

***DRAFT for Public Review and Comment – November 30, 2015***  
**WYOMING GAME AND FISH DEPARTMENT**  
**CHRONIC WASTING DISEASE MANAGEMENT PLAN**

**EXECUTIVE SUMMARY**

- The purpose of this plan is to provide flexible and adaptable direction for management of Chronic Wasting Disease (CWD) in mule deer, (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), elk (*Cervus elaphus*) and moose (*Alces alces*).
- The plan will be reviewed and updated as warranted.
- The plan consists of four components: Disease Management, Applied Research, Public Information and Funding.
- Based upon the current research and known epidemiology of CWD in free-ranging cervids, eradication is currently not a realistic disease management objective.
- The Wyoming Game and Fish Department (WGFD) will coordinate the management of CWD with other state, federal and tribal agencies.
- The WGFD will conduct surveillance to monitor and estimate spatial distribution and prevalence of CWD, and coordinate CWD research with other state, federal and tribal agencies.
- The WGFD will provide timely, complete, and accurate CWD information to the public, via the WGFD website (<http://wgfd.wyo.gov>).
- The WGFD will continue to work cooperatively with the Wyoming Department of Health and other human health organizations to monitor current research on CWD and human health and to provide up-to-date-information to the public.

**INTRODUCTION**

Chronic wasting disease (CWD) is a member of a group of diseases termed transmissible spongiform encephalopathies (TSEs) and is a fatal disease of cervids (deer, elk, and moose). CWD was first observed in captive mule deer in Colorado in 1967 (Williams and Young, 1980), but was not observed in free-ranging deer and elk in Wyoming until 1987. The disease was rare and of little interest to wildlife managers or the public until another TSE, bovine spongiform encephalopathy (BSE), caused human disease in the United Kingdom (Bruce et al., 1997). Because BSE is similar to CWD, people became concerned CWD could also affect human health. Initial incursion of CWD is thought to be by animal-to-animal contact, with later phases of transmission driven by animal to environment and vice versa. In this 30-year interim, CWD became firmly established in deer and elk in southeastern Wyoming and has spread into the Bighorn Basin, the east side of the Bighorn Mountains, south-central Wyoming and northeastern Wyoming. Deer, elk and moose hunt areas in Wyoming where CWD has been found can be seen on the WGFD website <https://wgfd.wyo.gov/Wildlife-in-Wyoming/More-Wildlife/Wildlife-Disease>

The management of disease in wildlife is an important responsibility of the WGFD. The purpose of this plan is to provide flexible and adaptable direction for monitoring and management of CWD in Wyoming. The plan will be reviewed and updated as warranted. The plan consists of four components:

- I. Disease Management
- II. Applied Research

- III. Public Information
- IV. Funding

## **COMPONENT I. DISEASE MANAGEMENT**

Based on current scientific information, eradication of CWD from free ranging cervids is not a realistic disease management objective, particularly since the disease has become established (Government of Alberta, 2008; James, 2008). Early mathematical models predicted CWD would drive affected cervid populations to extinction (Gross and Miller, 2001). More recent modeling suggests CWD may have a population level impact in Rocky Mountain National Park elk (Monello, 2013, 2014), while other research suggests certain populations may be able to survive through disease-driven genetic selection (Robinson et al, 2012; Williams et al, 2014). Nonetheless, it is anticipated that endemic CWD will depress some cervid populations to some unknown level (Miller et al., 2008; Edmunds 2013; Monello 2014). Even though eradication is not feasible, the WGFD will consider effective management actions to slow the spread and/or reduce the prevalence of the disease based on current accepted scientific information.

Through adoption of this plan, the WGFD has chosen an adaptive management strategy allowing flexibility to alter disease management activities depending on future research findings, CWD distribution, prevalence, funding, and level of concern (public, WGFD and other governmental agencies). Currently, the Disease Management component of this plan addresses nine objectives. Most of these objectives were identified by a panel of 60 wildlife disease experts and categorized relative to their estimated efficacy in endemic CWD areas (Government of Alberta, 2008). The WGFD will use the best scientific information available and will take necessary and reasonable steps to achieve these objectives:

### **1. Surveillance.**

Surveillance allows the WGFD to identify which deer, elk, or moose hunt areas have one or more of these species that test positive for CWD. These hunt areas will comprise the “CWD Endemic Area” within Wyoming.

The WGFD will conduct CWD surveillance as funding permits, and will modify its surveillance based on funding and distribution of CWD within the state. Much of the WGFD’s surveillance emphasis will remain in the endemic area (Deer Hunt Areas 64-66 and Elk Hunt Areas 7 and 19), around the 22 state elk feedgrounds and National Elk Refuge (NER), and monitoring along the frontier of the CWD endemic area. Surveillance is conducted by collecting retropharyngeal lymph nodes, tonsil tissue, or the obex from hunter and vehicle-killed cervids and those animals targeted for removal (i.e., cervids showing clinical signs consistent with CWD).

Hunters, who participate in the WGFD’s CWD surveillance program by providing deer, elk, or moose tissue samples and provide adequate information, can obtain test results through the WGFD’s website. If a sample submitted to the WGFD’s CWD surveillance program tests positive and adequate contact information is provided, the hunter will be notified of the positive test result.

Other than the WGFD surveillance program, WGFD will not be responsible for the testing of individual hunter's deer, elk, or moose. The WGFD will provide information regarding public testing facility locations for hunters who choose to have their deer, elk or moose tested at their own expense.

The WGFD may donate deer, elk and moose carcasses acquired from the CWD zone to individuals after the animal has been tested with no evidence of CWD being found and the recipient signs an affidavit of informed consent. While the WGFD will donate meat from animals that test negative to individuals, it will not donate meat from animals killed within the CWD endemic area to organizations or entities whose purpose is to redistribute the meat.

Hunting licenses provide the holder the opportunity to take deer, elk, or moose in accordance with state statutes and Wyoming Game and Fish Commission (WGFC) regulations with no assurance of edible meat. Therefore, the State of Wyoming does not guarantee meat quality from deer, elk and moose regardless if a carcass tests positive or negative for CWD. The WGFD will not re-issue a hunting license, issue a refund for any deer, elk, or moose license, nor reimburse for processing and any other charges/expenses if a deer, elk, or moose tests positive for CWD.

**2. Carcass Movement Restrictions.**

Tissues of CWD-infected carcasses can transmit CWD to uninfected cervids (Miller et al., 2004). To minimize this potential source of transmission, the WGFC regulates the transportation and disposal of harvested cervids taken from within Wyoming. Likewise, the WGFC regulates the importation of harvested cervids/cervid parts taken from any state, province or country within areas designated by the appropriate jurisdictional agency where CWD occurs.

**3. Translocation of cervids within and outside of Wyoming.**

Live free-ranging cervids will not be moved to other locations for any reason within or outside of Wyoming without prior review, approval, or permitting by the WGFD and/or WGFC.

**4. Remove cervids suspected of being affected by CWD.**

Removal of cervids displaying signs of CWD may reduce the spread of CWD and will contribute to statewide targeted surveillance and/or provide research material. When possible, WGFD personnel will lethally take, sample, and remove targeted cervids from the field and properly dispose of the carcass in a manner that will minimize CWD transmission. In addition, the WGFD will continue its public information program requesting the public to report sick cervids to aid in CWD monitoring efforts. Research has shown that such targeted surveillance and removal is effective to document presence of CWD and removal of a potential source of infection.

**5. Appropriate WGFD personnel will participate in intra- and interdepartmental and intra- and interstate CWD coordination meetings.**

Sharing research results and coordination among state, federal, and tribal agencies is important in the management of CWD. The WGFD will coordinate and collaborate with state, federal, and tribal agencies on relevant CWD management issues.

**6. Maintain the Wyoming statutory prohibition of cervid ownership, importation and facilities in Wyoming and the effectiveness of the WGFC’s Chapter 10 regulation.**

WGFC Chapter 10 Regulation, “Regulation for Importation, Possession, Confinement, Transportation, Sale and Disposition of Live Wildlife,” addresses CWD, in relation to the only privately owned elk facility permitted in Wyoming by statute. Any captive cervid imported into Wyoming must originate from facilities certified to be free of CWD in accordance with federal regulations (9 CFR, parts 55 and 81) and WGFC Chapter 10 regulation. These WGFC and federal restrictions are intended to prevent spread of CWD. There are no other captive, privately owned cervids within Wyoming. Future establishment of captive, commercial native cervid facilities in Wyoming is prohibited by statute.

**7. Hunting will continue to be the primary tool for monitoring CWD in cervids.**

The flexibility inherent in Wyoming’s hunting regulations allows the WGFC to modify hunting seasons to meet specific management objectives. This flexibility, combined with the long and rich hunting heritage in the State of Wyoming, makes the use of hunter harvest an effective and preferred tool in monitoring CWD in cervids.

**8. Herd population management.**

Large-scale culling in an attempt to reduce animal populations and minimize animal to animal contact has been attempted in other states and provinces. While such culling has shown it can reduce and maintain prevalence levels, it has proven to be expensive, unpopular, requires continued long-term application, and ultimately is unable to eradicate CWD (State of Wisconsin, 2006; James, 2008; Holsman, 2010; VerCauteren, Kurt, and Scott E. Hygnstrom, 2011; Wasserberg et al, 2009, 2014; Manjerovic 2014). The WGFD will consider disease transmission/prevalence when developing herd population objectives and other management recommendations. The WGFD will strive to meet herd population objectives by taking in account all factors and influences.

**9. Feedgrounds.**

Elk have been fed in northwest Wyoming since the early 1900s. Originally, elk feedgrounds were designed to mitigate loss of winter range, reduce human/elk conflicts and maintain a traditional population of elk. More recently, elk feedgrounds have continued to address those issues as well as facilitating separation of elk and cattle to prevent the potential spread of brucellosis. Supplemental feeding of elk creates complex biological, social, economic and political issues. Wildlife disease adds to this complexity. Recent modeling based on captive elk suggested that feedground elk may survive in the face of CWD through genetic selection and limited harvest (Williams et al, 2014), albeit at drastically reduced numbers in a worst case scenario. However, using

data from captive situations is difficult at best and it is still unknown what ultimate impact CWD could have on feedground elk populations. Disease transmission can be related to density of animals in a given area as well as the frequency of contact between animals. Artificially concentrating elk on feedgrounds may result in more rapid spread of CWD. Based on WGFD hunter-harvested CWD surveillance data, CWD prevalence levels in non-fed elk populations remain significantly lower than those of sympatric mule deer and white-tailed deer populations in the endemic area of Wyoming (Edwards–pers. comm.).

The WGFD will continue to prioritize identification, removal and testing of cervids exhibiting signs of CWD on and around elk feedgrounds. Hunter harvest and other CWD surveillance in northwestern Wyoming will be conducted in coordination with the NER and the National Park Service – Grand Teton National Park (GTNP).

The WGFD will work with the NER, GTNP, and United States Forest Service (USFS)-Bridger-Teton National Forest (BTNF) on implementing the Elk and Bison Management Plan to manage wintering populations and reduce their reliance on supplemental feed.

The WGFD will collaborate with stakeholders to acquire critical winter range habitat and migration corridors for elk in order to protect elk from human disturbance.

Based on research that grass plants can bind, retain, uptake and transport prions, the WGFD will assess and manage the risk of hay from the CWD endemic area that is used at feedgrounds.

Additionally, WGFD will:

- Review WGFC supplemental feeding policy to determine if changes are warranted.
- Determine if closures of specific feedgrounds can occur where dispersal of elk will not cause damage/conflict/co-mingling issues with private property, stored crops and domestic livestock or create a need to drastically reduce overall elk herd sizes.
- The WGFD will consider disease transmission/prevalence when developing herd population objectives, feedground quotas, and other management recommendations. The WGFD will strive to meet herd population objectives/feedground quota by taking in account all factors and influences.
- As funding allows, expand and increase the WGFD's CWD surveillance efforts in the Pinedale and Jackson Regions.
- If a single case of CWD is confirmed in a deer, elk or moose in or adjacent to an elk herd unit with feedgrounds, WGFD will intensify surveillance, review the data, and recommend management actions for the specific feedground(s). WGFD will communicate, consult and coordinate with GTNP, NER and BTNF pertaining

to any proposed actions to address CWD being confirmed in a cervid in or adjacent to an elk herd unit containing feedgrounds.

- If feasible, use an incinerator(s) to destroy carcasses from feedgrounds to limit soil contamination and the spread of CWD. Where elk carcass incineration is not possible, evaluate additional methods for carcasses disposal.
- Continue the collection of biological samples of elk in order to establish a baseline of genetic information for individual herds in the Jackson and Pinedale Regions. This will allow the WGFD to track if genetic shift is occurring over time toward alleles that have a prolonged incubation period for CWD.
- Continue researching and monitoring cervid migration and dispersal routes in and out of the Jackson and Pinedale Regions and how these migrating animals may expand CWD.
- Provide training on recognition of CWD clinical signs to WGFD employees involved in elk feedgrounds, other state and federal employees, hunters, outfitters, and the general public.
- Monitor predatory animal presence and their impacts (both positive and negative) on feedground elk, including the implementation of proper management actions for gray wolves that are causing unacceptable impacts to elk at any state operated feedground in accordance with W.S. 23-1-304 and WGFC Chapter 21 Gray Wolf Management regulation.

If CWD is detected in elk inhabiting state feedgrounds, WGFD personnel shall monitor the population intensively and lethally remove and dispose of any elk showing clinical signs of CWD. The WGFD will continue, to the extent possible, to: 1) maximize the feeding area to decrease animal-to-animal contact (low density feeding); 2) decrease days of feeding to promote the dispersion of elk; 3) take additional actions to decrease elk concentration provided such actions are consistent with other necessary wildlife management and feedground practices.

## **COMPONENT II. APPLIED RESEARCH**

The WGFD will support and conduct, on a priority basis, research that will facilitate continued expansion of knowledge of CWD. The WGFD will continue to monitor published research on CWD and similar diseases to ensure the WGFD has the most current and comprehensive data and scientific information available to make CWD management decisions.

In addition to involvement in ongoing collaborative CWD research, the WGFD, in cooperation with the Wyoming Wildlife/Livestock Disease Research Partnership, has identified research priorities and will seek funding to initiate these studies, which may be conducted in collaboration with other researchers.

### **COMPONENT III. PUBLIC INFORMATION**

Chronic wasting disease is of interest to various groups at different levels locally, nationally and internationally. As the public agency charged with managing CWD in Wyoming's wildlife populations, the WGFD has an obligation to provide timely, complete, accurate, and unbiased information about CWD to the public. The WGFD's information efforts related to CWD will focus on: where CWD has been found in Wyoming; risks to humans; WGFD efforts to monitor the disease; efforts by WGFD and others to learn more about the disease; and potential impacts to deer, elk or moose populations; and laws and regulations related to CWD. The WGFD will provide current and new CWD information on its website, various media and social media outlets and public presentations and contacts.

### **COMPONENT IV. FUNDING**

CWD management, research, and public information activities are expensive, and the WGFD's financial status will not allow complete implementation of this plan without additional funding. Now that federal CWD funding is no longer available, the WGFD will continue to request general funds for CWD as part of the WGFD's Veterinary Services program and will pursue additional funding sources to implement this plan and research projects.

### **ACKNOWLEDGEMENTS**

Many elements of this CWD Plan would not be possible without the cooperation of sportsmen, landowners, game meat processors, taxidermists, scientists, and professional wildlife managers. We appreciate their interest and help.

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Adopted by the Wyoming Game and Fish Commission on January XX, 2016.

Signed: \_\_\_\_\_  
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