



## **QUALITY DEER MANAGEMENT (QDM) SURVEY: DEER MANAGEMENT UNITS 035 AND 135 (Iosco County)**

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### **ABSTRACT**

*A survey was completed to determine whether hunters and landowners supported proposed mandatory QDM regulations in Iosco County (Deer Management units [DMU] 035 and 135). A key element 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; 73% of the landowners and 78% of hunters returned their questionnaire. About 59% of landowners owning land in Iosco County, and 57% of people hunting deer in Iosco County supported implementing mandatory QDM regulations. Support from both landowners and hunters was insufficient to recommend implementation of mandatory QDM regulations for DMUs in Iosco County.*

### **INTRODUCTION**

Quality Deer Management (QDM) seeks to keep deer populations in balance with the habitat, more closely balance sex ratios, and increase the number of older-age bucks in the population. The Michigan Department of Natural Resources (MDNR) supports the voluntary implementation of QDM practices on private land. The MDNR supports mandatory QDM



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regulations in a 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, Hale Whitetails Unlimited submitted a proposal to modify deer management regulations in Iosco County (Deer Management Units 035 and 135; Figure 1). This group requested a change in buck harvest regulations so that a larger 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 Iosco County to a deer with three or more points on one antler. This would protect bucks with fewer points from harvest. The current definition of a legal buck in DMU 035 is a deer with an antler greater than three inches in length, while hunters in DMU 135 are only permitted to take an antlered deer if it has two or more antler points on one antler ("no spike rule"). Hale Whitetails Unlimited also advocated harvesting enough antlerless deer annually to achieve an adult buck to adult doe ratio below 1:2 and 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 Iosco County (DMUs 035 and 135).

## **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 2,093 randomly selected hunters and landowners from Iosco County. The survey was designed to produce estimates that would be accurate within a margin of error of plus or minus five percentage points.

A list of property parcels  $\geq 5$  acres were obtained from township property tax assessors in Iosco 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 from all the townships 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 3,351 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 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 Iosco 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, 2002b). The final list consisted of 1,060 hunters. Mailing addresses were missing for 5 of these hunters; therefore, questionnaires were sent to 1,055 hunters.

People receiving the questionnaire were asked to report whether they supported the proposed mandatory QDM regulations for losco 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 losco County. The opinions of hunters that did not hunt within losco County and landowners that did not own land within losco 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 1,055 hunters, including 50 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 2,093 people were sent the questionnaire, 36 surveys were undeliverable resulting in an adjusted sample size of 2,057 (i.e., minus undeliverable questionnaires). Questionnaires were returned by 1,546 people, yielding a 75% adjusted response rate.

## **RESULTS AND DISCUSSION**

Questionnaires were originally mailed to 1,088 landowners and 1,055 hunters, but questionnaires were undeliverable to 22 landowners and 14 hunters. Thus, the adjusted sample size was 1,066 landowners and 1,041 hunters. Questionnaires were returned by 775 landowners (73%) and 815 hunters (78%) (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 losco County supported implementing the proposed mandatory QDM regulations (Table 2). In contrast, 37% of landowners did not support mandatory QDM regulations, and 5% did not have an opinion about the regulations. Among hunters that hunted in losco County, about 57% supported the proposed mandatory QDM regulations (Table 3). About 41% of the hunters did not support the mandatory QDM regulations, and 3% 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 losco County by the Wildlife Division to the Natural Resources Commission.

About 58% of the landowners owning land in DMU 035 supported implementing the proposed mandatory QDM regulations, and 57% of the deer hunters that hunted in DMU 035 favored the proposed QDM regulations (Table 4). Among the people owning land in DMU 135, 63% supported the proposed regulations, and about 58% of the people hunting in DMU 135 approved of these regulations.

The failure of the current proposal to gain sufficient support for favorable recommendation should not affect continuation of the existing “no-spike” rule in DMU 135. The “no-spike” rule has been in effect in DMU 135 since 1997. This “no-spike” rule has been widely accepted by hunters and landowners in DMU 135 (Frawley 2002a).

## **ACKNOWLEDGEMENTS**

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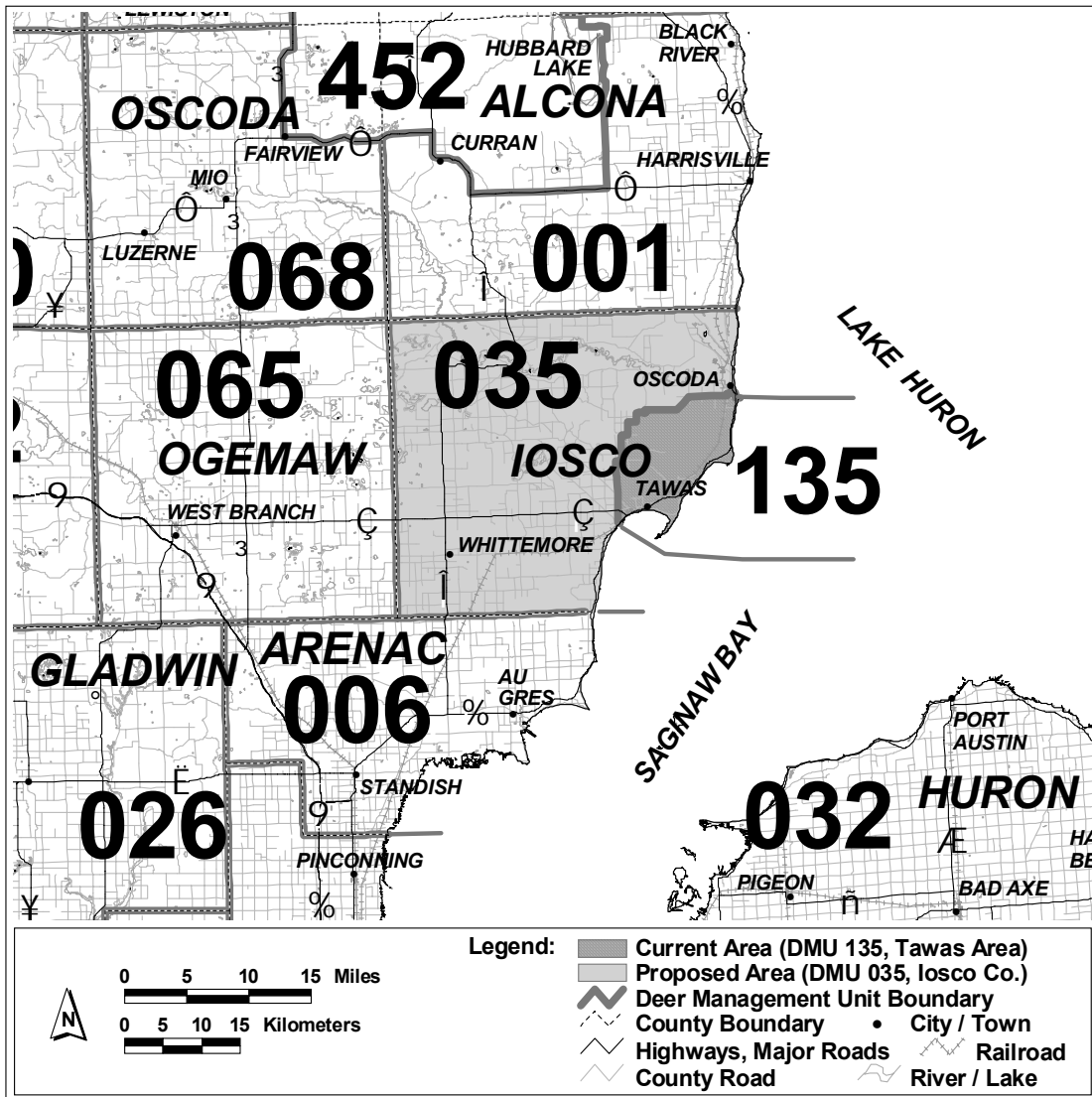


Figure 1. Deer Management units 035 and 135 in Iosco County, east-central Lower Peninsula of Michigan, 2002.

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 135 (Iosco County), Michigan.

Group	Total number of people in group	Number of people included in sample <sup>a</sup>	Number of questionnaires that were undeliverable	Number of questionnaires returned	Response rate (%)
Landowners <sup>b</sup>	3,351	1,088	22	775	73%
Hunters <sup>c</sup>	13,117	1,055	14	815	78%

<sup>a</sup>Fifty people were included in both the landowner and hunter samples; thus, the overall sample size consisted of 2,093 people.

<sup>b</sup>Landowners owned at least one 5-acre parcel; however, each landowner was counted once regardless of number of parcels owned.

<sup>c</sup>Estimated number of people that hunted deer in Iosco County in 2001 (unpublished data).

Table 2. Proportion of landowners supporting the proposed mandatory QDM regulations in DMUs 035 and 135 (Iosco County), Michigan.

Response	Percentage of landowners <sup>a</sup>	95% CL <sup>b</sup>	Responses (%)
Yes (Supported mandatory QDM regulations)	58.8%	3.1%	<p>A pie chart illustrating the distribution of responses from landowners. The largest slice is 'Yes' at 58.8% (black), followed by 'No' at 36.7% (gray), and 'No Opinion' at 4.5% (white).</p>
No (Did not support mandatory QDM regulations)	36.7%	3.1%	
No opinion	4.5%	1.3%	

<sup>a</sup>Percentage of landowners owning at least one 5-acre parcel of land in Iosco County; landowners that selected “don’t care” (3.8 ± 1%) about their support for QDM regulations were not used to measure support for the QDM regulations.

<sup>b</sup>95% confidence limits.

Table 3. Proportion of hunters supporting the proposed mandatory QDM regulations in DMUs 035 and 135 (Iosco County), Michigan.

Response	Percentage of hunters <sup>a</sup>	95% CL <sup>b</sup>	Responses (%)
Yes (Supported mandatory QDM regulations)	56.9%	3.5%	
No (Did not support mandatory QDM regulations)	40.5%	3.5%	
No opinion	2.6%	1.1%	

<sup>a</sup>Percentage of hunters that hunted deer in Iosco County; hunters that selected “don’t care” ( $3.1 \pm 1\%$ ) or failed to provide an answer ( $0.4 \pm 1\%$ ) about their support for QDM regulations were not used to measure support for the QDM regulations.

<sup>b</sup>95% confidence limits.

Table 4. Proportion of landowners and hunters supporting the proposed mandatory QDM regulations in Iosco County (Iosco County), Michigan, summarized separately by DMU.

Response	Within DMU 035				Within DMU 135			
	Percent- age of land- owners <sup>a</sup>	95% CL <sup>b</sup>	Percent- age of hunters <sup>c</sup>	95% CL	Percent- age of land- owners <sup>d</sup>	95% CL	Percent- age of hunters <sup>e</sup>	95% CL
Yes (Supported mandatory QDM regulations)	57.6%	3.4%	56.9%	3.6%	63.4%	6.1%	58.1%	6.8%
No (Did not support mandatory QDM regulations)	38.0%	3.3%	40.5%	3.6%	30.1%	5.8%	39.3%	6.7%
No opinion	4.4%	1.4%	2.5%	1.2%	6.6%	3.2%	2.6%	2.2%

<sup>a</sup>Percentage of landowners owning at least one 5-acre parcel of land in DMU 035.

<sup>b</sup>95% confidence limits.

<sup>c</sup>Percentage of hunters that hunted deer in DMU 035.

<sup>d</sup>Percentage of landowners owning at least one 5-acre parcel of land in DMU 135.

<sup>e</sup>Percentage of hunters that hunted deer in DMU 135.

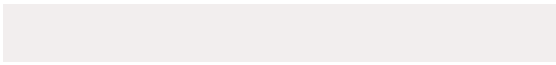
## Appendix A

Quality Deer Management Survey Questionnaire for  
Iosco County (DMUs 035 and 135).



# 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 Iosco County, deer management units (DMUs) 035 and 135. The proposal requests that: (1) a legal buck be defined as a deer having at least 3 antler points on one side, (2) an antlerless harvest be maintained sufficient to maintain an adult buck to adult doe ratio below 1:2, and (3) the regulations be in effect for a five-year trial period beginning with the fall 2003 deer seasons. If survey results do not indicate support for this proposal, the current no-spike regulation will remain in effect in DMU 135.*

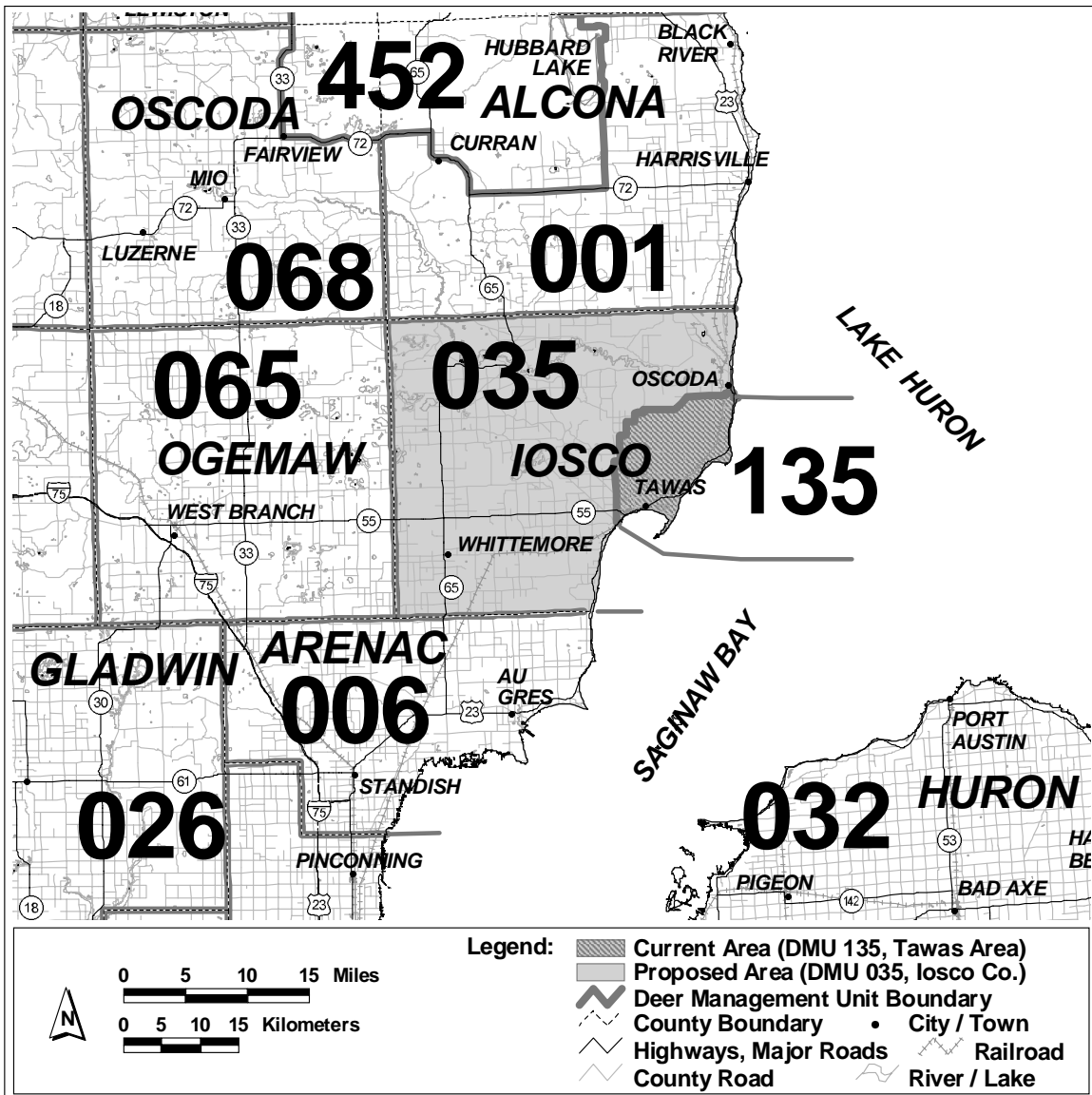
1. Do you deer hunt in Deer Management Unit 035 in Iosco County (see map on reverse side)? 1  Yes    2  No
  
2. Do you deer hunt in Deer Management Unit 135 in Iosco County? 1  Yes    2  No
  
3. Do you own land in Deer Management Unit 035 in Iosco County? 1  Yes    2  No
  
4. Do you own land in Deer Management Unit 135 in Iosco County? 1  Yes    2  No
  
5. 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 Units 035 and 135 in Iosco County

The "no spike rule" is currently in effect in DMU 135.



**Deer Management Unit 135** means that area of Iosco county bounded by a line beginning at the mouth of the Au Sable river and the Lake Huron shoreline, then southerly along the Lake Huron shoreline to highway M-55, westerly on highway M-55 to Wilber road, northerly on Wilber road to Galion road, easterly on Galion road to Sherman road, northerly on Sherman road to Curtis road, easterly on Curtis road to Brooks road, northerly on Brooks road to Esmond road, easterly on Esmond road to old highway US-23 (also known as Au Sable road), easterly on old highway US-23 (Au Sable road) to the Au Sable river, easterly along the Au Sable river to the point of beginning.