

Chairman Gillespie, Chairman Barnbin, members of the Committee, thank you for having us here today.

White-tailed deer hunting in Pennsylvania infuses more than \$1.6 billion dollars per year into the Pennsylvania economy. In addition, the aesthetic value that white-tailed deer and elk provide to the people of Pennsylvania is incalculable.

Chronic wasting disease (CWD) is the most important disease threatening white-tailed deer and elk in North America. CWD is a highly contagious, always-fatal disease that has no vaccine. It is difficult to detect the disease in live animals because the outward physical and behavioral signs of CWD often take more than a year before they are readily observable and there is no approved live animal test.

Since the late 1960s, CWD has spread across North America through movement naturally in migrating or dispersing wild populations, via human-facilitated movement of live cervids, or in carcasses or other infectious materials. By 2005, based on documentation of presence, growth, spread, and persistence, it had become clear that CWD could not possibly be a longstanding disease of North American deer. Infected animals shed disease agents called "prions" that are transmitted to healthy animals through direct contact or by encountering shed prions in the environment. Prions are shed when an infected animal feeds, urinates, defecates, or dies and decomposes.

Research has shown that once CWD reached a high prevalence rate in an area, it can contribute to localized population declines in wild deer populations and attempts to eradicate the disease have had limited success. These shed prions bind to soil and remain in the environment, capable of infecting healthy animals for over 16 years. In short, the introduction of CWD into Pennsylvania is an ecological disaster unfolding before our eyes.

The Pennsylvania Game Commission is charged with managing and protecting wild white-tailed deer and given their susceptibility to this fatal transmissible disease, and its long-lasting environmental persistence, managing it is an enormous financial, logistical, and technological feat. Additionally, deer movement within the state is exacerbated by the captive cervid industry which complicates issues further. To increase the success of managing CWD in Pennsylvania, both captive deer and wild deer should be treated as a "collective herd" and thus uniform standards and enforcement are essential and must be implemented across the state.

Disease issues are not a new, we know what spreads and increases disease. The challenge we are faced with is taking on the political and social pressure of what needs to be done to mitigate these risks. Ultimately, there are two types of risk factors that are associated with a greater probability of CWD occurring in an area or population. Exposure is the first type of risk factor. This occurs when CWD is moved to new locations. Amplification is the second risk factor. This occurs when the prevalence of CWD increases in that area.

Common risk factors that move CWD to new locations and expose new animals are: 1) movement of captive cervids, 2) areas adjacent to CWD positive wild or captive herds, 3) imports of hunter-

killed carcasses from CWD infected areas, 4) urine based attractants, and 5) translocation, rehabilitation, or natural movement. Common risk factors that increase CWD prevalence in an area are: 1) high deer density like captive facilities, 2) baiting and feeding, and 3) urine-based or other attractants. In short, the more you move deer and congregate deer for any reason, the risk factors for CWD will inevitably increase.

In efforts to mitigate these risk factors in the wild herd, the PGC has implemented the following for wild deer: 1) a high-risk parts ban has now been extended to entire states, 2) a urine ban in the disease management area, (DMA), 3) a feeding ban in DMAs, 4) menagerie and rehab restrictions in the DMAs, 5) road-kill deer pick-ups and delivery to dumpsters to get animals off the landscape and into lined landfill, 6) dumpsters for hunters, 7) a DMA parts bans, and 8) investigating the use of focused sharp shooting and localized population reduction to manage CWD prevalence, spread, and surveillance.

Surveillance of wild deer is inherently difficult and the goals and objectives are different than those of captive deer. The PGC surveillance goals are to detect CWD where it occurs in the state and monitor the spread where it is known to occur. To achieve these goals, we have nearly 8,000 wild deer last year and have been sampling statewide since 2001. These samples came from clinical suspects, escaped captives, road-kills, and hunter-harvests. We also focus our efforts in areas where CWD is known to exist. Compared to other states in the east, we are sampling at significantly higher levels.

Research is another essential part of the PGC CWD program. In conjunction with Penn State University, we are continuing to learn how to manage and survey for CWD through ongoing research efforts. As new information is obtained, we modify our approaches. Toward that end, the PGC has been active in several research efforts including: 1) completing a landscape genetics study in collaboration with Penn State where we were able to identify patterns of population connectivity among deer populations to deduce potential pathways of infection for CWD, and 2) initiating a new intensive study with Penn State to help evaluate CWD control measures. This study will seek to answer what are the survival rates and the causes of deer mortality in a CWD area, what actions can stabilize or reduce CWD, and what management actions will the public support.

The PGC has made great strides in managing the effects of CWD in Pennsylvania. Unfortunately, these strides have come at a great financial cost to the agency and significant burden for our hunters, taxidermists, and processors. However, it has become clear that our efforts will be in vein if current problems proceed. These problems are directly increasing the exposure and amplification of the risk factors that I previously mentioned. These problems are easy to fix, but the political and social components have kept them from becoming common-sense regulations.

The first problem is that the parts ban for out-of-state deer or DMAs do not extend to captive deer. When new captive herds test positive, the PGC sets up a new DMA. Seventy five percent of the DMAs were established from positives detected in captive deer. DMA1 in Adams County was the site of the first case of CWD in Pennsylvania, found on a captive deer farm in 2012. Following 5 years of intensive sampling of wild deer, no wild deer has ever tested positive in the area surrounding the farm. This DMA was decommissioned in 2017.

DMA2 was also created in 2012 after CWD was detected in three free-ranging hunter harvested deer from Blair and Bedford Counties. The area of DMA2 has increased steadily as new cases have been found outside of the area or along its borders. The pattern of new positive cases has lead PGC to suspect that spread of the disease within this area has not been entirely due to natural movements of wild deer. A major expansion to the east during 2017 was caused when CWD positive deer were found on a Franklin County deer farm where they had been transported from a Fulton County CWD positive farm.

DMA3 was created in 2014 around deer farms in Jefferson County where CWD positive deer were identified. No CWD positive free-ranging deer were found within DMA3 until 2017 when three cases were confirmed. The locations of these three deer were relatively remote from each other bringing into question whether or not their distribution is congruent with the natural spread of disease from an initial infection point. Two of these new locations have resulted in expansion DMA3 northward and southward.

DMA4 was created in Lancaster County during 2018 around a CWD positive deer farm after a CWD positive deer was found in Wisconsin where it had been legally shipped from the Lancaster County Herd Certification Program herd. Subsequently, 2 additional deer were found to be CWD positive on this farm.

Consequently, the agency is being spread too thin as more DMAs are established and this limits what we can do in areas where the disease is present in wild deer. Simply put, if a wild or captive deer comes out of a DMA or another state, it should be regulated by the same rules. The solution to this problem is to make all bans enforceable for captive and wild deer to help stop new positive areas from occurring.

The second problem is that the PGC has the law enforcement ability to enforce wild deer regulations but PDA lacks adequate enforcement capacity to enforce captive deer regulations. Joint enforcement of regulations pertaining to taxidermist, meat processors, and hunters harvesting captive deer is essential to mitigating these risk factors. The solution to this problem is to pass legislation to break down the legislated barriers between the PDA and the PGC that would allow better collaboration and joint enforcement between the two agencies.

The third problem is that areas testing positive for CWD are not contained. Containing a wild deer herd is difficult and typically involves decreasing a localized population. This is never viewed well by the general public or hunters. Thus, the PGC has to involve all of the stakeholders to ensure that they are included in the decision-making process. The PGC will continue to streamline this process. Captive deer facilities that test positive do not have the same barriers that the PGC experiences since they are privately owned. Thus, captive deer that test positive should be maintained behind a fence they cannot escape from or interact with other deer, such as a double fence and one that is at least 10 feet high. Additionally, farms that have tested positive should be depopulated with an increased sense of urgency. This should include depopulating positive farms within existing DMAs.

CWD is a momentous wildlife health problem for deer and eventually elk in Pennsylvania. CWD has the potential to prevent these populations from thriving in the long-term. Although challenging, the PGC is dedicated to our surveillance and management programs to find isolated cases of CWD and remove them from the landscape while few deer are infected. In situations where the disease

is widespread, we believe our efforts should focus on containment and control strategies by involving the public and decreasing populations in local areas.

In addition, we need the ability to better collaborate between the agencies that are charged with managing this disease. CWD containment is complicated by the fact it is found in both captive and wild deer that interact and infect one another. The transportation of captive cervids will continue to pose increasing risks to both wild and captive animals in the absence of strict regulations governing such practices. Our hands are tied when we are forced to manage the repercussions of the captive herd but have no involvement with the rule making and enforcement. The PGC has an open line of communication with PDA that includes meetings where we try to identify agencies' roles and best practices to manage CWD, but we are limited with our collaboration because of legislation. Addressing CWD in Pennsylvania will require more resources and more stakeholder and landowner involvement, including PDA and PGC collaboration.

How we address this disease is challenging, yet vitally important to the long-term sustainability of the Pennsylvania deer herd. Captive deer and wild deer should be treated as a "collective herd" and the finger pointing and buck passing must stop. It is all our responsibility to deal with this disease or the consequences will be catastrophic. Without better tools to manage this problem we will fail. We ask you to give us the tools we need so this does not happen.

I would be happy to answer any questions.

Submitted by: Bryan J. Burhans
Executive Director
Pennsylvania Game Commission
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