MINNESOTA
BOARD OF ANIMAL HEALTH

ANNUAL REPORT

Fiscal Year 2021

BOARD MEMBERS

DEAN COMPART, President, Swine Producer, Nicollet
ERICA SAWATZKE, Poultry Producer, Kensington
JIM VAGTS, Livestock Producer, Harmony
DR. PEGGY ANNE HAWKINS, Veterinarian, Northfield (replaced Graham Brayshaw in July 2020)
DR. JESSICA KOPPIEN-FOX, Veterinarian, Marshall (replaced Matt Anderson in April 2021)
DR. MATT ANDERSON, Veterinarian, Zumbrota (replaced by Jessica Koppien-Fox in April 2021)
DR. GRAHAM BRAYSHAW, Veterinarian, Minneapolis (replaced by Peggy Anne Hawkins in July 2020)

BOARD MEETINGS

September 9, 2020
December 9, 2020
February 24, 2021
April 21, 2021

TABLE OF CONTENTS

The Annual Report of the Minnesota Board of Animal Health is published in accordance with the provisions of Minnesota Statutes.

The Board of Animal Health is an equal opportunity employer.

LETTER FROM THE STATE VETERINARIAN

As I did last year, COVID-19 needs to be recognized for its impact again in this annual report. The challenges posed by the pandemic changed this year and we transitioned from assisting livestock producers with processing plant interruptions to tracking the evolution of the virus and its impact on animals. In January, the Department of Health informed us of a potential SARS-CoV-2 case at a tiger sanctuary in Minnesota. One tiger tested positive for the virus, thankfully all other tests at the site did not detect the virus. Our focus during this disease has been surveillance in our livestock and domestic animals and I'm glad to report we had no COVID detections or breakthroughs with livestock this year. However, we will remain vigilant as new variants of the disease spread in people.

The 2020 county fair season and the Minnesota State Fair were not the usual barn-packed, ribbon awarding events we're accustomed to during Minnesota summers. Instead, the majority of fairs made the difficult decision to cancel. However, a bit of silver lining emerged as organizations got creative and hosted virtual exhibits. The Board adapted to those virtual shows and coordinated with local organizers to ensure any gatherings or grouped animals were still inspected by an official veterinarian. The beginning of the 2021 county fair season also happened this fiscal year and we were happy to get back to permitting fairs and working with veterinarians and exhibitors on in-person events.

Aside from the challenges we faced in fiscal year 2021, we also achieved advances in virtual technology and electronic records. This year we transitioned to completely live streamed quarterly Board meetings with recordings archived on our website. More than 45-percent of our certificates of veterinary inspection (CVIs) processed were electronic CVIs, a growing trend that reduces processing errors and staff time dedicated to handling papers. We've been working with the USDA to promote free Radio Frequency Identification (RFID) tags for certain producers, distributing RFID tag reading wands to livestock markets, and improving our disease alert notifications to livestock producers. These measures increase our effectiveness and speed to better serve Minnesotans.

An important project we embarked on this year was rulemaking for our farmed cervid program; the rulemaking process is intended to match the Board's rules to statutes and to improve our oversight. We made excellent progress on the rules with diverse input from interested groups and individuals, and the public and we anticipate new rules going into effect in fiscal year 2022. Simultaneously with our rulemaking, the 2021 legislative session resulted in an expansion of our collaboration with the Department of Natural Resources (DNR) in addressing chronic wasting disease (CWD). At the tail end of the 2021 special session the legislature granted concurrent authority to the Board and DNR to co-manage white-tailed deer farms in the state. As of the end of this fiscal year we've initiated talks of amending the existing memorandum of understanding between our agencies. By the time this report goes to print in November 2021, I anticipate we'll be fully operating with the DNR under the renewed memorandum of understanding.

From time to time, I'm asked about how the Board responds to animal diseases. Every animal disease is different and merits a different response from us and our partners. Some diseases have tried and true tests and response measures allowing us to quickly gain the upper hand and quell the spread. Yet others are emerging or evolving, and we rely on research and new ideas to push us to the forefront and sharpen our tools for an effective response. We are led by veterinarians with a desire to benefit domestic and livestock health while operating within our statutes and rules. Sometimes this work takes time and we can grow impatient with measured progress. However, the goal never changes, and the goalposts are always in sight. We always follow the transparent, collaborative, and legal approach to getting our work done and defeating diseases. I look forward to carrying on with this approach into the next fiscal year.

Beth S. Thompson, JD, DVM
State Veterinarian, Executive Director

DOGS AND CATS

COMMERCIAL DOG AND CAT BREEDER (CDCB) PROGRAM

The Board licenses and inspects breeders who possess 10 or more intact adult dogs or cats and produce six or more litters of puppies or kittens in one year. This year, the Board completed its work with licensed commercial breeders and veterinarians who work with those breeders to develop and implement a Commercial Breeder Excellence Program. This program recognizes licensed breeders who demonstrate excellence and exceed the standards currently required by commercial dog and cat breeder laws.

COMMERCIAL BREEDER EXCELLENCE PROGRAM

Breeders with no program violations in the previous licensing period are eligible for participation and can demonstrate excellence in one to five areas including:

- Behavior and Socialization
- Canine Brucellosis or Feline Leukemia (FeLV)/Feline Immunodeficiency Virus (FIV) Screening
- Continuing Education
- Facility Management
- Health Screening

Participating breeders are awarded a badge for qualifying in each area and a breeder who earns all badges is deemed a Breeder of Excellence. Additional information regarding the program and a list of participants is available on the Board's website: mn.gov/bah/breeder-excellence.

KENNEL LICENSING PROGRAM

The Board licenses and inspects facilities that accept impounded, stray, abandoned, or owner-surrendered cats and dogs. This includes humane societies, rescue organizations and impound facilities. The Board does not license training and boarding facilities, animal day care facilities or groomers.

CANINE BRUCELLOSIS

The Board continues to partner with the Minnesota Department of Health (MDH) to investigate all non-negative test results for Canine Brucellosis. Canine Brucellosis is an important disease to monitor because it can be spread between dogs and can be transmitted to people. Because of the contagious nature of this disease, infected dogs must be permanently isolated from other dogs or be euthanized. The Board and MDH are committed to preventing the spread of this disease by educating the public, canine businesses, and veterinarians about the importance of surveillance and reporting.

LICENSED KENNEL & COMMERCIAL DOG AND CAT BREEDER (CDCB) DATA: FISCAL YEAR 2021

122
CDCB licensed as of June 30, 2021

7
New CDCB licensed July 1, 2020 - June 30, 2021

2
Participants in the Breeder Excellence Program

80
Kennels licensed as of June 30, 2021

1
New kennel licensed July 1, 2020 - June 30, 2021

CANINE BRUCELLOSIS:

5
Investigations

12
Total dogs tested

4 Positives

8 Negatives

FARMED CERVIDAE

The Board began the public rulemaking process for rules within the farmed cervid program shortly before the beginning of this fiscal year and continued with the rulemaking process throughout the fiscal year. The focus of rulemaking was to update the rules to align with legislative changes made to the farmed cervid program statutes in 2019 and better guide the agency to prevent and control the spread of chronic wasting disease in farmed cervids. The Board formed an Advisory Committee to provide advice to the agency in our rulemaking process and selected 15 members to represent a diversity of views and interests related to Cervidae in Minnesota.

Board staff also held separate listening sessions for the public, tribal groups, and farmed cervid producers to gather feedback on the proposed regulations and ideas for developing further amendments to the rules. The Advisory Committee met eight times between August 2020 and January 2021 and nine listening sessions were held between late August and mid-February. At the end of the fiscal year, an additional legislative change giving the Department of Natural Resources (DNR) concurrent authority to manage farmed white-tailed deer prompted the Board to take a hiatus in rulemaking.

The 2021 legislative session brought additional change to the farmed cervid program with the most significant change to the laws mentioned in the previous paragraph. As of July 1, 2021, farmed white-tailed deer will be regulated by both the Board and the DNR; the Board will continue to have full authority for all other farmed cervids in Minnesota. The Board and DNR have put together a working group to define what co-regulation of farmed white-tailed deer will look like. The plan for this oversight will be outlined in an updated Memorandum of Understanding between the two agencies that addresses cervid health in Minnesota.

Board and USDA animal health staff continue to oversee farmed cervids and take compliance measures as needed to ensure producers are following the regulations. Included in that oversight are annual inspections, reconciling herd inventories, and tracking animal movements both within Minnesota and both to and from other states. We continue to train individuals to be authorized to collect tissues from farmed cervids for CWD testing to improve our successful testing of animals for CWD; 31 individuals were trained this fiscal year. We have completed the first full year of allowing the CWD ELISA test to be used for testing farmed cervids going to state or federal inspected slaughter; 211 of 1,763 samples were tested using the CWD ELISA test performed at the Wisconsin Veterinary Diagnostic Laboratory in Madison, Wisconsin. This test provides a much shorter turnaround time for a result so the carcass can be released sooner for further processing (48 to 72 hours for the CWD ELISA test vs. 2 to 3 weeks using the IHC test).

The number of farmed cervid herds in Minnesota continues to decline with 259 farmed cervid herds registered with the Board at the end of the fiscal year.

SPECIES BREAKDOWN BY ANIMAL

BREED	TOTAL ANIMALS	NUMBER OF HERDS
White-Tailed Deer	3,905	175
Elk	3,297	85
Red Deer	145	7
Reindeer	81	10
Fallow Deer	62	9
Sika Deer	26	5
Muntjac	19	4
Pere David's Deer	5	1
Moose	3	1
Caribou	2	2
TOTAL:	7,545	259

HERD USAGE

USAGE	TOTAL HERDS
Breeding	69
Exhibition/Competition	17
Hobbyist	118
Hunting Preserve Site	16
Meat Production	51
Other Animal Products	8
Trophy/Hunting Animal Sales	80
Urine Production	5
Velvet Antler Production	19
TOTAL:	259

HERD TOTALS BY FISCAL YEAR

FISCAL YEAR	NUMBER OF HERDS
2021	259
2020	291
2019	360
2018	395
2017	421
2016	462
2015	463
2014	489
2013	522
2012	N/A
2011	600*

*Reported as an approximate number.

SWINE

African Swine Fever (ASF) continues to command the attention of the pig industry worldwide. With reports of new cases in Germany in the fall of 2020, including commercial and feral swine populations, this virus has proven resilient despite efforts by our European counterparts to restrict entrance and outbreaks. Here at home, states have been engaging in regular meetings with stakeholders from swine dense states to strategize prevention of virus introduction. Additionally, protocols for containment and elimination of the virus are being developed to employ if ASF does breach our borders. A Certified Swine Sample Collector pilot program has been under development with consultation from several states, including Minnesota. This project was proposed to augment sample collecting from swine in the event of a foreign animal disease outbreak. It would allow trained non-veterinarians to collect surveillance samples under the direction of a licensed veterinarian to increase efficiency of disease detection in lieu of the relatively small number of swine veterinarians practicing in the nation. The Minnesota Board of Animal Health is seeking approval from the Minnesota Board of Veterinary Medicine at its annual meeting in September to allow for trained sample collectors to be utilized at the discretion of animal health officials during emergency events.

The Emergency Disease Management Committee for Swine (EDMCS) continued its planning and preparation work this year, and subcommittees have been busy:

Communications drafted templates for talking points to release during emergency events. Documents are available for public press releases as well as detailed information for producers. Topics include foreign and reportable disease outbreaks as well as steps to engage in prevention and reduction of disease spread. Additionally, officials have been identified in each of the EDMCS subcommittees to receive and distribute information to their relative groups, which include state and federal agencies. Communications is also tailoring plans to each subcommittee of the EDMCS to address a national 72-hour standstill, if imposed.

Surveillance and Diagnostics is collaborating with regional and national laboratories to create uniform or similar test submission templates for ASF. Dr. Jerry Torrison discussed testing preferences and National Animal Health Laboratory Network (NAHLN) protocols relative to ASF. Dr. Marie Culhane continues to work with scenarios to model best surveillance techniques to accurately and efficiently detect ASF.

Information Management developed documents and protocols in The Minnesota African Swine Fever Response Plan including: an epidemiological questionnaire to be utilized by case managers, interactive mapping capabilities to utilize in a disease event for distinguishing control zones and facilitating the issuing of movement permits, and an emergency text alert messaging system and the information that will be communicated to producers during an event. The Minnesota African Swine Fever Response Plan has been widely distributed to other state animal health officials to serve as a template to create their own response plan.

Health, safety, and welfare of producers, veterinarians, responders and animals accumulated information from those involved in the 2020 depopulation and disposal activities to better assess the needs of individuals for resources from personal protective equipment to mental health support. Further, animal welfare considerations are being reviewed based on industry feedback received during depopulation events to determine best methods of depopulation. Lastly, standard operating procedures are being developed for those involved in managing depopulation activities in various environments.

Biosecurity and Quarantine/Cleaning and Disinfection created individual guidance documents for cleaning and disinfecting as they pertain to each of the following: Vehicles, People, Farm Perimeter, Manure Management, Disposables, and ASF Positive Premises. Additionally, cleaning and disinfecting protocols were evaluated during cold weather depopulation exercises to determine efficacy of protocols and disinfectants in temperatures below freezing.

Depopulation and Disposal conducted two cold weather depopulation/disposal exercises to evaluate how well equipment functions during subfreezing temperatures and develop standard operating procedures relative to temperature extremes. Additionally, composting during frigid temperatures was evaluated for viability as well as differences between carbon sources used in the process.

While carbon dioxide has been the gas of choice for depopulation, a demonstration utilizing nitrogen gas foam with the oxygen depletion trailers is scheduled for late July 2021. Nitrogen may prove to be more readily available and likely will become another tool for mass depopulation based on ability to source carbon dioxide.

Wildlife Management and Vector Control reviewed photos from the cold weather depopulation and disposal compost piles for evidence of scavenging. Images of crows carrying compost debris as well as evidence of burrowing were observed. Additional recommendations for adequate compost pile coverage were added to the standard operating procedures for composting as a result. Strategies for preventing feral swine populations from establishing in Minnesota were discussed including public and law enforcement education on who to contact for loose pig sightings. Managing import of feral pig byproducts such as meat and taxidermy specimens is also being evaluated.

Regionalization has been evaluating movement protocols during "peace time" as compared to a disease event. Trucker surveys were utilized to better evaluate the normal process that livestock haulers use relative to biosecurity, and to gauge their awareness of ASF. Additional work is being done to determine measures that can be employed to increase truck washing/disinfecting capabilities in the state. Similar efforts are underway to survey renderers, feed companies, and packing plants. Counterparts from Iowa met virtually to discuss expectations during a foreign animal disease event to allow for movement between states. Movement scenarios were presented to represent potential transit during a foreign animal disease event to determine similarities and disparities between Iowa and Minnesota. Additional meetings will be planned with the intent of continuing conversations and developing a regionalized approach to permitting.

GARBAGE FEEDING

Minnesota currently permits and inspects five Class A (may contain meat or been in contact with meat) garbage feeders and 15 Class B (does not contain and has not been in contact with meat) garbage feeders. The Board conducts approximately 25-30 searches per quarter for unlicensed garbage feeders in the state.

SWINE PRODUCTION HEALTH PLANS:

Minnesota participates in commuter agreements (Swine Production Health Plans) with other states to allow movement of swine groups through production systems without requiring individual identification for each pig. Movement records are submitted to the Board weekly and to the USDA monthly. Pigs are required to be evaluated at least every 30 days by the herd veterinarian. Currently, 19 systems are enrolled to move pigs into or out of Minnesota in agreement with the following states:

- Iowa
- Illinois
- Indiana
- Kansas
- Missouri
- Montana
- Nebraska
- South Dakota
- Wyoming

FISCAL YEAR 2021: ANIMALS MOVED UNDER SWINE PRODUCTION HEALTH PLANS*

INTERSTATE EXPORTS	1,028 Movements	919,242 Animals
INTERSTATE IMPORTS	1,688 Movements	1,382,074 Animals
INTRASTATE IMPORTS	6 Movements	8,814 Animals

*FY21 Swine Production Health Plan data is incomplete due to staffing shortages remaining from the pandemic.

POULTRY

H6N1 Influenza A virus of North American wild bird lineage was isolated and identified in a commercial turkey flock in the fall 2020. For several months the virus continued to spread with farm-to-farm transmission of the virus. The virus was identified in 93 commercial meat-type or breeder turkey flocks on 70 premises in nine Minnesota counties. The H6N1 virus was identified as a Low Pathogenic Avian Influenza (LPAI) virus, a strain that does not require a formal implementation of the H5/H7 LPAI Initial State Response and Containment Plan (Minnesota Plan). Despite this, the Board responded and worked closely with the growers and processors to support an industry led response to contain and eradicate the virus. The Board's response included facilitating collection of initial samples to rule out H5/H7 LPAI, testing and tracking positive flocks, providing Disease Alerts to the industry, mapping positive flocks, participating in weekly meetings with poultry veterinarians and conducting epidemiological investigations. This event provided an opportunity to "practice" the Minnesota Plan by training field staff who would be assigned as Case Managers during a Board led response, using and revising documents that would be used during an event and entering flock/premises data into the Board's database to track infected flocks. An epidemiologist was hired by the Board to conduct an epidemiological investigation. The findings suggest that on-farm biosecurity compliance, carcass disposal (rendering) and chase crews may have contributed to continued virus spread.

When biosecurity was identified as the weak link allowing farm-to-farm transmission of the Highly Pathogenic Avian Influenza (HPAI) virus during the 2014-2015 HPAI outbreak in the U.S., the USDA-APHIS created a final rule "Conditions for Payment of Highly Pathogenic Avian Influenza Indemnity Claims." The final rule was adopted August 14, 2018 and does three things. First, it accepts the interim rule that provides a formula allowing indemnity payments to be split between poultry and egg owners and their contracted growers. Second, it adopts the National Poultry Improvement Plan (NPIP) 14 biosecurity principles. Third, it requires biosecurity plans be in place with auditing as a condition of indemnity for operations meeting size requirements.

In the final rule, producers that meet the minimum size requirements to qualify for HPAI indemnity claims must have a biosecurity plan in place that addresses all 14 biosecurity principles. This includes an audit by the NPIP Official State Agency (OSA) which in Minnesota is the Board who conducts audits of these biosecurity plans to verify they follow the NPIP Biosecurity Principles. The NPIP Biosecurity Principles are applicable to all types and sizes of poultry production, but the auditing portion is only conducted on commercial poultry operations. A producer can opt out of the audit; however, they will not be eligible for indemnity in the event HPAI is identified on their farm. The OSA must have a record of a "satisfactory" paper audit on file to qualify for indemnity during an HPAI disease event. The Board continues to work with poultry producers to audit their biosecurity plans according to NPIP Program Standards. In fiscal year 2021, the Board audited and rated 43 biosecurity plans as satisfactory.

In accordance with Minnesota Board of Animal Health rules (1721.0330), all samples collected from hatcheries and poultry flocks in Minnesota to meet Board disease program requirements must be collected by an Authorized Poultry Testing Agent (APTA). In FY21

numerous APTA training sessions were held to ensure samples are collected and submitted appropriately to meet Board and NPIP requirements. The COVID-19 pandemic required the Board to look at virtual training courses as a substitute to the in-person training courses that have been held in the past. In addition to these virtual training courses that were quite successful, it allowed the Board to have University of Minnesota Extension staff share their expertise on common poultry diseases, flock and hatchery sanitation and biosecurity principles. As of June 30, 2021, the Board had 869 Authorized Poultry Testing Agents certified. During FY21 six APTA training sessions were held with 159 individuals trained. In addition, Board staff conducted 188 APTA field reauthorization training sessions.

NPIP PROGRAM PARTICIPANTS AS OF JUNE 30, 2021

Commercial Breeding Flock Facilities	64
Commercial Egg Layer Facilities	32
Commercial Hatcheries	8
Commercial Slaughter Plants	6
Gamebirds	12
Live Bird Markets	3
Poultry Dealers	236
Waterfowl, Exhibition, Gamebird, Backyard (WEGBY) Facilities	107

NPIP-PARTICIPATING FLOCKS IN FISCAL YEAR 2021

POULTRY TYPE	NUMBER OF NPIP PARTICIPATING FLOCKS	NUMBER OF BIRDS
Commercial Egg-Type Chicken Breeders	1	41,705
Commercial Meat-Type Chicken Breeders	42	652,285
Commercial Turkey Breeders	73	975,785
Commercial Egg-Type Chickens	199	17,304,079
Commercial Meat-Type Chickens	1,127	55,140,320
Commercial Meat-Type Turkeys	1,615	44,279,042
Waterfowl, Exhibition, Gamebird, Backyard (WEGBY)	107	13,250
Gamebirds	12	180,330

MINNESOTA POULTRY TESTING LABORATORY

The Minnesota Poultry Testing Laboratory (MPTL) is a joint venture between the University of Minnesota Veterinary Diagnostic Laboratory (VDL) and the Minnesota Board of Animal Health. The MPTL serves as the official laboratory for the National Poultry Improvement Plan (NPIP) in Minnesota. The MPTL also maintains facilities and infrastructure capable of serving as an Incident Command Post for a disease event should the need arise.

The University of Minnesota diagnostic laboratories are accredited by the American Association of Veterinary Laboratory Diagnosticians. The MPTL is considered a branch lab of the VDL on the St. Paul campus of the University of Minnesota and together they are Level 1 laboratories in the USDA National Animal Health Laboratory Network (NAHLN). This network provides testing on behalf of the USDA using validated testing methods performed by technicians who take proficiency tests for each assay they perform as part of a comprehensive quality assurance program. Testing on behalf of USDA for export shipments has been a growing service at the MPTL.

MPTL staff are cross-trained in laboratory testing procedures to increase the number of people able to perform avian influenza (AI) Polymerase Chain Reaction (PCR) testing. Having more staff trained allows for testing coverage for routine and emergency testing. Additionally, a team of technicians from the Minnesota National Guard also completes annual AI PCR training and proficiency testing. Together, these personnel expand the number of staff able to respond to a potential AI event by increasing overall PCR testing capacity. MPTL technicians are also trained and proficiency tested for African Swine Fever (ASF), Classical Swine Fever (CSF) and Johne's Disease PCR testing. This training increases the testing capacity for services previously only available at the St. Paul laboratory. The MPTL also participates in proficiency testing for other NPIP and NAHLN scope diseases such as Newcastle Disease (NDV), Mycoplasma spp. and Salmonella spp.

MPTL staff train Authorized Poultry Testing Agents to assist with the distribution of supplies for the collection and submission of samples for Board and NPIP surveillance programs. In addition to providing services for regulatory disease programs, the MPTL offers diagnostic services for private poultry producers, veterinarians, and companies. Demand has increased for serology testing for vaccine efficacy monitoring and health monitoring. Serology tests indicate past exposure to a virus, while PCR indicates active infection.

The COVID-19 pandemic presented operational challenges at the MPTL, and the staff proved to be resilient. Protocols were established to reduce exposure risk among staff by physical distancing, Personal Protective Equipment (PPE) use, and some scheduling adjustments to allow staff to work continuously as essential employees. Quarantine requirements affected staffing on some occasions. Supply shortages due to supply chain disruptions are ongoing and testing schedules had to be adjusted to preserve product inventory in coordination with clients and the Board.

HORSES

Horse shows are back in session after a relative hiatus due to COVID-19 restrictions in 2020. A particular virulent strain of EHV-1 was a concern early in the show season as the European variant had been diagnosed at several shows and racetracks along the East Coast and Southeast. Minnesota exhibitors who traveled to those states, because they were anxious to get a jump on the early show season, were cautioned about the disease risk and given guidance on reducing exposure risk back home in Minnesota. Additionally, exhibitions at large Minnesota venues were asked to review Minnesota Board of Animal Health exhibition regulations for equine events. Specifically, venues were asked to include reference to those regulations as part of their lease agreements and to inform show managers of the requirement to obtain a permit to hold an equine exhibition congregating horses for more than 12 hours.

Import regulations of horses have been the subject of a few investigations this fiscal year, as horses from states with more lenient movement regulations have been brought into Minnesota. The nature of the horse buyer industry coupled with often subjective identification parameters has led to tedious work tracking movements. The horse market is relatively lucrative, attracting more sale activities and associated movements by both licensed horse dealers and lay persons. Unfortunately, import and export regulations pertaining to horses occasionally get overlooked, leading to Notices of Violations being issued with educational guidance in the form of detailed corrective actions. Scrutiny also increased on international imports because of the European EHV-1 strain and other foreign animal diseases. Specifically, a horse from Ireland was quarantined until negative culture results for Contagious Equine Metritis were returned. Another horse from Belgium, owned by a Minnesotan, was exposed to EHV-4 during import and/or quarantine.

Vector borne reportable equine disease cases were limited to two unrelated cases of Eastern Equine Encephalitis (EEE) positive horses in the Fall of 2020. One horse in Aitkin County tested positive post-mortem, and the owner reported under vaccinating and delaying boosters due to COVID-19 restrictions and limitations on equine related activities. Other horses on the property were immediately vaccinated and boostered appropriately for EEE and WNV. One horse in Benton County tested positive on post-mortem, and the owner reported no vaccination history in the 12 months since acquiring the horse. No other horses were on the property and the horse had not been off the property since it was acquired. Both EEE cases included guidance from the Minnesota Department of Health regarding human health risks in areas known to have mosquitoes carrying the virus. Press releases were issued and information included on the Minnesota Board of Animal Health website to encourage vigilance in vaccinating horses for vector-borne disease and to consult with the Minnesota Department of Health for mitigation strategies to prevent human infections.

EQUINE DISEASE CASE NUMBERS: FISCAL YEAR 2021

0
West Nile Virus

2
Eastern and Western Equine Encephalitis

0
Equine Infectious Anemia

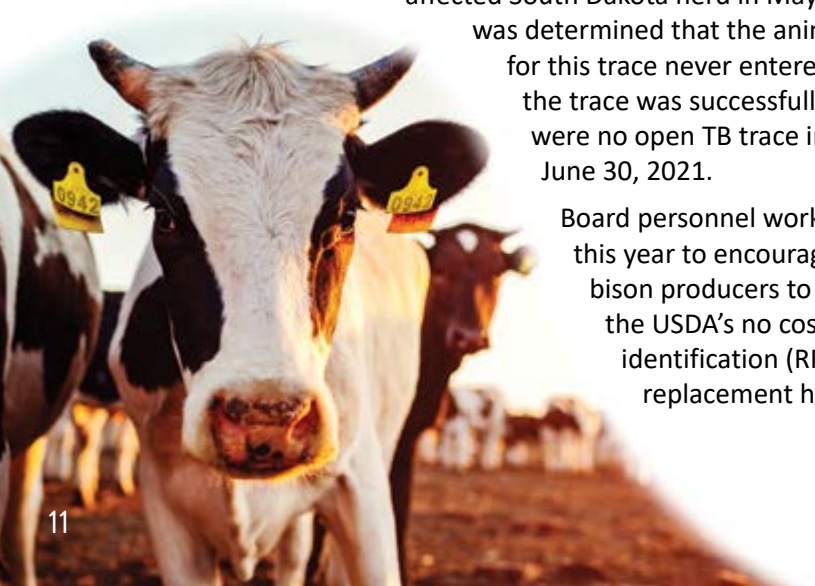
0
Equine Herpesvirus Myeloencephalopathy

CATTLE

Board personnel have been busy working through bovine tuberculosis (TB) trace investigations with the assistance of Minnesota cattle producers and livestock market operators since March of 2017. In January of this year, the Board was able to close the final investigation regarding the previously known TB affected herds in South Dakota, North Dakota, Texas, and Wisconsin. The Board completed 317 TB trace investigations that originated from seven herds in the four states. 2,741 cattle tested negative for TB via caudal fold tuberculin (CFT) test, though none of these tests were performed this year. There were 79 responders that tested negative via a follow-up confirmatory test. Ten exposed cattle were indemnified and confirmed negative.

A summary of the movement of potentially TB exposed cattle documented throughout these 317 trace investigations that were traced by Board personnel through to final disposition (animals confirmed dead/slaughtered, animals cleared as negative via TB testing, or animals traced out-of-state) includes 22,982 cattle documented to have arrived on a Minnesota premises; 16,691 cattle documented to have been traced out-of-state; and 5,565 cattle documented to have been traced to at least one additional Minnesota premises from the original premises they were destined to.

The Board received one additional TB trace investigation from a newly affected South Dakota herd in May of this year. It was determined that the animal in question for this trace never entered Minnesota and the trace was successfully closed. There were no open TB trace investigations as of June 30, 2021.



Board personnel worked throughout this year to encourage cattle and bison producers to take advantage of the USDA's no cost radio frequency identification (RFID) program for replacement heifers. The USDA has allocated just over 200,000 official RFID ear tags to Minnesota which can be distributed to producers and veterinarians for use in dairy, beef, and bison replacement heifers. The Board is also working to distribute RFID readers in the form of pocket wands to select accredited veterinarians and livestock markets. Read more about this effort in the Traceability section of this report on page 16.

CATTLE PROGRAM: FISCAL YEAR 2021*

10 veterinarians were certified by the Board to conduct caudal fold tuberculin tests (CFT).

28 veterinary students participated in the Bovine TB Certification Course in January 2021 to prepare them with the information required to become accredited in the State of Minnesota following graduation.

5,863 cattle and bison caudal fold tested for TB.

Zero caudal fold tests were performed as part of trace investigations.

46 TB trace investigations were performed by Board personnel.

31 Minnesota premises involved in TB trace investigations.

7,154 cattle vaccinated for brucellosis.

504 cattle and bison tested for brucellosis.

*Note: Due to understaffing, the numbers reported only include the data that has been captured at the time this report was compiled and is not reflective of actual animals tested/vaccinated.

SHEEP AND GOATS

Minnesota maintains its status as a consistent state under the USDA's National Scrapie Eradication Program (NSEP). A consistent state meets USDA's requirements under the NSEP for conducting an effective scrapie control and eradication program.

The NSEP is a partnership; eradication can only be achieved by collaboration. The Board, the sheep and goat industry, veterinarians, and livestock concentration point personnel are all important partners in this effort. The Board closed the door on the last open scrapie investigation in August 2011, for an ewe that tested positive in April 2009, and has reported no positive scrapie cases since. Two scrapie investigations were conducted this year, and both were closed after the disease was confirmed not to be detected in the samples for the two animals in question.

Disease surveillance remains an important aspect of the NSEP and Minnesota's ability to maintain consistent state status. Minnesota must demonstrate to the USDA that it adequately monitors for scrapie within the state's sheep and goats. Scrapie sampling for Minnesota sheep has enjoyed a long history of slaughter establishments cooperating across the country to report results. However, there are few establishments that collect Minnesota goats, so the state has prioritized goat sampling in Minnesota in recent years to ensure minimum requirements are met. Minnesota's sampling minimums this year were 405 sheep and 84 goat samples. Minnesota exceeded the minimums for both sheep and goats and assisted other states in reaching their minimum sampling requirements. Here is a summary of this year's slaughter surveillance activities:

- 1,100 sheep and 492 goats from Minnesota were tested at slaughter nationwide.
    - 4 of the sheep and 472 of the goats were collected in Minnesota by Board and USDA APHIS VS personnel.
    - Scrapie was not detected in any of the Minnesota sheep and goats sampled.
- 8 sheep and 1,404 goats were collected in Minnesota by Board and USDA APHIS VS personnel.
    - These samples came from animals from 21 different states including a significant portion from our neighbors in Iowa and Wisconsin.

The Board continues its ongoing partnership with the Ovine Progressive Pneumonia (OPP) Concerned Sheep Breeders Society and multiple state and federal partners to promote a voluntary OPP and Caprine Arthritis Encephalitis (CAE) program, recognizing flocks that meet specific guidelines to achieve and maintain a test negative OPP/CAE status. The producer driven program strives to eradicate OPP in sheep. A list of current participants and details on how to enroll in the program can be found on the Board's website:
https://www.bah.state.mn.us/sheep-goats/#opp/cae-program

RABIES

The Board, Minnesota Department of Health (MDH), Minnesota Veterinary Diagnostic Laboratory and Minnesota Public Health Laboratory conduct rabies surveillance and educate Minnesota veterinarians, physicians, animal control personnel and the public about risks of exposure to this deadly virus. Domestic animals exposed or potentially exposed to an animal suspected or confirmed to be infected with the rabies virus are confined and observed, or officially quarantined at the direction of the Board.

In Minnesota, bats and skunks are the natural carriers of rabies and the number of Minnesota bats and skunks confirmed to be infected with the rabies virus declined sharply in 2021. The reduction in natural carriers also led to fewer cases of rabid domestic animals.

Education and vaccination are the most important measures to reduce the risk of rabies. The Board and MDH develop, and regularly improve, online resources to assist Minnesotans in recognizing the signs of rabies, submitting animals for rabies testing, and protecting domestic animals and people from rabies. The Board sends out alerts to veterinarians when rabies is confirmed in domestic animals. All animal owners should discuss rabies risk and vaccine options with their veterinarian.

RABIES POSITIVE SPECIES AND CASES: FISCAL YEAR 2021

151 Rabies Investigations

29 Positive Cases:

26 Bats **3** Skunks

EMERGENCY PREPAREDNESS

Emergency preparedness is having a plan in place for an unforeseen event. When it comes to the Board's work with animal health, these events are often triggered by foreign animal disease investigations. If an investigation leads to a positive disease diagnosis, the Board responds immediately and appropriately to protect the health of Minnesota's domestic animal populations. In fiscal year 2021 the Board and USDA's nine Foreign Animal Disease (FAD) Diagnosticians conducted 66 FAD investigations.

In fiscal year 2021 African Swine Fever (ASF) is still a big concern as it continues to spread in Southeast Asia and Eastern Europe. With lessons learned from previous exercises a new ASF/CSF response plan was developed and is being reviewed. Along with this, the Board is working with USDA's National Training and Exercise Program to develop an ASF functional response exercise for the packing and rendering industries. Several workshops were done with the industries this fiscal year with the functional exercise scheduled for next fiscal year.

If ASF is introduced in the U.S., depopulation with disposal will be the initial response strategy. Our experiences last year, with the backlog of hogs due to COVID-19 shutting down packing plants, made us realize that new methods for depopulating hogs and then disposing of their carcasses needed to be developed. The Board, MDA and our emergency response contractors used 2018 Farm Bill National Animal Disease Preparedness and Response Program (NADPRP) money to develop and construct four CO2 depopulation trailers along with their accompanying tanks and vaporizers. These trailers were tested in both warm and cold weather and proved very successful. During these exercises the carcasses were disposed of using our grind and compost techniques, allowing further training for our contractors. We are working with the MDA on another depopulation gas, using Nitrogen in a foam. Using NADPRP money, we will exercise this next fiscal year.

The 2018 Farm Bill also authorized the National Animal Vaccine and Veterinary Counter Measures Bank. This is in response to changes in U.S. policies regarding use of Foot and Mouth Disease (FMD) vaccine as a response strategy. Consequently, many states are looking at developing FMD vaccination plans. Minnesota is also looking at developing a FMD vaccination plan and has participated in workshops and exercises held virtually by the University of Illinois College of Veterinary Medicine, Texas A&M Institute for Infectious Animal Diseases, and Iowa State University College of Veterinary Medicine. With this knowledge we hope to have a Minnesota FMD vaccination plan written during the upcoming fiscal year.

FOREIGN ANIMAL DISEASE INVESTIGATIONS BY SPECIES: FISCAL YEAR 2021

66 Total Investigations

54 Swine **4** Rabbit **3** Bovine **2** Equine **2** Poultry **2** Caprine

COMPLIANCE

The goal of the Board's Compliance Program is to ensure compliance with Statutes, rules and policies in place to protect the health of Minnesota's domestic animals. The Board strives to resolve violations with minimal enforcement action and within reasonable time limits set by the Board; minimize economic losses for producers and businesses to preserve their livelihood; and effectively utilize state resources to conserve time and state funds.

Individuals or businesses not in compliance with laws regulated by the Board are subject to progressive enforcement action. These actions most often begin with a notice of violation and correction order intended to educate the offending party, which can then lead to a civil penalty or fine, intended to incentivize compliance.

COMPLIANCE CASES BY PROGRAM: FISCAL YEAR 2021

PROGRAM	NOTICE OF VIOLATION/ CORRECTION ORDER	CIVIL PENALTY
Animal Disease Traceability	10	3
Carcass Disposal	4	0
Commercial Dog and Cat Breeders	10	3
Farmed Cervidae	64	18
Food Waste to Livestock	1	0
Import/Intrastate Movement	9	1
Kennels	4	0
Markets	2	0
Poultry	12	0
Sales	2	0
Scrapie	2	0
Testing Authorization/Certification	2	0
Tuberculosis	1	0

ANIMAL MOVEMENTS AND TRACEABILITY

The Board was awarded limited funds from supplemental USDA cooperative agreement opportunities for the last three federal fiscal years. This year, the Board utilized the second-year award to purchase 32 small pocket wands, which we plan to distribute to accredited veterinarians. The wands will be distributed along with a supply of official RFID ear tags for replacement heifers and bison in the next fiscal year. The Board hopes to pair distribution with the future launch of the USDA's Animal Health Services application. This should encourage a transition to capturing movements, TB tests, and Brucellosis vaccinations electronically, which would improve Minnesota's animal disease traceability program. At the end of this year, the Board learned the third request for supplemental funding was approved. The Board will need legislative approval, expected in the next year, to spend the most recent award. If received, the Board plans to purchase heavy duty wands with data screens for use in livestock auction markets or other livestock concentration points.

The Board is currently developing additional means to advance animal disease traceability in Minnesota by developing alternative methods for accredited veterinarians to electronically issue TB test charts and Brucellosis vaccination records. The current methods are laborious for veterinarians and time consuming to process for Board personnel. The tools being developed will streamline the capture of the animals for each record, decrease mistakes, and leverage the Board's ability to utilize the records for traceability purposes. These tools are expected to be available next year.

NOTE: Animal movement data is not being reported this fiscal year due to understaffing. The numbers normally reported only include the data on Certificates of Veterinary Inspection (CVIs) that has been captured to date and is not reflective of actual animals reported to have moved on CVIs.

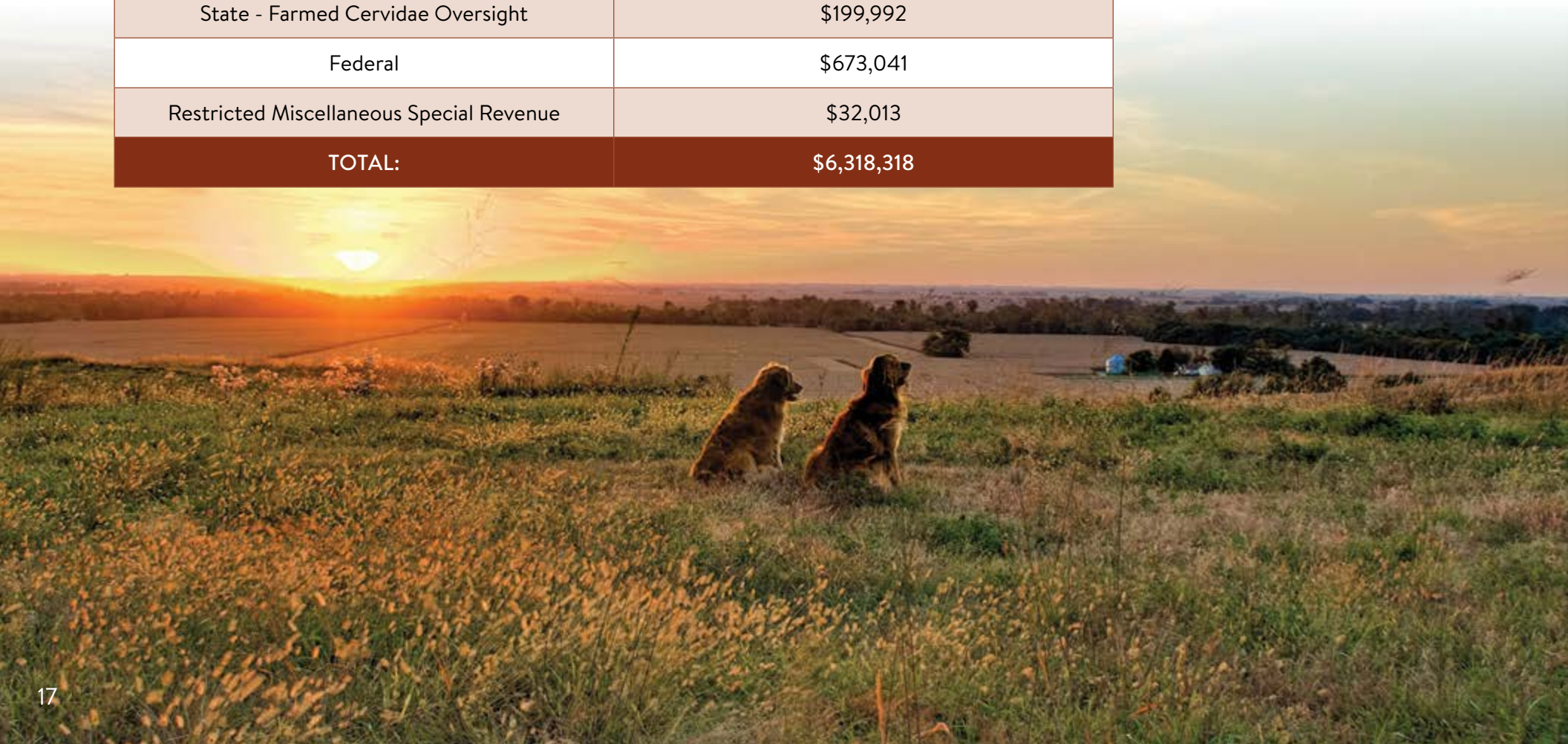
CVIs BY SPECIES: ELECTRONIC VERSUS PAPER

SPECIES	ELECTRONIC	PAPER	TOTAL CVIs
Bison	9.26%	90.74%	54
Bovine	45.36%	54.64%	16,207
Dogs	29.77%	70.23%	12,812
Goats	47.07%	52.93%	648
Cervidae	29.73%	70.27%	222
Equine	60.13%	39.87%	8,274
Cats	43.12%	56.88%	1,431
Other	56.03%	43.97%	373
Sheep	36.47%	63.53%	935
Swine	93.90%	6.10%	10,977
Poultry	53.39%	46.61%	221
Regulated Animals	34.04%	65.96%	47
Swine Semen	93.07%	6.93%	1,660
TOTAL	55.09%	44.91%	53,861

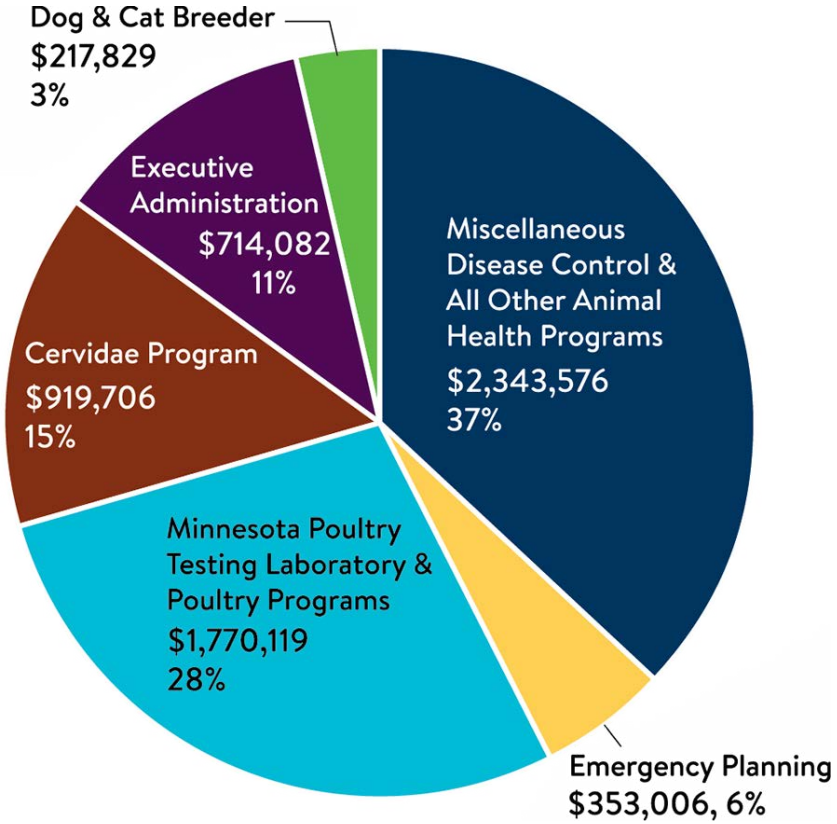
BUDGET

During Fiscal Year 2021, the Board expended $6,318,318 to carry out its many animal health and disease programs. Funding for these programs came from the following sources:

SOURCE OF FUNDS	FISCAL YEAR 2021 EXPENDITURES
State - General Appropriation	$5,217,269
State - Emergency Planning and Preparedness	$196,003
State - Farmed Cervidae Oversight	$199,992
Federal	$673,041
Restricted Miscellaneous Special Revenue	$32,013
TOTAL:	**$6,318,318**

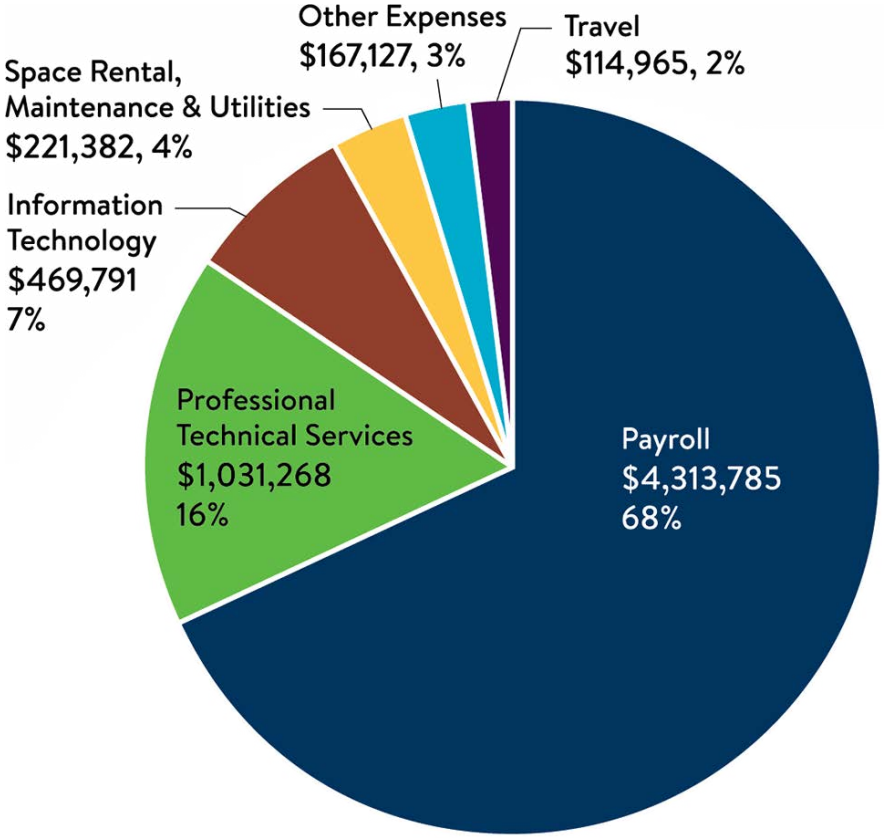


BOARD OF ANIMAL HEALTH - FISCAL YEAR 2021
TOTAL EXPENSES BY PROGRAM - $6,318,318



- Miscellaneous Disease Control and All Other Animal Health Programs: $2,343,576 (37%)
- Emergency Planning: $353,006 (6%)
- Minnesota Poultry Testing Laboratory and Poultry Programs: $1,770,119 (28%)
- Cervidae Program: $919,706 (15%)
- Executive Administration: $714,082 (11%)
- Dog and Cat Breeder $217,829 (3%)

BOARD OF ANIMAL HEALTH - FISCAL YEAR 2021
TOTAL EXPENSES BY CATEGORY - $6,318,318



- Payroll: $4,313,785 (68%)
- Professional Technical Services: $1,031,268 (16%)
- Information Technology: $469,791 (7%)
- Space Rental, Maintenance and Utilities: $221,382 (4%)
- Other Expenses: $167,127 (3%)
- Travel: $114,965 (2%)

VETERINARY DIAGNOSTIC LABORATORY

VDL FISCAL YEAR 2021: PROCEDURES BY LABORATORY

LABORATORY	NUMBER
Bacteriology	36,010
Clinical Pathology	62
Histology	33,517
Immunohistochemistry	6,063
MN Poultry Testing Lab+	142,420
MN Poultry Testing Lab*	135,071
Molecular Diagnostics	326,236
Necropsy	9,238
Necropsy/Histopathology Only	7,206
Non-Accredited Research Laboratory	930
Outsourced Lab Service	17,525
Parasitology	3,814
Receiving, Reporting and Admin	404
Serology	138,732
Udder Health	60,902
Virology	10,988
All valid laboratories	2
DNR Project	1
GRAND TOTAL:	**929,121**

VDL FISCAL YEAR 2021: ANIMALS SUBMITTED

SPECIES	NUMBER
Amphibian	52
Avian, Chicken	43,202
Avian, Miscellaneous	3,094
Avian, Turkey	140,488
Bovine	76,144
Canine	3,108
Caprine	2,411
Cervidae	2,783
Equine	3,319
Feline	1,288
Fish	2,604
Miscellaneous Mammal	1,675
Non-Animal Submission	111
Ovine	4,623
Porcine	216,253
Reptile	68
GRAND TOTAL:	**501,224**

+Producer-funded testing
*Board-funded testing

VDL FISCAL YEAR 2021: PROCEDURES BY SPECIES

SPECIES	NUMBER
Amphibian	315
Avian, Chicken	55,910
Avian, Miscellaneous	5,274
Avian, Turkey	232,338
Bovine	113,805
Canine	10,755
Caprine	4,142
Cervidae	7,548
Equine	4,415
Feline	4,084
Fish	4,086
Miscellaneous Mammal	4,539
Non-Animal Submission	154
Ovine	5,865
Porcine	475,382
Reptile	509
GRAND TOTAL:	**929,121**

MINNESOTA
BOARD OF ANIMAL HEALTH

Healthy animals for healthy people and communities.

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