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2004 QUALITY DEER MANAGEMENT (QDM) SURVEY: DEER MANAGEMENT UNIT 017 (CHIPPEWA AND MACKINAC COUNTIES)

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ABSTRACT

A survey was completed to assess hunters and landowners support for mandatory QDM regulations in Deer Management Unit (DMU) 017. The Michigan Department of Natural Resources (MDNR) supports the voluntary implementation of QDM practices on private land in Michigan. However, mandatory regulations should be imposed in a DMU only when it can be shown that a clear majority ($\geq 66\%$) of hunters and landowners support implementation. Questionnaires were sent to a random sample of landowners and hunters; 73% of the landowners and 82% of hunters returned their questionnaire. About 59% of landowners owning land in DMU 017 and 58% of people hunting deer in DMU 017 supported implementing mandatory QDM regulations. Support from both landowners and hunters was insufficient to recommend implementation of mandatory QDM regulations for DMU 017.

INTRODUCTION

Quality Deer Management (QDM) is a form of management that requires restrictive buck harvests and sustained antlerless harvests to produce a deer population that has a relatively equal sex ratio and is in balance with its habitat. The Michigan Department of Natural Resources (MDNR) supports the voluntary implementation of these practices on private land. The MDNR supports mandatory QDM regulations in a Deer Management Unit (DMU) if at least 66% of hunters and landowners in the affected DMU support these regulations.



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The MDNR developed guidelines for considering and implementing QDM regulations with the assistance of private conservation groups and resource agencies (Quality Deer Management Working Group 1999). Following these guidelines, Eastern Upper Peninsula Wildlife Coalition requested that the MDNR implement mandatory QDM regulations in DMU 017 (portions of Chippewa and Mackinac counties; Figure 1). The group developed a proposal that sought to protect most 1½ year old males from harvest by allowing the harvest of only antlered deer that have three or more antler points on one side, each one or more inches in length. (A second buck would still be legal to harvest if it has 4 or more points on one side.) Additionally, this proposal strived to achieve a better buck to doe sex ratio and to support the MDNR in achieving an appropriate antlerless deer harvest. If adopted, this proposal would be implemented for a minimum of 5 years beginning with the 2005 deer hunting seasons. Youth hunters participating in the youth firearm deer season would be exempt from the antler-point restriction, although these youth hunters would still need to follow existing statewide harvest regulations.

The Wildlife Division has 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 assess hunters and landowners support for the proposed mandatory QDM deer harvest regulations in DMU 017.

METHODS

This survey was done in accordance with guidelines developed for evaluating proposed mandatory QDM regulations in Michigan (Quality Deer Management Working Group 1999). A questionnaire was sent to 1,797 randomly selected hunters and landowners from DMU 017. The survey was designed to produce estimates with margin of errors smaller than five percentage points. To achieve an estimate with a margin of error of 5%, about 500 people would need to be contacted. Because questionnaires were sent to 1,797 people, the margins of error were expected to be about 4% for both landowners and hunters.

Lists of property parcels ≥ 5 acres were obtained from the equalization departments in Chippewa and Mackinac counties. The property tax records were organized by property parcel identification numbers, rather than by landowner names. Therefore, people owning multiple parcels were in the property tax records multiple times. To create a list of landowners (without multiple parcels per landowner), the property tax records from the two counties were merged, and then parcels owned by the same landowner were combined. As this list was compiled, publicly owned lands, parcels within cities and villages, and parcels outside DMU 017 were also excluded from the list. From the final landowner list, 1,000 landowners were randomly selected to receive a questionnaire (i.e., simple random sampling design, Cochran 1977).

The estimate of hunter support was also calculated using a simple random sampling design. A random sample of these hunters was obtained from lists of people that indicated they had hunted in DMU 017 during 2001-2003. These lists represented randomly selected people included in annual deer harvest surveys that were conducted by the Wildlife Division (Frawley 2002b, 2003, 2004).

People receiving the questionnaire were asked to report whether they supported the mandatory QDM regulations for DMU 017. Response options to the question on the proposal were “yes,” “no,” “undecided,” and “don’t care” (Appendix A). The percentage of support was measured by dividing the number of “yes” responses by the sum of those responses indicating “yes,” “no,” or “undecided.” People who indicated “don’t care” or who did not provide an answer were not used to estimate support for the proposed QDM regulations. Moreover, opinions of hunters that did not hunt within DMU 017 and landowners that did not own land within DMU 017 were not included when estimating support for the proposed QDM regulations.

Estimates of support for the mandatory QDM 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 1,000 landowners and 842 hunters, including 45 people that were included in both the landowner and hunter samples (Table 1). Questionnaires were initially mailed during early December 2004. Up to two follow-up questionnaires were mailed to nonrespondents. Although 1,797 people were sent the questionnaire, 28 surveys were undeliverable resulting in an adjusted sample size of 1,769 (i.e., minus undeliverable questionnaires). Questionnaires were returned by 1,358 people, yielding a 77% adjusted response rate.

RESULTS AND DISCUSSION

Questionnaires were originally mailed to 1,000 landowners and 842 hunters, but questionnaires were undeliverable to 13 landowners and 15 hunters. Thus, the adjusted sample size was 987 landowners and 827 hunters. Questionnaires were returned by 719 landowners (73%) and 681 hunters (82%) (Table 1). Response rates of both groups exceeded the minimum response rate of 50% that was required in order to accept the results of the survey (Quality Deer Management Working Group 1999).

About 59% of the landowners owning land in DMU 017 supported implementing the proposed mandatory QDM regulations (Table 2). In contrast, 37% of landowners did not support mandatory QDM regulations, and 4% did not have an opinion about the regulations. Among hunters that hunted in DMU 017, about 58% supported the proposed mandatory QDM regulations (Table 3). About 40% of the hunters did not support the mandatory QDM regulations, and 2% did not have an opinion about the regulations. The support of both landowners and hunters failed to exceed the minimum support level of 66% that was required to recommend implementation of mandatory QDM regulations for DMU 017 by the Wildlife Division to the Natural Resources Commission.

A survey of landowners and hunters in DMU 017 was previously done in 2002 to determine whether they supported changing the definition of antlered deer to an animal with three or more antler points on one side (Frawley 2002a). Unlike in the current proposal, there was no exemption for the youth hunting season in the 2002 proposal. In 2002, $57 \pm 3\%$ of the

landowners owning land in DMU 017 supported implementing the proposed changes, and 53 ± 3% of hunters supported the proposed changes. Thus, support of both landowners and hunters in 2002 and in 2005 failed to exceed the minimum support level to recommend implementation of mandatory QDM regulations for DMU 017. Although the estimated level of support increased slightly between 2002 and 2004, the change was within the margin of error of the estimates indicating that the change was not statistically significant.

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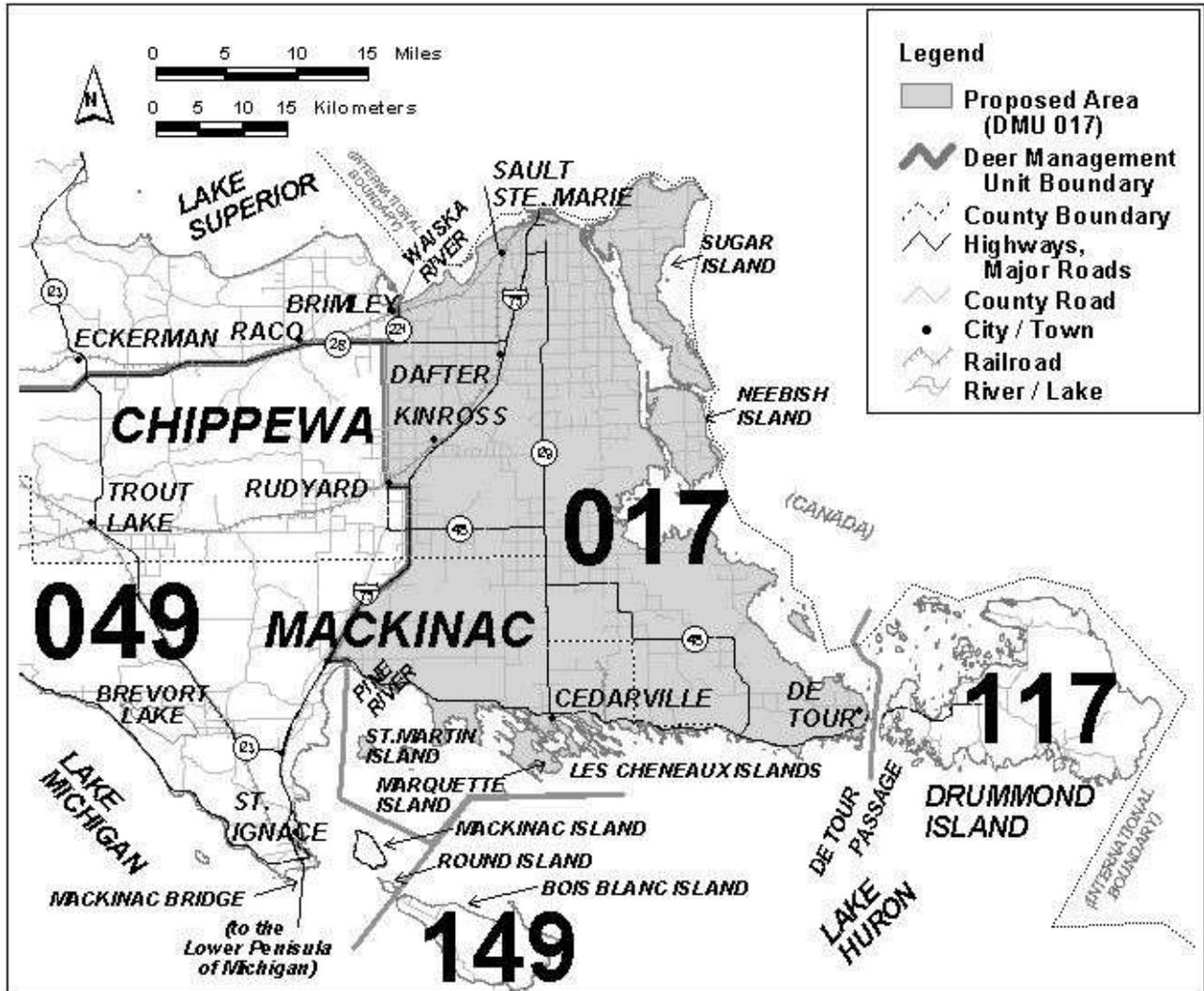


Figure 1. Deer Management Unit 017 (shaded area) in eastern Upper Peninsula of Michigan, 2004.

Table 1. Number of people within each group and number selected for the random sample of people receiving the opinion survey regarding mandatory QDM regulations in DMU 017, Michigan.

Group	Total number of people in group	Number of people included in sample ^a	Number of questionnaires that were undeliverable	Number of questionnaires returned	Response rate (%)
Landowners ^b	4,205	1,000	13	719	73
Hunters ^c	8,089	842	15	681	82

^aForty-five people were included in both the landowner and hunter samples; thus, the overall sample size consisted of 1,797 people.

^bLandowners owned at least one 5-acre parcel; however, each landowner was counted once regardless of number of parcels owned.

^cEstimated number of people that hunted deer in DMU 017 in 2003 (Frawley 2004).

Table 2. Proportion of landowners supporting the proposed mandatory QDM regulations in DMU 017, Michigan.

Response	Percentage of landowners ^a	95% CL ^b	Responses (%)
Yes (Supported mandatory QDM regulations)	58.9	3.4	<p>A pie chart illustrating the distribution of responses from landowners. The largest slice is 'Yes' at 58.9%, followed by 'No' at 37.0%, and a small slice for 'No Opinion' at 4.1%.</p>
No (Did not support mandatory QDM regulations)	37.0	3.3	
No opinion	4.1	1.4	

^aPercentage of landowners owning at least one 5-acre parcel of land in DMU 017; landowners that selected “don’t care” ($2.9 \pm 1.1\%$) or failed to provide an answer ($0.3 \pm 0.4\%$) about their support for QDM regulations were not used to measure support for mandatory QDM regulations.

^b95% confidence limits.

Table 3. Proportion of hunters supporting the proposed mandatory QDM regulations in DMU 017, Michigan.

Response	Percentage of hunters ^a	95% CL ^b	Responses (%)
Yes (Supported mandatory QDM regulations)	58.0	3.8	<p>A pie chart illustrating the distribution of responses to the proposed mandatory QDM regulations. The chart is divided into three segments: a large black segment representing 'Yes' at 58.0%, a grey segment representing 'No' at 40.1%, and a very small white segment representing 'No Opinion' at 1.9%.</p>
No (Did not support mandatory QDM regulations)	40.1	3.8	
No opinion	1.9	1.0	

^aPercentage of hunters that hunted deer in DMU 017; hunters that selected “don’t care” (1.3 ± 0.9%) or failed to provide an answer (0.3 ± 0.4%) about their support for QDM regulations were not used to measure support for mandatory QDM regulations.

^b95% confidence limits.

Appendix A

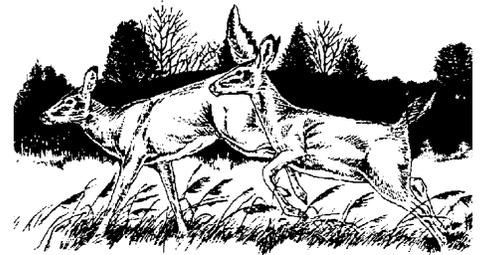
Deer Management Survey Questionnaire for
Deer Management Unit 017.



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

DEER MANAGEMENT SURVEY

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



A proposal has been submitted to the DNR to modify deer harvest regulations in Deer Management Unit 017 (portions of Chippewa and Mackinac counties). The proposal aims to protect most 1½ year old males by allowing the harvest of only those antlered deer that have three or more antler points on one side, each one or more inches in length. (A second buck would still be legal to harvest if it has 4 or more points on one side.) Additionally, this proposal strives to achieve a better buck to doe sex ratio and to support the DNR in achieving an appropriate antlerless deer harvest. If adopted, this proposal would be implemented for a minimum of 5 years beginning with the 2005 deer hunting seasons. Youth hunters participating in the youth firearm deer season would be exempt from the antler-point restriction, although these youth hunters would still need to follow existing statewide harvest regulations.

- 1. Do you hunt in Deer Management Unit 017 in Chippewa and Mackinac counties (see map on reverse side)? 1 Yes 2 No

- 2. Do you own land in Deer Management Unit 017 in Chippewa and Mackinac counties (see map on reverse side)? 1 Yes 2 No

- 3. Do you support the above proposal? **For purposes of measuring support, checking the “no opinion” box will count as a “no” answer and indicates you have not formed an opinion about the proposal.** Checking the “don’t care” box will result in your opinion not being counted as supportive or opposed to the proposal. This merely indicates that you are aware of the proposal and don’t care what the deer hunting regulations are for this area.

1 Yes
2 No
3 No Opinion
4 Don’t Care

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

Deer Management Unit 017 in Chippewa and Mackinac counties
Shaded area will be affected by proposed regulation changes

