

Chronic Wasting Disease Prevention and Response Plan



Ontario Ministry of Natural Resources and Forestry

December 2019

EXECUTIVE SUMMARY

Chronic Wasting Disease (CWD) in cervids (members of the deer family) has emerged as one of the most compelling wildlife management challenges in North America. To address this challenge, a comprehensive and adaptive approach that outlines plans and coordinates actions among responding agencies is essential.

Organized around six key objectives, the CWD Prevention and Response Plan sets out the elements of Ontario's CWD preparation and response and outlines the actions intended to prevent or respond to CWD, toward achieving the long-term outcome of maintaining the health of wild cervids in Ontario. The plan describes the roles and responsibilities of agencies involved and the range of actions that they may take during different stages of a CWD response within Ontario.

Owing to the many uncertainties surrounding diseases such as CWD, as well as the wide range of circumstances and situations in which the disease may be first detected in Ontario, the plan supports an adaptive, flexible, timely and coordinated approach to CWD prevention and response. The anticipated outcomes of the measures described in this plan will contribute to this plan's long-term objective of protecting the socio-economic, ecological and cultural benefits that wild cervids provide to Ontario.

This plan will be periodically reviewed in light of new information, shifts in agency mandates and public, and stakeholder input.

Cette publication est disponible en français. Pour obtenir de l'aide en français, veuillez communiquer avec le Centre d'information des Richesses naturelles au 1-800-667-1940.

Cover photo: istockphoto

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
1.0 INTRODUCTION.....	2
Cervids	2
Chronic Wasting Disease (CWD).....	2
Economic Impact of CWD.....	4
Partner Agencies Responding to CWD.....	6
2.0 MNRF'S CWD PREVENTION AND RESPONSE PLAN	7
Goals and Objectives	7
1. Enhance CWD Knowledge	7
2 CWD Prevention and Surveillance.....	8
3. Rapid, Effective Response to CWD Detection	9
4. Ensure Effective Long-term Management of Wild Cervids Following Any Response	13
5. Coordinate and Collaborate Actions.....	13
6. Inform the Public, Stakeholders and Communities	15
Summary	17

1.0 INTRODUCTION

Cervids

Ontario is home to four wild cervid species (members of the deer family): white-tailed deer, moose, American elk and woodland caribou. Cervids are a highly valued species group of Ontario's wildlife heritage and provide many benefits including hunting and viewing, economic benefits from hunting and tourism and are valued as a wild food source. They are considered by many as symbols of wilderness and are an important component of Ontario's biodiversity.



Left to right: White-tailed deer (*Odocoileus virginianus*), moose (*Alces alces*), American Elk (*Cervus elaphus*), Woodland Caribou (*Rangifer tarandus caribou*)

Throughout this document the term "cervid" may be generally used to refer to all members of the cervid species, although, in practice, actions taken to prevent or respond to chronic wasting disease (CWD) in Ontario will largely be focussed on deer and elk, as they are the most likely to be involved in a CWD response involving native, wild cervids. Across North America moose are only rarely infected with CWD, and direct transmission of the disease between moose is not believed to be possible at this time.

Ontario's woodland caribou populations occupy northern boreal and forest-tundra habitats, and while susceptible to CWD, live largely in isolation from other species and populations of cervids, making them less likely to become infected.

In addition, several species of cervids not native to Ontario are susceptible to CWD, including mule deer, Sika deer, red deer and their hybrids. All these species may be kept in captivity on farms in Ontario, as zoos/exhibits, or for commercial production of meat, hides, pelts, antler or other products.

Chronic Wasting Disease (CWD)

Only identified within the last five decades, prions (the material responsible for CWD) are still poorly understood, leading to great challenges in detection, diagnosis and control. As of early 2019, CWD is always fatal to infected animals and there is no treatment.

What is Chronic Wasting Disease?

CWD belongs to a group of prion diseases called transmissible spongiform encephalopathies (TSEs). The infectious agent of prion diseases is not believed to be a bacterium, virus or parasite. Instead, CWD is documented as being caused by an abnormally-shaped protein called a "prion." The normal form of this protein is present in all healthy humans and animals. However, in prion disease, one or more prion molecules are converted to an abnormal, infectious form. This abnormally-shaped prion causes existing, healthy proteins to convert into diseased, misfolded proteins, eventually causing a neurological disease in which the infected brain becomes filled with holes until it resembles a sponge when examined under a microscope. Under certain conditions, prion diseases can be transmitted, either directly (e.g. animal-animal contact) or through the environment (e.g. prions in soil), and even tiny amounts of prion-contaminated material can initiate this process in

a healthy animal. In addition, infectious prions are believed to spontaneously occur in populations, particularly in older age class animals.

There are a variety of TSE diseases that affect both wild and domestic animals, including scrapie of domestic sheep and goats, bovine spongiform encephalopathy (BSE) of cattle, and transmissible mink encephalopathy of farmed mink. Several rare fatal diseases of humans are also TSEs; Creutzfeldt-Jakob disease (CJD) occurs worldwide and variant Creutzfeldt-Jakob disease is associated with the agent of BSE where it occurs in cattle.

Signs of CWD

Five cervid species are known to be naturally susceptible to CWD: White-tailed deer, elk, caribou/reindeer, moose and mule deer; while other species (Sika, red deer and red deer hybrids) have contracted CWD in captivity, and other cervid and non-cervid species are also likely susceptible. Susceptibility to CWD varies among species and age groups.

CWD typically affects adult cervids aged 18 months and older, with clinical signs being observed most frequently in 3- to 5-year old animals. Once infected, the incubation time before the disease presents clinical signs is about 18 months. From the onset of outward signs, death may occur in a range of mere days to more than one year.

CWD-affected cervids show a loss of body condition and changes in behavior. Affected animals may walk in repetitive patterns (e.g. circles); show lack of coordination and a wide-based stance; subtle head tremors occur in some animals; they may be found near water sources or in riparian areas; they may appear 'drowsy' and have lowered head and ears. Affected animals usually eat reduced amounts of food, leading to gradual loss of body condition. Excessive drinking and urination are common in the end stages of the disease.

CWD Diagnosis

Definitive diagnosis of CWD requires examination of the brain for evidence of spongiform lesions and/or accumulation of the CWD-associated prions. In Canada, the official screening test for CWD used by the Canadian Food Inspection Agency (CFIA) is enzyme-linked immunosorbent assay (ELISA), a commonly used biochemistry assay which requires testing of either the retropharyngeal lymph nodes or the obex area of a dead animal's brain stem to determine if it contains protease-resistant prions. Emerging testing techniques, such as real-time quaking-induced conversion (RT-QuIC) assays and tonsillar biopsy and recto-anal mucosa associated lymphoid tissue (RAMALT) testing are possible in live cervids but are not as sensitive or accurate as ELISA methods. Further research and validation are required to improve the sensitivity and specificity of these live-testing methods before they can be considered an effective tool in CWD management.

Human Health and CWD

The emergence of transmissible spongiform encephalopathies (TSE) such as BSE ('mad cow disease'), scrapie and CWD has increased public interest and concern about possible human health effects from eating cervids infected with CWD. In early 2019, Health Canada stated that "...to date, there have been no reported cases of CWD infection in humans. There has also not been direct evidence to suggest that CWD may be transmitted to humans. However, animal studies suggest that CWD may pose a risk to some types of non-human primates." The World Health Organization recommends that it is important to keep the agents of all known prion diseases from entering the human food chain.

In order to protect their health, hunters active in areas where CWD has been detected should have their harvested animal tested, practice safe carcass handling protocols and avoid consumption of any animal that has tested positive for CWD.

Economic Impact of CWD

Ontario Farmed Cervid Industry

The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) is responsible for legislation, policies and programs governing commercial cervid farms in Ontario. The *Animal Health Act* (2009) provides OMAFRA the authority to take specific risk-based actions to inspect, diagnose, contain and control animal health hazards. Statistics Canada data (May 2017) indicates that there were approximately 4,050 deer and elk on 97 cervid farms in Ontario. Additional captive cervids are found in zoos, parks and exhibits throughout the province. Red deer/American elk hybrids, fallow and sika deer are the most common cervids raised on farms. Overall, these farmed cervids maintain an estimated market value of CAD \$24.3M.

As of September 2018, eight percent of Ontario cervid farms are enrolled in the Canadian Food Inspection Agency's (CFIA) CWD Voluntary Herd Certification Program (VHCP), the national program for managing farmed cervid health accreditation.

Deer Hunting – Wild Cervids

The primary cervid species hunted in Ontario is the white-tailed deer. In 2017, deer hunters spent about 1.5 million days hunting in Ontario and made about \$275 million in expenditures directly related to their deer hunting trips. Expenditures by resident hunters account for about 95 percent of this amount. Revenues from the sale of deer hunting licences generated approximately \$9.1 million.

An economic analysis was prepared for Ministry of Natural Resources and Forestry (MNRF) in 2005 to anticipate the potential economic impact should CWD be detected in Ontario. The analysis focused on primary economic impacts of CWD on wild deer, as well as secondary impacts on other sectors of the Ontario economy (**Table 1**).

The analysis showed that if hunters stop hunting – or hunt less often – there will be wide-ranging economic losses. Hunters will spend less, creating a ripple effect throughout the Ontario economy. Table 1 summarizes two impact scenarios modelled in this analysis and the potential economic impacts resulting from each.

Table 1. Estimated recreational hunting social-economic impacts from CWD detection in wild cervids in Ontario (\$CAD adjusted for inflation to October 2018).

Impact type	Scenario A 5% reduction in hunting effort	Scenario B 25% reduction in hunting effort
Initial expenditure reduction	2.9M	14.6M
Economic impacts modelled from Socio-economic Impact Model		
Value added	3.1M	15.4M
Wages and salaries	1.8M	9.2M
Employment (person-years)	47	235
Total tax impacts	0.9M	4.6M
Imports into Ontario	0.8M	3.6M
Reduction in hunter welfare		
Reduced consumer surplus	24.9M	41.4M

Legislative Framework

The *Fish and Wildlife Conservation Act, 1997* (FWCA), and its regulations provide for the management and perpetuation of Ontario's fish and wildlife resources.

The FWCA and its regulations enables such measures as open/closed seasons for harvesting of wildlife, prescribing harvesting methods, controlling possession of wildlife, defining geographic areas for management, authorizing the issuance of licences, permits and authorizations, and limiting or qualifying the authority of these licences.

Regulations under the FWCA that help prevent the entry of CWD into Ontario are detailed in **Preventative Measures** section of this plan.

The FWCA provides legal authority to establish CWD response actions, as well as restrict activities which may contribute to the spread of CWD in Ontario. MNRF will continue to work with stakeholders, the public and Indigenous communities and organizations to identify opportunities for enhancing Ontario's CWD preparedness and response capabilities.

Policy Direction

Ontario maintains several strategic policy documents and species-specific management plans that set out goals, objectives and actions for promoting and protecting wildlife health, including wild cervid health. These policies provide strategic direction that complements MNRF's CWD prevention and response plan objectives.

These policies include:

- *Biodiversity: It's In Our Nature* (2012), the implementation plan for Ontario's Biodiversity Strategy;
- *Cervid Ecological Framework* (2009) which notes the management concern posed by diseases such as CWD and confirms Ontario's efforts toward monitoring and researching wildlife diseases, implementing prevention measures, communicating and responding to significant threats as they arise;
- *Elk Management Plan* (2010);
- *Moose Management Policy* (2009);
- *White-tailed Deer Management Policy for Ontario* (2017); and
- *Caribou Conservation Plan* (2009).



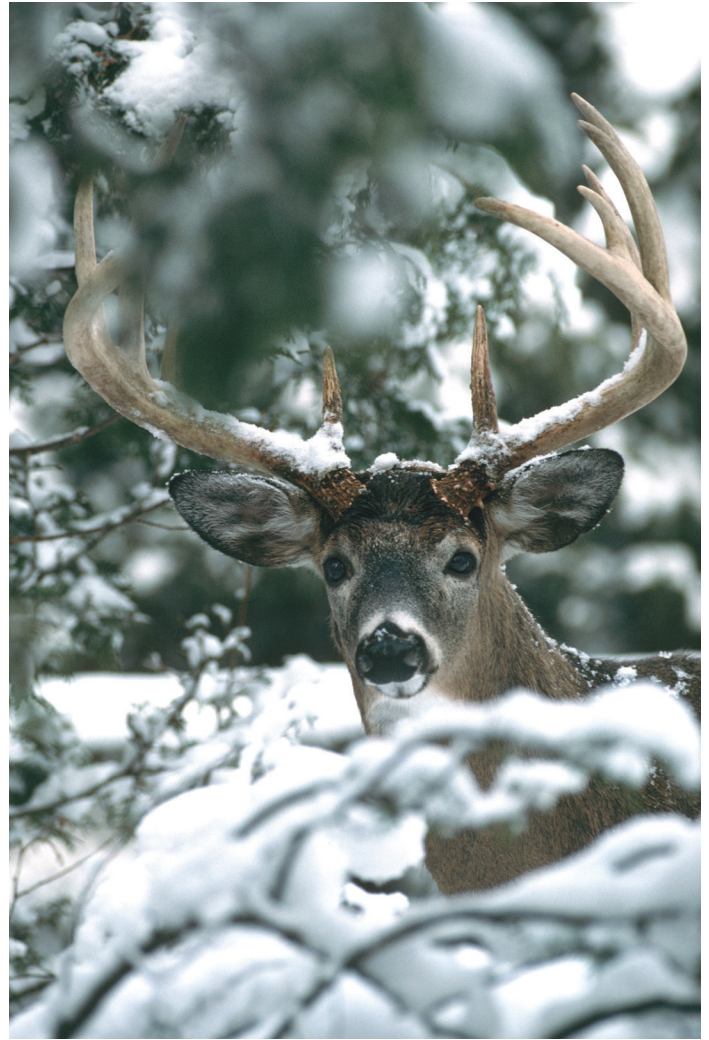
Partner Agencies Responding to CWD

Numerous provincial and federal agencies maintain mandates that include a role in CWD awareness, prevention and response:

- MNRF has a mandate for protecting Ontario's biodiversity while promoting economic opportunities in the resource sector and supporting outdoor recreation opportunities. The primary legislation governing the protection and use of wildlife resources is the *Fish and Wildlife Conservation Act, 1997* (FWCA).
- OMAFRA is the lead agency for policy and legislation concerning farmed cervids. OMAFRA administers the *Animal Health Act* (2009), legislation intended to protect animal health, establish measures for the prevention, detection, response, control and recovery from hazards associated with animals that may affect animal or human health, and to regulate activities relating to animals that may affect animal or human health.

OMAFRA also administers the *Food Safety and Quality Act, 2001* which provides for the quality and safety of food, agricultural commodities and inputs.

- The Ontario Ministry of Health (MOH) is responsible for protecting public health in Ontario and administers the *Health Protection and Promotion Act, 1990*. MOH develops, implements and evaluates Ontario's public health protection and prevention policies and legislation regarding immunization, environmental health, and infectious diseases, and maintains a role in communicating the risk to the public on various human health issues.
- The Ontario Ministry of Environment, Conservation and Parks (MECP) has a broad mandate and responsibilities for a variety of legislation leading to healthier communities and economic prosperity through the protection of Ontario's air, land and water. Protecting and recovering species at risk and their habitat is a key part of MECP's mandate.



- The Canadian Food Inspection Agency (CFIA) has a mandate under the *Health of Animals Act, 1990*, in respect of certain diseases, including CWD, which can affect animals or are transmissible between animals and people.
- The Canadian Wildlife Health Cooperative (CWHC) was established in 1992 as a nation-wide team of wildlife health specialists dedicated to generating knowledge essential to assessing and managing wildlife health. CWHC provides MNRF with access to these specialists for a variety of initiatives related to wildlife health, including diagnostic services, risk assessment and situational analyses.

2.0 MNRF'S CWD PREVENTION AND RESPONSE PLAN

The overall purpose of the CWD Prevention and Response Plan is to define MNRF's approach to addressing the threat CWD poses to Ontario's wild cervid populations. CWD has emerged as one of the most challenging wildlife management issues in North America. Many jurisdictions are actively responding to CWD, providing Ontario the opportunity to learn from the experiences of others.

A coordinated and comprehensive approach in responding to CWD is necessary to minimize potential harm to Ontario's cervid species, the environment and the socio-economic and cultural benefits provided by cervids.

Goals and Objectives

The goals of MNRF's Chronic Wasting Disease Prevention and Response Plan are:

Goal 1: Minimize the threat posed by CWD through an adaptive, coordinated approach that provides effective direction to preventing and responding to CWD in Ontario's wild cervids, and;

Goal 2: Maintain the socio-economic, cultural and ecological benefits derived from Ontario's wild cervid populations through a long-term management response to any detection of CWD.

To achieve these goals, the Chronic Wasting Disease Prevention and Response Plan sets out the following objectives:

1. Enhance CWD knowledge.
2. CWD prevention and surveillance.
3. Rapid, effective response to CWD detection.
4. Ensure effective long-term management of wild cervids following any response.
5. Coordinate and collaborate actions.
6. Inform the public, stakeholders and communities.

1. Enhance CWD Knowledge

Effective wildlife disease monitoring is a challenging task for any single organization. Detection of new diseases and pathogens across vast areas on a sustainable basis requires a consistent and coordinated approach. MNRF is committed to ensuring informed wildlife disease monitoring through active participation in several collaborative processes involving public and academic agencies. Hunters, outdoors enthusiasts and the public can also play an important role in monitoring for wildlife diseases, including CWD. Ongoing risk-based CWD surveillance and the adoption of scientific advancements in CWD understanding will inform MNRF's decision-making in support of a coordinated, adaptive response to CWD.

The *Pan-Canadian Approach to Wildlife Health* sets out a vision for wildlife health, identifies challenges and opportunities, and provides actions to achieve a shared mission of wildlife health protection and promotion. It addresses this goal by enabling, sustaining and integrating infrastructure and expertise in Canada.

At the core of delivering the pan-Canadian approach is the provision of strategic and operational oversight of wildlife disease monitoring and diagnostic services by the Canadian Wildlife Health Cooperative.

CWHC plays a key role in supporting Ontario's wildlife health program through disease risk assessment, surveillance and monitoring, diagnosing and investigating outbreaks, provision of expertise, maintenance of a central wildlife health database, and training wildlife management personnel in wildlife health.

In partnership with MNRF, CWHC can ensure ready access to wildlife veterinary and pathology services, permitting timely diagnosis of causes of wildlife mortality and supporting an adaptive management approach as new threats and opportunities to protect wildlife health arise.

Animal Health Networks

MNRF shares animal disease information with several networks to ensure awareness of emerging threats of significance to domestic, agricultural and wild animals as well as humans. These established networks provide timely exchange of information and facilitate preparedness in the event of an emerging threat to animal/wildlife health such as CWD:

- **Ontario Animal Health Network (OAHN)** is a collaborative animal health network representing nine commodity sectors (e.g. swine, bovine, equine, poultry, etc.) as well as wildlife. OAHN's mission is to provide coordinated preparedness, early detection and response to animal diseases through sustainable cross-sector networks.
- **Canadian Animal Health Surveillance System (CAHSS)** is an initiative of the National Farmed Animal Health and Welfare Council (NFAHWC), with broad based collaborative support of industry and governments designed to fill the need for strengthened animal health surveillance in Canada.

2. CWD Prevention and Surveillance

Wild Cervid Surveillance

A key component of Ontario's CWD preparedness is MNRF's CWD wild cervid surveillance program, intended to detect low-level disease prevalence. Early detection provides the best chance of eliminating CWD before it becomes established. Wild cervid CWD surveillance was initiated in Ontario in 2002 and has continued every year since.

Each year, surveillance samples are collected from deer hunters during the fall hunt from surveillance areas using risk factor inputs to determine the areas with the highest risk, which informs the choice of surveillance area for that year.

Risk inputs currently used include (in order of importance): estimated density of cervid farms, zoos, taxidermists and CWD cases/outbreaks in neighbouring jurisdictions; estimated wild deer and elk density; years since last surveillance; presence of unstudied deer or elk populations; deer wintering concentrations; winter severity (Figure 1).

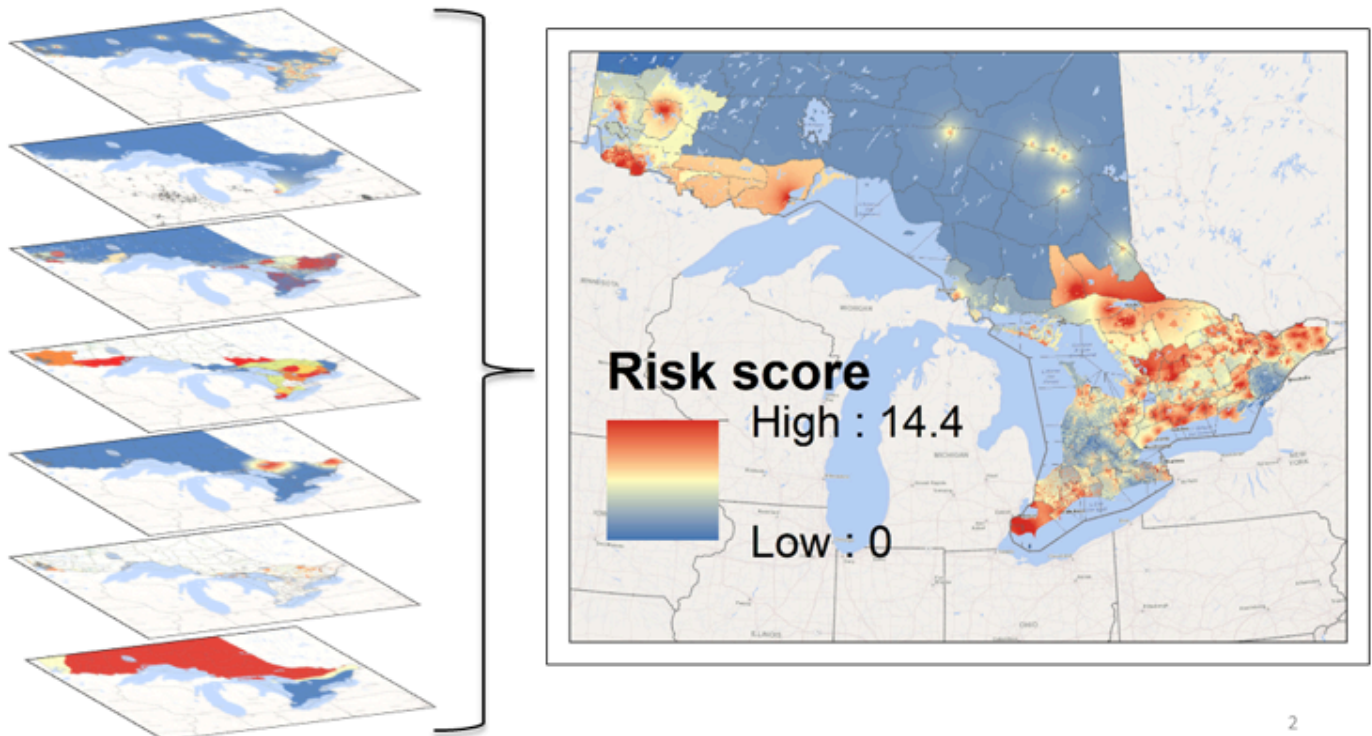


Figure 1: Example of risk layers compiled to produce a spatially quantified risk assessment for CWD disease in cervids to help inform choice of surveillance areas in Ontario.

This model is used to inform the selection of individual Wildlife Management Units (WMUs) in which annual surveillance of hunter-harvested deer is undertaken.

In addition to hunter-harvested testing, MNRF opportunistically tests dead deer reported by the public, that are involved in vehicle collisions, or are found dead in unexpected circumstances. Deer involved in vehicle collisions are more likely to be infected with CWD than hunter-killed deer.

Since its introduction in 2002, MNRF has tested over 12,400 hunter-harvested and opportunistically sampled white-tailed deer and elk in Ontario. All tests have been negative.

Farmed Cervid Surveillance

Since 1998, OMAFRA has provided cervid farmers the opportunity to have animals tested at slaughter (testing for CWD is not mandatory). Under this program over 3,200 captive deer and elk have been tested for CWD, all tests to early 2019 have been negative. During 2019, OMAFRA modified the CWD sampling practices at provincially licensed abattoirs in order to provide greater geographical coverage of farms with domestic cervids across the province and help to better manage the risk this disease poses to Ontario.

Preventative and Preparatory Measures

A number of measures are intended to be taken by Ontario to reduce the likelihood of CWD entering Ontario, and to ensure legal and operational authority is established to allow for a rapid response in the event of CWD detection. These include:

- Broadening the prohibition on the import into Ontario of high-risk cervid parts by enhancing the existing restrictions on entry of cervids hunted outside of Ontario.

High-risk parts include any part of the antlers, head, brain, eyes, tonsils, hide, hooves, lymph nodes, spleen, mammary glands, entrails, internal organs or spinal column of any member of the deer family that has been

killed outside Ontario. Exceptions would be allowed for certain materials, such as finished taxidermy mounts, tanned skin, antlers or skull cap so long as no tissue or skin is attached.

- Expanding restrictions on the import into, transport within, or through Ontario of all live cervids, including a general prohibition on the import of all live cervids from any jurisdiction in which CWD is found.

These measures will help address the weakness of existing controls on the movement of captive cervids from CWD-certified herds being moved between jurisdictions in both Canada and the U.S.

- Prohibiting the use or possession of any product that contains or purports to contain the faeces, urine, blood, gland oil, saliva or other bodily fluids of a cervid for any purpose, including for hunting or for attracting wildlife for viewing or photography. This minimizes the chance that prions, which may be found in the body parts and fluids of cervids from which these attractants are made, are not inadvertently introduced to Ontario.

3. Rapid, Effective Response to CWD Detection

MNRF recognizes the need to consider all management options and will seek involvement and cooperation of partner agencies, local governments, stakeholders, Indigenous communities and organizations and the public in coordinating response actions to manage CWD in wild or captive deer and elk, and to control its spread.

The roles of agencies participating in a response to a confirmed positive case of CWD will be determined by whether the disease is detected in a captive or wild cervid. A coordinated and adaptive approach among responding agencies is a key element in achieving long-term CWD outcomes.

CWD Detection in Wild Cervids

If CWD is detected in wild deer, elk, caribou or moose, the CFIA Director General, Ontario Area, will declare official confirmation of positive test results. CFIA will advise MNRF officials and in turn, MNRF's CWD Incident Response Management Team, who will then initiate control and response actions outlined below. The Incident Response Management Team will meet with affected stakeholders, municipalities and Indigenous communities to determine and recommend appropriate response actions.

MNRF will lead enhanced surveillance in a pre-determined radius around the location of the infected wild animal to determine extent of response actions. Surveillance results will be used to determine the extent of an initial Enhanced Surveillance and Control Zone.

Once enacted, CWD control measures should be continued in the control zone until no evidence of CWD is detected in wild cervids during six consecutive years of enhanced surveillance.

The key response actions that are intended to be taken by MNRF, should CWD be detected in either a captive or wild cervid, include:

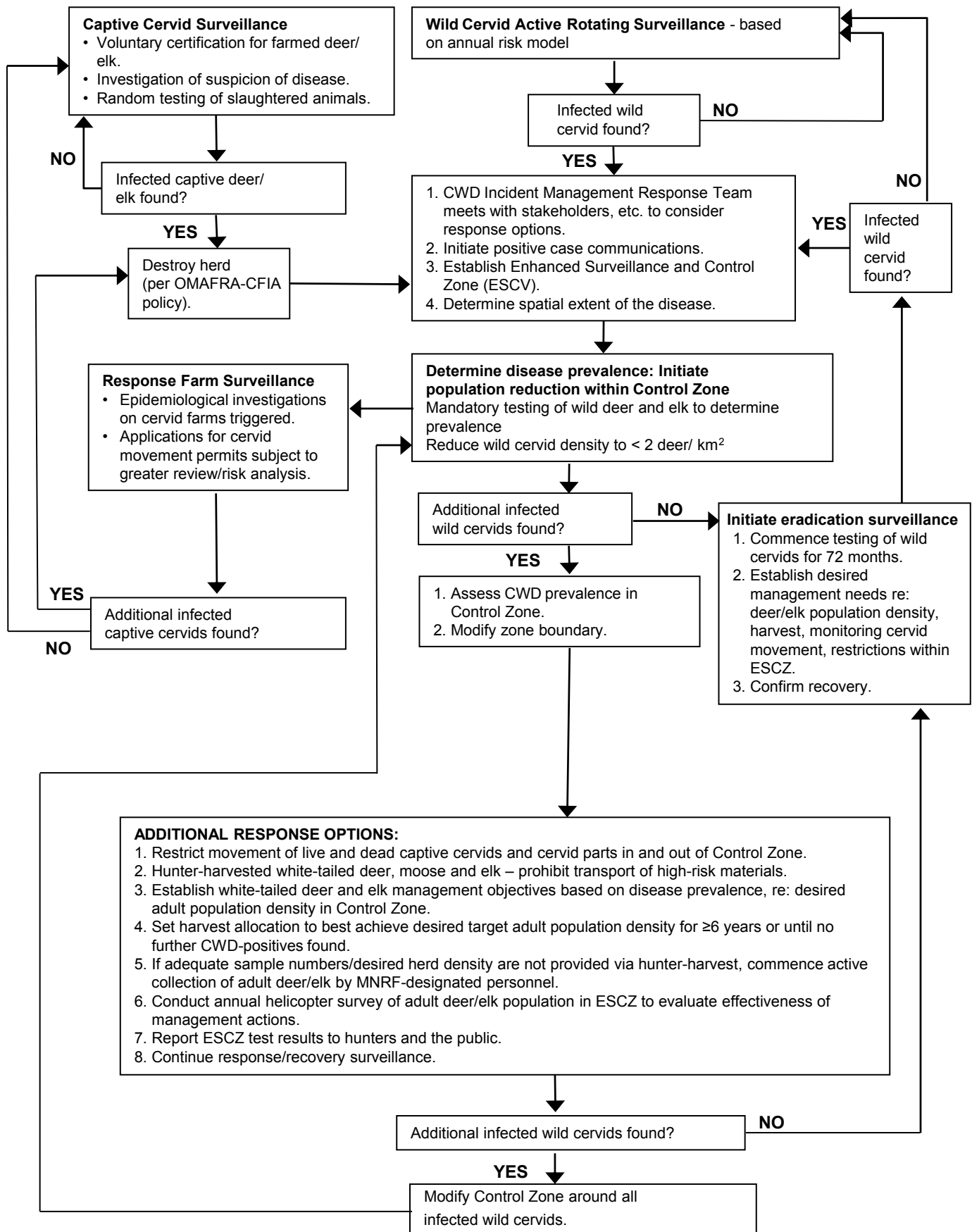
- Utilizing the order-making powers of the FWCA to enact measures deemed necessary to provide immediate response to situations which may contribute to CWD spread, as well as potentially succeeding such orders with regulations to provide permanency to these measures;
- Continued, wide-scale surveillance of wild cervid populations for early detection of the disease through lethal cervid removal;
- Responsive communications (see **Inform the public, stakeholders and communities**, below);
- Support, as required, the quarantine and/or destruction of any CWD-exposed farmed herds per the CFIA's CWD response policy;
- Determining the extent and prevalence of the disease around the detection site by enhanced sampling of wild cervids in combination with aerial surveys to estimate deer densities;
- Initiate intensive population reduction of wild herds in proximity to the location of CWD detection to reduce prevalence of, or eradicate, the disease;
- Consideration of temporary hunting/trapping season closures and closure of trails and parks within a core control zone where active depopulation actions are being taken in order to protect personal and public safety and to avoid scattering the cervid population;
- Enacting controls to reduce the potential spread of the disease, including prohibiting baiting and feeding of wild cervids, and restricting movement of captive and wild cervids and their parts beyond the surveillance and control zone;
- Implementing controls on disposal of cervid carcasses and body parts to reduce risk to animal and human health and to the environment;
- Contacting/engaging other agencies and stakeholders – municipalities, cottage associations, hunting and agricultural clubs/organizations, Indigenous communities and organizations, as well as landowners, in planning and garnering support for enhanced surveillance and eradication/control activities; and,
- Amending authorizations of wildlife rehabilitators, zoos and exhibits located within the control zone to prohibit rehabilitation and movement of cervids beyond the control zone.

CWD Detection in Captive Cervids

- If CWD were detected in Ontario among captive cervids (farm, zoo or collection), the CFIA's current protocol provides for a response to the initial detection when the premises in question is enrolled and in good standing in the Voluntary Herd Certification Program (VHCP), having attained at least "level D." These protocol response actions include communications, quarantine, ordering the destruction of all high risk (exposed) animals, cleaning and disinfection actions on the infected premises, trace-in/trace-out investigation, and agriculture animal surveillance. In all other cases where CWD is detected among farmed cervids (i.e., second and subsequent premises or where premises are not VHCP fully enrolled), OMAFRA would be the primary responder responsible for initiating quarantines, de-population, engagement of stakeholder organizations, etc., following CFIA confirmation of the detection.
- During a farmed cervid CWD response, MNRF's CWD Incident Response Management Team would initiate additional response actions that include disease surveillance and population reduction in wild cervids in a predetermined radius around the affected facility as soon as is reasonably possible after disease confirmation. Additional measures to reduce the likelihood of disease spread would also be taken (**Figure 2**).



Figure 2: Chronic Wasting Disease Response in Ontario



4. Ensure Effective Long-term Management of Wild Cervids Following Any Response

In managing CWD In Ontario's wild cervids post-detection, MNRF will develop policies, procedures and regulatory measures suitable to the circumstances that contribute to the long-term outcome of maintaining healthy cervid populations and the benefits they bring to Ontarians.

To provide confidence that CWD has been eradicated, response measures are to be continued for a minimum of six years following initial detection of the disease in Ontario. However, if CWD becomes established in the natural environment at a scale where it is no longer reasonable to contain the spread of CWD, longer-term responses must be considered, based on the best available science and management practices from other jurisdictions having effective long-term management of CWD. MNRF will adopt such approaches in the unfortunate event that CWD spread cannot be contained to achieve its response plan outcomes.

Long-term Management of CWD

Despite preparedness and rapid response actions, the reality of CWD is that in most jurisdictions, control and response actions have not been able to prevent spread of the disease among wild cervids beyond the initial point of detection. As of 2019, only New York State has been successful in eradicating CWD following detection in wild cervids (note: CWD detected on a Quebec farm has been contained to that premises, with no detection among wild cervids as of end of 2019). In virtually all other jurisdictions where CWD has become established among wild cervid populations, management agencies have adopted a long-range, adaptive management approach to reduce the rate of CWD spread. Possible actions to manage CWD over the long-term include:

- Re-evaluation of population objectives for recreational deer harvest management and adoption of an appropriate harvest management strategy that supports the goal of long-term population suppression at the WMU or landscape scale in proximity to a CWD control zone. A harvest management approach that prioritizes harvest of mature male deer as well as harvest allocations to reduce herd size to a pre-determined density (i.e., less than 2 deer per square kilometer) supports efforts to slow the rate of CWD spread among wild cervids.
- Facilitate removal of sick-appearing deer by hunters by adopting policy that facilitates the use of licensed hunters to opportunistically harvest deer displaying signs consistent with CWD to allow for mandatory testing.
- Deer tag/licence incentives: MNRF may consider liberalizing deer tag availability, tag/licence pricing and licence terms and conditions to encourage harvesting of deer by recreational hunters within CWD-infected zones.

5. Coordinate and Collaborate Actions

A key objective of the CWD Prevention and Response Plan is to provide a collaborative, cooperative approach in undertaking CWD prevention and response actions.

Collaborative partnerships and effective, coordinated actions by MNRF, partner agencies, Indigenous communities and stakeholders will lead to awareness and support for CWD response actions necessary to ensuring continued, long-term socio-economic, cultural and ecological benefits provided by Ontario's wild cervid populations.

Partner Agency Roles and Responsibilities in CWD Preparedness and Response

The roles and responsibilities of MNRF and partner agencies in maintaining CWD awareness, preparedness and response are outlined below. It is also recognized that local

governments, key stakeholders and Indigenous communities may have a role in CWD prevention and response to CWD detection in Ontario. The details of their roles are not included here as they are likely to be situation-dependent.

- **Ontario Ministry of Natural Resources and Forestry role:** MNRF will be the lead agency to respond upon detection of CWD in wild cervids. In addition, an emergency management structure involving provincial and federal partner agencies may be initiated in response to detection of CWD in Ontario, particularly if detection occurs also in farmed cervid populations.

MNRF maintains ongoing messaging via media to maintain awareness and knowledge about CWD, factors contributing to risk, and regulations intended to reduce the likelihood of CWD entry into Ontario.

MNRF will lead a coordinated response to control and mitigate CWD in the province's wild cervid populations in response to a detection of the disease in either wild or captive cervids. MNRF will also coordinate its CWD response with provincial ministries whose mandates have linkages (see **Rapid, effective response to CWD detection**, above). MNRF will coordinate with OMAFRA on disease containment and control measures such as establishing quarantine zones, epidemiological investigations, cleaning and disinfection procedures.

- **OMAFRA role:** OMAFRA is a partner with CFIA in the *Canada-Province of Ontario Foreign Animal Disease Response Plan* which defines the roles and responsibilities of federal and provincial agencies in responding to on-farm foreign animal disease incidents, including CWD. The plan aims to enhance collaboration and coordination, establish clear lines of communication, and to improve the efficiency and effectiveness of on-farm disease response.

In the event of CWD detection involving farmed cervids, MNRF will coordinate with OMAFRA on establishing quarantine zones, public and stakeholder messaging, as well as work closely with CFIA to ensure an effective response intended to eradicate the disease.

- **CFIA role:** CFIA would also participate in an on-farm CWD response, working with OMAFRA to take steps to eradicate the disease, guided by CFIA's *Canada-Province of Ontario Foreign Animal Disease Response Plan* and *Chronic Wasting Disease Hazard Specific Plan*.

Multiple agencies, including CFIA, recognize the importance of prompt and aggressive action in response to the first detected case of CWD in farmed cervids in Ontario. Coordinated actions among agencies are key to preventing the further spread of the disease in both farmed and wild cervid populations.

- **MOH's role** in CWD planning and response is largely focused on communication to the public respecting the risk of CWD to human health. In addition, MOH assesses the public health risk and may advise on issues regarding burial, composting or incineration of dead wildlife.
- **MECP role:** If large-scale disposal of captive or wild dead cervids is required as part of a CWD response, MECP will provide direction on required approvals or exemptions necessary to deal with biological disposal issues which may be subject to statutory requirements. MECP also has responsibility for species at risk policy and legislation and would provide advice in the event Ontario's caribou populations were at risk due to detection of CWD. Coordination of CWD response actions with MECP will also be required where provincial parks, conservation reserves and protected areas may be involved.

■ **Canadian Wildlife Health Cooperative role:** CWHC provides MNRF with access to wildlife health specialists for a variety of initiatives including CWD diagnostic services, risk assessment and situational analyses. During a CWD response, MNRF would engage CWHC experts to assist in ensuring communications are accurate and scientifically sound. CWHC may also assist with initial diagnosis of animals submitted for CWD testing.

■ **Canadian Border Services Agency role:** CBSA is not formally mandated to enforce MNRF legislation, however MNRF will continue to work with CBSA to promote awareness of CWD cervid carcass import regulations and to facilitate transfer of intelligence about non-compliance to appropriate MNRF officials.

6. Inform the Public, Stakeholders and Communities

The experiences of other jurisdictions indicate that CWD may present Ontario with a significant challenge in communicating the necessity of seemingly drastic measures to protect the health of cervid species over a very long timeframe. Public and stakeholder support for CWD response activities will be essential in achieving long-term CWD response outcomes. Communication of management responses to CWD should consider the varying levels of interest and knowledge among both traditional stakeholders (hunters, naturalists), Indigenous communities and the broader public.

A flexible, collaborative and responsive communications approach with clear, consistent messaging is necessary for garnering the support for CWD response actions among a diverse range of public perceptions and stakeholder expectations.

Key Communication Considerations – Prevention and Awareness

Prion diseases such as CWD and its human variant, Creutzfeldt-Jacob Disease (CJD), have high profiles with the public and the media. When communicating, leading clinical specialists are needed as spokespeople to ensure statements to the public are coming from trusted sources. Messages regarding the human health risks associated with CWD should be delivered by infectious disease specialists, neurologists and public health scientists.

The following proactive communications-related objectives are intended to provide CWD-related information to the public and media in advance of any potential occurrence of the disease. Educating the public and the media in advance will facilitate a clear, anticipated response, should CWD be detected in Ontario.

The objectives of the CWD public awareness efforts are:

- To inform stakeholders, media, Indigenous communities/organizations and the public about CWD so they may have a reasonable, fact-based knowledge of CWD and its potential threat to captive and wild cervid health;
- To indicate that there is currently no scientific evidence that CWD can be transmitted to humans, but that precautionary measures are advised; and
- To maintain a source of general, scientifically-verified CWD information for interested parties to consult prior to and during any incident of CWD in Ontario.

Key communication messages may be delivered by various means including social and print media, bulletins, fact sheets, key stakeholder publications and public service announcements. MNRF's webpages on [CWD](#) and [hunting](#) are helpful sources of information for CWD and hunting-related information and notices (CWD: www.ontario.ca/cwd, hunting: www.ontario.ca/hunting).

Communications – Roles and Responsibilities: Detection and Response Phase

The following list identifies possible communications strategies that could be implemented if CWD is detected in Ontario. Agencies will discuss and coordinate the implementation of communications strategies as outlined in an approved CWD awareness communications plan and will seek input from key stakeholders as appropriate.

The lead for communications responsibilities is determined by the location of CWD response actions and the mandate of the agency responsible for them: Where CWD response actions are undertaken on a farm, in a zoo, or in a cervid collection facility, OMAFRA will respond to media inquiries and will take the lead for communications directed to Ontario commodity and farming communities. For CWD response actions in relation to wild cervids or in a wildlife custodian facility, MNRF will take the lead and carry out the positive case communications strategy outlined below:

- Prepare and distribute an organization chart outlining the communications flow and protocols for the MNRF incident management response team, based on principles of good risk management communications and best practices. Identify key policy decisions and identify the associated communication needs.
- Ensure a coordinated provincial communications response among key agencies allowing for consistent and credible messaging responses.
- Develop and approve a stakeholder, public and Indigenous community/organization communications/engagement plan that identifies contacts, key messages, protocols for notification and engagement, and a planning process for local community meetings if warranted.
- Brief provincial decision-makers, officials, key stakeholders and Indigenous organizations and communities about Ontario's approach in the event of detection of a positive case of CWD.
- Develop and approve internal communications materials for advising government staff of new information and developments.
- Approved key messages and Qs and As should be prepared for use in social and print media, bulletins, fact sheets, key stakeholder publications, public service announcements, and at staff meetings.
- Work with key external stakeholders to develop processes and tools to keep them informed of new information and developments and briefed on roles and responsibilities.

Given the importance of effective communications messaging, the CFIA, MNRF, OMAFRA, MOH and MECP will continue to work collaboratively on actions and communications as provided for in an approved positive-case communications strategy. The objectives of the positive-case communications strategy are as follows:

- Ensure provincial decision-makers, officials, Ministers, MPPs, municipal leaders, industry groups, and other key external and internal stakeholders, Indigenous communities/organization and the public are immediately notified and given timely updates through approved protocols.
- Ensure coordinated, consistent, accurate, and timely messaging on the status of the disease and the province's role in the response.
- Use timely, accurate and reliable communications to address public concerns and build public support and confidence that the situation is being managed appropriately.
- Identify and promote opportunities and actions that may be taken by stakeholders, communities and the public in support of MNRF's CWD response plan.

Immediate action will be critical during an initial CWD response. To ensure awareness of actions which stakeholders, communities and the public can take in support of an effective CWD response, MNRF will develop and ensure readiness of a positive-case communications strategy. Effective communications are a key element in assuring the long-term goals of MNRF's CWD response in supporting the viability of Ontario's cervid populations.

Summary

The implementation of the strategies described within this plan will involve ongoing analysis, discussion, engagement and review to ensure key priorities and actions are identified and enacted as required. MNRF and partner agencies will maintain leadership on these measures through ongoing communication and engagement with interested and affected Ontario communities, stakeholders and the public as appropriate.

Experience to date in affected US and Canadian jurisdictions has shown that CWD presents a challenging wildlife management issue. While there will be a strong public expectation for a focussed government response to a CWD outbreak in Ontario, such a response must respect broad public perspectives on

government transparency, animal welfare and wildlife/environmental management, at the same time as respecting fiscal realities for public agencies involved in the CWD response.

While a prompt, structured and effective response to a CWD outbreak in Ontario is expected and is desirable from the standpoint of potentially eradicating the disease, agencies and stakeholders involved in the response must be prepared for the potential of maintaining a sustained, multi-year commitment of resources before it can be confirmed with confidence that the outbreak has been contained. As such, the participation roles and responsibilities of government, stakeholders, media, and the public can be expected to evolve over the course of a CWD detection in Ontario.

The CWD Prevention and Response Plan was drafted with these challenges in mind and will be periodically reviewed as new scientific information on CWD, changes to government roles and mandates, socio-economic and other factors require. Periodic review of appropriate actions toward maintaining CWD awareness, agency capacity to address the disease, and maintaining an adaptive management approach is critical to an effective and accountable CWD prevention and response strategy for Ontario.



Photo credit: Stephen Phillips

