Summary of Research

Montana Fish, Wildlife & Parks

Selected Results from Surveys of Resident Big Game Hunters & Private Landowners Regarding the Topic of Chronic Wasting Disease

HD Unit Research Summary No. 36

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Abstract: *In 2013, Montana Fish, Wildlife & Parks (FWP) conducted surveys of private landowners and resident big game hunters regarding their perceptions of alternative management actions for preventing Chronic Wasting Disease (CWD) from coming to Montana and managing/controlling the disease if it ever is detected in the state's wild deer, elk or moose populations. Results of these surveys demonstrate that most landowners and hunters are supportive of Montana increasing its surveillance for CWD along Montana's borders. To help prevent CWD from coming to the state, both of these groups are also highly supportive of implementing more restrictive regulations regarding the transportation of out-of-state harvested deer, elk, and moose being brought into Montana. Hunters and landowners also appear to be in alignment with one another regarding other potential management actions. In particular, while both groups are definitely NOT supportive of management actions that would require the use of trained sharpshooters, they are moderately supportive of management actions that would involve the use of hunters to help reduce or eliminate populations of deer, elk, or moose being affected by CWD if the disease is ever detected in the state. Last but not least, the survey results reveal support for establishing voluntary testing programs for hunter harvested deer, elk, and moose in an effort to better estimate and monitor the disease should it come to Montana. Results from both surveys are being used by FWP to aid the development of an up-to-date CWD management plan for Montana.*

BACKGROUND INFORMATION

Chronic wasting disease (CWD) is a disease of the central nervous system that is fatal to free-ranging mule deer, white-tailed deer, moose, and elk. The disease is caused by abnormally shaped proteins that can transform normal proteins into their image. As these proteins accumulate, they result in tiny sponge-like holes in the brain and upper spinal cord tissue. There remains a lot to be learned about the specifics of how the disease is naturally transmitted in the wild. Additional information on CWD can be found at www.cwd-info.org.

CWD is only known to affect deer, elk, and moose and has been found in the wild in areas of 17 states and two Canadian provinces including Colorado, Wyoming, Nebraska, South Dakota, Wisconsin, New Mexico, Utah, Illinois, New York, West Virginia, Kansas, Maryland, Minnesota, Missouri, North Dakota, Pennsylvania, Texas and the provinces of Saskatchewan and Alberta. Federal and state agencies are working to control any spread of the disease in these areas. To date, CWD has NOT been found in the wild in Montana. At present, no known risks to humans, domestic livestock, or human pets (including cats and dogs) have been identified from CWD.

Montana Fish, Wildlife & Parks (FWP) has mandated responsibilities to manage for viable and sustainable wildlife populations for the benefits of residents and nonresidents alike. CWD has the potential to affect the viability of wild deer, elk, and moose populations in Montana and public values associated with those populations. CWD has been detected in wild deer and moose populations in adjacent states and provinces, and it is unknown how, when and where it will impact Montana. There is uncertainty about the long-term impact of CWD on ungulate populations or human health, what the goal for CWD management should be, where risk for CWD is greatest, and whether currently planned actions would be effective and socially acceptable.

Research and the experience of other states suggests Montana's current management plan for surveillance, prevention and response for CWD management is out of date, unaffordable, and may be ineffective at reaching desired management goals. Recognizing implementation will affect other programs; FWP needs to develop an effective, contemporary, socially acceptable, and affordable approach to address CWD based on best available information and lessons learned from other states/provinces. The current Montana plan also indicates that review and revision of the management strategies should be undertaken at five year intervals, further stressing the need for Montana to revisit CWD planning.

Given this need, FWP began the process of revisiting the Montana CWD management plan with a staff workshop in the fall of 2011. This workshop was attended by FWP Wildlife Division staff from around the state as well as technical collaborators the Montana Cooperative Wildlife Research Unit. The intent of this workshop was to characterize the basic scope of the CWD management issue, as well as realistic alternatives for CWD management contained in the current plan or that have arisen given new knowledge and experience since the current plan was implemented. At this workshop, the group identified the following CWD objectives over a ten year horizon:

- *Minimize effects of CWD on ungulate populations.*
- *Maximize recreational opportunities.*
- *Maintain ungulate populations at objective.*
- *Minimize health risks of CWD for humans.*
- *Maintain public trust and support.*
- *Reduce uncertainty of CWD effects on populations and human health.*
- *Minimize costs.*

Following from this initial planning step, FWP revisited the current CWD decision notice and management plan through a public planning process. The first step was to propose that the FWP Commission forestall the current decision notice, and that occurred during the winter of 2012-13. Currently, a new CWD management plan is being drafted by FWP, and this draft will be released into a public planning process in the fall of 2013.

While the experience of other states and provinces indicates that CWD management strategies focused on population reduction engender substantial public opposition, the causes of this opposition are not clear. Potential causes that have been highlighted in other states include limited landowner tolerance for such operations, public frustration with the loss of hunting opportunity associated with population declines, lack of public understanding of the potential risks and impacts of CWD, and lack of evidence that such operations reduce or limit the spread of CWD. Understanding the cause of public dissatisfaction is necessary for developing effective strategies for CWD management.

Further, while other jurisdictions have experience with such CWD management programs and public reactions, Montana does not and no data exist that quantify the attitudes of Montanans to various CWD management approaches. Even during the public comment periods during the development of the current CWD management plan, less than 10 comments were received. There is reason to believe that the attitudes of Montanans may differ from those in other jurisdictions, because the Montana public is comprised of more people with utilitarian values than most other states and provinces.

To feed directly into the CWD planning process, in 2013, FWP conducted surveys of private landowners and resident big game hunters regarding their perceptions of the acceptability of a variety of potential CWD related management actions.

Private Landowner Survey. Private landowners who own at least 160 acres in Montana were the focus of the landowner survey. In late June (2013), a random sample of N=1500 landowners was selected from the State Cadastral Database, and each of these landowners was mailed a letter inviting participation in an online CWD landowner survey. Because only 78 landowners responded to the online survey, the remaining non-respondents were sent a printed copy of the survey by mail in mid-July. Ultimately, 280 landowners responded to the paper survey method. In total, there were 358 respondents to the CWD landowner survey resulting in an overall 25 percent response rate. This survey response rate takes into account that 36 landowner mailing address proved to be undeliverable.

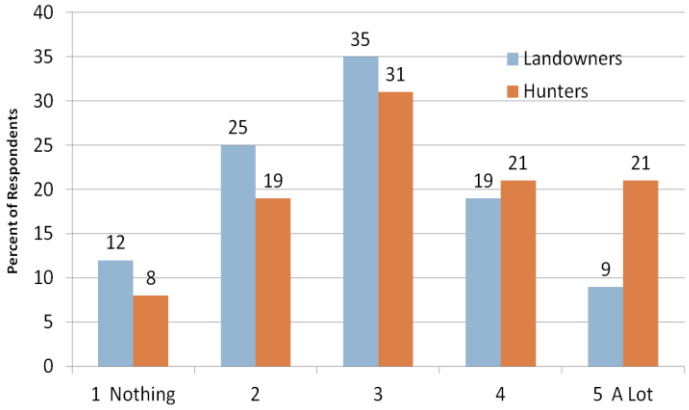
Resident Big Game Hunter Survey. Resident Montana big game hunters who had a deer and/or elk license from the 2012 general hunting season were the focus of the hunter survey. A randomly selected sample of N=1500 hunters was selected for this survey from FWP's Automated License System (ALS). A total of 554 of these hunters had a deliverable email address and were sent an email invitation to participate in an online CWD hunter survey in late June (2013). Three different follow-up reminders were emailed to these hunters, and ultimately there were 162 responses to the online survey of hunters who had email addresses. The remaining 937 hunters (e.g., those who did NOT have an email address) were mailed a letter in late June inviting participation in a separate online CWD hunter survey. Because only 22 of these hunters responded to the online survey, the remaining non-respondents were sent a printed copy of the survey by mail in mid-July. Ultimately, 170 of these hunters responded to the paper survey method. In total, there were 348 respondents to the CWD hunter survey resulting in an overall 25 percent response rate. This survey response rate takes into account that 112 hunter mailing address proved to be undeliverable.

SURVEY RESULTS

Knowledge of CWD

Participants from both the landowner and hunter surveys were asked about their knowledge of CWD. A surprising number of respondents to both the landowner and hunter surveys reported they had not heard much about CWD prior to receiving the survey (Figure 1). Compared to landowners, hunters more often reported having heard of CWD.

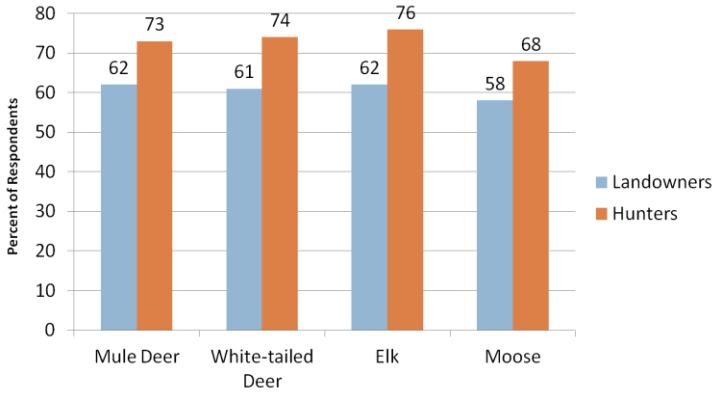
Figure 1. Response to: "*Prior to receiving this survey, on a scale from 1 (nothing) to 5 (a lot), how much have you heard about CWD?*"



Concern about CWD finding its way into Montana

A strong majority of landowners and hunters reported they are concerned that CWD might find its way into Montana's wild deer, elk, and moose populations in the future (Figure 2). At the same time, both groups were equally concerned that numbers of deer, elk, and moose might decline across the state if CWD is ever detected within the state's borders.

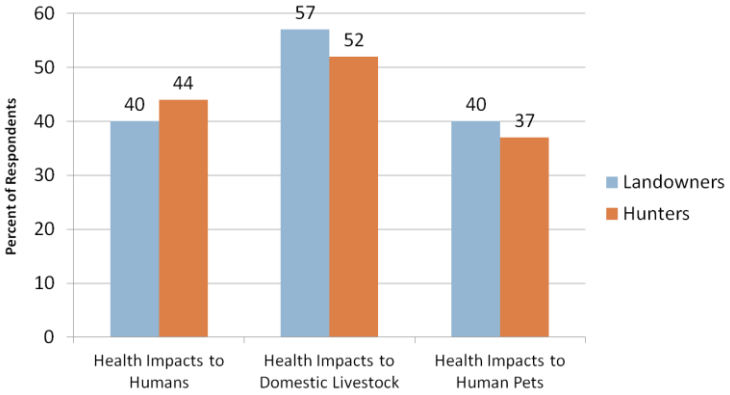
Figure 2. Percent of respondents who reported they are "concerned" or "very concerned" that CWD might find its way into Montana's wild mule deer, white-tailed deer, elk, and moose populations.



Perceptions regarding the potential health impacts of CWD to humans, domestic livestock, and pets

Both landowners and hunters reported moderate levels of concern regarding the potential health impacts of CWD to humans, their pets, and domestic livestock on the Montana landscape (Figure 3). The most concern was expressed regarding domestic livestock.

Figure 3. Percent of respondents who reported they are "concerned" or "very concerned" about the health impacts to humans, domestic livestock, and human pets from CWD.



Acceptability of potential CWD management actions

Potential management actions that were deemed acceptable by 60 percent or more of the respondents from both the landowner and hunter surveys included the following:

To prevent CWD from coming to Montana...

- Increase surveillance for CWD along Montana's borders.
- Require hunters to report and gain permission to transport into Montana those deer, elk, and moose they harvest in other states/provinces where CWD has already been found.
- Require mandatory testing (with penalties for non-compliance) of all hunter harvested deer, elk, and moose being transported into Montana from other states or provinces where CWD has already been found.

If CWD is ever detected in Montana...

- In areas where CWD has been detected, increase hunter harvest opportunity in an effort to substantially reduce the number and/or density of those species being affected by the disease. Also, establish incentives for private landowners to increase hunter access in these areas.

- Establish incentives for hunters and landowners to voluntarily provide samples of hunter harvested deer, elk, and moose in an effort to better estimate and monitor the prevalence of the disease across the state.
- Implement a voluntary testing program for hunter harvested deer, elk, and moose in an effort to better estimate and monitor the prevalence of the disease across the state and provide hunters with information about the animals they harvest (such a program would be paid for by FWP by diverting money from other programs).
- For all deer, elk, and moose harvested in a part of the state where CWD has been detected, require than hunters can only transport quarters, boned-out meat, processed meat, cleaned skull plates, antlers, or taxidermy mounts into other parts of Montana where CWD has yet to be detected. The remaining carcass must be left or disposed of in the area of the state where the harvest occurred. Of note, a similar regulation is already in place for hunter harvested deer, elk, and moose being transported into the Montana from other states/provinces where CWD has already been found.

Potential management actions that were deemed unacceptable by 60 percent or more of the respondents from both the landowners and hunter surveys included making use of trained sharpshooters to either help prevent CWD from coming to Montana or to manage the disease if it ever is detected in the state.

DISCUSSION

Currently, FWP is challenged to draft a new CWD management plan for Montana. Results from this survey effort suggest that development of such a plan needs to take into account the public's relative lack of knowledge regarding this troubling disease which has the potential to adversely affect Montana's wild deer, elk, and moose. As such, an important component of updating Montana's CWD plan will likely need to focus on broadening FWP communication and education efforts regarding CWD.

From these two surveys, it is apparent that landowners and big game hunters are very much concerned about the potential for CWD to eventually find its way into Montana. Landowners and hunters also very much concerned about the potential effects of the disease not only to deer, elk, and moose—but to humans, domestic livestock, and human pets. To date, no known risks to humans, domestic livestock, or human pets (including cats and dogs) have been identified from CWD. That said, the public's perception of risk (whether real or not) should be a very important consideration in the development of Montana's CWD plan.

Last but not least, from these two surveys it was learned that landowners and hunters appear to be in alignment with one another regarding the acceptability and unacceptability of a number of potential management actions that could be taken to help prevent CWD from coming to Montana, and to mitigate the disease if it is ever detected in the state. This information is being used by FWP to aid the development of an up-to-date CWD management plan for Montana.

STUDY NOTES

FWP conducts social science surveys on a regular basis in an effort to extend opportunities for the public to weigh in on important fish, wildlife, and parks management issues in Montana (in this case CWD). Because of the relatively low response rates to both of the surveys presented in this research summary, there exists the potential for non-response bias. As such, it is unknown whether or not the survey results presented herein accurately represent the viewpoints of all private landowners who own at least 160 acres in Montana and all resident big game hunters who had a deer and/or elk license from the 2012 Montana hunting season. Nonetheless, these survey results provide FWP with more than 70 times the number of public comments collected during the development of Montana's original CWD plan in 2004.

In an effort to save costs, the initial study design for the surveys presented in this research summary focused on two methods: (1) sending out email invitations with an embedded online survey link and (2) mailing out letter invitations that instructed study participant about how to complete an online survey. Ultimately, it was learned that these two methods were not effective in obtaining a sufficient survey response. Therefore, FWP modified the study design at the midway point of this effort to a more traditional paper survey method. The paper survey method proved by far to be the most effective method in eliciting response from both landowners and hunters.

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