

October 2016



Veterinary Services Newsletter October 2016

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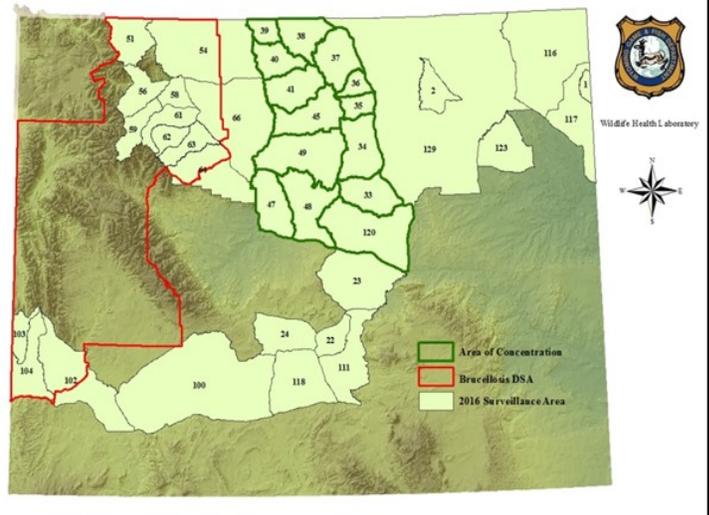
Wildlife Health Laboratory

Brucellosis Surveillance

This year's surveillance is off to a great start, with 125 blood samples received so far. All samples have been tested and no positives identified outside of the known endemic area. The vast majority of blood kits (9,700) have been mailed to hunters, with the last 800 scheduled to hit the post office on October 15th.

Training was provided to field personnel in the Bighorns on tissue sample collection from hunter-killed elk. The goal is to obtain a live isolate of *Brucella abortus* from the region for DNA "fingerprinting" that might shed light on where this disease in the Bighorn Mountains may have come from. To do this, the Iliac and supra-mammary lymph nodes are collected from cow elk and cultured for *B. abortus*. Once cultured, DNA is extracted from the bacteria and analyzed to determine its "family tree". The genetic sequences are then compared to other known sequences in Montana, Idaho, Yellowstone National Park, feedground populations in Wyoming, and numerous populations around the Greater Yellowstone area such as Dubois and Meeteetse.

2016 Wyoming Brucellosis Surveillance of Hunter Harvested Elk



Map showing the scheduled hunt areas (in green) for brucellosis surveillance; hunt areas outlined in dark green are areas of concentrated surveillance.

CWD Surveillance

Surveillance for CWD in the state's deer, elk, and moose populations are also underway. During the month of September, 225 CWD samples have been submitted to the laboratory, of those 180 were from hunter-killed animals (4 positives) 29 from targeted animals (animals showing signs of CWD, and 8 of those were positive), and 16 from road-killed animals (no positives). So far, all positives have come from within the known endemic area for this disease, but we do expect to discover CWD in at least one new hunt area this year.



Fencing and Irrigation

This month was another busy one for us here in the canyon with most of the time being spent continuing our fencing efforts. We also started installation of irrigation pipe through one of our western pastures, to improve our irrigation system

A Piece of History

This month we hosted former TWRC director, Huey Dawson, and former research director, Bill Hepworth, for a tour and storytelling. Their knowledge of the history of the facility was fascinating and helped us to better understand the development of the TWRC. Thanks to both Huey and Bill for coming out and sharing a day with us to fill us in on some history, stories, and why some of the facility was built the way that it is.

University of Wyoming Capture Lab

At the end of September, we taught a wildlife immobilization lab for senior wildlife management students. The goal of this course is to give students hands on experience and practical information in wildlife management to prepare them for their future careers. For this lab, we give a lecture on techniques and issues surrounding wildlife immobilization. Then students come out to our facility and learn how to load darts and practice firing dart guns. Finally, they help us dart an elk and monitor it while it's immobilized.



UW Wildlife management students assist with an elk immobilization. Photo taken by Kristina Harkins, M.S. Student, University of Wyoming



Bighorn Sheep Handling

This month we ran our captive bighorn sheep back through the handling building for hoof care and sampling. The new facility worked great again! This time we were joined by a PhD student from British Columbia who was looking for pointers on designing a holding facility for bighorn sheep for his research. He will be able to utilize some of the general designs and recommendations from our facility to make an efficient facility for his study on Psoroptes in bighorn sheep.

Thirteen cases were submitted for diagnostics in September. We also received 2 mule deer, an elk, a Cooper’s hawk, and two owls this month. These cases are still pending results.

Species	Date Received	County	Diagnosis
Antelope	8/15/2016	Sweetwater	Emaciation/blindness/ulcerative keratitis
Arctic Fox	8/18/2016	Out of State	Undetermined
Cottontail Rabbit	8/31/2016	Fremont	Coccidiosis
Cottontail Rabbit	8/18/2016	Laramie	Dermal ulcers and pneumonia
Elk	9/16/2016	Laramie	CWD
Mule Deer	8/2/2016	Sweetwater	Predation
Mule Deer	7/19/2016	Laramie	Conjunctivitis
Mule Deer	8/31/2016	Carbon	CWD
Mule Deer	9/16/2016	Carbon	Encephalitis
Pronghorn	7/22/2016	Albany	Undetermined
Pronghorn	8/15/2016	Sweetwater	Keratitis
Raccoon	9/6/2016	Albany	Undetermined
Swainson’s Hawk	8/16/2016	Albany	West Nile Virus

Wildlife Disease of the Month—Chronic Wasting Disease

Chronic wasting disease (CWD) is a chronic, fatal disease of the central nervous system in mule deer, white-tailed deer, elk, and moose. CWD belongs to the group of rare diseases called transmissible spongiform encephalopathies (TSEs). These disorders are thought to be caused by abnormal proteins called “prions”. Evidence suggests that CWD is transmitted via saliva, urine, feces, or even infected carcasses. Animals may also be infected through the environment via contamination of feed or pasture with prions (which can persist for 10+ years). While we do know how CWD can be transmitted, we do not know which method drives most transmission in free-ranging populations.

Early in disease, animals may show no clinical signs of CWD. In fact, many CWD positive animals that are harvested appear perfectly normal. Later on, affected animals show progressive weight loss, reluctance to move, excessive salivation, droopy ears, increased drinking and urinating, lethargy, and eventually death. Not all individual animals will show all the typical signs of CWD. There is currently no evidence that CWD is transmitted to humans. However, because of the long time between exposure to CWD and the development of disease, many years of continued follow-up are required to be able to say what the risk of CWD is to humans. The CDC and WHO recommend that humans do not ingest meat from any animal known to have CWD.

Recent research in Wyoming and Colorado suggests that CWD can lead to declines in some deer populations and possibly elk populations. The prevalence of CWD is higher in deer than elk, and tends to be higher in bucks than in does. CWD is most prevalent in the southeastern portion of Wyoming. Over the past 30 years, Wyoming has seen CWD prevalence increase, particularly in southeastern Wyoming.

A few precautions that hunters can take include: Animals that appear sick should not be harvested or consumed. Wear rubber or latex gloves when field dressing carcasses. Minimize handling of brain and spinal tissues and wash your hands and instruments afterwards. Don’t eat the brain, spinal cord, eyes, spleen and lymph nodes. When butchering, meat should be boned out. Knives and other butchering equipment can be disinfected by soaking in 10% household bleach for 30 minutes (may rust some equipment). Quarter and freeze your animal until CWD test results are returned. This can help you save on processing costs if your animal is positive.

