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QUALITY DEER MANAGEMENT (QDM) SURVEY: DEER MANAGEMENT UNIT 053 (MASON COUNTY)

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ABSTRACT

A survey was completed to determine whether hunters and landowners supported proposed mandatory QDM regulations in Deer Management Unit (DMU) 053 (Mason County). A key feature of the proposed 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 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; 79% of the landowners and 84% of hunters returned their questionnaire. About 47% of landowners owning land in Mason County, and 49% of people hunting deer in Mason County supported implementing mandatory QDM regulations. Support from both landowners and hunters was insufficient to recommend implementation of mandatory QDM regulations for DMU 053.

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 that is in balance with its habitat. The Michigan Department of Natural



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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.

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, the West Shore Branch of the Quality Deer Management Association submitted a proposal to modify deer management regulations in Mason County (DMU 053) (Figure 1). This proposal requested a change in buck harvest regulations so that a portion of the yearling bucks would be protected from harvest and allowed to become older. This would be done by changing the definition of a legal buck within Mason County. Hunters could take one antlered deer having at least three points on one antler. The current definition of a legal buck in Mason County is a deer with an antler greater than three inches in length. Youth hunters participating in the youth firearm deer season would be exempted from the antler-point restriction, although these youth hunters would still need to follow existing statewide harvest regulations. The proposal also advocated harvesting enough antlerless deer annually to stabilize or reduce overall deer numbers to keep deer populations in balance with the habitat.

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 determine whether hunters and landowners supported proposed mandatory QDM deer harvest regulations in Mason County.

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 2,186 randomly selected hunters and landowners from Mason County. The survey was designed to produce estimates that would be accurate within a margin of error of plus or minus five percentage points.

Lists of property parcels ≥ 5 acres were obtained from the Equalization Office in Mason County. 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 were merged, and then parcels owned by the same landowner were combined. As this list was compiled, publicly owned land and parcels within cities and villages were also excluded. The final landowner list consisted of 4,466 landowners. A randomly selected sample consisting of 1,088 landowners were sent 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 hunters was obtained from lists of people that indicated they had hunted in Mason County during 2000-2001. These lists represented randomly selected people included in annual deer harvest surveys that were conducted by the Wildlife Division (Frawley 2001,

2002). The final list consisted of 1,130 hunters. Mailing addresses were missing for 4 of these hunters; therefore, questionnaires were sent to 1,126 hunters.

People receiving the questionnaire were asked to report whether they supported the mandatory QDM regulations for Mason County. 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. A screening question was asked of everybody that received the questionnaire to determine whether they still hunted or owned land in Mason County. The opinions of hunters that did not hunt in Mason County and landowners that did not own land in Mason County 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 1,088 landowners and 1,126 hunters, including 28 people that were included in both the landowner and hunter samples (Table 1). Questionnaires were initially mailed during December 2002. As many as two follow-up questionnaires were mailed to nonrespondents. Although 2,186 people were sent the questionnaire, 45 surveys were undeliverable resulting in an adjusted sample size of 2,141 (i.e., minus undeliverable questionnaires). Questionnaires were returned by 1,741 people, yielding an 81% adjusted response rate.

RESULTS AND DISCUSSION

Questionnaires were originally mailed to 1,088 landowners and 1,126 hunters, but questionnaires were undeliverable to 31 landowners and 14 hunters. Thus, the adjusted sample size was 1,057 landowners and 1,112 hunters. Questionnaires were returned by 832 landowners (79%) and 934 hunters (84%) (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 47% of the landowners owning land in Mason County supported implementing the proposed mandatory QDM regulations (Table 2). In contrast, 48% of landowners did not support mandatory QDM regulations and 4% did not have an opinion about the regulations. Among hunters that hunted in Mason County, about 49% supported the proposed mandatory QDM regulations (Table 3). About 50% 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 Mason County by the Wildlife Division to the Natural Resources Commission.

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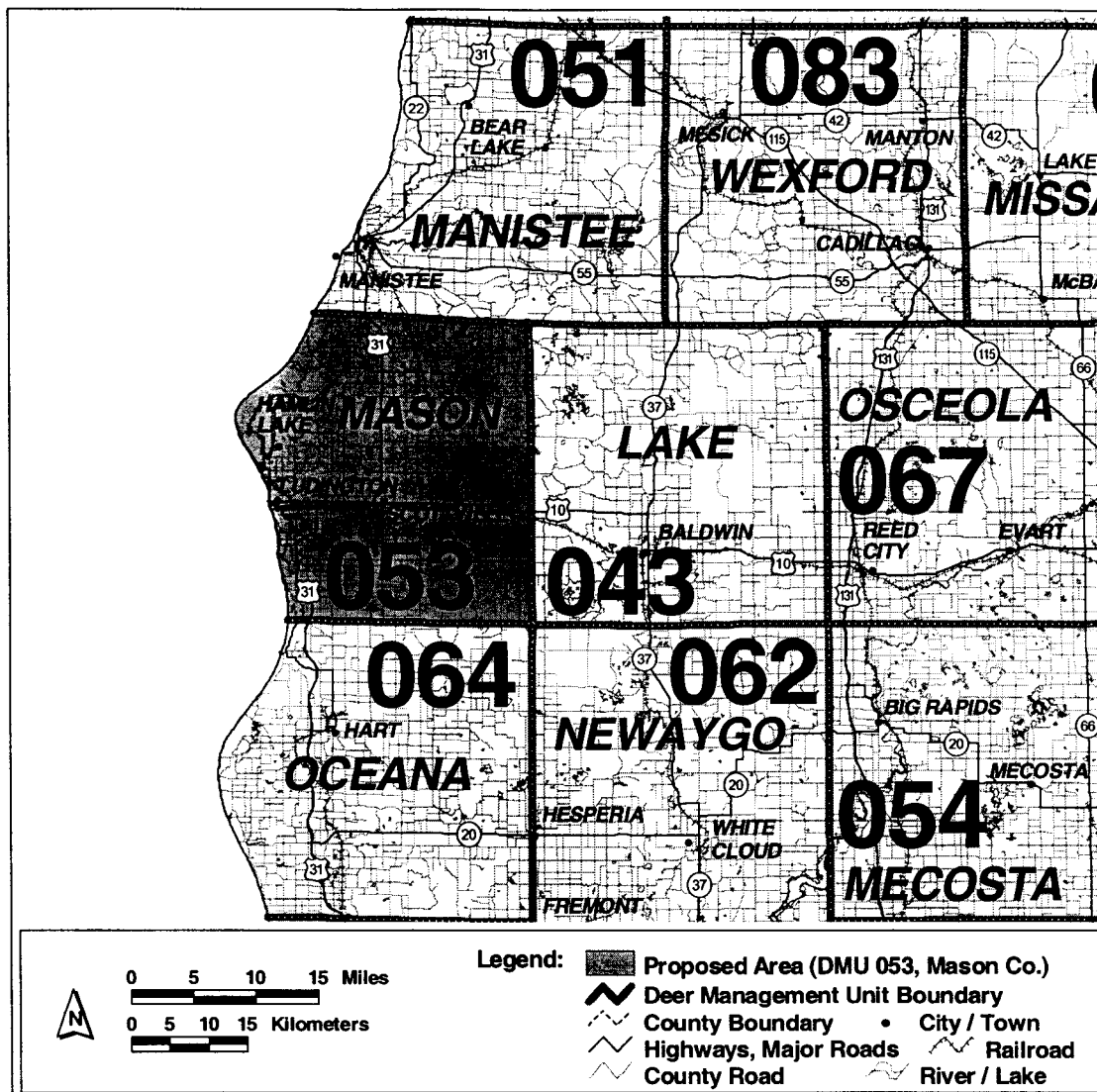


Figure 1. Deer Management Unit 053 (shaded area) in the west-central Lower Peninsula of Michigan (Mason County), 2002.

Table 1. Number of people within each group and number selected for the random sample of landowners and hunters receiving the opinion survey regarding mandatory QDM regulations in DMU 053 (Mason County), 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	4,466	1,088	31	832	79%
Hunters ^c	14,180	1,126	14	934	84%

^aTwenty-eight people were included in both the landowner and hunter samples; thus, the overall sample size consisted of 2,186 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 Mason County in 2001 (unpublished data).

Table 2. Proportion of landowners supporting the proposed mandatory QDM regulations in DMU 053 (Mason County), Michigan.

Response	Percentage of landowners ^a	95% CL ^b	Responses (%)
Yes (Supported mandatory QDM regulations)	47.3%	3.1%	<p>Yes 47.3%</p> <p>No 48.4%</p> <p>No Opinion 4.3%</p>
No (Did not support mandatory QDM regulations)	48.4%	3.2%	
No opinion	4.3%	1.3%	

^aPercentage of landowners owning at least one 5-acre parcel of land in Mason County; landowners that selected "don't care" ($3.0 \pm 1\%$) or failed to provide an answer ($0.9 \pm 1\%$) 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 053 (Mason County), Michigan.

Response	Percentage of hunters ^a	95% CL ^b	Responses (%)
Yes (Supported mandatory QDM regulations)	48.5%	3.2%	<p>A pie chart illustrating the distribution of responses regarding support for mandatory QDM regulations. The chart is divided into three segments: a large dark segment for 'Yes' (48.5%), a slightly larger light segment for 'No' (49.8%), and a very small white segment for 'No Opinion' (1.6%).</p>
No (Did not support mandatory QDM regulations)	49.8%	3.2%	
No opinion	1.6%	0.8%	

^aPercentage of hunters that hunted deer in Mason County; hunters that selected "don't care" ($1.3 \pm 1\%$) or failed to provide an answer ($0.2 \pm 1\%$) about their support for QDM regulations were not used to measure support for mandatory QDM regulations.

^b95% confidence limits.

Appendix A

Quality Deer Management Survey Questionnaire for Deer Management Unit 053 (Mason County).



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

QUALITY 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 053 (Mason County). The proposal requests that: (1) hunters could take one antlered deer having at least three points on one antler and a second antlered deer having at least four points on an antler; (2) increase harvest of antlerless deer, and (3) the regulation be in place for five years beginning with the fall 2003 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 Mason County (*see map on reverse side*)? ¹ ☐ Yes ² ☐ No
2. Do you own land in Mason County (*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 053 in Mason County

Shaded area will be affected by proposed regulation changes

