

Alberta's CHRONIC WASTING DISEASE RESPONSE PROGRAM: March, 2007

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on behalf of Alberta's CWD team

EXECUTIVE SUMMARY

Chronic wasting disease (CWD) is a chronic degenerative and ultimately fatal disease of cervids (deer, elk, and to a lesser extent moose). CWD has the potential to significantly reduce cervid population densities and is considered a threat to deer populations in Alberta. Through previous CWD surveillance and management activities in Alberta and Saskatchewan, two geographical areas were identified as high risk for further CWD incursion: 1) the Edgerton/Chauvin/Dilberry Lake area east of Wainwright (Border North), and 2) the region around the confluence of the Red Deer and South Saskatchewan Rivers (Border South) (Figure 1) based on findings in hunter harvests and targeted herd reductions in 2005 and 2006 (Figure 2). An International Expert Panel¹, convened in 2004 to examine the epidemiology and risks of CWD to cervids, concluded that CWD is likely not native to cervid populations in Canada and that there are no natural barriers to further spread in affected areas. In light of this finding, and the potential for CWD to negatively affect Alberta cervids, the Fish and Wildlife Division of Alberta Sustainable Resources Development made it a priority to prevent or limit the spread of CWD into the province.

Toward this objective, the Fish and Wildlife Division implemented another CWD response program in March 2007. The specific goal of the program was to limit disease transmission by reducing deer densities in the vicinity of CWD-positive deer. Guiding principles for the program were safety of staff and the public in conjunction with effective and efficient shooting of deer with minimal disturbance to landholders and local residents.

Intensive herd reduction was conducted in multiple areas, all within approximately 10 km of recent cases of CWD in wild deer in Alberta or Saskatchewan along the Red Deer River (RDR) and South Saskatchewan River (SSR), and in the vicinity of Edgerton, Chauvin, and Dilberry Lake Provincial Park (DLPP).

For the first time, a combination of ground and aerial collection was used. Firearms qualified Fish and Wildlife staff delivered the ground program. A private contractor delivered the aerial program. Shooters were instructed to shoot any deer that could be safely shot and recovered, but with an emphasis on mule deer. The field program was delivered in two major time periods: March 5-9 in the south and March 15-27 in the north. Aerial surveys were conducted before both deliveries and after the southern delivery to determine deer distributions and the changes in deer numbers. Lack of snow prevented an 'after' flight in the north.

All deer were processed by Fish and Wildlife staff to collect heads for CWD testing and to collect reproductive samples, salvage hides, and salvage usable meat where possible. In addition, incisor bars were collected for aging purposes, and parasites and tissue samples were collected for various cooperative research projects including genetic analyses. Heads were tested by Alberta Agriculture and Food in Edmonton.

Hides were provided to the Alberta Fish and Game Association and the Oyen Rod and Gun club for fund-raising programs. Antlers and a dozen carcasses were provided to the provincial hunter education programs for teaching purposes. Salvaged meat from CWD-negative deer is distributed through normal Fish and Wildlife channels.

¹ <http://wildlife1.usask.ca/ccwhc2003/publications/>

In total, 1850 deer (769 mule deer, 1081 white-tailed deer) were collected between March 5 and March 27, 2007. Collection activities in the herd reduction areas yielded 449 deer from the south (168 MD and 280 WTD) and 1401 deer from the north (600 MD and 801 WTD). With the exception of one vehicle incident, all safety, herd reduction, and surveillance goals were achieved successfully.

In total, twelve CWD-positive deer were collected: three in the south (0.7% infected) and nine in the north (0.6% infected) (Figure 2). A rough calculation of estimated prevalence of CWD in deer in the combined herd reduction areas is 1.1%. By species, estimated prevalence in mule deer was 1.2% in the south, 1.3% in the north; in white-tailed deer it was 0.4% in the south and 0.1% in the north.

Throughout the field program there was ongoing dialogue with the two CWD public advisory committees and an open public meeting in Edgerton prior to disease control activities in the north. Information was provided regarding CWD, its management and control options, an overview of the response programs, data on local deer populations, and to gain input for future deer harvest options. Primary stakeholders also were informed of the intended herd reduction program. In all venues, the audience was encouraged to ask questions and provide comments and suggestions. Input regarding possible hunting season changes also was encouraged.

Additional communications products included a CWD informational display, a colour brochure, paid advertisements in local newspapers and regular landowner/resident mailouts with updated results.

Total direct costs of the winter CWD program in 2007 were in the range of \$1.08M. Primary costs were associated with staff expenses and overtime, and field equipment, supplies, and services. Additional direct diagnostic costs were provided in-kind by Alberta Agriculture and Food.

Future outlook:

1) The Edgerton/Chauvin area remains an area of significant concern. The March 2007 results indicate a serious incursion of CWD in the Edgerton area and a high risk of further spread. The finding of CWD in mule deer and white-tail deer reinforces the extent of the problem and that both species are at risk. The disease is established in the relatively high density deer population along Ribstone Creek both west and east of Edgerton. The herd reduction in March likely had significant effects on specific local mule deer populations but not the white-tails. Further, the infected whitetail in this area was the furthest west of the new cases and was not within the area where most of the other whitetails were collected. Prudent management of CWD would suggest immediate response in the vicinity of the cluster of cases at Edgerton is warranted. Aggressive hunting harvest should be encouraged throughout the WMU, in conjunction with ongoing aggressive targeted herd reduction.

2) Red Deer River: the two new cases came from Kennedy coulee - a mule deer near the previous hunter-killed infected deer and a whitetail in the river valley east of Hwy 14. It is likely that CWD may be quite diffuse along both of these water courses. Hunter harvest should be focused in the coulee as well as the river valley from the coulee to Empress. Additional culls should be delivered as soon as possible, in the context of landowner support.

3) South Saskatchewan River: the one new case (a mule deer), occurred where significant herd reduction has been applied. There are very few deer remaining in the immediate vicinity of this cluster of CWD cases. Hunter harvest may be an appropriate tool to continue ongoing herd reduction and surveillance, with targeted response to any new cases considered.

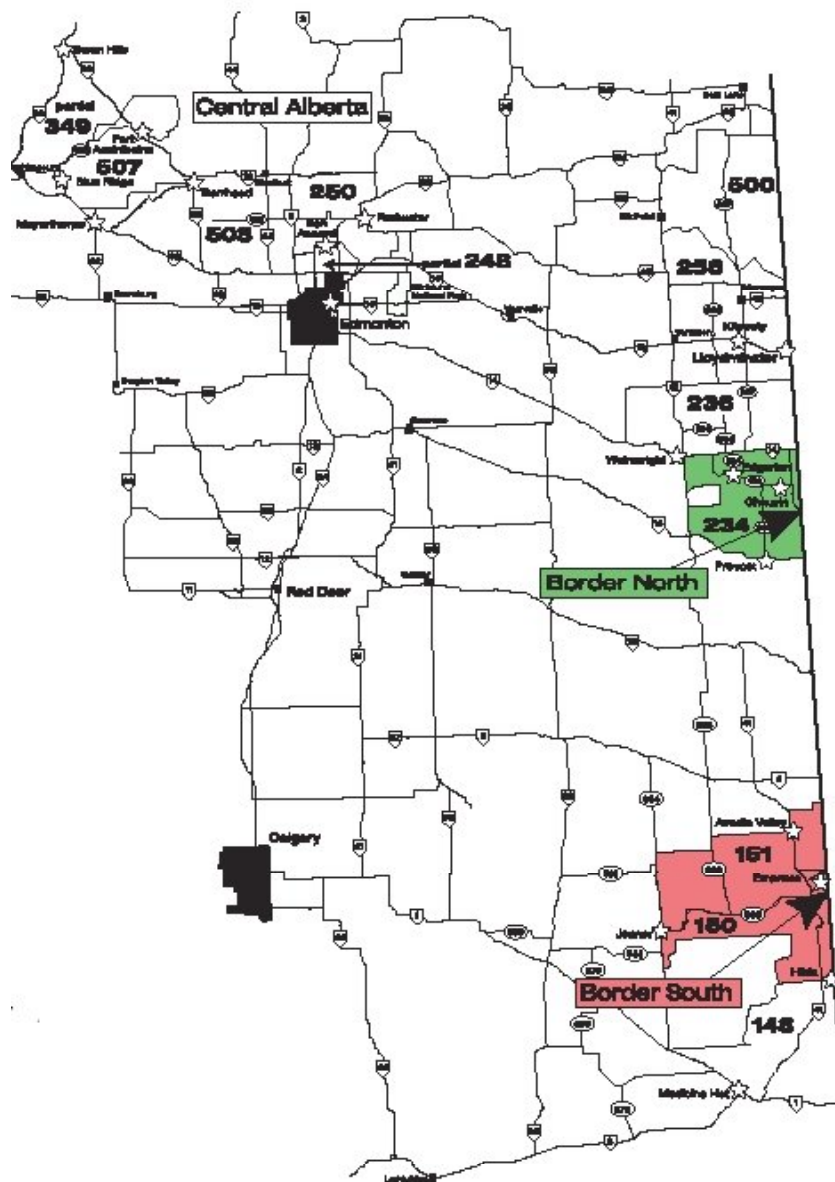


Figure 1. Location of Alberta's CWD response programs in March 2007.

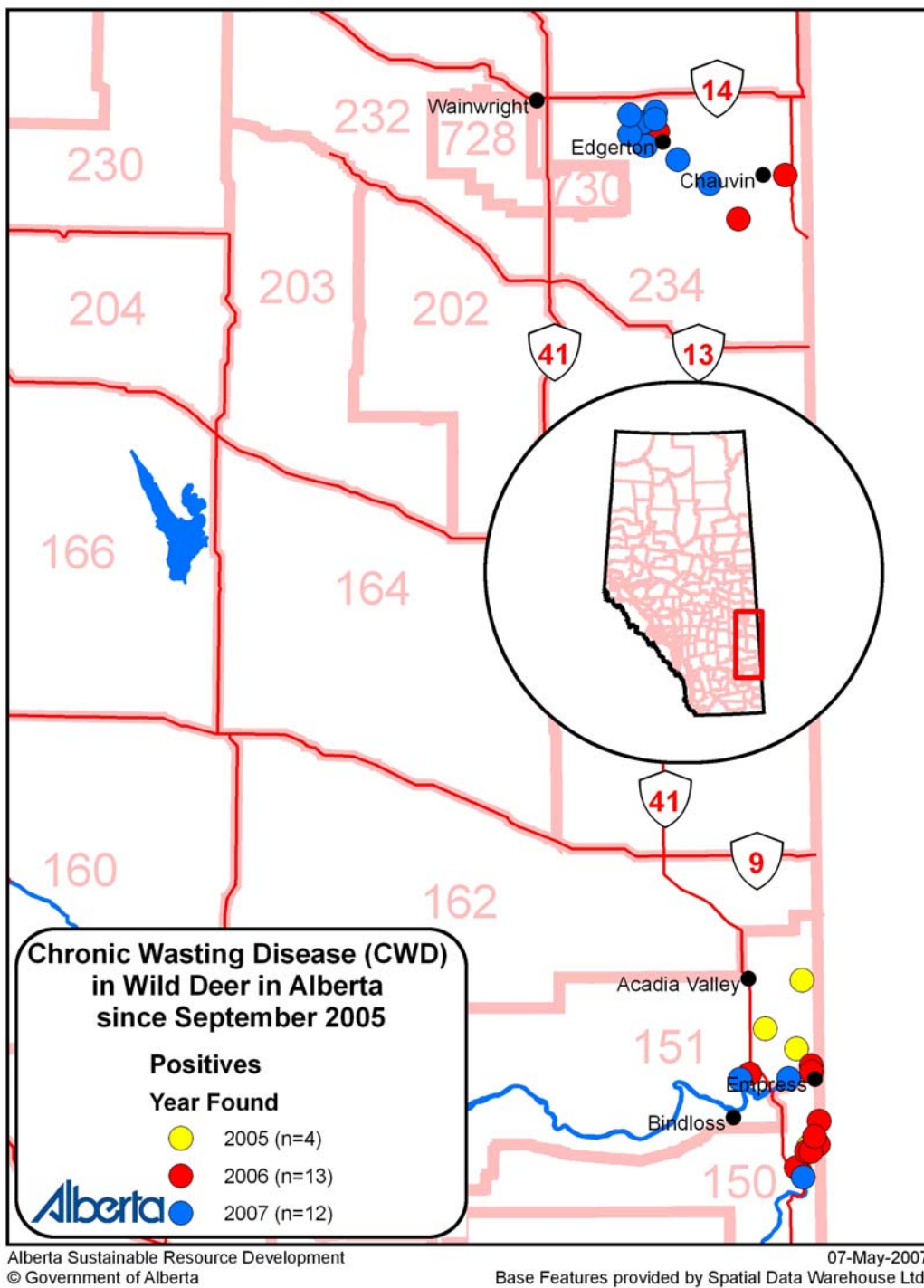


Figure 2. Location of CWD-positive deer in Alberta from September 2005 to April 2007.