Government of Alberta
Agriculture and Rural Development

ALBERTA

MANDATORY

CHRONIC WASTING DISEASE

SURVEILLANCE PROGRAM

Alberta Mandatory CWD Surveillance Program

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1. **Background**

In 2002, Alberta Agriculture and Rural Development worked collaboratively with the Alberta Elk Association (AEA) and the Alberta Whitetail and Mule Deer Association (AWMDA) to progress from a voluntary to a mandatory chronic wasting disease (CWD) surveillance program. Until such a time that an accepted diagnostic test for CWD on live animals exists, freedom from CWD is determined by three methods: testing dead animals, the absence of clinical signs in a herd and a demonstrated lack of exposure to CWD over a designated period of time.

The purpose of the Alberta Mandatory CWD Surveillance Program has changed over the years. When it was initiated in 2002, the main purpose was to provide evidence of disease freedom for the entire province in order to gain access to international markets for cervids and cervid products. Over time the purpose has shifted; it is now used by individual producers and marketers to provide customers and importing jurisdictions confidence that the herds of origin are free from CWD and by government to monitor cervid herds for the presence of CWD in the province. An industry and government team reviewed the program and modifications were made in 2011 to update it. While the basics of the program remain the same, the current program reflects updates agreed upon by members of the Review Team.

All cervid producers in Alberta are required to submit the appropriate tissue samples or entire heads of **all farmed cervids one year of age and older** that die (for any reason) on a farm, are culled for humane reasons or are slaughtered. Samples are tested for CWD using the Bio-Rad TeSeE ELISA test by the Agriculture and Rural Development (ARD) Transmissible Spongiform Encephalopathy Laboratory, or another laboratory approved by the Canadian Food Inspection Agency (CFIA) for the purposes of CWD testing. Only animals from cervid farms located in Alberta will be included in the Alberta Mandatory CWD Surveillance Program.

CWD is a reportable disease under both the provincial *Animal Health Act* (Alberta) and the federal *Health of Animals Act* (Canada). Information resulting from this program or information collected under the *Livestock Industry Diversification Act* (LIDA) will be shared between Alberta and the CFIA when required for disease control and animal health surveillance purposes. Federal and provincial disease control policies will apply after a confirmed positive diagnosis of CWD in a farmed cervid is made by the CFIA.

Under LIDA, cervid farms may not accept cervids from a zoo or the wild due to the potential for the introduction of disease.

2. Objectives

The objectives of the program can be divided into two main categories:

a. Disease detection:
    i. Monitor farmed cervids in Alberta for CWD (detect cases if they occur).
b. Market access:
    i. Support cervid producers enrolled in the National CWD Voluntary Herd Certification Program.
    ii. Provide a level of assurance of CWD freedom for individual cervid farms.
    iii. Provide an indication of risk of CWD in farmed cervids in Alberta for industry as a whole.

These objectives will be accomplished through:

- Testing all farmed cervids one year of age and older that die (for any reason) on a farm, are culled for humane reasons or are slaughtered.
- Reporting cumulative CWD test results to provide assurance that Alberta farmed cervid herds have extremely low risk for CWD.
- Providing CWD testing and reporting to Alberta cervid farmers and Regulatory Services Division to support export of live cervids and cervid products.

3. Legal Basis

The *Livestock Industry Diversification Act* (LIDA) authorizes the Director of Regulatory Services Division (RSD) to require cervid producers to provide the appropriate samples from farmed cervids for CWD testing.

CWD is a reportable disease federally to the CFIA under the *Health of Animals Act* and provincially to the Chief Provincial Veterinarian under the Alberta *Animal Health Act*. The operator or owner responsible for the herd or herd veterinarian must report to the CFIA and the Office of Chief Provincial Veterinarian within twenty four hours if he/she recognizes clinical signs that could suggest the presence of CWD in a farmed cervid. Clinical signs of CWD are outlined in Appendix Two.

The response to the diagnosis of a case of CWD in a farmed cervid will follow the existing federal and provincial CWD response policies at the time.

4. Compliance

The intent of this program is that samples from all dead animals be submitted as detailed in Appendix Three and Appendix Four. However, ARD recognizes that extenuating circumstances may result in some heads not being suitable for examination. In spite of this, all heads (or appropriate tissue samples) as outlined

in Appendix Three are required to be submitted for testing and be accompanied by the appropriate animal identification. In situations where a producer is unable to submit a cervid head for CWD testing, a written submission outlining the reasons for this may be required by RSD. To ensure program compliance, RSD will follow ARD's Compliance Principles available at:
http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/ofa12643

RSD will review cervid producer files annually to check compliance with the Mandatory CWD Surveillance Program.

A letter of compliance will be provided by RSD at the request of the producer at no cost. This letter will confirm the provincial and herd CWD testing history to another province, state or trading partner.

In order to make this program successful, cervid producers must comply with all LIDA requirements. Specific requirements under LIDA that are integral to this program are detailed in Appendix One.

5. Inspections and Audits

A RSD inspector will conduct physical farm inspections on all cervid farms once in a five year period as per current RSD farmed cervid policy for LIDA compliance. RSD also has the ability to spot audit cervid farms to verify inventory, if necessary. The cervid producer will receive appropriate notice of the inspection from the RSD inspector.

Herd inventories taken during CFIA herd TB testing will be considered a herd audit if the worksheets are provided to RSD.

Where a cervid producer chooses, for trade reasons, to do an annual audit of their herd inventory, it must be conducted by an authorized individual at the cervid producer's expense and the results reported to RSD. Authorized individuals are: CFIA accredited veterinarians, animal health technologists supervised by an accredited veterinarian, and RSD inspectors.

6. Submission of Samples

Under this mandatory program, cervid farmers are responsible for ensuring that the entire head, or appropriate tissue samples collected as described in Appendix Three, are submitted for each animal that is over one year of age and:

a) dies (for any reason) on the farm; or
b) is culled or euthanized; or
c) is slaughtered in Alberta.

All samples must be appropriately identified. The unique ARD cervid tag must be left in the ears of all heads that are submitted for CWD testing and/or the appropriate documentation identifying the animal ID must accompany all tissue samples that are submitted (Appendix Three).

All samples must be accompanied with a completed CWD submission form.

Cervid farmers must make every effort to submit samples in a condition that is suitable for testing by the laboratory; however, samples must be submitted no matter how long the animal has been dead. Producers are encouraged to submit heads in a timely manner (see Appendix Three).

Animals that are being euthanized or slaughtered should be killed in a manner that does not render the obex of the brain unsuitable for testing (see Appendix Six).

Appropriate samples may be submitted for CWD testing to a CFIA accredited lab other than an ARD lab if it has been approved by the Office of the Chief Provincial Veterinarian. Lab reports with the final results must be forwarded to RSD.

7. Carcass Disposal:

Carcasses and offal of deer and elk must be disposed of in accordance with the Destruction and Disposal of Dead Animals Regulation AR 229/2000 pursuant to the *Animal Health Act*.

8. National CWD Voluntary Herd Certification Program

While the Alberta Mandatory CWD Surveillance Program is different from the National CWD Voluntary Herd Certification Program, the two programs both contribute to the confidence of CWD freedom in a cervid herd.

Cervid producers who wish to have individual herd certification must enroll and meet the standards required by the National CWD Voluntary Herd Certification Program. Currently the National CWD Voluntary Herd Certification Program is administered in Alberta by RSD.

9. Program Review

A Provincial CWD Program Review Committee will be established for the purpose of reviewing the Alberta Mandatory CWD Surveillance program annually and make suggestions for improvement. The membership of the committee is described in Appendix Five.

Alberta Mandatory CWD Surveillance Program

Approved As Policy	Date

John Knapp, Deputy Minister
Alberta Agriculture and Rural Development

Amendments to the Program	Date
Program Review and Update	March 2011

APPENDIX ONE

Producer Responsibilities

Cervid producer responsibilities under LIDA that are integral to the Mandatory CWD Surveillance Program include:

a) License renewal;
b) Submission of all reports (birth, deaths, movement, other transactions);
c) Submission of an accurate annual herd inventory;
d) Ensuring that the entire head, or appropriate tissue samples collected as described in Appendix Four are submitted for CWD testing;
e) Appropriate animal containment;
f) Submission of the original individual animal certificate to RSD upon the animal's death.

Other producer responsibilities include:

a) Contacting the district veterinarian at the nearest CFIA office and calling the Office of the Chief Provincial Veterinarian within 24 hours if the owner (or person in possession, care or control of the cervid) suspects that it has CWD.
b) Filling out the submission forms to be submitted with the heads or samples.

APPENDIX TWO

Clinical Signs of CWD

The operator or owner responsible for the herd must report to the CFIA and the Office of Chief Provincial Veterinarian within twenty four hours if he/she recognizes the following signs that could suggest the presence of CWD in a deer or elk when the animal is more than twelve months of age:

- Abnormal aggression, panic or difficulty in judging space and distance:
  - In some cases the animal is injured or even killed by running into fences and equipment when being handled;
  - The animal may be found in a fence corner unable to get out, and eventually ends up back in another corner even when moved;

- The animal appears to be depressed and unaware of its surroundings:
  - The depression might be shown by the failure of the elk or deer to notice humans entering a facility;
  - Ears will frequently drop from the normal alert position;
  - The animal may be separated from the remainder of the herd and may drop in status within the herd so that it may be the last to feed;

- Elk and deer with chronic wasting disease may have trouble swallowing:
  - They may drool a great deal and the throat and chest may be wet from saliva or water;
  - Food material may get into their lungs causing pneumonia that, if treated with antibiotics, gets better for a short time, but the animal eventually dies despite treatment;

- Gradual loss of weight and condition;
  - This slow loss of weight gave the disease the name ‘chronic wasting disease’, but the weight loss may not always be obvious until a postmortem examination is completed;
  - On postmortem examination there is complete loss of body fat;
  - The animal may keep its winter coat long after it should, with the coat appearing dull, lighter coloured and standing straight up.

Producers should also be aware that other diseases or conditions may cause similar signs and the only way to confirm CWD as the cause is through the post mortem testing of the brain and other relevant tissues.

APPENDIX THREE

Sample collection and storage

LIDA requires that the unique ARD cervid tag be left in the ear(s) of all animals found dead, being euthanized or slaughtered.

All heads, or the appropriate samples of brain and other tissue, must be submitted, no matter how long the animal has been dead.

Head Removal

- Protective clothing and eyewear, dust mask, rubber boots and plastic or rubber gloves should be worn when removing the head. When done, disinfect as described below.
- Remove the head by disarticulating the atlanto-occipital joint (joint that attaches the head to the neck) or leaving the top four inches of the neck ensuring that **the brain obex is intact**, and **leave all ear tags attached.**
- Antlers should be removed at the pedicle for male animals.

Sample Collection:

- If appropriate tissue samples are submitted instead of the entire head, samples may be collected, packaged and submitted to the ARD Lab by:
- a licensed veterinarian.
- a registered Animal Health Technologist who has obtained satisfactory training and who is working under the supervision of a licensed veterinarian.
- a qualified third party (not related to or has a business interest with the cervid producer) who has obtained satisfactory training and is approved by the Chief Provincial Veterinarian.
- If tissue samples are to be submitted instead of the entire head, the numbers of all eartags must be on the submission form, and the submission form must be signed indicating that the person collecting the sample has personally read the ear tags. Tags that must be recorded are the Health of Animals (CFIA) tag, ARD Cervid tag #, and producer tag #.
- Storage, packaging and shipping are described in Appendix Four.

Skull Plate Removal

- Producers may remove the antlers and skull plate (top part of the skull) before head submission, as long as care is taken to avoid damaging the brain to the extent that it is untestable and the ears with appropriate identification intact are left attached to the head.

Alternative Head Identification

- Producers may elect to submit cervid heads with the skin and ears removed as long as the:
  - Official ARD eartags and all other eartags have been attached to the intact bottom jaw of the skull using a LIDA antler tag (tamper-proof zip tie with a unique identification number) by a veterinarian, AHT, or qualified third party (as above), and;
  - The tags were attached to the jaw by a qualified third party who was approved by the Chief Provincial Veterinarian and that person signs the submission form confirming that they witnessed the tags in the cervids ears and affixed them to the intact jaw of the skull with the LIDA antler tag number indicated on the form.

Heads submitted to the lab will not be returned to the owner under any circumstance. Owners that wish to save the antlers or the head of dead cervids must either remove the antlers before submitting the head or have an appropriate individual collect and submit appropriate samples.

Disinfection:

- Instruments and protective clothing can be disinfected by soaking in a two percent concentration of available chlorine, for a one hour period; rinse in clear water and dry to prevent further corrosion;
- Most commercial bleaches have a concentration of six percent available chlorine. A two percent solution may be obtained by diluting one part of 6% commercial bleach with two parts water. The concentration of the commercial bleach can be determined by reading the label.

Tissues to be collected and submitted to the ARD laboratory:

- Elk: fresh (unpreserved) brainstem and retropharyngeal lymph nodes.
- White-tailed and Mule Deer: fresh (unpreserved) retropharyngeal lymph nodes, tonsils, and brainstem.
- Reindeer: fresh (unpreserved) brainstem and retropharyngeal lymph.

Storage of Samples:

- Brain tissue deteriorates very quickly. Fresh submissions of heads must be immediately refrigerated and reach the laboratory within 24 hours of death for examination for CWD;
- If delivery will be delayed more than 24 hours, the head must be frozen prior to shipping;
- The target submission date should be within 60 days of the cervids death or by January 31 for samples from the previous year (whichever occurs first).

APPENDIX FOUR

Submission of the samples to the laboratory

To allow proper planning by the ARD laboratories, ARD requires 24 hour advance notice if producers are submitting more than 10 heads at any one time. In the case of large slaughter numbers (> 20 heads), a letter of understanding between the producer/person organizing the slaughter and ARD is required and must be signed at least two weeks before the slaughter date.

The addresses of the four ARD laboratories:

Edmonton
Post Mortem Room
OS Longman Building
6909 116th St.
Edmonton AB T6H 4P2
ph 780/422-1923
fax 780/422-3438

Lethbridge
3115 - 5th Ave. N.
Lethbridge AB T1J 4C7
ph 403/381-5190
fax 403/381-5766

Airdrie
97 East Lake Ramp NE
Airdrie AB T4A 0C3
ph 403/948-8575
fax 403/948-2063

Fairview
9309 113 St.
Fairview AB T0H 1L0
ph 780/835-2238
fax 780/835-2185

All paperwork must be sealed in a separate plastic bag (ziplock) to prevent damage in the event of leakage. The producer will send the main portion of the original Animal Inventory Certificate to the RSD.

Packaging:

- The head must be double or triple bagged in heavy duty bags and tied tightly to prevent leakage. Use an absorbent material such as newspaper between the first and second layer to absorb any seepage from the first bag;
  If the head is to be shipped by courier or bus, it should be shipped directly to the Edmonton laboratory. The head must be frozen and double bagged as described above with absorbent material placed between the bags, as well as, in the container to absorb leakage. The bagged head can then be placed in a sturdy solid-sided, leak proof container such as a plastic cooler. Ice (cooler) packs should be included to keep the head frozen during warmer weather. The container is to be sealed with waterproof tape to prevent leakage or breaking open during transit. Containers will not be returned.

Shipping:

- Ensure the container is properly addressed and the completed history/submission forms is enclosed in a separate waterproof plastic bag and taped to the bagged samples in the container;
- Completely fill out the laboratory submission form available at the laboratory or online: http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/cpv9448, including your full name, address, game farm license number and species;

- All ear tags and other identification are to be recorded on the submission form with the animal history; submissions from abattoirs must include the abattoir name, as well as the name, phone number and fax number of the inspector with the responsibility to release the carcass/meat products;
- The head can be delivered in person to the nearest ARD Laboratory at Fairview, Edmonton, Airdrie or Lethbridge;

Do not ship the samples if they will arrive at the laboratory on a weekend or statutory holiday. Freeze the sample and hold in the freezer until it can be shipped to arrive when the laboratory is open.
Laboratory hours for accepting CWD samples are 8:30 – 11:30 am and 1:00 – 4:00 pm. Fairview is closed on Fridays.

Reporting
The ARD will provide CWD lab reports to the following:

For cervids slaughtered at federal abattoirs: • The cervid producer • CFIA inspector at abattoir • RSD – licensing	For cervids slaughtered at provincial abattoirs: • The cervid producer • RSD inspector at abattoir • RSD – licensing • Herd veterinarian (if identified)
For on-farm deaths: • The cervid producer • RSD – licensing • Herd veterinarian (if identified)	For on-farm slaughter and other deaths: • The cervid producer • RSD – licensing • Herd veterinarian (if identified)

Initial reactions will be reported to the Chief Provincial Veterinarian and the CFIA. Tissue samples from initial reactions will be submitted to CFIA reference laboratory for CWD confirmatory tests.

ARD retains an electronic record in its laboratory database.

Reports will be faxed out within 7-10 business days of submission of the heads or samples.

Case Definitions for Laboratory Samples

Negative: not incubating - The target tissue was tested using the BioRad ELISA method and disease specific $Prep^{CWD}$ was not found. Based on the above results, the animal was unlikely to be incubating CWD when it died.
Target tissues: elk=obex, deer=retropharyngeal lymph node, reindeer=obex

Non-target Tissue Tested Negative: target tissue not identified - non-target tissue was tested using the BioRad ELISA method and PrP^{CWD} was not found. Based on the tissue available for testing, this animal was unlikely to have died from CWD.
Target tissues: elk=obex, deer=retropharyngeal lymph node, reindeer=obex

Unsuitable: tissue sample submitted was unsuitable for testing or unidentifiable. An explanation for the reason that the sample is unsuitable will be provided in the lab report.

Initial Reaction – tissue sample tested at Alberta Agriculture and Rural Development laboratory using the BioRad ELISA method and disease specific PrP^{CWD} showed a reaction. The tissue sample will be submitted to CFIA reference laboratory for CWD confirmatory tests.

Positive - tissue sample confirmed positive for CWD by CFIA reference laboratory with confirmatory tests.

APPENDIX FIVE

Provincial CWD Program Review Committee

The purpose of this committee will be to review the Alberta Mandatory CWD Surveillance program annually and make suggestions for improvement.

The Office of the Chief Provincial Veterinarian will chair this Review Committee and committee membership will consist of:

- 2 representatives of the Alberta White-tailed and Mule Deer Association,
- 2 representatives of the Alberta Elk Commission,
- 1 representative from the Alberta Reindeer Association,
- 1 representative of the Regulatory Services Division of ARD,
- 1 representative of Alberta Sustainable Resource Development,
- Chief Provincial Veterinarian or designate,
- 1 representative from the Canadian Food Inspection Agency,
- 1 representative of the Alberta Veterinary Medical Association, and
- 1 representative from the TSE Unit of the Food Safety and Animal Health Division of ARD.

The Chief Provincial Veterinarian will consider requests from the industry associations and other stakeholders on methods of improving the program while maintaining its integrity and credibility between the annual reviews. The CPV will inform the Program Review Committee of these changes.

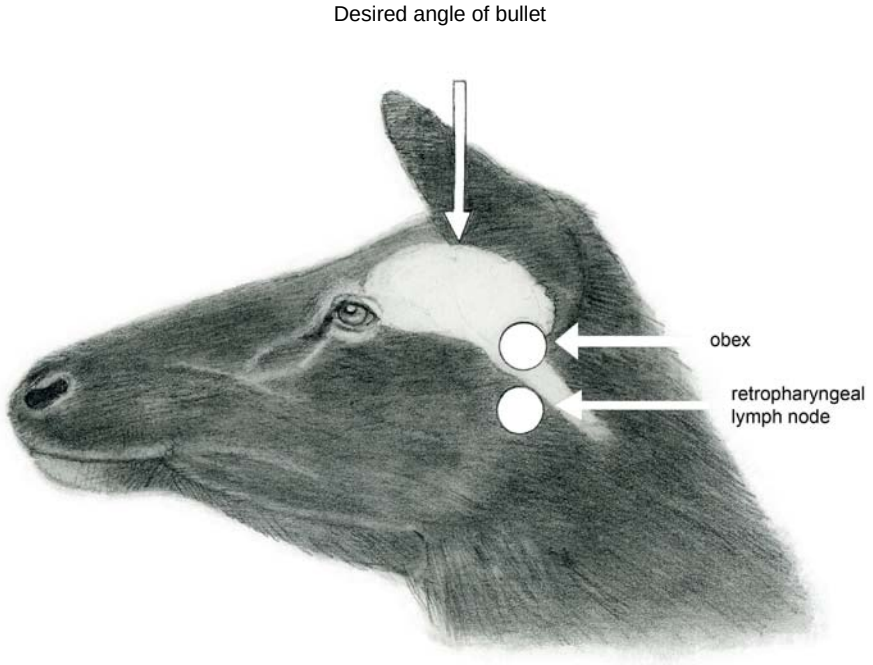
APPENDIX SIX

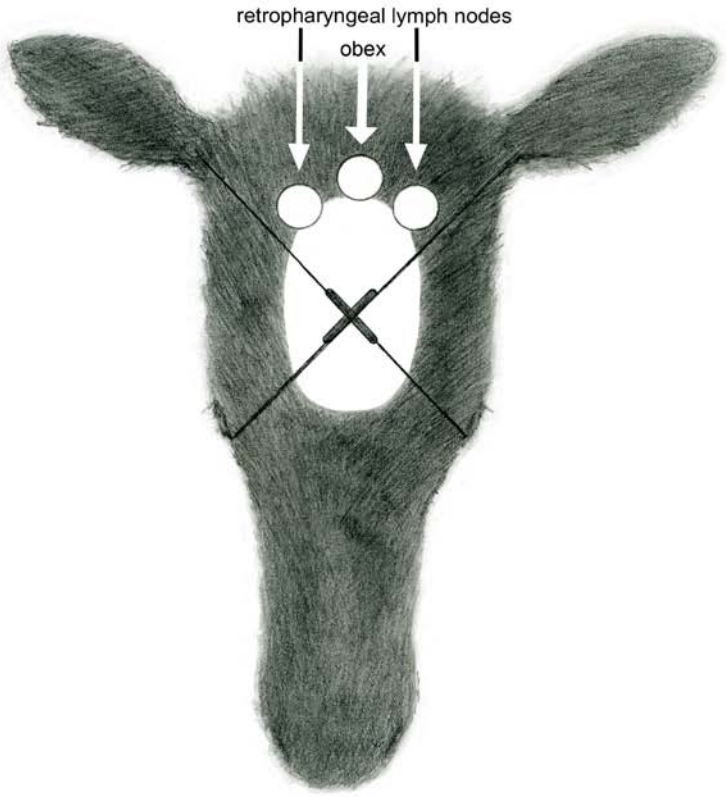
Slaughter Information

To avoid the potential of a meat recall should a positive CWD diagnosis be made, the meat from slaughter animals must be held and identified at the abattoir where the animal was slaughtered until the testing of the brain tissue from these animals is complete. In the case of on-farm slaughter, the meat should not be consumed until the CWD test results are available.

Recommended Slaughter Procedures to Keep Obex and Brain Intact

When conducting on farm slaughter/euthanasia USE THE APPROPRIATE CALIBER and type of bullet CONSIDERING SPECIES, ANGLE AND SHOT PLACEMENT, as to preserve the integrity of the Obex. For more information contact your veterinarian, or industry organization.




retropharyngeal lymph nodes
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