MICHIGAN DEPARTMENT OF NATURAL RESOURCES
Wildlife Division Report No. 3432
March 2005

Printed by Authority of: P.A. 451 of 1994
Total Number of Copies Printed: 85
Cost per Copy:.....$0.56
Total Cost: $47.60

Michigan Department of Natural Resources

2004 QUALITY DEER MANAGEMENT (QDM) SURVEY: DEER MANAGEMENT UNITS IN THE UPPER PENINSULA

Brian J. Frawley

ABSTRACT

A survey was completed to determine whether hunters and landowners supported mandatory QDM regulations in Deer Management Units (DMU) in Michigan's Upper Peninsula (UP). 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 (≥66%) of hunters and landowners support implementation. Questionnaires were sent to a random sample of landowners and hunters; 75% of the landowners and 86% of hunters returned their questionnaire. About 63% of landowners owning land in the UP and 61% of people hunting deer in the UP supported implementing mandatory QDM regulations. Support from both landowners and hunters was insufficient to recommend implementation of mandatory QDM regulations for the UP.

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.

A contribution of Federal Aid in Wildlife Restoration, Michigan Project W-147-R

Equal Rights for Natural Resource Users
The Michigan Department of Natural Resources (MDNR) provides equal opportunities for employment and access to Michigan's natural resources. Both State and Federal laws prohibit discrimination on the basis of race, color, national origin, religion, disability, age, sex, height, weight or marital status under the Civil Rights Acts of 1964, as amended (MI PA 453 and MI PA 220, Title V of the Rehabilitation Act of 1973 as amended, and the Americans with Disabilities Act). If you believe that you have been discriminated against in any program, activity, or facility, or if you desire additional information, please write the MDNR, HUMAN RESOURCES, PO BOX 30028, LANSING MI 48909-7528, **or** the MICHIGAN DEPARTMENT OF CIVIL RIGHTS, STATE OF MICHIGAN PLAZA BUILDING, 1200 6TH STREET, DETROIT MI 48226, **or** the OFFICE FOR DIVERSITY AND CIVIL RIGHTS, US FISH AND WILDLIFE SERVICE, 4040 NORTH FAIRFAX DRIVE, ARLINGTON VA 22203.

For information or assistance on this publication, contact: MDNR, WILDLIFE DIVISION, P.O. BOX 30444, LANSING, MI 48909-7944, http://www.michigandnr.com. This publication is available in alternative formats upon request. TTY: Michigan Relay Center 1-800-649-3777

IC2578-87 (03/02/2005)

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, Superior Deer Management requested that the MDNR implement mandatory QDM regulations throughout the UP, excluding Drummond Island. The group developed a proposal that sought to protect most 1½ year old males from harvest 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 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 2006 deer hunting seasons.

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 the UP.

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 3,979 randomly selected hunters and landowners from the UP. 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 3,979 people (2,000 per group), the margins of error were expected to be about 3% for both landowners and hunters.

Lists of property parcels ≥5 acres were obtained from the equalization departments throughout the UP. 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 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 on Drummond Island were also excluded from the list. From the final landowner list, 2,000 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 the UP during 2003. These lists represented randomly selected people included in annual deer harvest surveys that were conducted by the Wildlife Division (Frawley 2004).

People receiving the questionnaire were asked to report whether they supported the mandatory QDM regulations for the UP. 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 the UP and landowners that did not own land within the UP 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 2,000 landowners and 2,000 hunters, including 21 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 3,979 people were sent the questionnaire, 88 surveys were undeliverable resulting in an adjusted sample size of 3,891 (i.e., minus undeliverable questionnaires). Questionnaires were returned by 3,142 people, yielding an 81% adjusted response rate.

RESULTS AND DISCUSSION

Questionnaires were originally mailed to 2,000 landowners and 2,000 hunters, but questionnaires were undeliverable to 68 landowners and 20 hunters. Thus, the adjusted sample size was 1,932 landowners and 1,980 hunters. Questionnaires were returned by 1,456 landowners (75%) and 1,707 hunters (86%) (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 63% of the landowners owning land in the UP supported implementing the proposed mandatory QDM regulations (Table 2). In contrast, 32% of landowners did not support mandatory QDM regulations, and 5% did not have an opinion about the regulations. Among hunters that hunted in the UP, about 61% supported the proposed mandatory QDM regulations (Table 3). About 37% 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 the UP by the Wildlife Division to the Natural Resources Commission.

ACKNOWLEDGEMENTS

I thank all the landowners and hunters that provided information. Holly Campbell, Theresa Riebow, and Becky Walker completed data entry. Mike Bailey, Rod Clute, Valerie Frawley, Pat Lederle, Penney Melchoir, Bill Moritz, Cheryl Nelson-Fliearman, and Brent Rudolph reviewed a draft version of this report.

LITERATURE CITED

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

Frawley, B. J. 2004. Michigan deer harvest survey report: 2003 seasons. Wildlife Division Report 3418. Michigan Department of Natural Resources, Lansing, USA.

Quality Deer Management Working Group. 1999. Procedure for initiation, evaluation, and review of mandatory quality deer management proposals. Wildlife Division, Michigan Department of Natural Resources, Lansing, USA.

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 the UP, Michigan.

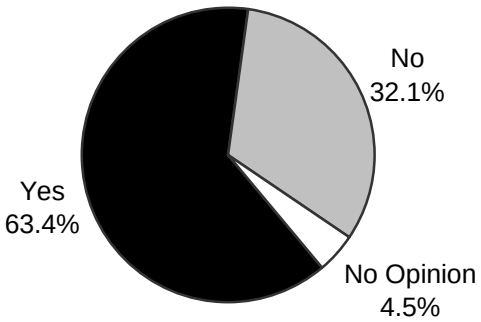
Group	Total number of people in group	Number of people included in sample[a]	Number of questionnaires that were undeliverable	Number of questionnaires returned	Response rate (%)
Landowners[b]	46,250	2,000	68	1,456	75
Hunters[c]	125,118	2,000	20	1,707	86

[a]Twenty-one people were included in both the landowner and hunter samples; thus, the overall sample size consisted of 3,979 people.
[b]Landowners owned at least one 5-acre parcel; however, each landowner was counted once regardless of number of parcels owned.
[c]Estimated number of people that hunted deer in the UP in 2003 (Frawley 2004).

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

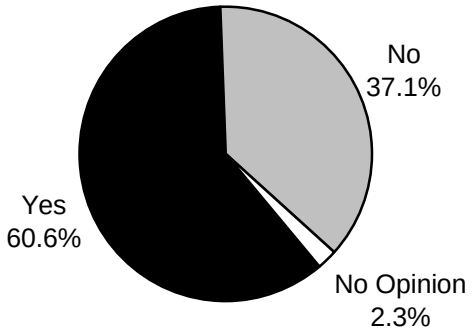
Response	Percentage of landowners[a]	95% CL[b]
Yes (Supported mandatory QDM regulations)	63.4	2.5
No (Did not support mandatory QDM regulations)	32.1	2.4
No opinion	4.5	1.1

Responses (%)



[a]Percentage of landowners owning at least one 5-acre parcel of land in the UP; landowners that selected “don’t care” (2.4 ± 0.8%) or failed to provide an answer (0.6 ± 0.4%) about their support for QDM regulations were not used to measure support for mandatory QDM regulations.
[b]95% confidence limits.

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

Response	Percentage of hunters[a]	95% CL[b]	Responses (%)
Yes (Supported mandatory QDM regulations)	60.6	2.4	
No (Did not support mandatory QDM regulations)	37.1	2.4	
No opinion	2.3	0.7	

[a]Percentage of hunters that hunted deer in the UP; hunters that selected "don't care" (1.5 ± 0.6%) or failed to provide an answer (0.2 ± 0.2%) about their support for QDM regulations were not used to measure support for mandatory QDM regulations.
[b]95% confidence limits.

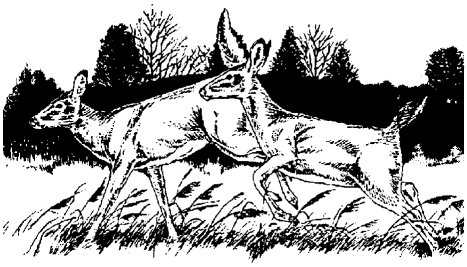
Appendix A

Deer Management Survey Questionnaire for
Deer Management Units in the Upper Peninsula.

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 Michigan's Upper Peninsula, excluding Drummond Island. 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 maintain deer below the carrying capacity of the habitat and better balance the buck-to-doe ratio by shifting harvest pressure to female deer where needed. If adopted, this proposal would be implemented for a minimum of 5 years beginning with the 2006 deer hunting seasons.

1. Do you deer hunt in the Upper Peninsula, excluding Drummond Island?

1 ☐ Yes 2 ☐ No

2. Do you own land in Upper Peninsula, excluding Drummond Island?

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.