

Submitted to the Environmental Quality Council  
By the Department of Fish, Wildlife, and Parks  
December 2017

### **CWD Update**

Montana Fish, Wildlife & Parks initiated the first year of the revised CWD Surveillance Plan during the 2017 hunting season. The Surveillance Plan entails (1) continuing to test any symptomatic cervid (deer, elk, or moose) statewide, (2) focusing systematic surveillance primarily on mule deer, the most susceptible species within Montana, and (3) employing a weighted surveillance strategy aimed at detecting 1% CWD prevalence with 95% confidence (Walsh 2012) that rotates among all currently identified, high-priority CWD surveillance areas. Priority survey areas for 2017 included hunt districts in region 3 (313, 314, 316, 317) and region 5 (520, 560, 575, 510, 502, 570, 500, 590). Each priority surveillance area is divided into smaller “minimum surveillance units” that encompass well-mixed populations of deer and which have their own sample size goals. Montana’s CWD management plan was drafted by the FWP CWD Action Team, which consist of wildlife, enforcement, wildlife health, management, and communication and education staff. A CWD Citizen’s Advisory Panel, which is a stakeholder group made up of landowners, veterinarians, scientists, and sportsmen met several times to review the draft plan, provide feedback and comments. The plan was out for public comment from November 8 - December 8, 2017, with final edits and a Fish & Wildlife Commission vote expected in February.

Retropharyngeal lymph nodes were the primary sample collected for testing. In cases in which these lymph nodes could not be collected, the obex (brain stem) was collected. CWD samples were shipped once per week to the Colorado State University diagnostic laboratory for CWD ELISA testing, and results were typically posted online within 2 weeks of sample collection. CWD testing protocol states that CWD IHC should be run as a confirmatory test on any suspect positive on ELISA. Most samples were tested using the CWD ELISA at \$17.00/sample; a small number of samples were tested or confirmed using IHC at \$35.00/sample. Funding for CWD surveillance is covered primarily through a PR grant with match from deer and elk auction license funds. The Mule Deer Foundation and Rocky Mountain Elk Foundation also contributed funding for CWD testing.

Most samples were collected at check stations by FWP enforcement and wildlife staff, with assistance from one dedicated CWD technician and several volunteers. Staff collected additional samples at the Region 3 and Region 5 FWP offices, from road-killed animals (in collaboration with Department of Transportation and Highway Patrol), and from some meat processors that assisted by collecting heads for testing.

Between August-December 2017, Montana FWP collected 1391 samples for testing from mule deer, white-tailed deer, elk, and moose. Most of these samples were from the priority surveillance area. Table 1, below, illustrates the number of each species collected (“N”), the total weighted surveillance points earned (“Points,” where different age, sex, and cause-of death groups receive specific point values based on relative risk of being infected), and the percentage of points that we’ve accumulated towards our 300-point goal for mule deer. We met our sampling goal (106%) for HDs 500, 570 & 590, and are currently at 36% of our goal for HDs 313, 314, 316, & 317; 80% of our goal for HDs 520, 560, and

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575; and 56% of our goal for HDs 502 & 510. Additional samples will be collected during the special Bridger CWD Hunt (December 15, 2017-February 15<sup>th</sup>, 2018) in HDs 502, 510, 520, and 575 and via road-kill collection throughout the winter. Figure 1 illustrates where samples were collected between August-December 2017. At this time, it is undecided whether we will continue sampling in R3 in 2018. We have plans to sample hunt districts along the Canadian border and around Philipsburg, MT, in 2018.

Table 1. CWD sampling effort by minimum surveillance unit and species. We used a weighted surveillance approach that ascribes different points to individuals of a specific age, sex, and cause of death. To detect 1% CWD prevalence with 95% confidence in mule deer, we needed 300 points per minimum surveillance unit. Although points are listed for the other species, these species were collected opportunistically and were not the primary focus of our surveillance efforts.

Region	Hunt Districts	Minimum Surveillance Unit	Species	Number of Samples (N)	Weighted Surveillance Points	% Points Collected Towards 300-Point Goal
3	313, 314, 316, 317	R3_1	MD	110	109	36
			WTD	56	88	-
			Elk	48	62	-
			Moose	0	-	-
5	520, 560, 575	R5_1	MD	279	240	80
			WTD	176	354	-
			Elk	15	13	-
			Moose	3	-	-
5	510, 502	R5_2	MD	185	168	56
			WTD	73	160	-
			Elk	4	3	-
			Moose	0	0	-
5	570, 500, 590	R5_3	MD	338	318	106
			WTD	35	72	-
			Elk	10	6	-
			Moose	0	-	-

No CWD positive animals were detected in Region 3 during the 2017 surveillance effort; however, surveillance efforts resulted in detection of six CWD positive deer (four mule deer bucks, one mule deer doe and one white-tailed doe) in Region 5 (See Region 5 surveillance map below).

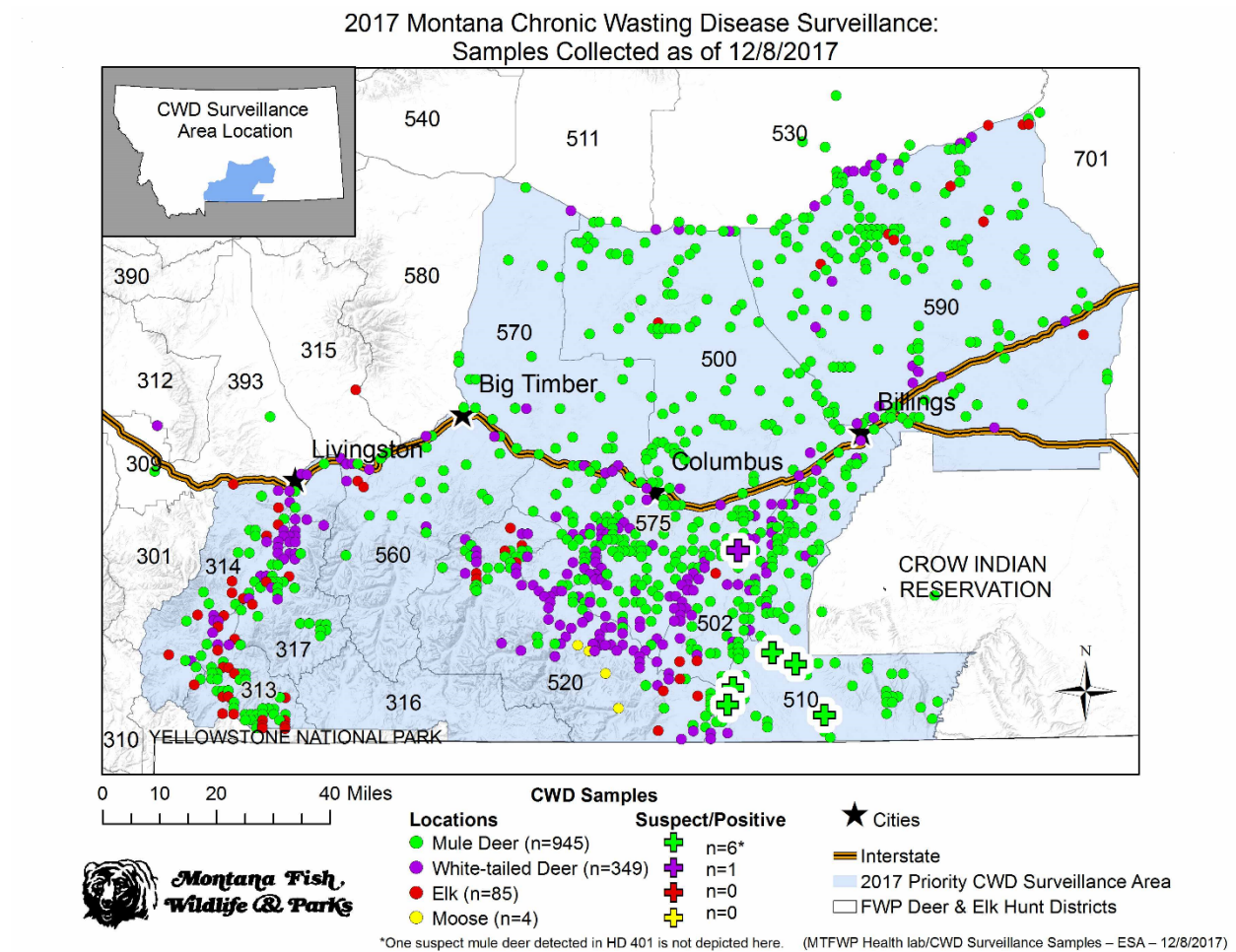


Figure 1. Map of sample locations by species within the southcentral Montana CWD priority surveillance area. Positives are marked by the “plus” sign.

One GPS-collared mule deer buck harvested in HD 401, which was sampled as part of our mule deer movement study in the Sweet Grass Hills, also tested positive for CWD during the 2017 hunting season. As part of a mule deer CWD study in collaboration with USFWS, mule deer were captured and GPS-collared in Region 4 (in 2015) and Region 6 (2014) to learn about movement of mule deer near the border of Canada where CWD is known to be present. When these collared mule deer die or are harvested, wildlife biologists follow up to collect samples for CWD testing. One mule deer buck from this study was harvested in Liberty County, north of Chester, MT, in HD 401 on November 12<sup>th</sup>, 2017 and tested positive for CWD.

Response:

A special CWD hunt will be carried out in Region 5 to estimate prevalence and distribution of CWD. This hunt was approved by the FWP commission on December 7<sup>th</sup>, 2017, and is described in Montana’s proposed CWD management plan. An initial response area (IRA) has been identified within which the

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hunt will occur. The IRA boundaries are based on 10-mile buffers around CWD detections, but are modified to incorporate identifiable landmarks such as roads, ridges etc. The hunt will include both mule deer and whitetail deer since both species are represented in the group of positive animals. The number of samples required was calculated to allow estimation of prevalence with a 3% confidence interval. Relative number of antlerless and either-sex tags issued is based on sex ratio of deer in the herd. Number of tags to be issued to obtain the required number of 200 harvested deer of each species is based on predicted hunter success. Successful hunters will be required to submit samples for CWD testing. For the hunt, FWP will sell 600 licenses for each species. The breakdown is as follows:

- White-tailed deer
  - 100 either sex licenses
  - 500 antlerless licenses
- Mule deer
  - 100 either sex licenses
  - 500 antlerless licenses

To limit the risk of moving CWD infected carcasses across the state, a Transport Restriction Zone (TRZ) was established in Carbon and Yellowstone Counties. Hunters will be prohibited from transporting whole carcasses or whole heads and/or spinal columns outside the TRZ. The hunt will run from December 15<sup>th</sup> until either the pre-determined sample number is reached or through February 15<sup>th</sup>, whichever comes first.

Data collected during the special CWD hunt will be used to determine prevalence and distribution of the disease in the region, which will inform long-term management decisions. The general management direction is to maintain prevalence at <5% and limit spread.

Response to detection of one case of CWD in HD 401 has not yet been determined.

#### **Requirements for CWD testing in Montana**

At a previous EQC meeting, the council asked MFWP to follow up on the requirements to have CWD testing conducted in Montana, rather than shipping samples to Colorado State University. The following information was provided by Dr. Stephen Smith, Montana Veterinary Diagnostic Laboratory.

“CWD testing is regulated and performed through the USDA’s National Animal Health Network (NAHLN). Only NAHLN laboratories have access to the approved protocols and can perform the testing. Becoming a NAHLN laboratory is a rigorous process, and requires accreditation by other bodies, such as the American Association of Veterinary Laboratory Diagnosticians (AAVLD) or the International Organization for Standardization (ISO), as well as the existence of an adequate Quality Management System and successful completion of an on-site NAHLN audit. Currently, the only NAHLN laboratory in the state of Montana is the Montana Veterinary Diagnostic Laboratory (MVDL) that operates within the Department of Livestock. Due to the specific requirements for CWD testing, specialized equipment is

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required, and purchase of this additional equipment would be the primary hurdle for testing in-state at MVDL. Initial estimates suggest equipment costs of approximately \$150,000.00 to perform the ELISA test and approximately \$125,000.00 to perform the immunohistochemistry (IHC) test. Additional, lesser costs will include staff training (requiring travel to another NAHLN laboratory) and the costs of materials, reagents, and in-house validation of the new tests. MVDL currently has the staff and space to begin this testing in-house, but the potential need for additional staffing will depend on the number of tests performed, and should be reassessed once more information about test volume is available.”

Availability of in-state CWD testing could be a benefit to the people of Montana if it resulted in competitive pricing and quick turn-around time for results.