ANNUAL REPORT

Montana Department of Livestock

ANIMAL HEALTH BUREAU

Mission Statement

To control and eradicate animal diseases, prevent the transmission of animal diseases to humans, and to protect the livestock industry from theft and predatory animals.

Figure 1. Winter Heifers
Source: DOL Staff

FISCAL YEAR 23

July 1, 2022 through June 30, 2023

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Summary Highlights
Tahnee Szymanski, DVM

Figure 2. Tahnee Szymanski, DVM
Source: Personal Photo

FY23 2023 (July 1, 2022—June 30,2023) was a year of transition for the Department of Livestock (DOL). I started the year as the Assistant State Veterinarian and finished the year not an employee of DOL. Now, I sit and write a summary of the year's highlight as the new State Veterinarian for Montana with the Assistant State Veterinarian position still vacant and a staff that is overwhelmingly new in their respective positions. Despite what feels like a lack of continuity within our office, Montana's livestock industry continues to benefit from the tremendous dedication of Animal Health Bureau (AHB) staff. The veterinarians, the import office team, and our field enforcement all put forward their best efforts in managing the health of our industry.

FY23 saw the continued presence of Highly Pathogenic Avian Influenza (HPAI) on the landscape, ongoing challenges with the management of brucellosis in the Greater Yellowstone Area (GYA), and substantial conversations about what a response to African Swine Fever (ASF) in the United States would look like. While our work is never done, the trajectory of our agency's work is positive. With continued industry engagement and hard work on our part, I am confident in our ability to protect our industry from disease, minimize the impact that investigations have on individual producers, and respond to whatever the next challenge may be.

My heartfelt appreciation to AHB staff. This report is a reflection of their tremendous body of work.

Sincerely,
Tahnee Szymanski, DVM
Montana State Veterinarian

ANIMAL HEALTH STAFF

Marty Zaluski, DVM grew up in Butte, Montana and graduated from Michigan State University College of Veterinary Medicine in 1997. He joined the Department of Livestock in 2007. As the state veterinarian and the administrator of the Animal Health & Food Safety Division, he is focused on the mission of protecting animal and public health. He oversees the bureaus of Animal Health, Veterinary Diagnostic Laboratory, Meat & Poultry Inspection, and Milk & Egg. He has been highly involved in Montana's brucellosis program, trichomoniasis, traceability, animal imports and food safety. Dr. Zaluski is married to Heather Zaluski, MD and has three children, Kate (17), Evan (21), and Maia (24). In his off-duty time, Dr. Zaluski enjoys brewing beer, riding dirt bikes, hunting, and boating.

Tahnee Szymanski, DVM is a Helena native and a 2004 graduate from Oregon State University College of Veterinary Medicine. She joined the Department of Livestock in 2008 after several years in large animal ambulatory practice. As the Assistant State Veterinarian and Animal Health Bureau Chief, Dr. Szymanski is responsible for the import office, Montana's state traceability program, animal health enforcement field staff, the alternative livestock program, and state and federal disease programs. These include trichomoniasis, tuberculosis, as well as other cattle, equine, and small ruminant disease programs. In her off-duty time, Dr. Szymanski enjoys hiking, kayaking, snowshoeing, and other outdoor adventures with her 11 year-old daughter, Campbell.

Bradley De Groot, DVM grew up going to school in Denver or Phoenix and working on a corn, wheat, cattle, and hog operation in northwest Kansas. He and his wife Krista and daughters Ingrid and Britta moved from Nebraska to Dillon in 2008, where the late Dr. Bill Hawkins helped them establish an independent ranch practice. Dr. De Groot served ranches in southwestern Montana and eastern Idaho until 2015 when he accepted a technical services position with Multimin USA. After cancer treatment in 2018, Dr. De Groot coordinated research for the cattle feeding concern Friona Industries before he took over the assistant state veterinarian position for the Wyoming Livestock Board in early 2019. In 2022, Dr. De Groot came home to Dillon to help manage the Brucellosis Control Program and other cattle industry initiatives for the Department.

Merry Michalski, DVM grew up in Colorado and attended Regis University in Denver where she received a bachelor's degree in biology in 2006. She earned her DVM from Colorado State University in 2013 and spent her first 8 years in small animal private practice where she excelled in surgery and emergency medicine. She joined the Montana Department of Livestock Animal Health Bureau in August 2022. Dr. Michalski oversees the department's animal emergency preparedness and One Health efforts, the state's National Poultry Improvement Plan program, and disease programs including rabies and *Brucella canis.* Merry and her husband, Allen, have called Helena home for 9 years. Outside of work you will find them hiking, mountain biking, trail running, backcountry split boarding, hunting, and home-brewing.

Import Office

Britta Larson Sekora grew up in Shelby, Montana and attended Carroll College for History and Constitutional studies, as well as Grand Canyon University for Applied Business Management. Britta was hired by the Department of Livestock in September 2019 as a Compliance Technician and is now the Import Office Manager, manages the poultry program, and oversees Bureau reporting. She lives in South Helena with her husband Andrew and two strong-willed daughters, age 6 and 10. In her free time Britta enjoys traveling, knitting, hiking, golfing, walking her energetic black lab Dexter, and spending time on the river with her family in the Flathead.

Jacqueline "Jac" Cima grew up in Northern California where she spent her childhood reading, riding dirt bikes, and showing the world's most difficult chestnut mare. She graduated from the University of California at Davis with a B.S in Animal Science with an emphasis on Livestock Production, which is just another way of saying she went to class with hay in her hair a lot. She worked as a Veterinary Technician at the UC Davis Veterinary Medicine Teaching Hospital for several years. As a technician, she specialized in equine critical care and livestock medicine and surgery which resulted in some great stories, a few scars, and a general dislike for potbellied pigs. She joined the Department of Livestock Brands Division as Re-Record Clerk in 2021 before moving upstairs in 2022 to the Animal Health Bureau to work as a Compliance Technician and oversee the Alternative Livestock program. Jac is now the Brucellosis Compliance Specialist for the Animal Health Bureau. In her free time, she enjoys baking, traveling, attempting to hit sporting clays, riding horses and, inexplicitly, volunteering to be ground crew at brandings.

Rebecca "Becca" Trammel grew up in San Diego, California with her dogs, barrel horses and FFA project heifers, pigs, and lambs. She went to Cal Poly San Luis Obispo and Colorado State University to get her degree in Animal Science and Agriculture Business, as well as get an associate degree from Scottsdale College for Equine Science. After she graduated, she was a rehab technician for racehorses and critically injured horses in southern California. She joined the Department of Livestock in January of 2023 as a Compliance Specialist and manages the Alternative Livestock Program. She enjoys spending her time off wandering around outside, competing in agility dog trials with her crazy dog Rip or with her retired barrel pirate horse JC.

Kaylee Hiel grew up in Helena, Montana. She joined the Department of Livestock in September 2019 as a Permit Technician and is now a Compliance Specialist, managing the blanket permit program. She enjoys traveling, hiking, baking, and spending time with her family and dogs.

Sara Starkey grew up in Southern California and earned an Associate's Degree in Equine Health from the University of Montana Western. She then spent four years working at a mixed animal veterinary clinic as a veterinary technician. Sara joined the Animal Health Bureau of the Department of Livestock in May 2016. She is a program specialist and manages seasonal grazer and biologics programs, coordinates the veterinary accreditation seminars, oversees electronic health certificate management and manages import quarantines. In her free time, Sara spends time with her husband, daughter, four dogs and six horses on their growing ranch.

Leslie Doely is a native of Creston, Montana in the Flathead Valley. She graduated from Montana State with a Bachelors of Science in Animal Science and soon after married high school sweetheart, Josh. The couple both secured jobs in Helena in 2010 – Leslie as a temp with Department of Livestock. Leslie has held several positions with DOL but is currently enjoying her role as the Brucellosis Compliance Specialist. The couple have two feisty boys, ages 4 (Callaway) and 7 (Cooper), a small beef cattle and meat goat operation, a few horses, chickens, cats, dogs and a big garden to keep them all busy and enjoying the outdoors.

Enforcement

Dan Bugni grew up in Montana, North Dakota, Wyoming, and Oklahoma. He spent his high school years jockeying racehorses, which took him all over the western United States for nine years. Dan eventually settled in Butte, Montana and was hired by the Department of Livestock in 1995 as a Market Inspector in Billings. From there Dan went to Great Falls, Ramsay, into the Chinook District and finally the Dillon District. He is currently the Western Area Supervisor working animal health and brands investigations. Dan is married, has a son who is a corporal in the Marine Corp and a daughter who is currently a sales associate at the Murdoch's corporation. In his free time Dan enjoys hunting, fishing, riding horses and assisting area ranchers to work their livestock.

Shawn Hando grew up in Montana and graduated from Shepherd High School. He spent most of his time working on ranches and feedlots growing up. Shawn was hired by the Department of Livestock in the fall of 2005 in the Billings market. From there he took the Market Supervisor job and eventually the District Investigator job. Shawn is now the Eastern Area Supervisor working animal health and brands investigations. Shawn lives in Shepherd Montana and is married with one son. He enjoys going to basketball games with friends and family along with roping.

Bison Program

Clay Vines was born and raised in Montana. He grew up and went to high school in Livingston, Montana. He attended Dawson Community college in Glendive, where he graduated with a degree in Criminal Justice; Law enforcement. He stayed competitive on the rodeo team participating in team and calf roping. Clay became a fishing guide in college and Fishing Outfitter in the years to follow. In 2014 he took a job with the Montana Department of Livestock and is now the Bison Program Manager living in the West Yellowstone, Montana area.

Mike Himmelspach was born and raised in Livingston, Montana. He has spent most of his life guiding hunters and ranching in Paradise Valley. Mike hired on with the Department of Livestock in January of 2019 with the Bison Management Program. Mike enjoys hunting, riding horses in the mountains, camping and lives in Paradise Valley with his wife Alison.

Brucellosis—Epidemiologic Investigations

Department of Livestock (DOL) identified one brucellosis affected herd in FY23. Two additional brucellosis affected herds, detected in 2010 and 2019, remain under quarantine and continue to undergo required whole herd testing.

The newly affected herd was discovered when ten cows from a Madison County Designated Surveillance Area (DSA) ranch were taken to a livestock auction in April. When the required card test for brucellosis was ran, one cow was found to be positive. The infected status of the cow was confirmed by National Veterinary Services Laboratory (NVSL) on May 9, 2023, from specimens collected at necropsy by Montana Veterinary Diagnostic Laboratory (MVDL) on April 20, 2023. The Madison County herd was placed under quarantine and is currently operating under an affected herd plan. The nine remaining, test negative cows went directly to slaughter from the livestock auction. Those animals were shipped in a sealed compartment with a restricted movement permit in order to verify slaughter.

The newly affected Madison County herd had performed whole herd tests from 2016 to 2021, but the early onset of winter in 2022 prevented whole herd testing for that year. The early 2022 winter also prevented the fall culling typical for the operation. All neighboring herds with fence line contact had tested brucellosis negative in the fall of 2022 for either annual seasonal movement out of the DSA or herd dispersal.

This is the first affected herd to be diagnosed in the spring, prior to turnout rather than fall, after the grazing season is finished. DOL and ranch operators were fortunate that this herd does not participate in communal grazing arrangements on public lands and has limited contact with neighboring cattle ranches during the peak of the brucellosis transmission risk period. These facts minimized the impact of the brucellosis quarantine on both the affected herd and neighboring ranches.

At this time, the source of introduction to the Madison County affected herd remains unknown. DOL is still awaiting whole genome sequencing lineage results on this *Brucella abortus* isolate from this herd as well as isolates from the last two years.

The two additional existing brucellosis affected herds include:

- A large domestic bison herd based in Gallatin County which has been under quarantine since FY11.
- A Madison County herd that was placed under quarantine following the discovery of an infected animal in FY19.

DOL also cleared eight cows from seven herds for which the brucellosis screening test (FPA) returned a positive result, and the follow-up confirmatory test (BAPA) returned a negative result. In nearly all these cases, the screening test is negative when the cow is retested 30-60 days after the initial test. In one case, the screening test did not return a negative result after nine months, and an auxiliary test returned a positive result even though the confirmatory test remained negative. MVDL necropsied the cow and attempted brucellosis culture of tissues. *Brucella abortus* was not detected in the cultured tissues and the cow herd again tested negative, therefore DOL and United States Department of Agriculture (USDA) concurred the herd was not infected with brucellosis.

Brucellosis—Testing and Reimbursement

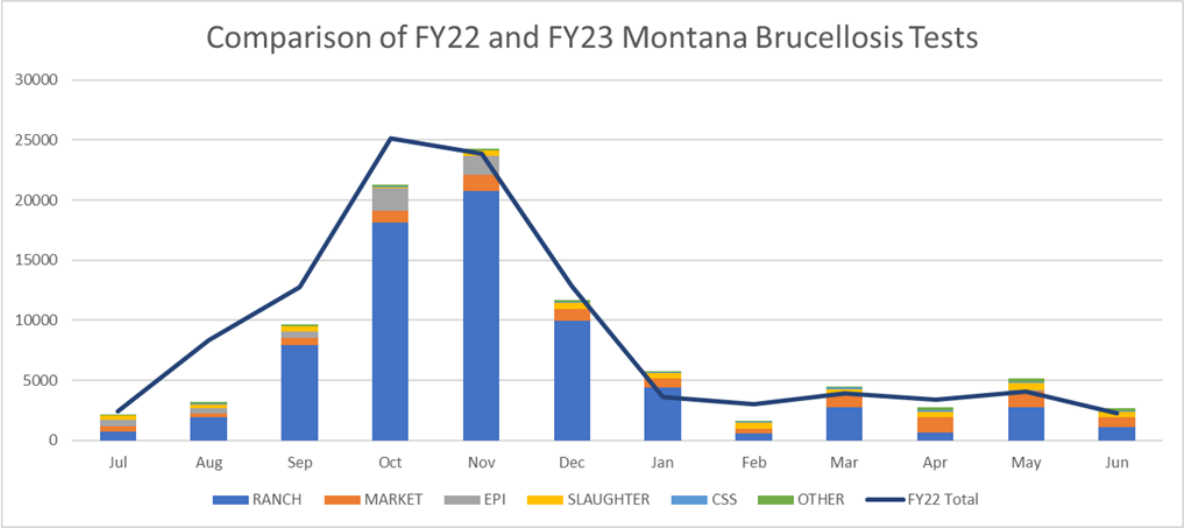


Figure 3. Comparison of FY22 and FY23 Montana Brucellosis Tests. Source: AHB Staff

In FY23, an approximately 10% decrease in brucellosis test numbers was seen, largely thought to be a result of the three previous years of herd liquidation precipitated by drought (Figure 3). On the other hand, herd inventory data indicated a 12% increase primarily due to increased producer survey response brought about by Department of Livestock (DOL) efforts to increase producer reimbursement. DOL personnel directly contacted producers to inform them that reimbursement was available and requested that clinicians remind their Designated Surveillance Area (DSA) clients to send in reimbursement request paperwork. This resulted in a nearly 200% increase in producer reimbursement claims with 136 producers claiming reimbursement in FY23 compared to only 79 producers in FY22. As to be expected, the decreased number of tests led to a corresponding decrease in total cost of testing compared to previous fiscal years (Figure 4).

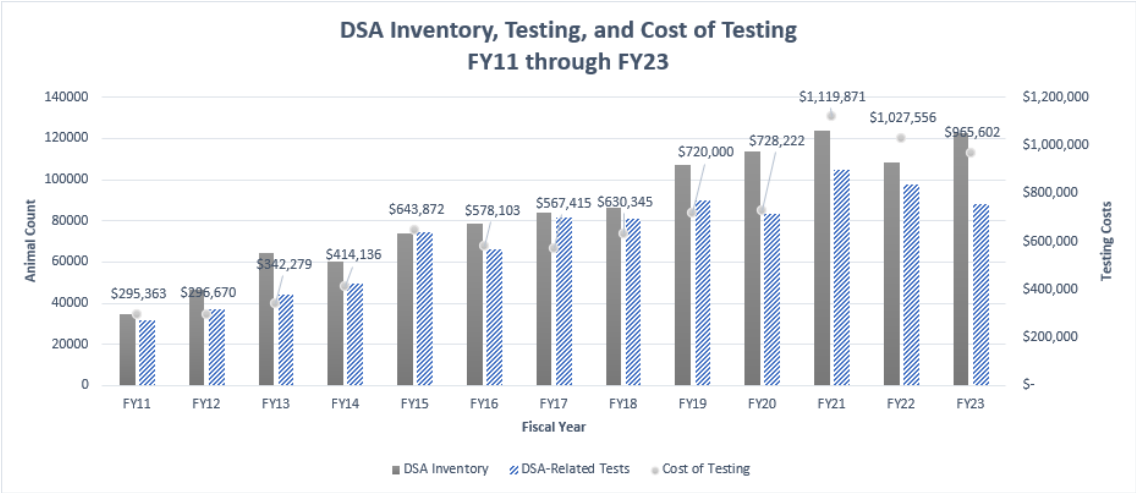


Figure 4. DSA Inventory, Testing, and Cost of Testing FY14-FY23

Brucellosis—Testing and Reimbursement, continued

Implemented in FY22, automatic brucellosis test reimbursement to veterinarians has reduced paperwork and processing time for veterinarians and Department of Livestock (DOL) staff as well as increased the percentage of tests reimbursed. All reimbursement eligible tests were reimbursed to veterinarians in FY23. In FY23, $641,741 total was paid out for brucellosis testing to both veterinarians and producers. Veterinarians received $531,299 for 83,542 tests. Only $273 was declined by veterinarians. Designated Surveillance Area (DSA) producers claimed $110,442, which is 72% of reimbursement eligible tests. This is a significant increase from FY22 in which producers requested reimbursement for only 45% of tests. In FY23, $43,530 was unclaimed by Montana producers. The total reimbursed for testing and adult vaccinations completed in FY23 was $655,501.

Veterinarian reimbursement rates fall into four categories based on the number of animals tested. The highest rate ($10.50/ head) is for tests of 10 animals or less, the middle rate ($8.50/head) for tests of 11- 50 animals and the lowest rate ($6.00/head) for tests of more than 51 animals. At the beginning of FY23, the veterinarian reimbursement rate for market tests was $7.00/head. In April 2023, the Board of Livestock (BOL) voted to increase the market rate to $8.50/ head to compensate for the fact that testing market animals is not as efficient as testing the same number of animals on a ranch, due to the size of the yards and working cattle in small consigned groups. This rate increase includes $7.50/ head to the veterinarian and $1.00/head to the market as handling compensation. Producers can receive a handling compensation of $2.00/head. Figure 5 shows a visual representation of number of tests and amount paid out by reimbursement rate. Most tests were reimbursed at the lowest rate ($6.00/head). The average veterinarian reimbursement rate was $6.31 per head.

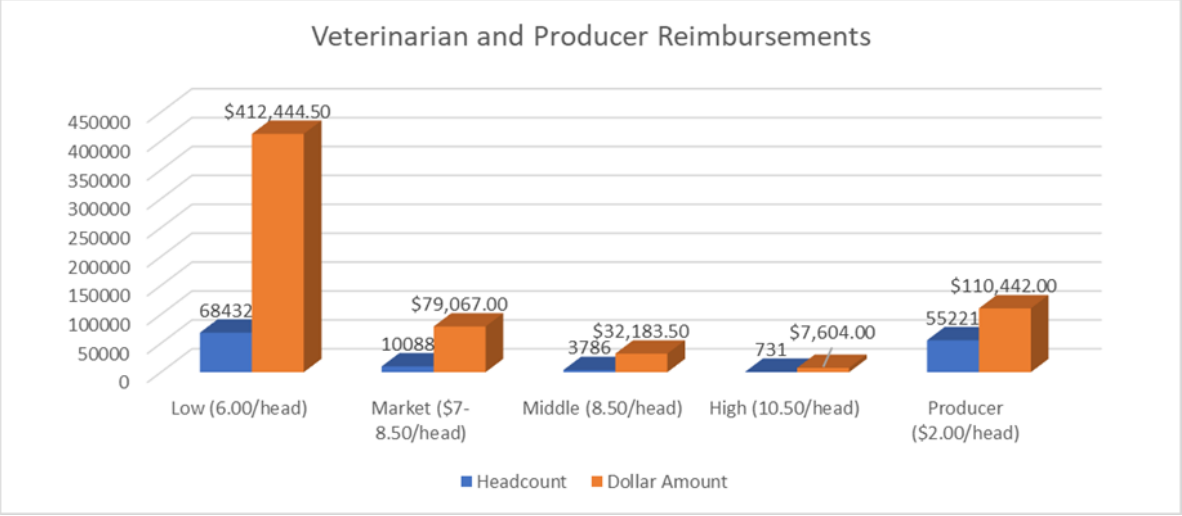


Figure 5. Veterinarian and Producer Reimbursement. Source: AHB Staff

Brucellosis Compliance: Private Sale and Cross-County Line Movement

Fiscal Year 21 marked the first time that movement and change of ownership compliance was determined on a single county basis, as opposed to analyzing all four Designated Surveillance Area (DSA) counties each fiscal year. With approximately 113,411 cattle and bison in 445 DSA herds in FY21, Animal Health Bureau (AHB) moved to an in-depth analysis of a single county per fiscal year. Justification for this change is the very high level of compliance that has been seen in the last several years and the increasing number of herds that utilize the DSA.

	FY21- Beaverhead County	FY22- Madison County	FY23- Gallatin & Park
Number of Inspections Evaluated	490	615	*pending*
Number of Cattle- Total	16,874	22,029	*pending*
Compliant Inspections (% Total Inspections)	441 (90%)	568 (92%)	*pending*
Number of Cattle- Compliant	14,599	19,370	*pending*
Noncompliant Inspections (% Total Inspections)	48 (10%)	47 (8%)	*pending*
Number of Cattle- Noncompliant	2,275	2,659	*pending*

Figure 6. FY21-FY23 Brucellosis Compliance. Source: AHB Staff

Sexually intact cattle over 12 months of age are required to test negative for brucellosis before leaving Montana's DSA or changing ownership. Compliance is determined by analyzing each inspection or permit to determine if the animals originated in the DSA, if a test was required, and if the required test was completed. Brand inspections and grazing permits were matched to corresponding tests by comparing test dates, headcount, and sex. Brand inspections and permits do not always capture enough detail to determine the origin of the animals or if animals are test eligible. In those cases, Brands Enforcement staff were called upon to provide specifics.

Movement and private sale compliance was again high in FY22, largely due to the continued efforts of DSA producers and their veterinarians. Follow-up on 47 noncompliant inspections is ongoing and largely consists of educating producers about DSA regulations and the developing management agreements with producers.

Type of Noncompliance	Number of Inspections	Number of Animals
No Test- Animals Sent to Feedlot	2	154
No Test- Bulls	10	25
No Test for Private Sale Out of DSA	3	11
No Test for Private Sale Within DSA	5	148
No Test to Leave Dsa	10	1786
No Test to Leave Dsa- Tested on Return	10	431
No Test to Leave State	2	93
No Test- Unsure If Dsa	4	10
Test Expired	1	1

Figure 7. FY21-FY23 Brucellosis Compliance. Source: AHB Staff

Brucellosis– Elk Capture FY23 and Surveillance

Fish, Wildlife and Parks (FWP) surveillance of 149 cow elk on the eastern front of the Pioneer Mountains in Beaverhead County completed in February 2023 detected no seropositive elk. Just under ten elk were captured in hunting district 329 east of Bannack and the rest were captured in hunting district 331 on the eastern slope of the Pioneer Mountains north of Dillon. The best brucellosis seroprevalence estimate is 0% of elk near the Pioneer Mountains are seropositive and the 95% upper confidence limit of that estimate is 2.5% seropositive. Interpret that upper confidence limit to mean that Department of Livestock (DOL) might reasonably expect to select 149 brucellosis seronegative elk from the few thousand elk that winter on the eastern slopes of the Pioneer Mountains. Even if brucellosis exposure in that population was present at a low rate, finding 149 seronegative elk from that population would be highly improbable if the rate of brucellosis exposure was anything over 2.5%. Coupled with past surveillance testing and collared elk movement patterns in Beaverhead and Madison Counties, DOL concludes that the Designated Surveillance Area (DSA) boundary in the Dillon area is well placed.

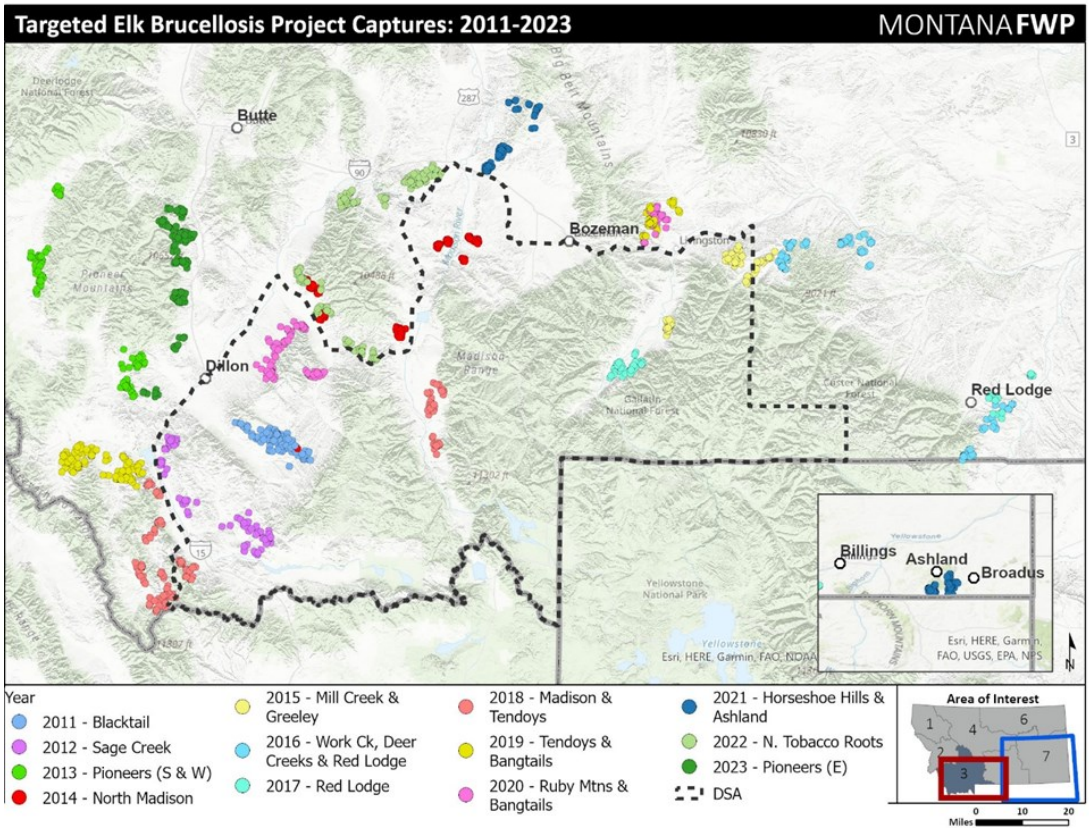


Figure 8: Targeted elk capture brucellosis testing from the beginning of the program. Each colored circle represents the location of 1 cow elk captured for Brucellosis testing. The full numbers tested are obscured by overlap in densely tested areas. Source: FWP Staff

Note that while some areas with brucellosis prevalence estimates of 0.0 are based on small numbers of elk, prevalence estimates for areas in proximity to brucellosis endemic regions (i.e., those near the DSA) are based on samples of larger numbers (often substantial numbers) of elk. Brucellosis surveillance of elk across broader areas away from the DSA augment the targeted testing to provide confidence that brucellosis has not escaped the DSA.

Brucellosis– Elk Capture FY23 and Surveillance, continued

ELK MOVEMENT

In addition to serological surveillance for brucellosis, subsets of elk captured for targeted brucellosis surveillance are also fitted with radio collars to track their movements as representatives of the larger elk populations. Tracking these movements enable regulatory agencies, livestock industry participants, and other interested stakeholders to evaluate the potential for further spread of brucellosis in free-ranging elk populations and for spill-over transmission from those free-ranging elk to domestic livestock. Radio collars transmit the locations of cow elk to which they are applied hourly for 62 weeks. At the end of 62 weeks, the collars are programmed to drop off while continuing to transmit their locations so they can be retrieved and reapplied in subsequent years. Collars are also programmed to transmit a suspected death signal during the first 62 weeks if they don't sense movement for ten hours.

From February 2022 through May 2023, radio collars tracked the movement of 40 cow elk in the northern Tobacco Root Mountains. These 40 randomly selected elk were all captured on their winter range outside the Designated Surveillance Area (DSA) boundary from south of Whitehall to the hills west of Three Forks. Most of these elk stayed out of the DSA during the 62 weeks during which the collars tracked their movements. However, a small number of collared elk did move into the DSA north of Willow Creek Reservoir east of Harrison during the spring when cow elk actively infected with *Brucella abortus* are carrying advanced pregnancies. Thus, they are more likely to transmit that infection to naïve elk and domestic livestock through late-term abortion or infected live birth. Importantly, elk that winter in the hills west of Three Forks do migrate to the north across Interstate 90. Notably, one cow migrated clear into the Elkhorn Mountains east of Boulder in June 2022 and had not returned to the area west of Three Forks by the time her collar dropped off in May 2023. These movements raise concerns regarding continued northward expansion of the range of brucellosis infected elk.

In contrast to the cow elk that winter just north of the Tobacco Root Mountains, the 30 head collared in February 2023 have moved further west away from the DSA boundary. While more than half of the observation period remains to evaluate the movement of these elk, evidence gathered so far indicates that the potential for further spread of brucellosis across the northwestern boundary of the DSA could be low.

Figure 9. Montana Elk. Source: AHB Staff.

Brucellosis– Elk Capture FY23 and Surveillance

BRUCELLOSIS PREVALENCE ESTIMATES

The most recent completed targeted elk capture testing is represented on the map in Figure 10 by the dark green dots north and a little west of Dillon. Testing planned for 2024 will target elk east of the Pioneer Mountains in the region between Dillon and Butte.

In addition to this targeted elk capture testing for brucellosis, Fish Wildlife and Parks (FWP) also tests all elk captured from anywhere in Montana for any other purpose. These brucellosis tests of elk captured for other purposes cover key areas where elk might move outside of the Designated Surveillance Area (DSA).

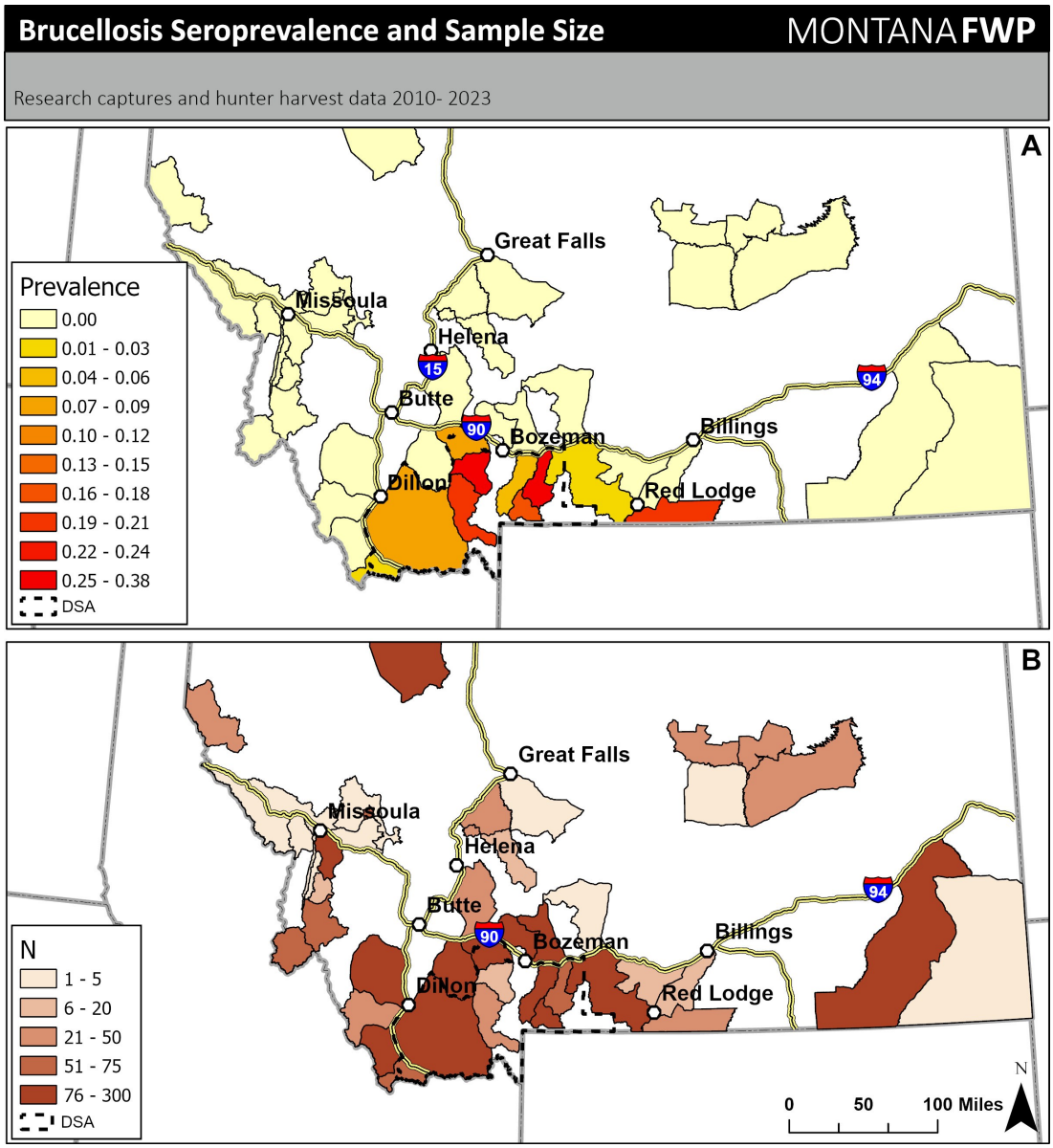


Figure 10: Estimated brucellosis seroprevalence (%, Panel A) and number of elk specimens collected for any purpose (n, Panel B) by 2022 hunting district from 2010-2023. Source: FWP Staff

Brucella canis (*B. canis*)

Department of Livestock (DOL) has advocated for increased surveillance for *Brucella canis* (*B. canis*) over the last three years, as brucellosis continues to burden Montana. DOL has frequent communication with Montana's veterinary community as well as shelter and rescue networks regarding *B. canis*.

During FY23, DOL created new guidance documents regarding management and prevention, a lay-person pamphlet with disease information, and an updated human health Q&A document in collaboration with Department of Public Health and Human Services (DPHHS). DOL provided a presentation regarding which dogs are high risk and should be tested, current Montana surveillance data, testing options, management recommendations, and case studies at the January 2023 Montana Veterinary Medical Association (MVMA) meeting. DOL also shared this information at a One Health Committee meeting which included several other state health officials. DOL created case definitions and has applied these to the test results provided by Montana Veterinary Diagnostic Laboratory (MVDL) to help guide decision making.

SUSPECT: Positive screening test without symptoms	PROBABLE: Positive screening test w/ these criteria OR an asymptomatic dog with increasing titers	CONFIRMED: Definitive laboratory test positive with/without symptoms
•Positive ELISA S/P 0.800-1.999 •Positive IFA 1:50 •Positive Multiplex •Management: Isolate and retest after 30-60 days	•Positive ELISA with symptoms OR an S/P >2.000 •IFA 1:50 with symptoms •IFA 1:200 any dog •Positive AGID •Management: Isolate and retest after 30-60 days •Euthanasia is an acceptable option	•Positive Culture •Positive PCR •Increase ELISA S/P value on retest AND positive IFA 1:200 •Management: Euthanasia strongly recommended •Alternative option: lifelong quarantine, spay/neuter, and adhere to Prevention and Control Guidelines

Figure 11: Case Definitions with Test Result Guidance and Management Recommendations. Source: AHB Staff.

Thanks to increased surveillance testing by Montana veterinarians, MVDL conducted 1,667 *B. canis* tests in FY23. DOL has started to appreciate a decrease in the percentage of positive test results over the last six months of FY23. The second half of FY23 (January 2023 - June 2023) had an average percent positive rate of 12.4%, compared to the first half of FY23 (July 2022 - December 2022) with an average percent positive rate of 23.44%.

Tests reported represent only tests run through MVDL and may include animals that were tested more than once. The overall positive rate for FY23 was 16.26%. These percentages reflect raw data only from a screening enzyme-linked immunosorbent assay (ELISA) test, which does not indicate confirmation of disease.

DOL continues to recommend increased surveillance testing of high-risk dogs, which includes dogs from endemic areas (increased numbers of intact, stray animals), dogs in breeding groups, sexually intact and mature dogs that enter a rescue or shelter with an unknown history, and any dog displaying symptoms related to *B. canis* infection. DOL also continues to recommend euthanasia of confirmed positive dogs, as well as dogs in shelters that test positive on a screening test but cannot be held for 30-60 days for retest.

Brucella canis (*B. canis*)

Of the 1,667 total tests run in FY23, 271 tested positive on the initial screening test. Of the 271 positive screening test dogs, 9 dogs (or 0.54% of the total tested) went on to be classified as confirmed with disease after additional testing was performed, culture, or polymerase chain reaction (PCR). These dogs with confirmed disease have either been euthanized or are under lifelong quarantine and are being treated with antibiotics in attempt to minimize risk to humans and other dogs.

Of the 271 test positive results, 54% were given a probable case definition and 46% were suspects. Out of the nine dogs that had confirmation of disease, eight had an original case definition of probable. The one dog that was defined as a suspect had an S/P value of 1.9 (close to the cut off criteria) and also had an exposure to a known positive dog. Additionally, 11 dogs that tested positive on initial screening tests had multiple rechecks to test out and become negative. The remaining 251 screening test positive dogs were either in shelter channels and euthanized, lost to follow-up before additional testing could occur, or were owned animals who were also lost to follow-up. Dogs that did not have additional testing to further classify disease status remained either probable or suspect cases.

Of the 271 screening test positive dogs:

Symptoms: 10% reported symptoms consistent with *B. canis*, 15% reported no symptoms, and 75% were unknown due to either being tested through a shelter/ rescue or loss of follow up.

Reason for testing: 56% were tested for surveillance, 8% for breeding, 7% for clinical symptoms, 9% for exposure to a known positive, and 13% were retests.

Outcome: 21% were euthanized, 5% are in quarantine, 5% are waiting for additional testing, 6% were community/tribal owned and lost to follow up, and 63% are unknown.

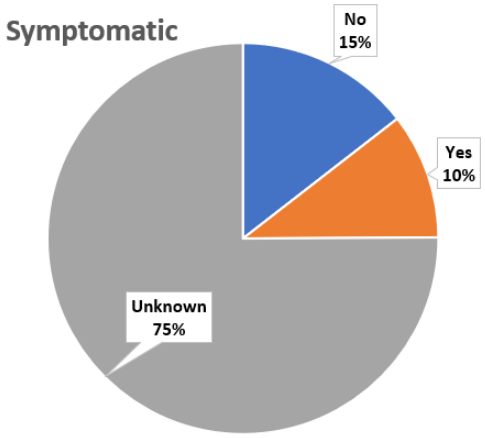


Figure 12: Percent of 271 test positive dogs that reported symptoms of *B. canis* infection. Source: AHB Staff

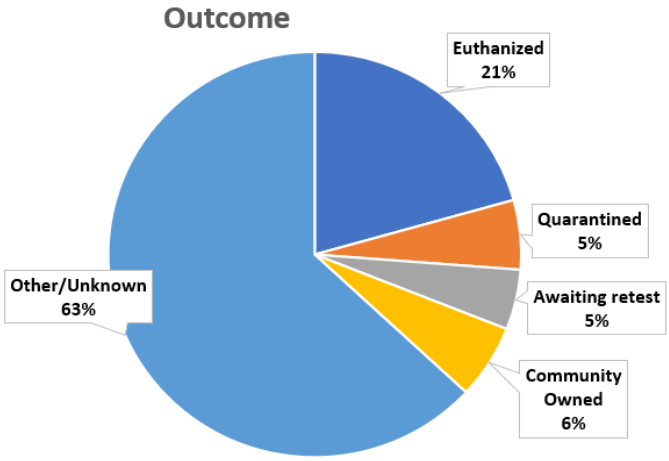


Figure 13: The reported outcome of the 271 *B. canis* test positive dogs. Source: AHB Staff

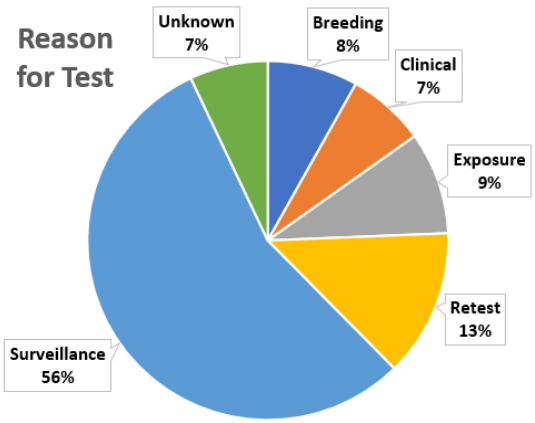


Figure 14: The reported reason for testing of the 271 *B. canis* test positive dogs. Source: AHB Staff

Brucella canis (*B. canis*), continued

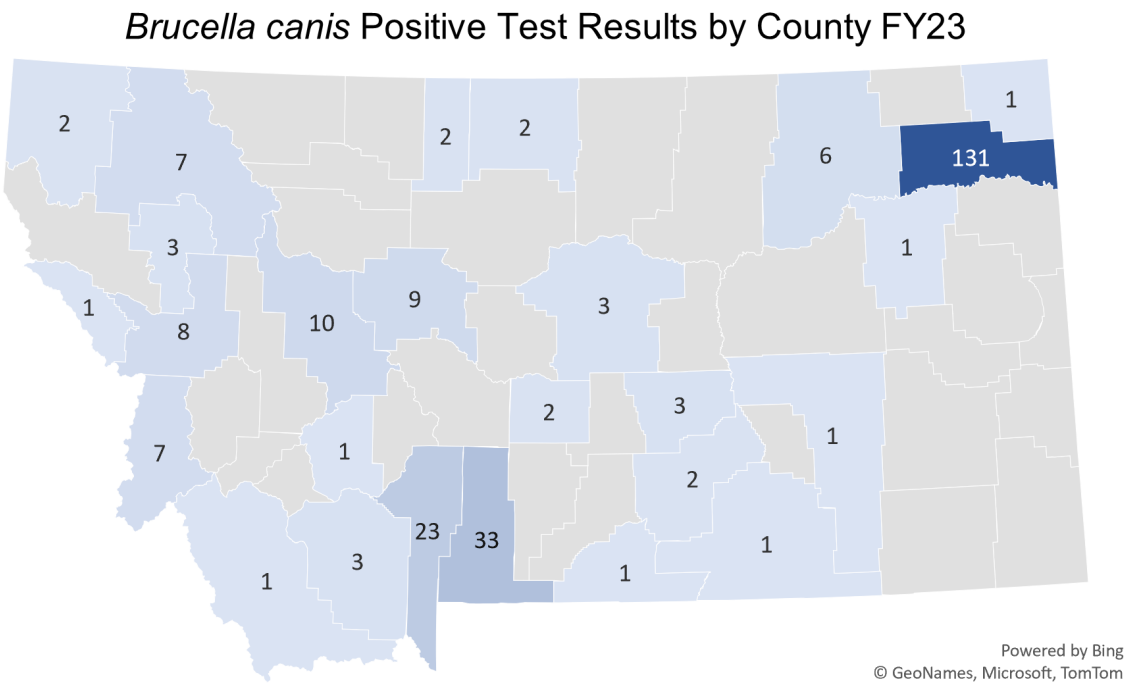
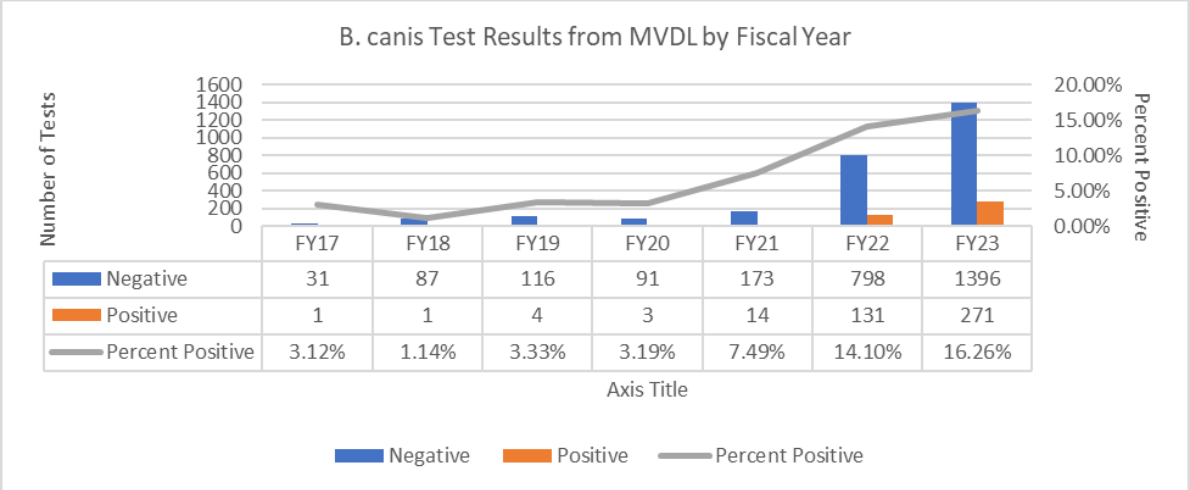


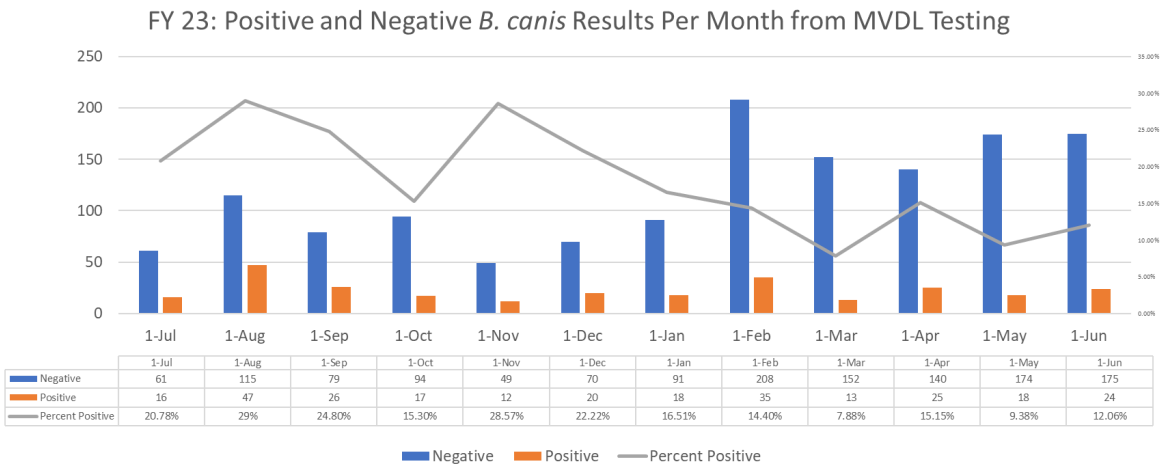
Figure 15: Number of *B. canis* positive results per county on screening testing performed at MVDL FY23. Source: AHB Staff.



	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Negative	31	87	116	91	173	798	1396
Positive	1	1	4	3	14	131	271
Percent Positive	3.12%	1.14%	3.33%	3.19%	7.49%	14.10%	16.26%

Figure 16: Total *B. canis* tests by results and percent positive rate FY17-FY23 from screening tests performed at MVDL. Source: AHB Staff.

Brucella canis (*B. canis*), continued



	1-Jul	1-Aug	1-Sep	1-Oct	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun
Negative	61	115	79	94	49	70	91	208	152	140	174	175
Positive	16	47	26	17	12	20	18	35	13	25	18	24
Percent Positive	20.78%	29%	24.80%	15.30%	28.57%	22.22%	16.51%	14.40%	7.88%	15.15%	9.38%	12.06%

Figure 17. Number of *B. canis* tests by result and percent positive rates per month during FY23 from screening testing performed at MVDL. Source: AHB Staff.

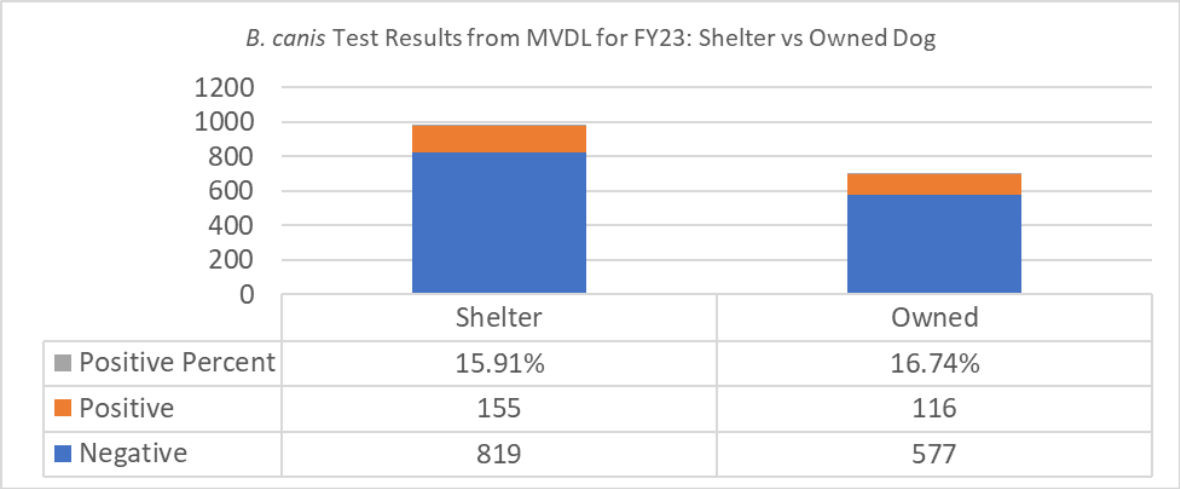


Figure 18: Total number of *B. canis* screening tests run through MVDL in FY23 with total test numbers for negative and positive results comparing animals from shelters vs owned animals. Source: AHB Staff

Brucella Ovis (*B. ovis*)

There are 22 flocks that participate in the *B. ovis* free flock program. The participants perform annual brucellosis testing on all rams eight months of age and older. Any outside rams that are added to the flock must have two negative tests 60-days apart or come directly from a *B. ovis* free flock before comingling. By participating in the *B. ovis* free flock program, the producers do not have to test their rams before taking them to market. They can also sell rams to other *B. ovis* free flocks without those rams requiring additional testing.

Highly Pathogenic Avian Influenza (HPAI)

The current Highly Pathogenic Avian Influenza (HPAI) outbreak, which began in February 2022, continues to be a concern for the United States (US). However, cases have been less frequent nationally May—June, 2023.

Montana had eight flocks with confirmed positive results for HPAI in FY23; two of these flocks were classified as backyard poultry (sale of poultry products) and the remaining six were non-poultry (backyard flocks with no sales). Department of Livestock (DOL) classifies flocks in accordance with World Organization for Animal Health (WOAH); backyard poultry are classified as flocks with less than 75,000 birds, whereas commercial poultry flocks have 75,000 birds or more. The HPAI confirmed premises were in Flathead, Teton, Glacier, Hill, Granite, Cascade, and Rosebud Counties.

All HPAI positive flocks were depopulated, totaling approximately 4,220 birds. The two backyard poultry flocks completed active cleaning and disinfection, have been released from quarantine, and were eligible for restocking. The six non-poultry flocks were required to remain fallow for 120 days following the completion of depopulation. At the conclusion of FY23, Montana had no flocks under HPAI quarantine.

For all confirmations, DOL conducted surveillance canvassing in a ten-kilometer area around the affected premises. Surveillance focused on identification of poultry owners in the zone and education about HPAI. Any reports of sick birds would be prioritized for HPAI testing. Two control zones contained commercial backyard poultry flocks; those flocks were required to conduct bi-weekly surveillance for HPAI with two consecutive negative weeks (which equals a minimum of four tests) prior to shipping eggs.

As part of the national HPAI outbreak, DOL issued a recommendation on March 3, 2022, that poultry be housed indoors during the spring migratory bird season to decrease the risk of disease transmission. This recommendation lasted throughout the remainder of the year because case detection continued in poultry and wild birds through all seasons. With the promising decrease in local and national affected poultry cases and with no wild bird cases in Montana in May-June, 2023, the indoor housing recommendation has expired. However, this recommendation will resume should the cases pick up again.

Fish, Wildlife and Parks (FWP) reported HPAI infection in carnivorous wild mammals in Montana, and DOL spread this awareness through email updates to veterinarians. Wild mammals infected with HPAI demonstrated neurologic abnormalities leading to death, which presented in a similar manner to symptoms caused by rabies virus. Wild mammal species with confirmed HPAI infection in Montana included: grizzly bear, skunk, fox, black bear, raccoon, and mountain lion. There were no reports of domestic mammals with HPAI infection in Montana in FY23.

Highly Pathogenic Avian Influenza (HPAI), continued

Montana High Path Avian Influenza Map Data (Figures 19 and 20) are 2022 and 2023 Calendar Year (CY) data. The 2022 map reflects the entire year, the 2023 map reflects January 01, 2023-June 20, 2023. Wild Bird and Domestic Premises have declined in 2023.

Montana High Path Avian Influenza Cases - 2022

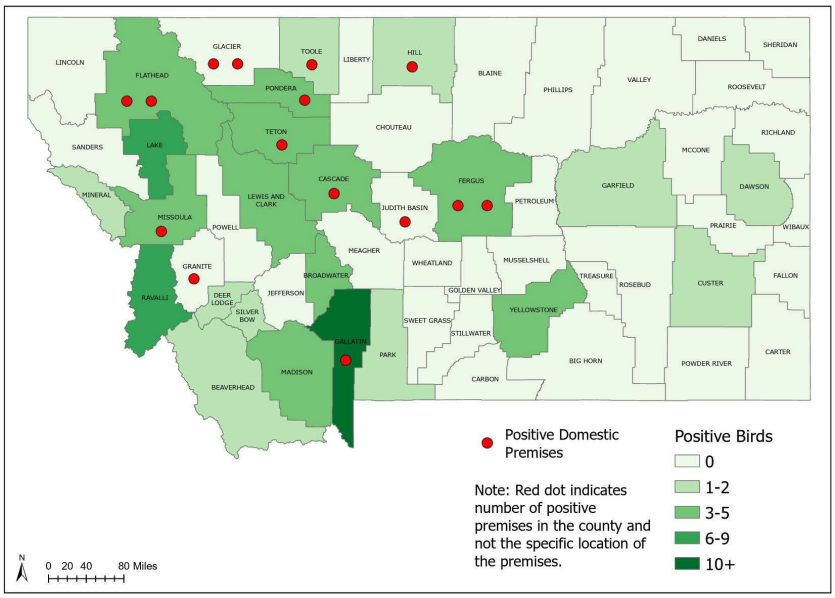


Figure 19: Montana High Path Avian Influenza Cases 2022. Source: AHB Staff

Montana High Path Avian Influenza Cases - 2023

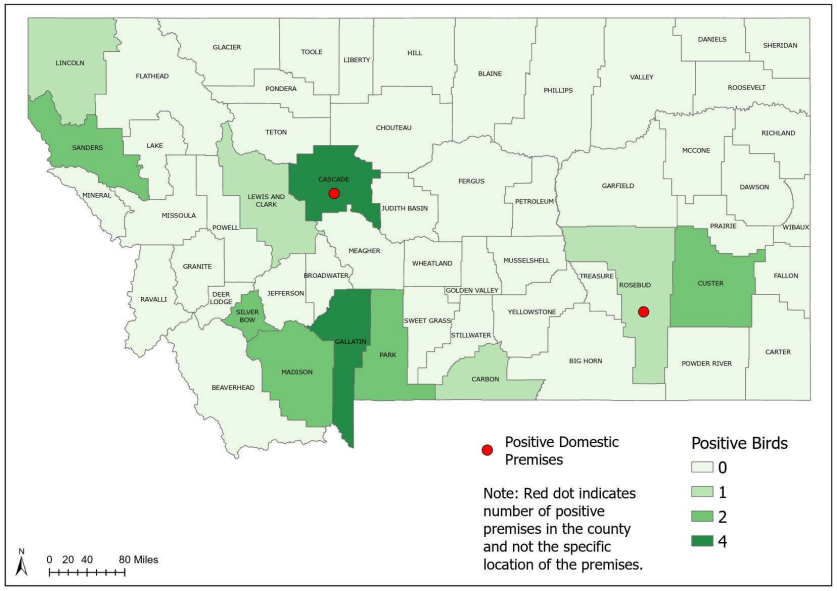


Figure 20: Montana High Path Avian Influenza Cases 2023, YTD. Source: AHB Staff

Johne's Disease

Department of Livestock's (DOL) voluntary Johne's Control Program was introduced in August 2019 to provide Montana cattle producers an independently verifiable way to reduce the risk of transmission of *Mycobacterium avium subspecies paratuberculosis* (MAP) infection through commerce. The program currently has seven participating herds in Broadwater, Custer, Granite, Hill, and Richland Counties. Diagnostic testing for MAP varies substantially in different regions of Montana (Figure 21).

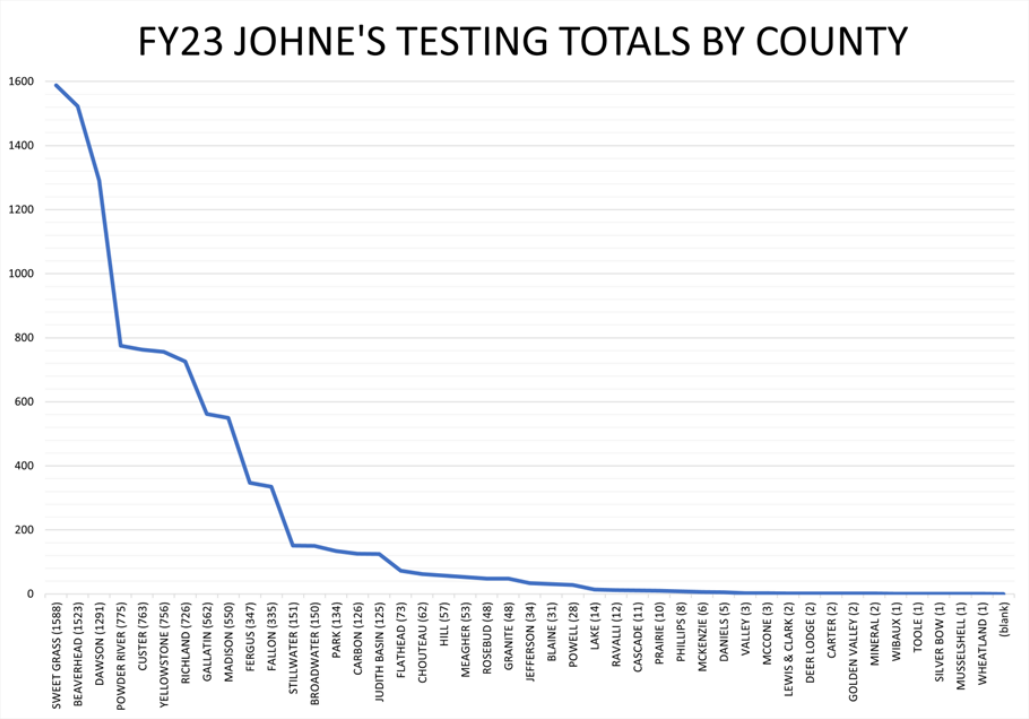


Figure 21: Number of MAP diagnostic tests run at MVDL by county FY23. Source: AHB Staff

The numbers of MAP diagnostic tests run do not directly represent the numbers of livestock tested. Veterinarians frequently run different kinds of tests on the same animals and sometimes repeat tests on animals at different times to increase diagnostic confidence for culling or marketing decisions. Diagnostic testing for MAP infection increased to a peak in FY21 and has slightly decreased since that time (Figure 22). DOL has learned that specimens for diagnostic testing are being sent to diagnostic laboratories outside of Montana. Animal Health Bureau (AHB) is working with those laboratories known to receive specimens from Montana to implement regular results reporting to DOL.

Year	NEGATIVE	POSITIVE / SUSPECT	PERCENT POSITIVE
FY23	8305	346	4%
FY22	8876	279	3%
FY21	9087	391	4%
FY20	6459	241	4%
FY19	4018	818	17%
FY18	3066	157	5%

Figure 22: MAP diagnostic test numbers run through MVDL and rates of positive results by FY. Source: AHB Staff

Most MAP diagnostic testing is performed by the Montana Veterinary Diagnostic Laboratory (MVDL) on cattle with 8,228 tests in FY23 that were approximately 4% positive or suspect. Goats were the second most common species tested in FY23 with 372 tests that were slightly more than 3% positive or suspect.

Rabies

A variety of species were tested for rabies in FY23 due to suspicious clinical signs, animal exposure, or human exposure. Twenty-five species were tested for rabies in FY23 including: bats, black and brown bears, bobcats, raccoons, coyotes, domestic cats and dogs, domestic livestock, ferrets, skunks, muskrats, and mountain lions. Of the 449 samples tested, 11 were positive: 9 bats and 2 skunks. The two terrestrial cases required action by Department of Livestock (DOL), which resulted in two 60-day quarantines in Powder River County. DOL's webpage has updated county quarantine information and an interactive map showing total rabies tests, positive rabies tests, and accredited veterinarians for each county.

Domestic animal exposure to rabies from wild animals is not uncommon in Montana. DOL follows up on any potential rabies exposure, even when the wild animal is not available for testing. FY23 potential domestic animal exposures resulted in sixteen 45-day observations and two 120-day quarantines.

DOL has frequent communication with Montana's veterinary community and public health officials regarding rabies and potential exposures. DOL participated in the Rabies Roadshow presentations in Miles City and Helena, which gave an overview of rabies regulations to nurses, animal control officers, veterinarians, and other health care professionals.

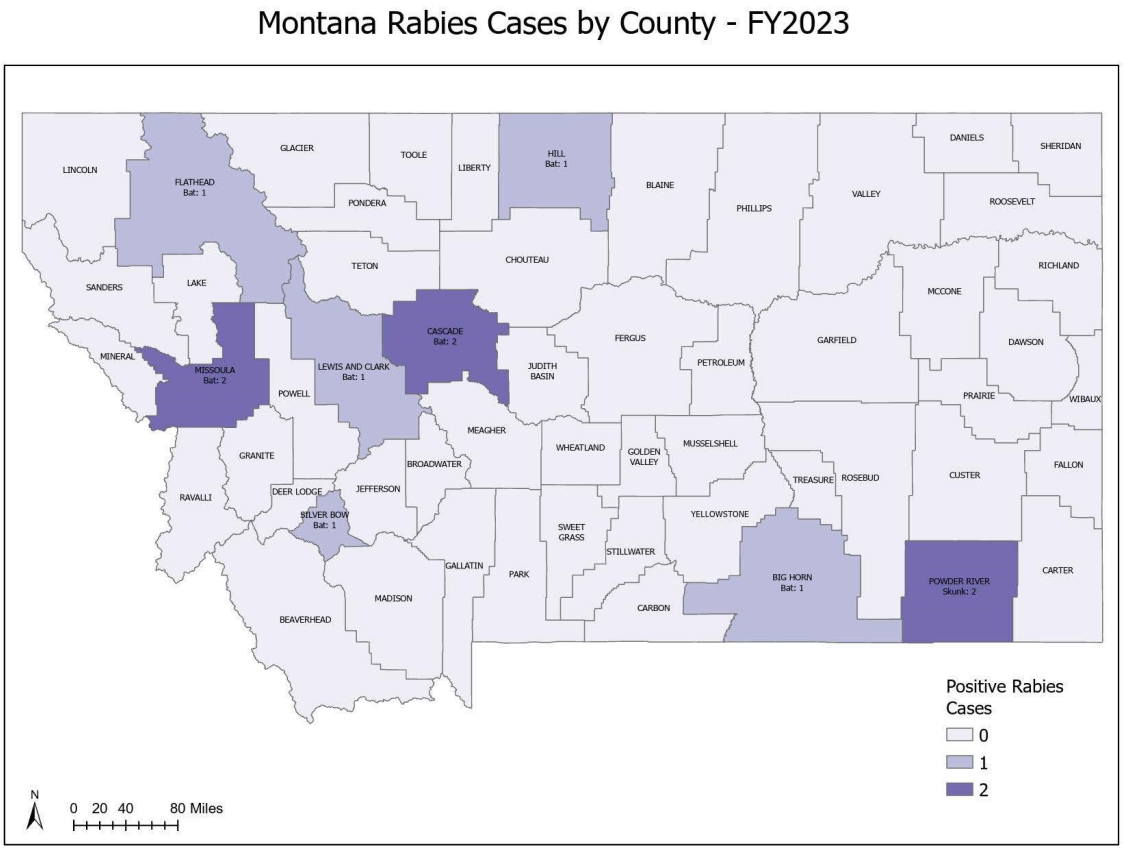


Figure 23: Montana Rabies Cases by County FY23. Source: AHB Staff

Trichomoniasis

There were zero trichomoniasis positive bulls in FY23. Figure 24 below shows negative tests by County in FY23.

Trichomoniasis Bulls by County								
County	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**
Carter	0	0	1	0	0	0	0	0
Custer	4	0	0	0	0	0	0	0
Fallon	0	2	0	0	0	0	0	0
Glacier	0	0	0	1	0	0	0	0
Yellowstone	2	0	0	0	0	0	0	0
Total Negative Tests	9,765	7,310	7,308	7,341	8,412	9,658	10,248	8,745
Total Positive Tests	6	2	1	1	0	0	0	0

Figure 24: Montana Trich Tests by County FY16-FY23. Source: AHB Staff

Department of Livestock (DOL) has an interactive map that shows total negative tests, total positive tests, female totals, and estimated bull totals by county in FY23. Female cattle numbers are based on 2022 per capita data. Total bulls per county is based on average stocking rate of one bull per 25 beef females. Please see the interactive map here: https://montana.maps.arcgis.com/apps/instant/exhibit/index.html?appid=43a9cb9f6cd447a1ba5d1d93ab030232

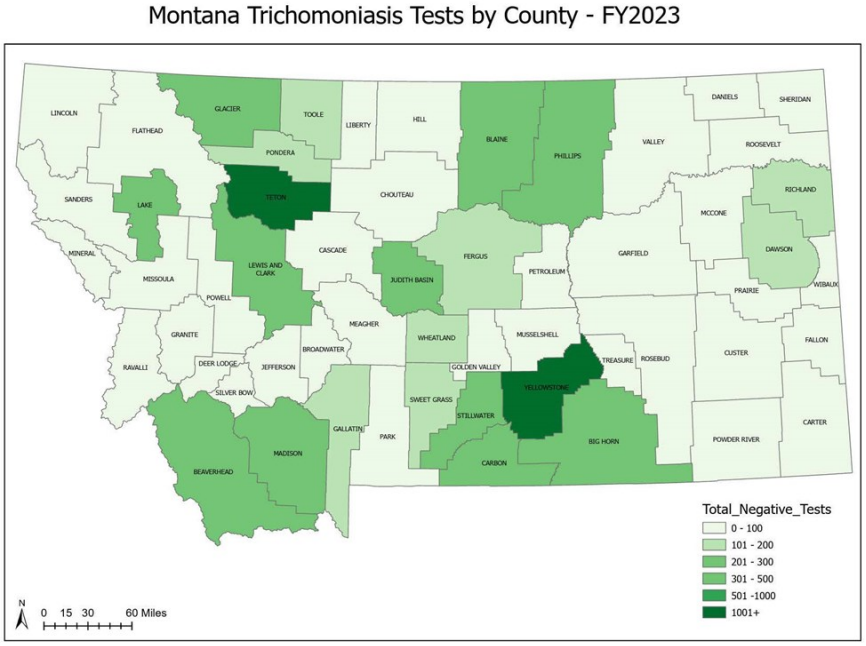


Figure 25: Montana Trich Tests by County FY23. Source: AHB Staff

West Nile Virus (WNV)

Department of Livestock (DOL) received two reports of West Nile Virus (WNV) in FY23. The cases were diagnosed in Lewis & Clark and Phillips Counties. The first horse was diagnosed in Lewis & Clark County. The horse had no known vaccination or travel history. The horse presented as ataxic and had facial twitches. The horse became worse over the span of three days but ultimately recovered. The second horse was diagnosed in Phillips County and had no known vaccination or travel history. The Phillips County horse was euthanized.

Historically, clinical horses testing positive for WNV, have not been vaccinated. The WNV vaccinations that are available for domestic animals including horses have shown to be effective against the virus and development of clinical signs.

In addition to the positive equine cases, there were no positive human cases and four positive mosquito pools reported in FY23. That is down from two positive human cases and 11 positive mosquito pools in FY22. Information about positive WNV cases is shared between DOL and Department of Public Health and Human Services (DPHHS), to support identification of potential risk areas within the state and to help with WNV prevention. While direct transmission of WNV between livestock and people does not occur, a veterinarian's diagnosis of WNV in an animal warrants client and public education about the presence of the disease in the region. Figure 26 illustrates the locations of positive human and equine cases of WNV as well as the positive mosquito pools.

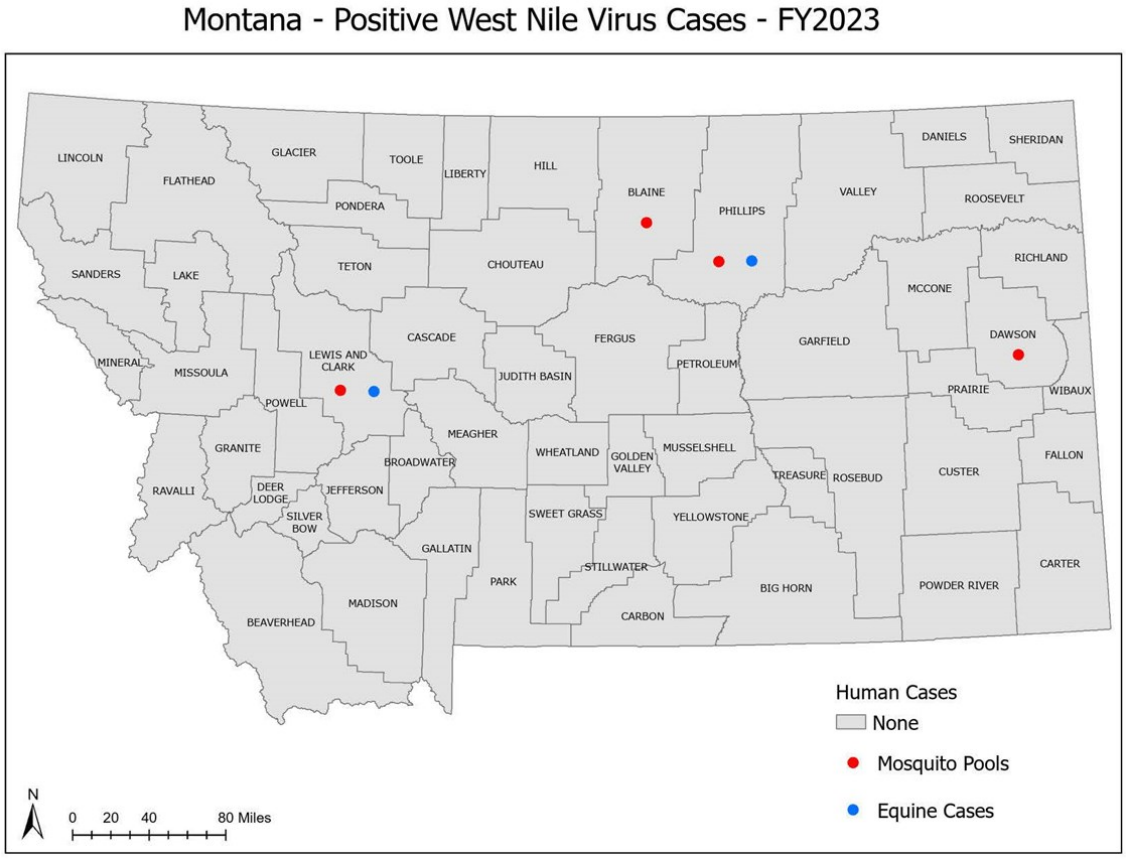


Figure 26: Montana WNV Cases FY23. Source: AHB Staff

Reportable Disease Summary

Figure 27 is a summary of reportable disease testing and diagnosis in FY23 conducted at Montana Veterinary Diagnostic Laboratory (MVDL).

Test Name	Total Test Results	Total Tests Positive	Notes About Positive/Suspect Cases
African Swine Fever	2	0	
Anaplasmosis	2473	272	Antibody +, doesn't indicate disease
Avian Influenza	611	186	
Brucella Canis	1453	262	
Bovine Herpes Virus	243	75	
Bluetongue	164	53	Antibody +, doesn't indicate disease
Bovine Lukemia Virus	873	60	Antibody +, doesn't indicate disease
Brucella ovis	624	2	
Bovine Viral Diarrhea	1780	68	Antibody +, doesn't indicate disease
Caprine Arthritis Encephalitis/ Ovine Progressive Pneumonia	105	8	
Campylobacter	1212	0	
CSF PCR	2	0	
Equine Infectious Anemia	7105	2	
Heartworm	91	2	
Johnes	9015	347	
Rabies Final Result	489	11	
Salmonella Culture	142	0	
Salmonella Enteritidis Culture	366	0	
Salmonella Enteritidis PCR Screen	1254	0	
Salmonella Pullorum	1	0	
Swine Influenza	1	0	
Trichinella	3	0	
Tritrichomonas foetus	4667	0	
Vesicular Stomatitis	52	3	Negative results after investigation
Vesicular Stomatitis NJ SN	52	0	
West Nile Virus	12	2	

Figure 27: Reportable Disease Testing and Diagnosis at MVDL FY23. Source: AHB Staff

Foreign Animal Disease (FAD) Investigations

In FY23, Foreign Animal Disease Diagnosticians (FADDs) conducted 23 investigations, including investigations of Highly Pathogenic Avian Influenza (HPAI) and Vesicular Stomatitis (VSV). Figure 28 shows FY23 FAD investigation disease information and results.

Start Date	Incident	Species Group	Invest Reason	Invest Type	Invest Status	Closing Reason
7/7/2022	FAD	Chicken	Complaint	High Death Rate	Completed	FAD Neg at NAHLN
7/15/2022	FAD	Avian	Complaint	High Death Rate	Completed	FAD Neg at NAHLN
7/22/2022	HPAI 2022	Chicken	Complaint	High Death Rate	Completed	Disease Mitigation Completed
8/31/2022	FAD	Equine	Complaint	Vesicular – vesicle, papule, erosion	Completed	FAD Diagnosis Negative
9/12/2022	HPAI 2022	Turkey	Complaint	High Death Rate	Completed	Disease Mitigation Completed
10/3/2022	HPAI 2022	Turkey	Complaint	High Death Rate	Completed	Disease Mitigation Completed
10/6/2022	FAD	Chicken	Complaint	High Death Rate	Completed	FAD Neg at NAHLN
10/17/2022	HPAI 2022	Poultry	Complaint	High Death Rate	Completed	Disease Mitigation Completed
10/26/2022	HPAI 2022	Chicken	Complaint	High Death Rate	Completed	Disease Mitigation Completed
11/11/2022	FAD	Chicken	Complaint	High Death Rate	Completed	FAD Neg at NAHLN
12/13/2022	HPAI 2022	Chicken	Complaint	High Death Rate	Completed	Disease Mitigation Completed
1/5/2023	HPAI 2022	Chicken	Complaint	High Death Rate	Completed	Disease Mitigation Completed
1/5/2023	FAD	Chicken	Complaint	High Death Rate	Completed	Disease Mitigation Completed
1/31/2023	FAD	Goose	Complaint	High Death Rate	Completed	FAD Neg at NAHLN
3/7/2023	FAD	Chicken	Complaint	Respiratory	Completed	FAD Neg at NAHLN
3/15/2023	FAD	Chicken	Complaint	High Death Rate	Completed	FAD Neg at NAHLN
4/12/2023	HPAI 2022	Chicken	Complaint	High Death Rate	Completed	Disease Mitigation Completed
4/23/2023	FAD	Chicken	Complaint	High Death Rate	Completed	FAD Neg at NAHLN
5/2/2023	FAD	Duck	Complaint	High Death Rate	Completed	FAD Neg at NAHLN
5/11/2023	FAD	Chicken	Complaint	Respiratory	Completed	FAD Neg at NAHLN
5/18/2023	FAD	Chicken	Complaint	High Death Rate	Completed	FAD Neg at NAHLN
5/30/2023	FAD	Chicken	Complaint	High Death Rate	Completed	FAD Diagnosis Negative
6/19/2023	FAD	Equine	Complaint	Vesicular – vesicle,	Completed	FAD Diagnosis Negative

Figure 28. FY23 FAD investigation disease information and results in each county. Source: AHB Staff

Deputy State Veterinarian

Animal Health Bureau (AHB) conducted two joint United States Department of Agriculture Animal and Plant Health Inspection Service Veterinary Services (USDA-APHIS-VS), Department of Livestock (DOL) accreditation sessions for 46 veterinarians new to practice in Montana. The accreditation sessions provide information to veterinarians on issues specific to Montana, including brucellosis, trichomoniasis, Johne's, and animal disease traceability (ADT) regulations. Thirteen of the attending veterinarians are category one accredited, which is a federal accreditation for small animal only. Thirty-three veterinarians were also category two accredited, covering small, large, and exotic animals. Both accreditations were held virtually.

AHB continues to publish quarterly Stock Quotes newsletters, and as needed, DOL Update email notifications for Montana deputy state veterinarians. Past editions of the Stock Quotes newsletter and associated One Health insert are available on the web at: https://liv.mt.gov/Animal-Health/Newsletters/index. Twenty DOL Updates were sent to veterinarians covering topics such as: Highly Pathogenic Avian Influenza (HPAI), *Brucella canis (B. canis)*, equine herpes virus (EHV), Brucellosis, Pigeon Fever, and emergency preparedness.

Figure 29. Chute Testing. Source: AHB Staff.

Emergency Preparedness

Department of Livestock (DOL) continued to work to advance Montana's level of emergency preparedness with several activities. DOL created a webpage with Emergency Preparedness information and links for veterinarians and livestock owners to access materials for biosecurity and disease or disaster preparedness plans.

HPAI Response

DOL responded to 57 sick bird calls in FY23 due to increased awareness and surveillance for High Path Avian Influenza (HPAI). DOL helped coordinate and implement depopulation and disposal of poultry with a confirmation of HPAI infection. In preparation for depopulation events, DOL purchased materials to create a Co2 chamber for humane depopulation of poultry (Figure 30). DOL veterinarians followed guidance from United States Department of Agriculture (USDA) and successfully utilized the equipment.

Figure 30: CO2 chamber created for humane depopulation of backyard poultry infected with HPAI. Source: AHB Staff

Secure Beef Supply (SBS)

DOL conducted 11 tabletop courses focused on the biosecurity recommendations of the Secure Beef Supply (SBS) Plan, including the line of separation, cleaning and disinfection, visitors, animal movement, and carcass disposal. Veterinarians that attended a tabletop presentation were then eligible to receive a $500 reimbursement after completing a SBS plan for a producer. The meeting sites included:

- Lewistown 17 attendees
- Malta 13 attendees
- Shelby 3 attendees
- Ronan 6 attendees
- Mile City 8 attendees
- Sidney 4 attendees
- Billings 11 attendees
- Dillon 10 attendees
- Three Forks 24 attendees
- Great Falls 36 attendees
- Havre 12 attendees

Alternative Livestock

In FY23, there were ten active alternative livestock licensed herds in Montana. One herd moved to inactive status during FY23 after depopulation of all remaining animals. Herd sizes range from 3-240 animals, with one mixed species herd. All other alternative livestock herds in Montana are elk only herds. In FY23, Montana exported 248 elk, mule deer, and big horn sheep to Idaho, Utah, Colorado, South Dakota, and Missouri. There were four alternative livestock animals imported into Montana in FY23.

Ending FY23, there are a total of 462 animals in alternative livestock herds. There were 28 births and 108 deaths, of these deaths 104 animals were eligible and tested for Chronic Wasting Disease (CWD). Producers are required to test all mortalities of animals 12 months of age and older. Untested animals were either too young for testing, too decomposed to yield reliable results, or presumed dead.

Animal Health Bureau (AHB) staff reviewed alternative livestock annual inventories and assigned herd status in the CWD Herd Certification Program accordingly. The CWD Herd Certification Program is a cooperative effort between Department of Livestock (DOL) and United States Department of Agriculture Animal and Plant Health Inspection Services (USDA APHIS) to monitor, control, and contain the spread of CWD in farmed cervids. The CWD certification program assigns herd monitored statuses based upon years of surveillance. After five years of testing, reporting, and monitoring, CWD Herd Certification is granted. Certification status is required to import or export to other states. Requirements for enrolled herds include fencing, individual official identification (ID), regular annual inventories, and postmortem testing on all animals 12 months or older. AHB completed annual herd inventories and reviews of ten alternative livestock premises. The remaining herd report is pending until the producer submits a complete inventory. The herd status has been suspended pending completion of a physical herd inventory. Figure 30 illustrates the current CWD Monitored Herd Status of Montana's 10 alternative livestock ranches.

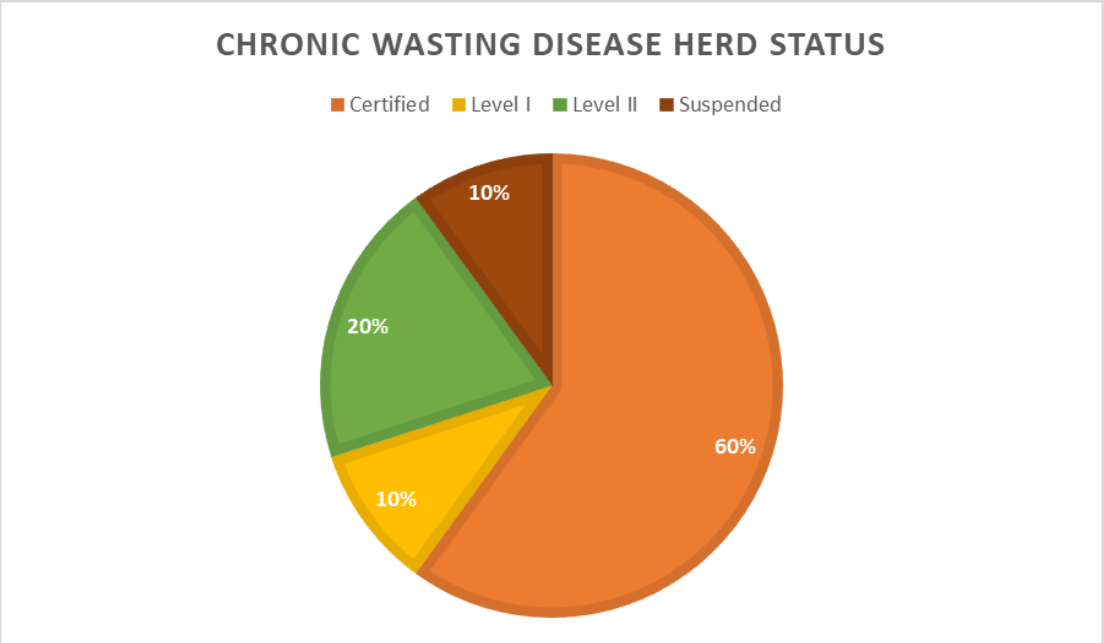


Figure 31: CWD Herd Status FY23. Source: AHB Staff

Bison Management

Department of Livestock (DOL) participated in and was the lead partner of the Interagency Bison Management Plan (IBMP) for 2023. Other IBMP partners include the National Park Service, United States Department of Agriculture Animal and Plant Inspection Services (USDA APHIS), Montana Fish Wildlife and Parks (FWP), United States Forest Service (USFS), and several tribal entities. Established in 2010, the goals of IBMP are to maintain a wild, free ranging bison population, reduce the risk of brucellosis transmission from bison to cattle, manage bison that leave Yellowstone National Park (YNP) and enter the state of Montana, and to maintain Montana's current brucellosis free status for domestic livestock. DOL contributes to these common goals by monitoring bison movements into and out of the tolerance zone and when bison are outside of the appropriate zones, acts according to IBMP guidelines and within the authority granted in Montana Code Annotated (MCA). Figures 33 and 34 show a summary of bison counts by region, zone and date. If bison cannot be successfully hazed back into an appropriate zone or there is potential for comingling with cattle, bison may be removed via lethal means. In FY23, there were no lethal removals of bison.

There are two separate bison management areas, to the west of the YNP boundary (West Yellowstone) and to the north of the park boundary (Gardiner). The management areas are divided into distinct zones:

- Zone 1 is the area inside the park, near the park boundary.
- Zone 2 is the tolerance zone outside of the park boundary.
- Zone 3 is outside of the park where there is no tolerance.

Early snow and a record high bison population in the park pushed many animals out of the park and into zone 2. DOL staff hazed nearly 900 bison over the course of 28 separate successful haze events; 25 in Gardiner and 3 in West Yellowstone to ensure that bison did not leave the tolerance zone or commingle with cattle. See Figure 32 below for a summary of haze event by date and management area.

Week Of:	Total Head Hazed in Gardiner	Total Head Hazes in West Yellowstone
2/12/2023	21	0
3/5/2023	358	0
3/12/2023	132	0
3/19/2023	30	0
3/26/2023	150	0
4/2/2023	112	0
4/9/2023	1	0
4/16/2023	3	0
4/23/2023	1	0
4/30/2023	11	0
5/14/2023	0	21
5/21/2023	0	27

Figure 32. FY23 Haze Counts by Week and Management Area. Source: AHB Staff

Bison Management, continued

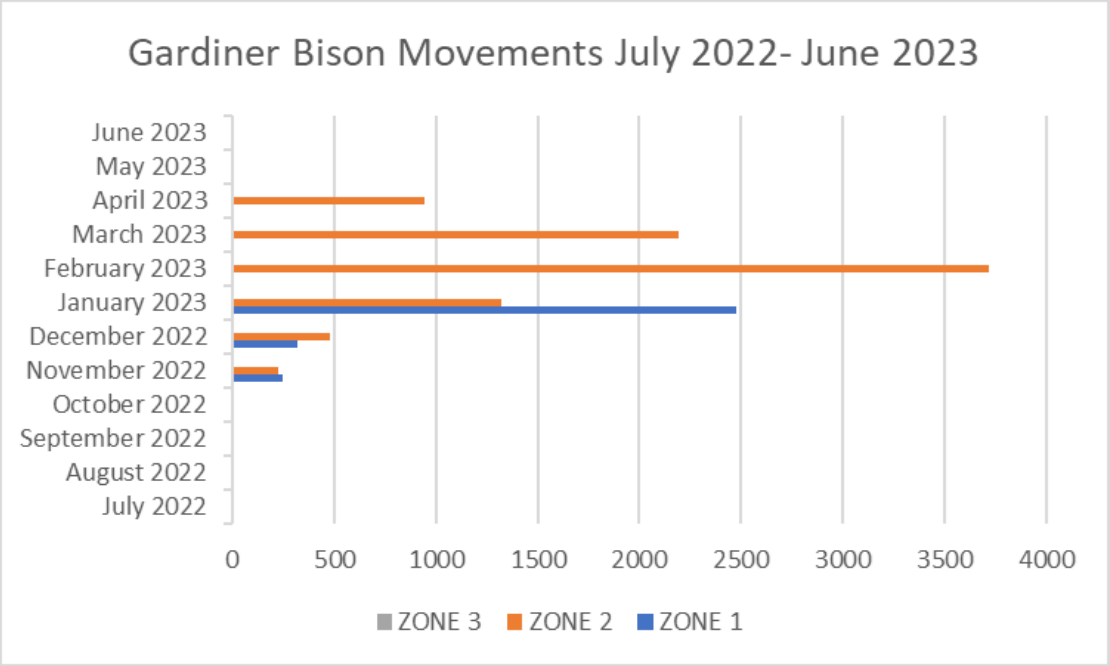


Figure 33: FY23 Gardiner Bison Movements Source: AHB Staff

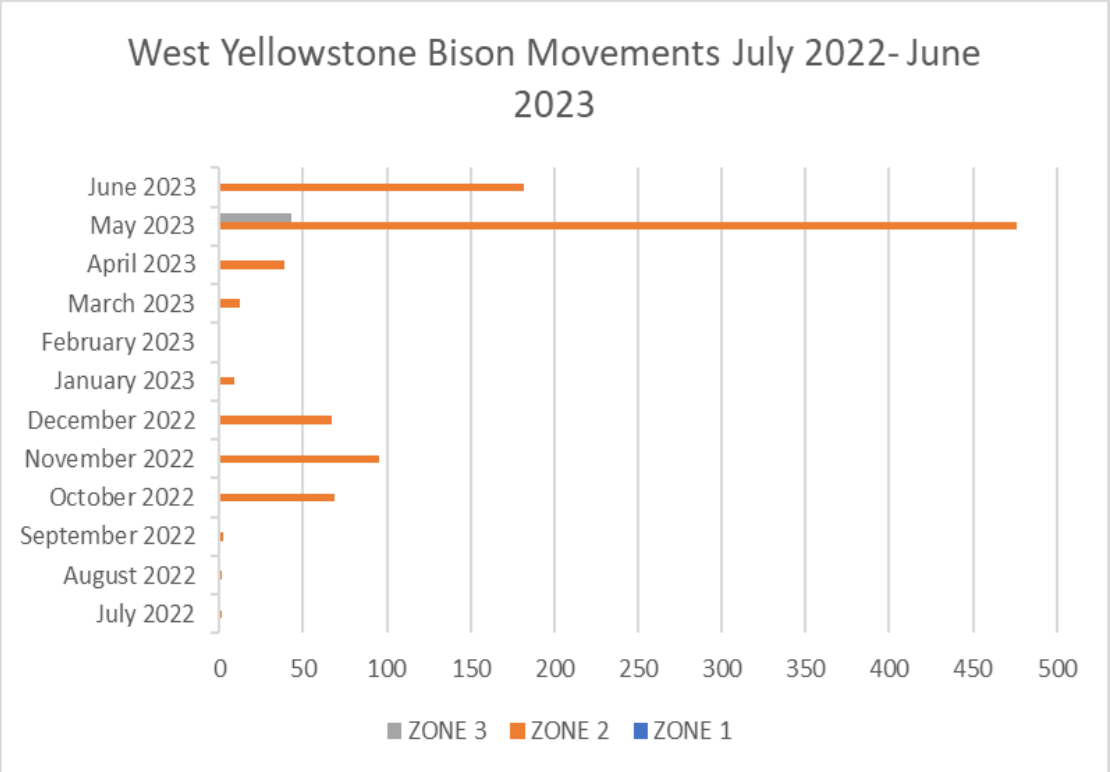
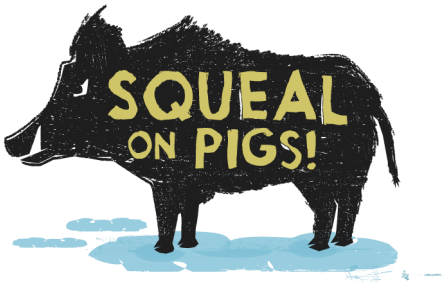


Figure 34. FY23 West Yellowstone Bison Movements. Source: AHB Staff

Feral Swine



Department of Livestock (DOL) responded to eight feral swine reports in FY23. These reports spanned the following counties: Pondera, Lincoln, Flathead, Hill, and Cascade.

Reports of potential feral swine include the following:

- Dog retrieved a recently deceased piglet while out walking with owner. They were walking in an area not in proximity to any farmhouses. The man was unable to give a good description of the piglet. No further action was taken.
- Dead pig found near Lake Koocanusa in Lincoln County. Carcass was collected for genetic testing however the carcass was severely decayed. Following several public meetings and local news stories, DOL received a call from a citizen that had seen the carcass earlier in the year and was able to report that prior to decomposition the carcass appeared to be a domestic pig. Genetic testing confirmed that the animal was a domestic breed of pig.
- Approximately three to four pigs were spotted by a hunter in Hill County. District investigators were unable to locate the pigs.
- Small black pig seen in Cascade County. Appeared to be a domestic pig based on pictures provided. District investigators were unable to capture the pig.
- Pig carcass found in Hill County with suspected evidence of butchering. United States Department of Agriculture (USDA) wildlife biologist suspected this was a domestic pig based on pictures, but genetic testing will be completed if able with remaining organic material.

DOL provided education on Feral Swine at a livestock meeting in Great Falls; attendees included livestock producers, veterinarians, and Fish, Wildlife, and Parks (FWP) (Figure 35).

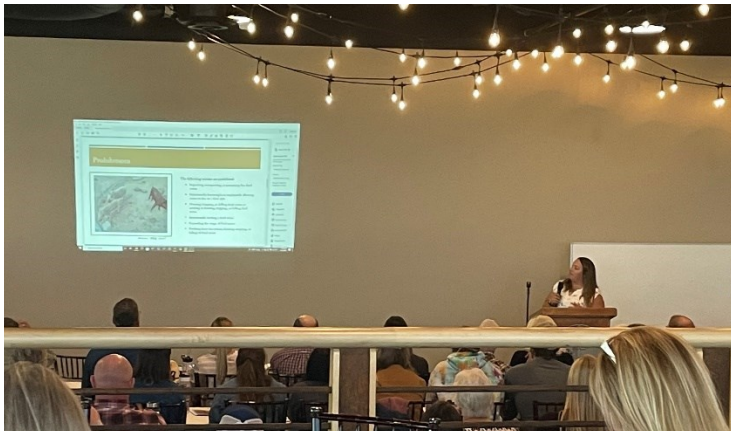


Figure 35. Feral Swine Livestock Meeting August 2022. Source: AHB Staff.

Swine Health Improvement Plan (SHIP)

Department of Livestock (DOL) continues participation in the Swine Health Improvement Plan (SHIP) for Montana swine producers as the Official State Agency (OSA). SHIP is a national program modeled after the highly successful National Poultry Improvement Plan (NPIP), which monitors disease in poultry.

Successful implementation and acceptance of SHIP will help the United States (US) maintain trade by declaring areas are free of disease, in case of an incursion of a Foreign Animal Disease (FAD) such as African Swine Fever (ASF), Classical Swine Fever (CSF), or Foot and Mount Disease (FMD). SHIP encompasses biosecurity, traceability, and disease surveillance. Certification requires a premises Identification (ID) number, a Secure Pork Supply (SPS) plan, a SHIP biosecurity survey, an enrollment form, and electronic documentation of product movement on and off the premises. Should a disease outbreak occur, movements of animals and products will stop. Permits will be needed to restart movement and producers that are SHIP certified will have a higher priority for movement permits due to a greater likelihood of freedom from disease.

In FY23, four farrow-to-finish and 12 breeding herds were enrolled in the Montana SHIP program: totaling a capacity of 55,550 swine.

Figure 36. United States SHIP. Source: US Swine Health Improvement Plan

Certified Swine Sample Collector Program (CSSC)

DOL has implemented the Certified Swine Sample Collector (CSSC) program in Montana. The CSSC program is a lay person training course designed to teach swine producers how to obtain appropriate samples for disease testing. During a large-scale foreign animal disease outbreak, federal and state veterinarians will be in extremely high demand. When this occurs, pork industry veterinarians, producers, and caretakers become critical resources in the sample collection process on production sites to test for the disease of concern. This national swine sample collection training program will assure animal health officials that lay individuals who have been trained by veterinarians will correctly collect, handle, and submit samples prior to or during an outbreak. Level II accredited veterinarians that work with swine producers are eligible to train swine caretakers to collect samples.

Seventeen swine producers were certified as Tier two collectors during FY23. Tier two training includes demonstrating competency to gather the following samples: oral fluid, blood, oral swabs, nasal swabs, processing fluids, spleen and spleen swabs, lymph nodes, tonsils, vesicular fluid, and performing necropsy.

National Poultry Improvement Plan (NPIP)

National Poultry Improvement Plan (NPIP) focuses on managing disease risk in live birds and hatching eggs. The program was initially developed to combat *Salmonella pullorum*, a disease that can cause high mortality in young poultry, and has since expanded to include additional diseases of concern, notably Avian Influenza (AI). The benefit to Montana producers in being NPIP certified is a knowledge of the health of their flock, the safe interstate movement of their birds and eggs, and the security of knowing producers may qualify for indemnity in the event of a confirmed disease outbreak. In FY23, Montana had a total of 32 NPIP participants (Figure 37). Montana's participants included 24 backyard flocks, 1 backyard emu flock, 4 gamebird farms, 2 commercial egg layers, and 1 dealer. Montana participants are in Big Horn, Broadwater, Carbon, Cascade, Flathead, Granite, Lewis and Clark, Musselshell, Pondera, Powell, Ravalli, Sanders, Sheridan, Silver Bow, Stillwater, Sweetgrass, Valley, and Yellowstone Counties.

Surveillance testing requirements vary by flock type and size. In FY23, 499 birds were tested for *Salmonella pullorum* and 1,219 were tested for AI. Department of Livestock (DOL) works closely with several Montana accredited veterinarians who conduct most of the state's NPIP testing.

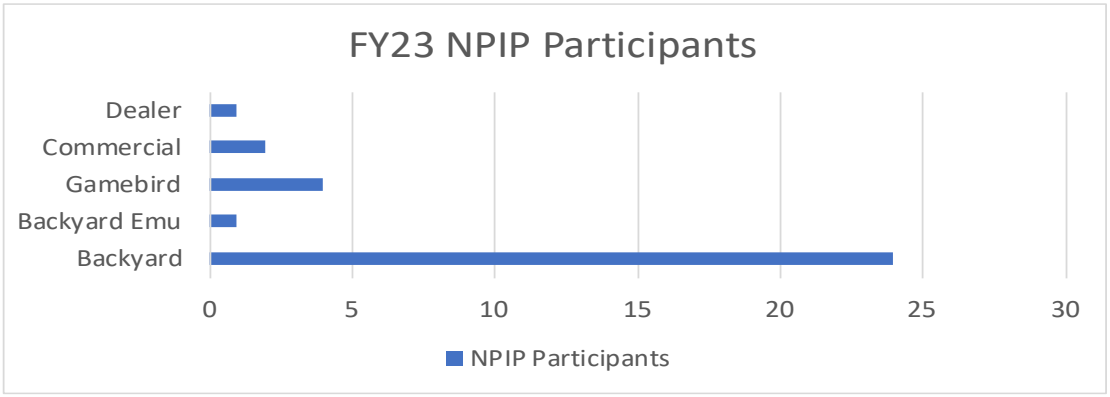


Figure 37. FY23 NPIP Participating Flocks. Source: AHB Staff

Figure 38. Oral Swabbing for Avian Influenza. Source: AHB Staff

Traceability and Compliance

Animal Health Bureau (AHB) Import Office monitors imports and exports of livestock and other animals into and out of the state of Montana. During FY23, 38,776 certificates of veterinary inspection (CVIs) were checked for compliance.

To improve animal disease traceability, AHB compliance staff sends letters to veterinarians and their offices. A "no permit letter" is sent to veterinarians who send animals to Montana on paper health certificates without obtaining a permit number. A total of 163 "no permit" letters were sent to out-of-state veterinarians in FY23.

Figure 39 below illustrates the number of records received and reviewed by AHB compliance staff during FY23.

Record Type	Total Number Entered
Export CVIs Checked for Compliance	24,453
Import CVIs Checked for Compliance	14,323
Brucellosis Test Records Checked for Compliance	1,499
Brucellosis Vaccination Records Checked for Compliance	4,697
Total Records Reviewed	**44,972**

Figure 39. CVI and Vaccination Record Totals FY23. Source: AHB Staff

When animals enter Montana illegally, AHB compliance staff works in conjunction with Brands Enforcement staff to ensure those animals meet the import requirements post entry. During FY23 AHB worked with brands staff to bring 45 non-compliant movements into compliance with regulations via quarantine and issued 83 post-illegal permit numbers. Violations included imports without a health certificate, animals entering without meeting testing requirements, and animals being imported without official identification (ID). All violations were rectified, and the consignors, consignees, and veterinarians were educated on Montana import regulations.

Traceability and Compliance, continued

Official Identification (ID)

As a vital component of Animal Health Bureau's (AHB) mission to ensure animal health and welfare, traceability plays a pivotal role in safeguarding both livestock and public health. By diligently recording and tracking official ID tags, AHB enhances the ability to swiftly respond to disease outbreaks, mitigate potential risks, and establish a robust foundation for disease surveillance and control. This comprehensive approach not only strengthens Montana's livestock industry but also bolsters consumer confidence in the safety and quality of Montana's agricultural products. By prioritizing the seamless integration of official ID tags into the United States Animal Health Emergency Reporting Diagnostic System (USAHERDS) traceability system, AHB remains committed to upholding the highest standards of livestock management and traceability in Montana.

Figure 40 below illustrates the number of official ID tags entered in FY23 by AHB compliance staff. Official ID entered is not the full representation of the official identification received by Department of Livestock (DOL). Over half of all official ID is uploaded automatically into USAHERDS. The tags represented in Figure 40 were the tags hand entered by AHB compliance staff in FY23.

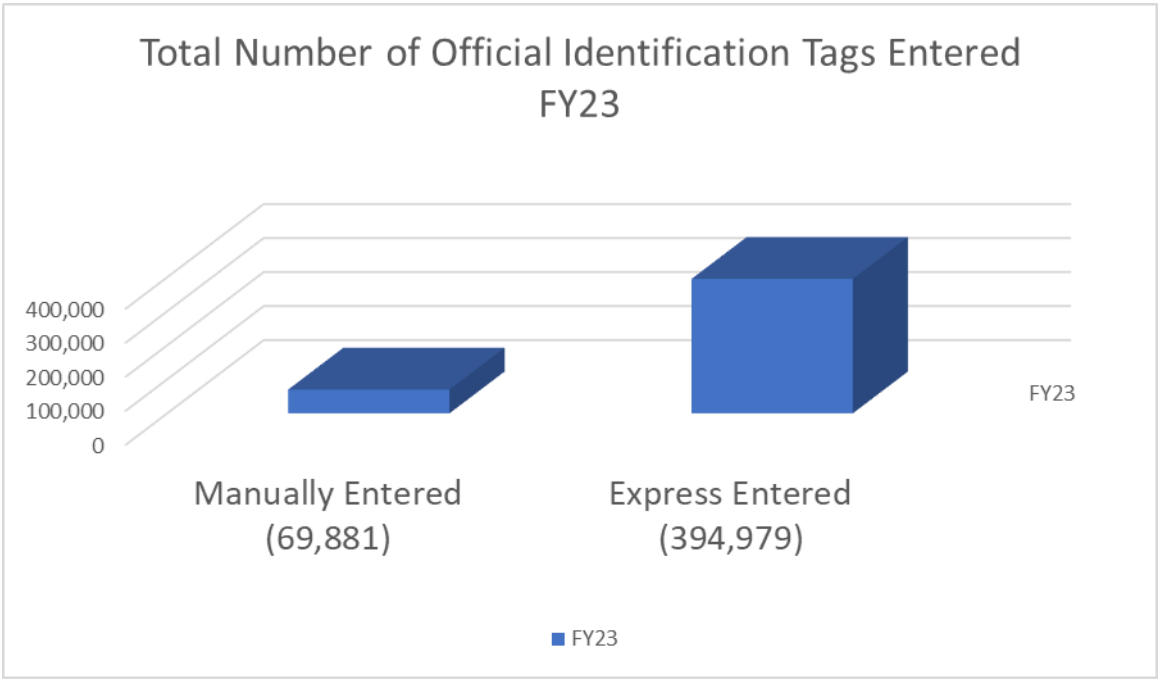


Figure 40. Official ID Tags Entered FY23. Source: AHB Staff

Traceability and Compliance, continued

Transition to Electronic Certificates of Veterinary Inspection

Starting January 1, 2021, Department of Livestock (DOL) mandated the use of electronic certificates of veterinary inspection (eCVI) for all animals exported from Montana. This transition resulted in a 55% decrease in the number of papers CVIs issued in the first year. From FY21 to FY22, there was over an 89% decrease in the use of paper health certificates, and from FY22 to FY23 there was an additional 83% decrease in the use of paper health certificates (Figures 41 and 42). Montana Veterinarians' over 80% decrease in paper CVIs in just two short years, showcases their dedication to embracing technology and advancing animal disease traceability in their industry. By adopting various forms of eCVIs, DOL can streamline data management, increase efficiency, and enhance accuracy in tracking animal movements on health records. This commitment not only reduces paperwork but also strengthens the ability to respond swiftly to disease outbreaks, protect animal health, and support seamless interstate and international trade. Overall, this shift exemplifies a proactive approach towards modernization, ensuring a more resilient and effective veterinary practice.

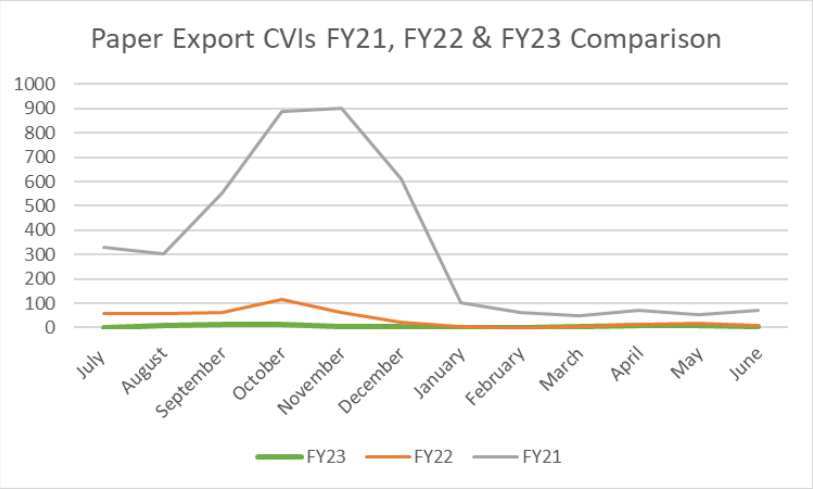


Figure 41. Official ID Tags Entered FY23. Source: AHB Staff

Number of Paper Export CVIs Received by Month			
Month	**FY21**	**FY22**	**FY23**
July	328	59	1
August	302	60	7
September	553	61	15
October	890	115	11
November	902	61	4
December	612	21	5
January	102	4	1
February	61	1	1
March	48	5	5
April	69	12	8
May	55	18	8
June	73	9	3
Total	**3995**	**426**	**69**

Figure 42. Export CVIs Received by Month FY21-FY23. Source: AHB

Animal Movements

Figures 43 and 44 illustrate the number of animals exported compared to the number of animals imported in FY23. Montana remains a net exporter state with more than half of the total exported animals being shipped to these top five states: South Dakota, Nebraska, Wyoming, Iowa, and Colorado.

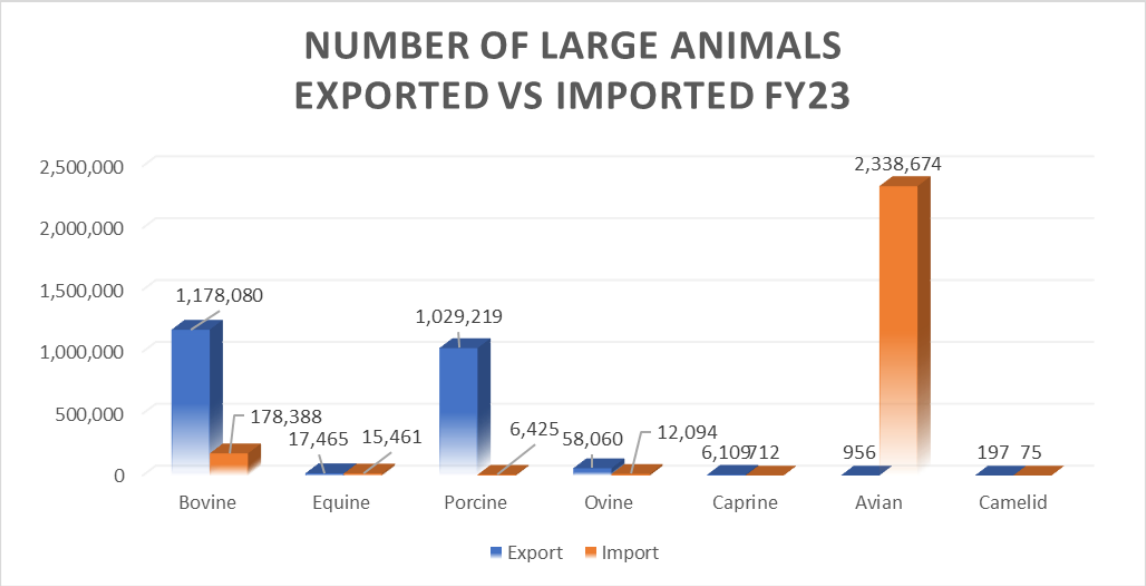


Figure 43. Large Animal Exports vs. Imports FY23. Source: AHB Staff

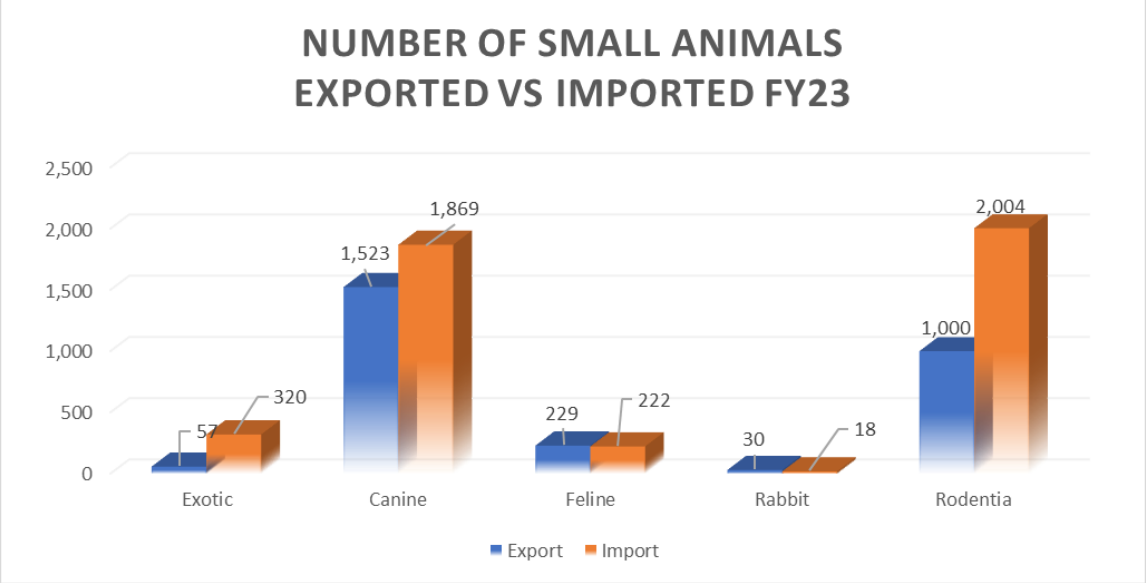


Figure 44. Small Animal Exports vs. Imports FY23. Source: AHB Staff

Animal Movements, continued

As to be expected, Montana experiences fluctuating trends in cattle exports due to a multitude of factors, including market demand, economic conditions, environmental conditions, changes in trade policies, and fluctuations in livestock production/inventory. In FY18, the state exported 1,391,690 cattle, which decreased slightly to 1,217,160 in FY19. However, the trend reversed in FY20, showing a modest increase to 1,247,401 cattle exported. Subsequently, in FY21, the number of cattle exports continued to rise, reaching 1,312,064. The most substantial growth in cattle exports was observed in FY22, a year with widespread drought conditions, when Montana exported a record 1,556,444 cattle. And in FY23, after a year of inventory contraction due to those drought conditions, there was an associated decline in the number of cattle exported, falling to 1,178,080.

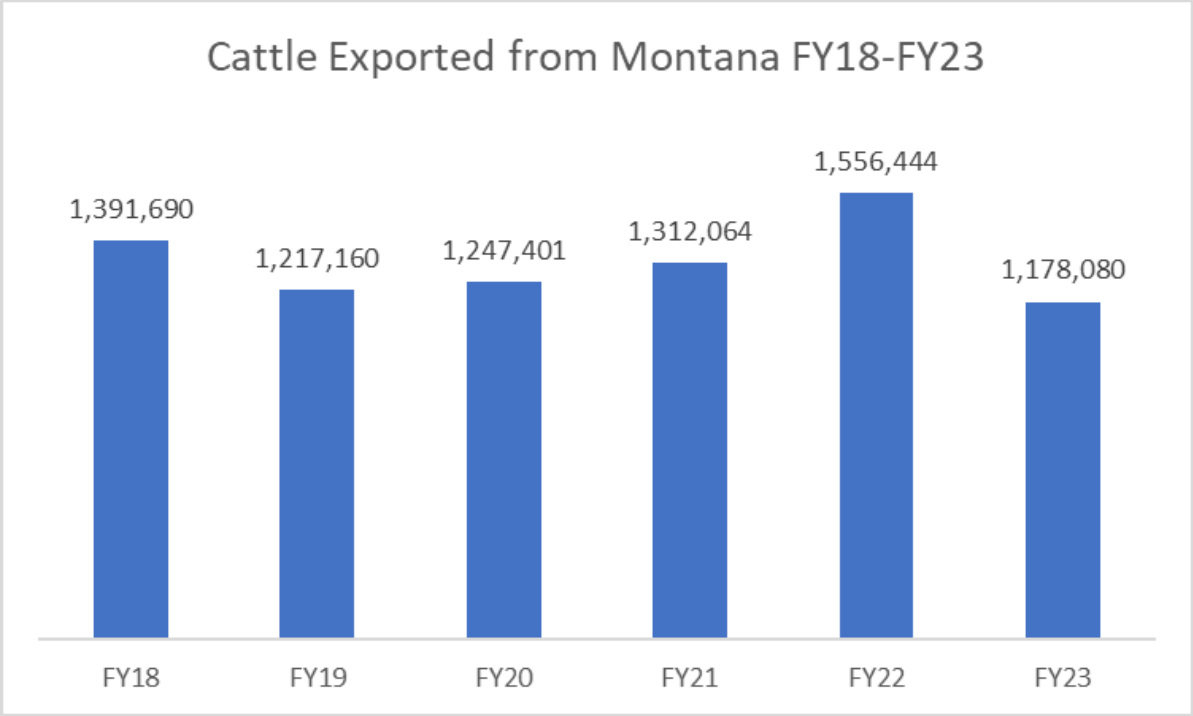


Figure 45. Cattle Exports FY18-FY23. Source: AHB Staff

Equine Extended Certificate of Veterinary Inspection (EECVI)

Beginning January 1, 2020, Department of Livestock (DOL) transitioned to the Extended Equine Certificate of Veterinary Inspection (EECVI). The EECVI is offered through Global Vet Link (GVL). EECVIs are valid for six months and owners track their movements through the owner portal. The transition to EECVIs has allowed DOL to offer an extended validity certificate and meet traceability requirements. Figure 46 illustrates the number of equine movements on EECVIs in FY23.

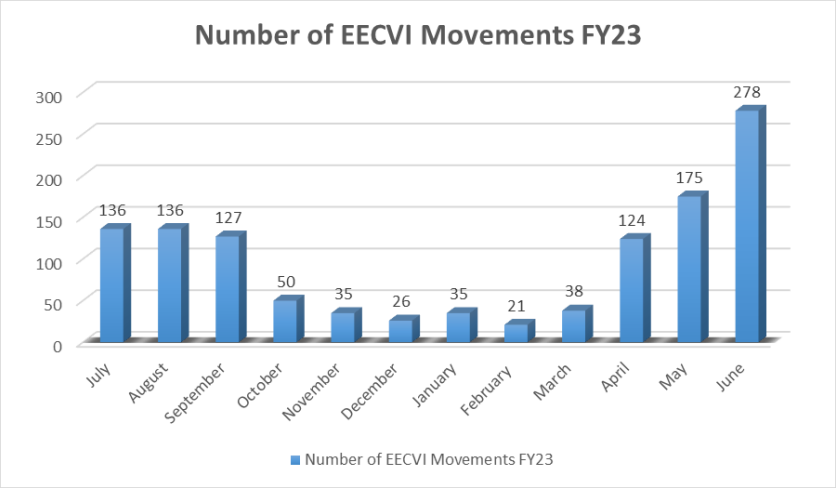


Figure 46. EECVI Movements FY23. Source: AHB Staff

States that are currently participating in the EECVI program include: Alabama, Arizona, Arkansas, California, Florida, Georgia, Idaho, Indiana, Kansas, Kentucky, Louisiana, Maryland, Minnesota, Missouri, Mississippi, Montana, Nevada, New Mexico, New York, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont*, Virginia, Washington, West Virginia, and Wyoming. *Vermont only participates May 1 – October 31. Acceptance of EECVIs continues to grow among states. Participating states in Figure 47 below are highlighted in blue (Vermont only participates May 1 through October 31 and is highlighted in green).

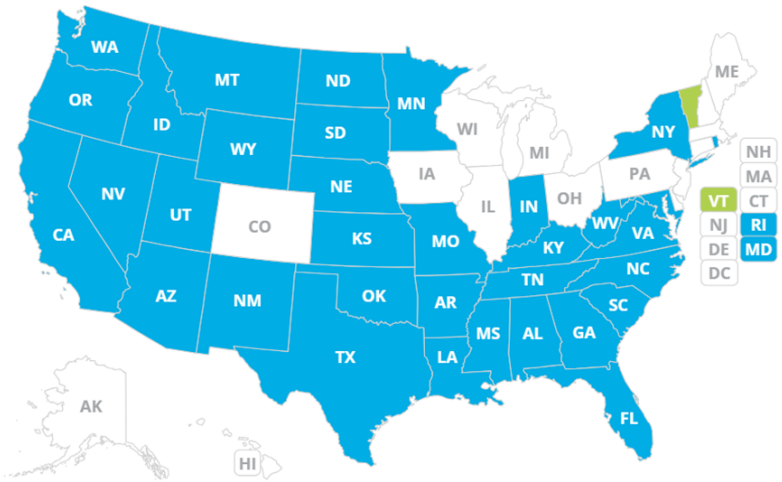


Figure 47. EECVI Participating States. Source: Global Vet Link

Call Center

Animal Heath Bureau (AHB) Import Office strives to provide excellent customer service through a busy call center, an after-hours answering service, and several online systems. The call center processed 9,337 calls consisting of both permit requests and general questions in FY23 (Figure 48).

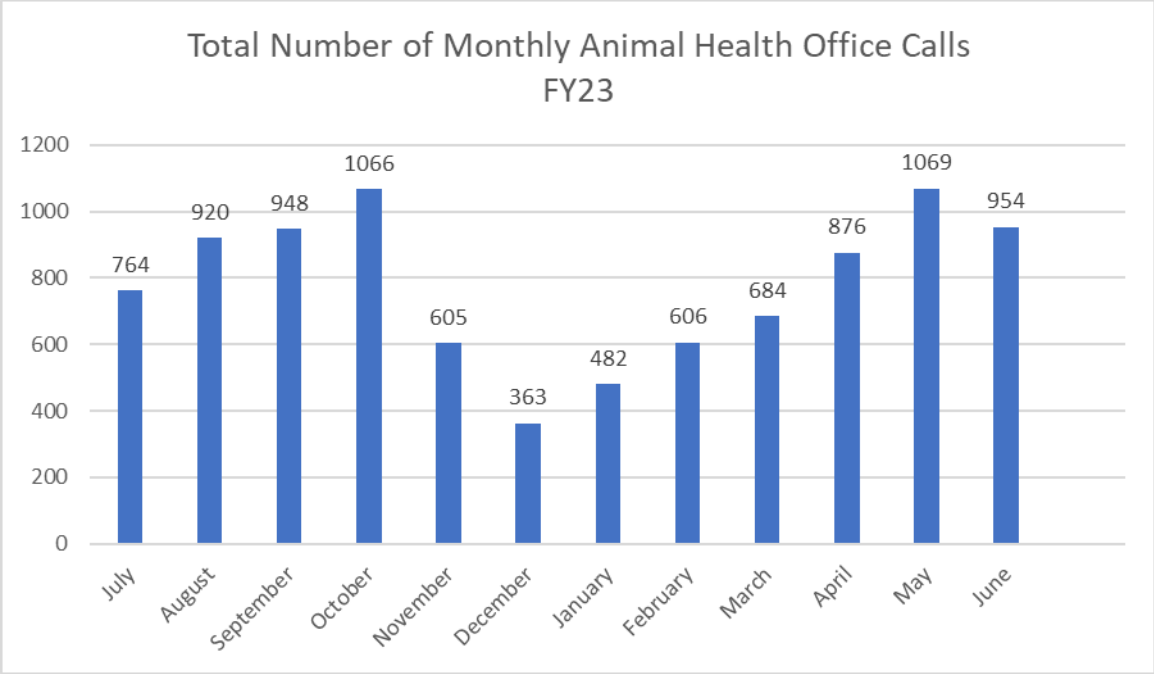


Figure 48. FY23 Monthly AHB Office Calls. Source: AHB Staff

On April 1, 2021, the import permit requirement was removed for all forms of electronic health certificates. Historically, permits were required due to the delay of paper certificates traveling by mail to state offices. The transition to electronic health certificates enables AHB to obtain traceability data at a much faster, often instant rate, eliminating the need for an entry permit number. This change has allowed AHB to provide better customer service to callers as well as automate several internal processes.

AHB provides an after-hours answering service to veterinarians and producers. Approximately 731 permit calls were taken and processed by the after-hours line in FY23. This exceptional service ensures that urgent concerns and emergencies regarding livestock can be addressed promptly at any time. By offering a dedicated hotline staffed by knowledgeable professionals, AHB demonstrates a commitment to the well-being of livestock and the livelihoods of those involved in the industry. This proactive approach fosters trust, enhances communication, and reflects the dedication to supporting the livestock community, ultimately leading to healthier livestock and more satisfied customers.

Permits, Licenses, and Fees Collected FY23

Below is a table of the licenses and permits offered during FY23 and the amounts collected by Department of Livestock (DOL) to facilitate those programs. Also included in the table are the amounts distributed and collected for supplies provided to veterinarians. Animal Health Bureau (AHB) distributes health certificate books, trichomoniasis and alternative livestock tags to veterinarians at cost to help facilitate traceability.

Permits/Licenses/Supplies Certifications Program	Permits/Licenses Certifications Applications/Supplies	Permits/Licenses/ Certifications Fees Collected
Annual Equine Semen Import	52	$364.00
Brucella Ovis – New Application	1	$40.00
Brucella Ovis – Renewal	21	$378.00
Biologics – New Application	2	$60.00
Biologics – Renewal	14	$140.00
Bovine Semen Domestic	2	$14.00
Bovine Semen International	0	$0
Montana Bull Stud	3	$1,050.00
Seasonal Grazer - New Application	37	$518.00
Seasonal Grazer – Renewal	4	$148.00
Trichomoniasis Quarantine Feedlot	3	$26.00
Large Animal Health Certificate Book	3	$96.00
Alternative Livestock Tags	433	$452.80
Trichomoniasis Tags	4544	$7,588.48
TOTAL		$10,875.28

Figure 49. FY23 Revenue generated from special licenses/permits and veterinarian supplies. Official Centralized Services (CS) analysis may differ due to actual dates and items that were received and processed. AHB data is shown to display specific program item revenue. Source: AHB Staff

FIELD REPORTS

Western Area— Officer Dan Bugni, Area Manager

Figure 50. Officer Bugni. Source: AHB Staff.

- Drove 26,506 miles carrying out various tasks and assignments for both Animal Health Bureau (AHB) and Brands Enforcement Division of the Department of Livestock (DOL).
- Conducted a total of three livestock paperwork check stations in FY23: one in Lolo, Montana and two in Deer Born, Montana.
- Attended the International Livestock Identification Association in Fort Worth, Texas.
- Attended a Pork Producers African Swine Fever (ASF) scenario training in Augusta, Montana.
- Participated in the Designated Surveillance Area (DSA) review meeting in Helena, Montana and completed field visits at the Ramsay Auctions Yards, Dillon auction yards, and slaughter facility in Dell, Montana.
- Attended an officer safety schooling training by the Federal Bureau of Investigation (FBI) in Missoula, Montana.
- Assisted in depopulation of a High Path Avian Influenza (HPAI) infected backyard flock located in Missoula County.
- Investigated reports of a cattle buyer from Minnesota buying cattle from Montana livestock auctions, destining them to Minnesota then shipping them to the Torrington Wyoming auction yards. This individual was contacted, informed, and issued four citations for diversion of livestock.
- Quarantined and issued a citation for illegal import of a horse that originated in Idaho. A negative Equine Infectious Anemia (EIA) test was completed, and the horse was released from quarantine.
- Attended a meeting with the Blackfeet Tribal Lands personnel regarding development of a tribal enforcement position modeled after DOL District Officer positions.
- Assisted in following up on two non-negative brucellosis suspects from a Beaverhead County herd.
- Facilitated the need for Canadian cattle shipments to offload at various Montana locations due to the closure of Monida pass to Idaho during a winter snowstorm.
- Worked with Natalie Lirette of the Bureau of Land Management (BLM) horse program on several BLM horse movements without inspections.
- Received a call from the Beaverhead County sheriff's office regarding a report of a baby bison calf at large in the middle of town. This calf belonged to an individual out of the Ronan, Montana area, who was issued a citation for transportation without a permit; a $335.00 bond was collected.
- Completed inspections on rodeo steers and issued a warning citation for the failure to obtain a change of ownership inspection and an illegal import quarantine.

FIELD REPORTS

Eastern Area— Officer Shawn Hando, Area Manager

Officer Shawn Hando started as the Eastern Area Supervisor in May 2023; this report reflects Officer Hando's work in FY23 from May 13, 2023 to June 30, 2023.

Figure 51. Officer Hando. Source: AHB Staff.

- Drove 3,550 miles in FY23 working on various tasks and assignments for Animal Health Bureau (AHB) and Brands Enforcement Division of the Department of Livestock (DOL).
- Traveled to Powder River County to break seals on five trucks in FY23.
- Verified the head count on a group of quarantined pairs that left the Designated Surveillance Area (DSA).
- Investigated a Powder River County local inspector that was reported to have written inspections on cattle going to South Dakota without physically inspecting the cattle. It was discovered that Powder River County did not have a local investigator at the time. This investigation was closed.
- Travelled to Helena to interview candidates for an open District Officer position. This position was filled successfully by Officer Patrick Roos and training will be ongoing throughout FY24.
- Worked with AHB to obtain post-illegal permit numbers for three horses that illegally entered Montana from Utah as well as one post-illegal permit number for one horse that illegally entered Montana from Minnesota.
- Investigated a report of cattle being diverted from their destinations from various Montana Livestock Markets to an unknown feedlot outside the State of Montana. It was found that the cattle did in fact go to the destination they were consigned to from the Montana Livestock Markets and the investigation was closed.

Administrative Rules of Montana (ARM) Rulemaking

In July 2022, Animal Health Bureau (AHB) proposed an amendment to rule 32.3.435 TESTING WITHIN THE DSA under Notice 32-22-332. Department of Livestock (DOL) proposed to include the most frequently granted variances to Designated Surveillance Area (DSA) testing into ARM, rather than continue managing hundreds of herd management agreements (MA). The DSA has grown by nearly three times the number of producers since its inception in 2010, and MA are no longer an effective method of meeting producer or program needs. No comments were received during the comment period and the amended rules were effective September 24, 2022.

In early 2023, AHB proposed an amendment to rule 32.3.2001 BRANDS AND EARMARKS under Notice 32-23-337. This proposed amendment was requested by the Montana livestock industry and brought DOL in line with United States Department of Agriculture (USDA) regulations, which require Canadian origin cattle to be permanently identified with either a brand or tattoo. The comment period ended March 10, 2023, and comments received were addressed in the adoption notice that was published April 14, 2023. The amended rules were effective April 15, 2023.

Full versions of the most current administrative rule proposals and adoptions can be found on the Montana Department of Livestock website here.

Administrative Rules Books
Source: http://goo.gl/cPAvIJ

Figure 52. Follow the Leader Source: AHB Staff

Thank you for letting us serve you!