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QUALITY DEER MANAGEMENT (QDM) SURVEY: DEER MANAGEMENT UNITS 032, 076, AND 079 (HURON, SANILAC, AND TUSCOLA COUNTIES)

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ABSTRACT

A survey was completed to determine whether hunters and landowners supported mandatory QDM regulations in Deer Management Units (DMUs) 032, 076, and 079. 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 87% of hunters returned their questionnaire. About 39% of landowners owning land in the affected DMUs, and 36% of people hunting deer in the affected DMUs supported implementing mandatory QDM regulations. Support from both landowners and hunters was insufficient to recommend implementation of mandatory QDM regulations for DMUs 032, 076, and 079.

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 Resources (MDNR) supports the voluntary implementation of these practices on private land.



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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 Thumb Area Branch of the Quality Deer Management Association requested that the MDNR implement mandatory QDM regulations in Huron, Sanilac, and Tuscola counties (DMUs 032, 076, and 079; Figure 1). This group 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 accomplished by changing the definition of a legal buck within these counties to a deer with four or more points on one antler. This would protect bucks with fewer points from harvest. The current definition of a legal buck is a deer with an antler greater than three inches in length. These groups also supported the harvest of sufficient antlerless deer annually to stabilize or reduce overall deer numbers to keep deer numbers 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 DMUs 032, 076, and 079.

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 1,986 randomly selected hunters and landowners from DMUs 032, 076, and 079. 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 offices in Huron, Sanilac, and Tuscola 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 three counties 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. 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 hunters was obtained from lists of people that indicated they had hunted in Huron, Sanilac, or Tuscola counties during 2000. These lists represented randomly selected people included in annual deer harvest surveys that were conducted by the Wildlife Division (Frawley 2001).

People receiving the questionnaire were asked to report whether they supported the mandatory QDM regulations for DMUs 032, 076, and 079. 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 DMUs 032, 076, or 079 and landowners that did not own land within DMUs 032, 076, or 079 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 1,000 hunters, including 14 people that were included in both the landowner and hunter samples (Table 1). Questionnaires were initially mailed during December 2001. A reminder note and up to two follow-up questionnaires were mailed to nonrespondents. Although 1,986 people were sent the questionnaire, 58 surveys were undeliverable resulting in an adjusted sample size of 1,928 (i.e., minus undeliverable questionnaires). Questionnaires were returned by 1,599 people, yielding an 83% adjusted response rate.

RESULTS AND DISCUSSION

Questionnaires were originally mailed to 1,000 landowners and 1,000 hunters, but questionnaires were undeliverable to 50 landowners and 8 hunters. Thus, the adjusted sample size was 950 landowners and 992 hunters. Questionnaires were returned by 752 landowners (79%) and 859 hunters (87%) (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 39% of the landowners owning land in DMUs 032, 076, or 079 supported implementing the proposed mandatory QDM regulations (Table 2). In contrast, 56% of landowners did not support mandatory QDM regulations and 5% did not have an opinion about the regulations. Among hunters that hunted in DMUs 032, 076, or 079, about 36% supported the proposed mandatory QDM regulations (Table 3). About 61% 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 DMUs 032, 076, and 079 by the Wildlife Division to the Natural Resources Commission.

ACKNOWLEDGEMENTS

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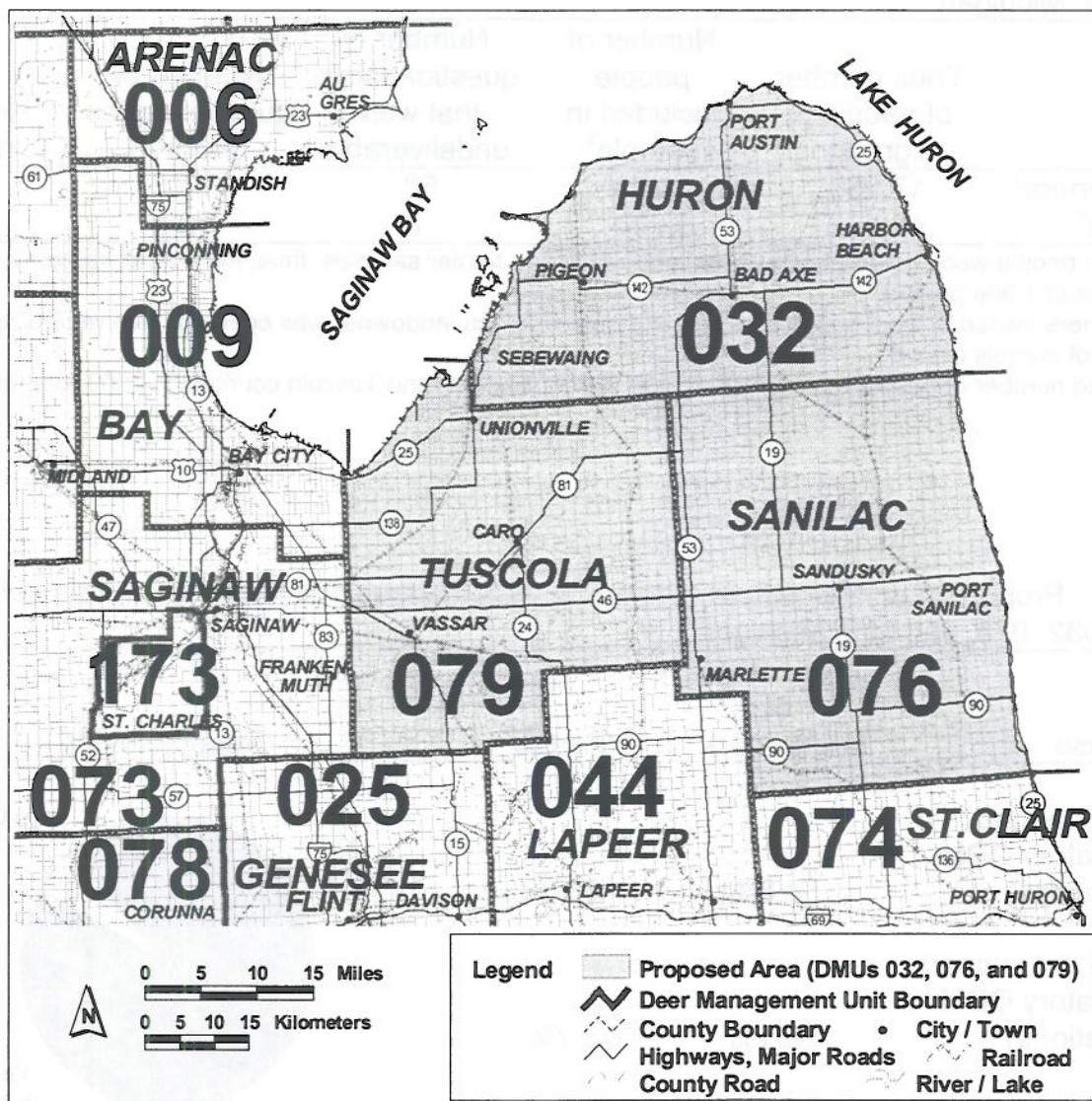


Figure 1. Deer Management Units 032, 076, and 079 (shaded area) in the east-central Lower Peninsula of Michigan, 2001.

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 DMUs 032, 076, and 079, Michigan.

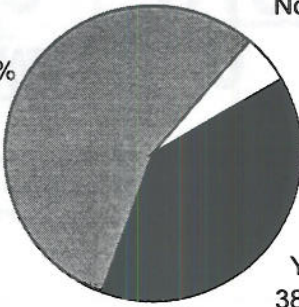
Group	Total number of people in group	Number of people included in sample ^a	Number of questionnaires that were undeliverable	Number of questionnaires returned	Response rate (%)
Landowners ^b	17,953	1,000	50	752	79
Hunters ^c	43,422	1,000	8	859	87

^aFourteen people were included in both the landowner and hunter samples; thus, the overall sample size consisted of 1,986 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 Huron, Sanilac, and Tuscola counties in 2000 (unpublished data).

Table 2. Proportion of landowners supporting the proposed mandatory QDM regulations in DMUs 032, 076, and 079, Michigan.

Response	Percentage of landowners ^a	95% CL ^b	Responses (%)
Yes (Supported mandatory QDM regulations)	38.8%	3.6%	 <p>No 56.1%</p> <p>No Opinion 5.1%</p> <p>Yes 38.8%</p>
No (Did not support mandatory QDM regulations)	56.1%	3.7%	
No opinion	5.1%	1.6%	

^aPercentage of landowners owning at least one 5-acre parcel of land in DMUs 032, 076, and 079; landowners that selected "don't care" ($5.1 \pm 2\%$) or failed to provide an answer ($0.3 \pm 1\%$) 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 DMUs 032, 076, and 079, Michigan.

Response	Percentage of hunters ^a	95% CL ^b	Responses (%)
Yes (Supported mandatory QDM regulations)	36.4%	3.3%	<p>A pie chart illustrating the distribution of responses to the proposed mandatory QDM regulations. The chart is divided into three segments: a large dark gray segment for 'No' at 61.3%, a small white segment for 'No Opinion' at 2.3%, and a medium dark gray segment for 'Yes' at 36.4%.</p>
No (Did not support mandatory QDM regulations)	61.3%	3.4%	
No opinion	2.3%	1.0%	

^aPercentage of hunters that hunted deer in DMUs 032, 076, and 079; hunters that selected "don't care" ($1.5 \pm 1\%$) or failed to provide an answer ($0.1 \pm 1\%$) 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 Units 032, 076, and 079.





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 Huron, Sanilac, and Tuscola counties (Deer Management Units 032, 076, and 079). The proposal requests that: (1) a legal buck be defined as a deer with at least 4 points on one antler; (2) an adequate number of antlerless deer be harvested annually to meet population goals and to achieve an adult buck to adult doe ratio of 1:2 or lower, and (3) the regulation be in place for five years beginning with the fall 2002 deer hunting seasons.

1. Do you hunt deer in Huron, Sanilac, or Tuscola counties (see map on reverse side)?
¹ ☐ No ² ☐ Yes
2. Do you own land in Huron, Sanilac, or Tuscola counties (see map on reverse side)?
¹ ☐ No ² ☐ Yes
3. Do you support the above proposal? **For purposes of measuring support, checking the "no opinion" box will count as a "no" vote 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 ☐ Yes² ☐ No³ ☐ No Opinion⁴ ☐ Don't Care

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

Deer Management Units in Huron, Sanilac, and Tuscola Counties

Shaded area will be affected by proposed regulation changes

