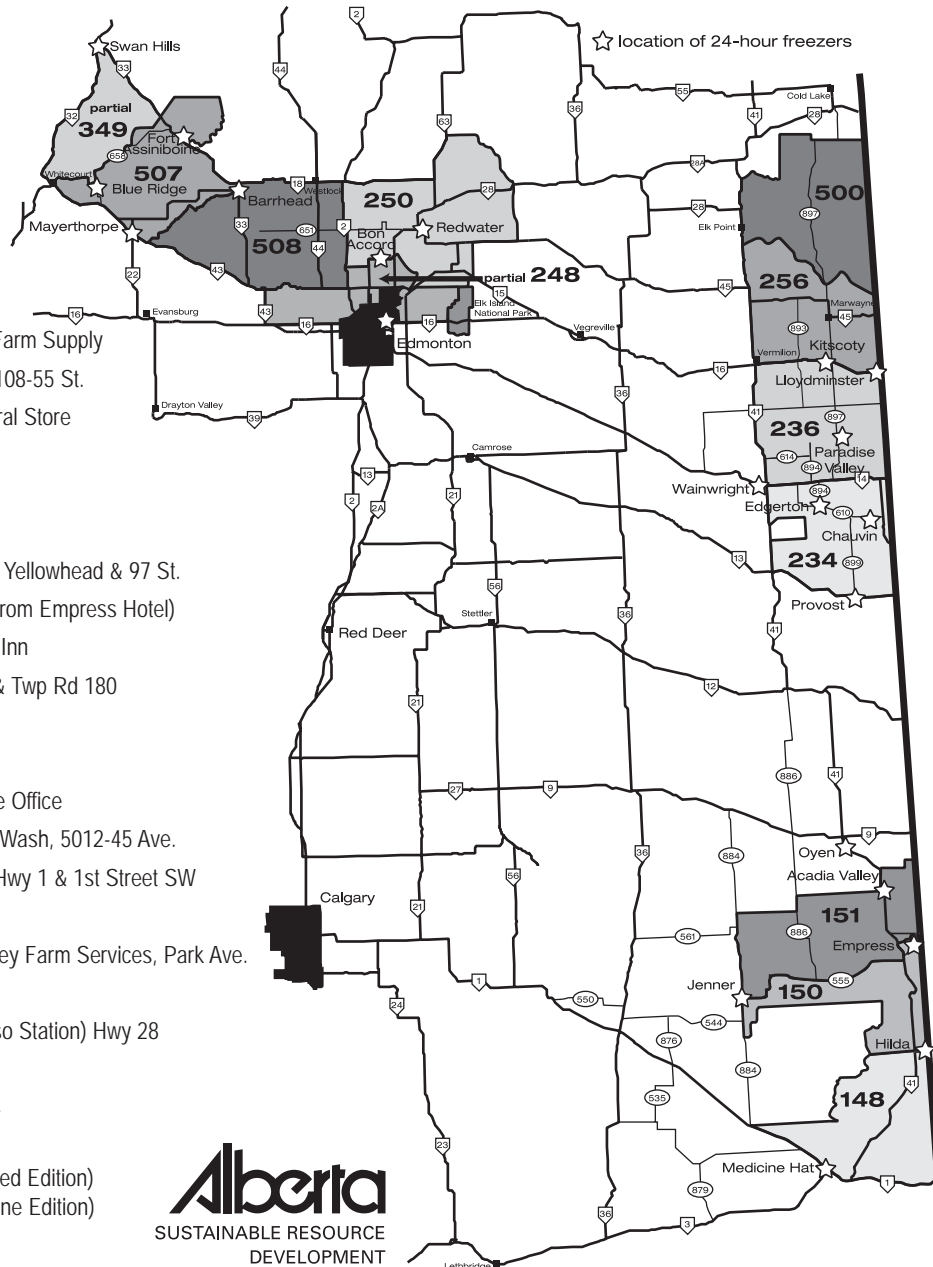


Hunters are asked to drop mature deer or elk heads off at any Fish and Wildlife office or any of the 24-hour freezers identified below and shown on the map. Please include, with the head sample, information of species, location of kill (WMU), sex of kill, approximate age (yearling or adult; no fawns or calves please), date of kill, and hunter's WIN number.



- Acadia Valley—Acadia Valley Farm Supply
- Barrhead—Barrhead Foods, 5108-55 St.
- Blue Ridge—Blue Ridge General Store
- Bon Accord—Winks, Hwy 28
- Chauvin—Goodall Motors
- Edgerton—Home Hardware
- Edmonton—Wholesale Sports, Yellowhead & 97 St.
- Empress—Echo Club (across from Empress Hotel)
- Ft. Assiniboine—Linda's Motor Inn
- Hilda—Volker Stevin, Hwy 41 & Twp Rd 180
- Jenner—Esso Station
- Kitscoty—Kitscoty Meats
- Lloydminster—Fish and Wildlife Office
- Mayerthorpe—Mohawk Gas & Wash, 5012-45 Ave.
- Medicine Hat—Turbo Station, Hwy 1 & 1st Street SW
- Oyen -Oyen Coop, Hwy 9 & 41
- Paradise Valley - Paradise Valley Farm Services, Park Ave.
- Provost—Esso Station
- Redwater—Restaurant 28 (Esso Station) Hwy 28
- Swan Hills—Nams Gasland
- Wainwright—Petrocan, Hwy 14

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# Chronic Wasting Disease

## *Surveillance for 2005*



**Disease Overview**

Chronic Wasting Disease (CWD) typically affects deer and elk. The disease is associated with protein changes in the brain and is also known as cervid spongiform encephalopathy. CWD can cause mortality in a variety of cervids (members of the deer family) and is established in wild mule deer, elk and/or white-tailed deer in southern and western Saskatchewan, in Colorado/Wyoming/Nebraska and in Wisconsin/Illinois. As well there are isolated reports in a few other states. Infections have also been reported in farmed cervids in the U.S. (various states), Canada (Saskatchewan, Alberta) and Korea. In September 2005, the first case of CWD in a wild deer in Alberta was confirmed.

**Background**

Although identified in the 1970s and 1980s, CWD probably occurred in a localized area of Colorado/Wyoming/Nebraska for quite some time. It may be the result of local mutation of a similar agent that causes scrapie in domestic sheep. However, CWD is known to occur only in cervids. Damage to the brain results in changes to behaviour, attitude and metabolism, and eventually leads to death of infected animals. Infected deer and elk cannot maintain weight and they slowly waste away. Other clinical signs are excessive salivation, lethargy, incoordination, and drooping head and ears.

**Life Cycle**

To date, it is not known exactly how CWD is transmitted. The disease can pass from one individual to another and occasionally from females to their offspring. Infectious material survives in the environment for an unknown period of time.

**Distribution and Surveillance in Alberta**

In response to a report of CWD in a wild mule deer in Saskatchewan, the Fish and Wildlife Division collected 241 wild deer along the Alberta-Saskatchewan border in April 2001. All deer collected were negative for CWD.

In late March 2002, CWD was identified in a farmed elk in Alberta. The infection was detected during the provincial surveillance program that has been ongoing since 1996. Federal CWD eradication programs were implemented immediately. All farmed cervids that moved on or off the premises in the previous three years as well as the current animals on the farm were killed and tested. No further CWD was found.

In early November 2002, CWD was identified in two farmed white-tailed deer on one farm in Alberta. As with the farmed elk, federal

control and eradication programs were implemented immediately. No further cases of CWD were found. In response to finding CWD on two game farms in central Alberta, the Fish and Wildlife Division sampled 300 wild deer in the vicinity of the farms in late February/early March 2003. All deer and elk collected were negative for CWD.

In mid-March 2005, Fish and Wildlife staff removed a total of 485 deer from a small high-risk area east of Chauvin near the Alberta-Saskatchewan border. Fish and Wildlife staff presented information and an outline of their plan at public information meetings before the cull and after. Meeting participants were encouraged to provide input and advice. Good cooperation was received from the public, particularly local landowners. All deer collected were negative for CWD.

In September 2005 CWD was confirmed in a wild deer in a farmyard approximately 30 km south and east of Oyen. In mid-September, 133 deer were collected by Fish and Wildlife staff in the immediate vicinity of the infected deer. Two additional cases of CWD were found in these deer.

The ongoing CWD surveillance program in Alberta relies heavily on heads of mature hunter-killed deer and elk in targeted areas of concern in three areas: Central (WMUs 248 (in part), 250, 349 (in part), 507, and 508), Border North (WMUs 234, 236, 256, and 500), and Border South (WMUs 148, 150 and 151)). Submission of heads is voluntary but hunters successful in these areas are encouraged to submit heads for the survey.

As in previous years, the heads can be dropped off at any Fish and Wildlife District Office during regular business hours, or at any 24-hr freezer location. Freezer locations are available from each Fish and Wildlife office or [www3.gov.ab.ca/srd/fw/diseases](http://www3.gov.ab.ca/srd/fw/diseases). For the 2005 hunting season, hunters submitting heads for testing will be notified of the test results and will have their name submitted in a draw for a number of valuable hunting-related items.

**CWD Response Actions and Plans**

Regular hunting seasons will be used to help reduce overall deer population numbers in each of the Central, Border North and Border South areas. Harvest goals and hunting opportunities have been increased. The number of licences and tags (multiple tags for most units) for mule and white-tailed deer have been increased in most WMUs along the Alberta-Saskatchewan border.

Quota hunt opportunities are also being provided in the Border North and South areas. These additional hunting opportunities will assist in reducing the number of deer as well as the potential spread of CWD.

The Quota Hunts will be specific to the land descriptions provided, and will require the hunter to obtain permission of one landowner prior to obtaining a licence. Heads of all deer killed under a quota licence MUST be submitted for CWD testing. Information on Quota Hunts is available at any Fish and Wildlife office.

**Public Significance**

This disease poses significant economic problems for farmers of elk and deer. CWD was introduced into captive (=farmed) elk populations via live wild elk taken from affected areas in the U.S. It was then unintentionally translocated to farms in various states as well as to Alberta, Saskatchewan and Korea. As a result, the economics of trade in live elk and their products (primarily antler velvet) have been seriously affected. Also, the association with BSE has led to possible public health concerns.

To date there is no scientific evidence to suggest that CWD can infect humans and growing evidence that it is indeed quite different from BSE. The U.S. Centres for Disease Control advise that the human health risks from CWD, if any exist, are extremely low. However, as a precaution, the World Health Organization (WHO) recommends that all products from animals known to be infected with any prion disease should be excluded from the human food chain.

**Importance for Wildlife Management**

The natural extent and impact of CWD in wild cervids appears to be extremely limited. In most cases, the source of disease in wild populations is unknown. Mortality of deer and elk does not seem to affect overall productivity in infected populations in the short term, although all theoretical models applied to data collected in Colorado suggest that mule deer populations at the heart of the affected area decline in 40-100 years and eventually die out.

The finding of CWD in wild and farmed white-tailed deer in Wisconsin, Illinois, New York and most recently West Virginia is causing significant concern for wildlife managers in the east. The high number of deer and elk farms and high density of wild deer (in the range of 75-100 white-tails/mi<sup>2</sup>) provide added risk of transmission. These states are taking aggressive action to limit further spread of CWD.

The primary concern about CWD is related to the potential for misrepresenting it as being equivalent to bovine spongiform encephalopathy (BSE), the infamous "mad cow disease," the prion disease of bovids (cattle). BSE has been associated with a similar infection in humans and poses worldwide concern for public health and agricultural economics. However, CWD and BSE are not the same.

Based largely on the perceived human health concerns, wildlife managers throughout western Canada and the U.S. expend considerable time, effort, and monies on surveillance and response programs aimed at defining exactly where CWD occurs or does not occur in the wild, and limiting its spread.

Most wildlife agencies across Canada and the United States conduct surveillance efforts to look for CWD in wild deer and elk. The disease has been found in Colorado, Wyoming, Nebraska, Wisconsin, Illinois, South Dakota, New Mexico, Utah, New York, West Virginia, Saskatchewan and now Alberta.

Alberta began surveillance of wild deer and elk in 1996. Voluntary submission of heads of hunter-killed animals is the primary source of surveillance samples. Particular emphasis is placed on getting heads of deer killed along the Alberta-Saskatchewan border and a specified area in central Alberta. Prior to the case found near Oyen, Alberta, over 6,000 samples of wild deer and elk in Alberta were negative for CWD. See the CWD Surveillance Program in Alberta at [www3.gov.ab.ca/srd/fw/diseases](http://www3.gov.ab.ca/srd/fw/diseases) for more information.

There are numerous research projects underway to better define the host range, method of transmission, diagnostic tests, impact on wild cervids, and risk to the public and livestock.

**Prevention/Control**

CWD is a federal reportable disease in Canada and appropriate surveillance and control programs for farmed cervids are underway. The procedures parallel those used to control and eradicate other federal reportable diseases and include

- ongoing surveillance (testing of slaughtered animals, report of clinical signs),
- quarantine of suspect and confirmed affected premises,
- detailed traceouts from all known affected premises,
- destruction of infected herds, and
- compensation of owners of infected elk or deer.

Affected premises are thoroughly cleaned and disinfected before they can be restocked. Similar programs are underway in the U.S.

In addition, Alberta has stringent programs developed among government agencies, game farmers, and other stakeholders to continually search for evidence of CWD in farmed and wild cervids as well as limit the possibility of introducing infections in animals imported into the province.