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## 2017 MICHIGAN SPRING TURKEY HUNTER SURVEY

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### ABSTRACT

*A survey of turkey hunters was conducted following the 2017 spring hunting season to determine turkey harvest and hunter participation. In 2017, about 74,450 hunters harvested about 33,433 turkeys. Statewide, 45% of hunters harvested a turkey. Nearly 73% of the hunters rated their hunting experience as excellent, very good, or good in 2017. About 92% of the hunters reported they experienced no or only minor interference from other hunters. Compared to 2016, hunter numbers and hunting effort did not change significantly statewide in 2017; however, harvest increased significantly by 10%. In addition, hunter success increased significantly (41% in 2016 versus 45% in 2017) and hunter satisfaction increased significantly (70% in 2016 versus 73% in 2017).*

### INTRODUCTION

Michigan's spring turkey (*Meleagris gallopavo*) hunting season was based originally on an area and quota system. This system was set up primarily to distribute hunters across geographic areas (management units) and time (hunt periods). As the turkey population has expanded statewide, license types were created that allowed hunters to hunt in multiple management units. The goal of the current system has been to provide hunting opportunities while maintaining acceptable levels of hunter satisfaction (Luukkonen 1998).

In 2017, nearly the entire state was open for wild turkey hunting from April 17 through May 31 (Figure 1). The area open for turkey hunting (58,114 square miles) was the same as last year. The statewide hunting area was divided into 13 management units (Figure 1). Hunting licenses were available on these management units for three types of hunts: (1) quota [limited licenses available] hunts on both public and private lands in a specific management unit, (2) quota hunt on private lands in southern Michigan [Hunt



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301 in Unit ZZ], and (3) a guaranteed hunt (no quota) that included all units [Hunt 234], but excluded public lands in the Southern Lower Peninsula (SLP).

People interested in obtaining a turkey hunting license could enter into a random drawing (lottery) conducted by the Department of Natural Resources (DNR) or purchase a license not allocated through the lottery (i.e., left-over licenses and licenses for Hunt 234). Each applicant in the lottery could select up to two hunt choices (any combination of quota and unlimited quota hunts). The lottery consisted of two drawings. The first drawing was used to select applicants based on their preferred hunt choice. The second drawing was among applicants who were not successful in the first drawing, and was based on the hunter's second choice for a hunt. Any licenses available after the drawing was completed were made available on a first-come, first-served basis to applicants that were unsuccessful in the drawing. Unsuccessful applicants could purchase one leftover license or a license for Hunt 234. Beginning one week after licenses were available to unsuccessful applicants, all remaining licenses were made available to nonapplicants. Hunters were allowed to purchase one license and take one bearded turkey with the harvest tag issued with their license. Hunters could use a bow and arrow, crossbow, or shotgun with number 4 or smaller shot (including a muzzleloading shotgun) to hunt turkeys.

A limited number of licenses were available for quota hunts, and they were valid only in a certain management unit and only during a limited time period (7-42 days). Most quota hunts began before May 5 and lasted for seven days. A private land management unit (Unit ZZ) was created in 2002 that included all private lands in southern Michigan (Figure 1). Hunters who selected Hunt 301 could hunt the first two weeks of the season (April 17-30) anywhere on private lands in Unit ZZ. This unit and hunt period was created to provide additional hunting opportunity and increased flexibility for hunters who had difficulty finding time to hunt during shorter quota hunts.

Licenses for Hunt 234 could be used in any management unit. They were valid on public and private lands, except in Unit ZZ, where they were only valid on private lands or on Fort Custer military lands. Hunt 234 started later than most quota hunts but lasted for 31 days (May 1-31). Licenses for Hunt 234 were sold as a leftover license with no quota and could be purchased throughout the entire spring turkey hunting season.

The Pure Michigan Hunt (PMH) was a unique multi-species hunting opportunity offered for the first time in 2012. Individuals could purchase an unlimited number of applications for the PMH. Three individuals were randomly chosen from all applications, and winners received elk, bear, spring turkey, fall turkey, and antlerless deer hunting licenses and could participate in a reserved waterfowl hunt on a managed waterfowl area. The turkey hunting licenses were valid for all areas open for hunting turkey and during all turkey hunting periods. Furthermore, the PMH license holder could hunt any season until their turkey harvest tag was filled.

A mentored youth hunting program started in 2012. Under this program, a mentored youth hunting license was created and could be purchased by youth hunters aged 9 and younger. The youth hunter had to participate with a mentor who was at least 21 years old. The mentored youth hunting license allowed the youth hunter to hunt small game,

turkey, deer, trap furbearers, and fish for all species. A turkey kill tag issued under the mentored youth hunting license was valid for one turkey during any hunt period, in any open hunt unit, on private or public land. No application was required to purchase the mentored youth license.

The DNR and the Natural Resources Commission have the authority and responsibility to protect and manage the wildlife resources of the state of Michigan. Harvest surveys are a management tool used by the Wildlife Division to accomplish its statutory responsibility. Estimating harvest, hunting effort, and hunter satisfaction are the primary objectives of this survey.

## **METHODS**

The Wildlife Division provided all hunters the option to report voluntarily information about their turkey hunting activity via the internet. This option was advertised in the hunting regulation booklet and through a statewide news release. Hunters could report information anytime during the hunting season. Hunters reported whether they hunted, the days spent afield, whether they harvested a turkey, type of device used while hunting (i.e., firearm, crossbow, or bow and arrow), and whether other hunters caused interference during their hunt (none, minor, some irritation, or major problem). Successful hunters were also asked to report where their turkeys were taken (public or private land), date of harvest, and beard length of the harvested bird. Birds with a beard less than six inches were classified as juveniles (one year old), while birds with longer beards were adults (two years old or greater; Kelly, 1975). Finally, hunters were asked to rate their overall hunting experience (excellent, very good, good, fair, or poor), and indicate the status of the turkey population in their hunting area (increasing, decreasing, stable, or unknown).

Following the 2017 spring turkey hunting season, a questionnaire (Appendix A) was sent to 13,550 randomly selected people that had purchased a turkey hunting license (resident turkey, senior resident turkey, nonresident turkey, mentored youth, and Pure Michigan hunting licenses) and had not already voluntarily reported harvest information via the internet. Hunters receiving the questionnaire were asked to report the same information that was collected from hunters that reported voluntarily on the internet.

Estimates were calculated using a stratified random sampling design that included 18 strata (Cochran 1977). Hunters were stratified based on the management unit where their license was valid (13 management units). Hunters who purchased a license that could be used in multiple management units (mentored youth hunters, PMH license holders, and licenses for hunts 234 and 301) were treated as separate strata (strata 14-17). Moreover, people that had voluntarily reported information about their hunting activity via the internet were treated as a separate stratum (eighteenth stratum).

A 95% confidence limit (CL) was calculated for each estimate. This CL could be added to and subtracted from the estimate to calculate the 95% confidence interval. The confidence interval was a measure of the precision associated with the estimate and implies the true value would be within this interval 95 times out of 100. Estimates were

based on information collected from random samples of hunting license buyers. Thus, these estimates were subject to sampling errors (Cochran 1977). Estimates were not adjusted for possible response or nonresponse biases.

Statistical tests are used routinely to determine the likelihood that differences among estimates are larger than expected by chance alone. The overlap of 95% confidence intervals was used to determine whether estimates differed. Non-overlapping 95% confidence intervals were equivalent to stating the difference between the means was larger than would be expected 995 out of 1,000 times ( $P < 0.005$ ), if the study had been repeated (Payton et al. 2003).

Questionnaires were mailed initially during early July 2017, and nonrespondents were mailed up to two follow-up questionnaires. Although 13,550 people were sent the questionnaire, 169 surveys were undeliverable resulting in an adjusted sample size of 13,381. Questionnaires were returned by 7,290 people, yielding a 54% adjusted response rate. In addition, 3,151 people voluntarily reported information about their hunting activity via the internet before the random sample was selected.

## **RESULTS AND DISCUSSION**

In 2017, licenses were purchased by 88,745 people, a decrease of about 2% from 2016 (Table 1). Nearly equal proportions of the three main license types were sold in 2017 (Figure 2). About 34% of the licenses were valid for in a single unit (i.e., quota hunts), 37% were valid for Hunt 234, and 26% were valid for Hunt 301. Among the hunters buying a license for a quota hunt, 52% purchased a license that was awarded in the drawing and 48% purchased a left-over license (Figure 3). Overall, 18% of the licenses sold were awarded through the drawing process (i.e., 15,847 of 88,745 licenses).

Most of the people buying a license were males (92%), and the average age of the license buyers was 45 years (Figure 4). Nearly 10% (9,151) of the license buyers were younger than 17 years old. Mentored youth hunting licenses were purchased by 2,222 youths in 2017, versus 2,264 licenses purchased in 2016.

The number of people buying a turkey hunting license in 2017 decreased nearly 27% in ten years from 2007 (121,491 people purchased a license in 2007). There were fewer license buyers for age classes between 25 and 58 years of age in 2017, compared to 2007 (Figure 5). However, there were increased hunter numbers among the youngest and oldest age classes in 2017. The increased hunter numbers in the oldest age classes likely represented the rising share of older people in the population as the baby-boom generation aged and life expectancies have increased. The increased participation among the youngest hunters reflected the lowering of the minimum age requirements. In 2017, there was no minimum age limit to hunt turkeys; while hunters had to be at least 10 years old to participate in 2007.

About 82% ( $\pm 1\%$ ) of license buyers hunted turkeys (74,450 hunters). Most of these hunters were males ( $68,470 \pm 868$ ), although nearly 8% ( $\pm 1\%$ ) of the hunters were females ( $5,980 \pm 512$ ). The estimated number of hunters in 2017 was similar to the

estimated number in 2016 (74,450 in 2017 versus 74,295 in 2016). Counties listed in descending order with more than 2,000 hunters afield included Allegan, Tuscola, Jackson, and Kent (Table 3).

Hunters spent an estimated 305,139 days afield pursuing turkeys ( $4.1 \pm 0.1$  days/hunter) and harvested approximately 33,433 birds (Figure 6). Counties listed in descending order with hunters taking more than 900 turkeys included Allegan, Tuscola, Montcalm, Jackson, and Barry (Table 3). Hunter effort and harvest in 2017 was not significantly different from 2016. Hunter success was 45% in 2017, which was improved significantly from the 41% hunter success experienced in 2016.

About 22% ( $\pm 2\%$ ) of the harvested birds were juvenile males ( $7,240 \pm 567$ ); 77% ( $\pm 2\%$ ) were adult males ( $25,709 \pm 905$ ), and about 1% were bearded females ( $303 \pm 107$ ). Additionally, the age of a small number of harvested birds ( $<1\%$ ) was unknown ( $181 \pm 94$ ) because hunters failed to report a beard length.

Hunting effort and the number of turkeys harvested were generally highest during the earliest hunting periods (Figures 7-9). For turkeys that the harvest date was known, 45% of these birds were taken during the first seven days (April 17-24). Daily hunter success generally was more than 8% during April 17 through May 8. Daily hunter success was generally below 8% during May 9-28. Hunting effort and harvest generally were greater on the weekends than weekdays.

About 81% of turkey hunters hunted solely on private land; 14% hunted on public land only, and 5% hunted on both private and public lands (Table 4). Of the 33,433 turkeys harvested in 2017,  $89\% \pm 1\%$  were taken on private land ( $29,743 \pm 934$  birds). About  $10\% \pm 1\%$  of the harvest ( $3,673 \pm 417$  birds) was taken on public land.

Nineteen percent of turkey hunters believed turkey numbers were increasing in their hunting area (Table 5); while, 44% thought turkey numbers were stable, 18% thought turkey were decreasing; 17% of turkey hunters were uncertain about the status of turkeys, and 1% did not comment on the status of turkey.

Hunter satisfaction is one measure used to assess the turkey management program in Michigan. Of the estimated 74,450 people hunting turkeys in 2017,  $73\% \pm 1\%$  of the hunters rated their hunting experience as either excellent ( $16,795 \pm 775$  hunters), very good ( $17,561 \pm 807$ ), or good ( $19,781 \pm 856$ ) (Table 6). Nearly  $16\% \pm 1\%$  of the hunters rated their experience as fair ( $12,252 \pm 715$  hunters). Only  $10\% \pm 1\%$  of the hunters rated their experience as poor ( $7,255 \pm 576$  hunters). About 1% of the hunters ( $807 \pm 195$  hunters) failed to rate their hunting experience.

Hunter satisfaction is affected by many factors such as hunting success and whether hunting activities were completed without interference (Luukkonen 1998). In 2017,  $74\% \pm 1\%$  of the hunters reported no hunter interference;  $18\% \pm 1\%$  reported minor interference;  $6\% \pm 1\%$  reported some irritation caused by hunter interference, and 1% reported hunter interference was a major problem (Table 7).

Although interference can affect hunter satisfaction, hunter satisfaction was more closely associated with hunter success (Figures 11 and 12). Hunter success was greatest for hunts beginning April 17; however, satisfaction varied little among the hunt periods (Table 8).

Compared to 2016, hunter numbers and hunting effort did not change significantly statewide in 2017 (Table 9); however, harvest increased significantly by 10%. In addition, hunter success increased significantly (41% in 2016 versus 45% in 2017) and hunter satisfaction increased significantly (70% in 2016 versus 73% in 2017). The proportions of hunters that indicated they experienced no or only minor interference with another hunter were similar in both 2016 and 2017 (Table 10).

Most hunters ( $91 \pm 1\%$ ) used firearms while hunting turkeys, although  $6\% \pm 1\%$  of the hunters used archery equipment (compound, recurve, or long bows), and  $5\% \pm 1\%$  used a crossbow. Most hunters ( $88\% \pm 1\%$ ) used a firearm to harvest their turkeys, while  $2\% \pm 1\%$  used archery equipment, and  $3\% \pm 1\%$  used a crossbow. About 43% of hunters using a firearm harvested a turkey, while 22% of hunters using a crossbow took a turkey, and 17% of hunters using another type of bow (longbows, recurve, or compound bows) took a turkey (Table 11).

## **ACKNOWLEDGEMENTS**

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Table 1. Number of hunting licenses available and people applying for licenses during the 2017 Michigan spring turkey hunting season.

Management unit or hunt period	Licenses available (quota)	Number of eligible applicants <sup>a</sup>	Number of applicants successful in drawing	Number of licenses remaining after drawing	Number of licenses purchased by successful applicants <sup>b</sup>	Number of licenses purchased by unsuccessful applicants <sup>b</sup>	Number of licenses purchased by people not in the drawing <sup>b</sup>	Number of licensees <sup>b</sup>
A	5,500	1,289	1,296	4,204	937	0	1,158	2,095
B	1,000	18	18	982	10	0	20	30
E	1,700	1,728	1,658	42	1,227	3	30	1,260
F	5,000	2,978	2,991	2,008	2,234	2	1,031	3,267
J	4,000	1,095	1,106	2,893	835	1	966	1,802
K	8,500	7,656	7,438	1,062	5,553	16	1,012	6,581
M	6,000	734	736	5,264	545	0	3,916	4,461
ZA	4,800	1,353	1,382	3,418	1,007	0	1,682	2,689
ZB	2,600	626	627	1,973	476	1	711	1,188
ZC	2,400	1,015	1,017	1,382	718	0	879	1,597
ZD	40	80	40	0	20	0	0	20
ZE	2,000	1,461	1,441	559	1,057	5	533	1,595
ZF	5,600	1,549	1,558	4,041	1,228	2	2,749	3,979
Hunt 234	NA	NA	NA	NA	474	74	32,430	32,978
Hunt 301	35,000	3,833	3,864	31,136	3,117	18	19,843	22,978
Pure MI Hunts	3	NA	NA	NA	NA	NA	NA	3
Mentored Hunts	NA	NA	NA	NA	NA	NA	NA	2,222
Statewide	84,143	25,415	25,172	58,964	19,438	122	66,960	88,745

<sup>a</sup>Number of eligible applicants selecting the management unit as their first choice to hunt.

<sup>b</sup>If a licensee purchased more than one license, only the latest purchase is included in the summary of licenses purchased.

Table 2. Number of hunters, hunting efforts, harvest, hunter success, hunter satisfaction, and hunter interference during the spring 2017 Michigan turkey hunting season.

Management unit	Hunters <sup>a</sup>		Hunting efforts (days) <sup>a</sup>		Harvest <sup>a</sup>		Hunter success		Hunter satisfaction <sup>b</sup>		Noninterfered hunters <sup>c</sup>	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL	%	95% CL
Hunt periods with quotas (General limited quota hunt periods)												
A	1,821	89	6,264	588	734	124	40	7	64	6	91	4
B	24	4	76	26	12	5	50	21	83	15	92	11
E	1,133	47	3,504	291	405	71	36	6	65	6	95	3
F	2,802	143	9,589	832	791	169	28	6	62	6	90	4
J	1,398	97	5,769	766	421	95	30	6	61	7	91	4
K	5,719	263	17,824	1,562	2,532	370	44	6	67	6	92	3
M	3,351	248	17,491	2,490	1,399	262	42	7	66	7	93	4
ZA	2,230	136	7,826	1,071	845	164	38	7	70	7	89	5
ZB	1,062	53	3,949	523	353	76	33	7	71	7	88	5
ZC	1,325	86	4,523	543	404	98	30	7	64	7	81	6
ZD	13	4	43	16	3	3	25	20	63	22	88	15
ZE	1,332	78	4,487	541	451	91	34	7	81	6	90	4
ZF	3,304	198	15,571	2,142	1,411	247	43	7	78	6	90	4
Pure MI Hunt	3	0	16	0	1	0	33	0	67	0	100	0
Subtotal	25,519	494	96,934	4,117	9,764	613	38	2	68	2	91	1
Hunt period 301 with quota (Private lands in Management Unit ZZ; April 17-30, 2017)												
ZA	5,279	380	18,449	1,773	2,888	298	55	4	79	3	93	2
ZB	2,259	269	6,990	1,161	1,306	209	58	6	81	5	89	4
ZC	3,098	308	10,192	1,340	1,597	227	52	5	77	4	91	3
ZD	398	119	1,678	642	161	76	41	15	73	13	89	9
ZE	5,086	375	18,030	1,846	2,739	291	54	4	79	3	93	2
ZF	4,506	358	16,799	1,798	2,754	291	60	4	82	3	94	2
Unknown	296	103	1,098	484	0	0	0	0	64	17	100	0
Subtotal	20,479	284	73,235	2,745	11,446	452	56	2	79	2	92	1

<sup>a</sup>Number of hunters does not add up to statewide total because mentored youth and hunters with licenses for hunts 234 and 301 can hunt in more than one unit. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

<sup>b</sup>Proportion of hunters that rated their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated they experienced no or only minor interference from other hunters.



Table 2 (continued). Number of hunters, hunting efforts, harvest, hunter success, hunter satisfaction, and hunter interference during the spring 2017 Michigan turkey hunting season.

Management unit	Hunters <sup>a</sup>		Hunting efforts (days) <sup>a</sup>		Harvest <sup>a</sup>		Hunter success		Hunter satisfaction <sup>b</sup>		Noninterfered hunters <sup>c</sup>	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL	%	95% CL
Unlimited quota hunt period (Guaranteed Hunt 234; May 1-31, 2017)												
A	757	193	3,035	959	95	67	12	8	46	13	94	6
B	29	39	72	98	29	39	100	0	100	0	100	0
E	1,596	276	7,109	1,637	619	173	39	9	72	8	92	5
F	1,451	263	7,022	1,694	441	146	30	8	67	9	94	4
J	897	205	3,880	1,097	247	105	28	10	63	11	95	5
K	5,465	475	28,645	3,584	2,129	311	39	5	66	5	93	2
M	71	55	167	142	34	39	48	39	75	33	100	0
ZA	5,060	462	22,882	2,893	2,486	337	49	5	71	5	93	3
ZB	1,703	285	7,454	1,746	792	196	47	9	78	7	96	4
ZC	2,126	314	9,050	1,918	924	210	43	8	77	6	95	3
ZD	208	102	824	515	78	61	38	24	65	24	93	13
ZE	4,816	452	22,059	3,026	2,157	313	45	5	80	4	94	2
ZF	3,525	396	15,494	2,359	1,635	276	46	6	73	5	94	3
Unknown	346	133	1,586	865	0	0	0	0	50	19	96	8
Subtotal	26,795	505	129,278	5,592	11,665	611	44	2	72	2	94	1

<sup>a</sup>Number of hunters does not add up to statewide total because mentored youth and hunters with licenses for hunts 234 and 301 can hunt in more than one unit. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

<sup>b</sup>Proportion of hunters that rated their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated they experienced no or only minor interference from other hunters.

Table 2 (continued). Number of hunters, hunting efforts, harvest, hunter success, hunter satisfaction, and hunter interference during the spring 2017 Michigan turkey hunting season.

Management unit	Hunters <sup>a</sup>		Hunting efforts (days) <sup>a</sup>		Harvest <sup>a</sup>		Hunter success		Hunter satisfaction <sup>b</sup>		Noninterfered hunters <sup>c</sup>	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL	%	95% CL
Mentored hunts (youth hunters nine years old and younger could hunt during any open season)												
A	31	14	106	59	14	10	45	24	82	18	91	14
B	0	0	0	0	0	0	0	0	0	0	0	0
E	42	17	201	99	17	11	40	20	73	18	100	0
F	42	17	193	95	11	9	27	18	93	10	93	10
J	33	15	70	35	11	9	33	21	58	22	92	13
K	212	36	821	210	56	19	26	8	78	8	82	7
M	61	20	179	70	25	13	41	16	82	13	95	7
ZA	338	44	1,114	195	98	25	29	6	82	6	94	3
ZB	126	29	486	161	33	15	27	10	87	8	82	9
ZC	128	29	368	105	47	18	37	11	87	8	91	7
ZD	6	6	14	18	0	0	0	0	100	0	100	0
ZE	336	44	1,071	182	103	26	31	7	82	6	91	4
ZF	307	43	977	182	142	30	46	7	88	5	95	3
Unknown	39	16	92	43	0	0	0	0	57	21	93	11
Subtotal	1,656	54	5,691	367	558	54	34	3	82	2	91	2
Statewide	74,450	764	305,139	7,476	33,433	977	45	1	73	1	92	1

<sup>a</sup>Number of hunters does not add up to statewide total because mentored youth and hunters with licenses for hunts 234 and 301 can hunt in more than one unit. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

<sup>b</sup>Proportion of hunters that rated their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated they experienced no or only minor interference from other hunters.

Table 3. Estimated number of hunters, hunting effort, harvest, hunter success, hunter satisfaction, and hunter interference during the 2017 Michigan spring turkey hunting season. Estimates combined quota and unlimited quota hunts in each county.

County	Hunters <sup>a</sup>		Hunting efforts (days) <sup>a</sup>		Harvest <sup>a</sup>		Hunter success		Hunter satisfaction <sup>b</sup>		Noninterfered hunters <sup>c</sup>	
	95%		95%		95%		95%		95%		95%	
	Total	CL	Total	CL	Total	CL	%	CL	%	CL	%	CL
Alcona	905	186	3,236	838	280	106	31	10	59	11	90	7
Alger	44	55	71	87	21	39	49	63	51	63	100	0
Allegan	2,306	318	9,163	1,813	1,110	229	48	8	80	6	90	5
Alpena	509	130	1,869	601	248	90	49	13	51	13	94	6
Antrim	579	138	2,228	733	213	82	37	12	65	12	95	5
Arenac	513	137	2,558	1,062	201	86	39	13	64	13	91	8
Baraga	47	55	196	220	2	0	4	5	48	60	100	0
Barry	1,802	287	7,102	1,469	930	208	52	8	77	7	95	4
Bay	562	158	2,002	686	265	106	47	14	70	13	96	5
Benzie	400	165	1,329	656	130	96	33	20	64	20	96	7
Berrien	888	202	4,419	1,362	373	123	42	11	72	11	92	6
Branch	840	189	4,174	1,553	426	134	51	11	77	9	92	6
Calhoun	1,451	238	4,817	1,024	658	161	45	8	80	7	94	4
Cass	912	200	4,028	1,322	475	139	52	11	84	8	91	7
Charlevoix	435	129	1,420	525	173	81	40	15	58	15	97	4
Cheboygan	471	122	1,761	559	80	48	17	10	60	13	93	7
Chippewa	222	121	972	636	92	78	41	27	42	27	82	22
Clare	1,255	207	4,516	1,045	383	117	31	8	71	8	93	5
Clinton	1,066	210	4,096	1,255	448	136	42	10	71	9	92	5
Crawford	714	176	2,455	689	168	85	24	11	54	13	86	9
Delta	578	191	3,045	1,278	286	139	50	18	64	17	100	0

<sup>a</sup>Number of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

<sup>b</sup>Proportion of hunters that rated their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated they experienced no or only minor interference from other hunters.

Table 3 (continued). Estimated number of hunters, hunting effort, harvest, hunter success, hunter satisfaction, and hunter interference during the 2017 Michigan spring turkey hunting season. Estimates combined quota and unlimited quota hunts in each county.

County	Hunters <sup>a</sup>		Hunting efforts (days) <sup>a</sup>		Harvest <sup>a</sup>		Hunter success		Hunter satisfaction <sup>b</sup>		Noninterfered hunters <sup>c</sup>	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL	%	95% CL
Dickinson	506	179	2,496	1,063	143	98	28	17	66	18	92	10
Eaton	1,156	222	5,100	1,279	431	132	37	9	76	8	97	4
Emmet	338	105	1,356	525	96	58	28	14	67	15	97	5
Genesee	1,382	230	5,849	1,441	578	149	42	8	78	7	90	5
Gladwin	942	174	3,489	828	436	123	46	10	74	8	95	4
Gogebic	221	121	949	547	113	86	51	28	81	22	81	22
Gd. Traverse	929	244	4,053	1,310	379	165	41	13	65	13	93	8
Gratiot	1,042	207	3,937	1,059	562	151	54	10	72	9	90	6
Hillsdale	1,457	238	5,139	1,141	732	169	50	8	85	6	93	4
Houghton	91	77	331	257	25	39	28	37	75	37	100	0
Huron	1,303	210	5,202	1,365	582	147	45	8	77	7	87	5
Ingham	1,058	202	4,228	1,182	546	149	52	10	78	8	93	5
Ionia	1,312	231	5,416	1,364	688	170	52	9	76	8	92	5
Iosco	679	172	2,498	780	228	104	34	13	60	13	91	8
Iron	368	155	1,709	859	93	77	25	19	55	22	89	14
Isabella	1,259	224	4,349	1,007	632	159	50	9	79	7	92	5
Jackson	2,041	275	7,640	1,434	951	190	47	7	78	6	91	4
Kalamazoo	1,009	212	3,036	798	558	154	55	11	81	9	90	7
Kalkaska	672	206	3,116	1,218	192	110	29	14	61	15	93	8
Kent	2,027	282	7,270	1,333	775	175	38	7	68	7	93	4
Keweenaw	41	55	163	220	0	0	0	0	100	0	100	0

<sup>a</sup>Number of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

<sup>b</sup>Proportion of hunters that rated their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated they experienced no or only minor interference from other hunters.

Table 3 (continued). Estimated number of hunters, hunting effort, harvest, hunter success, hunter satisfaction, and hunter interference during the 2017 Michigan spring turkey hunting season. Estimates combined quota and unlimited quota hunts in each county.

County	Hunters <sup>a</sup>		Hunting efforts (days) <sup>a</sup>		Harvest <sup>a</sup>		Hunter success		Hunter satisfaction <sup>b</sup>		Noninterfered hunters <sup>c</sup>	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL	%	95% CL
Lake	1,276	289	4,405	1,211	375	169	29	11	61	12	91	7
Lapeer	1,508	237	5,061	1,122	729	164	48	8	74	7	93	4
Leelanau	422	174	1,119	547	217	127	51	21	79	17	94	11
Lenawee	1,071	200	4,699	1,188	450	129	42	9	82	7	96	3
Livingston	1,407	225	4,933	1,197	732	164	52	8	79	7	92	4
Luce	0	0	0	0	0	0	0	0	0	0	0	0
Mackinac	0	0	0	0	0	0	0	0	0	0	0	0
Macomb	658	164	2,357	743	351	119	53	13	82	10	96	4
Manistee	755	226	2,963	1,387	269	129	36	14	70	14	90	10
Marquette	273	136	1,330	782	63	67	23	22	53	26	100	0
Mason	831	228	3,534	1,235	264	132	32	13	66	13	89	9
Mecosta	1,321	286	4,686	1,265	625	203	47	11	77	9	95	4
Menominee	1,071	242	4,843	1,735	547	184	51	13	75	11	100	0
Midland	1,225	224	4,705	1,122	666	163	54	9	82	7	93	5
Missaukee	520	184	2,032	822	133	88	26	15	48	18	87	13
Monroe	520	144	2,193	756	200	89	38	14	70	13	91	8
Montcalm	1,851	277	6,412	1,222	994	205	54	8	75	7	92	4
Montmorency	786	155	2,548	577	214	77	27	9	67	10	88	7
Muskegon	1,260	243	4,914	1,202	616	165	49	10	84	7	92	6
Newaygo	1,988	343	8,079	1,802	841	228	42	9	70	8	89	6
Oakland	1,357	205	4,433	833	662	153	49	8	71	7	86	5

<sup>a</sup>Number of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

<sup>b</sup>Proportion of hunters that rated their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated they experienced no or only minor interference from other hunters.

Table 3 (continued). Estimated number of hunters, hunting effort, harvest, hunter success, hunter satisfaction, and hunter interference during the 2017 Michigan spring turkey hunting season. Estimates combined quota and unlimited quota hunts in each county.

County	Hunters <sup>a</sup>		Hunting efforts (days) <sup>a</sup>		Harvest <sup>a</sup>		Hunter success		Hunter satisfaction <sup>b</sup>		Noninterfered hunters <sup>c</sup>	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL	%	95% CL
Oceana	998	251	3,645	1,136	478	184	48	13	77	11	95	5
Ogemaw	999	204	4,100	1,275	372	131	37	11	77	9	92	6
Ontonagon	125	94	969	951	42	55	33	36	50	38	100	0
Osceola	1,271	283	4,668	1,207	527	186	41	11	67	11	94	5
Oscoda	650	172	2,645	971	164	85	25	12	64	13	89	9
Otsego	572	132	2,704	826	141	64	25	10	57	12	82	10
Ottawa	1,650	268	5,952	1,345	850	191	52	8	77	7	93	4
Presque Isle	619	140	2,220	626	220	82	35	11	67	12	95	5
Roscommon	837	192	3,347	910	193	94	23	10	70	11	93	6
Saginaw	1,433	242	5,588	1,291	664	168	46	9	77	7	91	5
St. Clair	1,752	255	5,704	1,077	629	155	36	7	71	7	89	5
St. Joseph	915	204	3,941	1,188	500	150	55	11	80	9	95	5
Sanilac	1,647	248	5,222	992	815	177	49	8	79	6	97	3
Schoolcraft	57	55	291	397	28	39	49	49	100	0	59	50
Shiawassee	1,257	227	5,150	1,283	534	145	42	9	72	8	91	5
Tuscola	2,118	268	7,950	1,427	1,052	193	50	7	79	6	90	4
Van Buren	1,133	229	5,107	1,416	476	144	42	10	72	9	92	6
Washtenaw	1,278	212	4,287	978	486	131	38	8	83	6	91	5
Wayne	104	62	365	328	43	39	41	29	74	27	90	18
Wexford	624	201	2,630	1,044	261	127	42	16	53	16	91	9
Unknown	2,764	357	10,626	1,796	308	114	10	4	54	7	92	4

<sup>a</sup>Number of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

<sup>b</sup>Proportion of hunters that rated their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated they experienced no or only minor interference from other hunters.

Table 4. Estimated number and proportion of hunters hunting on private and public lands during the spring 2017 Michigan turkey hunting season.<sup>a</sup>

Management unit	Private land only				Public land only				Both private and public lands				Unknown land			
	Total	95% CL	95% CL		Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL
Hunt periods with quotas (General limited quota hunt periods)																
A	1,396	123	77	6	312	92	17	5	103	56	6	3	10	18	1	1
B	18	5	75	18	2	3	8	11	4	4	17	15	0	0	0	0
E	835	73	74	6	248	61	22	5	37	27	3	2	12	16	1	1
F	1,414	198	50	7	1,178	191	42	6	195	95	7	3	14	27	1	1
J	834	114	60	7	387	93	28	6	160	65	11	5	18	23	1	2
K	3,768	378	66	6	1,426	314	25	5	525	208	9	4	25	49	0	1
M	2,115	284	63	7	739	211	22	6	497	180	15	5	0	0	0	0
ZA	1,119	175	50	7	893	167	40	7	204	94	9	4	14	26	1	1
ZB	460	82	43	7	494	83	46	7	101	47	10	4	7	14	1	1
ZC	618	111	47	8	653	111	49	8	44	36	3	3	10	18	1	1
ZD	8	4	63	22	5	3	38	22	0	0	0	0	0	0	0	0
ZE	446	93	33	7	815	103	61	7	62	37	5	3	8	15	1	1
ZF	1,734	258	52	7	1,189	236	36	7	362	149	11	4	19	37	1	1
PMH	1	0	33	0	1	0	33	0	1	0	33	0	0	0	0	0
Subtotal	14,766	650	58	2	8,344	560	33	2	2,296	359	9	1	138	83	1	0
Hunt 301 with quota (Private lands in Management Unit ZZ; April 17-30, 2017)																
ZA	5,279	380	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB	2,259	269	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZC	3,098	308	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZD	398	119	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZE	5,086	375	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZF	4,506	358	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	296	103	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	20,479	284	100	0	0	0	0	0	0	0	0	0	0	0	0	0

<sup>a</sup>Row totals may not equal 100 because of rounding errors.

Table 4 (continued). Estimated number and proportion of hunters hunting on private and public lands during the spring 2017 Michigan turkey hunting season.<sup>a</sup>

Management unit	Private land only				Public land only				Both private and public lands				Unknown land			
	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL
Unlimited quota hunt period (Guaranteed Hunt 234; May 1-31, 2017)																
A	564	167	75	11	176	94	23	11	16	27	2	4	0	0	0	0
B	29	39	100	0	0	0	0	0	0	0	0	0	0	0	0	0
E	1,223	244	77	7	329	127	21	7	43	47	3	3	0	0	0	0
F	725	189	50	9	543	162	37	9	154	86	11	6	29	39	2	3
J	551	162	61	11	211	98	24	10	120	77	13	8	14	27	2	3
K	3,863	410	71	4	1,201	240	22	4	344	130	6	2	58	55	1	1
M	52	47	74	33	3	0	4	3	15	27	22	34	0	0	0	0
ZA <sup>b</sup>	5,060	462	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZB <sup>b</sup>	1,703	285	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZC <sup>b</sup>	2,126	314	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZD <sup>b</sup>	208	102	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZE <sup>b</sup>	4,816	452	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZF <sup>b</sup>	3,525	396	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	274	118	79	16	29	39	8	11	14	27	4	8	29	39	8	11
Subtotal	23,543	582	88	1	2,080	310	8	1	1,042	223	4	1	130	82	0	0

<sup>a</sup>Row totals may not equal 100 because of rounding errors.

<sup>b</sup>Licenses for the unlimited quota hunt were valid only on private lands in Management Unit ZZ in southern Michigan (Figure 1).

<sup>c</sup>Number of hunters does not add up to statewide total because hunters can hunt in more than one unit for the unlimited quota hunts.



Table 4 (continued). Estimated number and proportion of hunters hunting on private and public lands during the spring 2017 Michigan turkey hunting season.<sup>a</sup>

Management unit	Private land only				Public land only				Both private and public lands				Unknown land			
	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL
Mentored hunts (youth hunters nine years old and younger could hunt during any open season)																
A	25	13	82	18	3	4	9	14	3	4	9	14	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	39	16	93	10	0	0	0	0	3	4	7	10	0	0	0	0
F	33	15	80	16	3	4	7	10	6	6	13	14	0	0	0	0
J	31	14	92	13	3	4	8	13	0	0	0	0	0	0	0	0
K	165	32	78	8	25	13	12	6	22	12	11	6	0	0	0	0
M	47	18	77	14	8	8	14	11	6	6	9	10	0	0	0	0
ZA	310	43	92	4	17	11	5	3	11	9	3	3	0	0	0	0
ZB	117	28	93	6	6	6	4	5	3	4	2	3	0	0	0	0
ZC	126	29	98	3	3	4	2	3	0	0	0	0	0	0	0	0
ZD	6	6	100	0	0	0	0	0	0	0	0	0	0	0	0	0
ZE	321	44	96	3	12	9	4	3	3	4	1	1	0	0	0	0
ZF	268	40	87	5	28	14	9	4	11	9	4	3	0	0	0	0
Unknown	36	16	93	11	0	0	0	0	0	0	0	0	3	4	7	11
Subtotal	1,482	58	89	2	99	25	6	2	73	22	4	1	3	4	0	0
Statewide <sup>c</sup>	60,256	919	81	1	10,509	640	14	1	3,411	423	5	1	299	123	0	0

<sup>a</sup>Row totals may not equal 100 because of rounding errors.

<sup>b</sup>Licenses for the unlimited quota hunt were valid only on private lands in Management Unit ZZ in southern Michigan (Figure 1).

<sup>c</sup>Number of hunters does not add up to statewide total because hunters can hunt in more than one unit for the unlimited quota hunts.

Table 5. Status of turkey population reported by turkey hunters during the spring 2017 Michigan turkey hunting season.

Management unit	Turkey population status ( of hunters) <sup>a</sup>				
	Increasing	Decreasing	Stable	Unknown	No answer
Hunt periods with quotas (General limited quota hunt periods)					
A	19	20	35	24	2
B	25	17	42	17	0
E	19	17	39	24	1
F	23	20	34	24	0
J	11	29	40	17	3
K	15	26	45	13	1
M	19	21	40	18	2
ZA	12	16	53	17	2
ZB	15	16	43	24	1
ZC	21	17	32	28	2
ZD	25	25	13	25	13
ZE	22	10	38	30	1
ZF	24	13	40	23	0
Pure MI Hunt	0	0	67	33	0
Mean	18	20	41	20	1
Hunt 301 with quota (Private lands in Management Unit ZZ; April 17-30, 2017)					
ZA	18	18	50	12	1
ZB	22	14	52	11	1
ZC	17	19	50	12	2
ZD	17	3	54	27	0
ZE	22	14	48	17	0
ZF	22	15	51	10	1
Unknown	4	7	61	29	0
Mean	20	16	50	13	1

<sup>a</sup>Row totals may not equal 100 because of rounding errors.

Table 5 (continued). Status of turkey population reported by turkey hunters during the spring 2017 Michigan turkey hunting season.

Manage- ment unit	Turkey population status ( of hunters) <sup>a</sup>				
	Increasing	Decreasing	Stable	Unknown	No answer
Unlimited quota hunt period (Guaranteed Hunt 234; May 1-31, 2017)					
A	6	23	48	20	2
B	50	0	50	0	0
E	20	19	44	17	0
F	20	21	39	19	2
J	19	31	38	11	2
K	17	25	42	14	1
M	45	25	23	7	0
ZA	18	23	41	17	1
ZB	19	13	50	15	2
ZC	20	10	52	16	3
ZD	30	7	28	28	7
ZE	22	14	47	16	2
ZF	20	20	40	19	1
Unknown	8	13	29	46	4
Mean	19	19	43	17	2
Mentored hunts (youth hunters nine years old and younger could hunt during any open season)					
A	18	27	45	9	0
B	0	0	0	0	0
E	20	7	40	33	0
F	27	7	27	40	0
J	8	0	33	58	0
K	13	20	39	28	0
M	14	14	36	36	0
ZA	17	12	50	21	1
ZB	16	13	42	29	0
ZC	26	7	50	15	2
ZD	50	0	0	50	0
ZE	19	15	37	25	3
ZF	25	7	41	25	1
Unknown	29	14	29	29	0
Mean	20	12	41	26	1
Statewide <sup>b</sup>	19	18	44	17	1

<sup>a</sup>Row totals may not equal 100 because of rounding errors.

<sup>b</sup>Statewide mean interference levels (all hunts and periods).

Table 6. How hunters rated their hunting experience during the spring 2017 Michigan turkey hunting season.

Management unit	Satisfaction level ( of hunters) <sup>a</sup>					
	Excellent	Very good	Good	Fair	Poor	No answer
Hunt periods with quotas (General limited quota hunt periods)						
A	20	19	25	21	13	2
B	25	25	33	8	8	0
E	17	22	26	21	13	1
F	10	29	22	21	17	1
J	14	16	31	22	16	2
K	21	18	28	18	15	0
M	17	22	27	20	12	2
ZA	16	27	27	18	10	2
ZB	21	18	32	17	10	2
ZC	20	20	24	22	12	2
ZD	25	38	0	0	38	0
ZE	23	26	31	15	4	0
ZF	19	31	28	14	8	1
Pure MI Hunt	0	33	33	33	0	0
Mean	18	23	27	19	12	1
Hunt 301 with quota (Private lands in Management Unit ZZ; April 17-30, 2017)						
ZA	27	26	26	13	7	1
ZB	31	27	23	11	7	1
ZC	34	22	21	14	7	1
ZD	25	24	24	19	5	3
ZE	32	25	23	15	5	1
ZF	29	27	26	12	6	0
Unknown	18	4	43	18	14	4
Mean	30	25	24	13	6	1

<sup>a</sup>Row totals may not equal 100 because of rounding errors.

Table 6 (continued). How hunters rated their hunting experience during the spring 2017 Michigan turkey hunting season.

Manage- ment unit	Satisfaction level ( of hunters) <sup>a</sup>					No answer
	Excellent	Very good	Good	Fair	Poor	
Unlimited quota hunt period (Guaranteed Hunt 234; May 1-31, 2017)						
A	10	20	16	35	18	2
B	50	0	50	0	0	0
E	20	26	27	18	9	0
F	19	18	31	18	14	1
J	15	17	32	25	12	0
K	16	23	27	21	11	1
M	23	4	48	22	3	0
ZA	22	20	29	16	12	1
ZB	22	23	34	11	9	2
ZC	29	24	24	13	8	2
ZD	30	7	28	21	14	0
ZE	25	25	30	14	6	1
ZF	20	28	24	17	9	1
Unknown	8	8	33	25	21	4
Mean	21	23	28	17	10	1
Mentored hunts (youth hunters nine years old and younger could hunt during any open season)						
A	9	27	45	9	9	0
B	0	0	0	0	0	0
E	40	13	20	20	7	0
F	7	40	47	7	0	0
J	42	0	17	17	25	0
K	17	28	33	17	4	1
M	36	32	14	9	9	0
ZA	22	26	34	11	7	1
ZB	29	29	29	7	7	0
ZC	28	28	30	11	0	2
ZD	50	0	50	0	0	0
ZE	27	32	24	12	6	0
ZF	44	25	19	6	5	1
Unknown	29	0	29	21	21	0
Mean	28	26	28	11	6	1
Statewide <sup>b</sup>	23	24	27	16	10	1

<sup>a</sup>Row totals may not equal 100 because of rounding errors.

<sup>b</sup>Statewide mean satisfaction levels (all hunts and periods).

Table 7. Estimated amount of hunter interference experienced by turkey hunters during the spring 2017 Michigan turkey hunting season.

Management unit	Interference level ( of hunters) <sup>a</sup>				
	None	Minor	Some irritation	Major problem	No answer
Hunt periods with quotas (General limited quota hunt periods)					
A	80	10	7	2	1
B	75	17	0	8	0
E	79	16	5	1	0
F	66	24	9	1	0
J	67	23	7	1	1
K	71	21	6	1	0
M	78	16	4	1	2
ZA	70	19	7	3	1
ZB	66	22	7	3	1
ZC	58	23	14	3	1
ZD	75	13	13	0	0
ZE	64	27	8	1	0
ZF	63	27	7	2	1
Pure MI Hunt	100	0	0	0	0
Mean	70	21	7	2	1
Hunt 301 with quota (Private lands in Management Unit ZZ; April 17-30, 2017)					
ZA	74	19	5	1	0
ZB	76	13	7	3	1
ZC	72	19	7	1	1
ZD	76	14	8	3	0
ZE	76	17	4	2	1
ZF	74	20	5	2	0
Unknown	86	14	0	0	0
Mean	75	18	5	2	1

<sup>a</sup>Row totals may not equal 100 because of rounding errors.

Table 7 (continued). Estimated amount of hunter interference experienced by turkey hunters during the spring 2017 Michigan turkey hunting season.

Management unit	Interference level ( of hunters) <sup>a</sup>				
	None	Minor	Some irritation	Major problem	No answer
Unlimited quota hunt period (Guaranteed Hunt 234; May 1-31, 2017)					
A	69	25	6	0	0
B	50	50	0	0	0
E	80	12	7	1	0
F	76	18	4	1	1
J	76	19	2	3	0
K	74	19	5	1	1
M	97	3	0	0	0
ZA	78	15	3	2	2
ZB	81	15	3	1	1
ZC	81	14	4	0	1
ZD	58	35	7	0	0
ZE	79	15	5	1	1
ZF	77	17	4	1	1
Unknown	79	17	4	0	0
Mean	78	16	4	1	1
Mentored hunts (youth hunters nine years old and younger could hunt during any open season)					
A	64	27	9	0	0
B	0	0	0	0	0
E	93	7	0	0	0
F	73	20	7	0	0
J	92	0	8	0	0
K	66	16	17	1	0
M	91	5	5	0	0
ZA	78	17	2	2	1
ZB	71	11	13	4	0
ZC	83	9	7	0	2
ZD	100	0	0	0	0
ZE	77	14	8	0	1
ZF	83	12	5	1	0
Unknown	86	7	7	0	0
Mean	78	13	7	1	1
Statewide <sup>b</sup>	74	18	6	1	1

<sup>a</sup>Row totals may not equal 100 because of rounding errors.

<sup>b</sup>Statewide mean interference levels (all hunts and periods).

Table 8. Estimated number of hunting efforts, hunters, hunting success, noninterfered hunters, and hunter rating of the 2017 spring turkey hunting season, by hunt periods.

Variable	Hunt periods beginning									
	April 17		April 24		May 1		May 8		All periods <sup>a</sup>	
	Estimate	95% CL	Estimate	95% CL	Estimate	95% CL	Estimate	95% CL	Estimate	95% CL
Hunting efforts (days)	137,163	4,449	18,342	1,854	141,818	6,064	7,816	1,352	305,139	7,476
Number of hunters	37,586	680	5,905	485	29,162	582	1,797	215	74,450	764
Successful hunters (n)	18,165	690	2,131	346	12,598	648	540	131	33,433	977
Successful hunters (%)	48	2	36	5	43	2	30	6	45	1
Noninterfered hunters (n) <sup>b</sup>	34,337	710	5,523	478	27,166	620	1,654	209	68,680	864
Noninterfered hunters (%) <sup>b</sup>	91	1	94	3	93	1	92	4	92	1
Favorable rating (n) <sup>c</sup>	28,232	739	3,776	428	20,840	687	1,288	191	54,136	999
Favorable rating (%) <sup>c</sup>	75	1	64	5	71	2	72	6	73	1

<sup>a</sup>Row totals may not equal totals for all periods because of rounding errors.

<sup>b</sup>Proportion of hunters that indicated they experienced no or only minor interference from other hunters.

<sup>c</sup>Hunters rating their hunting experience as excellent, very good, or good.



Table 9. Comparison of the estimated number of hunters, hunting effort, and harvest between 2016 and 2017 Michigan spring turkey hunting seasons, summarized by regions.

Region <sup>a</sup>	Hunters (No.) <sup>b</sup>					Hunting efforts (days)					Harvest (No.)				
	2016		2017		Change (%)	2016		2017		Change (%)	2016		2017		Change (%)
	Total	95% CL	Total	95% CL		Total	95% CL	Total	95% CL		Total	95% CL	Total	95% CL	
UP	3,097	261	3,340	264	8	15,762	2,354	17,365	2,515	10	1,139	230	1,457	266	28
NLP	21,884	681	22,435	691	3	83,732	3,981	91,206	4,772	9	7,765	573	8,501	590	9
SLP	47,405	813	46,616	776	-2	188,069	5,950	185,941	6,106	-1	21,183	793	23,168	785	9*
Unknown	2,669	363	2,764	357		10,923	2,030	10,626	1,796		300	120	308	114	
Total	74,295	808	74,450	764	0	298,486	7,043	305,139	7,476	2	30,386	976	33,433	977	10*

<sup>a</sup>Regions included the Upper Peninsula (UP), the Northern Lower Peninsula north of Management Unit ZZ (NLP), and Management Unit ZZ in the Southern Lower Peninsula (SLP).

<sup>b</sup>Number of hunters did not add up to statewide total because mentored youth and hunters with a license for the unlimited quota hunt can hunt in more than one unit.

\*P<0.005.

Table 10. Comparison of estimated hunter success, hunter satisfaction, and hunt interference between 2016 and 2017 Michigan spring turkey hunting season, summarized by regions.

Region <sup>a</sup>	Hunter success					Hunter satisfaction <sup>b</sup>					Noninterfered hunters <sup>c</sup>				
	2016		2017		Differ- ence (%)	2016		2017		Differ- ence (%)	2016		2017		Differ- ence (%)
	%	95% CL	%	95% CL		%	95% CL	%	95% CL		%	95% CL	%	95% CL	
UP	37	7	44	7	7	55	7	67	7	12	96	3	94	3	-2
NLP	35	2	38	2	2	63	2	67	2	4	92	1	92	1	0
SLP	45	2	50	1	5*	74	1	77	1	3*	92	1	92	1	0
Total	41	1	45	1	4*	70	1	73	1	3*	92	1	92	1	0

<sup>a</sup>Regions included the Upper Peninsula (UP), the Northern Lower Peninsula north of Management Unit ZZ (NLP), and Management Unit ZZ in the Southern Lower Peninsula (SLP).

<sup>b</sup>Hunters rating their hunting experience as excellent, very good, or good.

<sup>c</sup>Proportion of hunters that indicated they experienced no or only minor interference from other hunters.

\*P<0.005.

Table 11. Number of turkeys harvested and hunter success, summarized by hunting device, during the spring turkey hunting season in Michigan, 2010-2017.

Year	Number of turkey harvested by device								Hunter success by device <sup>a</sup>					
	Firearm		Crossbows		Other bows <sup>b</sup>		Unknown		Firearm		Crossbows		Other bows <sup>b</sup>	
	95%		95%		95%		95%		95%		95%		95%	
	Total	CL	Total	CL	Total	CL	Total	CL	%	CL	%	CL	%	CL
2010	34,984	1,093	525	161	1,519	279	22	32	41	1	20	6	20	3
2011	28,831	1,017	590	170	1,143	228	23	34	37	1	17	5	17	3
2012	29,611	984	650	172	1,055	214	62	57	39	1	17	4	18	3
2013	30,152	1,038	921	210	1,090	231	80	76	39	1	22	5	18	4
2014	27,746	919	516	143	838	195	9	13	41	1	17	4	21	4
2015	28,272	908	751	188	935	196	81	63	43	1	20	5	21	4
2016	28,422	959	860	200	963	221	142	87	42	1	21	4	21	4
2017	29,389	964	869	194	748	183	2,427	171	43	1	22	4	17	4

<sup>a</sup>Hunters harvesting a turkey.

<sup>b</sup>Included longbows, recurve, and compound bows.

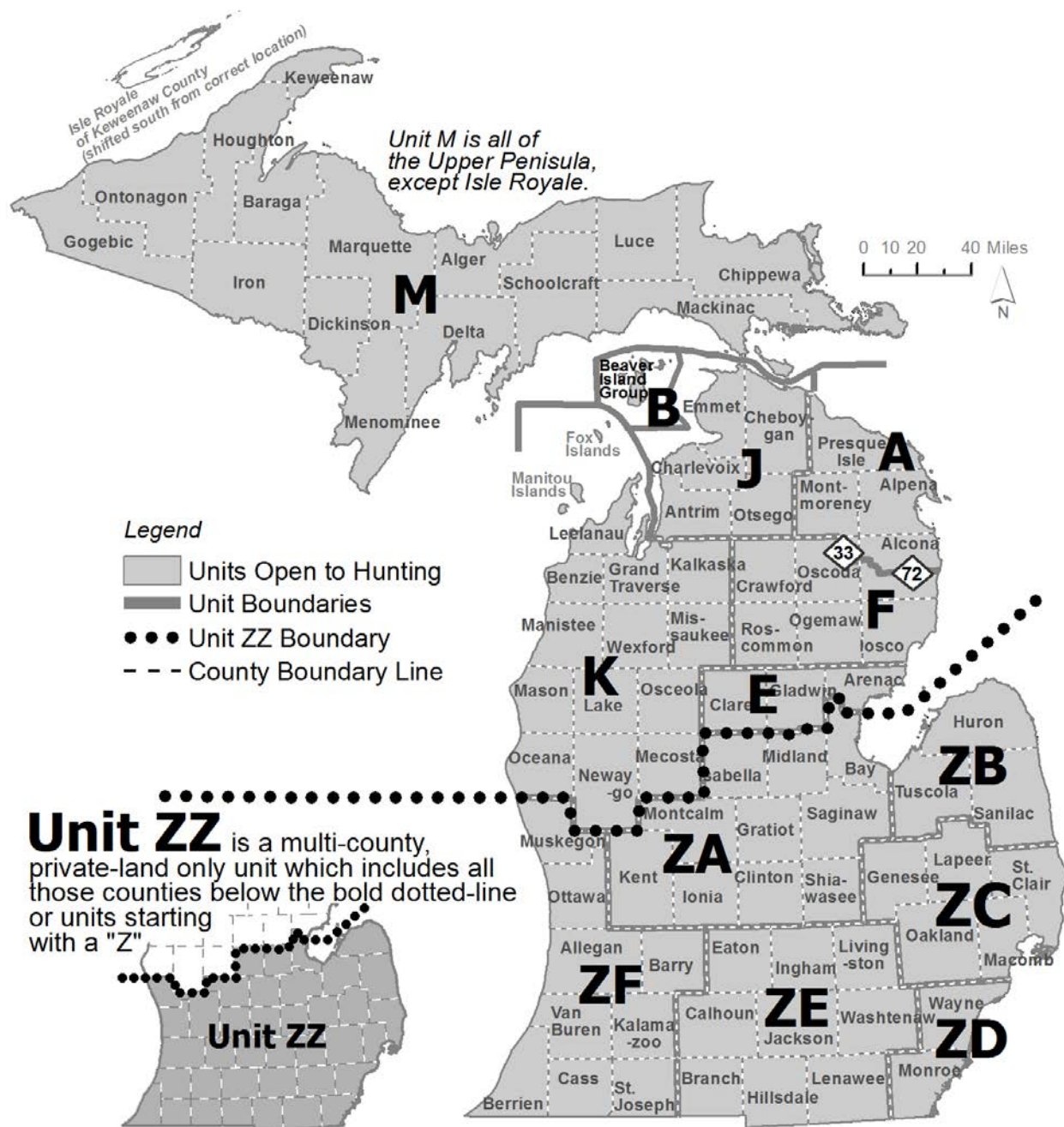


Figure 1. Management units in Michigan open to spring turkey hunting in 2017.

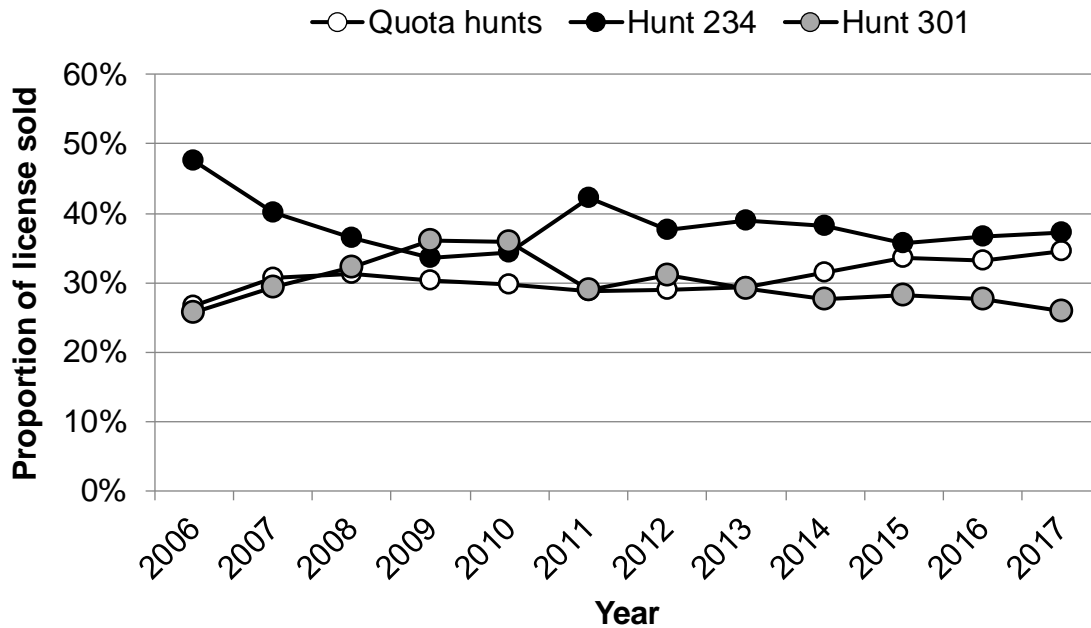


Figure 2. The proportion of spring turkey hunting licenses sold during 2006-2017, summarized separately for license type (quota hunts, Hunt 234, and Hunt 301).

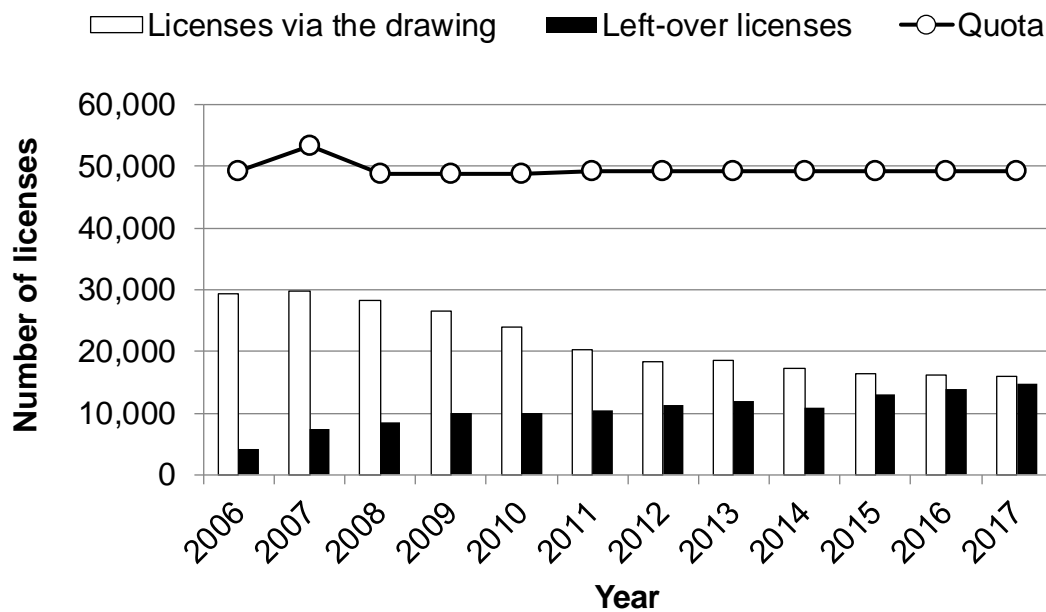


Figure 3. The number of spring turkey hunting licenses available for quota hunts (excluded licenses for hunts 234 and 301, mentored youth licenses and Pure Michigan hunts), the number of quota hunt licenses sold via the drawing, and the number of quota hunt licenses sold as left-over licenses during 2006-2017.

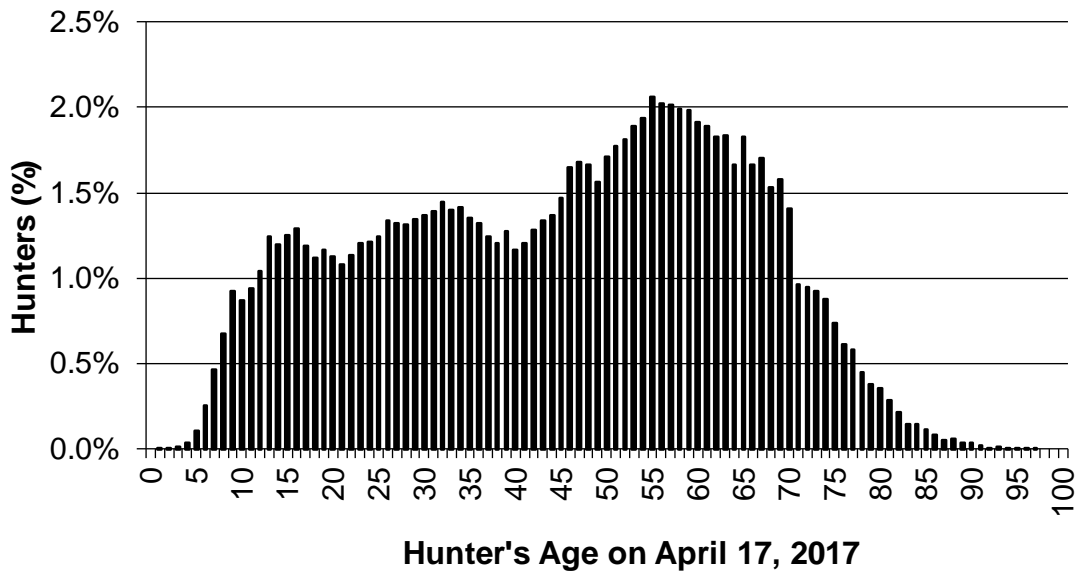


Figure 4. Age of people that purchased a turkey hunting license in Michigan for the 2017 spring hunting season (mean = 45 years). Licenses were purchased by 88,745 people.

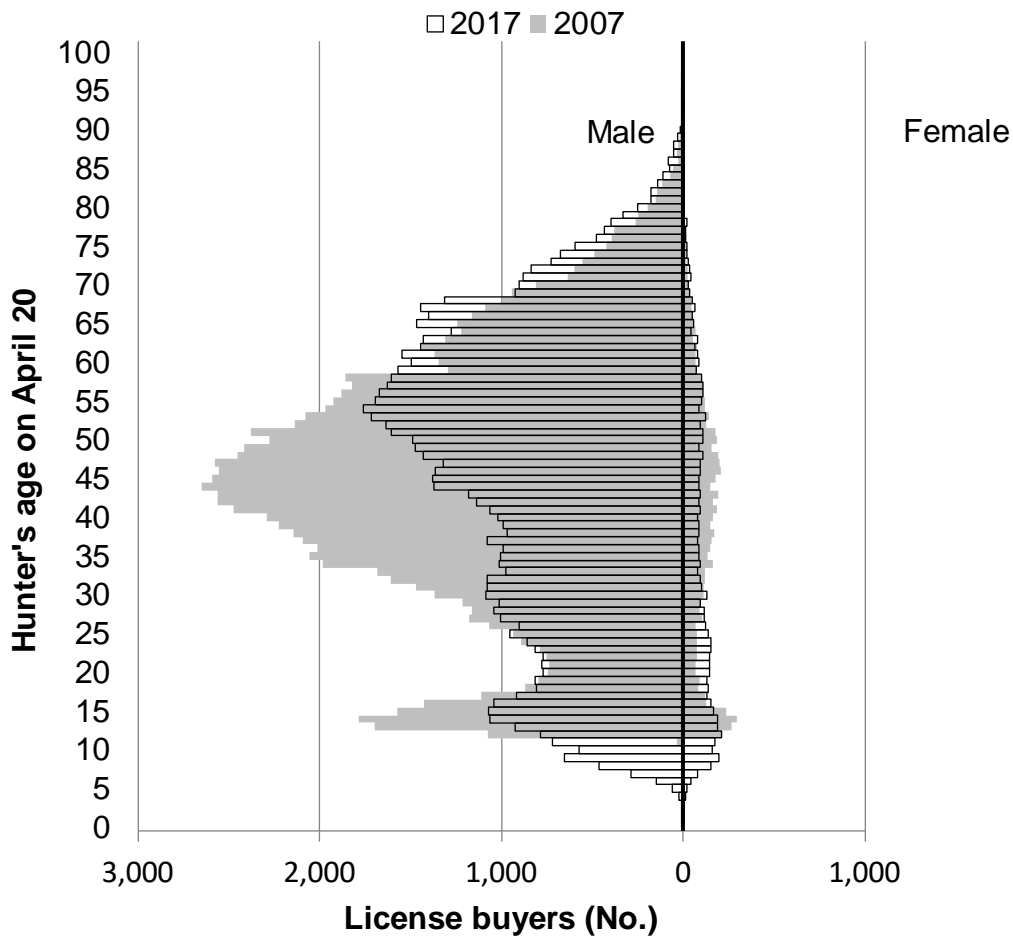


Figure 5. Number of spring turkey hunting license buyers in Michigan by age and sex during 2007 and 2017 hunting seasons. The number of people buying a license was 121,491 in 2007 and 88,745 in 2017.

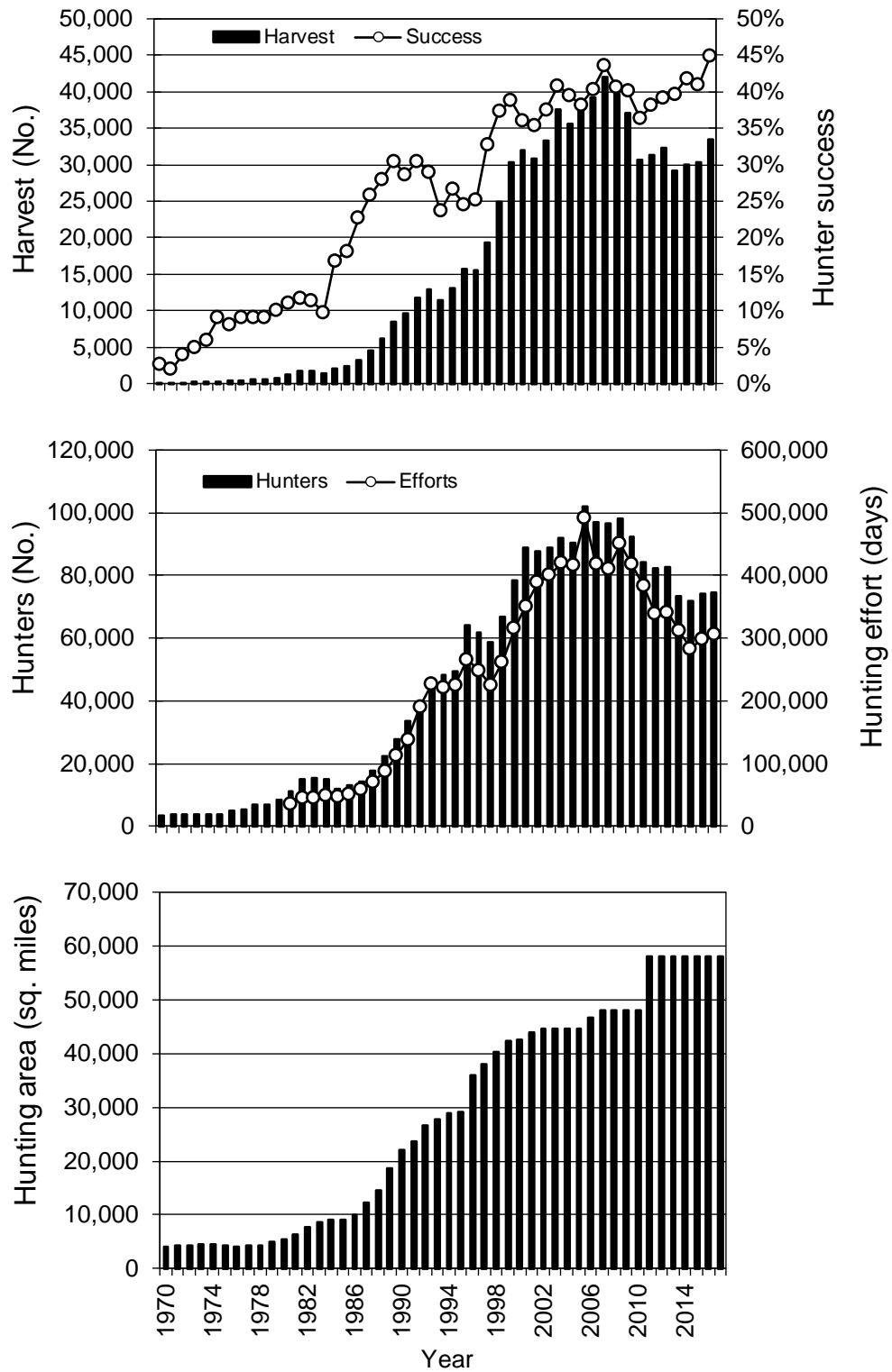


Figure 6. Estimated number of hunters, harvest, hunting efforts, hunter success, and area open to hunting during the Michigan spring turkey hunting season, 1970-2017. Estimates of hunting effort generally were not available before 1981.

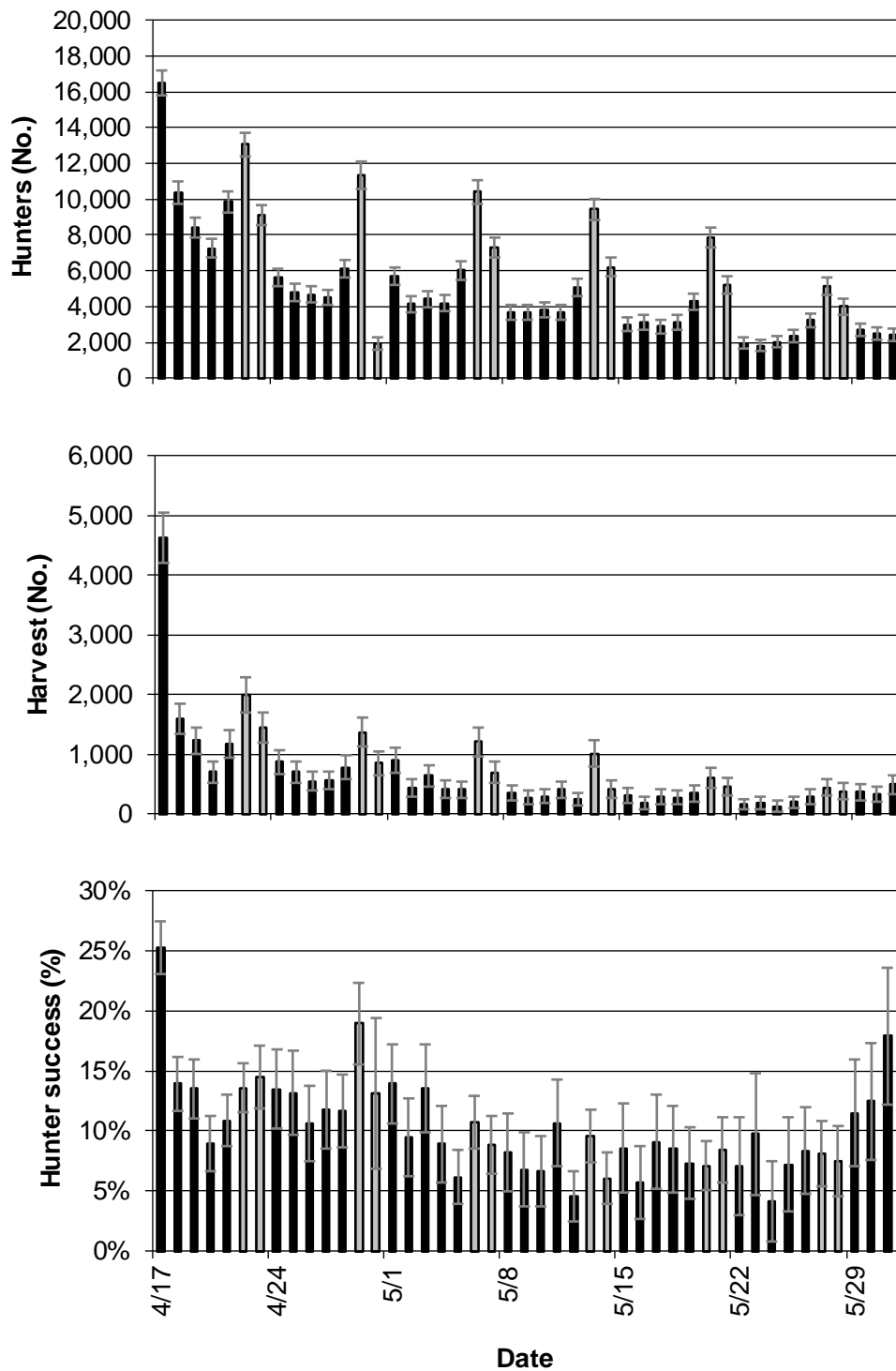


Figure 7. Estimated number of hunters, harvest, and hunter success by date during the 2017 Michigan spring turkey hunting season (includes all hunts). An additional  $1,765 \pm 277$  birds were taken on unknown dates. Gray-shaded bars indicate weekends. Vertical bars represent the 95% confidence interval.

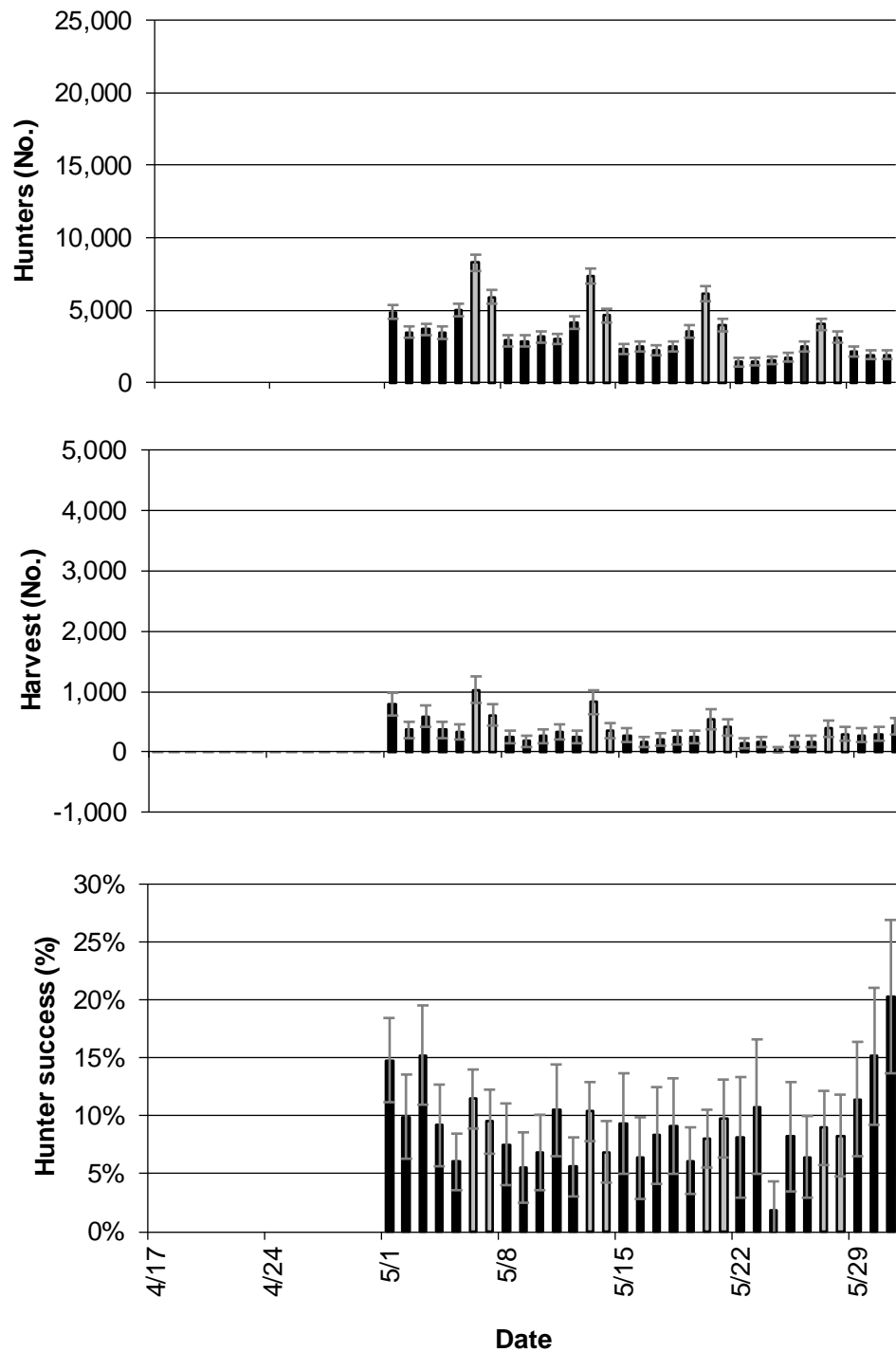


Figure 8. Estimated number of hunters, harvest, and hunter success by date during Hunt 234 of the 2017 Michigan spring turkey hunting season (May 1-31). An additional  $678 \pm 185$  birds were taken on unknown dates. Gray-shaded bars indicate weekends. Vertical bars represent the 95% confidence interval.



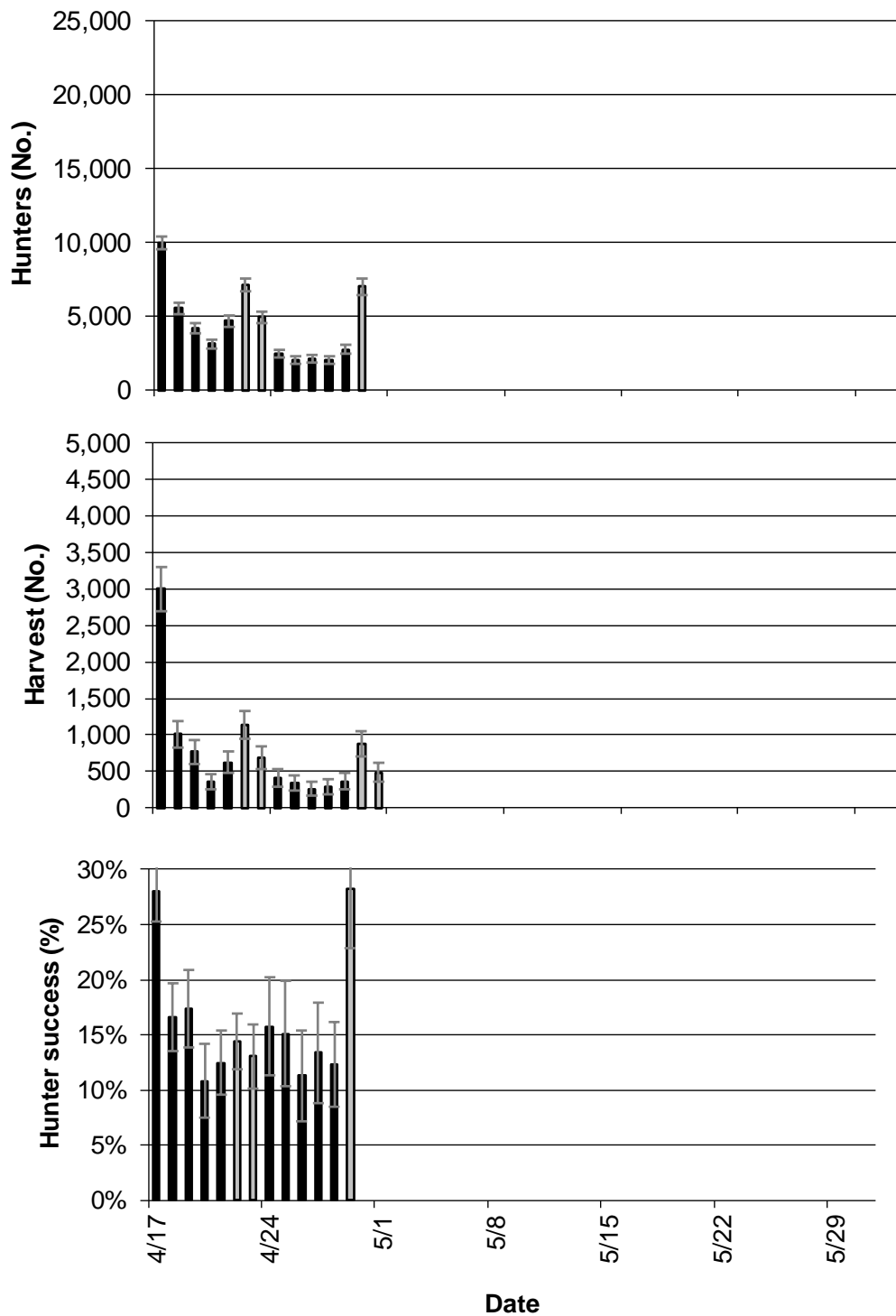


Figure 9. Estimated number of hunters, harvest, and hunter success by date during Hunt 301 of the 2017 Michigan spring turkey hunting season ( April 17-30). An additional  $855 \pm 174$  birds were taken on unknown dates. Gray-shaded bars indicate weekends. Vertical bars represent the 95% confidence interval.

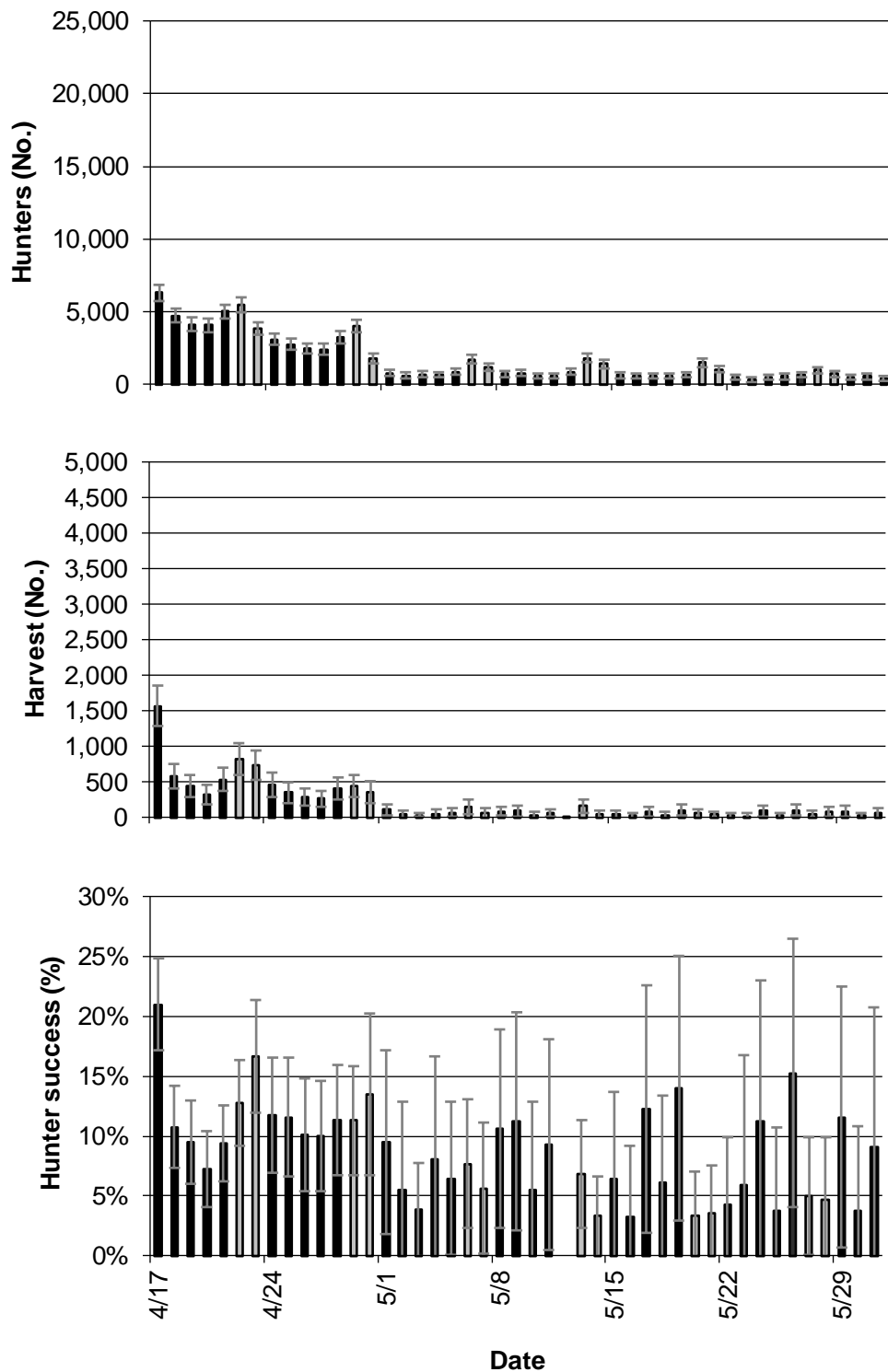


Figure 10. Estimated number of hunters, harvest, and hunter success by date during all hunts, except for mentored youth hunts and hunts 234 and 301 of the 2017 Michigan spring turkey hunting season. An additional  $207 \pm 111$  birds were taken on unknown dates. Gray-shaded bars indicate weekends. Vertical bars represent the 95% confidence interval.

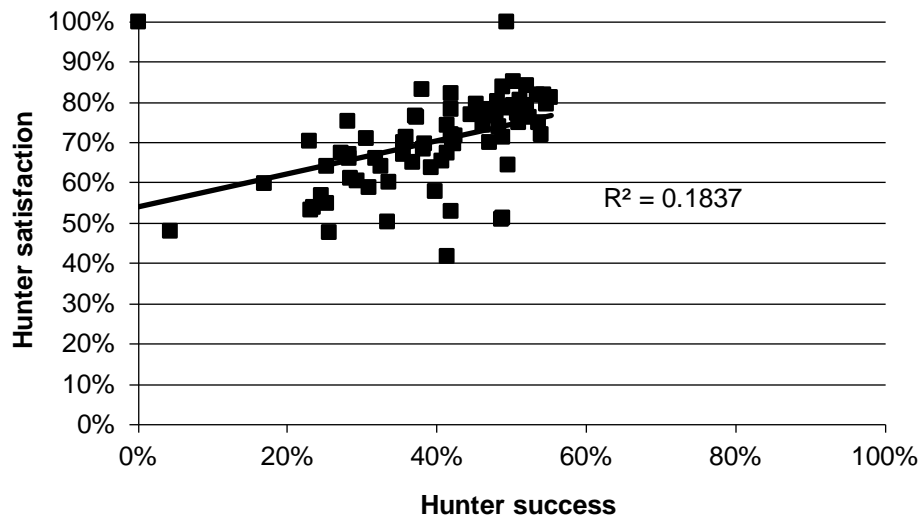


Figure 11. Relationship between hunter satisfaction (expressed as the percentage of hunters rating their hunting experience as excellent, very good, or good) and hunter success for each of 81 counties in Michigan during the 2017 spring turkey hunting season (included only counties with at least 30 hunters).

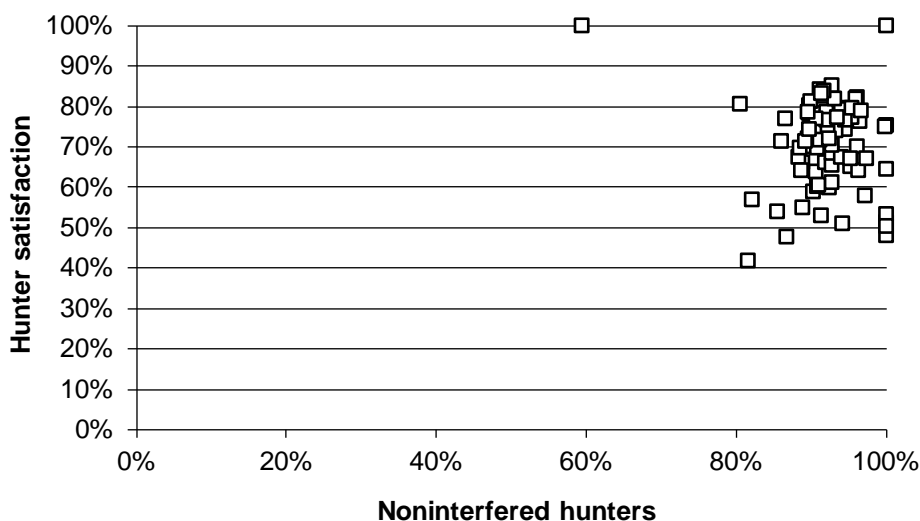


Figure 12. Relationship between hunter satisfaction (expressed as the percentage of hunters rating their hunting experience as excellent, very good, or good) and hunter interference for each of 81 counties in Michigan during the 2017 spring turkey hunting season (included only counties with at least 30 hunters). Noninterfered hunters were the proportion of hunters that indicated that they experienced no or only minor interference from other hunters.

## APPENDIX A

### Questionnaire used for the 2017 Spring Turkey Harvest Survey.



MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WILDLIFE DIVISION  
PO BOX 30030 LANSING MI 48909-7530

### 2017 MICHIGAN SPRING TURKEY HUNTER REPORT

This information is requested under authority of Part 435, 1994 PA 451, M.C.L. 324.43539.



*It is important that you complete and return this questionnaire even if you did not hunt or harvest a turkey.  
If you did not hunt, please answer "No" to question 1 and return this report.*

1. Did you hunt turkeys during the 2017 spring season? <sup>1</sup> ☐ Yes <sup>2</sup> ☐ No; skip remaining questions.

2. Did you hunt with a firearm, crossbow, or bow? (select all that apply)

<sup>1</sup> ☐ Firearm <sup>2</sup> ☐ Crossbow <sup>3</sup> ☐ Bow (recurve, compound, or long bow)

3. If you hunted, please complete the adjacent table: (If you hunted on both public and private lands in the same county or unit, report your activity on separate lines. If you hunted in Unit ZZ, please report the subunit you hunted.)

County hunted (e.g., Kent County)	Unit hunted (see map on back)	Land ownership (please check one)	Number of days hunted
		<sup>1</sup> <input type="checkbox"/> Private	
		<sup>2</sup> <input type="checkbox"/> Public	
		<sup>1</sup> <input type="checkbox"/> Private	
		<sup>2</sup> <input type="checkbox"/> Public	
		<sup>1</sup> <input type="checkbox"/> Private	
		<sup>2</sup> <input type="checkbox"/> Public	

4. Using the adjacent calendar, please circle [O] the days that you hunted. Circle only the days you actually went afield to hunt turkeys.

April 2017							May 2017						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
								1	2	3	4	5	6
							7	8	9	10	11	12	13
							14	15	16	17	18	19	20
		17	18	19	20	21	21	22	23	24	25	26	27
23	24	25	26	27	28	29	28	29	30	31			
30													

5. Did you harvest a turkey during the 2017 spring season? Only count turkeys tagged with your kill tag. <sup>1</sup> ☐ Yes <sup>2</sup> ☐ No; skip to question 7.

April 2017							May 2017						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
								1	2	3	4	5	6
							7	8	9	10	11	12	13
							14	15	16	17	18	19	20
		17	18	19	20	21	21	22	23	24	25	26	27
23	24	25	26	27	28	29	28	29	30	31			
30													

6. If you placed your harvest tag on a turkey, please mark [X] the date that the turkey was harvested.

A. In what county and unit was the turkey taken (refer to map on backside)?

Please write in county name

Please write in hunting unit

B. Which option best describes the bird that you tagged?

<sup>1</sup> ☐ Male with a beard less than 6 inches

<sup>2</sup> ☐ Male with a beard 6 or more inches

<sup>3</sup> ☐ Female with a beard

C. What type of land was the turkey harvested?

<sup>1</sup> ☐ Private

<sup>2</sup> ☐ Public

D. What type of device was used to harvest your turkey?

<sup>1</sup> ☐ Firearm

<sup>2</sup> ☐ Crossbow

<sup>3</sup> ☐ Bow (recurve, compound, or long bow)

7. Overall, how would you rate your 2017 spring turkey hunting experience?

<sup>1</sup> ☐ Excellent

<sup>2</sup> ☐ Very Good

<sup>3</sup> ☐ Good

<sup>4</sup> ☐ Fair

<sup>5</sup> ☐ Poor

8. How would you describe interference by other hunters during your 2017 spring turkey hunt?

<sup>1</sup> ☐ None

<sup>2</sup> ☐ Minor

<sup>3</sup> ☐ Some irritation

<sup>4</sup> ☐ Major problem

9. Compared to last year, what is the status of turkeys in the county you preferred to hunt in 2017?

<sup>1</sup> ☐ Increasing

<sup>2</sup> ☐ Decreasing

<sup>3</sup> ☐ Stable

<sup>4</sup> ☐ Unknown

This map displays the hunting units of Michigan, categorized by whether they are open to hunting. The units are labeled with letters and numbers: A, B, J, K, E, F, ZB, ZA, ZC, ZD, ZE, ZF, and ZG. The map also shows county boundaries and names, such as Keweenaw, Ontonagon, Baraga, Houghton, Gogebic, Iron, Marquette, Alger, Luce, Chippewa, Mackinac, Schoolcraft, Delta, Dickinson, Menominee, Beaver Island Group, Emmet, Cheboygan, Presque Isle, Montmorency, Alpena, Antrim, Otsego, Charlevoix, Kalkaska, Grand Traverse, Benzie, Leelanau, Manistee, Wexford, Mason, Osceola, Lake, Clare, Gladwin, Arenac, Huron, Tuscola, Sanilac, Lapeer, St. Clair, Macomb, Wayne, Monroe, Lenawee, Hillsdale, Branch, St. Joseph, Cass, Van Buren, Kalama-zoo, Barry, Eaton, Ingham, Livingston, Oakland, Washtenaw, Jackson, Calhoun, Berrien, Muskegon, Oceana, Newaygo, Mecosta, Isabella, Midland, Bay, Saginaw, Gratiot, Clinton, Shawansee, Genesee, and Allegan. A legend indicates that units open to hunting are shaded gray, unit boundaries are solid lines, and county boundary lines are dashed. A scale bar shows distances up to 40 miles, and a north arrow is present. A note specifies that Unit M is all of the Upper Peninsula, except Isle Royale.

**Please note if you hunted Turkey Management Unit ZZ.** Turkey Management Unit ZZ consisted of 6 smaller management units (subunits) in southern Michigan. If you hunted in Unit ZZ, please report which of these smaller subunits you hunted (i.e., units ZA, ZB, ZC, ZD, ZE, ZF).