



# 1999 MICHIGAN FALL TURKEY HUNTER SURVEY

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## ABSTRACT

*A survey of turkey hunters was conducted following the 1999 fall hunting season to determine turkey harvest and hunter participation. In 1999, an estimated 15,925 hunters harvested 6,451 turkeys, nearly three times as many birds as were taken last year. About 41% of hunters successfully harvested a turkey. About 60% of the hunters rated their hunting experience as excellent, very good, or good.*

## INTRODUCTION

In 1999, seven management units totaling 24,526 sq. miles were open for fall turkey (*Meleagris gallopavo*) hunting during October 4-November 9 (Fig. 1). The Wildlife Bureau used a random drawing to allocate 18,244 licenses among applicants for these licenses. Any licenses available after the drawing were made available on a first-come, first-served basis to applicants that were unsuccessful in the drawing. Licenses were valid on all land ownership types (i.e., public and private land) and allowed a hunter to take one turkey of either sex.

The Wildlife Bureau has the authority and responsibility to protect and manage the wildlife resources of the State of Michigan. Harvest surveys are one of the primary management tools used by the Wildlife Bureau to accomplish its statutory responsibility. Estimating harvest, hunting effort, and hunter satisfaction are among the primary objectives of these surveys.

## METHODS

Following the 1999 fall turkey hunting season, a questionnaire was sent to 3,334 randomly selected people that had purchased a hunting license. Hunters receiving the questionnaire were asked to report whether they hunted, number of days spent afield, and whether they harvested a turkey. Successful hunters also were asked to report where their turkeys were taken (public or private land) and beard length of the harvested bird. Birds with a beard <4 inches were classified as juveniles (<1 year old), while birds with longer beards were adults ( $\geq 1$  year old). Finally, all license buyers were asked to rate their overall hunting experience.

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Estimates were calculated using a stratified random sampling design (Cochran 1977) and were presented along with their 95% confidence limit (CL). This confidence limit can be added and subtracted from the estimate to calculate the 95% confidence interval. The confidence interval is a measure of the precision associated with the estimate and implies that the true value would be within this interval 95 times out of 100.

Questionnaires were mailed initially during late November 1999, and a reminder note and two follow-up questionnaires were mailed to nonrespondents. Although 3,334 people were sent the questionnaire, 28 surveys were undeliverable resulting in an adjusted sample size of 3,306. Questionnaires were returned by 3,026 people, yielding a 92% adjusted response rate.

## RESULTS

In 1999, 18,244 licenses were purchased for the fall turkey hunting season, and 15,925 of the license buyers hunted turkeys (Table 1). These hunters spent 76,677 days afield pursuing turkeys ( $\bar{x} = 4.8$  days/hunter) and harvested 6,451 birds. Most of these hunters were men ( $15,021 \pm 309$ ), although nearly 6% of the hunters were women ( $896 \pm 176$ ).

The 1999 fall turkey harvest was the largest harvest in Michigan's history (Fig. 2). It was 11% higher than the 1992 harvest of 5,805, the previous record harvest. Moreover, the 1999 harvest was nearly three times higher (180%) than last year. Factors contributing to the record harvest included a larger turkey population, more areas available for hunting, and greater hunter numbers. Nearly twice as much area was open to turkey hunting in 1999 compared to 1998. Moreover, the number of turkey hunters increased by 179% since last year. About 41% of the hunters harvested a turkey in 1999, which was comparable to previous years.

About 45% of the harvested birds had a beard ( $2,895 \pm 291$ ). Most of these bearded birds (66%) were adults ( $1,906 \pm 243$ ); 34% were juvenile birds ( $984 \pm 181$ ). Of the 6,451 turkeys harvested in 1999, 79% of these birds were taken on private land ( $5,116 \pm 357$  birds). About 19% of the harvest ( $1,228 \pm 222$  birds) was taken on public land. Additionally, a few birds ( $93 \pm 68$  birds) were harvested from land of unknown ownership.

Of the 15,925 turkey hunters in 1999, about 60% rated their hunting experience as either excellent ( $2,792 \pm 291$  hunters), very good ( $2,887 \pm 290$ ), or good ( $3,866 \pm 334$ ). Nearly 18% of the hunters rated their experience as fair ( $2,808 \pm 299$  hunters). Only 13% of the hunters rated their experience as poor ( $2,083 \pm 264$  hunters). Additionally, about 9% of the hunters ( $1,489 \pm 207$  hunters) failed to rate their hunting experience.

Hunter satisfaction was similar between 1998 and 1999. Changes in hunter satisfaction generally parallel changes in hunter success. Both hunter success and satisfaction were similar between 1998 and 1999.

## LITERATURE CITED

Cochran, W. G. 1977. Sampling techniques. John Wiley & Sons, New York. 428pp.



Table 1. Number of hunters, harvest, and hunting efforts during the 1999 Michigan fall turkey hunting season.

Management unit	Licenses available	Number of applicants <sup>a</sup>	Licenses sold	Hunters		Hunting efforts (days)			Harvest		Hunting success (%)
				Total	95% CL	Total	95% CL	Total	95% CL		
A	1,250	3,159	811	703	35	3,343	467	229	47	33	
D	5,000	2,602	2,280	1,900	112	8,572	1,027	626	134	33	
E	5,000	3,719	3,093	2,557	148	12,180	1,660	907	178	35	
H	4,700	8,818	3,203	2,804	136	12,635	1,558	1,210	200	43	
J	6,000	4,298	3,432	3,167	117	13,728	1,708	1,420	217	45	
M	1,100	787	573	500	20	2,476	250	264	30	53	
N	2,100	851	616	548	17	2,455	176	303	28	55	
O	2,600	1,085	772	679	23	3,528	308	363	35	53	
G	200	1,053	129	113	5	599	64	51	8	45	
GA	1,000	1,172	652	604	22	3,808	451	207	38	34	
L	850	1,440	593	527	23	2,962	349	193	35	37	
P	100	179	74	66	3	450	45	22	4	33	
PA	200	312	128	105	6	667	92	27	6	26	
PB	200	435	142	132	4	840	103	36	7	27	
S	200	643	142	131	5	816	83	35	8	27	
W	1,600	1,657	1,067	890	51	4,550	731	376	65	42	
Y	200	307	130	121	4	629	79	43	7	36	
YA	600	874	407	377	13	2,439	289	137	24	36	
Statewide	32,900	33,391	18,244	15,925	270	76,677	3,248	6,451	386	41	

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



Table 2. How hunters rated their hunting experience during the 1999 Michigan fall turkey hunting season.

Management unit	Satisfaction level (% of hunters)					No answer
	Excellent	Very good	Good	Fair	Poor	
A	15	18	24	17	13	13
D	11	20	21	21	19	9
E	17	11	24	19	17	13
H	19	17	24	24	11	5
J	20	21	28	14	12	6
M	17	21	24	18	11	10
N	23	25	23	12	8	9
O	19	24	23	14	9	10
G	27	15	25	17	7	9
GA	18	16	21	20	11	15
L	20	19	27	8	9	16
P	18	24	20	14	12	14
PA	19	15	27	15	15	8
PB	20	15	22	16	15	12
S	19	19	19	14	12	16
W	16	19	27	15	12	12
Y	17	25	20	12	11	15
YA	20	23	19	14	11	14
Statewide	18	18	24	18	13	9

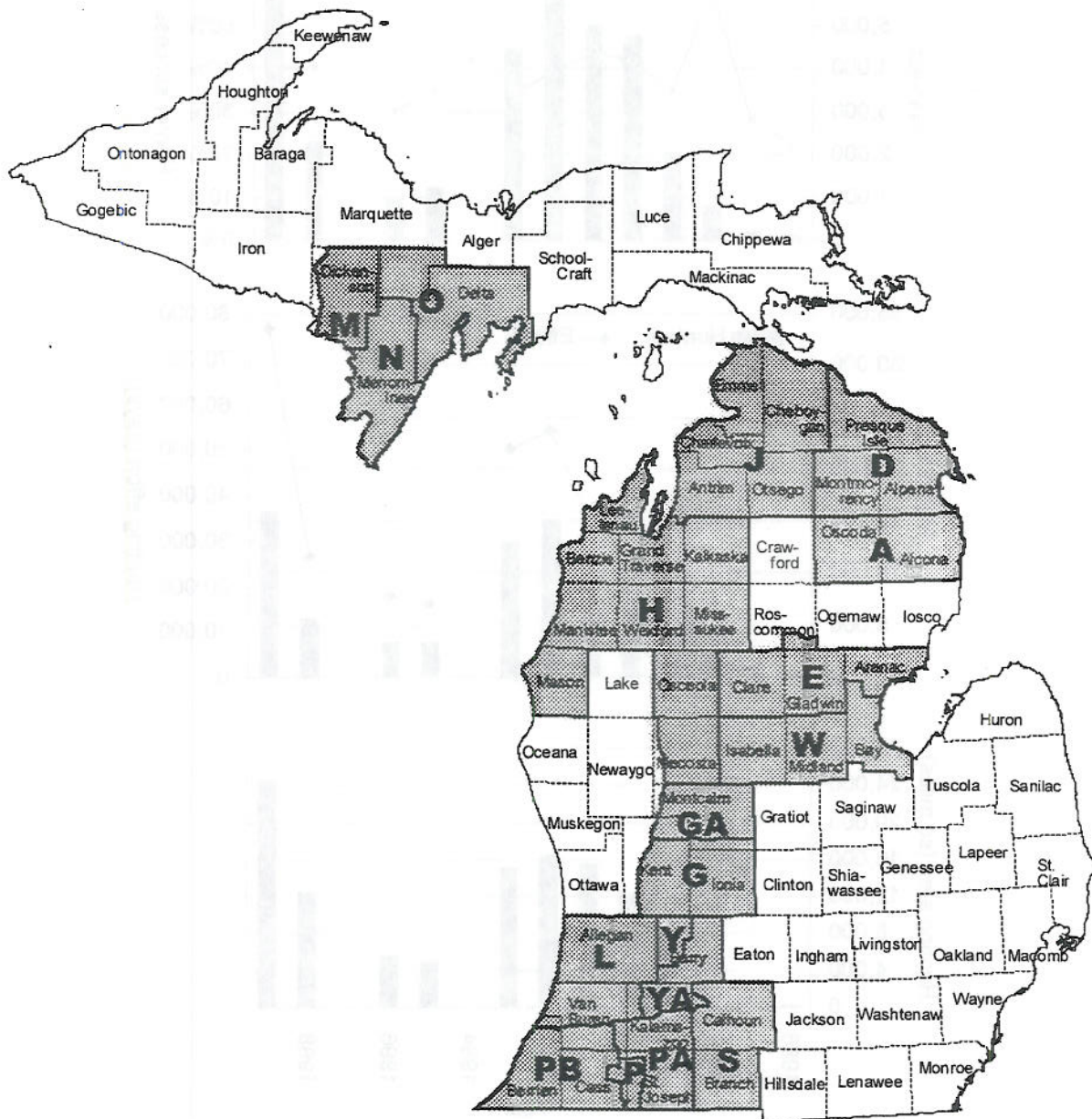


Figure 1. Management units in Michigan open for fall turkey hunting in 1999.

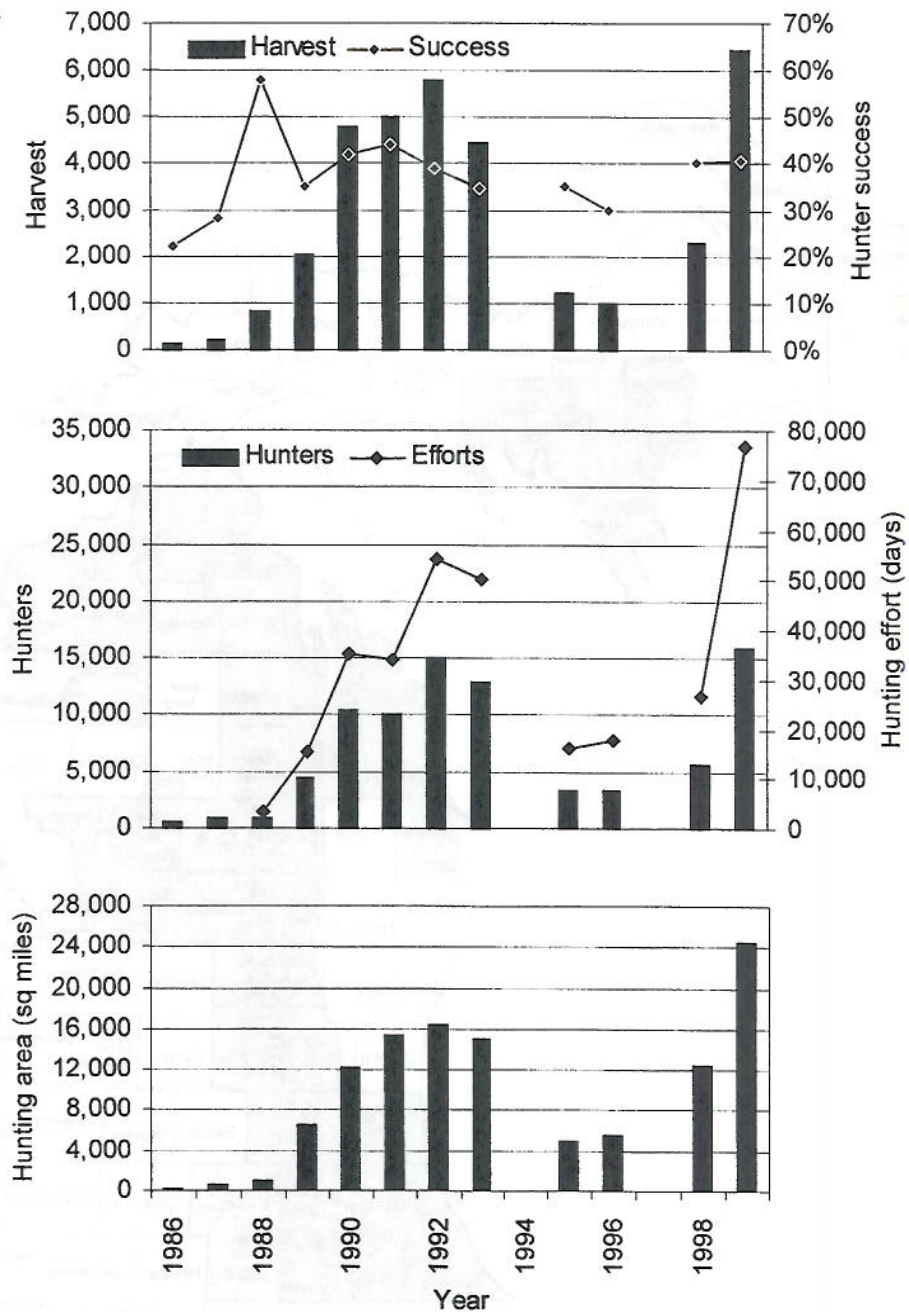


Figure 2. Number of hunters, harvest, hunting efforts, and hunting success during the fall turkey hunting season, 1986-1999. Turkeys were not hunted during the fall in 1994 and 1997.