



MICHIGAN DEPARTMENT OF NATURAL RESOURCES
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EVALUATION OF ANTLER POINT RESTRICTIONS IN DEER MANAGEMENT UNITS IN THE NORTHWEST LOWER PENINSULA

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ABSTRACT

A survey was completed to determine whether hunters supported continuation of existing mandatory Antler Point Restrictions (APRs) in twelve counties in the Northwest Lower Peninsula. A key feature of the existing mandatory regulations was changing the definition of a buck to a deer with three or more points on one antler. The Michigan Department of Natural Resources (MDNR) supports the voluntary implementation of APR practices on private land in Michigan. Mandatory APR are implemented by regulation only when a clear majority (>66%) of hunters support implementation. Questionnaires were sent to a random sample of hunters; 80% of hunters returned their questionnaire. About 77% of the people hunting deer in the Northwest Lower Peninsula supported continuation of mandatory APR regulations. Support from hunters was sufficient to recommend continuation of APRs in the Northwest Lower Peninsula.

INTRODUCTION

Since 2013, deer hunters in twelve counties in the northwest Lower Peninsula (Figure 1) were only permitted to take an antlered deer if it had three or more antler points on one antler. This change in buck harvest regulations was implemented to protect a portion of yearling bucks from harvest and allow them to become older. The restrictions on a second harvested buck were not changed in 2013 and still required the second buck to have at least four points on one antler.

The MDNR supports the voluntary implementation of APRs on private land. MDNR supports mandatory APRs only if at least 66% of hunters in the affected area support these regulations.



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The DNR developed guidelines for considering and implementing APR regulations with the assistance of private conservation groups and resource agencies (Quality Deer Management Working Group 2013). According to these guidelines, the DNR would determine whether hunters and landowners supported continuation of APRs five years after they were initiated.

The Natural Resources Commission and Wildlife Division have the authority and responsibility to protect and manage the wildlife resources of the state of Michigan. Opinion surveys are a management tool used by the Wildlife Division to accomplish its statutory responsibility. The main objectives of this opinion survey were to determine whether hunters supported continuation of the existing APRs (i.e., three points on a side) in 12 counties in the Northwest Lower Peninsula.

METHODS

This survey was done in accordance with guidelines developed for evaluating proposed mandatory APR regulations in Michigan (Quality Deer Management Working Group 2013). A questionnaire was sent to 2,100 randomly selected hunters from the Northwest Lower Peninsula.

Prior surveys done to estimate support for proposed APR regulations have sampled landowners in addition to hunters. However, estimates of support have varied little between landowners and hunters in previous surveys (e.g., Frawley 2002, 2003a, 2003b). Thus, landowners were not sampled separately for the current survey.

The estimate of hunter support was calculated using a stratified random sampling design that included two strata (Cochran 1977). A random sample of hunters was obtained from a list of people that indicated they had hunted in the Northwest Lower Peninsula during 2014 (first stratum). This list represented randomly selected people included in the annual deer harvest survey that was conducted by the Wildlife Division (Frawley 2015). In addition, an additional random sample was selected from the list of hunters from the Northwest Lower Peninsula that had voluntarily reported information about their deer hunting activity via the internet prior to the initiation of the annual deer harvest survey (second stratum). The random sample consisted of 2,000 people from the first stratum and 100 people from the second stratum. The stratified sampling design accounted for the varying probabilities of being selected from the strata so estimates could be reliably extrapolated from the sample to all license buyers.

People receiving the questionnaire were asked to report whether they supported continuation of the existing mandatory APR regulation for the Northwest Lower Peninsula. Response options to the question on the proposal were “yes” or “no” (Appendix A). The percentage of support was measured by dividing the number of “yes” responses by the sum of those responses indicating “yes” or “no.” People who did not provide an answer were not used to estimate support for the proposed APR regulations. Moreover, opinions of hunters that did not hunt within the Northwest Lower Peninsula were not included when estimating support for the proposed APR regulations.

Estimates of support for the mandatory APR regulations were calculated along with their 95% confidence limit (CL). This CL could be added 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 implied that the true value would be within this interval 95 times out of 100. Estimates were not adjusted for possible response or nonresponse bias.

The random sample of people receiving the questionnaire included 2,100 hunters (Table 1). Questionnaires were initially mailed during early February 2017. Up to two follow-up questionnaires were mailed to nonrespondents.

RESULTS AND DISCUSSION

Although 2,100 people were sent the questionnaire, 38 surveys were undeliverable resulting in an adjusted sample size of 2,062 (i.e., minus undeliverable questionnaires). Questionnaires were returned by 1,645 people, yielding an 80% adjusted response rate. The response rate exceeded the minimum response rate of 50% that was required in order to accept the results of the survey (Quality Deer Management Working Group 2013).

Among hunters that hunted in the Northwest Lower Peninsula, about 77% supported the continuation of existing mandatory APR regulations (Table 2). About 23% of the hunters did not support continuation of the mandatory APR regulations. The support of hunters was sufficient to recommend continuation of the existing APR for the Northwest Lower Peninsula by the Wildlife Division to the Natural Resources Commission. The Natural Resources Commission holds final authority regarding APR implementation, which will be up for consideration during establishment of deer hunting regulations for the 2017 season.

ACKNOWLEDGEMENTS

I thank all the hunters that provided information. Theresa Riebow completed data entry. Marshall Strong prepared Figure 1. Ashley Autenrieth, Steve Chadwick, Russ Mason, and Chad Stewart reviewed a draft version of this report.

LITERATURE CITED

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

Frawley, B. J. 2002. Quality deer management (QDM) survey: Deer Management Unit 045 (Leelanau County). Wildlife Division Report 3360. Michigan Department of Natural Resources, Lansing, USA.

Frawley, B. J. 2003a. Quality deer management (QDM) survey: Deer Management Unit 053 (Mason County). Wildlife Division Report 3389. Michigan Department of Natural Resources, Lansing, USA.

Frawley, B. J. 2003b. Quality deer management (QDM) survey: Deer Management Unit 059 (Montcalm County). Wildlife Division Report 3390. Michigan Department of Natural Resources, Lansing, USA.

Frawley, B. J. 2015. Michigan deer harvest survey report: 2014 seasons. Wildlife Division Report 3609. Michigan Department of Natural Resources, Lansing, USA.

Quality Deer Management Working Group. 2013. Guidelines for initiation, evaluation, and review of mandatory antler point restrictions. Wildlife Division, Michigan Department of Natural Resources, Lansing, USA.

Legend:

 **Area affected by the existing Antler Point Restriction:**
Includes Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Lake, Manistee, Mason, Missaukee, Osceola, and Wexford counties, excluding the offshore islands in Lake Michigan.

 Other portions of Michigan



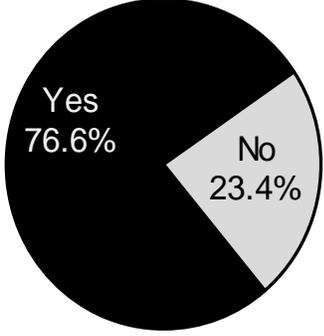
Figure 1. Twelve counties (shaded) in the Northwest Lower Peninsula affected by the evaluation of the existing APRs, 2017.

Table 1. The estimated number of hunters in the Northwest Lower Peninsula and the number of hunters selected to receive the opinion survey about mandatory APR regulations in the Northwest Lower Peninsula, Michigan.

Total number of hunters ^a	Number of people included in sample ^a	Number of questionnaires that were undeliverable	Number of questionnaires returned	Response rate (%)
101,248	2,100	38	1,645	80

^aEstimated number of people that hunted deer in the Northwest Lower Peninsula in 2014 (Frawley 2015).

Table 2. Proportion of hunters supporting existing antler point restrictions in the Northwest Lower Peninsula, Michigan, in 2017.

Response	Percentage of hunters ^a	95% CL ^b	Responses (%)
Yes (Supported mandatory APR regulations)	76.6	2.1	
No (Did not support mandatory APR regulations)	23.4	2.1	

^aPercentage of hunters that hunted deer in the Northwest Lower Peninsula; hunters that failed to provide an answer (<1%) were not used to measure support for mandatory APR regulations.

^b95% confidence limits.

APPENDIX A

Questionnaire Used for the Evaluation of Antler Point Restrictions in Deer Management Units in the Northwest Lower Peninsula.



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.



Starting in 2013, deer hunters in twelve counties in the northwest Lower Peninsula (see figure on reverse side) were only permitted to take an antlered deer if it had three or more antler points on one antler. This rule has now been in effect for four hunting seasons, but before we recommend continuation of this rule, we must determine whether hunters support continuation of this antler-point restriction.

<p>1. Do you hunt deer in the area affected by this antler-point restriction (see figure on reverse side)?</p>	<p>¹ <input type="checkbox"/> Yes</p>	<p>² <input type="checkbox"/> No</p>
<p>2. Do you own land in the area affected by this antler-point restriction?</p>	<p>¹ <input type="checkbox"/> Yes</p>	<p>² <input type="checkbox"/> No</p>
<p>3. Do you support the continuation of this antler-point restriction?</p>	<p>¹ <input type="checkbox"/> Yes</p>	<p>² <input type="checkbox"/> No</p>

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

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PR-2057-3 (Rev. 01/04/2017)

Shaded area affected by the existing antler-point restriction.

Legend:

 **Area affected by the existing Antler Point Restriction:**
Includes Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Lake, Manistee, Mason, Missaukee, Osceola, and Wexford counties, excluding the offshore islands in Lake Michigan.

 Other portions of Michigan

