

STAFF SUMMARY FOR JUNE 20-21, 2018

32. CHRONIC WASTING DISEASE**Today's Item****Information** **Action**

Receive an update regarding chronic wasting disease (CWD) from DFW. This update is meant to serve as a public education opportunity, as well as to educate FGC about possible future actions it may need to consider in order to control the disease.

Summary of Previous/Future Actions

- FGC prohibition on importation of cervid carcasses Aug 30, 2002; Oakland
- **Today receive presentation on CWD June 21, 2018; Sacramento**

Background

In 2002, FGC enacted regulations (Exhibit 1) to prohibit the importation of hunter harvested animal carcasses in the family cervidae, except for boned meat or processed cuts of meat, hides, and heads that have no part of the spinal column or brain attached to reduce the threat of CWD in California. Today, DFW will provide a presentation (Exhibit 2) on this deadly virus and how Californians can remain vigilant to prevent it from spreading.

CWD is a fatal neurologic disease of cervids (deer, elk, moose, reindeer) caused by a misfolded form of a normal protein. CWD belongs to a group of human and animal diseases called transmissible spongiform encephalopathies (TSE). Examples of TSEs in animals include bovine spongiform encephalopathy in cattle, also known as "mad cow disease," and scrapie in sheep and goats. Creutzfeldt-Jakob disease and a variant are examples of TSEs in humans.

An infectious disease of major concern for cervids, CWD may negatively impact these prey populations where it occurs. CWD can be spread through direct contact with infected individuals or through an environment contaminated with infectious material; carcasses and tissues of infected animals can spread the disease if left out on the landscape. The misfolded proteins are very stable and difficult to disinfect once in the environment.

While it has been detected in 24 states, 2 Canadian provinces, South Korea and Norway, neither California nor any neighboring states has had a case of CWD. Through legislation and geography, California is at relatively low risk for CWD; however, it has the potential to spread to California's deer and elk populations, and surveillance for the disease remains a priority for DFW. Legislation enacted and regulatory actions taken by California since the 1990s help keep the risk of importing the disease to a minimum, including regulating the importation of captive deer and elk (and other cervids), limiting what hunters can bring in from out-of-state hunts (no skull, no backbone), and banning the feeding of wildlife to prevent artificially congregating susceptible animals.

There have been no documented cases of a human infected with CWD. However, DFW and the Centers for Disease Control and Prevention (CDC) recommend that hunters do not eat meat from deer that test positive for CWD or otherwise appear sick, wear latex or nitrile gloves when field-dressing and processing animals, and wash their hands and disinfect tools after processing.

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CWD has continued to spread throughout North America (Exhibit 3), and states that are currently CWD-negative, such as California, must increase their surveillance, increase public awareness that this is a serious issue, and not wait until the virus is present to respond. With the number of California hunters that travel to CWD-positive states, California has the potential for CWD-positive animals to be brought into the state. Research involving human susceptibility may elevate the concern of consuming CWD-positive game, which requires us to increase public awareness of the risk.

Significant Public Comments (N/A)**Recommendation (N/A)****Exhibits**

1. [Regulatory text: Section 712. Restriction of Importation of Hunter-Harvested Deer and Elk Carcasses.](#)
2. [DFW presentation](#)
3. [Map with current distribution of CWD in North America, dated Apr 2018](#)

Motion/Direction (N/A)

§ 712. Restriction of Importation of Hunter-Harvested Deer and Elk Carcasses.

14 CA ADC § 712 BARCLAYS OFFICIAL CALIFORNIA CODE OF REGULATIONS

Barclays Official California Code of Regulations

Title 14. Natural Resources

Division 1. Fish and Game Commission-Department of Fish and Game

Subdivision 3. General Regulations

Chapter 3. Miscellaneous (Refs & Annos)

14 CCR § 712

§ 712. Restriction of Importation of Hunter-Harvested Deer and Elk Carcasses.

It is unlawful to import, or possess any hunter harvested deer or elk (cervid) carcass or parts of any cervid carcass imported into the State, except for the following body parts:

- (a) portions of meat with no part of the spinal column, brain or head attached (other bones, such as legs and shoulders, may be attached).
- (b) hides and capes (no spinal column, brain tissue or head may be attached).
- (c) clean skull plates (no brain tissue may be present) with antlers attached.
- (d) antlers with no meat or tissue attached, except legally harvested and possessed antlers in the velvet stage are allowed, if no meat, brain or other tissue is attached.
- (e) finished taxidermy mounts with no meat or tissue attached (antlers in the velvet stage are allowed if no meat, brain or other tissue is attached).
- (f) upper canine teeth (buglers, whistlers, ivories).

Note: Authority cited: Sections 200, 203, 240 and 2355, Fish and Game Code. Reference: Sections 200, 203 and 2355, Fish and Game Code.

HISTORY

1. New section filed 9-9-2002 as an emergency; operative 9-9-2002 (Register 2002, No. 37). A Certificate of Compliance must be transmitted to OAL by 1-7-2003 or emergency language will be repealed by operation of law on the following day.
2. Repealed by operation of Government Code section 11346.1(g) (Register 2003, No. 23).
3. New section filed 6-5-2003; operative 6-5-2003 pursuant to Government Code section 11343.4 (Register 2003, No. 23).
4. Amendment filed 6-20-2008; operative 6-20-2008 pursuant to Government Code section 11343.4 (Register 2008, No. 25).

This database is current through 5/25/18 Register 2018, No. 21

14 CCR § 712, 14 CA ADC § 712



Chronic Wasting Disease



Photo: Wrdn. Michael Hopper, Kansas Dept. of Wildlife, Parks & Tourism

Fish and Game Commission Meeting

June 21, 2018

Brandon Munk, MS, DVM

Wildlife Branch's Wildlife Investigations Laboratory

Presentation Overview

- Update on chronic wasting disease and California's preparations, specifically:
 - What is CWD and where is it currently
 - Why we should be concerned
 - What has California done
 - What are we doing

CWD is a Prion Disease

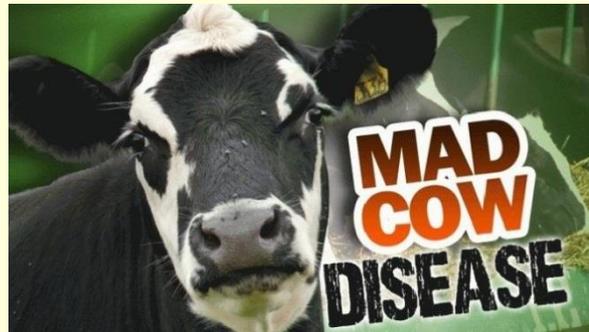
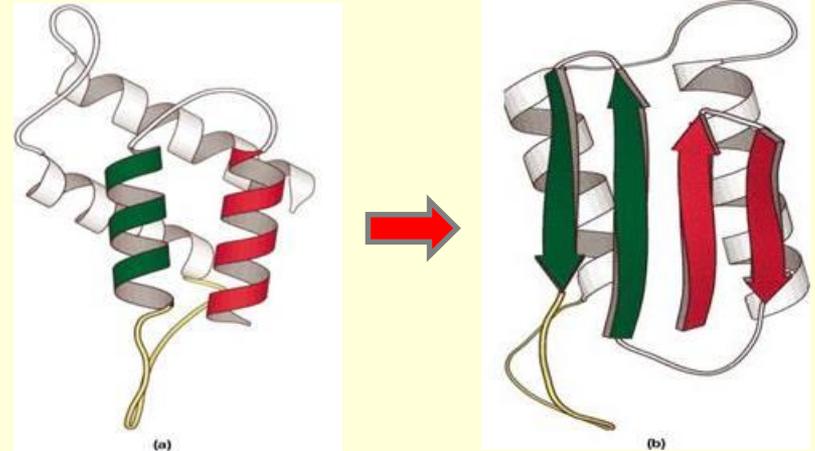
PRION = PRotein + infectION

Animal Examples

- Bovine Spongiform Encephalopathy
- Scrapie
- Chronic Wasting Disease (CWD)

Human Examples

- CJD and vCJD
- Kuru



<http://stylemagazine.com/>



<https://microbewiki.kenyon.edu/>

Clinical Presentation

- Wasted, emaciated
- Uncoordinated
- Head, ears lowered
- Excess salivation
- Abnormal behavior



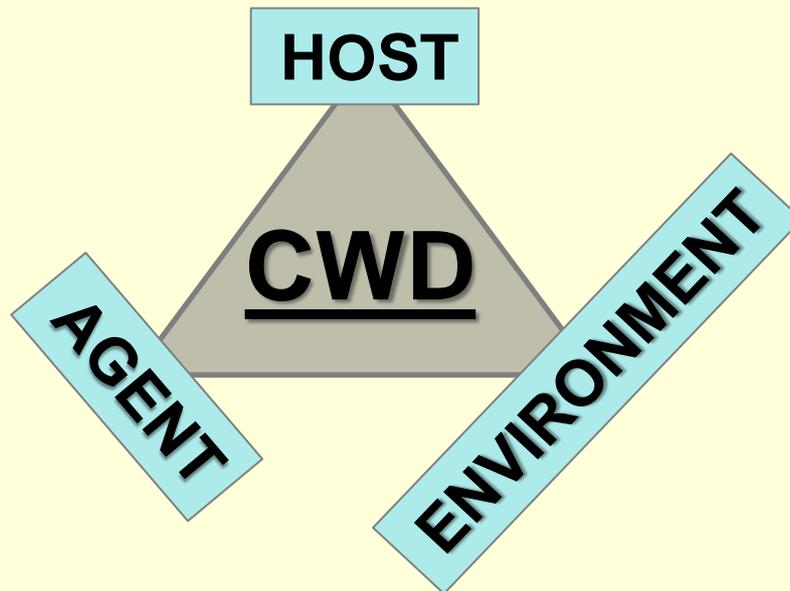
Photos: Dr. Terry Kreeger, Wyoming Game and Fish



Photo: Wisconsin Department of Natural Resources

Management Challenges

Extended incubation
Pre-clinical shedding
Behavior
Age
Genetics?

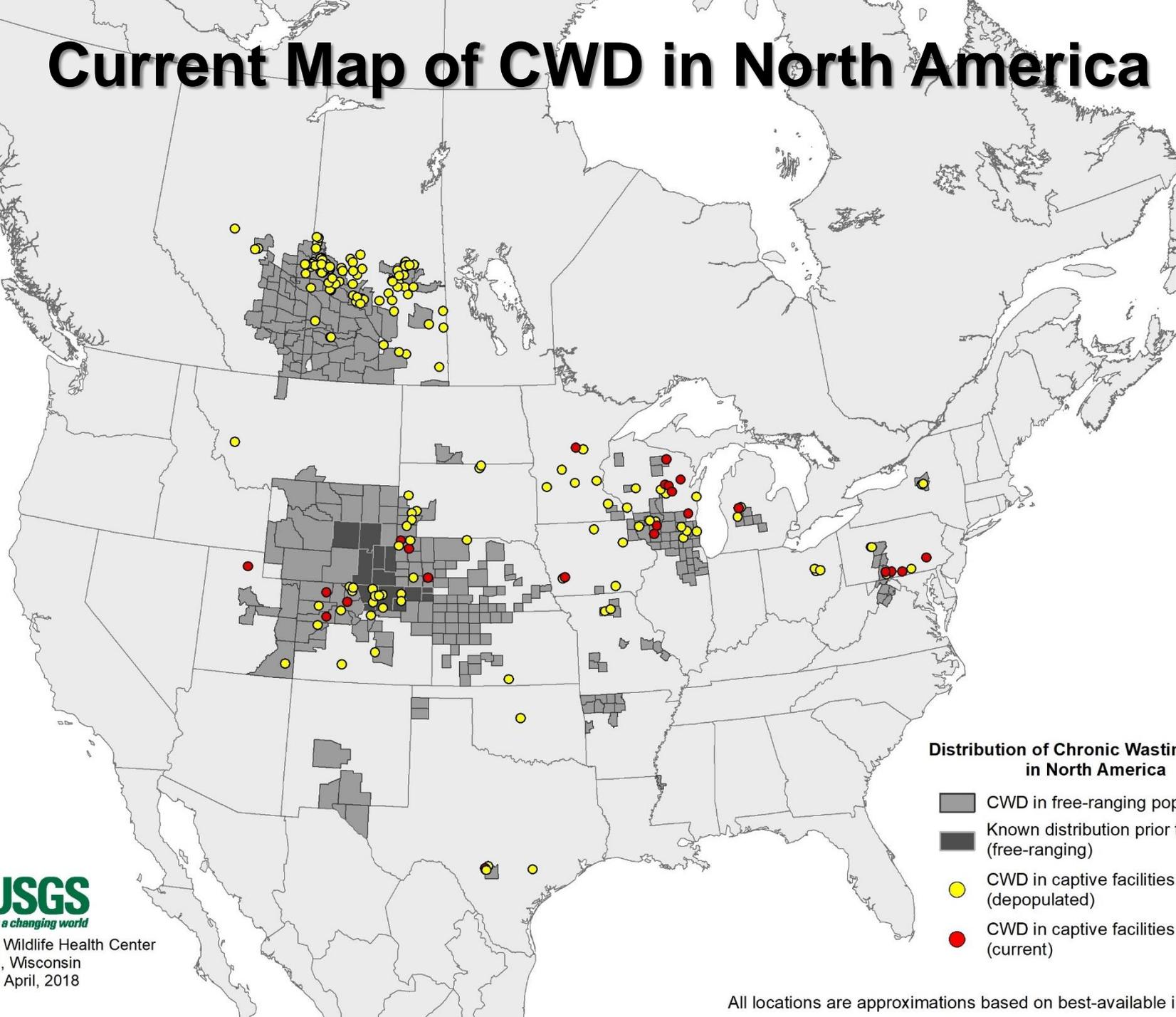


Robust
Persistent
Diff. strains
Vaccine?
Species
Barriers?



Congregation
Scavengers
Plant uptake?
Soil composition
Drought?

Current Map of CWD in North America



Distribution of Chronic Wasting Disease in North America

- CWD in free-ranging populations
- Known distribution prior to 2000 (free-ranging)
- CWD in captive facilities (depopulated)
- CWD in captive facilities (current)



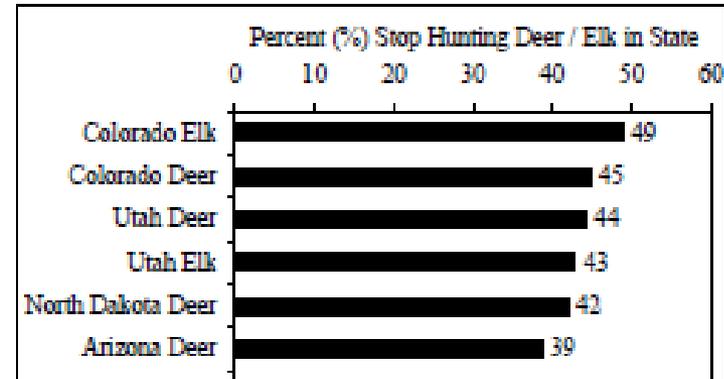
National Wildlife Health Center
Madison, Wisconsin
Updated April, 2018

All locations are approximations based on best-available information

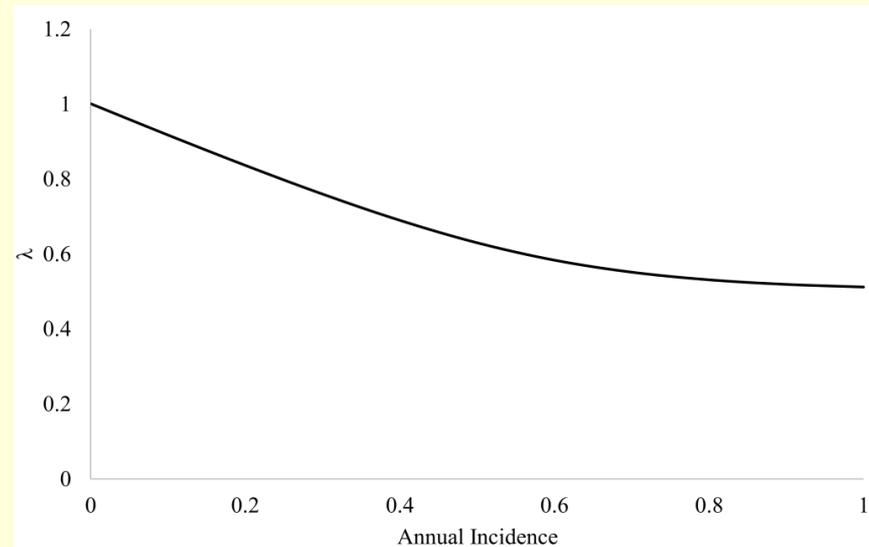
We should be concerned

- Continued spread
- No cure, no vaccine
- Management and surveillance challenge
- Decreased hunter participation
- Negative affects to native cervids
- Uncertain human health risk

Figure 4.1.1d. Percent of hunters that would stop hunting deer / elk in the state for Situation 4 (50% across the entire state)



WAFWA 2005. HDNRU Report No. 56



DeVivo et al 2017. *PLoS ONE* 12(10):1-17.

What California has done

Regulatory Measures

- Ban on native captive cervid farming
- Strict live cervid and hunter-harvest import regulations
- Ban on feeding big game mammals

Surveillance Activities

- Active surveillance 1999-2012
- Opportunistic surveillance 2012-2016
- Active surveillance re-boot 2017
- ~4,600 cervids tested since 1999
- **NO PRION DETECTED**

What we are doing

- CWD Task Force established
 - Current members - CDFW, FGC, and CDFA
 - Finalize an adaptive surveillance plan
 - Expand surveillance efforts
 - Draft CWD Response, Management, and Communication plans
 - Identify additional regulatory actions

Presentation Summary

- CWD continues to spread and is a significant threat to our native cervids
- Management is difficult and eradication may be impossible if established
- CA has test ~4,600 cervids since 1999, and NO CWD DETECTED
- CWD Task Force created to build surveillance capacity and produce CWD Response and Management plan

Questions



Thank You



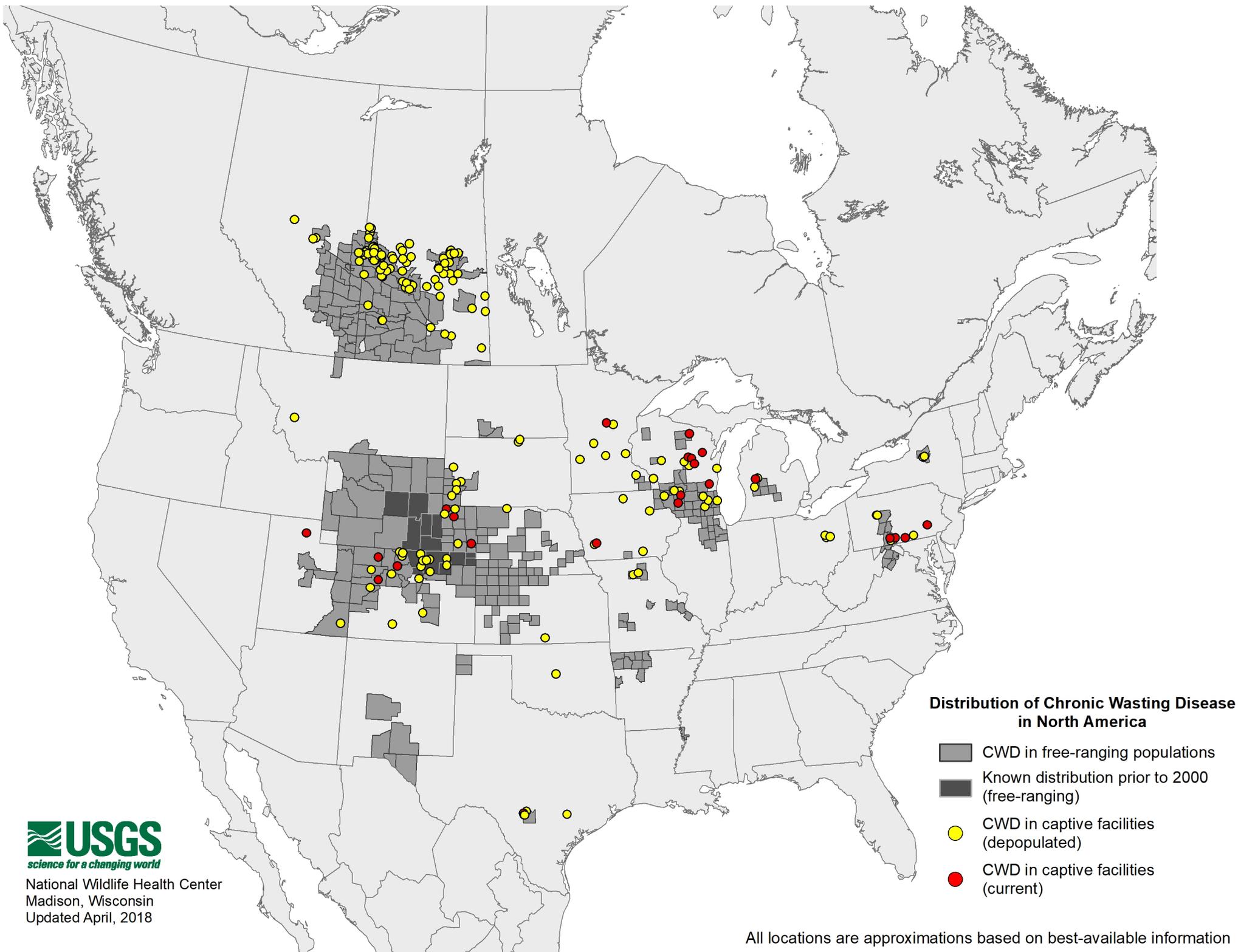
Photo: Jason Sumners, Missouri Department of Conservation

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National Wildlife Health Center
 Madison, Wisconsin
 Updated April, 2018

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