

# **Landowner Response to Chronic Wasting Disease and its Management**

**in Wisconsin's Southwest Disease Eradication Zone**

By Jordan Petchenik

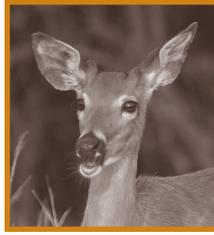
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**T**his report represents an ongoing effort by the Wisconsin Department of Natural Resources to bring the opinions and concerns of Wisconsin hunters and landowners to the chronic wasting disease management decision-making table. Its purpose is to enlighten resource managers so that they can make informed recommendations about strategies designed to eradicate the disease from Wisconsin's deer herd. Since chronic wasting disease was discovered in Wisconsin in 2002, the Department has conducted five studies focused on the public's response to the disease and its management. In addition to the current study, these include: "Chronic Wasting Disease in Wisconsin and the 2002 Hunting Season: Gun Deer Hunters' First Response", "Gun Deer Hunting in Wisconsin and the 2003 Season", "Landowner Response to Chronic Wasting Disease in the Sparks Areas of Hollandale and Orion Township" (in progress), and "Landowner Response to Chronic Wasting Disease and its Management in Wisconsin's Southeast Disease Eradication Zone" (in progress). Furthermore, the Department has collaborated with and has financially supported human dimensions research pertaining to chronic wasting disease conducted by the University of Wisconsin-Stevens Point, the University of Wisconsin-Madison, and the Western Association of Fish and Wildlife Agencies. By collectively applying this social information, these studies encourage public participation and improve resource managers' abilities to make informed decisions.

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## Introduction and Study Highlights

The State of Wisconsin has a goal of eradicating chronic wasting disease (CWD) from its borders. Wildlife disease experts believe that without management intervention, CWD will increase in prevalence and distribution. To accomplish disease eradication, the state is relying on cooperation from both hunters and landowners. Hunters must be willing to shoot more deer and landowners must allow hunters on their land.

This report examines landowner response to CWD in the state's southwest disease eradication zone (DEZ). The purpose of this study was to measure 1) landowner concerns about the risks associated with CWD; 2) where landowners obtain information about CWD; 3) landowner support for various CWD control measures; and 4) the effect of various incentives to shoot more deer.

The results of this study were based on answers obtained from a 22-page mailed questionnaire sent to a random sample of 1,000 landowners in the southwest DEZ. The study was administered in 2004; questions pertained to the 2003 deer hunting seasons. Researchers used standard mailed questionnaire procedures. The questionnaire itself was reviewed by the Human Dimensions Unit at Colorado State University and pre-tested by landowners in the DEZ. Sixty four percent of the eligible landowners completed and returned the questionnaire. A telephone follow-up for non-response bias disclosed no differences between respondents and non-respondents.

To anticipate the detailed findings outlined in the Results and Discussion section, four major findings and their implications are presented here. A summary of the other survey results are presented in the Conclusion section of this report.



### Major Finding #1.

**Landowners support the State's goal of disease eradication, yet they show mixed to low support for the various disease eradication techniques.**

Results show strong landowner endorsement for the state's mission of disease eradication and control. Seven landowners in ten (71%) agree that CWD should not be allowed to spread further in the state, 69 percent say the percentage of deer infected with CWD should not be allowed to increase, and nearly two-thirds (64%) agree that CWD should be eliminated from the state. Conflicting with this endorsement, however, is strong disapproval of and opposition to numerous management techniques designed to accomplish the eradication goal. For example, less than one-half (43%) agree that the wild deer population should be reduced in the DEZ to less than five deer per square mile. Also, a majority of landowners (60%) does not support the state's use of sharpshooters to help reduce the deer herd in the DEZ. An even higher majority of the landowners are unwilling to allow sharpshooters on their land (76%), and oppose the use of bait by sharpshooters on their land (79%). Further, nearly three-fourths of the landowners (73%) say the reason why they limit the number of deer killed on their property is because they do not believe the disease can be stopped. In light of these opposing forces, accomplishing the goal of disease eradication will be very difficult. Rather than deterring the Department from continued eradication efforts, these opposing forces should be viewed as challenges which need immediate and continued attention.

To build public support the Department should develop a way of communicating with the public to explain in lay terms the progress that has been made, how landowner and hunter participation is contributing to the eradication efforts, and where the disease would be without Departmental and public intervention. This will likely require cooperation from University of Wisconsin researchers to complete their modeling efforts and then develop illustration techniques which easily communicate

the model's forecasting powers. Further, anecdotal data indicate that the public would like to know if there is a sunset on the eradication effort; in other words, when will the norm return (e.g., a 9-day season absent earn-a-buck)? Expertise outside of the Department may be necessary to help craft these and other communication messages.

## **Major Finding #2.**

**Monetary incentives have little effect on increasing the time a hunter spends in the field or on the number of deer a hunter will harvest. Hence, the continued use of monetary incentives should be examined.**

The survey asked whether four new incentives changed hunter behavior by increasing the time a hunter spent in the field and by increasing the number of harvested deer. Although relatively few hunters report any individual incentive had a positive effect on their harvest, this is not to say that the incentives had no impact on the number of deer taken. In all, more than one-half of the landowner-hunters (56%) report at least one of the four incentives resulted in them harvesting more deer. Looking at the specific incentives, survey results suggest that opportunities to harvest a deer (e.g., via free buck tags and a longer season) were more effective at increasing hunting participation and deer harvest than were monetary incentives. One-half (54%) of landowners who hunted in 2003 spent more time hunting because of free buck tags and 45 percent spent more time hunting because of the longer season. Further, landowners who hunt believe that offering free buck tags and extending the season were more likely to increase the actual overall harvest of deer than were monetary incentives. Approximately one-third say they harvested more deer because of the two free buck tags (35%) or the longer gun season (33%).

In contrast, the monetary incentives were less influential. The opportunity to earn either \$200 for shooting a CWD-positive deer, \$200 for having a CWD-positive deer harvested from their land, or \$20 through lottery drawings for each registered deer harvested from the DEZ each induced only 19 to 21 percent of the landowners

to spend more time hunting; and fewer than ten percent say each resulted in harvesting more deer. Results also indicate that larger monetary incentives would do little to increase the time spent hunting or the deer harvest. Increasing the positive incentive from \$200 to \$500 and the lottery payment from \$20 to \$50 would each probably or definitely increase time in the field for 23 percent of the landowner-hunters.

In response to these findings, the monetary incentives for the 2005 deer season have been reviewed. The state decided to drop the \$20 lottery incentive for the 2005 deer season but decided to continue the \$200 landowner / hunter payments to acknowledge the important role of landowners and hunters and to focus the message on the value of removing CWD infected deer. However, given the long-term effort that will likely be required to eradicate the disease from Wisconsin, the state will need to continue to weigh direct (required funds) and indirect (required personnel) costs of continued monetary incentives against the benefits gained from a potential increase in harvest of wild deer.

## **Major Finding #3.**

**From a human dimensions perspective, disease eradication will be a challenge because landowners do not believe the disease can ever be fully eradicated from the state.**

Although the majority of landowners support the state's goal of eradicating CWD from the state, results indicate that landowners doubt the goal can be successfully accomplished. Landowners believe the Department's greatest challenge to disease eradication is lack of cooperation, that is, hunters who oppose the state's CWD control efforts and landowners that do not allow hunting on their land. Approximately eight in ten landowners agreed that hunters that oppose eradication efforts (81%) and landowners that do not permit hunting on their land (77%) are barriers to successfully eliminating CWD from Wisconsin's wild deer herd. Further, when landowners were asked what they believe to be the most serious barrier to eradication, the most frequently cited response (36%) is a belief that once CWD is in a wild herd it cannot be eliminated.

To combat the belief that the disease can never be eliminated, landowners will need, once again, an understanding of progress that has been made, how public participation is contributing to the eradication efforts, and where the disease would be without Department and public intervention. A peer-reviewed model which illustrates possible scenarios for disease spread absent eradication efforts is critical.

Making the challenge even greater is landowner reluctance to increase the number of deer harvested from their land. Just over one-half of the landowners (53%) have a reason for limiting the number of deer harvested from their land. Of those landowners, many (72%) feel strongly that it is wrong to take a deer that will not be used. However, approximately three-fifths (59%) of all landowners would be willing to allow more deer to be killed on their land in the DEZ if the deer could be donated to a food pantry. (The 2003 deer season did not include opportunities to donate deer to a food pantry.) This latter finding underscores the importance of outreach efforts to landowners and hunters of the now-available venison donation program.

#### Major Finding #4

##### **Landowner-hunters are taking advantage of the extended seasons and those who do are killing more deer.**

The traditional 9-day gun hunt remains the integral season in a multi-season framework. Even with 23 days of gun deer hunting opportunities (October 30 through November 21) preceding the 9-day gun season, landowners hunted almost four days during the traditional season (or an average of 42 percent of the 9-day season). However, landowners also took advantage of the extended seasons (pre and post the 9-day gun season). Two-thirds (68%) hunted *at least* one day other than the traditional 9-day hunt, averaging almost 13 days of deer hunting in the DEZ. From the perspective of number of days hunted, the early gun season during the first weeks of November (October 30 through November 21) is the most popular – it accounts



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for the greatest number of hunter-days, with 1,295 days reported hunting (an average of four days). As hoped, statistical analysis shows a correlation between number of days hunted and number of deer harvested ( $r = 0.31$ ). Landowners who hunted during the early or late seasons in addition to the traditional 9-day gun hunt harvested an average of 1.9 deer apiece, while those who hunted only during the traditional hunt took an average of 1.0 deer apiece. This difference in when the landowners hunted is also significantly different ( $t$ -test,  $P < 0.001$ ).

It should be noted, however, that landowners were not enamored with the season offerings. The largest block of landowners (35%) would prefer a gun deer season other than the alternatives offered in the questionnaire.

These findings point toward a management strategy that includes multiple opportunities to harvest deer. The Department, however, should not ignore the preference of some landowners and hunters for a return to the traditional season structure (see focus group comments within the detailed Results and Discussion section). With this in mind, the Department may want to revisit the multiple season options, paying particular attention to a structure (e.g., season breaks) that addresses the desire by some for a return to a 9-day gun deer hunt.

## Methods: Sampling, Data Collection and Analysis

The study population consisted of 8,000 individuals owning a minimum of five acres in the southwest DEZ (see Appendix A for map). A random selection of 1,000 landowners was drawn from this landowner data base. Data were obtained through the use of a mailed questionnaire.

### The Questionnaire

A 22-page questionnaire was developed in consultation with personnel from the Wisconsin DNR Bureaus of Wildlife Management, Customer Service and Licensing, and Integrated Science Services; the University of Wisconsin-Madison Department of Wildlife Ecology, and the Human Dimensions of Natural Resources Unit at Colorado State University (HDU-CSU). The resulting questionnaire was pre-tested in focus groups with landowners in the southwest DEZ, revised, and peer reviewed by social scientists at HDU-CSU.

### Implementation

Standard mailed questionnaire techniques were used to conduct this survey. Each landowner was contacted a maximum of four times. These contacts include an initial questionnaire with a cover letter signed by Wisconsin DNR Secretary Scott Hassett with a first-class hand-stamped addressed return envelope (known as the full mailing); a postcard which served as a “thank you” for returning the questionnaire or as a reminder to please complete and return it; a second full mailing sent to all non-respondents; and a final third full mailing sent to non-respondents. Mailings were sent between October 1, 2004 and November 12, 2004.

The response rate of the landowners is based on a formula that divides the number of returned questionnaires by the total number of mailings, minus the number of cases determined to be a “non-sample.” For this study a non-sample is defined as selected respondents who are deceased; mailings undelivered with no forwarding address given; or people who said they were not landowners. From the sample of 1,000 landowners, 40 were eliminated (26 were due to

an incorrect address without forwarding information and 14 were determined to be deceased or no longer a landowner). Useable questionnaires were returned by 613 landowners for a response rate of 64 percent.

The University of Wisconsin Survey Center (UWSC) conducted the clerical tasks associated with this survey. The UWSC assembled the mailings, tracked the response rate, and performed the necessary data entry. All mailings originated from and were returned to the UWSC.

The Wisconsin DNR Bureau of Integrated Science Services conducted all analyses using SPSS-PC version 13.0. The margin of error for the study is  $\pm 3$  percent.

### Non-Response Check

To explore potential non-response bias, respondents who returned completed questionnaires were compared to those who did not return a questionnaire. A random selection of 53 non-respondents were telephoned in January 2005 and asked a subset of questions from the mail survey. A statistical comparison of responses found minimal or no differences between the mail survey respondents and non-respondents. As a result, based on the telephone non-response check, non-response bias was not considered to be a problem and data were not weighted.

### Additional Data

Direct quotations from three focus groups are found integrated throughout this report. The quotations appear in *italics* and have been inserted to add context to some of the thinking that underlies the survey responses. The focus groups were conducted in May and June 2004. Participants included landowners known to support the Wisconsin DNR’s CWD control initiatives, landowners that oppose the Wisconsin DNR’s CWD initiatives, and landowners that support some but oppose other Wisconsin DNR CWD initiatives. Participants were identified and contacted by Wisconsin DNR field personnel and CWD liaisons.

## Results and Discussion

### Awareness and Concerns About Chronic Wasting Disease

This section addresses landowner awareness and concerns about CWD to better understand the perceptions of risk attributed to the disease. In particular, this part of the report addresses the impact of CWD on hunting and the deer population, as well as, perceptions of exaggerated risk.

Respondents were asked the degree to which they agreed or disagreed with numerous issues related to CWD, focusing on the questionable risks associated with the disease. Responses were recorded on a scale of 1 to 7, where 1 represents “strongly disagree”, 4 represents “neither agree nor disagree”, and 7 represents “strongly agree.” In general, the majority of respondents believe that CWD may pose a risk to the health of humans, livestock, and the deer herd (Table 1).

**Table 1 indicates that** landowners in the DEZ did not disagree with a single item about CWD and the questionable risks associated with the disease. Although no issue had a mean value below 4 (i.e., no issue had a mean score that fell within the disagree values), there were no mean scores that equated to moderate (score = 6) or strong agreement (score = 7).

More than seven landowners in ten (72%) agree that CWD may pose a risk to livestock but not enough is known to be certain (mean score 5.1) (Table 1).

Approximately two-thirds of the landowners agree that: because of CWD their family members have concerns about eating venison (68% agree, mean score = 5.0); CWD may pose a risk to humans but not enough is known to be sure (68% agree, mean score = 4.9); CWD should be eliminated from the wild deer herd (67% agree, mean score = 4.8); and because of CWD they personally have some concerns about eating venison (64% agree, mean score = 4.6) (Table 1).

Just over one-half of the landowners agree that: the threat of CWD has been exaggerated (56% agree, mean score = 4.5); CWD may pose a risk to deer but not to humans (55% agree, mean score = 4.4); and CWD may cause disease in humans if they eat venison from an infected deer (51% agree, mean score = 4.4) (Table 1).

Less than one half of the landowners agree that: the Wisconsin DNR exaggerated the threat CWD poses to the deer herd (48% agree, mean score = 4.1) and that the Department of Health and Family Services (DHFS) exaggerated the threat CWD poses to human health (41% agree, mean score = 4.0) (Table 1).

Please note that landowners are more likely to agree that the threat of CWD has been exaggerated than to agree that the Wisconsin DNR or DHFS specifically have exaggerated the threat.

**Table 1.** Perceived risks of CWD. (Means followed by the same letter are not statistically different at the alpha=0.05 level; means which are **not** followed by the same letter are significantly different).

Perceived Risk	Percent “Slightly” to “Strongly” Agree (Scores 5 – 7)	Mean Score <sup>a</sup>
May pose risk to livestock but not enough is known to be sure	72	5.1 A
Family members have concerns about eating venison	68	5.0 AB
May pose risk to humans but not enough is known to be sure	68	4.9 B
CWD should be eliminated from wild deer herd	67	4.8 B
I have concerns about eating venison	64	4.6 C
The threat of CWD has been exaggerated	56	4.5 CD
May pose risk to deer but not to humans	55	4.4 CD
May cause disease in humans if they eat venison from infected deer	51	4.4 DE
DNR has exaggerated the threat CWD poses to wild deer	48	4.1 E
DHFS has exaggerated the threat CWD poses to human health	41	4.0 F

<sup>a</sup> Responses were recorded on a scale of 1 to 7, where 1 represents “strongly disagree,” 4 represents “neither agree nor disagree,” and 7 represents “strongly agree.”

The focus group participants had this to say about their knowledge of the risk associated with CWD:

*One of the things that I initially was concerned with was would this disease carry into cattle, and so forth? But I did attend a three-day symposium in Denver, Colorado for the Dane County Board. Of course, we listened to numerous speakers on the whole issue. I came away pretty confident that this disease has been there 30 years and has never got into cattle. Therefore, I was pretty satisfied that CWD would be almost harmless or negative to any humans or to cattle, which was my biggest concern. After coming away from there, listening to the numerous speakers I was pretty confident that we were okay. And I feel better today about it than I ever have.*

*I can't say that I ever even heard of anybody getting a runny nose from eating CWD deer, and that's a great thing. As far as our cattle, it would be a different story if you heard there were problems with it...*

*We were born and raised on venison. I think none of us would butcher a sick deer that looked drooling. Anything that looks good we eat...I had one positive that we shot not too long ago and we fed it to an animal. I wanted to see what it would do. I have a lot of dogs and I had a dog I didn't really care for. It didn't affect him. I do a lot of trapping and the coyotes eat the carcasses. I work with you people, the DNR, catching skunks and raccoon and it hasn't spread to them. If I shot a nice healthy one here I would definitely eat it.*

*Most of my CWD fears now aren't really for the meat or consuming it or anything, it's what the DNR is going to do about it. It's the concern for our hunting tradition. Those are my only fears. My family, we had venison tonight. My wife is eating it and she's feeding it to the children so she's over that initial fear and shock. So, next year I'll be back hunting. We can consume four or five deer a year, my family alone. Next year I will be back hunting. I love to hunt.*

*A lot of [hunters] I talked to won't eat it unless they've had it tested... And they worry about the locker that processed it that might have had it.*

*I don't know if the DNR knows but to me it's a concern if CWD becomes BSE. If it does we're going to all be looking for a new occupation. I guess to me that is one reason really I'm in favor of eradication.*

*My wife quit eating [venison] right away. I don't even bring it home. I don't know what I would do if I shot a deer. I haven't shot one since this happened. Not that I haven't seen one or haven't been out there hunting. I just like being out there. I can put my scope on them and boy that would be a nice deer, but my wife wouldn't cook it if I brought it home.*



Respondents were also asked how concerned they were about numerous issues related to CWD, especially the impact of CWD on hunting and the deer population. Responses were on a 9-point scale where 1 represents “not at all concerned” and 9 represents “extremely concerned.” The scale was then collapsed so that responses 1 to 4 represents “no to low concern” and 5 to 9 represents “some to extremely high concern” (Table 2).

**Table 2 shows that** landowners are more concerned about the health of the deer herd and the future of deer hunting in Wisconsin than they are about their own personal health due to CWD.

Almost two-thirds of the landowners (64%) express some concern for the health of the deer herd in Wisconsin (Table 2). More than one-half of the landowners are concerned about: CWD spreading throughout the statewide deer population (57% concerned, mean score = 5.1); the risk of CWD jumping to livestock (56% concerned, mean score = 5.2); the risk CWD poses to the future of deer hunting in Wisconsin (54% concerned, mean score = 4.9); the safety of venison from deer in the DEZ (53% concerned, mean

score = 4.9); the potential for CWD control efforts to kill the entire deer population in the DEZ (53% concerned, mean score = 4.8); and the potential for CWD control efforts to discourage hunters from hunting in the DEZ (52% concerned, mean score = 4.8) (Table 2).

About two-fifths or more of the landowners are concerned about: the potential for CWD to greatly reduce the deer population in Wisconsin (46% concerned, mean score = 4.5); not having enough healthy deer left to hunt in the DEZ (42% concerned, mean score = 4.2); the safety of venison from areas where CWD has not been detected (40% concerned, mean score = 4.0); and not having enough healthy deer left to hunt in Wisconsin (38% concerned, mean score = 4.1) (Table 2).

About three landowners in ten express high concern over: the potential for CWD to kill the entire deer population in the DEZ (30% concerned, mean score = 3.5); the potential for CWD to kill the entire deer population in Wisconsin (29% concerned, mean score = 3.4); and their own personal health as a result of CWD (28% concerned, mean score = 3.4) (Table 2).

**Table 2.** *Concerns about CWD. (Means followed by the same letter are not statistically different at the alpha=0.05 level; means which are not followed by the same letter are significantly different.)*

Because of CWD, how concerned are you about...	Percent High Concern	Mean Score <sup>a</sup>
...the health of the deer population in Wisconsin?	64	5.5 A
...CWD spreading throughout the statewide deer population?	57	5.1 B
...the risk of CWD jumping to livestock?	56	5.2 B
...the risk CWD poses to the future of deer Hunting in Wisconsin?	54	4.9 C
...the safety of venison from deer in the DEZ?	53	4.9 C
...the potential for CWD control efforts to kill the entire deer population in the DEZ?	53	4.8 C
...the potential for CWD control efforts to discourage hunters from hunting in the DEZ?	52	4.8 C
...the potential for CWD to greatly reduce the deer population in Wisconsin?	46	4.5 D
...not having enough healthy deer left to hunt in the DEZ?	42	4.2 D
...the safety of venison from areas where CWD has not been detected?	40	4.0 E
...not having enough healthy deer left to hunt in Wisconsin?	38	4.1 E
...the potential for CWD to kill the entire deer population in the DEZ?	30	3.5 F
...the potential for CWD to kill the entire deer population in Wisconsin?	29	3.4 G
...your own personal health?	28	3.4 FG

<sup>a</sup> Responses were on a 9-point scale where 1 represents “not at all concerned” and 9 represents “extremely concerned.” The scale was then collapsed so that responses 1 to 4 represents “no to low concern” and responses 5 to 9 represents “some to extremely high concern”.

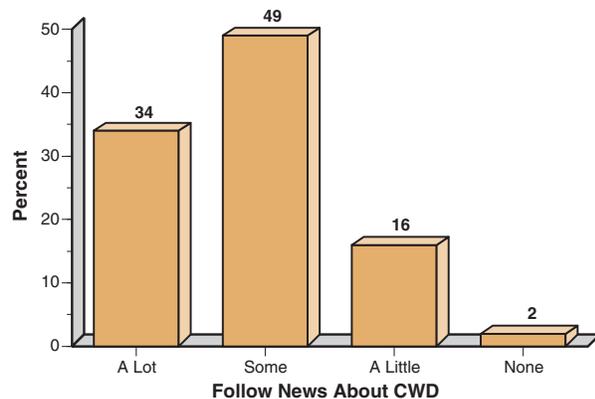
## Information About CWD

This section addresses the objectives to better understand: how landowners currently obtain their information about CWD; what additional information would they like about CWD; and their perceived trust and believability of the Wisconsin DNR when addressing CWD issues.

### Landowners' Following CWD in the News

Respondents were first asked the extent that they had been following the news about CWD. Results indicate that landowners in the DEZ continue to be interested in CWD.

**Figure 1 clearly indicates that** the majority of landowners continue to be interested in CWD: one-third of the landowners (34%) closely follow the news about CWD; almost one-half of the landowners (49%) follow “some” of the news about CWD; and less than one landowner in five (18%) is not interested in CWD (that is, s/he has been following CWD news “a little” or “not at all”).



**Figure 1.** Extent that respondents have been following the news about CWD.

## Sources of Information About CWD

Respondents were presented a list of CWD information sources and asked how often they obtained information from each source. Responses were on a scale of 0 to 4, where 0 represents “never”, 2 represents “sometimes”, and 4 represents “often.” The most frequently relied on sources for information about CWD are Madison and Milwaukee newspapers and the Wisconsin DNR landowner newsletter.

**Table 3.** Frequency of obtaining information from following sources.

News Source	Percent “Often”	Mean Score <sup>a</sup>
Madison or Milwaukee newspaper	48	2.4
Wisconsin DNR landowner newsletter	42	2.2
Television news	35	2.1
Other local newspapers	35	2.0
Friends or family	32	1.9
Radio news	28	1.8
Wisconsin DNR publications	21	1.5
Hunting/sportsmen’s publications	21	1.2
Magazines or books	16	1.2
Hunting/sportsmen’s clubs	14	1.0
Wisconsin DNR internet website	14	0.7
Column from Wisconsin DNR Secretary in newspaper	13	1.0
Special interest groups	10	0.8
Other internet websites	8	0.5
University of Wisconsin	6	0.6
Personal letters/telephone calls from Wisconsin DNR	6	0.5
Personal visits from Wisconsin DNR wildlife staff	6	0.5
State Department of Agriculture	4	0.5
Universities outside Wisconsin	4	0.3
Private industry	3	0.3
State Department of Health	2	0.2

<sup>a</sup> Responses were on a scale of 0 to 4, where 0 represents “never,” 2 represents “sometimes,” and 4 represents “often.”

**Table 3 illustrates that** landowners obtain CWD information from a variety of sources. It’s worth noting that a majority of the landowners did not “often” frequent a single information source. This likely underscores the availability of information from a wide variety of sources.

Almost one-half of the landowners (48%) say they “often” obtain CWD information from Madison and Milwaukee newspapers (Table 3).

Slightly more than two-fifths of the landowners (42%) rely on the Wisconsin DNR newsletter for information and about one-third of the landowners say they “often” obtain CWD information from television news (35%), from newspapers other than from Madison and Milwaukee (35%), and from friends and family (32%) (Table 3).

Landowners obtain CWD information from Wisconsin DNR publications with the same frequency that they obtain information from hunting/sportsmen’s publications (both 21%) and less than one landowner in five “often” rely on all other sources for CWD information. Perhaps surprisingly, this included the Wisconsin DNR website (14%) and the Wisconsin DNR Secretary’s newspaper column “Ask Scott” (13%). About three landowners in ten (28%) “often” obtain their CWD information from radio news reports (Table 3).

Please note that the low reliance on the “Ask Scott” column relative to landowners’ reliance on newspapers in general may in-part be explained by the frequency of the column. “Ask Scott” was only available on a monthly basis for six months to local newspapers in communities in the DEZ.

We should also note that when asked to identify the one main source of information from which they would prefer to obtain information about CWD, landowners identified: the Wisconsin DNR newsletter (25%), Madison and Milwaukee newspapers (19%), Wisconsin DNR publications (9%), the Wisconsin DNR website, the University of Wisconsin, and other local newspapers (7% each). All other sources are not more than five percent.



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## Adequate Information

Respondents were asked the extent to which they agreed or disagreed that they had enough information about numerous CWD related topics. Responses were on a scale of 1 to 7, where 1 represents “strongly disagree”, 4 represents “neither agree nor disagree”, and 7 represents “strongly agree.” In general, a majority of landowners believe that they have enough information about the history of CWD in Wisconsin and where CWD in Wisconsin has been identified but would like additional information on many other topics.

**Table 4 is evidence that** a majority of landowners say they do not have enough information on numerous CWD related topics. This is no surprise because these topics have not been definitively answered by the state. For example, the state cannot definitively answer how CWD first got to Wisconsin so it is no surprise that only 37 percent of the landowners say they have enough information about the disease’s origin (Table 4). Other topics where less than one-half of the landowners say they have adequate information include: the types of wildlife species that can have CWD (46%), precautions that landowners should take because of CWD (37%), possible human safety risks associated with CWD (36%), what causes CWD in wildlife (35%), what DATCP is doing (32%), and possible livestock health risks associated with CWD (30%) (Table 4). These results indicate that current information efforts should continue and perhaps even be heightened.

However in light of this information gap, a majority of landowners believe they have enough information on where deer with CWD have been found in Wisconsin (67%), when CWD was first identified in deer in Wisconsin (60%) and how many wild deer with CWD have been found in Wisconsin (59%) (Table 4). In addition, about one-half of the landowners believe they have enough information on what the Wisconsin DNR is doing about CWD (55%), precautions that hunters should take because of CWD (51%) and how many captive deer with CWD have been found in Wisconsin (51%) (Table 4).

**Table 4. Adequate information about CWD.**

I feel I have enough information about...	Percent "Slightly" to "Strongly" Agree	Mean Score <sup>a</sup>
...where deer with CWD have been found in Wisconsin . . . . .	67	4.8
...when CWD was first identified in deer in Wisconsin . . . . .	60	4.6
...how many wild deer with CWD have been found in Wisconsin . . . . .	59	4.5
...what the Wisconsin DNR is doing about CWD . . . . .	55	4.4
...precautions that hunters should take because of CWD . . . . .	51	4.3
...how many captive deer with CWD have been found in Wisconsin . . . . .	51	4.2
...types of wildlife species that can have CWD . . . . .	46	3.8
...precautions that landowners should take because of CWD . . . . .	37	3.7
...how CWD first got to Wisconsin . . . . .	37	3.7
...possible human safety risks associated with CWD . . . . .	36	3.6
...what causes CWD in wildlife . . . . .	35	3.6
...what DATCP is doing about CWD . . . . .	32	3.5
...possible livestock health risks associated with CWD . . . . .	30	3.4

<sup>a</sup> Responses were on a scale of 1 to 7, where 1 represents "strongly disagree," 4 represents "neither agree nor disagree," and 7 represents "strongly agree."

Each landowner was asked to indicate up to three topics (that were listed in Table 4) about which s/he would like to receive more information. To some extent, the results are as expected – they are the inverse of results found in Table 4. Information on the possible human safety risks associated with CWD is the most desired topic.

**Table 5 indicates that** a majority of landowners did not say that they need more information on any topic. However, several CWD related topics deserve increased focus. Almost one-half of the landowners (47%) want more information on the possible human safety risks associated with CWD and about two-fifths of the landowners (38%) want more information on the possible livestock health risks associated with CWD (Table 5).

About three landowners in ten would like more information on what causes CWD in wildlife (32%), the precautions that landowners should take because of CWD (30%), and the types of wildlife species that can have CWD (29%) (Table 5).

Ten percent to 25 percent of the landowners want more information on how CWD first got to Wisconsin (25%), what the Department of Agriculture is doing about CWD (18%), what the Wisconsin DNR is doing about CWD (16%), the precautions that hunters should take because of

CWD (13%), and where deer with CWD have been found in Wisconsin (10%) (Table 5).

Landowners are most satisfied with the information they have received about how many wild deer with CWD have been found in Wisconsin (9%), when CWD was first identified in deer in Wisconsin (7%), and how many captive deer with CWD have been found in Wisconsin (1%) (Table 5). These results given in Table 5 should provide the Department and the state with guidance on the content of information needed to fill the information gap presented in Table 4.

**Table 5. Percentage of landowners that would like more information about CWD related topics.**

Topic	Percent
Possible human safety risks associated with CWD . . . . .	47
Possible livestock health risks associated with CWD . . . . .	38
What causes CWD in wildlife . . . . .	32
Precautions that landowners should take because of CWD . . . . .	30
Types of wildlife species that can have CWD . . . . .	29
How CWD first got to Wisconsin . . . . .	25
What DATCP is doing about CWD . . . . .	18
What the Wisconsin DNR is doing about CWD . . . . .	16
Precautions that hunters should take because of CWD . . . . .	13
Where deer with CWD have been found in Wisconsin . . . . .	10
How many wild deer with CWD have been found in Wisconsin . . . . .	9
When CWD was first identified in deer in Wisconsin . . . . .	7
How many captive deer with CWD have been found in Wisconsin . . . . .	1

**State Information Sources**

Respondents were asked if the Wisconsin Departments of Natural Resources (Wisconsin DNR), Agriculture and Consumer Protection (DATCP), and Health and Family Services (DHFS) have done enough to provide them with the information they need about CWD. Specifically, respondents were asked if they would prefer to receive from each state agency: less information, more information, or about the same amount of information they currently receive. Responses were on a 5-point scale where 1 represents “a lot less information”, 3 represents “about the same amount of information” and 5 represents “a lot more information.”

A second question asked if respondents think the state agencies have given CWD the proper amount of attention. Responses were on a 4-point scale where 1 represents “too little”, 2 represents “about right”, 3 represents “too much”, and 4 represents “unsure.” When calculating the means, the “unsure” responses were eliminated, thereby creating a 3-point scale.

**Table 6 shows that** in general, DATCP and DHFS could do more to provide CWD information to landowners. A minority of landowners would like to receive more information from the

Wisconsin DNR. The Wisconsin DNR is doing a fairly good job of providing the desired amount of information to landowners; almost one-half of the landowners (46%) say they would prefer to receive the same amount of information they currently receive and less than one-half of the landowners (45%) say they would prefer to receive more information about CWD from Wisconsin DNR. A slight majority of landowners would like to receive more information about CWD from DATCP (53%) and from DHFS (51%) (Table 6).

The comment from one focus group participant is indicative of the feeling of many others:

*I don't think you could give us enough — you can't give us enough stuff that's positive... Any information you can give us is great.*

Landowners believe the DATCP and DHFS could direct more attention to CWD. Landowners are less likely to say that about the Wisconsin DNR. Just over one-half of the landowners (54%) say the Wisconsin DNR is giving CWD the proper amount of attention. About one landowner in ten (9%) says the Wisconsin DNR is giving CWD too little attention and about three landowners in ten say DATCP (29%) and DHFS (29%) are giving CWD too little attention (Table 6).

**Table 6.** Landowners’ preference for information from State agencies and perception of attention given by State agencies to CWD. (Means followed by the same letter are **not** statistically different at the alpha=0.05 level; means which are not followed by the same letter are significantly different.)

Information From Agencies	State Agency		
	DNR	DATCP	DHFS
Percentage of landowners that prefer to receive less information	9	10	12
Percentage of landowners that prefer to receive about same amount of information	46	37	37
Percentage of landowners that prefer to receive more information	45	53	51
Mean score (scale 1-5) <sup>a</sup>	3.4 A	3.6 B	3.5 AB
<b>Attention Given by Agency to CWD</b>			
Percentage of landowners who feel that there is Too Little	9	29	29
Percentage of landowners who feel that it is About Right	54	34	31
Percentage of landowners who feel that there is Too Much	26	8	8
Percentage of landowners who are Unsure	11	30	32
Mean score (scale 1-3) <sup>b</sup>	2.2 A	1.7 B	1.7 B

<sup>a</sup> Responses were on a 5-point scale where 1 represents “a lot less information,” 3 represents “about the same amount of information” and 5 represents “a lot more information.”

<sup>b</sup> Responses were on a 4-point scale where 1 represents “too little,” 2 represents “about right,” 3 represents “too much,” and 4 represents “unsure.” When calculating the means, the “unsure” responses were eliminated, thereby creating a 3-point scale.

Landowners are not as well informed about the CWD actions taken by DATCP and DHFS as they are about the Wisconsin DNR's actions. About one-third of the landowners are uninformed about CWD involvement from DATCP (30%) and from DHFS (32%). In contrast, only about one landowner in ten (11%) is uninformed about the attention CWD is receiving from the Wisconsin DNR (Table 6).

Landowners that oppose the Department's CWD management strategy are inclined to believe the Wisconsin DNR has blown the seriousness of CWD "out of proportion."

*We had been much better off if they [DNR] wouldn't have done a thing, much better off. And the deer would've been just as healthy as they are now. It's here but you just blew it out of proportion.*

*The DNR, and a lot of people thought the DNR, that they were placed in a difficult situation because the publicity about it had gotten so wide-spread and the alarm, which was generated by DNR themselves, was so profuse that it scared everybody. And they said, 'We've got to do something right now. Something terrible is going to happen. If we don't take some action now we're going to be blamed for having this problem evolve here.' They had to do something. And they said, 'What can we do? We eradicate them.'*

*I think that the DNR was coming on a little bit too strong... there was too much scare tactic there at first about CWD, and it really turned a lot of people off.*



## Trust and Believability of the Wisconsin DNR

Respondents were asked the extent to which they disagreed or agreed that they trust the Wisconsin DNR regarding numerous CWD related issues. Responses were on a scale of 1 to 7, where 1 represents "strongly disagree", 4 represents "neither agree nor disagree", and 7 represents "strongly agree." In general, a majority of landowners trust the Wisconsin DNR when addressing CWD, although the mean scores indicate that the degree of trust is not very high.

**Table 7.** Landowners' trust of the Wisconsin DNR when addressing CWD.

I trust the Wisconsin DNR to...	Percent "Slightly" to "Strongly" Agree	Mean Score <sup>a</sup>
Provide truthful information on the number of CWD- positive deer discovered in Wisconsin	71	5.0
Provide truthful information on how CWD spreads	66	4.8
Provide timely information on CWD issues	66	4.7
Provide the best available information on CWD in Wisconsin	65	4.7
Provide truthful information about human safety issues related to CWD	63	4.7
Provide me with enough information to decide what actions I should take regarding CWD	63	4.6
Provide adequate opportunities to listen to landowners' concerns about CWD	59	4.5
Follow the best available science in managing CWD	56	4.5
Provide truthful information about deer population estimates	56	4.4
Properly address CWD in Wisconsin	55	4.3
Make good deer management decisions regarding CWD	52	4.1

<sup>a</sup> Responses were on a scale of 1 to 7, where 1 represents "strongly disagree," 4 represents "neither agree nor disagree," and 7 represents "strongly agree."

**Table 7 explains that** although the majority of landowners say they trust the Wisconsin DNR when addressing CWD related issues, the mean scores are at the low end of the trust scale – they fall between "neither agree nor disagree" and "slightly agree."

More landowners (71%, mean score = 5.0) trust the Wisconsin DNR to provide truthful information on the number of CWD-positive deer discovered in Wisconsin than any other CWD related issue (Table 7).

Two-thirds of the landowners have some trust in the Wisconsin DNR to provide truthful information on how CWD spreads and to provide timely information on CWD issues (both 66%), and to provide the best available information on CWD in Wisconsin (65%) (Table 7).

The smallest number of landowners (though still a slight majority) trust the Wisconsin DNR to make good deer management decisions regarding CWD (52%) (Table 7).

The focus groups revealed that for some landowners, the Department's response to CWD has eroded their trust in the Department.

*I don't trust the DNR's numbers regardless of what they get. They can say five deer per square mile. They're still going to try and kill every deer and say, 'Well, maybe there are five that escaped.' I don't trust their numbers. I never was like that until CWD. I didn't have any reason to not trust and believe and support the DNR until CWD. When you look at what other states are doing, when you look at science that isn't there, what the DNR is telling you is their science... There's a lot of science that says that by killing all the deer you're killing the cure. I believe that nature heals itself. I think every time you go in you cut a limb, you break a bush, you step on a blade of grass, you kill an animal, nature is already working to grow back, survive, adapt to whatever. Way too many times the DNR or humans have come in and done things that go wrong.*

*I, for one, believe it's been here for a long time. I think that possibility exists. Nobody has proven to me that this is a newly emerging disease. There are people who are trumping up that cause and I think they do that more to promote their own ideologies and their own agendas, whether it's*

*banning baiting or feeding, or whether it's crucifying game farms. I think this is being used as a tool to promote that agenda.*

*[Do you think the Department believes that they made a mistake and they are now afraid to admit it?] I think yes, but I think it even goes further than that. There are a lot of theories out there but I believe that under the money crunch that we're in, in the political game that we play all the time, there are many, many cutbacks. [CWD] was a way to keep people employed... I can't prove that but there was a lot of money poured into this in many different aspects, all the way to the federal government. I do honestly believe that politics played a big portion of this, getting money into the Department... I've never had one admit to me they were wrong... They cannot admit that they messed up.*

*We sat in on a seminar in Dodgeville... whatever we decided over there didn't mean anything. We voted down sharpshooters. We voted down shooting at night. DNR did it anyway. It was just like we wasted two days. Everything that we strived for over there just went right out the window. Then the media got a hold of it and they said, 'This is what we decided.' Well we didn't decide that so why would I trust you now?*

For other landowners, the Wisconsin DNR is the sole source of information.

*You guys got the best information. I'm not listening to a thing except the DNR. What else can we have faith in? I mean if you don't know, boy, we're hurting.*

*I told people that I don't listen to what political science majors say about land use, but I do listen to what microbiology majors say about microbiology. And that's the thing. You guys are the ones that went to school for this, you're educated in it, you're trained in it and work in it. I mean, we all depend on you guys to come up with the answers... We look up to you guys.*

Landowners were also asked to rate the believability of the Wisconsin DNR’s information about biology, human safety issues, and deer management strategies related to CWD. Responses were on a scale of 1 to 9, where 1 represents “not at all believable”, 3 to 4 represents “slightly believable”, 5 to 7 represents “moderately believable”, and 8 to 9 represents “highly believable.”

**Table 8 shows that** landowners believe the Wisconsin DNR’s information about CWD since all mean scores are at or near the “moderately” believable response. However, the mean scores also indicate that a considerable minority of landowners is still suspect of the information provided by the Wisconsin DNR. This is particularly true for information about management strategies focused on CWD.

More than seven landowners in ten (72%) believe the Wisconsin DNR’s biological information about CWD; about two-thirds of the landowners (65%) believe information from the Wisconsin DNR about human safety issues related to CWD; and more than one-half of the landowners (56%) believe information from the Wisconsin DNR about deer management strategies focused on CWD (Table 8).

Participants in the focus groups were asked if there was anything in Department “communications that we could be doing differently or that you might think well of or you would like to see?” Responses indicate a desire to learn how landowner participation has helped with the state’s eradication goal.



*I’d like to know if anything positive happened for our participation in this? Is the DNR happy with anything we’re doing? [So, how has your involvement and your support and the deer that you’ve been taking off of your land, how has that helped us in our eradication efforts?] Yes. There should be something in the State Journal about that. Something positive for those that helped.*

*Tell us how we’ve done. In the last two years, compared to two years ago, how have we done in the state? Is the DNR not satisfied, are they partially satisfied? What’s your goal and where are you at?*

*Kind of like a list of what we’ve accomplished and where we are at.*

Participants were also asked what would have to happen for the Department to lose landowner support. Representative responses include:

*If we found out that there was bad science behind your program and that we were being hoodwinked. I mean there’s plenty of things right now and people are saying all kinds of bad things, but I haven’t heard any that I believe yet. But if we found out that we were being hoodwinked, and I don’t think we are, but I think that would really end it.*

*If I felt that the state wasn’t being honest with us... That’s when I think you guys could go right down the tube...I mean, if it comes out, you know, somewhere along the line that you actually kept information from us.*

*If you back off with any of your publicity that we’ve got the problem in the state, we’ve got to keep hanging in there, yup, I would back out.*

**Table 8.** Landowners’ believability of CWD information provided by the Wisconsin DNR. All of the mean scores presented in this table are statistically different from each other at the alpha=0.05 level.

Wisconsin DNR Provided Information	Percent “Moderately” or “Highly” Believable (Score 5 to 9)	Mean Score <sup>a</sup>
Biological information about CWD	72	6.2
Information about human safety issues	65	5.7
Information about deer management strategies	56	5.3

<sup>a</sup> Responses were on a scale of 1 to 9, where 1 represents “not at all believable,” 3 to 4 represents “slightly believable,” 5 to 7 represents “moderately believable,” and 8 to 9 represents “highly believable.”

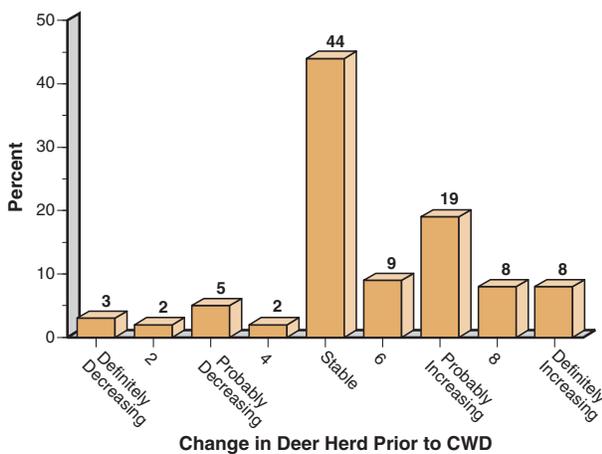
## Landowner Perception of the Deer Herd

This section addresses the objective to better understand landowners' perception of the deer herd on their land. In particular, the section considers landowners' perception of the deer herd on their land prior to CWD and any sightings of sick or unhealthy looking deer.

### Changes in the Deer Herd Prior to the Discovery of CWD

Overall, landowners feel that prior to the discovery of CWD in Wisconsin, the number of deer on their land was relatively stable in numbers, or increasing slightly. On a scale of 1 to 9, where 1 represents "definitely decreasing", 5 represents "relatively stable", and 9 represents "definitely increasing", the mean response was 5.8.

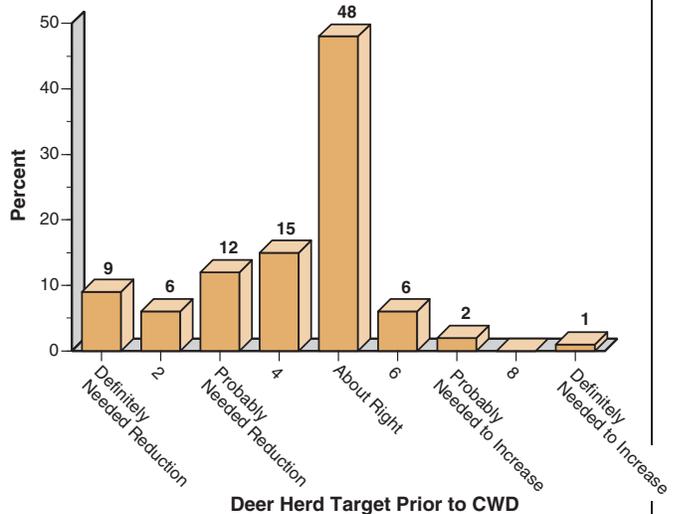
**Figure 2 illustrates that** most landowners believe that prior to the discovery of CWD, the deer population on their land was remaining stable or perhaps increasing. More than one-half (55%) of the landowners believe the deer population on their land was fairly stable; more than one-third (35%) say the deer population on their land was increasing; and about one landowner in ten (10%) believes the deer population on his/her land was decreasing (Figure 2).



**Figure 2.** Perception of deer population on land prior to CWD.

### Deer Herd Target Population Prior to the Discovery of CWD

Landowners also believe that prior to the discovery of CWD in Wisconsin, deer numbers on their land were about right or needed to be reduced slightly. On a scale of 1 to 9, where 1 represents "definitely needed to be reduced", 5 represents "was about right", and 9 represents "definitely needed to be increased", the mean response was 4.2 (Figure 3). When grouped together, Figures 2 and 3 suggest that landowners were predominantly satisfied with the size of the deer herd on their land prior to CWD.



**Figure 3.** Deer herd target population prior to CWD.

**Figure 3 shows that** a majority of landowners say the deer population on their land prior to the discovery of CWD was at a proper level. Seven in ten (70%) landowners believe the deer population on their land "was about right"; more than one-fourth (27%) of the landowners say the deer population on their land needed to be reduced; and fewer than one landowner in 20 (3%) say the deer population on his/her land needed to increase (Figure 3).

Focus group participants offered numerous comments about an excessive deer population.

*I'm not against reducing the deer herd. I don't think that chronic wasting disease is the excuse or reason for doing it. I think there are just too many deer.*

*We got right around 60 to 70 deer off the farm in the last year and a half, and we still have too many because of adjacent landowners not participating [in hunting].*

*We have 350 acres. We have too many deer. We've worked pretty hard at reducing the heard. We got a ways to go yet.*

*I'm not a hunter. I couldn't shoot a deer but we've got a lot of them. I've hit a few with a car, but I think there are too many and I'd like to work with you any way possible.*

*I do not hunt but I have a lot of people that like to hunt. I'm very interested in getting rid of more of these deer, although I think you've done a pretty good job around there right now. It's a lot better than it was.*

*I called the DNR and said that if they have the equivalent of a swat team that they could just come and camp on my land and take them out.*

The following comments illustrate the ecological benefits of a reduced deer herd as seen by two landowners.

*I've been talking for years about how you don't see any high woods – you don't see oak and maple that's over 15-20 years old. And when you start seeing things like that you'll know that we have the deer shot down the way they should be...I was just talking about how the trilliums and the ferns have come back. Where I live deer packed it down. Now they're coming back.*

*Our family is enjoying deer season as much or more as we ever have in the past and we've seen tremendous positive results in the forests and our land and believe me, the only thing that land*

*grows is deer and trees. And for a long time it wasn't growing trees. And now we're growing trees. We've got young oak trees where we haven't had any for 20 years. We've got young oak trees. We've got wildflowers that I used to count on one hand that I'd see specimens of that flower blooming in our woods, and now we've got all kinds of wildflowers. So it's not the end of deer hunting and it's not the end of the world.*

### Sick/Unhealthy Deer Sightings

Very few landowners have seen deer they thought looked sick or unhealthy.

**Table 9.** Percent of landowners that have seen sick or unhealthy looking deer on their land.

Sighted Sick or Unhealthy Deer?	Percent
Yes	4
No	94
Unsure	2

**Table 9 indicates that** nearly all landowners say that they had not seen any deer on their land that they would describe as being sick or unhealthy-looking during the first nine months of 2004. More than nine landowners in ten (94%) have not seen any sick or unhealthy looking deer and four percent of the landowners say they had seen sick or unhealthy looking during the first nine months of 2004.

Please note that there was no statistically measurable difference between the responses given by hunters and non-hunters.

The following comment illustrates the difficulty some landowners may have accepting CWD as a serious wildlife disease.

*One of the things that I'm concerned about is how big of a problem is this really? This wasted deer problem. I've never seen a wasted deer in the 35 years that I've been here. I've seen lame deer, deer with broken legs, but I've never seen a deer that's wasted. How many of the deer that have been slaughtered over the past two years would actually qualify as a wasted deer?*

## Support for and Effect of Disease Control Measures

This section addresses the objective to better understand landowners’ support of Wisconsin DNR disease control measures. In particular, the section considers landowners’ agreement with the Wisconsin DNR’s goals and policies to address CWD; awareness and effect of various incentives designed to increase the number of deer harvested; perception of change in land use by deer hunters; opinion of the state using sharpshooters to reduce the deer herd; perception of barriers to CWD eradication; reasons for limiting the number of deer harvested from their land; and an overall assessment of how the Wisconsin DNR is doing managing CWD.

### Agreement with Wisconsin DNR’s CWD Goals and Policies

Landowners were asked their opinion of several Wisconsin DNR CWD goals and policies on a scale of 1 to 7, where 1 represents “strongly disagree”, 4 represents “neither agree nor disagree”, and 7 represents “strongly agree.” The majority of landowners favor attempts to control or eliminate CWD, and to a slightly lesser extent they favor a statewide ban on baiting and recreational feeding of deer. Opinion is divided over whether the deer population in the DEZ should be reduced to less than five deer per square mile. The majority disagrees with banning baiting and feeding just in counties where CWD has been reported (Table 10).

**Table 10 explains that** landowners support the Wisconsin DNR’s mission of disease eradication and control; however, they are less supportive of other goals and techniques. A majority of landowners support the Wisconsin DNR’s goals of preventing CWD from spreading any further in Wisconsin (71%); not allowing the percentage of CWD-infected deer in the DEZ to increase (69%); eliminating CWD from the wild deer population (64%); banning deer baiting on a statewide basis (61%); and banning recreational feeding of deer on a statewide basis (55%) (Table 10).

**Table 10.** Agreement with Wisconsin DNR’s CWD goals and policies. (Means followed by the same letter are not statistically different at the alpha=0.05 level; means which are **not** followed by the same letter are significantly different.)

Wisconsin DNR CWD Goals and Policies	Percent “Slightly” to “Strongly” Agree	Mean Score <sup>a</sup>
CWD should not be allowed to spread further . . . . .	71 . . . . .	5.2 A
Percent of CWD deer should not be allowed to increase . . . . .	69 . . . . .	5.1 A
Baiting should be banned statewide . . . . .	61 . . . . .	5.0 AB
CWD should be eliminated . . . . .	64 . . . . .	4.9 BC
Recreational feeding should be banned statewide . . . . .	55 . . . . .	4.7 C
Baiting should be banned in CWD and surrounding counties . . . . .	49 . . . . .	4.4 D
Recreational feeding should be banned in CWD and surrounding counties . . . . .	51 . . . . .	4.3 D
Wild deer population should be reduced in the DEZ to less than 5 deer/square mile . . . . .	43 . . . . .	4.0 E
Baiting should be banned only in CWD counties . . . . .	33 . . . . .	3.6 F
Recreational feeding should be banned only in CWD counties . . . . .	33 . . . . .	3.5 F
Wisconsin should do nothing to eliminate CWD . . . . .	20 . . . . .	2.8 G

<sup>a</sup> Responses were on scale of 1 to 7, where 1 represents “strongly disagree,” 4 represents “neither agree nor disagree,” and 7 represents “strongly agree.”

About one-half of the landowners support: banning recreational feeding of deer (51%) and banning baiting of deer (49%) in CWD-infected counties and the surrounding counties (Table 10). Significantly less than one-half of the landowners support: reducing the wild deer population in the DEZ to less than five deer per square mile (43%); banning baiting of deer only in CWD-infected counties (33%); banning recreational feeding of deer only in CWD-infected counties (33%); and doing nothing to eliminate CWD from the wild deer herd (20%; seventy percent disagree with this statement).

Please note it is likely that more landowners would support a statewide ban on baiting than a ban that is restricted to CWD counties and surrounding counties due to equity. In other words, if they cannot use bait, than no one should be allowed to use bait. Additionally, previous Department surveys document that hunters in the southern half of Wisconsin offer greater support for a

statewide ban on deer baiting than do hunters in northern Wisconsin. So for some, CWD may be their means for ending the deer baiting debate.

Many landowners in the focus groups do not believe an eradication goal of five deer per square mile is attainable, nor is it advisable.

*[Because of CWD do you think you need to reduce the deer herd on your land?] No, because we've already got it reduced where we want it.*

*I think there are areas within the eradication zone that have too many deer and I believe that my area is probably one of them. But I think the main stumbling block is that we're looking at a goal of five or less deer. My neighbors, everybody I talk to in my neighborhood, my friends, my deer hunters, nobody's willing to see deer numbers go that low...I think a livable number is somewhere in that 20 to 25 range per square mile. I think people can get behind that.*

*If this CWD had been here for over two years, there would be a dead deer under every bush. It's two years later and there isn't a dead deer under every bush and I haven't seen a sick deer yet. So, I'd say no, eradication is not necessary.*

*I don't think you can answer eradication because the data isn't there. The science is not there. If you could say with just a little qualification that this is a highly transmissible disease, it's going to spread through our entire deer population, it's going to eliminate any form of hunting or sports activities related to deer, furthermore, it's going to spread to cattle, it's going to spread from cattle, it's going to spread to humans...If you establish those questions then there is no question to be answered — it has to be eradicated. But that is not the case. The science is not there.*

*[But is the idea of a goal of less than five deer per square mile, do you think that's feasible?]*...

*No. You got too many people that will not allow hunters to hunt... So, you've got people that aren't going to allow access to their land. You've got already a relatively high density on the land. You've got difficult terrain to hunt. No. It's not feasible. You won't eradicate it. It's here. We'll just deal with it.*

*[Is there anyone here that says, 'Wow, it's at 30 now. Five that just sounds way too low to me?'] Yeah. Our family lives to hunt. Our whole family is built around the outdoors and five is scary. If we're at 32 right now, five is darn scary...I'm not saying that we wouldn't do that, but it's scary.*

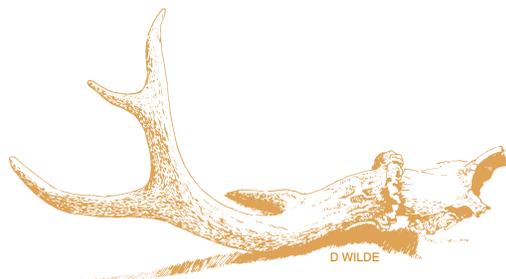
Some landowners support disease eradication through herd reduction.

*It was really hard to bite the bullet at first but once we did we realized that it isn't the end of the tradition. It isn't end of the world.*

*Well CWD won't go away by itself. It won't go away until all the deer die. I mean you talk wanting to have some deer left but I think if you got the deer herd down to five deer per square mile you actually have a chance of maybe getting rid of it to where five or ten years after that you actually have a deer herd again.*

*The sooner you get rid of them, the sooner you're going to have a healthy herd back.*

*It's not something that left on its own, well, they will eventually die. It won't go away. Eradicating the CWD is the fastest turn around you're going to get.*



### Awareness of Incentives for Harvesting Deer in the DEZ

Most landowners are aware of at least one incentive for harvesting more deer. Only ten percent are unaware of any of these incentives. The incentive that is least widely known is the deer registration lottery.

**Table 11.** Awareness of incentives.

Incentive	Percent Aware
Hunter receives \$200 for CWD positive deer . . . . .	81
Landowner receives 2 free buck tags in DEZ . . . . .	79
Landowner receives \$200 for CWD positive deer . . . . .	75
Hunter may receive \$20 for deer registered in lottery . . . . .	49

**Table 11 provides evidence that** only one-half of the landowners (49%) are aware that a hunter could earn \$20 through lottery drawings for each registered deer s/he shot in the disease eradication zone. However, three-fourths or more of the landowners are aware of the opportunity for: a hunter to receive \$200 for shooting a CWD-positive deer (81%); a landowner in the disease eradication zone to receive two free buck tags (79%); and for a landowner in the disease eradication zone to receive \$200 for having a CWD-positive deer shot on his/her land (75%).

**Table 12.** Hunter and non-hunter awareness of incentives. (Chi-square analysis shows that there is a significant difference (at the P<0.001 level) between hunters and non-hunters for each incentive.)

Incentive	Percent Aware	
	Hunters	Non-hunters
Hunter receives \$200 for CWD positive deer . . . . .	89	68
Landowner receives 2 free buck tags in DEZ . . . . .	84	71
Landowner receives \$200 for CWD positive deer . . . . .	86	60
Hunter may receive \$20 for deer registered in lottery . . . . .	61	31

**Table 12 shows that** landowners who hunt are more likely to be aware of these incentives than landowners who do not hunt. Ninety-four percent of landowners who hunt are aware of incentives, while only of eighty-five percent of landowners who do not hunt are aware of incentives.

### Perceived Effect of Increased Incentives for CWD Positive Deer

Landowners were asked what the effects might be of increasing the incentive for harvesting a CWD-positive deer from \$200 to \$500. More landowners thought that they would see an increase in the number of hunters asking for permission to hunt on their land than any other effect. While opinion is somewhat divided on whether the increased incentive would lead to more deer being harvested, the majority feel they would not spend any extra time hunting themselves, nor would they be inclined to allow more hunters access to their land (Figures 4a-4d).

**Figures 4a-4d illustrate the** landowners’ belief that an increase in the number of hunters asking permission to hunt their land would be the only probable effect of increasing the incentive for harvesting a CWD-positive deer. Just under two-thirds (64%) of the landowners believe they would see an increase in the number of hunters asking permission to hunt their land. (Figure 4a).

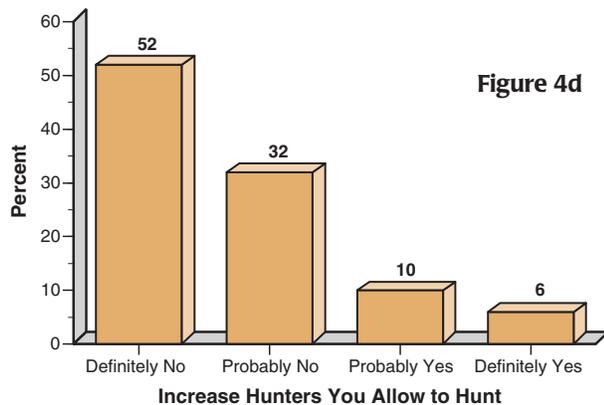
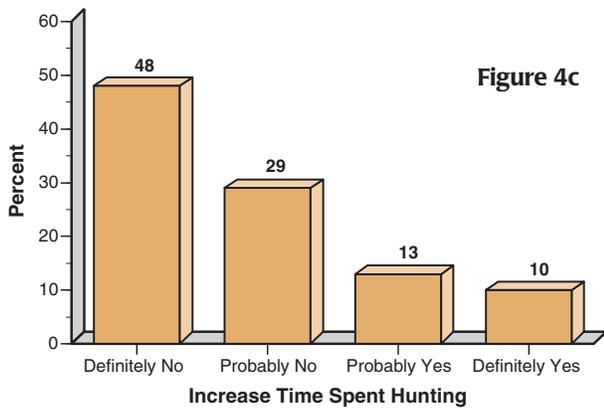
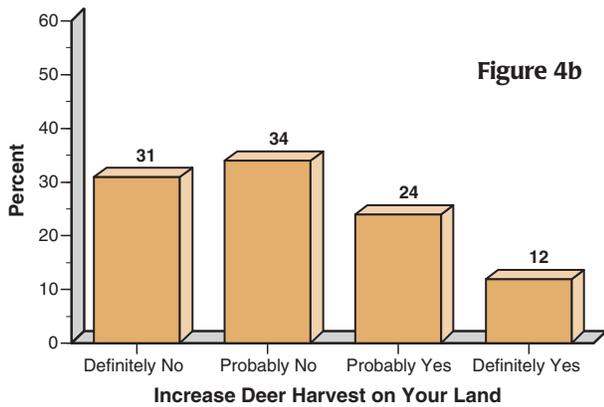
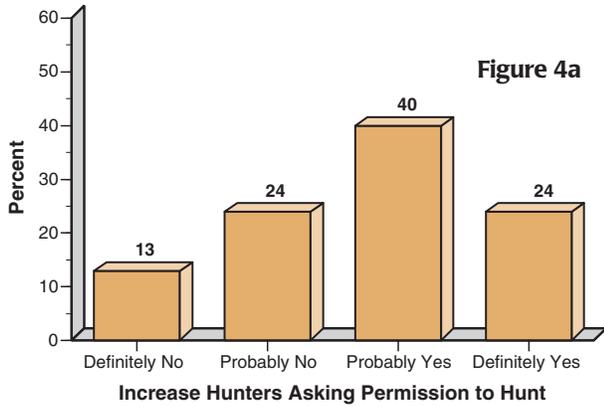
Just over one-third (36%) of the landowners anticipate they would see an increase in the overall harvest of deer from their land (Figure 4b). About one-fourth (23%) of the landowners think the increased incentive would result in them spending more time hunting. (Figure 4c). Less than one-fifth (16%) of the landowners say the increased incentive would encourage them to allow more hunters to hunt their land. (Figure 4d).

Please note that the following **Table 13 highlights the** mean responses to the data presented in Figure 4. Responses were given on a scale of 1 to 4 where 1 represents “definitely no” and 4 represents “definitely yes”.

**Table 13.** Effects of increasing the incentive for harvesting a CWD-positive deer from \$200 to \$500. (t-test analysis indicates that all of the mean scores presented in this table are statistically different from each other at the P<0.001 level.)

Effect	Mean Score <sup>a</sup>
Increase hunters asking permission to hunt . . . . .	2.7
Increase deer harvest on your land . . . . .	2.2
Increase time spent hunting . . . . .	1.8
Increase hunters you allow to hunt . . . . .	1.7

<sup>a</sup> Responses were on a scale of 1 to 4 where 1 represents “definitely no” and 4 represents “definitely yes”.



## Incentives that Increased Time Spent Hunting

Although a majority of the landowners that hunt say they are willing to or prefer to harvest an antlerless deer, the opportunity to harvest a buck had the greatest effect on increased time spent hunting.

Table 14 explains that landowners who were hunters were most enthused about the opportunity to harvest additional bucks. The incentive that increased the most amount of time that landowners spent hunting is the opportunity for them to receive two free buck tags. More than one-half (54%) of the landowners say they spent more time hunting because of the free buck tags than if the free tags were not offered. However, not quite as many landowners report that the longer season induced them to spend more time hunting (45%).

Table 14. Incentives that increased time spent hunting.

Incentive	Percent Response
Two free buck tags	54
Longer gun season	45
\$200 for hunter taking a deer with CWD	21
\$200 for landowner for a deer with CWD	21
\$20 Lottery for registered deer	19

When combined, the multiple types of monetary rewards accounted for more than one-fourth of landowners who hunt (28%) to spend more time hunting.

Please note that about one-third of the landowners (32%) who hunted report that none of these monetary incentives got them out hunting any more than usual.

Figures 4a-4d. Effects of increasing the incentive for a CWD-positive deer from \$200 to \$500.

### Perceived Effect of Increasing Lottery Payments for Registered Deer

Landowner response to the possibility of increasing the lottery payment from \$20 to \$50 for each registered deer harvested from the DEZ is similar to the response to increasing payments for CWD-positive deer. The overall finding is that a majority would not anticipate any changes.

**Figures 5a-5b show that** for a slight majority of landowners, an increase in the number of hunters asking permission to hunt on their land is the only probable effect of increasing the lottery payment. Just over one-half (56%) of the landowners believe they would see an increase in the number of hunters asking permission to hunt their land (Figure 5a). Approximately one-third (32%) of the landowners anticipate they would see an increase in the overall harvest of deer from their land (Figure 5b). About one-fourth (23%) of the landowners think the increased lottery payment would result in them spending more time hunting. (Figure 5c). One landowner in seven (13%) says the increased incentive would encourage him/her to allow more hunters to hunt his/her land (Figure 5d).

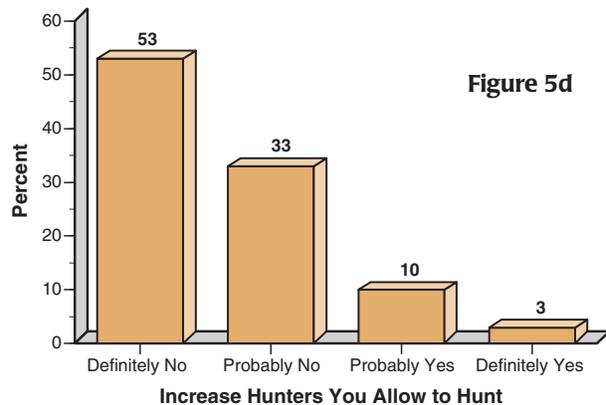
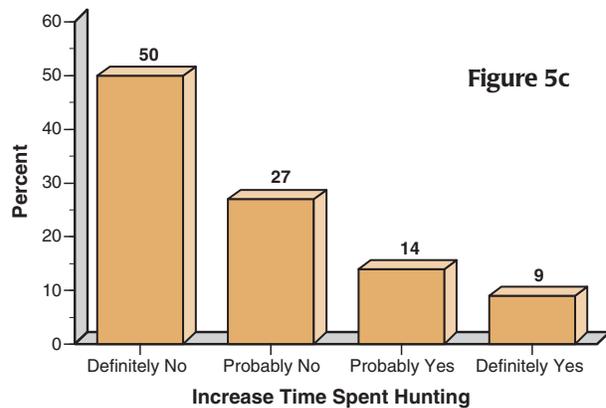
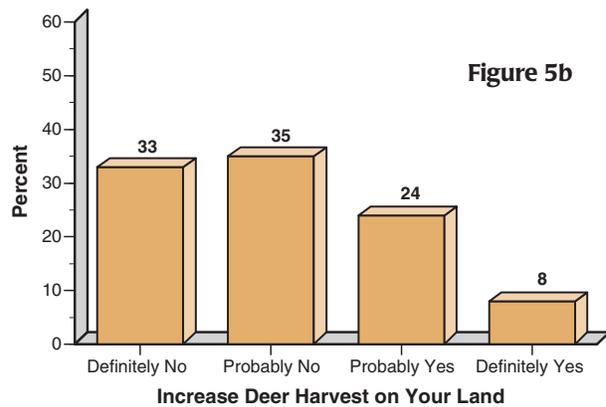
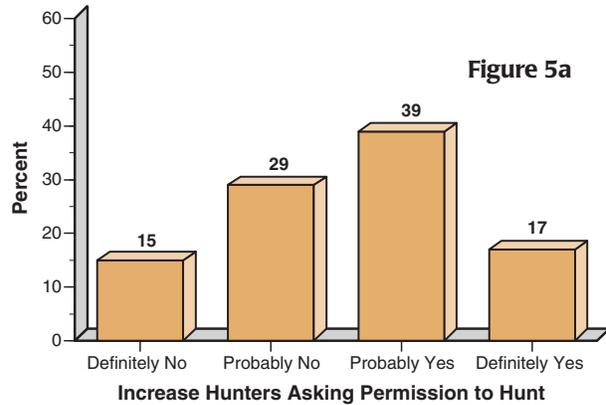
Please note the following **Table 15 illustrates the** mean responses to the data presented in Figure 5. Responses were given on a scale of 1 to 4 where 1 represents “definitely no” and 4 represents “definitely yes”.

**Table 15.** Effects of increasing the lottery payments from \$20 to \$50 for each registered deer harvested from the DEZ. (t-test analysis indicates that all of the mean scores presented in this table are statistically different from each other at the P<0.001 level.)

Effect	Mean Score <sup>a</sup>
Increase hunters asking permission to hunt . . . . .	2.6
Increase deer harvest on your land . . . . .	2.1
Increase time spent hunting . . . . .	1.8
Increase hunters you allow to hunt . . . . .	1.6

<sup>a</sup> Responses were on a scale of 1 to 4 where 1 represents “definitely no” and 4 represents “definitely yes”

**Figures 5a-5d.** Effects of increasing the lottery payments from \$20 to \$50 for each registered deer harvested from the DEZ.



## Incentives that Increased Deer Harvested

As previously noted, the correlation between the amount of time spent hunting and the number of deer harvested is positive but not particularly high ( $r = 0.31$ ). Not surprisingly, fewer landowners report that these incentives resulted in them harvesting more deer. Although fewer landowners report a positive effect on their harvest from the incentives, this is not to say that the incentives had no impact on the number of deer taken.

**Table 16.** Incentives that increased deer harvest.

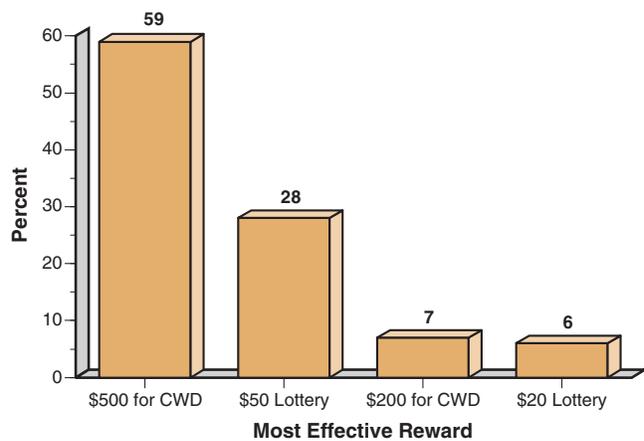
Incentive	Percent Response
Two free buck tags . . . . .	35
Longer gun season . . . . .	33
\$200 for Hunter Taking a Deer with CWD . . . . .	7
\$200 for Landowner for a Deer with CWD . . . . .	5
\$20 Lottery for Registered Deer . . . . .	8

**Table 16 shows that** among those who report a positive result from the incentives, it is again the two free buck tags (35%) and the longer season (33%) that receive most of the credit. Only about one hunter in ten (11%) reports that one or more of the monetary incentives results in more deer taken. In all, more than one-half of the hunters (56%) report at least one of these incentives result in them harvesting more deer and just over two-fifths (44%) do not report that any of these incentives result in them harvesting more deer (Table 16).



## What Incentive Would Result in the Most Deer Harvested?

Landowners generally have negative feelings about the likelihood that increased incentives would yield a greater result on their own land. However, if any of these incentives work, landowners logically feel the largest reward would have the greatest effect; they feel that increasing the hunter/landowner reward for a CWD positive deer from \$200 to \$500 would produce the greatest deer harvest.



**Figure 6.** Reward that would result in the most deer harvested.

**Figure 6 illustrates that** of the four rewards offered, landowners anticipated that a \$500 reward for both the landowner and the hunter for shooting a CWD-positive deer would result in the most deer being harvested from the DEZ. Nearly three-fifths (59%) of the landowners believe the \$500 reward would result in the highest deer harvest. Just over one-fourth (28%) believe \$50 payments through lottery drawings for each registered deer from the DEZ would result in the highest deer harvest. Less than one landowner in ten thinks the \$200 reward or the \$20 lottery payments would result in the highest deer harvest from the DEZ (Figure 6).

### Personally Preferred Incentives

The largest block of landowners (40%) is opposed to any monetary incentive for harvesting deer. Of the remaining 60 percent, those who favor the \$500 reward for the landowner and hunter account for the largest group.

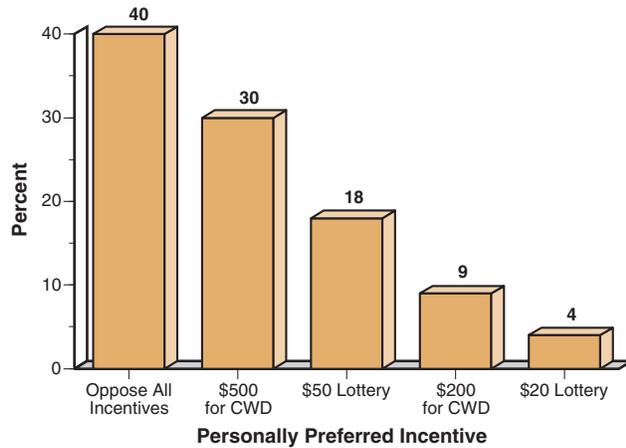


Figure 7. Reward that is most preferred by landowners.

Figure 7 indicates that more landowners oppose monetary incentives than support any single incentive. Two-fifths (40%) of the landowners oppose all four monetary rewards. Just under one-third (30%) of the landowners prefer the \$500 reward for the landowner and hunter; less than one-fifth (18%) prefer the \$50 payment through lottery drawings; and less than one landowner in ten prefers the \$200 reward or the \$20 lottery payments (Figure 7).

When evaluating which incentive has the potential to have the greatest impact, the responses differ depending upon whether the landowner is a deer hunter or not (Figure 8). The largest group of hunters is opposed to any incentives, while the largest group of non-hunters prefers the \$500 reward for the landowner and hunter. Among hunters who favor a monetary incentive, opinion is equally divided between the \$500 reward for the landowner and hunter and the \$50 deer registration lottery.

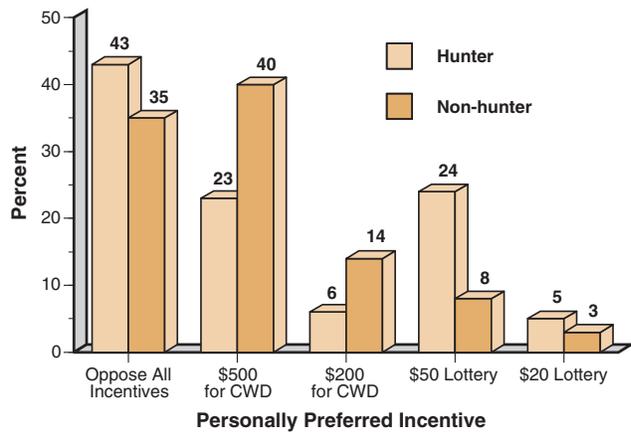


Figure 8. Reward that is most preferred by hunting and non-hunting landowners. (Chi-square analysis reveals that the difference in responses between hunters and non-hunters are significant at the  $P < 0.001$  level.)

Figure 8 shows that the largest block of hunters is opposed to all monetary incentives while the largest block of non-hunters favors the \$500 reward for having a CWD-positive deer shot on his/her land. Forty-three percent of the hunters oppose all monetary rewards and a nearly equal percentage of non-hunters prefer the \$500 reward. Just over one-third (35%) of the non-hunters oppose all monetary incentives and about one-fourth of the hunters favor the \$500 reward and the \$50 lottery payments (Figure 8).

No topic in the focus groups generated more discussion than that of using monetary payments as incentives for herd reduction. Most comments underscore both landowner and hunter disdain for monetary incentives.

*[Did the \$200/\$400 incentive change anything in the way hunting is handled on your land?]*

*No. Absolutely not. It's disgusting. It turns my stomach. It's a bounty. This incentive, it's more of a dis-incentive.*

*Bad idea... You're not going to bring more hunters in if they can't, if the hunters don't have anywhere to go hunting. I'm not going to let somebody hunt my land because they don't need a license. So, I don't really think that is going to bring hoards of hunters to kill more deer by saying, 'You don't have to pay your license fee' or 'You can get \$200.'*

*Nothing. It didn't change a thing. The way I look at it is in our area with the two positive deer within four miles of us in two years, the odds of shooting [a positive deer] are very slim so I'm not going to get all excited to go run out into the woods for \$200 and shoot 25 deer that I got to haul away. The meat isn't probably going to test positive.*

*The DNR was asking, 'Would you take these free tags?' And then it was on the radio, 'Look how supportive the hunters are by taking these tags.' We were taking these tags because we thought we could save the deer... We're trying to take these tags so other people can't get them so you can't kill them. [So you had different motives for taking the tags?] Right. A lot of people did. They figured you could only afford to print so many of them.*

*If you have \$200 somebody might say, 'Geez, we can get \$200 for this.' That is ludicrous. Why don't you take that money and use it for testing and try to find out more about the disease rather than giving it away? If you go back to your nine-day season you have more deer killed, you've got more deer to test and bring tradition back so you've got more hunters... Take that money and use it towards getting our tests done quicker.*

*[So you as a landowner and perhaps the shooter, you may have earned \$400, and that's just not worth it for you?] I can see where it's a bonus or an incentive in an area where they have a higher concentration of positive deer. In our area, it just wasn't a big incentive.*

*The way I look at it is, with the very low rate of positives, if any, that we don't have a real incentive to shoot more.*

*[Is the \$20 incentive or reward worth the effort, and by effort I mean your effort and the effort of DNR staff to administer it...?] I don't think so. Twenty bucks is not worth my time to take another deer I don't really want.*

*No way. Who's gonna go out, shoot another they don't really want, need and drag it all home all for \$20?*

Not all landowners were critical of the incentive program. For some, the monetary incentives encouraged them to spend additional time hunting and to harvest additional deer.

*Yes. It gave me a little more incentive... By not seeing a deer day after day it gave me a little more incentive to sit there not seeing anything. So it gave you an incentive to go out.*

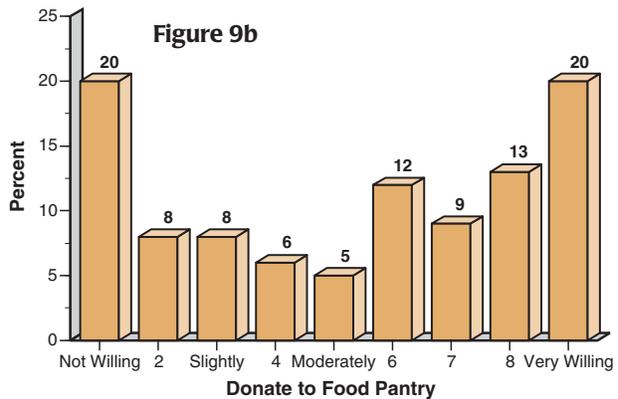
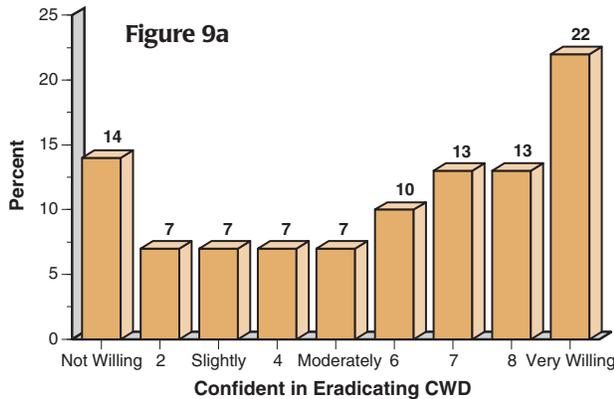
*Absolutely. Our family did spend more time, you bet. [Your whole family did. Did it pay off for you?] Yeah, we've killed seven positive deer on 250 acres in the last two years and we've found at least that many dead that we attribute to CWD. So, yeah, absolutely. We're out there, it's great incentive to get the boys out in the woods and my brother and I love to hunt so we don't need any, but yeah, it's made a difference.*

*I guess I could say we did have some people come hunting this year probably, partially, because of it. Maybe to get some money back.*

*I would've been out there anyway but it being as I had two positive deer before and just a couple miles from where I initially found it, it gave me a little more incentive, like I said...*

### Other Incentives for Hunting Permission

Many landowners would be willing to allow more hunting on their property if they thought it would eradicate CWD and if the deer harvested could be donated to a food pantry (Figure 9).



Figures 9a-9b. Confidence in disease eradication and venison donation as incentives.

Figure 9a illustrates that two-thirds of the landowners (65%) would be “moderately” or “very willing” to allow more deer to be killed their property if they thought it would help eradicate CWD. Three-fifths of the landowners (59%) would be “moderately” or “very willing” to allow more deer to be killed on their land in the DEZ if the deer could be donated to a food pantry (Figure 9b). The findings underscore the importance of outreach efforts to landowners and hunters of the now-available venison donation program.

The results presented in Figure 9 were given on a scale of 1 to 9, where 1 represents “not at all willing”, 3 represents “slightly willing”, 5 represents “moderately willing”, and 9 represents “very willing.” The mean score for allowing more deer to be killed if the venison went to a food pantry is 5.2; the mean score for allowing more deer to be killed if the landowner was confident that killing more deer would help eradicate CWD is 5.7. These means are significantly different from each other at the  $P \leq 0.05$  level.

We should also note that non-hunters are more willing than hunters to allow more deer to be killed on their property if the deer could be donated to a food pantry or if they were confident that killing more deer would help eradicate CWD. This difference between non-hunters and hunters is significantly different at the  $P < 0.001$  level.



## Changes in Hunters' Land Use Since the Discovery of CWD

Landowners (both hunters and non-hunters) do not report any substantial increase in the use of their land for deer hunting by others.

Figures 10a-10d reveal that CWD has encouraged only a small percentage of hunters to seek permission to hunt private land in the DEZ; likewise, only a small percentage of landowners provided increased access to their land for new hunters. One-fourth of the landowners (26%) agree that they have seen an increase in trespass hunting on their land since CWD was discovered in Wisconsin (Figure 10a). For one landowner in seven (14%), the number of hunters who have traditionally hunted the land and the number of hunters asking for permission to hunt the land has increased (Figures 10b and 10c). About one landowner in six (17%) agrees that since CWD was discovered, the number of hunters s/he has given permission to hunt the land has increased (Figure 10d).

In general, landowners report that use of their land by hunters has not increased. Responses were given on a scale of 1 to 7, where 1 represents "strongly disagree," 4 represents "neither agree nor disagree," and 7 represents "strongly agree." Table 17 shows that all four means fall in the "disagree" range, indicating that hunting and occurrences of trespassing have not increased.

**Table 17.** Change in land use by hunters. (Mean scores followed by the same letter are not statistically different from each other at the  $P \leq 0.05$  level.)

Since CWD was discovered in Wisconsin the number of hunters...	Mean Score <sup>a</sup>
...that are trespass hunting on my land has increased	3.6 A
...who have traditionally hunted my land has increased	3.1 B
...asking for permission to hunt my land has increased	3.1 B
...I give permission to hunt my land has increased	3.1 B

<sup>a</sup> Responses were given on a scale of 1 to 7, where 1 represents "strongly disagree," 4 represents "neither agree nor disagree," and 7 represents "strongly agree."

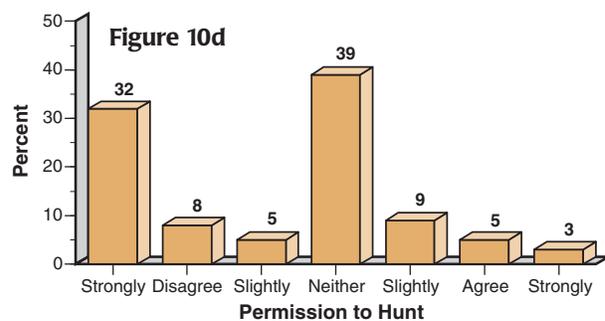
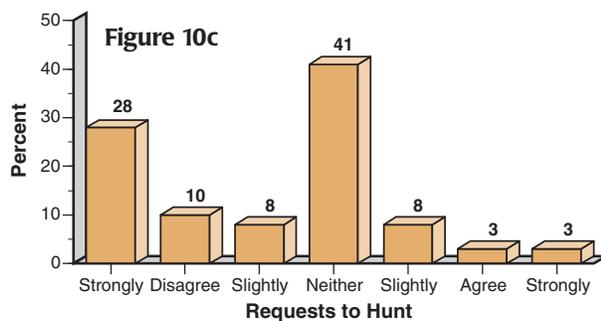
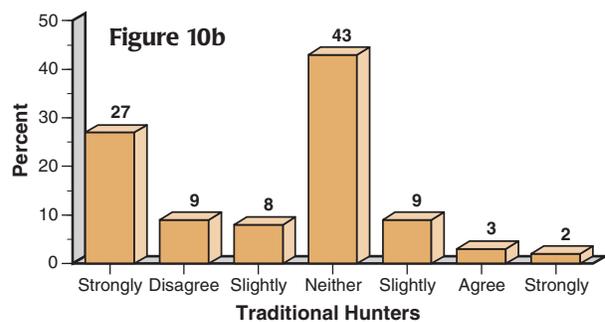
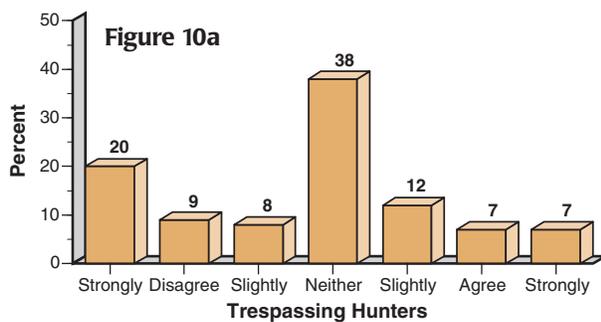
From the focus groups:

*[Have you lost any hunters from your traditional hunting group because of CWD?] I know we lost one family that came down for ten years, and when CWD came around they just stopped... [Did they talk to you at all about it?] Well, they did have another place to hunt was part of it, but it was just kind of like, 'If we got to shoot all the does and this, we don't want to do it.'*

*I lost three guys that I lease 120 to...[And did they give an explanation?] CWD. Scared of it.*

**Figures 10a-10d.**

Increase in land use for deer hunting by others.



### Preferred Deer Hunting Season in the DEZ

The largest group of landowners (35%) prefers some gun deer hunting season other than the alternatives listed. A smaller group (29%) prefers a hunting season similar to the 2003 season. Finally, a substantial group would prefer either of the seasons that give deer and hunters a break in early November. There is no obvious consensus on this issue.

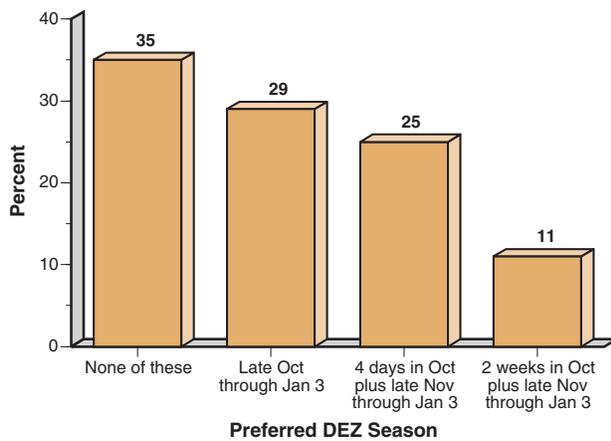


Figure 11. Preferred gun deer season in the DEZ.

Figure 11 indicates that there is no consensus on a gun deer hunting season that is most preferred by DEZ landowners. The largest block of landowners (35%) opposes all season options in favor of a season other than those listed in the questionnaire and about three landowners in ten (29%) prefer a gun deer season in the DEZ that starts in late October and ends on January 3 (similar to the 2003 season). Additionally, one-fourth of the landowners (25%) prefer a gun deer season in the DEZ that includes four days in late October and then starts the Saturday before Thanksgiving and ends on January 3 and about one landowner in ten (11%) prefers a season that includes two weeks in late October and then starts the Saturday before Thanksgiving and ends on January 3.

Please note that there is no statistical difference in the responses from hunters and non-hunters presented in Figure 11.

Most focus group participants objected to the longer season options because they disrupted other hunting pursuits and farming operations. These objectors would prefer that the Department reinstate the traditional nine-day gun deer season. They firmly believe that just as many, if not more, deer would be killed under the nine-day season. Furthermore, some believe that a return to tradition would do much to mend landowner-Wisconsin DNR relationships.

*I think we should go back to our traditional nine-day hunting season where everyone is psyched up for those days. We wait all year round for those nine days. Businesses are all tuned to it, everybody is, schools are all tuned to it and everything, churches and what not, and that is a big thing. By diluting that thing and saying, 'We're going to spread this out over three months or two months' it takes away the whole psyche of hunting.*

*One word: tradition. The way it was... Give the season back to the bow hunters. My boy lives for bow hunting. He doesn't like to rifle hunt. If you let our traditional season be, the kill will go up, whether we like it or not, it will go up. And that's it. It screws up my rabbit hunting. I love to small game hunt and it screws up my trapping when they do it all until January. Go back to tradition, nine days.*

*The more hunters you put in a shorter period of time, the more deer killed you will have than if you spread them over a couple months because not everybody hunts the same day. You've got to get these deer to move, otherwise they're not going to get shot. They'll go over on the neighbors. They're not hunting over there today so they're lying at the neighbor's so they'll go over there, and they're safe.*

*In order for them to achieve that [eradication goal] we have to go back to a traditional season framework. Our gun hunting has to start the Saturday before Thanksgiving to get back all the family events that went along with that, all the relationships, friends that came together. Get everybody in the woods at the same time.*

*Tradition is what people really want. I think most will let bygones be bygones and maybe the Department was in a bad position when they had to make a decision and they had to do a forceful one. Now, by God, we know it's not going to work. Let's get back to where we were. Let's give people their traditions back. I think people could forgive. That would repair a lot of things with a lot of people. You're talking about repairing things.*

*It's a headache for the farmer too, for the landowner basically. Having that long a season is just a pain. [Would you be taking as many deer off your land if it was maintained at just the traditional nine day season?] Yeah I think I would.*

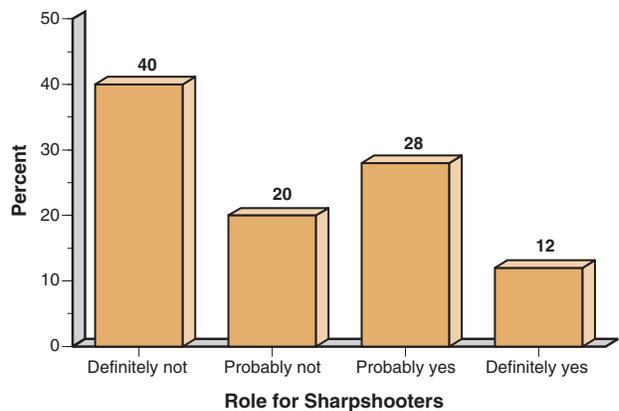
Not all landowners agree. Some believe the additional hunting opportunities offered through a longer season increased their deer harvest and increased family get-togethers.

*[You were saying that if it was just the nine-day season you wouldn't have taken as many deer.] No, we wouldn't. We wouldn't have the opportunity. We hunted just like we have traditionally in the past but our family gets together, I mean we were getting together every weekend that we could and sometimes evenings or afternoons go out and make drives with whoever we had or sit over a good spot all day, right up to the last day.*

*Same here. We hunted, got together more as a family and so we got more deer off the land... 'cause we had the longer opportunities.*

## Is There a Role for Sharpshooters?

The majority of landowners do not feel there is a role for sharpshooters in reducing the deer herd in the DEZ. On a scale of 1 to 4, where 1 represents “definitely no” and 4 represents “definitely yes”, the mean score was 2 indicating that the weight is toward “no” when it comes to sharpshooters.



**Figure 12.** Support for sharpshooters to help reduce the deer herd in the DEZ.

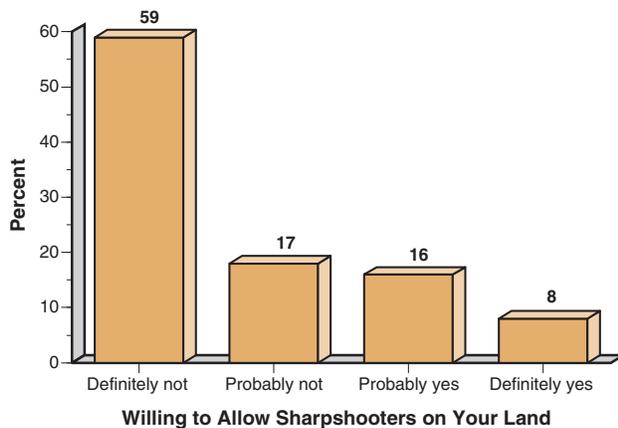
**Figure 12 points out that** the majority of landowners do not think sharpshooters should be used to help reduce the deer herd in the DEZ. Three-fifths (60%) of the landowners oppose the use of sharpshooters. Conversely, two landowners in five (40%) say they “probably” or “definitely” believe there is a role for sharpshooters for helping to reduce the deer herd. However, we should note that a larger block of non-hunters than hunters support the use of sharpshooters, though majority support is not found (47 percent of non-hunters, compared to 29 percent of hunters support using sharpshooters to help reduce the deer herd).

### Would Landowners Allow Sharpshooters on Their Land?

Landowners are even more negative about their potential willingness to allow sharpshooters on their own land. On a scale of 1 to 4 where 1 represents “definitely no” and 4 represents “definitely yes”, the mean response is 1.7. Landowners who see no role for sharpshooters would not let them on their land, while landowners who do see a role for sharpshooters would allow them on their land. This is highly correlated with the previous findings presented in Figure 12 ( $r = 0.762$ ).

**Figure 13 highlights that** a high majority of landowners are unwilling to allow sharpshooters on their land to help reduce the deer herd. Three-fourths of the landowners (76%) say they “definitely” or “probably” would not allow sharpshooters on their land and about one-fourth of the landowners (24%) would likely provide sharpshooter access to their land.

Please note that the Department is currently using sharpshooters only on properties where landowners have given permission. The findings presented in Figure 13 questions whether the Department has gained sharpshooter access to one-fourth of the properties in the DEZ where landowners would likely provide access. If not, there may be opportunities for increased access to private lands, and thus, the Department might consider renewed efforts to gain such access.



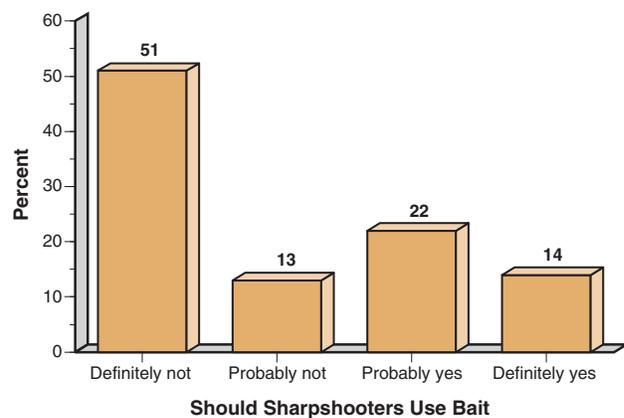
**Figure 13.** Percent of landowners that would allow sharpshooters on their land.

We should also note that similar to the previous finding presented in Figure 12, non-hunters were more supportive than hunters in their willingness to allow sharpshooters on their land. Thirty-four percent of non-hunters compared to 13 percent of hunters, would likely provide sharpshooter access to their own land.

### Sharpshooters and Bait

Landowners have negative feelings about allowing sharpshooters to hunt over bait in order to reduce the deer herd. On a scale of 1 to 4 where 1 represents “definitely no” and 4 represents “definitely yes”, the mean response is 2.0. These responses are highly correlated with the results shown in Figure 12 ( $r = 0.788$ ) and Figure 13 ( $r = 0.715$ ).

**Figure 14 shows that** a majority of landowners oppose the use of bait by sharpshooters to help reduce the deer herd in the DEZ. Approximately two-thirds (65%) of the landowners oppose the use of bait by sharpshooters but just over one-third of the landowners (36%) believe sharpshooters should be allowed to shoot over bait. Similar to the previous note accompanying Figure 12, a larger block of non-hunters than hunters support the use of bait by sharpshooters. Just over two-fifths (44%) of the non-hunters, compared to one-fourth (24%) of the hunters, support sharpshooters using bait to help reduce the deer herd.



**Figure 14.** Support for sharpshooters using bait to help reduce the deer herd in the DEZ.

From the focus groups:

*You'll so infuriate people with that policy by implementing that that it would be counter-productive.*

*It's not palatable. [Why is that?] It will anger the people that are against your program to see the Department go to that extreme. For every one you shoot they'll [opposing landowners] grow ten more [deer].*

*They're not going to let you in. They're not going to let you in because they want their hunting preserve.*

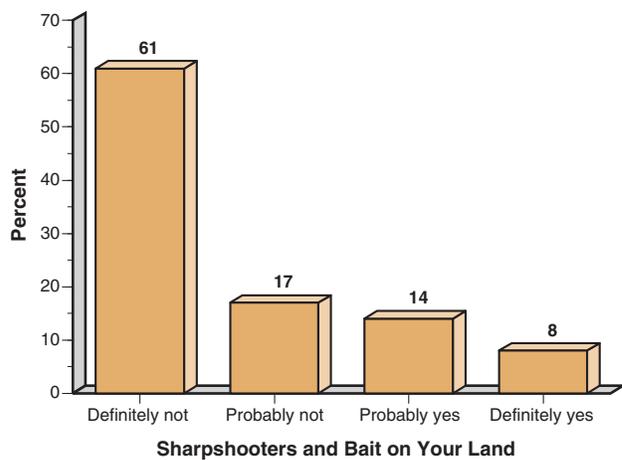
This landowner notes that the Wisconsin DNR must become even tougher to obtain sharpshooter access to private lands.

*The DNR's going to have to get more teeth than they have, and everybody thinks that they have too much now. They're going to have to get more teeth to get onto that property.*



## Sharpshooters and Bait on Private Land

Given the data presented earlier regarding sharpshooters (Figures 12 and 13) and the use of bait (Figure 14), it is no surprise, landowners strongly oppose the idea of sharpshooters using bait on their land (Figure 15). On a scale of 1 to 4 where 1 represents “definitely no” and 4 represents “definitely yes”, the mean response is 1.7. This response is highly correlated with Figure 12 ( $r = 0.706$ ) and Figure 13 ( $r = 0.772$ ) and extremely correlated with Figure 14 ( $r = 0.905$ ).



**Figure 15.** Percent of landowners that would allow sharpshooters to use bait on their land.

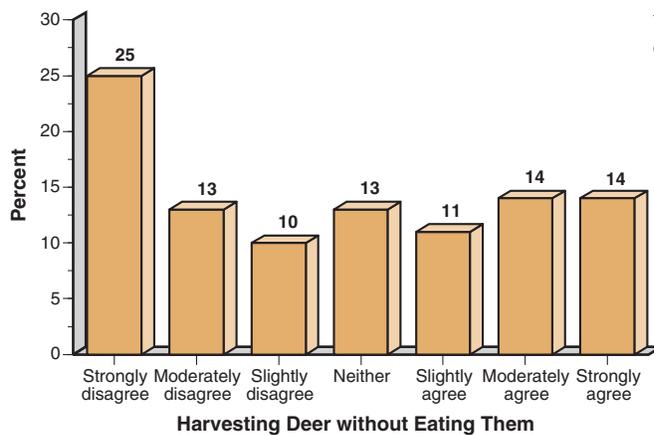
**Figure 15 reveals that** the strongest opposition to using sharpshooters is found to this question (allowing sharpshooters to use bait on the respondents' land). More than three-fourths of the landowners (79%) say they “definitely” or “probably” would not allow sharpshooters to shoot over bait on their land. Conversely, just over one-fifth of the landowners (22%) say they “definitely” or “probably” would allow sharpshooters to shoot over bait on their land.

Please note that although non-hunters continue to be more supportive of this measure than do hunters, this support is diminished. Twenty nine percent of non-hunters, compared to 14 percent of hunters, would likely allow sharpshooters to use bait on their own land.

### Disposing of Deer without Eating Them

Opinion on whether or not it is acceptable to harvest deer without eating them, in an effort to control CWD, is varied with no obvious consensus. On a scale of 1 to 7, where 1 represents “strongly disagree”, 4 represents “neither agree nor disagree”, and 7 represents “strongly agree”, the mean response was 3.7, nearly exactly on the “neither agree nor disagree” mark. The category with the most responses was “strongly disagree.”

Figure 16 illustrates that almost one-half (48%) of the landowners believe that it is unacceptable to kill and dispose deer without eating them. About two-fifths (39%) of the landowners believe it is acceptable to kill and dispose deer rather than eat them.



We should note that the 2003 deer season did not offer opportunities to donate deer to a food pantry. The objecting 48 percent shown in Figure 16 may be voicing their disapproval with the disposal methods (e.g., landfill, incineration, or chemical digestion).

When these responses are divided between landowners who hunt and those who do not, a clearer picture can be seen (Figure 17). The mean response for hunters is 3.3, indicating that the majority of hunters disagree with disposing of deer without eating them. Landowners who do not hunt had a mean response of 4.3, indicating a very slight leaning toward agreement with disposing of deer without eating them. The non-hunter distribution was the most evenly spread across the spectrum of answers, while there were quite a few hunters who had strong feelings. In the words of one landowner: “I will not let anybody come in and hunt and throw the deer in the dumpster.”

Figure 16. Percent of landowners that disagree or agree with killing and disposing deer without eating them.

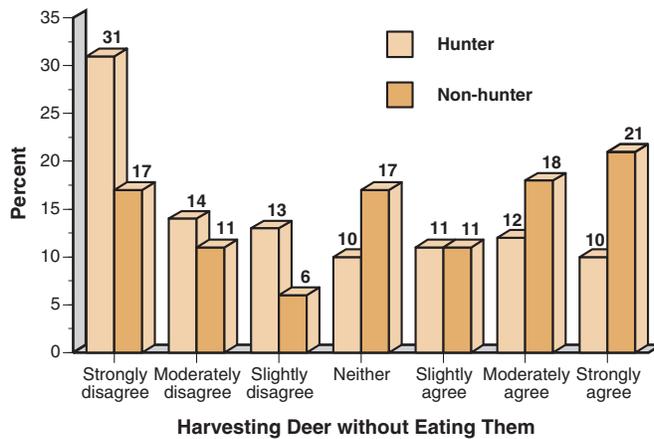


Figure 17. Percent of hunters and non-hunters that disagree or agree with killing and disposing deer without eating them.

## What Limits the Number of Deer Landowners Will Kill on Their Land?

Landowners were asked if there are any factors that would limit the number of deer they are willing to have shot on their land in the DEZ in an effort to control CWD. Those who responded “Yes” were then asked how important seven reasons might be for limiting the number of deer they are willing to have shot. Responses were on a scale of 1 to 9, where 1 represents “not important”, 3 represents “slightly important”, 5 represents “moderately important”, and 9 represents “very important.” Just over one-half of landowners (53%) have a reason for limiting the number of deer harvested on their land (Table 18).

**Table 18.** Reasons for limiting the number of deer killed on landowners’ property. (Mean scores followed by the same letter are not statistically different at  $P \leq 0.05$ .)

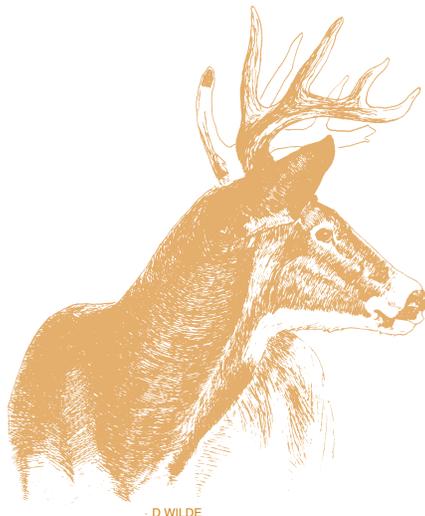
Limiting Reason	Percent “Moderately” or “Very” Important	Mean Score <sup>a</sup>
Do not want to kill more than can be used	72	6.4 A
Don’t believe we can stop the disease	73	6.1 A
Do not want to reduce the herd anymore	61	5.3 B
Have concerns about CWD	55	4.8 C
Not enough places to donate deer	50	4.6 C
Friends/relatives are not interested in taking any venison	51	4.6 C
Do not allow hunting on my land	38	3.9 D

<sup>a</sup> Responses were given on a scale of 1 to 9, where 1 represents “not important,” 3 represents “slightly important,” 5 represents “moderately important,” and 9 represents “very important.”

Table 18 tells us that the two biggest reasons that landowners limited the deer harvest on their land are that many of them feel strongly that it is wrong to take deer that can’t be used (72%) and because they do not believe that CWD can be eradicated from the state (73%).

Three-fifths of the landowners (61%) limit the deer harvest on their land because they do not want to reduce the herd any further and only one-half or slightly more of the landowners limit the deer harvest because they have concerns about CWD (55%), because they do not believe there are enough places to donate deer (50%), or because friends and relatives are not interested in taking any venison from their land (51%). The least important consideration in limiting the deer harvest was landowners who do not allow hunting on their land (38%).

These results suggest that if landowner awareness increased for the food pantry program (i.e., an understanding that deer donated would not be wasted) they might be willing to increase the harvest of deer from their land.



### Barriers to Eliminating CWD

From a landowner standpoint, the two barriers standing in the way of eliminating CWD are: 1) that CWD can never be totally eliminated from the wild deer herd, and 2) that some private landowners do not allow hunting on their land. Interestingly, very few feel that Wisconsin DNR or DATCP are the most serious barrier to eliminating CWD.

Figure 18 illustrates that 62 percent of the landowners believe that the two key barriers responsible for making CWD difficult to eradicate from the wild deer herd are 1) once CWD is in a wild deer herd it can never be totally eliminated (36%) and 2) that not all private landowners will allow hunting on their land (26%). No other barrier accounted for more than ten percent of the responses and the roles of Wisconsin DNR and DATCP were seen as the least significant barriers. We should point out here that hunters see these issues differently than other landowners. Hunters see two barriers as equally serious: the fact that landowners do not allow hunting (31%) and the fact that CWD cannot be eliminated (30%). Among other landowners, the intractability of CWD is seen as the most serious barrier (45%).

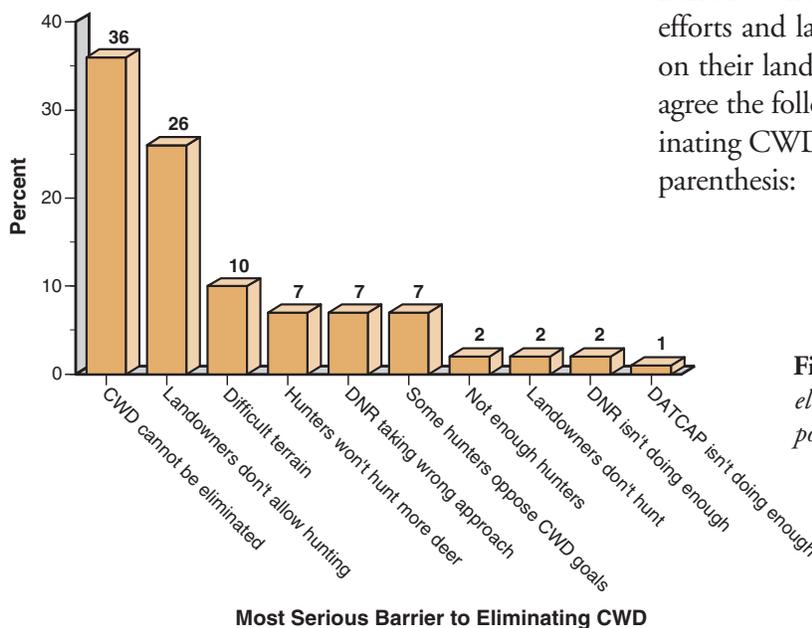


Figure 18. Most serious barrier to eliminating CWD from the wild deer population.

Table 19. Barriers to eliminating CWD.

Barriers	Percent "Slightly" to "Strongly" Agree	Mean Score <sup>a</sup>
Some hunters oppose state's efforts	81	5.6
Some private landowners do not allow hunting	77	5.4
Once CWD is in a herd it can't be eliminated	69	5.2
Some private landowners don't hunt	69	5.1
Hunters do not want to harvest more deer	69	5.0
Farmed deer escape into wild	47	4.3
Difficult terrain	46	4.2
Wisconsin DNR is taking the wrong approach	35	4.1
Department of agriculture not doing enough	31	4.0
Not enough hunters	33	3.5
Wisconsin DNR is not doing enough	18	3.3

<sup>a</sup> Responses were given on a scale of 1 to 7, where 1 represents "strongly disagree," 4 represents "neither agree nor disagree," and 7 represents "strongly agree."

On a scale of 1 to 7, where 1 represents "strongly disagree", 4 represents "neither agree nor disagree", and 7 represents "strongly agree", the results presented in Table 19 tell us that landowners believe the Department's greatest challenge to disease eradication is lack of cooperation (i.e., hunters who oppose the state's CWD control efforts and landowners that do not allow hunting on their land). The percentage of landowners that agree the following statements are barriers to eliminating CWD and the mean responses are given in parenthesis:

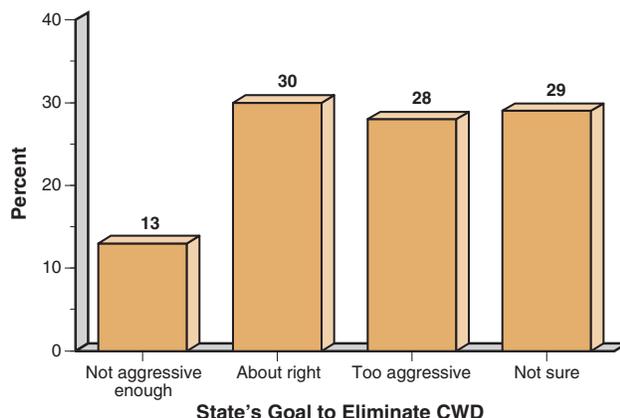
- hunters that oppose the state’s CWD control efforts (81%, mean = 5.6);
- private landowners that do not allow hunting on their land (77%, mean = 5.4);
- once CWD is in a wild deer herd it can never be totally eliminated (69%, mean = 5.2);
- private landowners that do not hunt (69%, mean = 5.1);
- and hunters do not want to harvest more deer than they can use (69%, mean = 5.0).

Landowners are undecided when determining if the following items are barriers to eliminating CWD from the wild deer population. The percentage of landowners that are undecided and the mean responses are given in parenthesis:

- captive (farmed) deer with CWD escape into the wild (47%, mean = 4.3);
- the terrain/landscape is difficult (46%, mean = 4.2);
- Wisconsin DNR is taking the wrong approach to eliminating CWD (35%, mean = 4.1);
- and DATCP is not doing enough to eliminate CWD (31%, mean = 4.0).

Items not considered to be barriers to eliminating CWD include:

- there are not enough hunters (33%, mean = 3.5);
- and Wisconsin DNR is not doing enough to eliminate CWD (18%, mean = 3.3).



### Is the State’s Plan to Eliminate CWD too Aggressive?

Survey respondents were asked how aggressive they thought the state’s goal was to eliminate CWD. On a scale of 1 to 3 where 1 represents “not aggressive enough” and 3 represents “too aggressive”, the mean response is somewhere between “about right” and “too aggressive” (2.2). Among those who have an opinion, opinion is evenly divided between those who feel the state’s strategy has been about right and those who feel the strategy has been too aggressive. Only a minority of 13 percent is convinced that the state has not been aggressive enough.

**Figure 19 shows that** landowners are divided in their opinions of the aggressiveness of the state’s plan to eliminate CWD. Three in ten landowners (30%) believe the state’s strategy has been about right. However, similar results are found from landowners that believe the strategy has been too aggressive (28%) and landowners that are unsure (29%). Only about one landowner in eight (13%) believes the strategy to eliminate CWD should be more aggressive. This result is considerably less than those who believe the strategy has been too aggressive.

We should note that the 29 percent “not sure” responses suggest that the jury is still out regarding this issue. This is not surprising given the unknown human and livestock risks posed by CWD. This response also implies that further outreach efforts are needed to inform landowners on why specific CWD control measures are being used and how their application is contributing to disease control and eradication. Additionally, we found that hunters are more likely than non-hunters to say the state’s strategy has been too aggressive. Just over one-third of the hunters (35%) compared to almost one-fifth of the non-hunters (18%) believe the strategy has been too aggressive.

**Figure 19.** *Aggressiveness of the state’s plan to eliminate CWD.*

### How is the Wisconsin DNR Doing

On a scale of 0 to 9, where 0 represents an “F” grade and 9 represents an “A” grade, the mean response was 4.9 (equivalent to a B-). Only a minority of landowners feel the Wisconsin DNR is doing worse than a C (Figure 20).

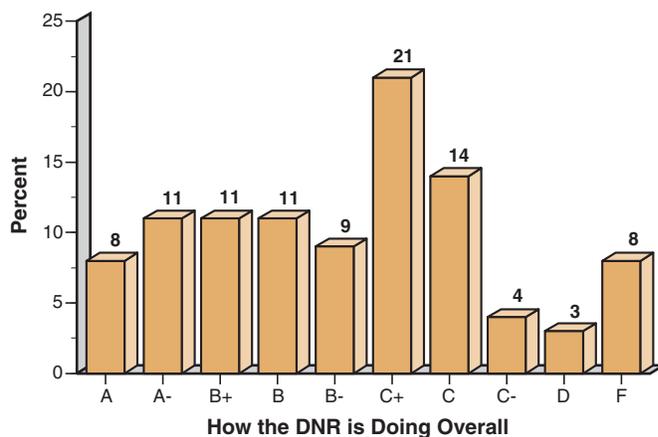
**Figure 20 is evidence that** more landowners are satisfied than dissatisfied with the job the Wisconsin DNR is doing managing CWD. Two-fifths (41%) of the landowners give the Wisconsin DNR a grade of B or higher. Just over two-fifths (44%) of the landowners provide grades ranging from a C to a B-, while only 15 percent of the landowners give the Wisconsin DNR a grade of a C- (4%), a D (3%) or an F (8%).

Please note that hunters are somewhat more satisfied than other landowners with the job the Wisconsin DNR is doing managing CWD. Hunters provide a mean score of 5.1 while non-hunters provide a score of 4.5, a statistically measurable difference ( $P < 0.005$ ). Grades of B or higher are given by 47 percent of the hunters and 31 percent of the non-hunters. These results are similar to those found in a recent University of Wisconsin hunter effort study. In that particular study, Holsman and Meinerz (2004)<sup>1</sup> found that 44 percent of DEZ hunters give the Wisconsin DNR a grade of B or higher.

To conclude this section, focus group participants were asked what they would like to see from the Wisconsin DNR that would encourage a positive relationship with landowners. Representative responses include:

*I think one of the things that would do that, if the DNR would say, 'Perhaps we should rethink our policy on this,' the policy that eradication may not be a solution or even necessary. 'We wanted to see this and needed your help in achieving this goal.' I think that would help turn a lot of us around and help ease the thing that they forced down our throats.*

*It was a political expedience for them to do something. I don't think they can continue to do that at this point. They swallowed this thing so far and spent so much money on it that it's going to be impossible...It's got to be a real radical step. These focus sessions are great but they're not going to convince the political aspect of this thing to change. It's got to be a radical change.*



**Figure 20.** Landowner grades for Wisconsin DNR performance.

<sup>1</sup> Holsman, RH and RD Meinerz. 2004. A preliminary report on hunter effort and attitudes in Wisconsin's Chronic Wasting Disease Eradication Zone: Results from the 2003 extended deer season. University of Wisconsin Stevens Point, College of Natural Resources. 51pp. <<http://www.uwsp.edu/cnr/CWDreport.pdf>>

## The 2003 Deer Hunting Season

This section addresses the objectives to better understand landowners' involvement with deer hunting. In particular, the section examines landowners' participation in and characteristics of the 2003 deer seasons; self-described hunter typology; perception of threats to the future of deer hunting in Wisconsin; and landowners' reasons for deciding not to deer hunt in 2003.

### Landowners that are Deer Hunters

More than one-half of the landowners surveyed hunt deer (Figure 21).

Figure 21 illustrates that landowners who are hunters dominate the southwest CWD eradication zone. Three-fifths (60%) of the landowners are deer hunters and the remaining 40 percent of the landowners are comprised of individuals that do not hunt but do not oppose deer hunting (38%) and landowners that oppose deer hunting (2%).

### Years of Deer Hunting Experience

Deer hunting experience ranges from one year to 70 years. Among the landowners that hunt, the mean years of deer hunting experience is 31 (Figure 22).

Figure 22 shows that one-half of the hunters (50%) have more than 30 years of deer hunting experience. One-fifth of the hunters (22%) have more than 40 years of experience and only one hunter in ten (10%) has not more than ten years of deer hunting experience.

### Deer Hunting Frequency

Landowners that hunt deer rarely miss a deer hunting season (Figure 23).

Figure 23 reveals that a vast majority of landowners who deer hunt participate most years or every year. Nearly three-fourths (72%) of the hunters go deer hunting every year and one-fifth (21%) go deer hunting most years. Only about one hunter in 20 (4.5%) has gone deer hunting less than half of the years since s/he started deer hunting.

Figure 21.

Landowners self description as a hunter.

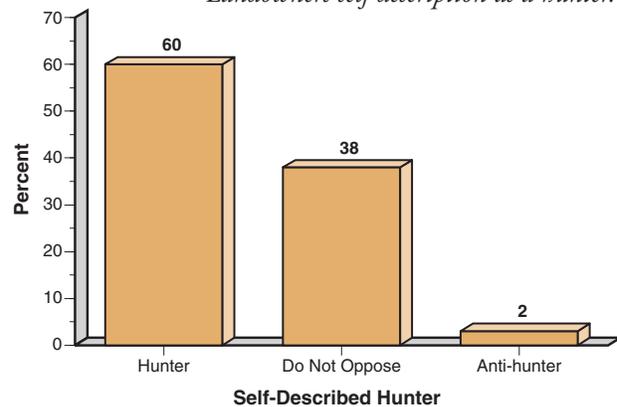


Figure 22.

Years of deer hunting experience.

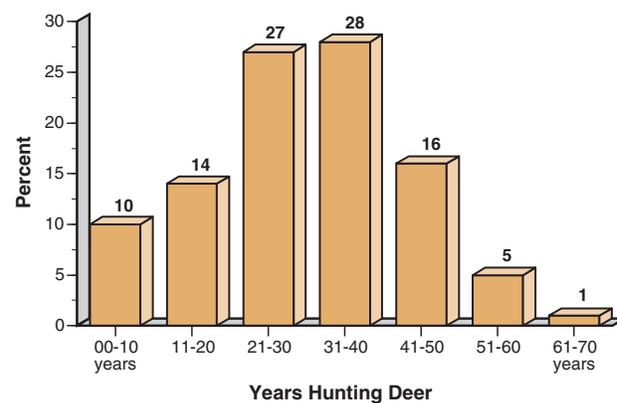
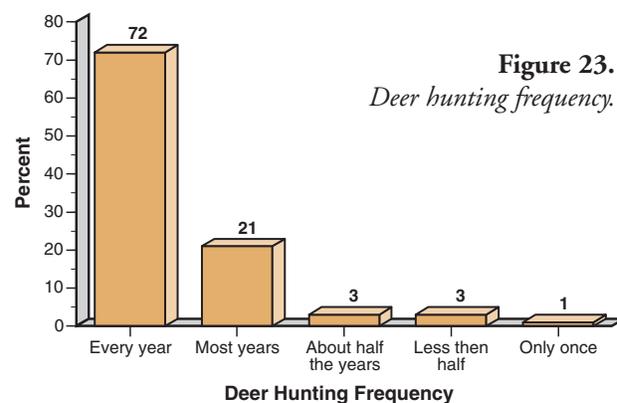


Figure 23.

Deer hunting frequency.



### Deer Hunter Typology

From the perspective of lowering deer herd numbers, self-described hunter typology should benefit the state's disease eradication efforts. The vast majority of hunters are at least willing to harvest an antlerless deer rather than end their hunt without a deer (Figure 24).

Figure 24 illustrates that among landowners who hunt deer, a majority is hoping to harvest a buck. However, an even larger proportion is hoping to or willing to harvest an antlerless deer. More than one-half (57%) of the landowners who hunt are hoping to harvest a buck. About one-third of the hunters are trophy buck (15%) or buck hunters (16%). Nearly seven hunters in ten (69%) prefer to or are willing to take an antlerless deer and just over two-fifths (44%) prefer to hunt for antlerless deer (3%) or hunt for whatever happens by (41%). Interestingly, one-fourth (25%) of the hunters would prefer to take a buck but will harvest an antlerless deer rather than end their hunt without a deer.

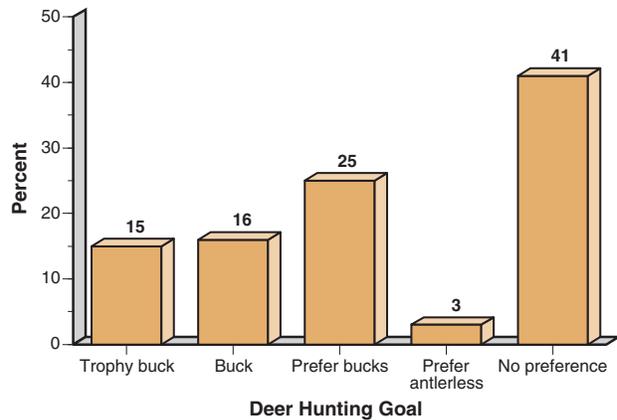


Figure 24. Self-described hunter typology.

### Deer Hunting Participation in 2003

A slight majority of landowners hunted deer during the 2003 seasons. Of those hunters, nearly all hunted their own land or someone else's land in the DEZ (i.e., they did not leave the area to hunt deer).

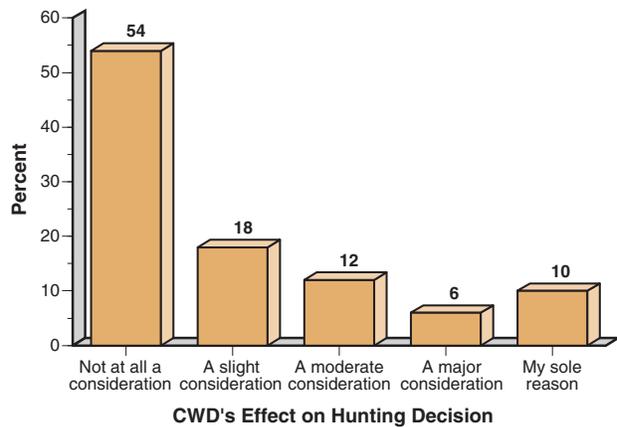


Figure 25. CWD's effect on hunting decision.

Table 20. Landowner participation in deer hunting during 2003 seasons.

Hunting Participation	Percent
Hunted in 2003	52
Hunted DEZ	91
Hunted only outside DEZ	9
Hunters who did not hunt	10

Table 20 outlines that more than one-half of all landowners hunted deer during the 2003 seasons. Fifty-two percent of all landowners hunted deer in 2003 and of those landowner hunters, more than nine in ten (91%) hunted either their own land or someone else's land in the DEZ. Only 9 percent of landowners restricted his or her hunting to land outside the DEZ.

Within the landowners who consider themselves hunters, ten percent did not deer hunt

during the 2003 seasons. Among those non-participants (50 individuals), a minority say CWD was a consideration in their decision (Figure 25).

Figure 25 shows that of the hunters who elected not to hunt during the 2003 deer seasons (50 individuals), just over one-half (54%) say CWD was not a consideration. More than two-fifths (46%), however, report that CWD played some role in their decision not to hunt. Sixteen percent of the non-participating hunters say CWD was at least a major consideration in their decision not to hunt and for one non-participating hunter in ten (10%), CWD is the sole reason for not hunting in the 2003 deer seasons.

We should note that among all landowners who did not hunt deer during the 2003 seasons, most (83%) say that CWD played no role in their decision not to hunt.

## Hunting Seasons

The traditional 9-day gun deer hunt remains the integral season in a multi-season framework. The early gun season that precedes the 9-day hunt is also a popular offering among the hunters (Table 21).

Table 21 explains that two-thirds (68%) of the hunters hunted at least one day outside of the traditional 9-day gun season and the mean number of days spent hunting in the DEZ in 2003 is 12.6 days. However, even with 70 days of gun and archery deer hunting opportunities preceding the traditional 9-day gun season, landowners hunted almost four days during the traditional season. The early gun season during the first weeks of November is also a popular season where landowners averaged four days of deer hunting. Although this is an average of only 18 percent of the season (on any given day there are less than half as many landowners out hunting as during the traditional gun season), it amounts to the greatest number of hunter-days, with 1,295 days reported hunting in this study.

In contrast, during the early archery season and the late gun season, landowners only use an average of five percent and seven percent, respectively, of the available days.

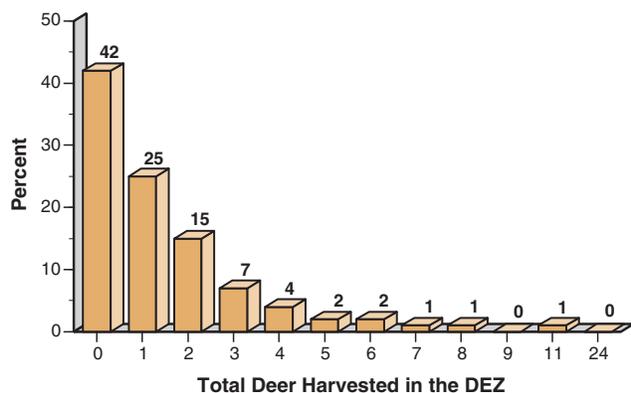


Figure 26. Total deer harvested in the DEZ.

Table 21. Number of days hunted during the 2003 deer seasons.

2003 Deer Hunting Seasons	Mean Number of Days	Minimum Number of Days	Maximum Number of Days	Total Number of Days
Days hunted from Sept 13 to Oct 29 (47 days)	2.5	0	35	784
Days hunted from Oct 30 to Nov 21 (23 days)	4.1	0	20	1,295
Days hunted from Nov 22 to Nov 30 (9 days)	3.8	0	9	1,189
Days hunted from Dec 1 to Jan 3 (34 days)	2.3	0	30	724
Total days hunting in DEZ (113 days)	12.6	0	68	3,992

## Deer Harvested in the DEZ

As expected, landowners harvested more antlerless deer than bucks from the DEZ. The average number of deer harvested per hunter is just over one deer. Almost three-fifths of the hunters harvested at least one deer.

Table 22. Number of deer harvested by type.

Deer Harvested	Mean	Minimum	Maximum	Total
Fawns	0.1	0	10	90
Does	0.6	0	10	193
Bucks	0.5	0	4	170
Total combined	1.4	0	24	453

Table 22 shows that landowners that participated in the hunting seasons took an average of 1.4 deer apiece from the DEZ during the 2003 seasons, for a total of 453 deer. It appears that landowners took more does than bucks, however, this is not a statistically significant difference.

Figure 26 shows that among the landowners that hunted during 2003, 58 percent harvested at least one deer. Analyzing these results further we can see that one-fourth (25%) of the hunters harvested one deer; one-fifth (22%) of the hunters harvested two or three deer; and just over one hunter in ten (11%) harvested four or more deer.

We should note that there is a correlation between number of days hunted and number of deer harvested ( $r = 0.31$ ). Landowners who hunted during the early or late seasons in addition to the traditional 9-day season harvested an average of 1.9 deer apiece, while those who hunted only during the traditional 9-day season took an average of 1.0 deer apiece ( $t$ -test, significant at the  $P < 0.001$  level).

### 2003 Deer Season Comparison

The additional hunting opportunities in 2003 was a benefit to about one hunter in six; that is, compared to previous deer seasons, this landowner harvested more deer in 2003.

Figure 27 reveals that only a minority of landowners report taking more deer than usual during the 2003 deer seasons. About one hunter in six (17%) harvested more deer during 2003 than most or any other deer season. The largest group of hunters (38%) reported that they harvested about the same number of deer in 2003 as they did during other deer seasons. Forty-six percent report that they harvested less deer than usual.

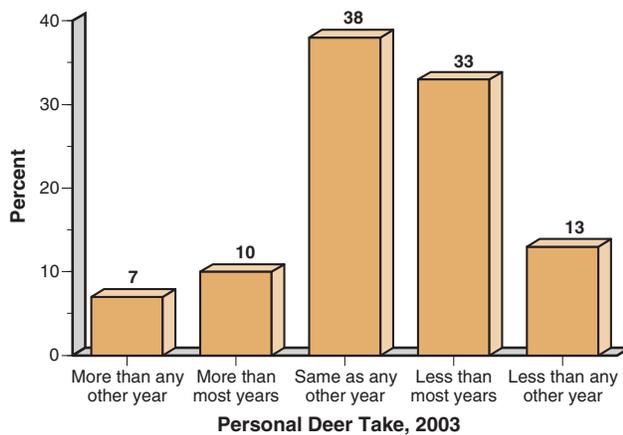


Figure 27. Deer harvest compared to pre-CWD seasons.

We should note that the 46 percent that report taking fewer deer than usual may be expressing their displeasure with the earn-a-buck requirement for hunters. That is, the earn-a-buck requirement hindered their hunting style by requiring them to shoot an antlerless deer prior to harvesting a buck.

Additionally, hunting during the early or late seasons has no measurable effect on the distribution presented in Figure 27. Also, as expected, those who are at least willing to take an antlerless deer are more likely than buck-only hunters to report that they harvested more deer during the 2003 seasons than most or any previous deer season (20 percent compared to nine percent, respectively). This finding is substantiated when personal deer kill is examined. A significantly higher proportion of buck-only hunters (47%) compared to willing antlerless hunters (38%) did not harvest any deer

during the 2003 seasons. A significantly higher proportion of willing antlerless hunters (37%) compared to buck-only hunters (24%) harvested two or more deer during the 2003 seasons.

### Hunters Asking Permission to Hunt Private Land

A high majority of landowners had other hunters requesting permission to hunt their land (Figure 28).

Figure 28 confirms that most landowners report between zero and two people asking permission to hunt on their land during the 2003 seasons. About three landowners in ten (29%) say they did not receive any requests from people asking to hunt the landowners' property. One-third of the landowners (32%) report one to three people asking permission to hunt their land and about one-half of the landowners (49%) report one to five people asking permission to hunt their land.

Please note that for the data presented in Figure 28, the mean number of requests was 3.7, although that mean includes an extreme outlier who reports 200 requests. Excluding that one case, the mean number of requests is 3.4 per landowner.

Additionally, given the findings presented in Figure 10c and Table 17, it appears that these requests to hunt private land have little to do with CWD. It is likely during the years preceding CWD, that the landowners were receiving requests from other hunters for permission to hunt their land.

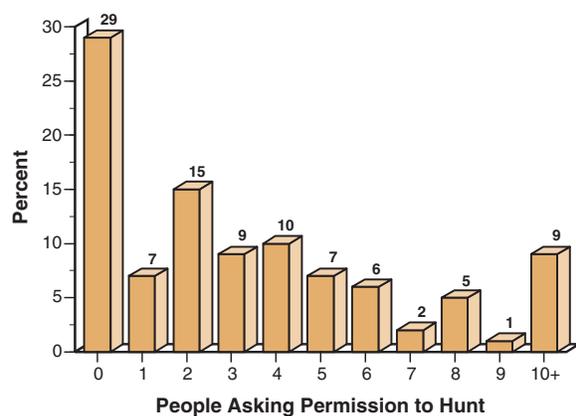


Figure 28. Number of other hunters asking permission to hunt landowners' land.

## Number of People Who Hunted Landowner's Property

Although 40 percent of the landowners consider themselves non-hunters or anti-hunting (see Figure 21), more than 70 percent of the landowners had hunters on their land.

Figure 29 illustrates that more than seven landowners in ten (72%) have their land hunted by people other than themselves or their spouses; about three landowners in ten (29%) do not allow anyone else to hunt their land; one-third of the landowners (32%) have one to three other people hunt their land; and just over one-half of the landowners (51%) have one to five other people hunt their land.

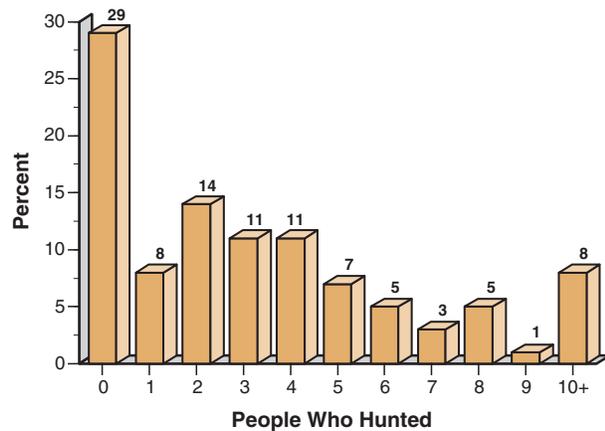


Figure 29. Number of other hunters that hunted the landowners' land.

Please note that analyzing the data used for Figure 29, the mean number of hunters on each landowner's property is 3.3.



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## Threats to the Future of Hunting

There are few issues that landowners see as serious threats to the future of deer hunting in Wisconsin. Landowners were asked to rank 17 possible threats to deer hunting on a scale of 1 to 9, where 1 represents "no threat", 3 represents "slight threat", 6 represents "moderate threat", and 9 represents "extreme threat." Respondents were then asked to select the single most serious threat to the future of deer hunting in Wisconsin. The mean scores and percent agreeing that the threat is most serious are found in Table 23.

Table 23 shows that of the 17 possible threats to deer hunting, landowners rank no issue as an "extreme" threat to the future of deer hunting in Wisconsin. The greatest threat is perceived to be CWD (mean response = 5.6), with one-fourth of the respondents (26%) saying it is the most serious threat. It is unclear, however, if the landowners are responding to concerns about the disease or the state's approach to disease management (e.g., the eradication plan). Other serious threats include the decreasing amount of public land available for deer

Table 23. Threats to the future of deer hunting in Wisconsin. (Mean scores followed by the same letter are not statistically different at  $P \leq 0.05$ .)

Threat to the Future of Hunting	Percent Agreeing Most Serious Threat	Mean Score <sup>a</sup>
Chronic Wasting Disease	26	5.6 A
Decreasing public land	8	5.4 A
Difficult access to private land	13	5.2 B
Too much private land	6	4.7 C
Too many people quitting	4	4.6 CD
Not enough new hunters	10	4.4 D
Anti-hunting groups	6	4.2 E
Complicated regulations	5	4.0 E
Too many competing activities	1	4.0 EF
Lyme disease in deer	1	3.9 EF
Cost of licenses	5	3.9 F
Tuberculosis in deer	1	3.9 FG
Not enough deer	9	3.8 FG
Too many regulations	3	3.6 G
Severe weather	1	3.0 H
Predators	< 1	2.4 I
Difficult to get licenses	< 1	2.2 J

<sup>a</sup> Landowners were asked to rank 17 possible threats to deer hunting on a scale of 1 to 9, where 1 represents "no threat," 3 represents "slight threat," 6 represents "moderate threat," and 9 represents "extreme threat."

hunting (mean response = 5.4), and difficulty obtaining access to private land (mean response = 5.2). The least threatening issues are predators (mean response = 2.4) and difficulty obtaining licenses (mean response = 2.2).

As heard in the focus groups:

*My fear is for the young people, they are very vulnerable to what people say. The DNR comes out with that scare tactic. The young girls that are getting married, they absolutely won't eat deer. They tell their husbands to go out and have a good time but don't bring a deer back. Now, their kids are going to follow the same, too. What is going to happen if this keeps going 20 years from now? Who's going to shoot these deer off? I'm afraid that hunting as it was...the antis are pushing this CWD because they know that's going to save the deer. There are going to be less hunters.*

*I think it's more CWD policy. [Tell me more about that.] I think the policy response in the eradication zone is destroying deer hunting as we know it. We've eroded the traditional fabric of our deer hunting seasons. Our bow hunters are dwindling by the wayside terribly. Bow hunting is probably half of what it was pre-CWD policy. I believe in 70a, which is completely within the eradication zone, during the first year of the eradication attempt the deer kill in 70a was 80 percent below the ten-year average. I believe last year it was 22 percent below the ten year average and I think what we need to do, we need to go back to the traditional season framework in order to try to repair that to get our hunters back.*



## Land Ownership and Personal Background

This section is intended to help understand who responded to the survey. It summarizes four land ownership attributes and seven socio-demographic characteristics of the respondents.

### Land Ownership Attributes

In general, survey respondents are full-time residents and farmers of the DEZ, they have owned land in the DEZ for about 20 years, and have farm operations of about 100 acres (Table 24).

**Table 24.** Land ownership attributes.

Attribute	Percent
<b>Land owned in DEZ</b>	
Total 5-50 acres	53
Total 51-100 acres	19
Total 101-200	14
201+ acres	14
Mean total acres	95 acres
Mean acres owned alone	80 acres
Mean acres owned with others	16 acres
<b>Years of land ownership</b>	
0-5 years	18
6-10 years	21
11-20 years	23
21-30 years	20
31+ years	19
Mean years	19 years
<b>Land as residence</b>	
Primary residence	69
Recreational, not primary residence	24
Neither primary nor recreational	8
<b>Farm on DEZ land</b>	
	96
Dairy/beef	37
Cash crop	43
Deer/elk farm	0
Other farming	37

**Table 24 shows that** the mean amount of total acreage owned per landowner is 95; just over one-half of the landowners (53%) own 50 acres or less; respondents have owned land in the DEZ for an average of 19 years; and about two-fifths of the landowners (39%) have owned land in the DEZ for more than 20 years. In addition, nearly seven out of ten landowners (69%) report that the land they own in the DEZ is their primary residence and one-third of the landowners (32%) could be

considered absentee-landowners. Almost all landowners (96%) say at least part of the land they own in the DEZ is farmed and a minimum of 37 percent of the landowners has livestock as part of their farming operation.

### Landowners' Socio-Demographic Characteristics

Landowners are primarily married men over 50 years old, they have lived in the area for more than 20 years, and they have at least some college education (Table 25).

**Table 25 shows that** almost all respondents (88%) are married and male. The average age of the landowner is 55 and about three in ten (29%) are over 60 years old. Almost two-thirds of the landowners (64%) have at least some college education and 43 percent have completed a bachelors degree or higher. About one-half of the landowners (49%) reside in households with annual incomes of at least \$75,000. Interestingly, only a small percentage of landowners (15%) is a member of or affiliated with at least one of the deer or land management groups presented in the questionnaire.



Stockphoto, M&M WEST

**Table 25. Socio-demographic characteristics of responding landowners.**

Attribute	Percent
<b>Gender</b>	
Male	88
Female	12
<b>Age</b>	
21-30	1
31-40	11
41-50	27
51-60	33
61+	29
Mean age	55 years
<b>Years living in CWD county</b>	
0-5 years	8
6-10 years	10
11-20 years	15
21-30 years	17
31+ years	51
Mean years	34 years
<b>Marital status</b>	
Married/living with partner	88
Not married or not living with partner	12
<b>Highest level of education completed</b>	
Less than high school diploma	3
High school diploma or GED	33
2-year associates degree or trade school	21
4-year college degree (e.g., bachelors)	24
Advanced degree (e.g., Ph.D., M.D.)	19
<b>Approximate 2003 household income</b>	
Less than \$25,000	7
\$25,000-\$49,999	19
\$50,000-\$74,999	25
\$75,000-\$99,999	20
\$100,000+	29
<b>Membership/Affiliation</b>	
Whitetails Unlimited	6
Wisconsin Woodland Owners Association	5
Quality Deer Management Association	4
Rocky Mountain Elk Foundation	3
CALFARR	3
Wisconsin Deer Hunter's Association	1
CAIDS	< 1
None of the above	85

## Conclusions

Here we present the conclusions from the results outlined in each of the 6 major sections of the report. Major findings can be found in the Study Highlights portion found at the beginning of this report.

### Awareness and Concerns About Chronic Wasting Disease

Overall, landowners are more concerned about the health of the deer herd and the future of deer hunting in Wisconsin than they are about their own personal health due to CWD.

### Information About CWD

The majority of landowners say they trust the Wisconsin DNR when addressing CWD related issues. However, mean scores for trust are not very high, indicating that landowners may be skeptical about the Wisconsin DNR's CWD management actions.

Landowners in the DEZ continue to be interested in CWD; one-third say they follow CWD news "a lot."

Landowners obtain CWD information from a variety of sources. Their preferred sources for CWD information are the Wisconsin DNR newsletter, Madison and Milwaukee newspapers, and Wisconsin DNR publications.

Landowners would like to receive more information on possible human safety risks and possible livestock health risks associated with CWD.

### Landowner Perception of the Deer Herd

Most landowners believe that prior to the discovery of CWD, the deer population on their land was remaining stable or perhaps increasing; a majority says the deer population on their land was at a proper level.

### Support for and Effect of Disease Control Measures

More landowners are satisfied than dissatisfied with the job the Wisconsin DNR is doing managing CWD. On a grading scale of A to F, two-fifths of the landowners give the Wisconsin DNR a grade of B or higher; only 15 percent give the Wisconsin DNR a grade of C- or lower. This finding is consistent with results from other Wisconsin CWD studies.

Most landowners are aware of the incentives for harvesting more deer. Landowner-hunters have a higher level of awareness than landowners that do not hunt.

Landowners believe that increasing the CWD-positive incentive from \$200 to \$500 would likely increase the number of hunters asking permission to hunt their land. Few landowners said it would encourage them to allow more hunters on their land. Likewise, a slight majority of landowners say that increasing the lottery payment from \$20 to \$50 would increase the number of hunters asking permission to hunt their land. Few landowners say it would encourage them to allow more hunters on their land.

Support for monetary incentives differs depending on whether the landowner is a hunter or not. The largest group of hunters is opposed to any monetary incentive, while the largest group of non-hunters most prefers the \$500 reward for having a CWD-positive deer shot on his/her land.

Consensus on a gun deer hunting season most preferred by DEZ landowners is not found. The largest block of landowners would prefer a gun deer hunting season other than the alternatives listed in the questionnaire. About three landowners in ten prefer a gun deer season in the DEZ that started in late October and ended January 3<sup>rd</sup>.



Little support is found for the use of sharpshooters to help reduce the deer herd. A majority of landowners do not think sharpshooters should be used to help reduce the deer population in the DEZ. Further, three-fourths of the landowners say they would not allow sharpshooters on their land. However, despite this conclusion, opportunities to increase sharpshooting efforts exist. One-fourth of the landowners say they would provide sharpshooter access to their land. This equates to approximately 2,000 landowners (currently the Wisconsin DNR is using sharpshooters only on properties where landowners have given permission). Survey results also suggest that renewed efforts should target non-hunting landowners. Compared to landowners that hunt, non-hunting landowners are significantly more amicable to using sharpshooters for herd reduction and also more likely to provide access to their land. It must be noted, however, that when landowners were questioned about providing sharpshooter access to their land, it is likely that those who said “probably”, are awaiting answers to the question identified in major finding #1 (see page 6): “How has landowner participation contributed to the eradication efforts and where would the disease be without intervention?”

Neither hunter nor non-hunter landowners report any substantial change in the use of their land for deer hunting by others. Only a small percentage of landowners say that since CWD was found in Wisconsin they have seen an increase in the number of hunters trespassing on their land and asking for permission to hunt their land.

A majority of landowners say they would be willing to allow more deer to be killed on their property if they thought it would help to eradicate CWD from Wisconsin and if the deer could be donated to a food pantry. Please note that in 2003 the state had yet to establish a venison donation program.

## The 2003 Deer Hunting Season

Landowners that are hunters dominate the southwest DEZ. Among landowners that hunt deer a majority is hoping to take a buck. However, an even larger proportion is hoping to or willing to take an antlerless deer.

Seventeen issues that could threaten the future of deer hunting in Wisconsin were presented in this study and no issue is considered an “extreme” threat. The three greatest perceived threats are: CWD, the decreasing amount of public land available for deer hunting, and the difficulty obtaining access to private land.

Ten percent self-described hunters did not hunt deer during the 2003 seasons. Almost half of the hunters who elected not to hunt during 2003 reported that CWD played some role in their decision (e.g., health concerns from the disease or objections with CWD management policies).

## Land Ownership and Personal Background

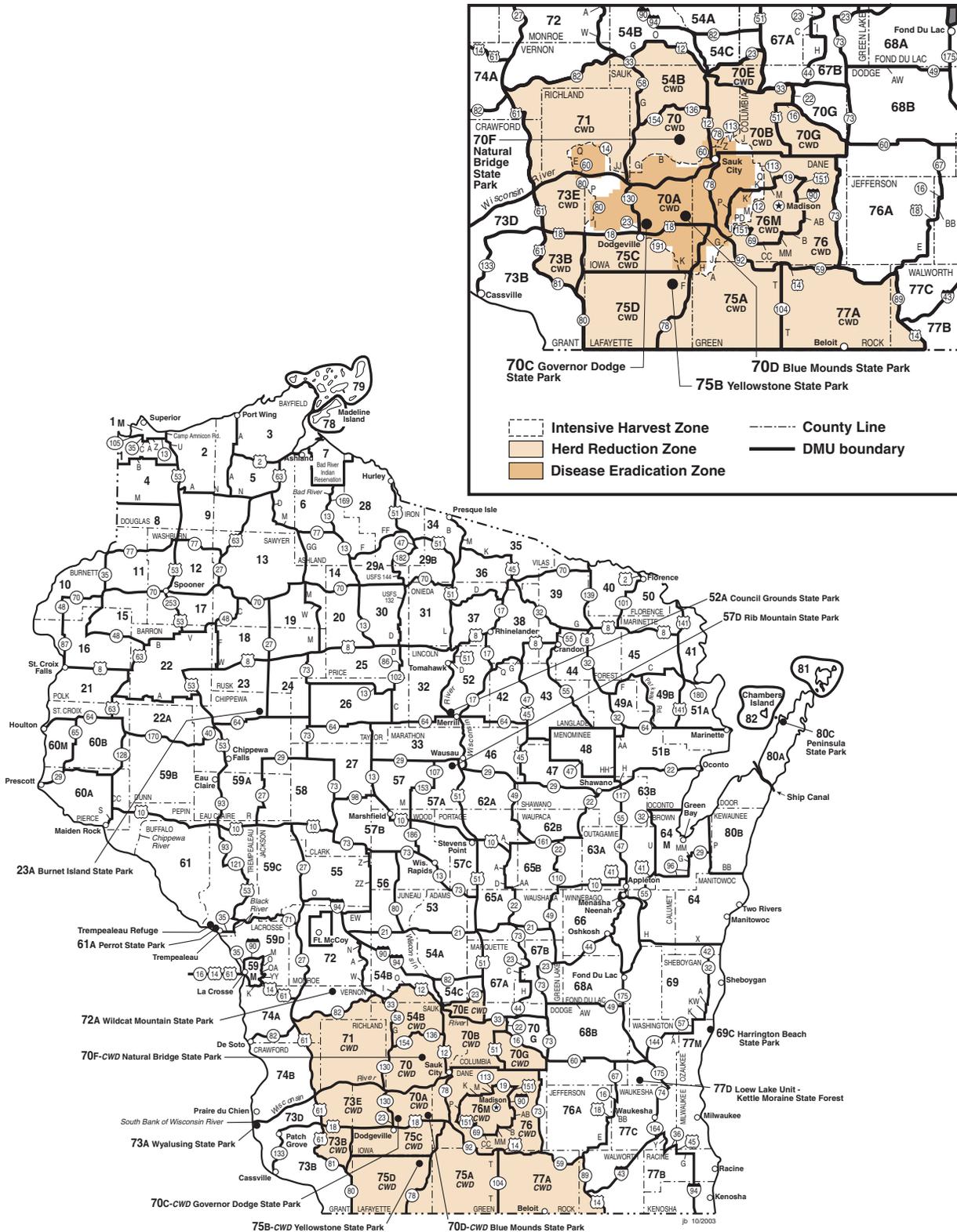
Landowners were found to own an average of 95 acres of land and have owned that land for an average of 19 years. They have lived in the DEZ county for an average of 34 years and about one-third of the landowners could be considered absentee-landowners. Almost all respondents say the land they own in the DEZ is at least partly farmed.



JOHN KUBISIAK

# Appendix A.

## 2003 Deer Management Units and the Southwest Disease Eradication Zone (DEZ)



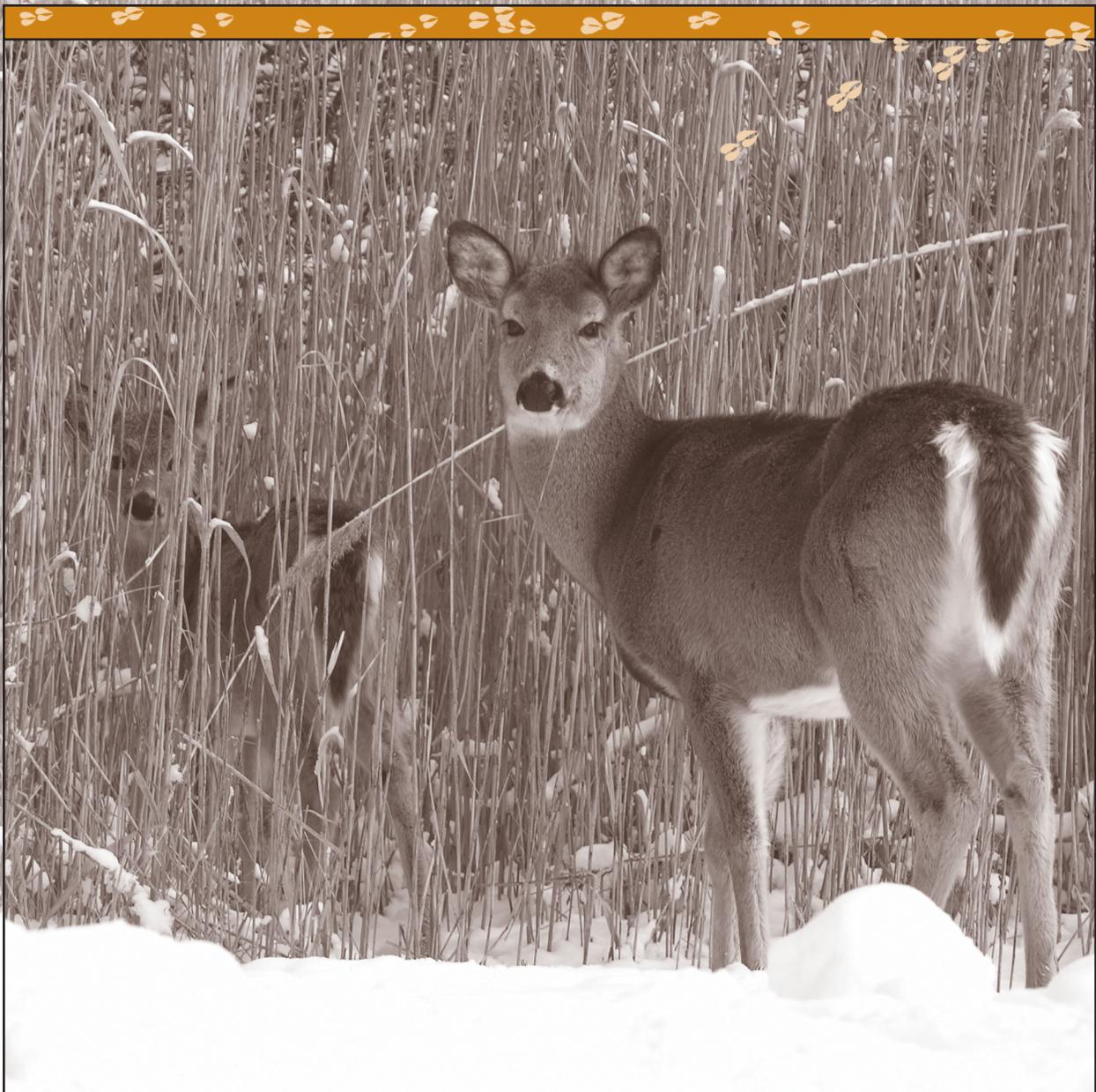


# Notes

## Notes



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