DEPARTMENT OF NATURAL RESOURCES

Surveillance and Management Plan for Chronic Wasting Disease in Free-ranging Cervids in Minnesota

2019 Minnesota DNR CWD Response Plan

Overview

The surveillance and management plan for chronic wasting disease (CWD) in free-ranging deer, moose, and elk describes the DNR response when disease is found. It addresses both emerging infections and scenarios where the disease may not be eliminated from wild populations. It describes the prescriptive steps the Agency will take upon initial disease discovery, along with more collaborative alternatives for cervid management options. The DNR recognizes the importance of healthy wildlife populations and the goals and strategies contained in this plan strive to achieve that objective.

Background

Chronic wasting disease is neurological disease of cervids (deer, elk, and moose) that has no cure and is 100% fatal. It is transmissible disease, which means it is spread by direct (nose-to-nose) and indirect (such as sharing a food source) contact. The disease was first described in Colorado in 1967 and is currently known to occur in 26 states and 3 Canadian Provinces in North America. Studies in the Western US, where the disease is well-established, are starting to show disease-related population declines. An on-going CWD study in Wisconsin is showing that CWD-infected deer have a 3x lower survival rate than deer without the disease. The CWD problem in wild cervid populations has been described as a "crisis" and increasing attention is being paid to the disease as more states become infected and the long-term implications become more clear.

The original CWD response plan was written by subject matter experts in the DNR's Wildlife Health Program in 2010; the current update was developed in 2018 and incorporates more recent research from the scientific literature, CWD plans from other states and provinces, and discussion with CWD experts around the country. This updated plan, titled "Surveillance and Management Plan for Chronic Wasting Disease in Free-ranging Cervids in Minnesota," now includes information specific to CWD infections that may persist on the landscape.

There are important elements in the plan, including program/regulatory alternatives, season lengths, bag limits, and incentives that are the focus of this engagement process. Consequently, engagement is conducted with partners and stakeholders at multiple levels. This necessitates an approach that, 1) informs people about CWD and the response plan in general and gathers general comments and questions, and 2) fosters relationships with partners and stakeholders when and if the plan must be implemented at the local level.

Defining the CWD response plan

- The CWD response plan is a document that -
  - Explains how DNR views the threat of CWD to Minnesota's wild deer, elk, and moose populations.
  - Provides goals and strategies for how to manage CWD with the primary goal of eliminating the disease where it is found.
  - Outlines a response to emerging and persistent infections.
  - Is both prescriptive and collaborative
- The CWD response plan is not -
  - Specific to one area of Minnesota or to white-tailed deer only
  - Restricted to just when infection is found in wild populations
  - An implementation plan; it lays out a wide range of management possibilities that are adaptable to a variety of disease scenarios

Public Engagement

Comprehensive public engagement on both the prescriptive and collaborative elements of the plan are vital. The DNR is working to build understanding of the importance of an aggressive disease response. The phases of plan engagement are:

- Discussions with Legislative, Tribal, Agency, and Stakeholder group leaders
- Discussions with County and Local leadership and key members of the public
- DNR-hosted public meetings across Minnesota to explain the plan and collect input on specific elements of the plan.

Plan Elements

Initial Detection (when CWD is first found)

When CWD is first detected, the DNR's initial management response are to, 1) act aggressively to eliminate the disease, if possible, 2) prevent or minimize disease spread, 3) collect adequate samples to monitor disease prevalence and spread, and (4) engage stakeholders and provide accurate and current information about CWD. To meet these goals, the following actions will occur as soon as possible and include:

- Conduct outreach activities related to CWD discovery.
- Where possible, complete an aerial survey in the immediate area surrounding the CWD-positive detection, to estimate baseline population parameters.
- Create a CWD Management Zone. The size depends on the infection as well as the density, distribution, and understanding of seasonal movements of the local populations. The zone size may change as new information becomes available.
- Recreational feeding and attractant bans in and around the CWD Management Zone.
- Conduct mandatory CWD sampling at adequate levels to monitor changes in prevalence and disease spread.

- Institute and enforce carcass movement restrictions out of the CWD Management Zone of deer >1 year of age, and only allow certain parts (i.e., quarters or other portions of meat with no part of the spinal column or head attached) to leave prior to receiving test results.
- Reduce wild deer density (through season management and targeted culling) within the CWD Management Zone and, more specifically, around locations of CWD-positive deer to remove infected deer and reduce opportunities for transmission.

Transition to a Persistent Infection (when CWD may not be eliminated)

Where diseases exist at a significant prevalence or over a wide-spread area, they may be impossible to eliminate from wild animal populations and the environment. This is true for all diseases, not just CWD. Since CWD has a long incubation period and can be transmitted several ways, the ability to fully eliminate the disease may not be possible in all situations; thus, management actions are needed to minimize impacts and limit spread to new areas of the state. The DNR has identified 4 primary triggers that would signal the shift from response of initial CWD detection to the management of persistent CWD infection:

- Apparent CWD prevalence (percent of animals infected) is >1% of deer sampled in the CWD Management Zone during the initial sampling effort. This suggests the disease is not new and may already be established in the affected area.
- Apparent CWD prevalence is <1% of deer sampled in the CWD Management Zone during initial sampling effort, but increases and includes more infected females during consecutive years of surveillance.
- The disease spreads substantially beyond the initial affected area.
- Apparent CWD prevalence is low (e.g. <1% in adult deer) in the CWD Management Zone during the initial sampling effort and remains low during consecutive years of surveillance, but is not decreasing and disease is found in younger animals (e.g., deer < 2 years old), indicating active transmission.

Management of a Persistent CWD Infection

If CWD is determined to be persistent in wild cervids, the DNR will implement additional steps to manage the disease and prevent spread. The goals for managing persistent CWD infection in wild cervids will include, 1) contain CWD infections within the CWD Management Zone, 2) minimize the impact of the disease statewide, 3) reduce the prevalence in affected areas, 4) collect adequate samples to monitor disease prevalence and spread, 5) provide accurate and current information about CWD to the public, agency personnel, and stakeholder groups, and 6) engage in applied research to better understand the epidemiology, transmission, and management of CWD. To meet these goals, the following actions will occur as soon as possible:

- Manage for a younger age structure in the CWD Management Zone to maintain a higher rate of population turnover.
- Increase antlered deer harvest, as adult bucks are more likely to have and spread CWD.
- Emphasize harvest efforts in habitats where deer movement is most likely to occur, such as riparian drainages.
- Reduce overall deer density in the CWD Management Zone in order to lower emigration rate and distance traveled by dispersing deer from the CWD Management Zone.
- Continue recreational feeding and attractant bans.

- Continue to enforce deer carcass movement restrictions out of the CWD Management Zone and expand this to include deer <1 year old.
- Designation of CWD Core Area(s), defined as areas where multiple CWD-positive cervids have been detected in close geographic proximity.
- Consider using financial and non-financial incentives for landowners and hunters to remove CWD-positive deer from the CWD Management Zone and Core Areas.
- If efforts to significantly reduce deer numbers in CWD Core Areas are insufficient through recreational hunting (regular and special seasons), agency-directed culling will likely occur to increase the probability of removing infected individuals from the landscape and reduce disease transmission.
- Establishment of a CWD Control Zone, which will be recognized as a buffer zone around the CWD Management Zone.
- Prohibit export of whole carcasses originating from within the CWD Control Zone.
- Reduce deer density in the CWD Control Zone to create a population sink and reduce emigration from and immigration to the CWD Management Zone.

Management of Endemic Disease

If CWD is determined to be endemic (established and self-maintaining) in wild cervids, the DNR will reduce efforts to aggressively manage this disease within the CWD Management Zone and shift focus and resources to preventing spread to new areas of the state. The goals for managing an endemic CWD infection in wild cervids will include, 1) minimize the impact of the disease statewide, 2) collect adequate samples to monitor disease prevalence and spread, 3) utilize liberal harvest regulations to reduce the prevalence in the endemic area, 4) aggressively respond to new detections of disease outside of the endemic area, 5) provide accurate and current information about CWD to the public, agency personnel, and stakeholder groups, and 6) apply adaptive management to adjust efforts as new information on successful CWD mitigation strategies emerge. To meet these goals, the following actions will occur as soon as possible:

- Aggressively respond to any new detection of CWD outside the CWD Management Zone, by utilizing hunters, landowners, and agency-directed culling to reduce deer numbers within a 2-miles radius of this detection.
- Continue to manage for a younger age structure in the CWD Management Zone to maintain a higher rate of population turnover through liberalized harvest opportunities.
- Implement voluntary surveillance options for deer harvested within the CWD Management Zone, such as self-service, sampling kiosks and self-mailing test-kits. Implement mandatory testing of deer harvested in the CWD Control Zone, to maximize likelihood of detecting disease spread.
- Continue cervid recreational feeding and attractant bans across a broad area.
- Continue to enforce deer carcass movement restrictions for any deer out of the CWD Management Zone and CWD Control Zone.