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2012 DEER HUNTER OPINION SURVEY

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ABSTRACT

A random sample of 5,697 deer hunting license buyers were contacted after the 2012 deer hunting season to (1) estimate importance of deer hunting and motives of deer hunters in Michigan, (2) quantify hunter activity during the past three deer hunting seasons, and (3) determine deer hunters' opinions on various hunting regulations. Most licensees (86%) indicated hunting deer was either one of their most important recreational activities or the most important activity. Among hunters who purchased a deer hunting license in 2012, 99% of these licensees spent time in the field hunting deer during the past three years (667,995 deer hunters). Most deer hunters in the Upper Peninsula (52%), Northern Lower Peninsula (54%), and Southern Lower Peninsula (56%) supported additional restrictions on buck harvest. Although most Michigan deer hunters favored additional buck harvest restrictions, none of the buck harvest restrictions evaluated received higher support than the existing regulations (i.e., allow hunters to take a total of two bucks in any combination of seasons if one of those bucks has at least four antler points on one antler).



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INTRODUCTION

The Michigan Natural Resources Commission (NRC) and the Department of Natural Resources (DNR) have the authority and responsibility to protect and manage the wildlife resources of the state of Michigan. The NRC recognizes deer in Michigan as an important natural resource that should be maintained at a level providing quality recreation, and also not resulting in unacceptable impacts on public safety, native plant communities, agricultural, horticultural, and silvicultural crops (NRC Policy 2007). Annually the DNR considers, among other factors, deer numbers and hunter attitudes when developing deer hunting regulations. Estimating hunter participation, harvest, and hunting effort through annual harvest surveys and information from deer harvest check stations, deer pellet group surveys, reports of automobile accidents involving deer, and population modeling are some of the methods used to monitor deer population trends. Opinion surveys and other forms of public input are also used by the NRC and DNR to accomplish their statutory responsibility.

The opinions of Michigan deer hunters are obtained through three primary means: contacts with local biologists, NRC and DNR public meetings, and hunter opinion surveys. DNR professionals frequently discuss regulations with hunters at local public meetings and during informal contacts, including phone calls and letters. However, opinions obtained through these processes may not reflect those held by most deer hunters because these opinions often come from hunters with specific complaints or focus on local issues. Scientifically-designed opinion surveys of deer hunters are useful tools to supplement hunter opinions obtained locally and through public meetings.

Hunting white-tailed deer is an important recreational activity in Michigan. An estimated 648,000 hunters spent 9.6 million days afield deer hunting, and harvested approximately 422,000 deer in Michigan during 2011 (Frawley 2012). Identifying factors that influence the choices of deer hunters will assist managers in obtaining a better understanding of the impacts of hunting regulations. The major objectives of this study were to (1) estimate importance of deer hunting to deer hunters in Michigan, (2) quantify hunter activity and hunting strategies during the past three deer hunting seasons, and (3) determine deer hunters' opinions on various hunting regulations.

METHODS

Following the 2012 deer hunting seasons, a questionnaire (Appendix A) was sent to 5,697 randomly selected people who purchased a 2012 deer hunting license and were at least 20 years old by October 1, 2012. The people selected were grouped into one of three strata on the basis of their region of residence (Figure 1). The strata consisted of people residing in (1) the Upper Peninsula [UP], (2) northern Lower Peninsula [NLP], and (3) southern Lower Peninsula [SLP]. The sample consisted of 1,899 people from each stratum. Although nonresidents typically comprise about 2-3% of the deer hunting license buyers (Frawley 2006), nonresidents were not included in the sample.

Questionnaires were mailed initially in mid-February 2013. Up to two follow-up questionnaires were sent to non-respondents. Questionnaires were undeliverable to

118 people, primarily because of changes in residence. Questionnaires were returned by 3,228 of 5,579 people receiving the questionnaire (58% response rate).

Estimates were calculated using a stratified random sampling design (Cochran 1977). Using stratification, hunters were placed into similar groups (strata) based on their region of residence, and estimates were derived for each group separately. The statewide estimate was then derived by combining group estimates so the influence of each group matched the frequency its members occurred in the statewide population of hunters. The primary reason for using a stratified sampling design was to produce more precise estimates. Improved precision means similar estimates should be obtained if this survey were to be repeated. Stratified sampling also helps ensure we obtain sufficient responses from each stratum.

Some individuals did not answer all survey questions. We calculated all percentages of responses to each question based on the total number of respondents that provided an answer for that question. For each question, generally, 1-3% of respondents failed to provide an answer.

In addition to statewide estimates, estimates were derived separately for the region where hunters most often hunted (UP, NLP, and SLP). Estimates were calculated along with their 95% confidence limit (CL). In theory, this CL 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 the true value would be within this interval 95 times out of 100. Unfortunately, there are several other possible sources of error in surveys that are probably more serious than theoretical calculations of sampling error. They include failure of participants to provide answers (nonresponse bias), question wording, and question order. It is difficult to measure these biases. Thus, estimates were not adjusted for possible bias.

Statistical tests are used routinely to determine the likelihood the differences among estimates are larger than expected by chance alone. We used the overlap of 95% confidence intervals to determine whether estimates differed. Non-overlapping 95% confidence intervals was equivalent to stating the difference between the estimates 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).

RESULTS

General deer hunting background

Adult deer hunting license buyers in 2012 had spent a mean of 30 ± 1 years hunting deer in Michigan. Most people who purchased a deer hunting license ($85 \pm 2\%$) indicated hunting deer was either one of their most important recreational activities or their most important activity (Figure 2).

Deer hunting regulation setting process

The Michigan Natural Resources Commission (NRC) is a seven-member public body whose members are appointed by the governor. The NRC is responsible for regulating the method and manner of take of Michigan game species, including deer. The DNR provides scientific expertise, technical advice, and recommendations to the NRC related to harvest quotas, species management unit boundaries, and season dates. The DNR annually recommends the number of antlerless deer hunting licenses available for sale (license quota) and the areas where these licenses are valid. Proposed hunting regulations are reviewed at monthly NRC meetings. Members of the public are encouraged to attend and provide input about proposed regulations. After proposed regulations are presented and public input is provided, the NRC must wait for at least one month to decide whether to implement these recommendations.

Deer hunters were presented five statements regarding the DNR regulation setting process and asked whether they agreed or disagreed with these statements (Table 1). Statewide, about $54 \pm 2\%$ of deer hunters agreed the DNR provided adequate opportunities for hunters to have input about hunting regulations. About $49 \pm 2\%$ of deer hunters agreed the DNR uses the best available science when establishing regulations. Nearly $50 \pm 2\%$ of deer hunters agreed the DNR uses consistent decision-making procedures to establish regulations, and $49 \pm 2\%$ of deer hunters agreed the DNR explained the alternatives considered in their decision-making process. Overall, $54 \pm 2\%$ of deer hunters agreed they trusted the DNR to set deer hunting regulations.

Deer hunting activity during the past three years

Among hunters who purchased a deer hunting license in 2012, $99 \pm 1\%$ of these licensees spent time in the field hunting deer during the prior three years ($667,995 \pm 3,536$ deer hunters).

About $95 \pm 1\%$ of the 2012 deer hunters hunted during the firearm season in Michigan during the past three years. An estimated $61 \pm 2\%$ had hunted deer during the archery season and $49 \pm 2\%$ had hunted during the muzzleloader season over the same period. About $23 \pm 2\%$ had hunted in the special antlerless deer hunting seasons.

Most people hunted deer in the Lower Peninsula. About $54 \pm 2\%$ of hunters pursued deer in the NLP and $48 \pm 2\%$ hunted deer in the SLP. An estimated $18 \pm 1\%$ of the deer hunters hunted deer in the UP. The regions where hunters most frequently hunted were the NLP ($45 \pm 2\%$) and SLP ($39 \pm 2\%$). Only $13 \pm 1\%$ of deer hunters most frequently hunted in the UP.

An estimated $18 \pm 2\%$ of the Michigan deer hunters rated their hunting experiences during the past three years as excellent or very good, $34 \pm 2\%$ rated their experiences as good, $32 \pm 2\%$ rated their experiences as fair, and $16 \pm 2\%$ of deer hunters considered their experiences as poor (Table 2).

Most hunters were selective when choosing to harvest a buck during the archery

season (Table 3). About (42%) of archers targeted only large bucks during the entire archery season. Furthermore, 29% of archers passed on small bucks early in the season but were willing to take any buck late in the season. Only 21% of archers reported they would take the first legal buck they had an opportunity to take in the archery season.

Most hunters also indicated they were selective when choosing to harvest a buck during the firearm season (Table 3). About 36% of hunters sought only large bucks during the entire firearm season, and 28% of firearm hunters passed on small bucks early in the season but would take any buck late in the season. In contrast, 30% of hunters reported they would take the first legal buck they had an opportunity to take in the firearm season.

Deer hunter opinions and preferences for hunting regulations

Most deer hunters in the UP (52%), NLP (54%), and SLP (56%) supported additional restrictions on buck harvest (Table 4). Deer hunters were presented six management options designed to reduce harvest of antlered deer and asked whether they supported these options in the region where they most often hunted (Table 5). Statewide, most deer hunters ($67 \pm 2\%$) supported allowing hunters to take two bucks in any combination of seasons if one of those bucks has at least four antler points on one antler. Most hunters statewide ($52 \pm 2\%$) also supported requiring all male deer to be tagged with a buck tag. Hunters were nearly equally divided in opinion about regional antler-point restrictions (46% supported and 45% opposed these regional restrictions). A minority of hunters (18-37%) supported the remaining three restrictions (Table 5).

Most hunters indicated if they were restricted to harvesting one antlered deer per year (i.e., one buck rule) they would continue to be selective when harvesting a buck during the archery season (Table 6). An estimated 36% of archers would target only large bucks during the entire archery season. About 24% of archers would pass on small bucks early in the season but would take any buck late in the season. Only 15% of archers reported they would take the first legal buck they had an opportunity to take in the archery season. About 17% of hunters indicated they would be more likely to harvest an antlerless deer in the archery season if the one buck rule was adopted.

Most hunters also indicated they would be selective when harvesting a buck during the firearm season if a one buck rule was enacted (Table 6). About 29% of hunters would target only large bucks during the entire firearm season, and 26% of firearm hunters would pass on small bucks early in the season but would take any buck late in the season. About 28% of hunters reported they would take the first legal buck they had an opportunity to take in the firearm season. About 9% of hunters indicated they would be more likely to harvest an antlerless deer in the firearm season if the one buck rule applied.

Deer hunters were presented five management options designed to increase harvest of antlerless deer and asked whether they supported these options in the region where they most often hunted (Table 7). Statewide, most deer hunters (74%) supported

allowing hunters to take antlerless deer with either a firearm or combination license. Most hunters statewide (64%) also supported implementing a late firearm season in December for antlerless deer only. In addition, about 49% of hunters supported using antler-point restrictions to encourage harvest of antlerless deer (and discourage harvest of bucks). Most hunters opposed implementing an early antlerless season in September (63% opposition) and opposed an earn-a-buck system (58% opposition).

DISCUSSION

The most commonly hunted game species in Michigan during recent years has been deer (Frawley 2006). More deer hunters consider deer hunting as one of their more important recreational activities than hunters pursuing other game species (Frawley and Rudolph 2008). The importance of deer hunting in Michigan was similar among hunters in 2001, 2003, 2006, and 2012 (Figure 3).

This survey indicated most Michigan deer hunters in 2012 were satisfied with their hunting experiences during the previous three years (Table 2). Compared to 2006, the proportion of hunters in 2012 rating their hunting experience as poor was unchanged (Figure 4). However, a lower proportion of hunters in 2012 rated their hunting experience as excellent or very good than in 2006.

In 1981, 4% of Michigan firearm deer hunters indicated that taking a trophy buck was an important reason why they hunted deer (Ryel 1982). The interest of Michigan deer hunters in taking a large buck appears to have increased since that time. The proportion of archers indicating they would only take a large buck increased from 32% to 42% between 2006 and 2012, and the proportion of firearm hunters reporting they would only take large bucks increased from 28% to 36% during this same period (Figure 7).

Despite most deer hunters reporting they were satisfied with their hunting experiences during the previous three years, most deer hunters also supported additional restrictions on buck harvest (Table 4). Deer hunter satisfaction has also been monitored each year since 2008 (e.g., Frawley 2013). Generally, less than 25% of hunters have been satisfied by the number of antlered deer seen during the hunting seasons (Figure 5). Peyton and Bull (2001) also reported that about 70% of Michigan deer hunters believed there were too few mature bucks for harvest in 2001. In addition, 55% of deer hunters indicated the DNR should try to maintain an older age structure among bucks to produce more mature bucks (Peyton and Bull 2001).

We estimated support for a variety of regulations intended to increase deer hunter satisfaction, increase the number of bucks, and increase the number of mature bucks (Table 5). The only regulation, other than current restrictions, favored by most deer hunters was the requirement to tag all male deer (including antlered bucks, buck fawns, bucks with antlers shorter than three inches, and bucks with shed antlers) with a buck tag. This option is currently allowed, although existing regulations also allow hunters who take sub-legal bucks to tag them as antlerless deer. Hunters in 2001, 2006, and 2012 have consistently supported tagging all male deer with a buck tag (Figure 8).

Because it is often difficult to distinguish sub-legal bucks from antlerless deer while hunting, the DNR and NRC have been reluctant to implement such a requirement because it could deter hunters from taking antlerless deer, thus reducing harvest opportunities and the ability to manage deer populations.

Michigan has a long tradition of allowing anyone who wishes to hunt bucks to purchase a deer hunting license (unlimited buck hunting participation). Legal bucks have been defined as a deer with one antler three or more inches in length since 1921. Until 1986, hunters were limited to one antlered deer. Beginning that year a hunter could take two bucks during the firearm seasons and during the archery season, one buck in the UP or two bucks in the LP. Outside of a limited number of deer management units with special restrictions, hunters since 1998 could harvest two bucks in any combination of seasons if one buck had at least four antler points on one antler.

Over 50% of hunters reported they would support additional restrictions on buck harvest in the region where they hunted in 2012. The level of support for additional restrictions was similar among 2001, 2006 and 2013; however, support increased significantly in the SLP between 2006 and 2012 (Figure 9). Although most Michigan deer hunters favor additional buck harvest restrictions, no buck harvest restrictions evaluated in our study received higher support than the existing regulations (i.e., allow hunters to take a total of two bucks in any combination of seasons if one of those bucks has at least four antler points on one antler). Most hunters in both 2006 and 2012 supported maintaining a two-buck limit and an antler point restriction on one of the bucks (Figure 10).

Michigan deer hunters have been periodically (1993, 2001, 2006, and 2012) asked whether hunters should be allowed only one buck license each year, valid in any deer hunting season (one buck rule). A plurality of Michigan deer hunters statewide in all years except in 2001 did not support a one buck rule (Figure 11). In addition, a plurality of Michigan deer hunters statewide in both 2001 and 2006 did not support an earn-a-buck system (Figure 12).

Adopting a one-buck limit is sometimes suggested as a way to decrease total buck kill, decrease harvest of younger and smaller bucks, and to increase antlerless harvest. Yet a one buck rule does not appear to offer substantial changes in Michigan because 5% or less of Michigan deer hunters currently take two bucks (Frawley 2012). Furthermore, most hunters indicated they were selective when choosing to harvest a buck under current regulations (Table 3). In addition, Michigan hunters did not indicate they would be substantially more selective if they were limited to one buck (Table 6), and the proportion of firearm hunters that indicated they would take only a large antlered buck was less under a one buck limit (29%, compared to 36% under current regulations). Finally, less than 10% of firearm hunters indicated they would be more likely to take an antlerless deer under a one buck limit, though 17% of archery season hunters anticipated this tendency.

Overall, most Michigan deer hunters enjoyed their deer hunting experiences during the three previous years. Yet, most hunters were not satisfied with the number of antlered deer seen or deer taken. Most Michigan deer hunters wanted changes in hunting

outcomes, but appeared unwilling to accept limitations on their recreational opportunities to produce those outcomes. Furthermore, results suggest even more restrictive regulations (for example, limiting the number of buck tags or requiring an antlerless deer to be harvested before an antlered buck can be taken) would potentially be required to substantially alter the impact of harvest on deer populations. Our results suggest additional discussion with Michigan deer hunters and other stakeholders may be required in order to determine what tradeoffs are acceptable in order to address perceived problems with numbers of deer, bucks, and mature bucks while also addressing NRC and DNR goals to provide quality recreation and consider impacts of deer on other resources in Michigan.

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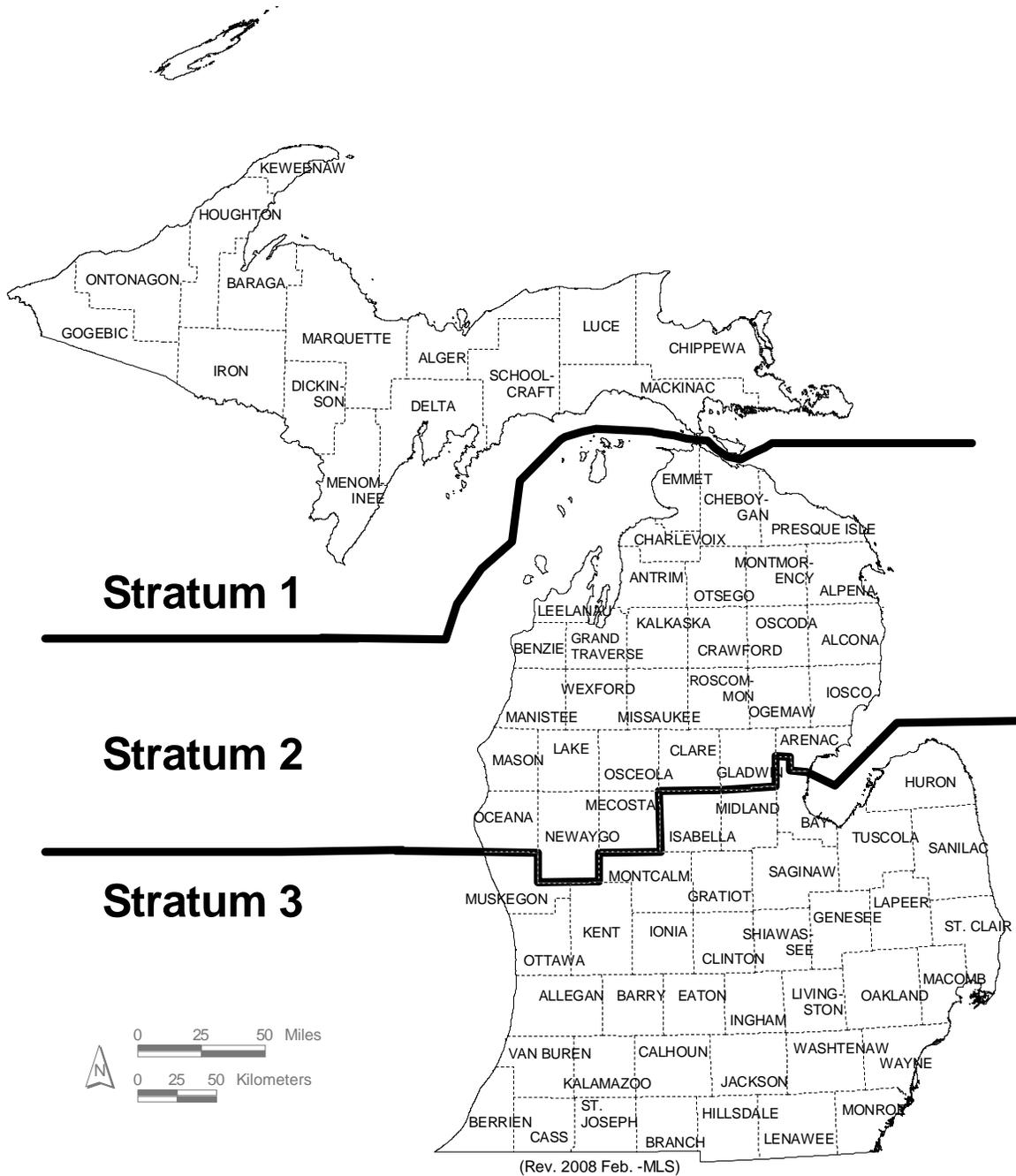


Figure 1. Stratum boundaries used for the selection of the sample for the Michigan deer hunter opinion survey, 2012. Nonresidents were not included in the sample.

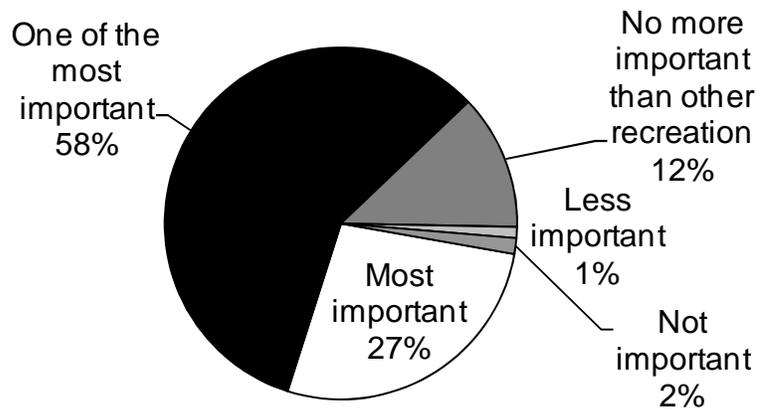


Figure 2. Importance of deer hunting as a recreational activity among deer hunting license buyers (% of license buyers) in Michigan, 2012.

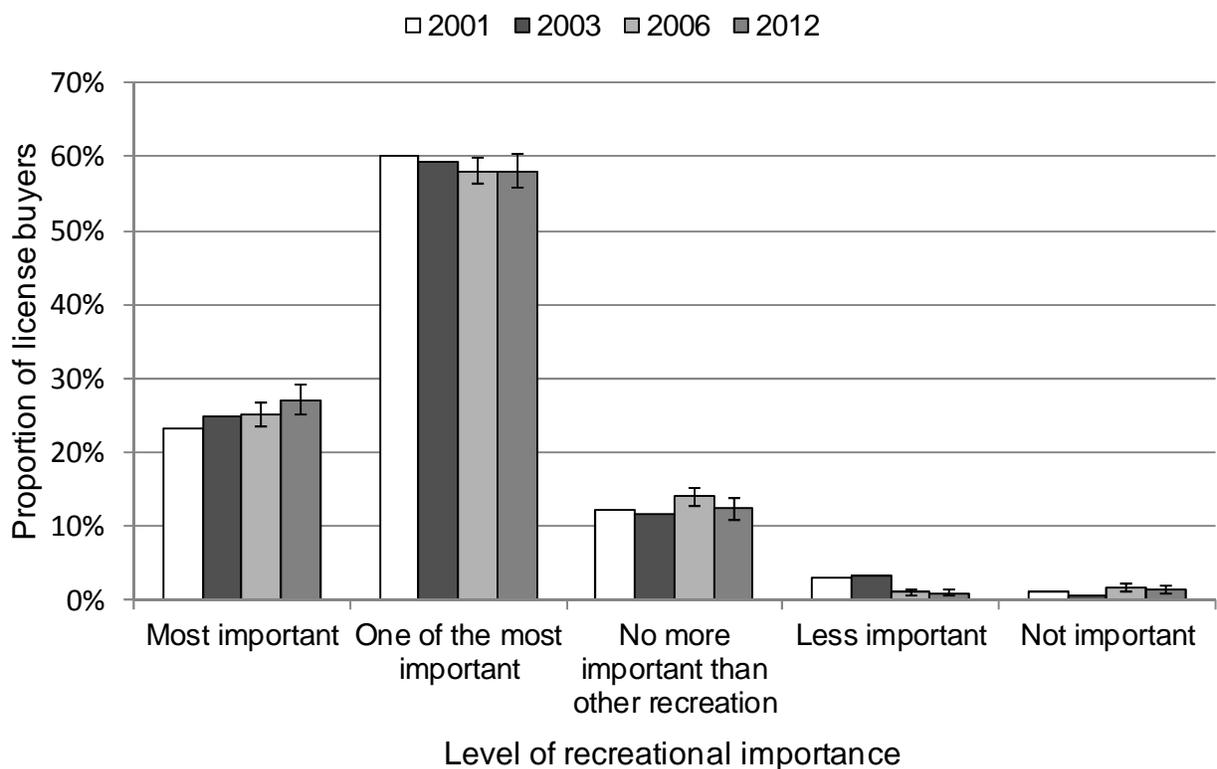


Figure 3. Importance of deer hunting as a recreational activity among hunting license buyers (% of license buyers) in Michigan. Sources of previous estimates: 2001 (Peyton and Bull 2001), 2003 (Bull et al. 2006) and 2006 (Frawley and Rudolph 2008).

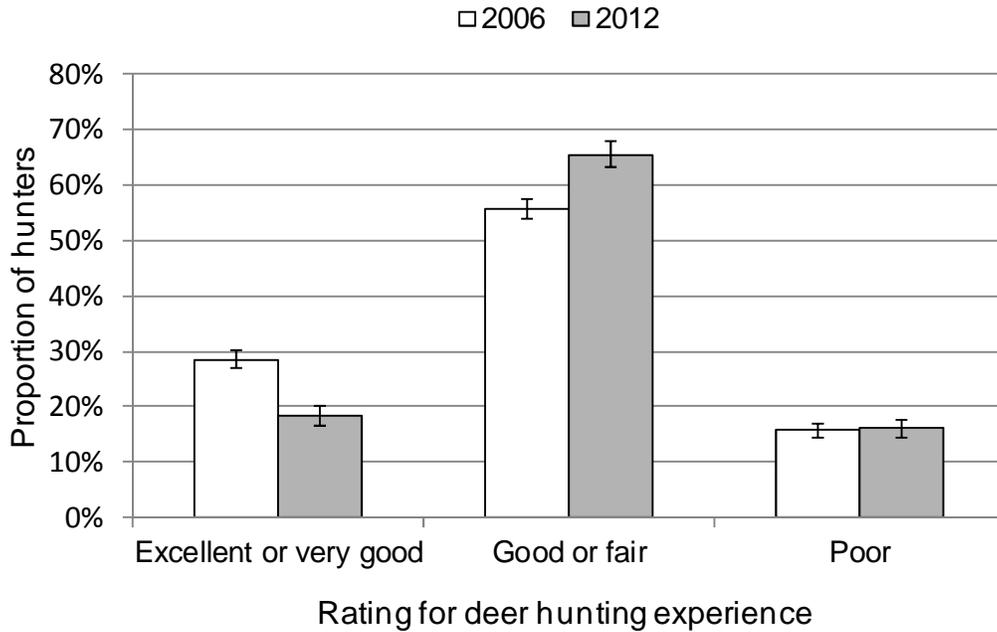


Figure 4. Rating of deer hunters in Michigan during the past three years, summarized in 2006 (Frawley and Rudolph 2008) and 2012.

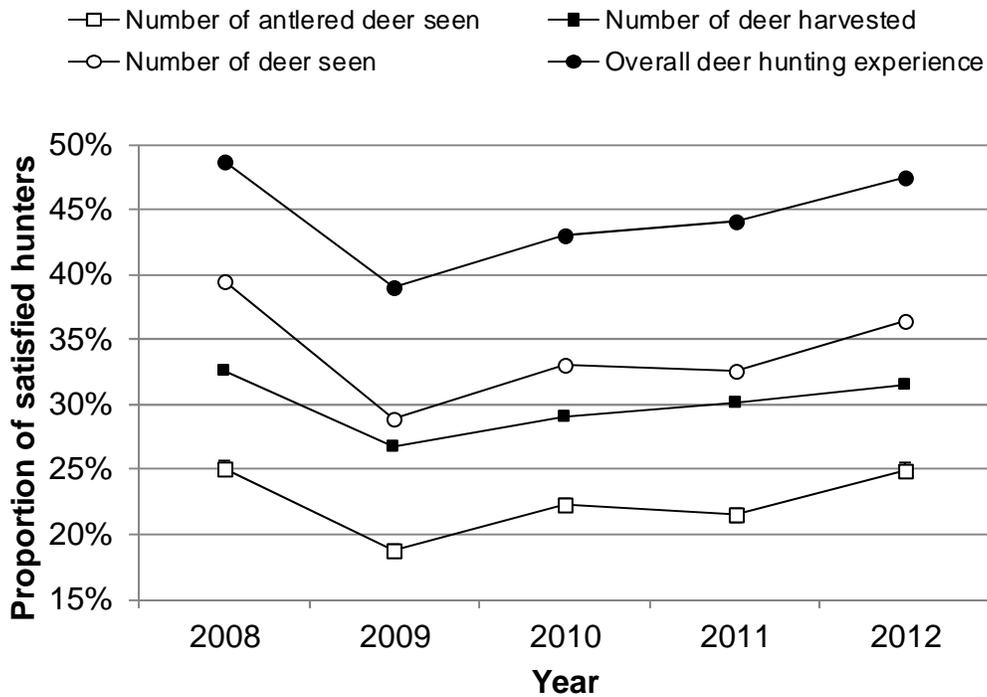


Figure 5. Proportion of deer hunters satisfied with the number of deer (and antlered deer) seen, number of deer harvested, and their overall deer hunting experience in Michigan during 2008-2012. (Estimates obtained from annual deer harvest survey; e.g., Frawley 2013). The 95% confidence limits were equal to about 1% for all estimates..

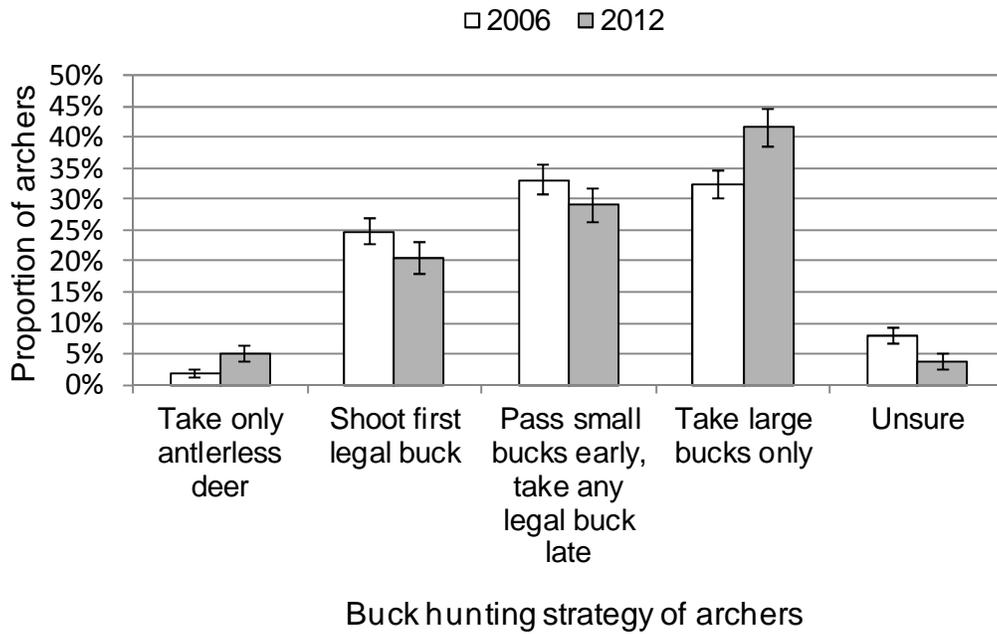


Figure 6. Buck hunting strategy of Michigan deer hunters during the archery deer hunting seasons in Michigan during past three years in 2006 (Frawley and Rudolph 2008) and 2012.

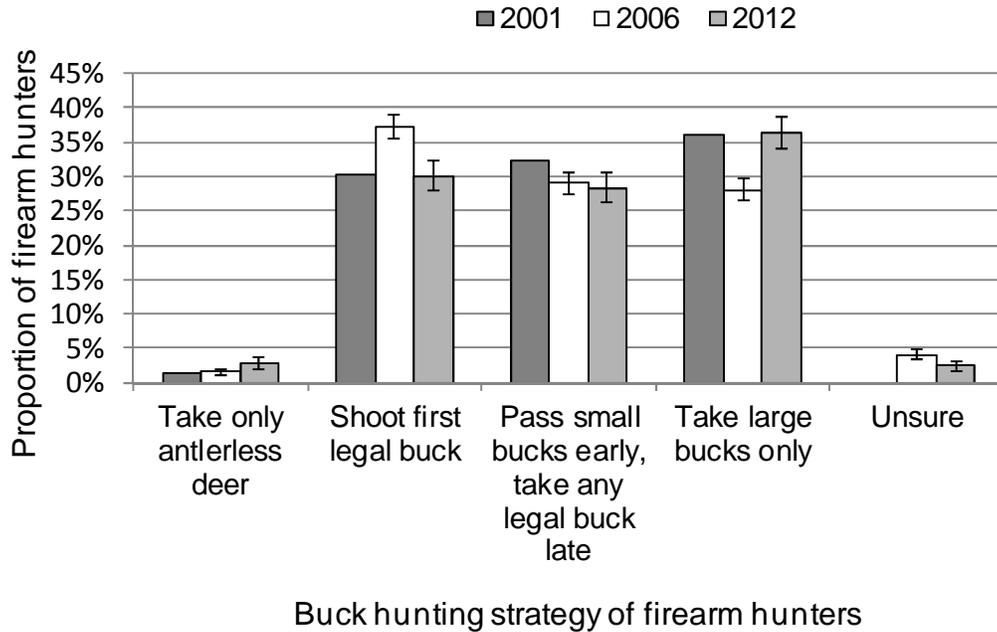


Figure 7. Buck hunting strategy of Michigan deer hunters during the firearm deer hunting seasons in Michigan during past three years. Sources of previous estimates: 2001 (Peyton and Bull 2001) and 2006 (Frawley and Rudolph 2008).

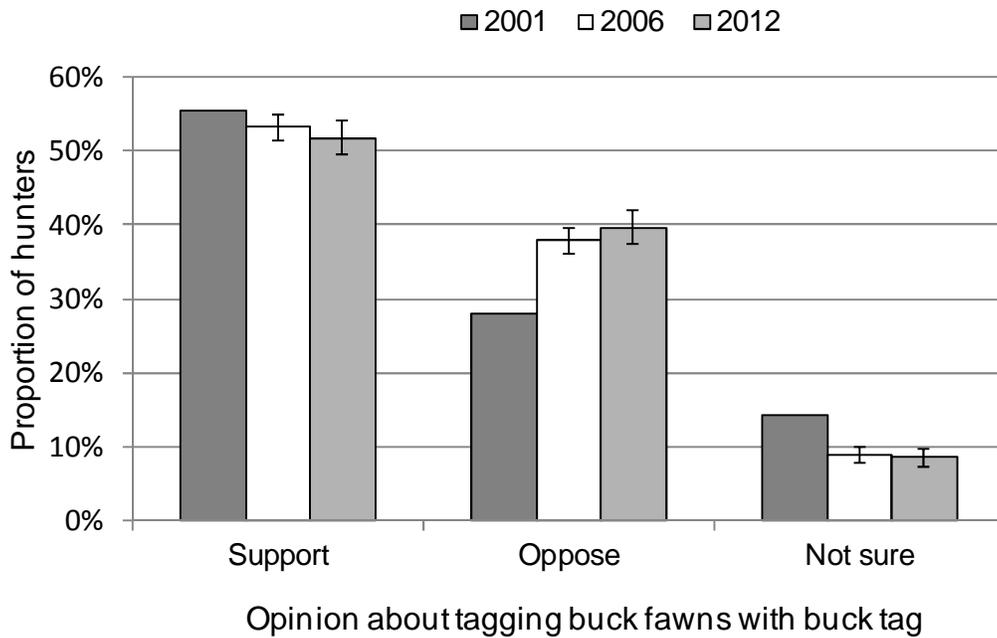


Figure 8. Proportion of hunters supporting regulations requiring all male deer (including antlered bucks, buck fawns, bucks with antlers shorter than three inches, and bucks with shed antlers) to be tagged with a buck tag in 2001 (Peyton and Bull), 2006 (Frawley and Rudolph 2008), and 2012.

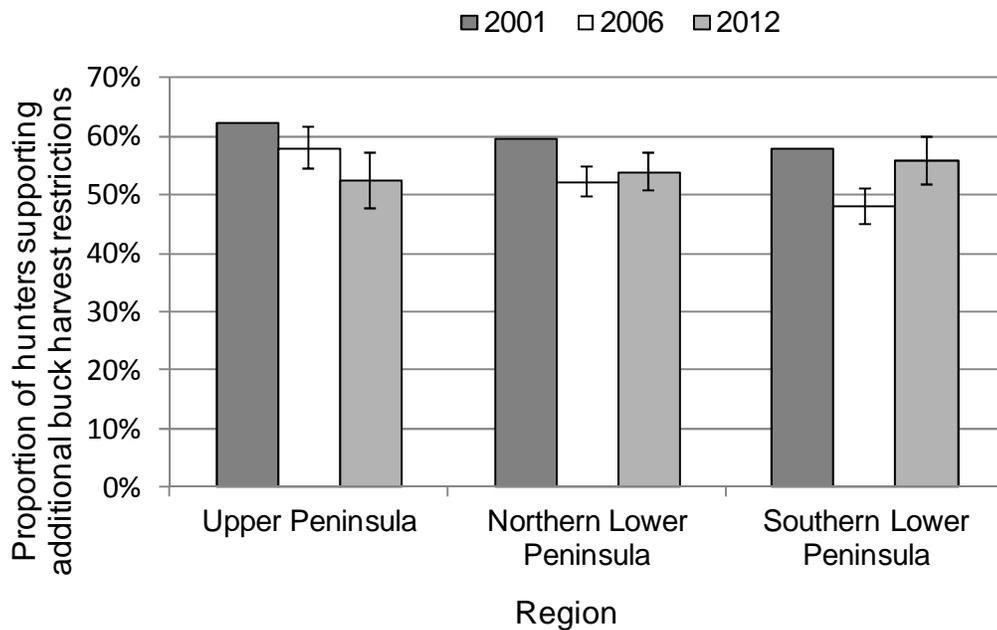


Figure 9. Proportion of deer hunters supporting additional restrictions on buck harvest in 2001 (Peyton and Bull 2001), 2006 (Frawley and Rudolph 2008), and 2012. The question for the 2001 estimates was not the same as used in 2006 and 2012. In 2001, hunters were asked whether they supported additional antler point restrictions to protect yearling bucks.

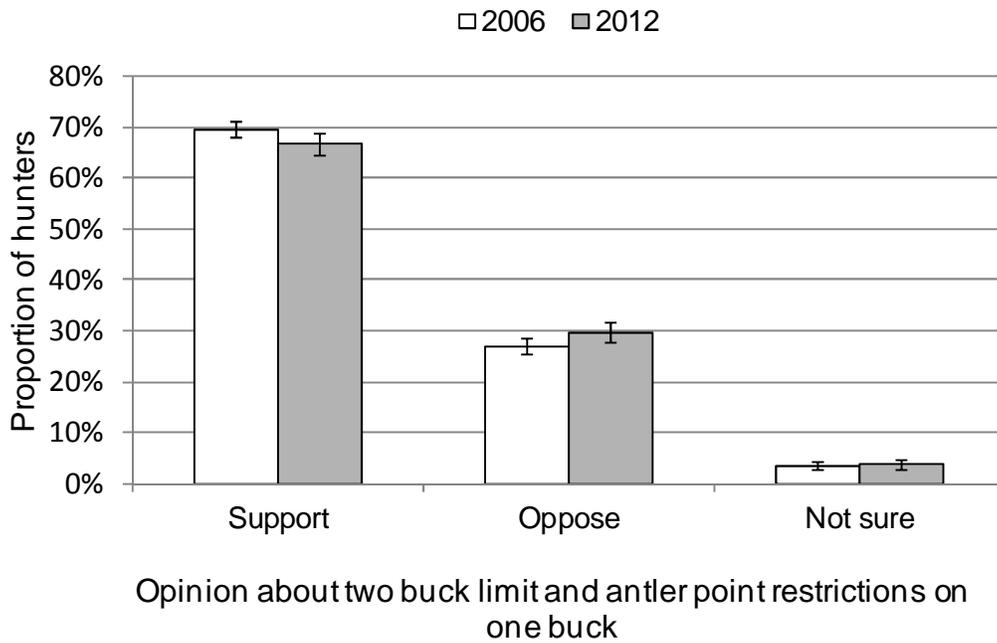


Figure 10. Proportion of deer hunters supporting the current regulations allowing hunters to harvest a total of two bucks in any combination of seasons if one of those bucks has at least 4 antler points on one antler in 2006 (Frawley and Rudolph 2008) and 2012.

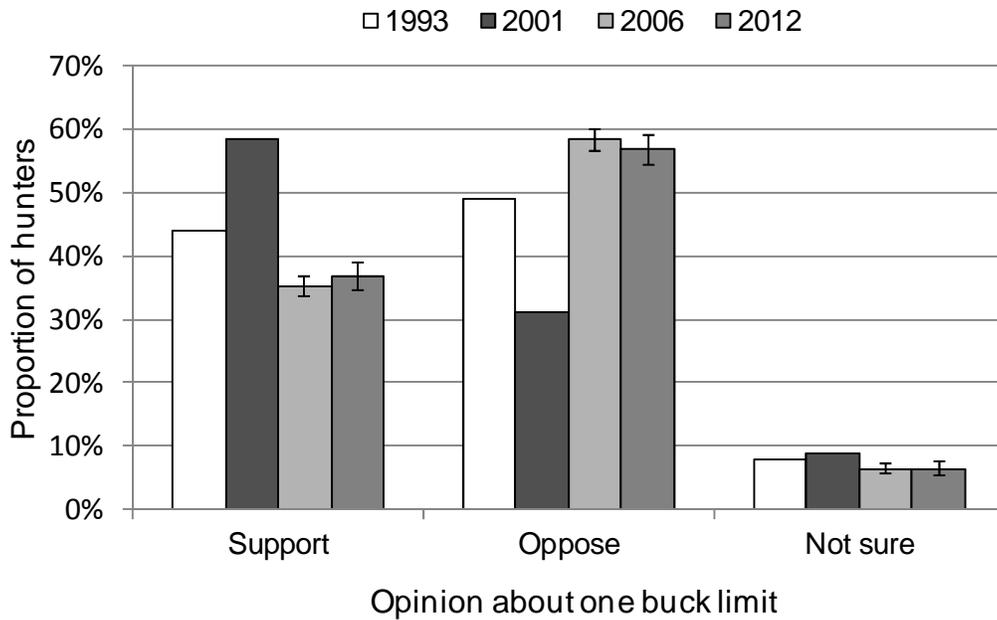


Figure 11. Proportion of hunters supporting regulations allowing only one antlered buck (no antler restrictions) per hunter per year in 1993 (unpublished DNR data), 2001 (Peyton and Bull 2001), 2006 (Frawley and Rudolph 2008) and 2012.

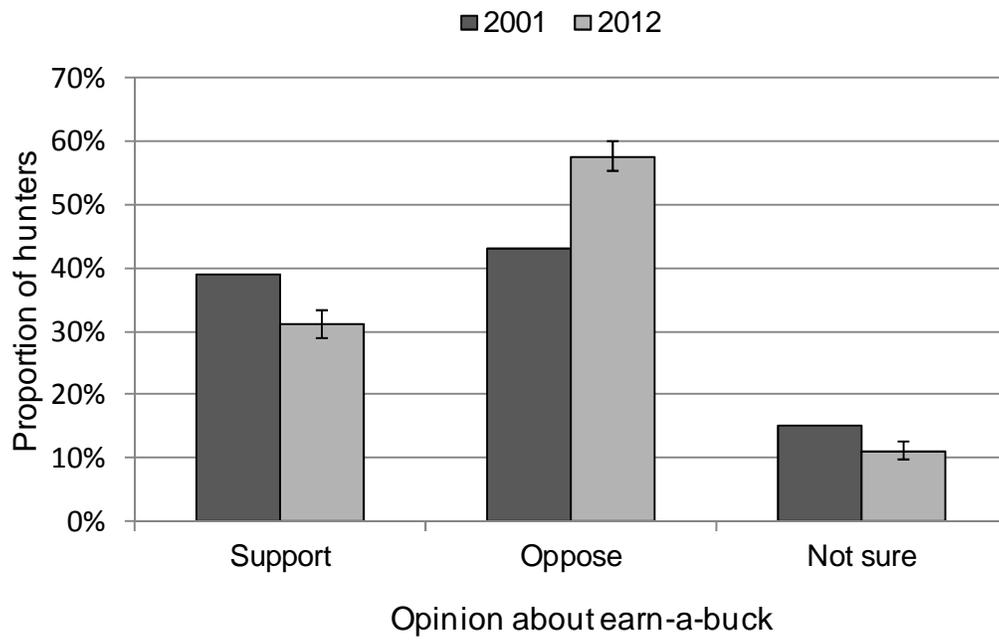


Figure 12. Proportion of hunters supporting an earn-a-buck system that requires hunters to take an antlerless deer before they may take a buck in 2001 (Peyton and Bull 2001) and 2012.

Table 1. Proportion of deer hunters agreeing or disagreeing with statements about the regulation setting process used by the DNR in Michigan, 2012.

Characteristic of regulation setting	Strongly agree		Agree		Disagree		Strongly disagree		Not sure	
	%	95% CL	%	95% CL	%	95% CL	%	95% CL	%	95% CL
DNR provides adequate hunter input	7	1	47	2	23	2	7	1	16	2
DNR uses best available science	6	1	43	2	23	2	7	1	22	2
DNR uses consistent decision procedures	6	1	44	2	22	2	6	1	22	2
DNR explains alternative regulations considered	5	1	44	2	24	2	7	1	19	2
Trust DNR to set hunting regulations	8	1	46	2	23	2	10	1	13	2

Table 2. Rating of deer hunting in Michigan during the past three years, summarized by region hunters most often deer hunted.

Region	Excellent		Very good		Good		Fair		Poor	
	%	95% CL	%	95% CL	%	95% CL	%	95% CL	%	95% CL
UP	4	2	12	3	34	5	34	5	17	3
NLP	5	2	13	2	31	3	31	3	20	3
SLP	5	2	16	3	37	4	30	4	12	3
Statewide	5	1	14	2	34	2	32	2	16	2

Table 3. Buck hunting strategy of Michigan deer hunters during the archery and firearm deer hunting seasons in Michigan during past three years.

Buck hunting strategy ^a	Archery season		Firearm season	
	%	95% CL	%	95% CL
Will not take a buck (take only antlerless deer)	5	1	3	1
Take first legal buck	21	3	30	2
Pass small bucks in early season, but take any buck in late season	29	3	28	2
Take only a large buck	42	3	36	2
Unsure	4	1	2	1

^aHunters that did not hunt in applicable season during the last three years and hunters failing to provide an answer were excluded from analyses.

Table 4. Proportion of deer hunters supporting additional restrictions on buck harvest in Michigan, 2012.

Region most often hunted	Level of support					
	Strongly support or support		Oppose or strongly oppose		Unsure	
	%	95% CL	%	95% CL	%	95% CL
UP	52	5	42	5	6	2
NLP	54	3	38	3	8	2
SLP	56	4	35	4	9	2

Table 5. Proportion of deer hunters supporting various buck harvest restrictions in Michigan, 2012.

Restriction and region	Level of support					
	Strongly support or support		Oppose or strongly oppose		Not sure	
	%	95% CL	%	95% CL	%	95% CL
Allow hunters to take a total of two bucks in any combination of seasons if one of those bucks has at least 4 antler points on one antler (existing rule in most of state).						
UP	60	5	37	4	3	2
NLP	69	3	27	3	5	1
SLP	66	4	31	4	3	1
Statewide	67	2	30	2	4	1
Keep the existing rule, but charge a higher price to purchase a second buck tag.						
UP	22	4	72	5	6	2
NLP	19	3	77	3	5	1
SLP	17	3	78	3	5	2
Statewide	18	2	77	2	5	1
Allow hunters to take a total of two bucks in any combination of seasons, but require regional minimum antler point restrictions. In the UP, one buck 2 or more points on one side, the other 4 or more points on one side. In the NLP, one buck 3 or more points on one side, the other 4 or more points on one side. In the SLP both bucks 4 or more points on one side.						
UP	53	5	41	5	6	2
NLP	46	3	45	3	9	2
SLP	45	4	46	4	9	2
Statewide	46	2	45	2	9	1
Allow hunters to take a total of two bucks in any combination of seasons, but require both bucks to have at least 4 antler points on a side.						
UP	24	4	70	4	6	3
NLP	28	3	65	3	7	2
SLP	42	4	54	4	4	2
Statewide	33	2	61	2	6	1
Allow only one antlered buck (no antler restrictions) per hunter per year.						
UP	47	5	45	5	8	3
NLP	36	3	58	3	6	2
SLP	36	4	59	4	5	2
Statewide	37	2	57	2	6	1
Require all male deer (including antlered bucks, buck fawns, bucks with antlers shorter than three inches, and bucks with shed antlers) to be tagged with a buck tag.						
UP	57	5	36	4	7	2
NLP	49	3	41	3	10	2
SLP	53	4	40	4	7	2
Statewide	52	2	40	2	9	1

Table 6. Buck hunting strategy of Michigan deer hunters during the archery and firearm deer hunting seasons if regulations limited hunters to harvesting only one buck per year in all seasons combined.

Buck hunting strategy ^a	Archery season		Firearm season	
	%	95% CL	%	95% CL
Will not take a buck in archery season (take only antlerless deer)	3	1	NA ^b	
Likely take a buck in the archery season; thus, would not hunt antlered deer in firearm season	NA		5	1
Take first legal buck	15	2	28	2
Pass small bucks in early season, but take any buck in late season	24	3	26	2
Take only a large antlered buck	36	3	29	2
More likely to take an antlerless deer	17	2	9	1
Unsure	5	1	4	1

^aHunters that did not hunt in applicable season during the last three years and hunters failing to provide an answer were excluded from analyses.

^bNot applicable.

Table 7. Proportion of deer hunters supporting various regulations to increase harvest of antlerless deer in Michigan, 2012.

Restriction and region	Level of support					
	Strongly support or support		Oppose or strongly oppose		Not sure	
	%	95% CL	%	95% CL	%	95% CL
Implement antler point restrictions to restrict take of bucks.						
UP	51	5	40	5	9	3
NLP	48	3	41	3	11	2
SLP	51	4	40	4	9	2
Statewide	49	2	41	2	10	1
Allow hunters to use a firearm or combination license to take antlerless deer during the firearm season.						
UP	70	4	25	4	5	2
NLP	72	3	21	3	7	2
SLP	79	4	15	3	7	2
Statewide	74	2	19	2	7	1
Implement an early firearm season in September for antlerless deer only.						
UP	30	5	62	5	8	3
NLP	30	3	64	3	6	2
SLP	34	4	62	4	4	2
Statewide	32	2	63	2	5	1
Implement a late firearm season in December for antlerless deer only.						
UP	50	5	42	5	8	3
NLP	61	3	34	3	5	1
SLP	73	4	23	4	4	2
Statewide	64	2	31	2	5	1
Use an earn-a-buck system that requires hunters to take an antlerless deer before they may take a buck.						
UP	29	4	62	5	9	3
NLP	28	3	60	3	12	2
SLP	36	4	53	4	11	3
Statewide	31	2	58	2	11	2

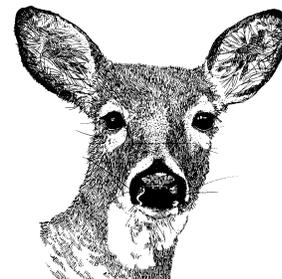
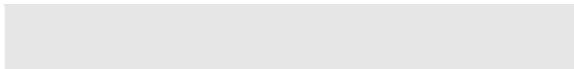
Appendix A. The questionnaire sent to people included in the 2012 deer hunter opinion survey in Michigan.



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

DEER HUNTER OPINION SURVEY

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 deer during the most recent deer hunting season.

General Deer Hunting Questions

1. About how many years have you hunted deer in Michigan? _____ Years
2. As a recreational activity, how important is deer hunting for you compared to your other recreational activities? *(Select one choice.)*

1 <input type="checkbox"/> My most important recreational activity.	4 <input type="checkbox"/> Not at all important as a recreational activity.
2 <input type="checkbox"/> One of my more important recreational activities.	5 <input type="checkbox"/> Less important than most of my recreational activities.
3 <input type="checkbox"/> No more important than other recreational activities.	

3. Indicate how strongly you agree or disagree with the following statements about the approach used by the Michigan Department of Natural Resources (MDNR) to establish deer hunting regulations. <i>(Select one choice per statement.)</i>	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Sure
a. MDNR provides adequate opportunities for hunters to have input regarding hunting regulations.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
b. MDNR considers the best available science when establishing hunting regulations.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
c. MDNR follows consistent decision-making procedures when establishing hunting regulations.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
d. MDNR explains what alternatives are considered when deer hunting regulations are established, and why the final alternative was selected.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
e. I trust MDNR to establish appropriate deer hunting regulations.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Questions Regarding Preferences for Buck Harvest Regulations

Michigan has a long tradition of allowing anyone who wishes to hunt bucks to purchase a deer hunting license (unlimited buck hunting participation). Legal bucks have been defined as a deer with at least one antler three or more inches in length. In recent years, hunters could harvest two bucks in any combination of seasons if one buck had at least 4 antler points on one side. Each year, 5% or less of Michigan deer hunters takes 2 bucks. Some hunters have requested changes to restrictions on the harvest of bucks in Michigan. The following questions ask for your opinions on a range of possible buck harvest regulations.

12. Please indicate how strongly you would support additional restrictions on buck harvest in each region of Michigan.
(Select one choice per item.)

	Strongly Support	Support	Oppose	Strongly Oppose	Not Sure
a. Upper Peninsula	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
b. Northern Lower Peninsula	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
c. Southern Lower Peninsula	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

13. Please indicate how strongly you support or oppose each potential future buck harvest regulation for Michigan.
(Select one choice per item.)

	Strongly Support	Support	Oppose	Strongly Oppose	Not Sure
a. Continue to allow hunters to take a total of two bucks in any combination of seasons if one of those bucks has at least 4 antler points on one side (existing rule).	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
b. Keep the existing rule, but charge a higher price to purchase a second buck tag.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
c. Allow hunters to take a total of two bucks in any combination of seasons, but require the following regional minimum antler point restrictions:					
<u>Upper Peninsula</u> one buck 2 or more points on one side, the other 4 or more points on one side	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
<u>Northern Lower Peninsula</u> one buck 3 or more points on one side, the other 4 or more points on one side					
<u>Southern Lower Peninsula</u> both bucks 4 or more points on one side					
d. Allow hunters to take a total of two bucks in any combination of seasons, but require both bucks to have at least 4 antler points on a side.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
e. Allow only one antlered buck (no antler restrictions) per hunter per year.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
f. Require all male deer (including antlered bucks, buck fawns, bucks with antlers shorter than three inches, and bucks with shed antlers) to be tagged with a buck tag.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

14. If regulations limited hunters to harvesting only one buck per year in all seasons combined, which statement would best describe your hunting strategy during the Michigan ARCHERY season? (Select one.)

- 1 I do not hunt during the archery season.
- 2 I would not hunt antlered bucks during the archery season.
- 3 I would shoot the first legal antlered buck I could.
- 4 I would pass smaller bucks early in the season, but would take any legal antlered buck later in the season.
- 5 I would only shoot a large buck.
- 6 I would be more likely to shoot an antlerless deer during archery season.
- 7 Unsure.

15. If regulations limited hunters to harvesting only one buck per year in all seasons combined, which statement would best describe your hunting strategy during the Michigan FIREARM season? (Select one.)

- 1 I do not hunt during the firearm season.
- 2 I would likely harvest a buck during the archery season and would not hunt antlered bucks during the firearm season.
- 3 I would shoot the first legal antlered buck I could.
- 4 I would pass smaller bucks early in the season, but would take any legal antlered buck later in the season.
- 5 I would only shoot a large antlered buck.
- 6 I would be more likely to attempt to purchase and fill an antlerless permit.
- 7 Unsure.

16. Please indicate how strongly you would support implementing the following options as a way of potentially increasing harvest of antlerless deer. (Select one choice per item.)

	Strongly Support	Support	Oppose	Strongly Oppose	Not Sure
a. Implement antler point restrictions to restrict take of bucks.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
b. Allow hunters to use a firearm or combination license to take antlerless deer during the firearm season.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
c. Implement an early firearm season in September for antlerless deer only.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
d. Implement a late firearm season in December for antlerless deer only.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
e. Use an earn-a-buck system that requires hunters to take an antlerless deer before they may take a buck.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Please return questionnaire in the enclosed postage-paid envelope. Thank you for your help!

www.michigan.gov/dnr