



House Energy and Natural Resources Committee  
Testimony on HB 1325

North Dakota Game and Fish Department  
Dr. Charlie Bahnson, Wildlife Veterinarian  
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Chairman Porter and members of the House Energy and Natural Resources committee, my name is Dr. Charlie Bahnson. I serve as Wildlife Veterinarian for the North Dakota Game and Fish Department.

We oppose this bill, primarily because the intent is unclear. I'll take a few minutes to explain how our surveillance and testing works with the hope that I can clarify a few misconceptions.

A positive CWD test result means the animal will develop terminal brain disease if it lives long enough. We know this from numerous longitudinal studies. Those involve infecting a group of animals at the same time, then periodically euthanizing a cohort at set time intervals to examine how the disease progresses. From these, we know that lymph nodes are a reliable place where prions collect. This makes them a good place to determine the infection status of an animal and that's the tissue that's tested.

CWD is unlike viral or bacterial disease. With those etiologies, a positive test can mean a lot of things. You can have a range of severity of disease, you may be in the process of clearing the infection, or you could be a carrier but not get the disease. In prion diseases, whether its CWD in a deer, Creutzfeldt-Jakob disease in humans, or scrapie in sheep, once positive, you only get more positive, the subject tests positive for life, and it's a death sentence.

We are interested in the prevalence of CWD at the herd level because that tells you something about the impact to the population. We test hunter harvested deer because that's a way to get access to a large sample size. For example, if 10 out of 100 harvested deer test positive from a unit, that gives us some very valuable information about the prevalence rate for the rest of the population that is still out on the landscape in that unit. Ten percent of deer right now, in that unit, are walking around with a progressive brain disease. Some will live long enough to be potentially harvested next year, but a lot will slowly peel off the back of the herd throughout the next year. Most of those animals will die in places where they're never found, they are never reported, and they are quickly gobbled up by scavengers. The handful of cases we've had so far represent a lot of luck. Deer died at the right place at the right time. We don't build our surveillance program around luck.

As for the testing, we follow USDA-recognized and approved CWD testing protocols carried out at veterinary diagnostic laboratories that are certified by the National Animal Health Laboratory

Network to ensure quality assurance and quality control. That's a lot of jargon to say that this is legitimate. These test results are valid.

We follow a two-test system. The first test is an enzyme-linked immunosorbent assay, termed "ELISA." A small piece of the lymph node is homogenized and treated with a chemical that will dissolve normal protein. Any remaining protein is then stained with a marker that is detectable through an automatic machine. ELISA testing is very sensitive but there is a small chance of false positives. For that reason, any "suspect positive" sample is tested a second time by ELISA. If it remains positive, it is submitted for a second test, immunohistochemistry or "IHC."

IHC involves affixing an extremely thin cross section of lymph node to a slide, treating it with a chemical to dissolve normal protein, followed by a dye that affixes to prions and can be seen under a light microscope. Slides are then visualized by trained pathologists. IHC is less sensitive but very specific. If the sample tests positive by IHC, it is positive.

We send all samples to Montana Veterinary Diagnostic Laboratory for ELISA testing. ELISA positive samples are sent to the Utah Veterinary Diagnostic Laboratory for confirmation testing by IHC. Here is a picture of an IHC slide confirming CWD in a lymph node. UVDL retains all slides for seven years. If it is decided that Game and Fish should also retain duplicate slides, we can.

A record of all positive CWD detections is already kept and made available to the public. Some proponents of this bill have requested and been provided with this information in the past. As I mentioned earlier, most positive detections come from hunter harvested animals, in which case, a necropsy is never performed. However, all necropsy reports are also already publicly available.

With that, I'd gladly stand for questions.