

Chronic Wasting Disease: An Ignored Epidemic

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INTRODUCTION

Chronic Wasting Disease (“CWD”) is an epidemic among free-ranging deer, elk, and moose throughout the United States and Canada.¹ As of January 2020, the Center for Disease Control and Prevention (“CDC”) provides CWD has been reported in at least twenty-four states in America, as well as two provinces in Canada.² In that same report, researchers found that CWD exists in 299 U.S. counties, many of which are concentrated in the Mid-West and Central Plains.³ This outbreak has even been found to have affected reindeer and moose in Norway, Finland, and Sweden, as well as a small number of cases in South Korea.⁴

A Colorado research facility first identified CWD in captive deer in the late 1960’s.⁵ By 1981, the disease had spread to wild deer and cervids as well, meaning it was no longer affecting only those captive deer that had been exposed to factors making the spread of the disease more likely.⁶ CWD primarily affects cervids, which are defined as “any member of the deer family, Cervidae, compromising deer, caribou, elk, and moose, characterized by the bearing of antlers in the male or in both sexes.”⁷ Interestingly, scientists have discovered CWD in both captive and free-range animals, making it the only prion disease of both farmed and wild animals of which scientists are aware.⁸

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¹ *Chronic Wasting Disease*, CTR. FOR DISEASE CONTROL AND PREVENTION (last updated Jan. 29, 2020), <https://www.cdc.gov/prions/cwd/occurrence.html> [<https://perma.cc/JD8A-WJG2>] [hereinafter CDC].

² *Id.*

³ *Id.*

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

⁷ *Cervid*, DICTIONARY.COM, <https://www.dictionary.com/browse/cervid> [<https://perma.cc/49EA-XUSE>] (last viewed Jan. 30, 2020).

⁸ *Chronic Wasting Disease*, SCIEDIRECT, <https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/chronic-wasting> [<https://perma.cc/28S8-4NJY>] (last viewed Jan. 30, 2020) [hereinafter SCIEDIRECT].

This Note focuses on why both federal and state governments should outlaw or ban “deer farms” or game ranching of cervids in the United States due to CWD. Part I describes CWD and those who it affects. Part II discusses what causes the spread of CWD among cervids. Part III assesses why the spread of CWD is significant, and why it needs to be curtailed. Part IV examines the current legal framework surrounding CWD. Finally, Part V analyzes what the federal and state legal framework should be surrounding CWD, specifically arguing that game ranching and cervid farming should be banned in the U.S.

I. CHRONIC WASTING DISEASE DEFINED

Chronic Wasting Disease is “a fatal, neurological illness occurring in North American cervids (members of the deer family), including white-tailed deer, mule deer, elk, and moose.”⁹ Both mature cervids, and sadly, even yearlings and fawns can contract CWD.¹⁰ In fact, yearlings and fawns often acquire the disease while still in utero from their mother.¹¹ CWD is a very contagious disease, and it is transmitted easily and freely within cervid populations.¹²

CWD is transmitted through both direct and indirect measures.¹³ It can be transmitted directly through animal-to-animal contact, but it can also be transmitted indirectly through contact with contaminated infectious material such as saliva, urine, feces, or carcasses of infected animals.¹⁴ Some report that it can even pass-through infected soil or hay.¹⁵ Generally, the disease is transferred by brain extracts from affected individuals into permissive host species.¹⁶

⁹ *What is Chronic Wasting Disease*, U.S. GEOLOGICAL SURV., https://www.usgs.gov/faqs/what-chronic-wasting-disease?qt-news_science_products=0#qt-news_science_products [<https://perma.cc/X7UT-YCRN>] (last viewed Jan. 30, 2020).

¹⁰ *Chronic Wasting Disease FAQ*, CWD-INFO, <http://cwd-info.org/faq/> [<https://perma.cc/G546-2HPQ>] (last viewed Jan. 30, 2020).

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

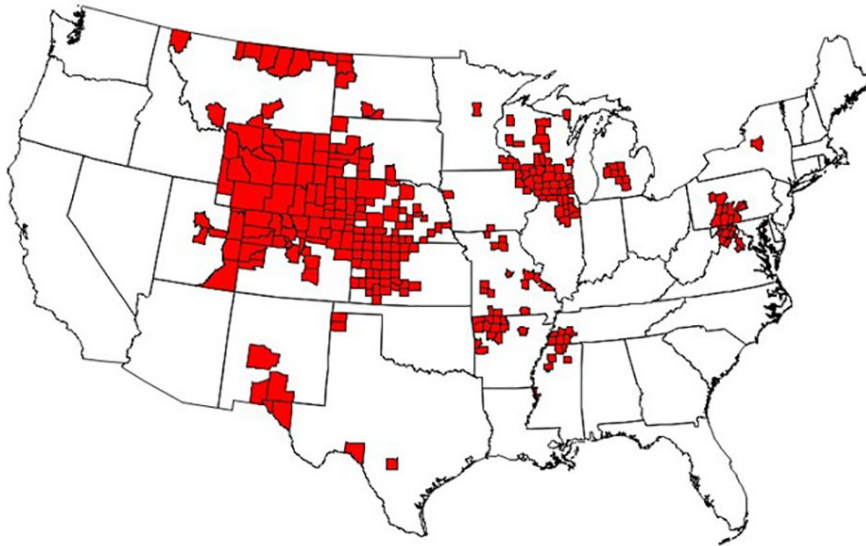
¹⁵ *CWD in Michigan*, THE MICH. DEPT OF NAT. RESOURCES, https://www.michigan.gov/dnr/0,4570,7-350-79136_79608_90516---,00.html [<https://perma.cc/HD62-47ZQ>] (last viewed Jan. 30, 2020) [hereinafter *CWD in Michigan*].

¹⁶ Adriano Aguzzi, Mario Nuvolone, and Caihong Zhu, *The immunobiology of prion diseases*, 13 NATURE REV. 888 (2013).

While this Note focuses on CWD in cervids, some researchers worry that other susceptible species may contract the disease at some point.¹⁷ Some of these species include primates, ferrets, cattle, sheep, cats, hamsters and more.¹⁸ At this point, however, these are simply susceptible animals and there are no confirmed cases in those species.

A. Chronic Wasting Disease Among Free-Ranging Cervids by County, United States, August 2020¹⁹

The CDC reports that as of August 2020, there were 315 counties in twenty-four states with CWD in free ranging cervids.²⁰ The CDC has provided the following map, gathering information from various sources:



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As shown in the map above, CWD has spread throughout the country since its inception, and it has seemed to concentrate

¹⁷ *Id.* at 889.

¹⁸ *Id.*

¹⁹ CDC, *supra* note 1.

²⁰ *Id.*

²¹ *Id.* (the CDC notes that the map is based on the best-available information from multiple sources, including state wildlife agencies and the United States Geological Survey).

in certain areas over time as it has become more prevalent.²² Mid-Western states like Wisconsin and Michigan have been harshly affected by CWD.²³ Plains states such as Wyoming, Colorado and Kansas have also been aggressively impacted by this devastating disease.²⁴ CWD is becoming more prevalent in areas where the disease has already been established in the past.²⁵

In 2009, researchers published summaries of harvest data showing the occurrence of the disease; these summaries displayed some shocking results that have serious policy implications moving forward.²⁶ The study showed that prevalence of the disease varied from 1.0-14.3 percent among mule deer, 1.0-2.4 percent in elk, and 1.0 percent among moose.²⁷ These results highlight the difficulty in analyzing this disease; when data is this unreliable, it becomes challenging to attack the problem.

Furthermore, the prevalence of CWD among captive deer can reach up to 90 percent in certain herds.²⁸ This is likely a result of “deer farms,” which are a huge factor in the spread and prevalence of this disease. Those in favor of deer farms counter that the disease has been found in wild animals that have lived for generations far from captive deer/elk farms.²⁹ This is, however, likely due to illegal importation of infected animals from states with CWD.³⁰ In fact, in heavily affected areas of Wisconsin, Wyoming, and Colorado, more than 40% of free-ranging cervids are infected.³¹ As a result, wildlife managers in those areas have noticed population declines in elk, mule deer, and white-tailed deer.³²

Two of the main issues with CWD are its contagiousness and the fact that it is untreatable.³³ Further, scientists and

²² *Id.*

²³ *Id.*

²⁴ *Id.*

²⁵ *Chronic Wasting Disease*, UNITED STATES GEOLOGICAL SURVEY, https://www.usgs.gov/centers/nwhc/science/chronic-wasting-disease?qt-science_center_objects=0#qt-science_center_objects [https://perma.cc/Z3F4-6RHJ] (last viewed Jan. 30, 2020) [hereinafter USGS].

²⁶ SCENCEDIRECT, *supra* note 8.

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

³¹ USGS, *supra* note 25.

³² *Id.*

³³ *CWD in Michigan*, *supra* note 15.

researchers continue to work to determine the origins of the disease, and as of 2020, there has been no confirmed origin of CWD despite many speculative theories.³⁴ Some think it may have developed out of a disease called “Scrapie,” which is a similar prion-related disease that occurs in domestic sheep.³⁵ Scrapie has been documented in the United States since 1947, and some think that CWD derived from that.³⁶ This could have occurred by deer coming into contact with scrapie infected sheep in the early 1900’s, but the world may never know how CWD originated.

Infected cervids deal with aggressive brain degeneration, which results in emaciation, odd behaviors, loss of regular body functions, and eventually death.³⁷ Further symptoms include stumbling, drooling, listlessness, drooping ears, lack of coordination, excessive thirst or urination, and the lack of fear of people.³⁸ Rapid weight loss is another symptom that is easily identifiable in infected cervids.³⁹

The symptoms referenced above do not actually occur in cervids until the CWD incubation period is over. CWD “incubates” in infected cervids for a period which averages between eighteen and twenty-four months.⁴⁰ During this incubation period, no noticeable signs are detectable, and the animals behave normally.⁴¹ In fact, infected animals typically show no symptoms until a few months before the end of the disease cycle.⁴² This causes great frustration in conservationists and researchers alike, because the majority of infected animals

³⁴ SCIEDIRECT, *supra* note 8.

³⁵ *Chronic Wasting Disease FAQ*, *supra* note 10.

³⁶ *Id.*

³⁷ *Id.*

³⁸ *CWD in Animals*, CTR. FOR DISEASE CONTROL AND PREVENTION (last updated Feb. 20, 2019), <https://www.cdc.gov/prions/cwd/cwd-animals.html> [<https://perma.cc/ZC26-AHZF>].

³⁹ *What are the visual signs of chronic wasting disease?*, UNITED STATES GEOLOGICAL SURVEY, https://www.usgs.gov/faqs/what-are-visual-signs-chronic-wasting-disease?qt-news_science_products=0#qt-news_science_products [<https://perma.cc/LQ68-G493>] (last viewed Jan. 30, 2020) [hereinafter *What are the visual signs of chronic wasting disease?*].

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Chronic Wasting Disease FAQ*, *supra* note 10.

are nearly impossible to differentiate from healthy animals, making research on the disease extremely challenging.⁴³

The symptoms that do start to occur usually cause premature death before the disease itself becomes fatal, because the deteriorating neurological system of the infected animal makes it much more prone to predators, vehicle collisions, and other diseases.⁴⁴ This makes tracking and compiling data on infected populations quite difficult for scientists and researchers. What is even worse is that when the symptoms do occur, it is still tough to diagnose.

Cervids infected with CWD exhibit symptoms that are typical of many diseases, leaving it prone to misdiagnosis unless the animal is specifically tested for CWD.⁴⁵ In fact, right now the only way to conclusively diagnose CWD involves an exam of the brain, tonsils, or lymph nodes.⁴⁶ The problem with this system of testing is that those tissues are not accessible by researchers until after the death of the cervid.⁴⁷ This is a massive hinderance on preventing the spread of CWD, and highlights the need for comprehensive federal policy to attempt to negate the spread and proliferation of this devastating disease.

Another huge issue is that CWD currently does not have a cure. Once contracted, CWD is fatal and there is no cure or recovery for infected animals.⁴⁸ Many people have speculated that this “zombie-disease” will spread to humans or other animals, but as of 2019, no such evidence exists.⁴⁹ This fear of transmission to humans likely relates to the diseases similar to “mad-cow disease” and “Creutzfeldt Jakob” disease, the latter of which can actually occur in humans.⁵⁰ However, no such transmission to humans or other types of animals has occurred. This fear, along with others, should prompt the state and federal government to finally take action on CWD.

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *What are the visual signs of chronic wasting disease?*, *supra* note 39.

⁴⁶ *Chronic Wasting Disease FAQ*, *supra* note 10.

⁴⁷ *See id.*

⁴⁸ *Cervids: Chronic Wasting Disease*, UNITED STATES DEPARTMENT OF AGRICULTURE (last updated Nov 27, 2018), <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information> [<https://perma.cc/NRJ4-H9C9>].

⁴⁹ *Chronic Wasting Disease FAQ*, *supra* note 10.

⁵⁰ USGS, *supra* note 25.

In order to properly understand the potential impact of this fatal disease, it is important to understand its biology. CWD is a member of the family of diseases called transmissible spongiform encephalopathies (“TSE’s”), and scientists believe it is caused by prions.⁵¹ It is the only known TSE to affect free-ranging wildlife.⁵² Prions are defined as “unconventional pathogenic agents that are comprised mostly, if not entirely, of an abnormal, infectious form of a normally occurring host protein called a prion protein.”⁵³

Prion proteins are found in abundance within mammalian brain and central nervous system tissues.⁵⁴ All mammals produce normal prions that are used by the cells.⁵⁵ The unfortunate difference in animals affected by CWD is simply the misfolding of a prion protein.⁵⁶ Typically, in unaffected animals, normal prions are used by the cells and later “recycled” within the body.⁵⁷ When diseased prions come into contact with normal prions, however, issues begin to form.⁵⁸ When this occurs, the diseased prions cause the normal prions to refold into the diseased prions’ abnormal shape.⁵⁹

The diseased prions are not “recycled” as the regular prions are, and thus tend to accumulate in and negatively affect lymphatic and nervous system tissues.⁶⁰ This, often times, leads to cachexia, which is a severe decrease in body mass, including both fat and lean body mass together with muscle.⁶¹ Because of these debilitating symptoms, death typically occurs within a few months of the appearance of these signs.⁶²

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *What causes chronic wasting disease?* UNITED STATES GEOLOGICAL SURVEY, https://www.usgs.gov/centers/nwhc/science/chronic-wasting-disease?qt-science_center_objects=0#qt-science_center_objects [https://perma.cc/R4XY-823R] (last viewed Nov. 8, 2020).

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ SCIENCE DIRECT, *supra* note 8.

⁶² *Id.*

More broadly, diseases like CWD are caused by prions, which inflict fatal neurodegenerative conditions.⁶³ Once CWD has been acquired, prions are typically first located in lymphoid tissues.⁶⁴ From there, the prions begin to attack the nerves of the autonomic nervous system.⁶⁵ By exploiting the autonomic nervous system, the prions are able to reach the central nervous system, which is where they have their toxic effect.⁶⁶

Histologic lesions are also quite common in cervids infected with CWD.⁶⁷ These lesions include “widespread spongiform change of the brain—i.e., neuronal vacuolation—as well as astrocytic hypertrophy and hyperplasia and microgliosis.”⁶⁸ In other words, these lesions have massive effects on the brains of infected cervids. Further, those infected with CWD hold prion aggregates in many of their organs, including the adrenal gland, muscles, lymphoid tissues throughout the body, the pancreas and peripheral nerves.⁶⁹ At three months, prions in the tonsils, lymph nodes, and Peyer’s patches of cervids can be detected by oral exposure.⁷⁰ At six months, prions can still be detected in the dorsal motor nucleus of the vagus nerve.⁷¹ This shows how easily the disease can be spread. By lingering in the cervids’ system, the disease has the opportunity to spread by coming into contact with more animals than it would have if the prions were not retained for such a long duration.

II. THE SPREAD OF CHRONIC WASTING DISEASE

The issue of who, or what, is responsible for the spread of Chronic Wasting Disease is hotly debated among conservationists, hunters, farmers, scientists, and many other interested parties. The transmission of CWD is not an exact

⁶³ See Adriano Aguzzi, Mario Nuvolone, & Caihong Zhu, *The immunobiology of prion diseases*, 13 NATURE REV. 888 (2013), <https://www.nature.com/articles/nri3553> [<https://perma.cc/82TY-72DR>].

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ SCIEDIRECT, *supra* note 8.

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

science; mystery surrounds the transmission of the disease.⁷² Lateral transmissions (animal-to-animal) are most common, but vertical transmissions (from mother to offspring) also occur.⁷³

There are many factors which induce the spread of CWD, but some factors have considerably worse consequences than others. There is extremely strong circumstantial evidence indicating that CWD has spread from captive cervids to wild cervids.⁷⁴ Some of this evidence includes the fact that when populations of cervids become dense, as they do in “deer farms,” the disease is more prevalent.⁷⁵ This is why many states with prevalent CWD problems have outlawed or significantly curtailed the use of bait in hunting for cervids.⁷⁶ Population density has been shown to increase both the direct and indirect transmission between animals, so it makes sense that some states have made these changes. Other states still lag behind, but if a real impact is to be made, sweeping federal policy is needed.⁷⁷

Still, others argue that contaminated pastures lead to spread of the disease.⁷⁸ While this certainly may be true now, after the disease has been present for many years, this seems to be attacking the symptom rather than attacking the virus. The only reason the soil has become contaminated is because the disease has been prevalent for so long. If you cut off the proverbial “head” of the disease, you destroy the body. Legislatures should focus their attention on the source of the problem, not the symptoms. Once the source has been eradicated, it would seem appropriate to attack the issue of contaminated soils.

Last, transmission of CWD is exacerbated by the movement of live animals, both naturally and unnaturally.⁷⁹ Of course, natural movement of cervids is a huge cause of the diseases’ spread, but this cannot be avoided if we accept that animals will act as they always have, continuing to move from location to location. What can be prevented, however, is human-

⁷² *Chronic Wasting Disease FAQ*, *supra* note 10.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *See id.*

⁷⁷ *Id.*

⁷⁸ *Chronic Wasting Disease FAQ*, *supra* note 10.

⁷⁹ *Id.*

aided transportation of captive and wild cervids. The practice of human-aided transportation of live and captive cervids adds an unfortunate and completely preventable risk factor to the already tumultuous environment in which wild cervids find themselves. Finally, it is important to know what is causing the spread of CWD, so that legislatures and agencies can allocate resources accordingly to first attack the source of CWD, and then try to stop the hemorrhaging.

The main cause of the spread of CWD is population density.⁸⁰ However, population density can be exacerbated by a number of causes, including deer farms (also known as “game ranches” or “game farms”), baiting, agriculture, and many others.⁸¹

First, it is important to define what really happens at these game ranches. Typically, these ranches involve the “management of tracts of private land for the purpose of increasing the numbers of wild deer or elk that use that land.”⁸² The animals technically remain a public resource, but access to them is typically restricted by fencing and/or landowners simply restrict access to their land.⁸³ Some of these operations, however, are more analogous to cattle ranching. In those situations, the farmer’s land is fenced in, and the practices involve the “direct husbandry of a privately-owned deer or elk herd.”⁸⁴ This type of operation is most troubling to wildlife managers, as it often times becomes a source of disease.⁸⁵ There are essentially three purposes behind these game-ranched cervids: 1) they are harvested for their meat and/or other products; 2) they are raised, and then hunters come in and do what is called a “canned hunt” (typically involves hunting within a fenced-in area); or 3) they are raised for sale.⁸⁶

While agriculture likely will not be completely overhauled to fix this problem, legislators and everyday people can make a difference by altering deer farm and baiting practices. In Ontario

⁸⁰ *Id.*

⁸¹ Ronald W. Opsah, *Comment: Chronic Wasting Disease of Deer and Elk: A Call for National Management*, 33 ENVTL. L. 1059, 1081–82 (2003).

⁸² *Id.*

⁸³ *Id.* at 1074.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

for example, a hunting group (The Ontario Federation of Anglers and Hunters) has continuously called for the phasing out of deer farms – due to the industry’s strong contribution to the spread of CWD.⁸⁷ Their spokesperson, Keith Munro, a biologist who specializes in white-tailed deer, said recently in an interview with Radio-Canada that “[r]ather than trying to fix all the little problems, the real effective solution is to phase out the industry.”⁸⁸ He further stated that “CWD is one of the greatest threats to wildlife health that we have right now. It’s an incurable, 100 percent fatal disease that affects all members of the deer family.”⁸⁹

Others disagree, however, and think that eliminating deer farms, or even curtailing them, would not produce the desired effect of slowing the movement of CWD.⁹⁰ Eliminating/curtailing deer farms would certainly positively impact areas in which no CWD exists. However, in areas where there is already CWD present, “[p]hasing out deer farms would not impact the disease on the ground where it exists today...” said Bryan Richards, a biologist who works with the USGS National Wildlife Health Center, which is the American government agency that tracks outbreaks of infectious diseases like CWD in North America.⁹¹

Further, Debbie McKenzie, an associate professor of biology at the University of Alberta, has been studying CWD for almost 17 years and stated, “I’m not sure at this point that phasing out the farms in areas where CWD is already present is going to help.”⁹² McKenzie further expressed that there are a number of cases where farmed deer and wild deer are within close proximity of each other and that fencing will not prevent further spread of the disease.⁹³

While it is true that better fencing of deer farms may not prevent the spread of CWD from those deer farms to wild populations, it is also true that eliminating those deer farms

⁸⁷ *Should deer farming be abolished to halt chronic wasting disease?*, YAHOO!NEWS (Dec. 30, 2019), <https://ca.news.yahoo.com/deer-farming-abolished-halt-chronic-090000624.html> [<https://perma.cc/ZE7V-HL2M>] [hereinafter YAHOO!NEWS].

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.*

⁹³ YAHOO!NEWS, *supra* note 87.

could curb much of the future spread of the disease. This is because many experts opine that deer farms are the breeding ground of CWD, and while the disease has been spread over time, if we could eliminate the source to the greatest practical degree, experts could begin to work on treatments rather than preventing the disease's spread.

Further, just because eliminating deer farms might not help in areas with significant affected populations, it does not mean that banning deer farming is moot. In fact, it could help prevent the spread of CWD into new areas, which is potentially more important long-term than affecting where it exists currently. If North America cannot contain the spread of CWD, it will eventually infect the entire cervid population and will have a huge impact on wildlife as a whole.

Nature is a delicate balance, and one animals' population issues can disparately impact many other plants and animals. Keeping the cervid population healthy is vital to that balance, as well as vital to hunters. In places like Wisconsin, Minnesota, and Iowa, deer-hunting is a cultural event that has been taking place for generations. Not only is it culturally important in those areas, but for many, deer meat is a staple to the diets of people who might not be able to afford to purchase all of their food. The loss or incapacitation of the cervid population would disparately affect those who need venison to survive, as well as anyone else who enjoys nature in its most pristine condition.

As mentioned above, the transportation of live cervids is also a huge factor in the spread of CWD. Different states are tackling transportation in different ways, with varying impacts. For example, the state of Minnesota has recently made an unprecedented move in curtailing CWD.⁹⁴ State Wildlife officials have issued a 30-day rule that forbids the transportation of any farm-raised white-tailed deer anywhere in the state.⁹⁵ This is the first time the DNR has ever made such a proclamation, which shows the seriousness of the issue currently.⁹⁶

⁹⁴ Matt McKinney, *State DNR slaps temporary ban on movement of farm-raised deer, following chronic wasting death*, STARTRIBUNE (Dec. 23, 2019), <http://www.startribune.com/state-dnr-slaps-temporary-ban-on-movement-of-farm-raised-deer-following-chronic-wasting-death/566437142/?refresh=true> [https://perma.cc/4XD4-AEBF].

⁹⁵ *Id.*

⁹⁶ *Id.*

Sarah Strommen, DNR Commissioner of Minnesota, thinks that the emergency rule is needed because previous efforts to stop the spread of CWD have not worked.⁹⁷ Strommen is quoted as saying, “I think it’s become apparent that addressing this farm-by-farm, positive-deer-by-positive-deer, simply isn’t working.”⁹⁸ At this point, small measures addressing deer farms and transportation of cervids are simply too little too late. It is essentially slapping a band-aid on a large cut; it might stop the bleeding temporarily, but it will not heal the cut. Within a three-year period, Minnesota has gone from having no confirmed CWD cases in wild deer to fifty-eight confirmed cases.⁹⁹

CWD was first observed in Minnesota in 2002, but it mainly affected the states deer farms.¹⁰⁰ Minnesota is now finally seeing the dissemination of the disease from farm to wildlife, and this illuminates just how these farms spread the disease, even if it is inadvertent. Minnesota’s three recent CWD outbreaks in *wild* deer have been linked by the DNR to deer/elk farms near Rochester, Winona, and Brainerd, Minnesota respectively.¹⁰¹ This is a prime example of how deer farms presence in areas without any CWD prevalence can cause the disease to start in a cervid farm, and thereby spread to wild cervid populations.

Minnesota currently has 339 deer and elk farms, many of which are family owned and operated, causing fierce debate within the state over how to handle cervid farms and CWD.¹⁰² One of the farms linked to the Minnesota outbreak listed above stayed in business for more than two years after the disease was discovered in their herd.¹⁰³ This means that for over two years the farm was completely operational, even though CWD had been detected in its cervid population and the likelihood of outbreak in an otherwise clean state was imminent. The need for stronger laws governing cervid farms and transportation are obvious after reading stories such as this, where basic common sense could have prevented the spread of CWD into otherwise unaffected wildlife.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ McKinney, *supra* note 94.

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

Iowa has taken a slightly different approach to the CWD issue in their state. The Iowa Department of Natural Resources has tested over 74 thousand animals total for CWD since 2002.¹⁰⁴ They found that CWD currently affects the wild cervid population in four Iowa counties: Allamakee, Clayton, Dubuque, and Wayne.¹⁰⁵ Iowa began testing captive deer and elk in 2002 to monitor the disease.¹⁰⁶ The last confirmed case of CWD in captive populations was in 2016, until a recent outbreak in two separate southeastern Iowa farms.¹⁰⁷ These farms were participating in the voluntary chronic wasting disease surveillance program, which required them to test any deer that died on their farms.¹⁰⁸

After finding CWD on these two farms, officials must now “destroy” the captive white-tail deer herds where CWD has been confirmed.¹⁰⁹ Many argue that these farms are humane, but when states must kill entire captive herds because CWD has been found on that farm, it is not humane or fair. Moving forward, more and more cervid farms will encounter this issue. This will cause states, like Iowa, to take drastic measures to stop the spread of CWD. Iowa is doing what it must, as inhumane as it feels, to stop the spread of this terrible disease to wild cervids. These farms have put government agencies and legislatures in between a rock and a hard place.

The Iowa Department of Agriculture and Iowa DNR must now kill two complete herds to prevent the spread of a disease that likely would not even be in the state without deer farms in the first place. This type of story will become more commonplace as states without the disease in wildlife populations, that have cervid farms, start to see the disease escalate and extend to wild populations.

Finally, experts also believe that “baiting” deer or other cervids leads to the spread of CWD. “Baiting” can be defined differently depending on the animal being baited, but deer

¹⁰⁴ Donnelle Eller, *Chronic wasting disease confirmed in two captive white-tail deer farms in southeast Iowa*, DES MOINES REGISTER (Nov. 22, 2019), <https://www.desmoinesregister.com/story/money/agriculture/2019/11/22/chronic-wasting-disease-confirmed-two-iowa-farms-captive-deer/4273118002/> [https://perma.cc/ZD7F-Z6CX].

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

baiting is generally defined as placing foodstuff—commercial (often marketed as deer attractants) or natural (corn, apples, etc.)—on the ground to attract deer to an area.¹¹⁰ Many states have outlawed or curtailed deer and cervid baiting because of the effect it has on population density.¹¹¹ Deer baiting can create an “unnatural congregation of deer” which facilitates the transfer of CWD through both direct and indirect contact.¹¹²

Currently, of the fifty states, twenty-two states allow the use of deer baiting in selected parts of the state, or even the entire state in certain cases (fourteen of these states allow state-wide deer baiting, eight states only allow it in specific areas).¹¹³ The remaining twenty-eight states do not allow deer baiting in any capacity, with many of those states banning baiting for disease prevention reasons.¹¹⁴

Even simply feeding deer, just out of kindness or otherwise, and not for hunting purposes, can help cause the spread of CWD.¹¹⁵ For example, in Arkansas, a state law went into effect making it illegal to put out food, scents, lures, grains, minerals or pellet feed for the purpose of enticing, hunting or attracting wildlife.¹¹⁶ While compliance is a huge issue with these laws, it is a step in the right direction of preventing the spread of CWD.

As illuminated above, there are a number of factors which cause the spread of CWD. Population density is the main factor, but population density is exacerbated when practices like deer farming and deer baiting are allowed. In order to curtail the

¹¹⁰ Gary Garth, *Deer Baiting*, KENTUCKY MONTHLY (Oct. 31, 2016), <http://www.kentuckymonthly.com/explore/field-notes/deer-baiting/> [<https://perma.cc/W5LG-LGDT>].

¹¹¹ *Id.*

¹¹² *Code Compliance To Respond To Deer Feeding And Baiting Reports Within City Limits*, 5NEWS (Dec. 30, 2019), <https://5newsonline.com/2019/12/30/code-compliance-to-respond-to-deer-feeding-and-baiting-reports-within-city-limits/> [<https://perma.cc/4FXW-Y788>].

¹¹³ *Deer Baiting Laws in 50 States – State Deer Baiting Regulations*, OUTDOOREVER, <https://outdoorever.com/deer-baiting-laws/> [<https://perma.cc/V3ZG-K5AQ>] (last viewed Jan. 30, 2020).

¹¹⁴ *Id.*

¹¹⁵ Stacy Ryburn, *City calls on residents to obey state’s law, stop feeding deer*, ARKANSAS DEMOCRAT GAZETTE (Dec. 30, 2019), <https://www.arkansasonline.com/news/2019/dec/30/feeding-deer-hurts-more-than-it-helps-f-1/?latest> [<https://perma.cc/ZQ5Q-6DRT>].

¹¹⁶ *Id.*

population density issues, the reasons for the population density (deer farming and baiting) must be resolved.

III. THE SIGNIFICANCE OF CHRONIC WASTING DISEASE

There are a number of reasons that explain why legislators, and the public at large, should care deeply about this issue. The first is the conservation of our natural resources. Cervids are hunted by many throughout the United States and serve as a substitute for purchased foods for many, including some who otherwise might not be able to afford the type of protein that cervids provide.

Second, Chronic Wasting Disease will have a devastating effect on cervid populations if it is allowed to continue thriving, as our government has allowed for the past 40 years. A healthy cervid population is vital for hunters, conservationists, and anyone who enjoys nature. Third, the decline of the cervid population will have a massive effect on other plants and animals. The animals who prey on cervids, the plants that cervids eat, and the other functions that cervids provide will be severely altered if the current cervid farming practices are continued.

Fourth, many hunters think that it is perfectly acceptable to eat meat from a cervid infected with CWD. While there have not been any cases of CWD transferring from cervids to humans, the Center for Disease Control and Prevention strongly urges against the eating of cervids infected with CWD¹¹⁷. In fact, the CDC is quoted as saying “[i]f CWD could spread to people, it would most likely be through eating of infected deer and elk.”¹¹⁸

This implies that there is a possibility that CWD could mutate and transfer to other wild animals, or even humans if given the right environment. Further, CWD could certainly eventually transfer to livestock, and the devastation this would cause on a world stage is unfathomable. If livestock were to contract CWD, we would likely see similar situations to the Mad Cow epidemic, whereby livestock was killed and put in mass

¹¹⁷ CDC, *supra* note 1.

¹¹⁸ *Id.*

graves because of the potential devastation and spreading of Mad Cow disease.¹¹⁹

Finally, the financial impact it could have if left untreated is difficult to quantify. Whit Fosburgh, President and CEO of the Theodore Roosevelt Conservation Partnership, wrote in a Legislative Hearing to create a Chronic Wasting Disease Task Force that “CWD is the single greatest threat to hunting and conservation in America today.”¹²⁰ For all of these reasons, it is vital that our government take steps to ensure this fatal disease does not continue to spread, and that we find a solution to eradicate CWD as soon as possible.

IV. CURRENT FEDERAL AND STATE POLICY FOR CHRONIC WASTING DISEASE

One of the biggest issues with Chronic Wasting Disease is that it was allowed to spread for many years, without almost any government oversight. Further, because much of this issue is governed by state law at this point, inconsistencies from state to state have allowed for the prevalence of CWD we see today. Much of what exists currently in terms of regulation is focused on the transportation of cervids, rather than attacking the source, which is game ranches. However, the U.S. is finally pushing its federal government to create legislation that will ameliorate these issues, and Congress is starting to take notice.

The legislature is finally becoming aware of the problem, but no real action has been taken. Congress introduced the Chronic Wasting Disease Management Act, which is certainly a step in the right direction.¹²¹

In 2017, Wisconsin representative Ron Kind sponsored H.R. 4454: Chronic Wasting Disease Management Act, which was supposed to “support state and tribal efforts to develop and implement management strategies to address chronic wasting

¹¹⁹ Charles Arthur, *Graves of 6,000 mad cows revealed*, INDEPENDENT, (Apr. 30, 1997), <https://www.independent.co.uk/news/graves-of-6000-mad-cows-revealed-1270071.html> [<https://perma.cc/R8TM-8E92>].

¹²⁰ *America’s Conservation Enhancement Act, Hearing on a bill to create a U.S. Fish and Wildlife Service Chronic Wasting Disease Task Force Before the S. Environment and Public Works Comm.*, 116th Cong. (2019-2020) (statement of Whit Fosburgh, President and Chief Executive Officer, Theodore Roosevelt Conservation Partnership).

¹²¹ Chronic Wasting Disease Management Act, H.R. 4454, 115th Cong. (2017).

disease among deer, elk, and moose populations, to support research regarding the causes of chronic wasting disease and methods to control the further spread of the disease, and for other purposes.”¹²² The bill was last referred to the Subcommittee on Livestock and Foreign Agriculture, where it was halted.¹²³

More recently, the Chronic Wasting Disease Management Act has reemerged. On March 6, 2019, Senator Jon Tester of Montana introduced Senate Bill 689.¹²⁴ The Bill was read twice and then referred to the committee on Agriculture, Nutrition, and Forestry.¹²⁵ Since then, the legislature has taken no action.¹²⁶ First, this proposed Bill leaves the states with policymaking authority with regard to “wildlife” management.¹²⁷ This is mischaracterizing the problem as one in which wildlife is a cesspool of disease, while farmed cervids are not considered as part of the problem. The Bill does briefly mention captive cervids, but there are no additional restrictions on game ranches or other types of cervid farming.¹²⁸ Further, the line between “wildlife” and “livestock” is blurred when we allow the exact same species to be both wild and captive, often times in similar areas.

It is clear that if the government were to define this issue based on the true source of CWD, which is game ranches, the supremacy and commerce clauses would grant the federal government the power to prohibit cervid farming federally. A piecemeal, state by state approach, as the Chronic Wasting Disease Management Act contemplates, will not eradicate CWD. Further, states are completely hamstrung in terms of funding, often diverting funds from other areas and using those funds on CWD research and intervention.¹²⁹ Even when the states have good intentions, the resources are simply lacking for a problem that many do not know about, and many others seem not to care about. There are now at least five bills in the Senate that deal

¹²² Chronic Wasting Disease Management Act, S.B. 689, 116th Cong. (2019).

¹²³ H.R. 4454.

¹²⁴ S.B. 689.

¹²⁵ *Id.*

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Hearings, supra* note 120 (statement of Whit Fosburgh).

directly or indirectly with CWD, but none of them contain the vigor or boldness required to truly address CWD.¹³⁰

The problem with the policies being put into prospective bills is that they are retroactive rather than proactive. The legislature seems preoccupied with attempting to determine the problem's scope first, rather than taking measures now that would inhibit the diseases spread. While more research and "scope defining" is necessary, it should be accompanied by strict regulation on the farming and transporting of cervids.

The legislature's efforts here are analogous to studying the effects and scope of wildfires while forests burn all around you, and not enacting any measures or taking any action to stop the fires or fight the source. These weak attempts at curtailing CWD will not enact the change for which scientists and conservationists are calling. Part V below will elaborate on the necessary steps the legislature must take moving forward to first stop the spread of CWD, and second, eradicate the disease.

V. A PLAN FOR THE FUTURE

The states who have been affected by Chronic Wasting Disease have been attempting to fix this problem for many years. It should be clear by now that state regulation is not the proper remedy for a problem of this magnitude. While this issue is localized, broad and sweeping federal change is necessary to fight the spread of CWD. State agencies could certainly enforce the laws, but the funding and planning must take place at the federal level if the remedies are to be successful.

The first, and most profound change, is to ban cervid farming or game ranching entirely. Essentially, this would rely on a bill stating that cervid-species animals could not be contained within fencing or otherwise contained for the purpose of farming, and are only to be harvested by hunters, governed by applicable state law.

In Wisconsin, for example, one of the states hardest hit by CWD, some are already calling for a deer farm ban.¹³¹ In Hurley,

¹³⁰ *Id.*

¹³¹ Richard Jenkins, *Iron County committee recommends deer farm ban*, YOUR DAILY GLOBE (Jan. 18, 2019), <https://www.yourdailyglobe.com/story/2019/01/18/news/iron-county-committee-recommends-deer-farm-ban/11566.html> [<https://perma.cc/5BUC-BUN3>].

Wisconsin, the Iron County Board of Supervisors are considering a temporary ban on deer farms to attempt to stop the influx of the disease.¹³² Elsewhere, in Sawyer County, Wisconsin, locals urged state officials to ban deer and elk farms “in order to prevent the spread of chronic wasting disease” in cervids.¹³³ Many people who are not outdoorsmen and women are unaware of this issue, but there is a grassroots movement among hunters and conservationists alike to do exactly what is outlined here: ban cervid farming and fenced deer enclosures.

This cervid farming ban would not necessarily need to be permanent. Once the disease is under control and mitigated, a reintroduction of cervid farming could be an option. It is important to note, however, that CWD is exacerbated by population density, so legalizing deer farming after banning it may not be the best idea. States will never want to pass this legislation, as it will impact the livelihood of cervid farmers that live there. It would be framed as big government taking over the little farmer’s farm, and it could be very unpopular among voters.

The federal government, however, has the broad authority to make these changes, and overall, is less accountable (in terms of day-to-day life) to its constituents than local government. The commerce clause gives the federal government broad authority to regulate interstate commerce, and as such would give them the power to regulate cervid farming. Cervids are often transported from one state to another, and even in the wild, this transportation occurs as hunters transport cervids across state lines as well. A ban on cervid farming is the first strategic move the federal government should make to start the process of eradicating CWD.

The next strategy which should be employed is one that is already in motion, through the Chronic Wasting Disease Management Act. This act will give funding to the states for research and intervention measures to tackle the disease, and funding is based on prevalence of CWD in the state. The affected

¹³² *Id.*

¹³³ Terrell Boettcher, *Deer Farm ban urged at Sawyer County hearing*, SAWYER COUNTY RECORD (Apr. 13, 2016), https://www.apg-wi.com/sawyer_county_record/sports/outdoors/deer-farm-ban-urged-at-sawyer-county-hearing/article_d4d2487c-0187-11e6-928b-ebb8a6f49be2.html [https://perma.cc/D2M2-5JHE].

states have been attempting to fix the issue, but funding and other resources like human capital are lacking in regard to fighting CWD. Much of this money should go to research and people out in the field tracking this issue, but there should also be money allocated to the enforcement of compliance for the transfer of cervids. The Chronic Wasting Disease Management Act must be passed, so that the states have the necessary resources to fight CWD.

Finally, the last step that should be taken to stop the spread of CWD is to allocate resources to local conservation groups, both governmental and non-governmental, to make sure hunters are complying with hunting regulations as they relate to CWD. For example, this would encompass enforcing laws already on the books such as baiting laws or how to properly dispose of infected cervids.

Compliance in hunting is very hard to enforce, as these regulations are often violated in the solitude of nature. It is inherently hard to enforce gaming regulations given the nature of hunting, so increased funding to governmental agencies like the DNR will certainly increase compliance. If hunters know that a game warden could stop them at any time, they will be much more likely to abide by the law. Even non-governmental groups can help with this. Funding for groups like Whitetails Unlimited, a non-governmental whitetail deer conservation group, will also pay dividends, as education is key for many hunters who may be unaware of the impacts CWD could have on the deer population, and the disastrous effects that could occur for hunters of the future.¹³⁴

CONCLUSION

To conclude, the first and most important step to take in the eradication of CWD is to ban cervid farming in any capacity. This step alone will completely change the framework for attacking CWD. Next, passing the Chronic Wasting Disease Management Act will give the necessary funding to affected

¹³⁴ *About Us, WHITETAILS UNLIMITED, <https://www.whitetailsunlimited.com/about-us/> [<https://perma.cc/MR6J-TXXJ>] (last viewed Jan. 30, 2020).*

states to start figuring out how to tackle CWD on a more localized level.

Finally, allocating resources to conservation groups, both governmental and non-governmental, will provide an educational and compliance-based framework to maintain a healthy deer population for generations of hunters, conservationists, and lovers of nature to enjoy. Cervids are both economically and culturally vital. One of the best metrics for the health of our society is how we treat wild animals, and right now, America has turned its back on the Whitetail deer. This country almost exterminated the Whitetail deer 100 years ago, and we cannot make that mistake again.¹³⁵ As spoken by the great outdoorsman Theodore Roosevelt, “In a civilized and cultivated country, wild animals only continue to exist at all when preserved by sportsmen.”¹³⁶

¹³⁵ *History and Origin*, WHITETAILS MO, <https://whitetailsmo.weebly.com/history.html> [https://perma.cc/FAS9-3ZMT] (last viewed Jan. 30, 2020).

¹³⁶ Torin Miller, *Top 10 Famous Quotes for Deer Hunters*, NATIONAL DEER ALLIANCE, (Mar. 16, 2017), <https://nationaldeeralliance.com/presidents-blog/top-10-famous-quotes-for-deer-hunters> [https://perma.cc/ZL5J-PF29].