Chronic Wasting Disease Management Plan

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Agenda

- Brief CWD background and history
- Past and present CWD surveillance in Washington
- WDFW's current draft CWD plan
- Summary and updates
- Questions and discussion

CWD Background and History

Transmissible Spongiform Encephalopathy

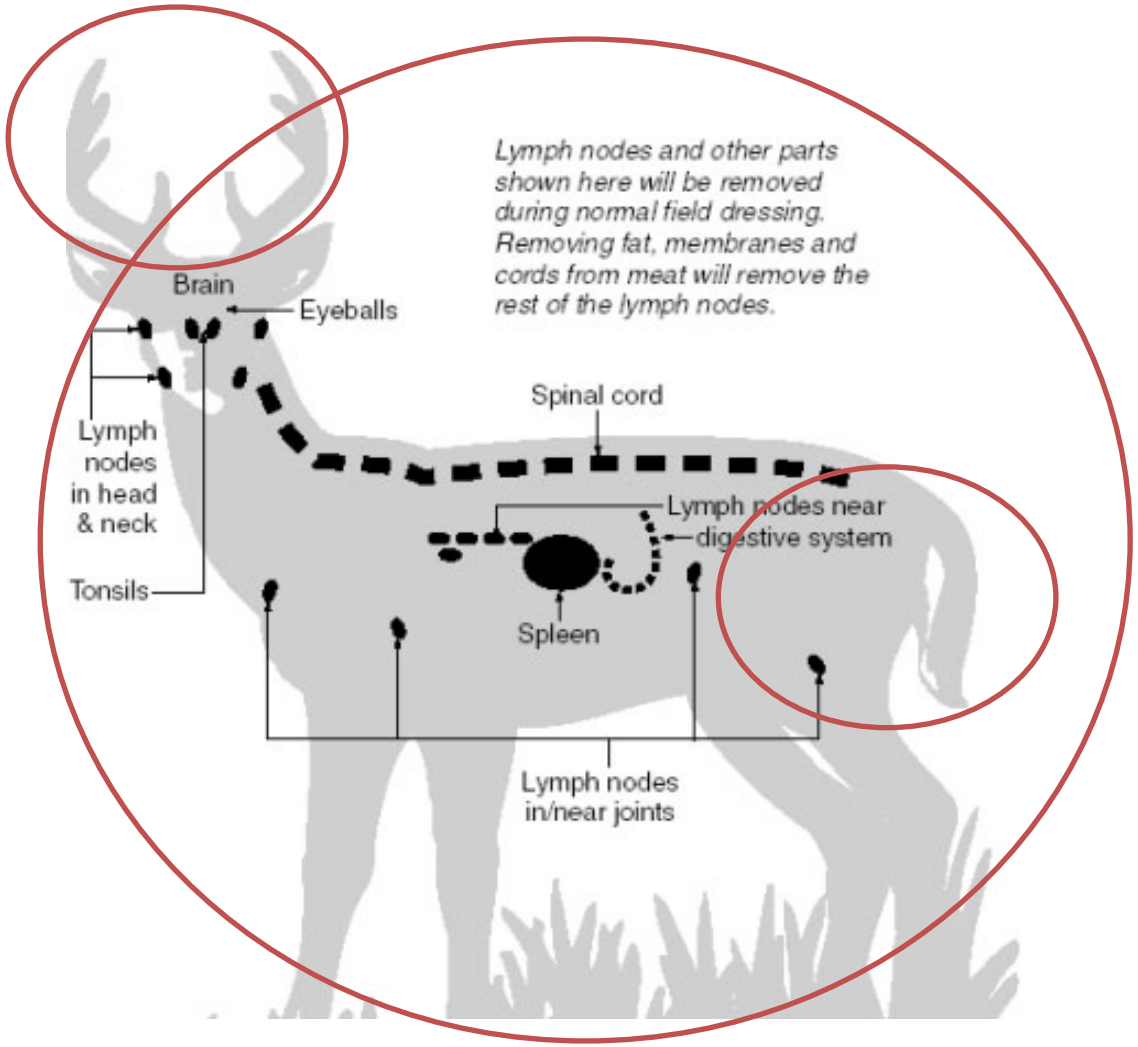
- Disease is transmitted from infected animal to susceptible animal
- Brain gray matter appears "spongy" microscopically
- Disease of the brain
- Other well-known TSEs include bovine spongiform encephalopathy, aka mad cow disease that is zoonotic (i.e., infects humans), Creutzfeldt-Jakob disease (CJD) that affects people, and scrapie that affects domestic sheep and goats
- All are **100% fatal**, no vaccines or treatments

Host Range

- CWD is a disease of cervids (i.e. deer family) and the following are known to be infected in the wild:
  - Moose
  - Elk
  - Reindeer (Norway)
  - Mule Deer
  - White-tailed Deer

History & Distribution in North America

Infectious Materials & Transmission



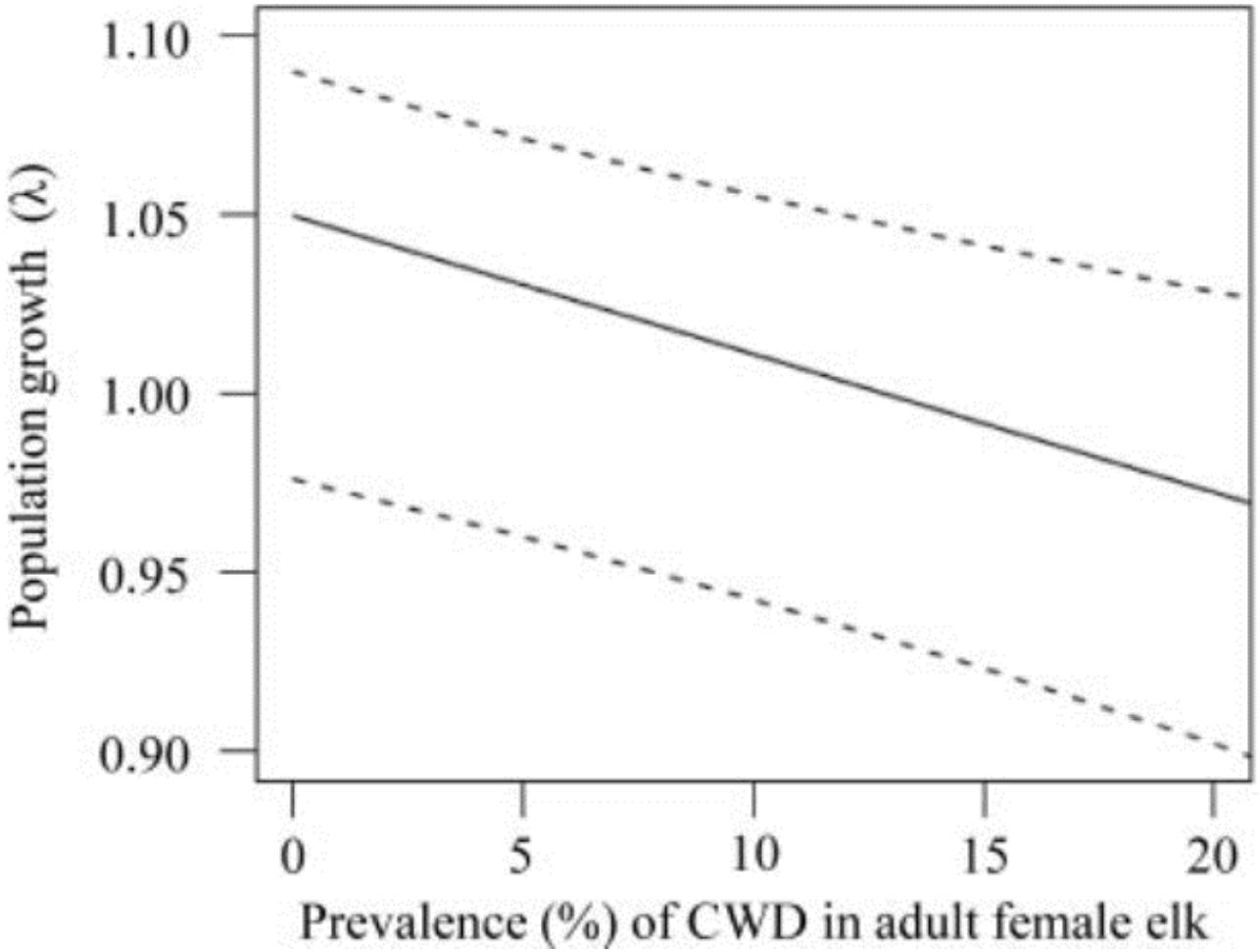
Other Concerns

- Evidence suggests this disease is not zoonotic, but CDC and WHO recommend not consuming CWD positive animals
- CWD has not been detected in non-cervid ungulates such as bighorns, mountain goats, and pronghorn; nor in domestic cattle, sheep, and goats

Wildlife Populations

- Population declines in deer and elk populations in WY and CO
  - CO elk – Monello et al. 2014
  - WY white-tailed deer – Edmunds et al. 2016
  - WY mule deer – DeVivo et al. 2017

Monello RJ, et al. (2014) Survival and population growth of a free-ranging elk population with a long history of exposure to chronic wasting disease. J Wildl Manage 78: 214–223.



Past and Present CWD Surveillance

CWD Surveillance in WA

Past

- Began CWD surveillance in 1995 of symptomatic animals
- From 2001-2011, federal funds were used to expand CWD surveillance statewide
- Federal funds ended and the Department reverted back to symptomatic surveillance

Present

- Symptomatic surveillance
- All samples to date were negative for CWD

Washington's CWD Situation

No cases of CWD detected to date, but testing has been limited so does not mean WA is CWD-free

CWD detected 70 mi east of WA border in 2019 (Libby, MT)

WA has taken steps to reduce CWD risks but many critical steps remain

CWD Management Plan (drafted 2020)

Plan Chapters

1. Plan Overview
2. CWD Background
3. Public Outreach and Communication
4. Risk Assessment and Minimization
5. Pre-Detection Surveillance
6. Initial Emergency Response

Public Outreach and Communication

Purpose

- Proactively build trust with and support from public/stakeholders regarding CWD management activities
- **Public support of management decisions is critical for success**
- Affects all aspects of CWD management
  - Implementation of vital risk mitigation strategies
  - Compliance with CWD rules and regulations
  - Submission of surveillance samples
  - Development and implementation of challenging management strategies post-detection

Strategies

- Upon plan adoption
  - Establish **public advisory group** to provide feedback on immediate risk mitigation and surveillance activities
  - Implement long-term **human dimensions initiative** to determine baseline public perception/awareness of CWD issues and guide messaging during each phase of the Plan
- Pre-detection
  - Implement schedule of communication and outreach activities using **Key Pre-detection Messages**
- Initial-detection
  - Implement schedule of communication/outreach activities using **Key Initial-detection Response Messages**

Risk Assessment and Minimization

Purpose

- Identifies best management practices to reduce risk of introducing CWD
- **Prevention is THE BEST MANAGEMENT PRACTICE!**
- Proposed actions based on Association of Fish and Wildlife Agencies (AFWA) Best Management Practices for CWD 2018

Four Areas of Risk

Live Cervid Movement

Issue: Greatest risk factor for CWD introduction is from humans moving cervids

Current Regulations:

- Allow importation/transport of some captive non-native cervid species into and within WA
- Allow restricted relocation of native wild cervids within WA by WDFW
- Allow transport of wild cervids (particularly fawns) for rehabilitation

Recommendations:

- Complete prohibition of live cervid importation, possession, propagation, and trade (preferred option)
- Alternatively, prohibit importation of live cervids originating from states/provinces with CWD and require federal CWD herd certification
- Require a CWD monitoring program for all captive facilities

Carcass Importation and Disposal

Issue: Carcasses are a potential source of infection and improper transport and disposal pose a great risk to naïve populations

Current Regulations:

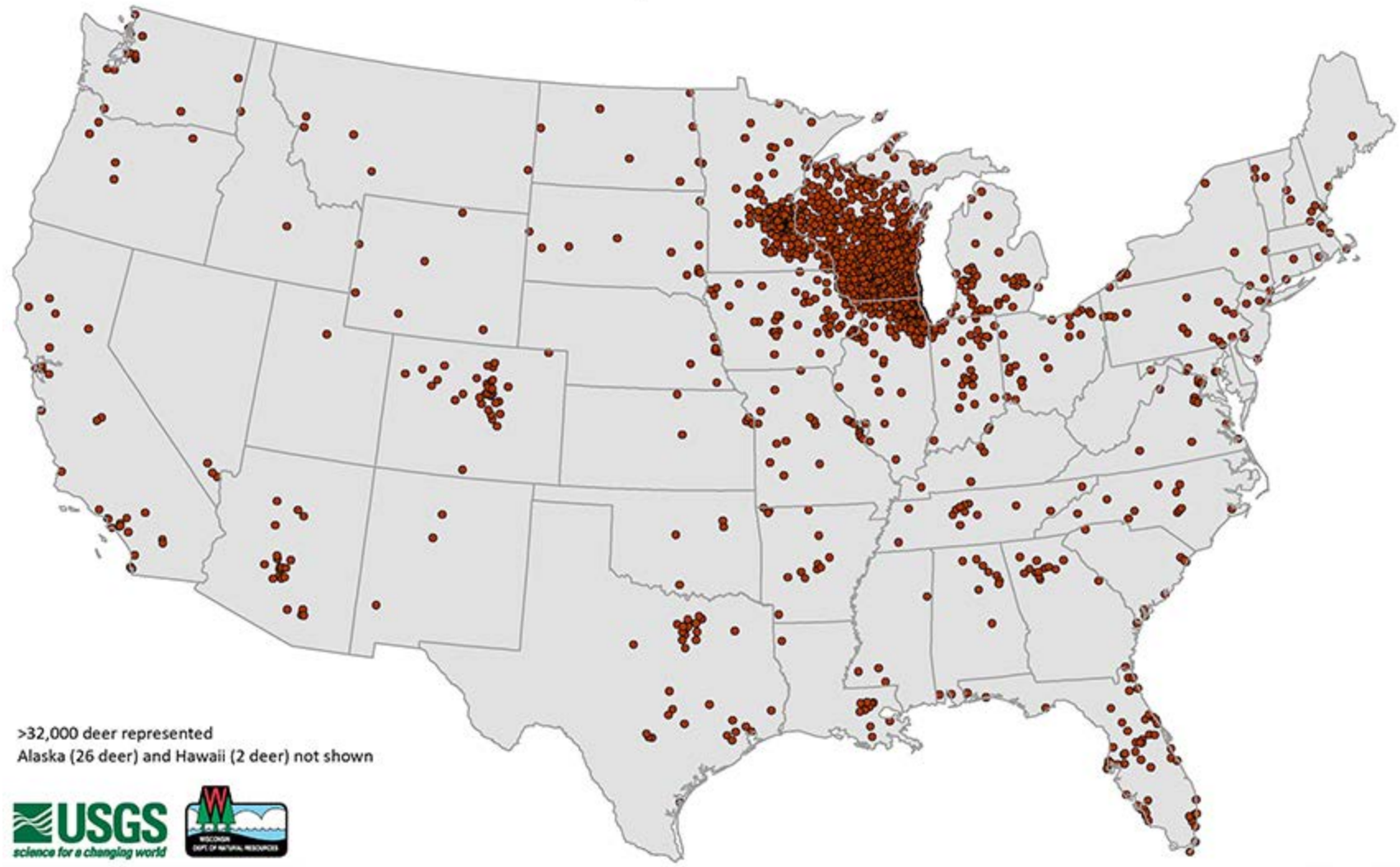
- Restricts importation of whole carcasses and certain carcass parts from states/provinces that have detected CWD in wild cervid populations
- WAC is subject to frequent updates as more states/provinces have positive detections

Recommendation:

- Update WAC to apply to ALL cervid species and ANY state, province, or territory, regardless of CWD status and whether the cervid was captive or wild

Home Zip Codes of hunters harvesting deer in Dane, Iowa, Richland and Sauk Counties, Wisconsin, 2016-2017

Data: Wisconsin Department of Natural Resources



Artificial Feeding and Baiting

Issue: Increases both local densities of animals and environmental contamination with infectious agents

Current Regulations:

- No restrictions on feeding
- Restrictions on amount and placement of baiting during hunting season

Recommendation:

- Ban baiting for the purposes of hunting deer and elk
- Prohibit recreational feeding by the public

Urine-based scents and attractants

Issue : CWD prions shed in urine for months to years before showing signs of disease, and lures may concentrate cervids creating CWD transmission hot spots

Current Regulations:

- No restrictions
- Deer urine production and sales in WA are not regulated by any agency

Recommendation:

- Prohibit the use or possession of urine-based scents and lures for deer and elk hunting

Pre-Detection Surveillance

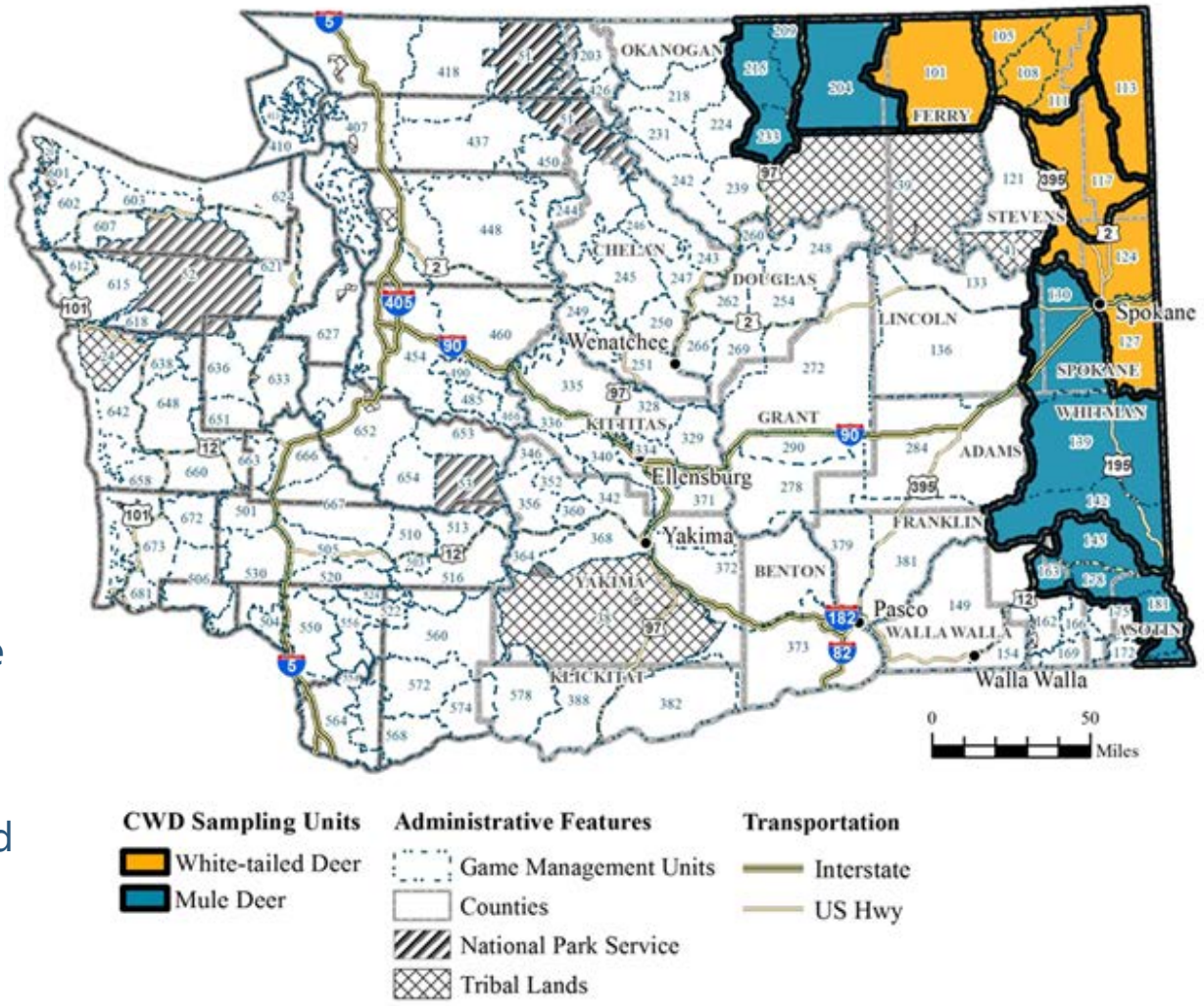
Rich Landers, The Spokesman-Review

Purpose

- Outlines critical systematic surveillance strategies necessary to provide early detection of CWD during an outbreak
- Early detection of the disease
  - Reduces likelihood of unchecked spread to other populations
  - Vastly increases the likelihood that our initial emergency response efforts will be effective
- Current surveillance efforts are not sufficient
  - Only test symptomatic cervids that display CWD-like signs

Optimized Surveillance Strategy

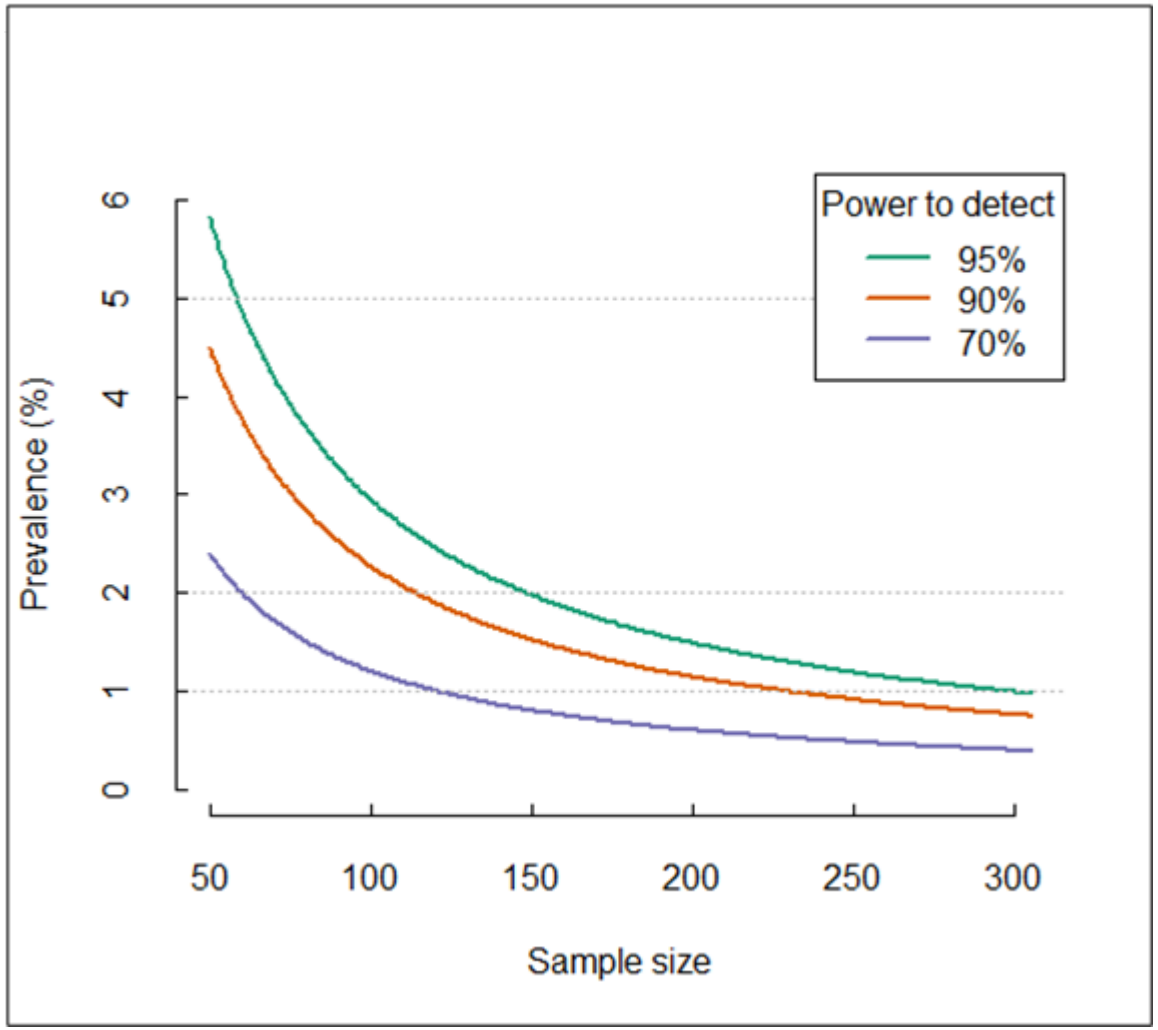
- Geographic risk factors
  - Location of sampling units focused in eastern WA, nearest Libby, MT
- Species risk factors
  - Transmission/susceptibility varies by species
  - Sampling in a given unit targets dominant species
- Demographic risk factors
  - Mature adult males are more likely to be CWD positive
  - CWD-positive deer are generally more susceptible to predation and road-kill
- Population size
  - Unit size varies so that <15,000 deer are contained within each unit
  - Allows for representative sampling



Sample Size

- Goal is to detect CWD at or below 1% prevalence in each sampling unit
  - If there are 15,000 deer per CSU, to be 95% confident we would detect CWD at or below 1%, then we need to sample 300 deer
  - If we collected 150 samples, we would be 78% confident we detected CWD at or below 1% prevalence
- Detection at 1% prevalence for a sampling unit of 15,000 deer means 150 deer are infected with CWD

Figure 2. Relationship of prevalence and sample size with varying power of detection.



Sample Sources

- Hunter-harvested animals
  - Check-stations
  - Meat processors and taxidermists
  - Hunting and wildlife conservation groups
  - Damage or special permit hunts
  - Collection sites
  - Collaboration with Tribes
- Vehicle-killed cervids
  - WSDOT
  - Convenience samples
  - Salvage tag holders
- Symptomatic animals
  - Statewide effort of any cervid species
- Research
  - Radio-collared cervids
  - Especially cervids killed by predators

Initial Emergency Response

Purpose

- Prevent establishment of CWD in Washington
  - Focus of management actions is containment of CWD
  - Continue efforts to mitigate risk of further introduction of CWD
- Triggered by 1st positive detection in WA or within 10 mi of WA's border
- Based on strategies outlined by:
  - MT Fish, Wildlife and Parks' CWD Management Plan and
  - AFWA BMPs for Development of a CWD Management Plan

Incident Response Team

- Responsible for carrying out the Initial Emergency Response
- WDFW Director appoints Response Manager that will lead IRT and be the liaison with the Director's Office
- WDFW Representatives:
  - Regional Wildlife Program
  - Public Affairs Division
  - Regional Enforcement
  - Regional Private Lands and Wildlife Conflict
  - Game Division
  - Wildlife Program Science Division
- External Partner Representation:
  - Washington State Department of Agriculture (WSDA)
  - Washington State Department of Health
  - Washington Animal Disease Diagnostic Laboratory
  - Washington Department of Natural Resources
  - Universities
  - affected Tribes
  - affected timber companies
  - appropriate federal land managers

Initial Response Phase

Disease Assessment Phase

Evaluation Phase

Initial Response Phase

- Define Initial Response Area (IRA)
  - Use radius of ~10 mi around site of detection as guide to legally delineate IRA boundaries
  - Sample all hunter-harvested and salvaged road-killed cervids in IRA via mandatory check at specific WDFW facilities
- Define Transport Restriction Zone (TRZ)
  - restrict transport of whole carcasses and unprocessed carcass parts outside of TRZs
  - Rehabilitation of cervid species will be prohibited within the TRZ and rehabilitated cervids cannot be lawfully released within the TRZ
  - Evaluation and potential termination of feeding and baiting of wildlife that may attract any cervid species if not already prohibited

Disease Assessment Phase

- Quantify CWD prevalence and distribution
- Randomly sample from all species, sex, and age classes within IRA
- To collect samples, WDFW will attempt to maximize hunting opportunities by:
  - **Adjusting hunting season dates** for specific species and weapon types most likely to result in an increase harvest of the species and sex and age class(es) of interest
  - **Adjusting antler point restrictions** for specific species and GMUs
  - **Adjusting special permit opportunities** for specific species, sexes, age classes, and GMUs most likely to result in an increase harvest of the species of interest

Evaluation Phase

- Did the action achieve the desired response in the affected cervid population?
- Did the action achieve public support?
- Did the action produce the needed sample size to generate reliable estimates?
- Were staff able to carry out the action, and can that level of effort be sustained?
- Did written descriptions and maps of the boundaries of the IRA and TRZ communicate needed information clearly and simply?
- Based on estimated prevalence and distribution of the disease, should the boundaries of the IRA and TRZ be modified?

Captive Cervid Facilities

- If a positive captive cervid is detected, then depopulation of the entire stock and testing will be required
- Initiate Emergency Response Plan for wild cervids within ~10-mile radius of the facility
- If a positive animal is found in a zoo, the Department will work with the facility to determine the risk to native wild cervids

Summary and Updates

Summary

- Currently, WA has not detected CWD
  - Only symptomatic testing
- Prevention is the best management practice
  - Reduce risks of introducing the disease through rule changes and public outreach and education
- Systematic CWD surveillance is vital
  - Determine CWD status and prepare for response to an initial detection
- What if CWD is already here and more widespread than initially thought?
  - Public outreach and education, risk minimization, and initial emergency response actions would be essential to gain control of the disease
- CWD is a major threat to the sustainability of wild cervid populations and has direct and indirect impacts on state resources and economies

Updates

- Considering several changes based on external reviews
  - Transport and disposal recommendations and expectations
  - Collaboration initiative with Tribes on CWD issues and management
  - Clarity in timelines and process
- Public review by end of April


Kerry Huller, Casper Star-Tribune

Questions?

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