



A REPORT  
TO THE  
MONTANA  
LEGISLATURE

PERFORMANCE AUDIT

# *Montana Veterinary Diagnostic Laboratory*

*Department of Livestock*

MAY 2016

LEGISLATIVE AUDIT  
DIVISION

15P-04

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Performance audits conducted by the Legislative Audit Division are designed to assess state government operations. From the audit work, a determination is made as to whether agencies and programs are accomplishing their purposes, and whether they can do so with greater efficiency and economy.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Members of the performance audit staff hold degrees in disciplines appropriate to the audit process.

Performance audits are performed at the request of the Legislative Audit Committee which is a bicameral and bipartisan standing committee of the Montana Legislature. The committee consists of six members of the Senate and six members of the House of Representatives.

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May 2016

The Legislative Audit Committee  
of the Montana State Legislature:

This is our performance audit of the Montana Veterinary Diagnostic Laboratory, a division of the Department of Livestock located on the campus of Montana State University–Bozeman.

This report provides the legislature information about the diagnostic lab's cost and fee structure, public health role, and relationship with Montana State University. This report includes recommendations for improving the lab's analysis of its test costs and fee structure; stabilizing some of its funding sources; and developing a detailed plan for a new building. A written response from the Department of Livestock is included at the end of the report.

We wish to express our appreciation to the Department of Livestock and Montana State University personnel for their cooperation and assistance during the audit.

Respectfully submitted,

*/s/ Tori Hunthausen*

Tori Hunthausen, CPA  
Legislative Auditor



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## APPOINTED AND ADMINISTRATIVE OFFICIALS

			<u>Industry Represented</u>	<u>Term Expires</u>
<b>Montana Board of Livestock</b>	John Lehfeldt, Chair	Lavina	Sheep	March 2019
	John Scully, Vice Chair	Ennis	Cattle	March 2019
	Nina Baucus	Wolf Creek	Cattle	March 2017
	Susan Brown	Belgrade	Dairy/Poultry	March 2017
	Brett DeBruycker	Dutton	Cattle	May 2021
	Lila Taylor	Busby	Cattle	May 2021
	Ed Waldner	Chester	Swine	March 2017
<b>Department of Livestock</b>	Mike Honeycutt, Executive Director			
	A.W. Layton, Director, Montana Veterinary Diagnostic Laboratory			




 MONTANA LEGISLATIVE AUDIT DIVISION

## PERFORMANCE AUDIT

 Montana Veterinary Diagnostic Laboratory  
 Department of Livestock

MAY 2016

15P-04

REPORT SUMMARY

The Department of Livestock's Veterinary Diagnostic Laboratory plays an important role in protecting both animal and human health. The department needs to improve its processes for determining the costs associated with the lab's tests, as well as for determining the fees the lab charges for its tests. A consistent contribution from per capita funds would help the department in preparing the lab's budget. The Montana State University building that the lab occupies is at the end of its useful life, and the department needs to be proactive in developing a specific plan for finding new space for the lab.

## Context

The Montana Veterinary Diagnostic Lab (lab) is the only accredited, full-service veterinary laboratory in Montana. The lab typically performs over 200,000 tests annually on a wide variety of animal species, as well as performing regulatory milk testing and testing on suspected rabies cases. This testing serves the livestock industry as well as public health concerns through providing valuable surveillance data regarding animal and zoonotic diseases, meaning diseases that can be transmitted between animals and humans. In recent years, the lab has experienced some budgetary difficulties, and the lab's budget alongside that of the Department of Livestock (department) in general have been a subject of legislative interest.

Our review looked at the fees charged by the lab, in addition to how the lab accounts for the costs of its testing activities and its budget in general. We interviewed lab and department personnel and examined relevant documentation in order to understand and evaluate the processes in place for monitoring costs and setting fees. We also interviewed management of similar state-operated veterinary diagnostic labs in five regional states.

Audit work also touched on a wide variety of concerns relating to the lab's operations and future, including the lab's role in protecting public health and the lab's relationships as a facility on the campus of Montana State University–Bozeman (university). We held interviews with the Department of Public Health and Human Services, and reviewed the lab's reporting relationship with public health entities at the state and federal level. We additionally reviewed documents relating to the lab's arrangements with the university and interviewed officials involved with the university's facilities services, school of agriculture, regional veterinary medicine program, and agricultural extension service.

## Results

Our audit found that the Montana Veterinary Diagnostic Lab does not maintain a regularly updated accounting of the costs associated with the majority of its testing services, and there is not a recurring, standard process in place for monitoring or reviewing the fees charged for these testing services. Further, though the lab certainly has a role to play in monitoring diseases that can impact public

*(continued on back)*

health, attempting to quantify this role to provide a basis for the lab's budget presents concerns. The department and lab could do more to provide for a consistent and stable lab budget in the long term. Additionally, the facility housing the lab is at the end of its useful life. As such, the department needs to take detailed and specific steps to plan for future lab space, particularly in light of the fact that the university displays little interest or willingness to pursue a closer relationship with the lab.

Among the items addressed in our report's five recommendations:

- ◆ The lab should create and maintain detailed, documented information on the costs associated with its testing services.
- ◆ The lab should perform and document reviews of the fees it charges for testing services.
- ◆ The department should develop a stable budget for the lab, in part by determining a consistent and sustainable contribution of per-capita funding for the lab.
- ◆ The lab should ensure that all features of its lab information management system are fully operational, including features relating to the public-health reporting role of the lab.
- ◆ The department should develop a plan and timeline for the replacement of the lab's current facility.

Recommendation Concurrence	
Concur	5
Partially Concur	0
Do Not Concur	0
<b>Source: Agency audit response included in final report.</b>	

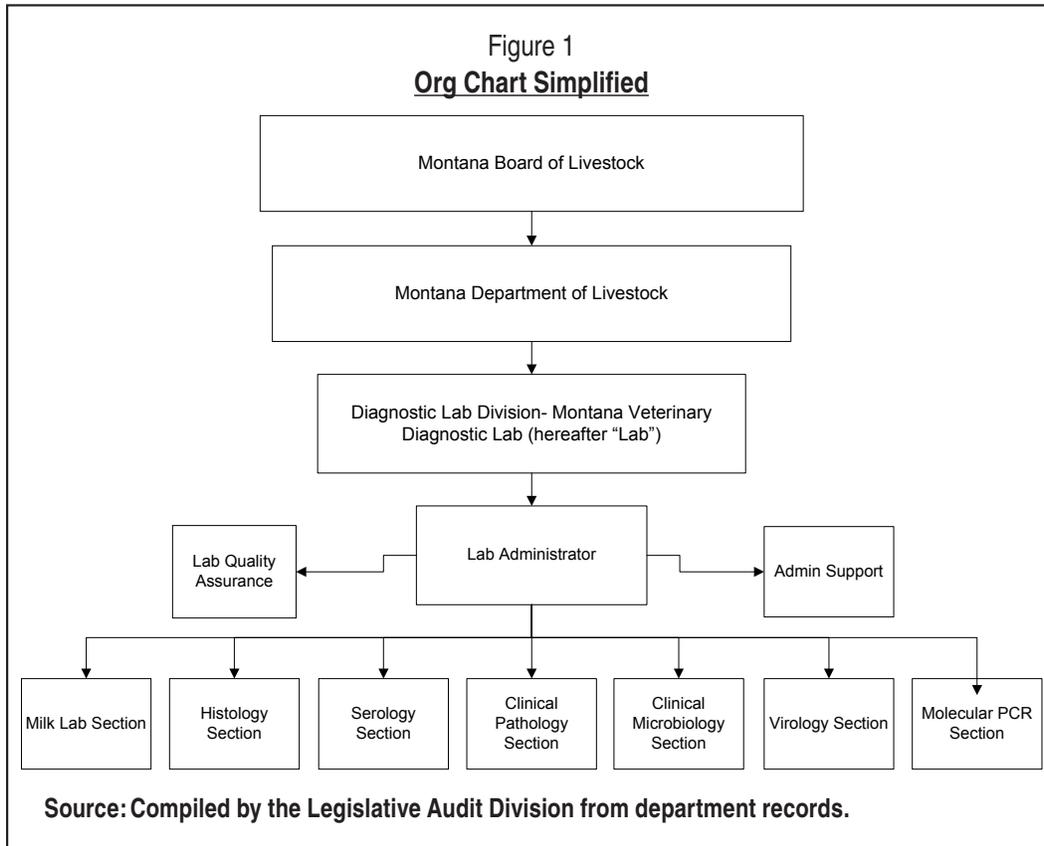
# Chapter I – Introduction and Background

## **Introduction**

The Montana Veterinary Diagnostic Laboratory (lab) is housed in the Marsh Laboratory on the campus of Montana State University in Bozeman (university). The lab, in its current form, dates back to 1960, when the Marsh Laboratory Building was constructed on the university campus with a combination of federal grants and state funds appropriated by the legislature. The lab building is owned by the university, but the lab itself is a division of the Department of Livestock (department). The lab employs approximately 20 FTE and has an annual budget of around \$2.1 million.

The lab is the only accredited, full-service veterinary laboratory in Montana. Its mission statement indicates the lab is to “protect the public health, promote a compliant state dairy industry and assist in the control and prevention of zoonotic diseases,” as well as to “fulfill requirements and surveillance duties directed by regulatory and guidance agencies.” The division provides disease diagnostic support to veterinarians, livestock producers, companion animal owners, and the Department of Fish, Wildlife & Parks, as well as many other state and federal agencies. The division provides laboratory support to the department’s Animal Health Division and Milk & Egg Bureau, and helps protect public health by testing dairy products and testing for zoonotic diseases (diseases that can be passed between animals and humans).

The lab and the department generally have been the subject of much legislative scrutiny in recent years, and a performance audit of the lab was prioritized by the Legislative Audit Committee for fiscal year 2015. Questions have arisen about the lab’s financial viability and the necessity of the state maintaining and supporting a lab of this type; how the lab serves to protect public health; and the measures of support the lab receives from the department and the university. It was with these issues in mind that we developed our audit scope and objectives.



## Audit Scope

The scope of this audit included:

- ◆ Funding questions, including how the lab's testing fees are set and whether the fees are appropriate and commensurate with costs; to what extent the lab should be self-sufficient; and what effect historical changes in external funding, most notably from per capita fees and the general fund, have affected the lab and its mission.
- ◆ The public-health role of the lab, including how testing for a public health benefit can be quantified relative to the other work performed by the lab, which can be described, for instance, as benefiting industry or companion animal owners.
- ◆ The lab's relationship with the university and how it compares to the relationships between other state labs and state universities; costs and benefits of the relationship to both the lab and the university; and the medium- and long-term future of the current building that is home to the lab.
- ◆ Lab activities over the last five years, including budgeting, test fees and revenues, and examinations of test costs. In areas such as the history of the current lab building, our review stretched back farther.

Scope exclusions:

- ◆ Given the specialized qualifications necessary to assess the scientific activities of the lab, the quality and appropriateness of the lab's scientific activities were excluded from the scope of this audit. Another factor influencing this scope decision was the lab's fully accredited status under the American Association of Veterinary Laboratory Diagnosticians, and the extension of that accreditation status until fall 2017.

## **Audit Objectives and Methodology**

Audit work and the establishment of the scope led us to develop the following audit objectives regarding the activities of the Montana Veterinary Diagnostic Laboratory:

1. Does the lab apply appropriate criteria when setting its test fees, and do test fees cover a reasonable percentage of the lab's operating budget?
2. What is the public-health role of the lab, and what quantity of testing performed at the lab is for a public-health purpose?
3. Do the lab's organizational relationships with the department and the university provide the lab with financial, professional, and infrastructure support sufficient to meet its responsibilities to the livestock industry and public health?

To address these objectives, we performed the following types of methodologies:

- ◆ Reviewed state law and administrative rules for guidance on lab operations and obligations.
- ◆ Reviewed several sources of criteria for best practices in labs of this type, including operations at veterinary diagnostic labs in other states in the region and criteria used by accrediting organizations when reviewing labs for certification.
- ◆ Conducted interviews with Board of Livestock members; Department of Livestock staff in Helena; veterinary diagnostic lab staff in Bozeman; university officials; vet lab administrators in other states; and others. These interviews largely touched on all three audit objectives.
- ◆ Reviewed minutes and archives of Board of Livestock meetings; Economic Affairs Interim Committee meetings; legislative hearings; and other public forums at which the lab was discussed.
- ◆ Compiled and reviewed legislative history and other studies and reports that address various aspects of lab operations.
- ◆ Reviewed veterinary diagnostic lab files related to costs of the various tests performed at the lab, as well as documents detailing the fees the lab charges its customers for various tests and services.
- ◆ Reviewed request for proposals and contract for the lab's new information management system; compared requirements in these documents with system's current functionality.

- ◆ Reviewed memoranda of understanding between the university and the department, as well as internal facilities services and planning documents at the university that address the Marsh Laboratory Building that is the current home of the lab.

### **Issue for Further Study**

During fieldwork, we heard a number of comments about the way the Department of Livestock and some divisions within it are currently structured. In particular, questions arose about whether the state needs a separate executive agency dedicated to livestock or whether the department's current mission could work within the Department of Agriculture as is the case in other states; whether the veterinary diagnostic laboratory should be a separate division within the Department of Livestock or could become part of the department's Animal Health Division; and why the information technology manager for the entire department is based in Bozeman and not Helena. These broader organizational issues fell outside of the scope of this audit but could be the subject of further audit work in the future.

### **Report Organization**

The remainder of this report details our analysis of the objectives and contains five recommendations. It is organized in three additional chapters, each addressing one of the objectives.

- ◆ Chapter II - Veterinary Diagnostic Lab Testing Services: Costs & Fees
- ◆ Chapter III - Public Health and the Veterinary Diagnostic Lab Budget
- ◆ Chapter IV - Lab Relationship with Montana State University

## Chapter II – Veterinary Diagnostic Lab Testing Services: Costs & Fees

### Introduction

The Montana Veterinary Diagnostic Lab (lab) performs a wide variety of diagnostic testing services, and charges fees for those services. Labs need accurate estimates of the costs associated with performing a given testing service in order to fully understand the organization's budgetary needs and set appropriate fees to charge for these services. Inaccurate or incomplete data regarding the costs associated with these tests could leave the lab unable to properly budget, set appropriate fees, or determine where its financial risks and opportunities lie relative to the testing services offered. Further, these labs often have to take into consideration their prices relative to similar labs in surrounding states, in order to offer competitively priced services. Our first objective addresses whether the Department of Livestock (department) applies a defined and consistent process when setting the veterinary diagnostic lab's test fees, and if the lab defines a specific percentage of the its operating budget to be covered by test fees.

Accordingly, while completing work on this objective we sought to investigate and answer the following questions:

- ◆ What is the process for setting and reviewing fees charged for testing services at the veterinary diagnostic lab?
- ◆ How are fees charged for testing services determined to reflect the costs of the respective tests?
- ◆ How does the lab monitor the costs associated with the various testing services provided?
- ◆ How do other state veterinary diagnostic labs monitor test costs and set fees?
- ◆ How much of the lab's overall budget should revenues derived from testing fees comprise, and how self-sufficient should the lab be with regards to funding?

In addressing this audit objective, we conducted interviews with department management, reviewed management information and documentation relevant to the lab's efforts to monitor costs, and reviewed the fee schedule. Additionally, we conducted interviews with management of comparable veterinary diagnostic labs in regional states as well as the federal National Animal Health Laboratory Network that works closely with veterinary diagnostic labs nationwide.

We determined that the department and the lab do not assess the costs associated with all of their testing services or review the fees charged for testing services in a regular

and documented process. The lab has limited information regarding these costs readily available, and has not produced this information in a proactive manner. Interviews with department personnel indicated that additional analysis of the lab's costs and fees would provide value to the lab and department.

### **Statute Requires Test Fees Based on Associated Costs**

Section 81-2-102, MCA, provides the statutory basis for the fees charged by the Department of Livestock, including those charged by the veterinary diagnostic lab. Specifically, §81-2-102 (1)(c), MCA, states the department "shall take into consideration the costs, both direct and indirect, of the tests, services, products, curatives, and agents" in setting fees.

Additionally, §81-1-102 (2), MCA, requires the department to set all of its fees to be "commensurate with costs." Without firm knowledge of all the costs of the tests performed at the lab, it is impossible to know whether or not the fees being charged by the lab are commensurate with the lab's costs for performing the tests.

### **The Veterinary Diagnostic Lab Lacks Documented Information on Costs**

In interviews with lab management, we learned there were only rough estimates of the costs associated with performing most tests, and that this information is not routinely monitored. Lab management has largely relied on lab section supervisors providing information about test costs. We also obtained information from lab management for calculating the cost to the lab of performing a test, as well as information on revenues and expenditures for the various sections of the lab.

The bulk of the available documentation was not part of regularly produced and monitored management information. The most comprehensive, lab-wide information was an effort to monitor expenditures and revenues in each lab section, but did not include a thorough accounting of overhead costs, limiting its usefulness in reflecting the reality of the financial situation at the lab. Documentation of costs associated with serology testing performed for *Brucella abortus* were the most detailed and recently-updated information lab management has for breaking down and generally analyzing the costs associated with performing a testing procedure.

However, upon review and follow-up with lab management, this information was determined to contain a number of errors. For example, the cost of one common test input was miscalculated to be many times higher than actual amount, an error that was recognized and not used as the basis for any lab decisions going forward. Broadly, the information was not actively utilized by the lab, nor was it up-to-date.

Based on this work, we found that the veterinary diagnostic lab does not maintain detailed information regarding the costs associated with performing testing services. In particular, the lab does not maintain any sort of standardized, centralized means for tracking these costs. In lacking this information, questions are raised about how the lab would justify fee increases as well as adequately understand when it may need to raise fees or potentially cut services that are too expensive to maintain. Audit work indicated the lab has historically produced much of the information that it does have regarding test costs in response to Board of Livestock interest, as opposed to producing and documenting this information as a regular part of management operations.

### **Veterinary Diagnostic Labs in Other States** **Use Cost Information to Set Fees**

In the course of audit work, we sought information on how similar state veterinary diagnostic labs in the region (Idaho, North Dakota, Utah, Washington, and Wyoming) are managed. In doing so, we identified five comparable labs to study further based on geographical proximity, size of operations, administrative structures, and the fact that labs in states bordering Yellowstone National Park all share the unique issue of brucellosis-related diagnostic testing. We spoke with management at each of these labs about how they manage costs, fees, and other items of interest to our audit objectives. Relevant to this objective, we discussed the process by which these other labs revise and monitor their fees. For each of these five veterinary diagnostic labs, information regarding the costs of testing services was a critical piece of information used to assess the fees charged for testing services as well as lab budgets in general.

The management at three of the five state veterinary diagnostic labs around the region each performed a cost analysis on testing services offered at least as frequently as fees are revised. All of the regional state veterinary diagnostic labs took account of, at a minimum, material costs necessary for performing tests as the first step in setting and revising fees. These analyses were of varying degrees of formality and specificity, but administrators of all of these labs indicated that they engage in regular review of the material costs associated with testing services offered. At one lab, a dedicated business manager annually reviews the cost inputs for some 400 different tests performed by the lab. Such knowledge is widely agreed upon as a critical step in determining the fees charged for testing services, as well as fully understanding the budgetary needs of the lab.

### **Knowing Costs Associated With Testing** **Would Help Lab Budget**

As a result of not knowing the costs associated with its testing services, the Montana Veterinary Diagnostic Lab is unable to demonstrate a complete picture of its budget

and financial needs. Further, the lab is not able to fully demonstrate the rationale behind the fees it charges, either to the Board of Livestock or to producers and related stakeholder groups. The lack of regularly documented information regarding the costs of tests is a result of the lab having not prioritized the production of such information in the past.

An ongoing example of such an impact is found in recent efforts by the Board of Livestock to raise fees charged by the milk lab section of the veterinary diagnostic lab. Public comment provided by the Montana Milk Producers Association, for instance, noted the lack of cost information that could be used in providing a more accurate breakdown of the veterinary diagnostic lab's expenses and budget. Further follow-up on these findings during audit work noted the lab management would like to have information of the costs of performing tests readily available, although there was uncertainty expressed that current staff would have time to develop and maintain this information in addition to existing workloads. However, assistance in this effort could be provided by Centralized Services of the department.

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**RECOMMENDATION #1**

*We recommend the Department of Livestock regularly analyze and document the Montana Veterinary Diagnostic Laboratory's material and overhead costs of the tests performed at the lab.*

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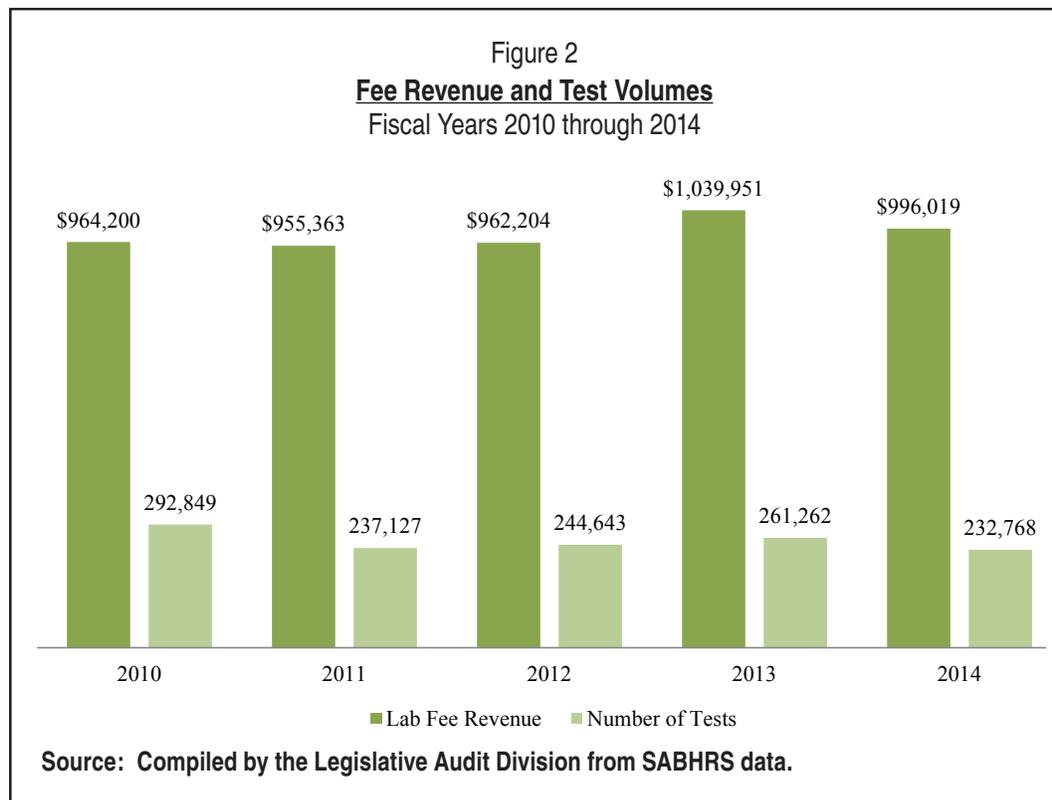
## **Lab Fees Are Not Reviewed for Reasonableness in a Standard Manner**

In the course of audit work on our first objective, we also discussed with lab management the process by which fees are revised. Following this, we reviewed the fees currently charged by the lab and information relevant to the process by which the lab reviews its fees.

Based on these interviews and subsequent document review, the fee-revision process appears to be largely informal and ad hoc. Much like the information that we were able to obtain regarding the costs of performing tests, documented information relevant to the revision of fees is primarily produced in response to Board of Livestock interest, rather than as an element of routine lab management. We did not identify a defined process for the revision of fees at the lab, and thus concluded that the veterinary diagnostic lab does not review the fees it charges for testing services fees in a systematic, documented manner. Rather, lab management indicated that fees are

typically reviewed in an informal manner focused primarily on what is being charged by other, similar labs in the region. As noted earlier, lab management has produced section revenue statistics that represent an attempt at deriving some information about fee revenues relative to costs. However, given that these included no calculations of overhead costs, these were of limited use. Additionally, it was unclear how such information was intended to be incorporated into a process for revising fees.

Follow-up with lab management on this work indicated that the veterinary diagnostic lab has not prioritized reviewing fees on a regular, cyclical basis. For instance, the most recently produced documentation regarding a review of fees through comparison to competitive labs elsewhere in the region was dated to 2011. The lab's most recent fee increases were across-the-board 5 percent hikes, with a lack of regard for what the individual tests cost, as well as whether the fees are at a level to guarantee participation by the industry, thus helping the lab fulfill its surveillance responsibilities. The current fee schedule was last revised in 2014. Based on the little documented evidence of this procedure obtained through the course of audit work, the fact that fees are not reviewed in a proactive manner appears in part due to the fact that the lab was prohibited from raising its fees for a number of years in the late 2000s. During this time, the veterinary diagnostic lab appears to have done little to monitor its fees relative to its larger budget, a practice that has continued.



For context, the lab typically generates around half of its annual \$2.1 million budget from test fee income.

### **Other Regional Labs Review Fees Regularly**

As noted above, a major element of our audit work involved speaking with management of five comparable veterinary diagnostic labs generally located in the region around Montana. In speaking to these administrators, one of our main areas of interest was the process by which these labs revise fees and how often they do so. When speaking with the management of these other labs, we also inquired about the information that they take into account in order to set their fees.

Our review of these regional labs found that labs often review the fees charged for testing services on a yearly basis. A majority of the labs spoken to throughout the course of audit work engaged in the review of fee schedules more often than the actual revision of those fees. For example, management at three of these labs review what they are charging for major testing services annually or biennially, whereas actually revising or potentially raising fees more often occurred closer to every three years.

Also based on interviews with managers of veterinary diagnostic labs in surrounding states, the review of fees was in all cases described as consisting of two primary elements. These are the costs associated with the test, and a comparison with competitive labs offering similar services. These considerations would form the framework for reviewing fees.

### **Fees Are Reasonable, but Need Further Review**

A portion of our audit work included looking at the lab fees at the Montana Veterinary Diagnostic Lab in relation to fees charged by comparable veterinary diagnostic labs in surrounding states. To perform this comparison, we gathered fee schedules from the five regional veterinary diagnostic labs chosen for comparison, and placed those into a format utilized by the director of the veterinary diagnostic lab in the last documented comparison of fees obtained for our review during audit work. (Note: Our comparison measured fees charged to in-state customers, as nearly every state adds a surcharge to its tests for out-of-state submissions. Montana also adds a 50 percent surcharge to out-of-state samples.)

Based on this general comparison of testing services offered by other state veterinary diagnostic labs, the Montana Veterinary Diagnostic Lab fee schedule displays no significant trends, and prices appear generally competitive. However, the fact that lab fees do not demonstrate major trends with regards to competitiveness or a lack thereof, alongside the gaps in information about the costs of tests performed at the lab, indicates

that fees may be competitive yet lack sufficient underlying justification relative to the costs of lab operations. As with the costs associated with testing procedures, the lack of documented, systematic review of the fees raises questions about the underlying justification and presents potential issues with how the lab manages its budget.

Table 1  
Select Test Fees in Surrounding States

Procedure/Test	MT Lab Fee	North Dakota State University	Washington Animal Disease Diagnostic Lab	Utah State University	Wyoming State Vet Lab	Idaho Dept. of Agriculture Lab
<b>Bacteriology</b>						
Campylobacter	\$13.00	\$15.00	\$13.00	\$12.50		
Trichomonas culture	\$6.50		\$7.50	\$6.50	\$8.00	\$5.00
<b>Serology</b>						
Equine Infectious Anemia	\$13.00	\$6.00	\$10.00	\$7.50	\$10.00	\$10.00
West Nile Virus	\$21.00	\$25.00	\$20.00	\$15.00	\$18.00	\$15.00
Brucella abortus						
Card, BAPA or FP	\$1.60	\$2.00	\$4.50	\$4.00	\$4.00	\$1.50
CF, Rivanol, SPT or STT	\$2.65	\$2.00		\$6.00		\$5.00
<b>PCR</b>						
Tritrichomonas foetus	\$28.50	\$25.00	\$40.00	\$20.00	\$30.00	\$18.00
Johne's PCR	\$31.50	\$40.00		\$30.00	\$35.00	\$30.00
<b>Clinical Pathology</b>						
Complete Blood Count	\$15.75	\$16.00		\$25.00	\$16.00	
<b>Parasitology</b>						
Cryptosporidia examination	\$8.50	\$10.00		\$10.00	\$8.00	
<b>Virology</b>						
Bovine Viral Diarrhea ELISA	\$5.25				\$5.00	\$4.25
Fluorescent Antibody Testing	\$8.50	\$15.00			\$12.00	
<b>Histology</b>						
Special Slide Stains	\$8.50	\$5.00	\$7.50		\$8.00	

Source: Compiled by the Legislative Audit Division from department records/other lab records.

Regular and systematic review of all fees charged would produce useful management information for the lab, particularly in terms of building and supporting the lab's budget. There is uncertainty, both at the lab and within the Department of Livestock, as to what ought to be charged for testing services. Current knowledge about what the veterinary diagnostic lab's "competition" is charging, and what it costs the lab to administer similar tests, is information indicated to be beneficial to lab operations by veterinary diagnostic lab management. Overall, the underlying management information for determining how fee revenues fund the lab's budget is lacking,

and there is opportunity for the lab to improve its financial management. Lab management expressed some concern about integrating this into existing workloads, but administrative support from Centralized Services in Helena could alleviate some of this administrative burden. Regardless of where the work is performed, knowledge of costs associated with performing tests and using those costs as an element in a more structured and regular review of fees charged by the lab represents a place to begin the process of improving the lab's financial management. This structured and regular review of fees would also help the department ensure statutory compliance with the requirement that fees be commensurate with costs.

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***RECOMMENDATION #2***

*We recommend the Department of Livestock biennially review the Montana Veterinary Diagnostic Laboratory fees in a systematic, documented manner that takes into account the direct and indirect material and overhead costs of tests and regional lab fees for competitive analysis.*

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# Chapter III –Public Health and the Veterinary Diagnostic Lab Budget

## Introduction

The Montana Veterinary Diagnostic Lab (lab) tests for a wide variety of pathogens, most of which play a role in animal health monitoring for the state's livestock industry. However, some of these pathogens are classified as "zoonotic," meaning that they can be transmitted from an animal host to a human. Additionally, some of the pathogens tested for are linked to diseases listed on the Department of Public Health and Human Services' (DPHHS) reportable disease schedule, and the veterinary diagnostic lab performs all of the testing related to suspected rabies cases in the state of Montana. In addition to these factors, one of the lab's several internal sections performs regulatory milk testing that helps to ensure a disease-free dairy supply.

In 2014, this relationship between the veterinary diagnostic lab and public health became of interest when the Economic Affairs Interim Committee (EAIC) requested that the lab quantify the portion of its testing that can be described as serving a public health purpose. This quantification of a public health impact became the amount of general fund authority provided to the lab during the current biennium.

Accordingly, we sought to investigate and answer the following questions:

- ◆ What is the public health role of veterinary diagnostic labs generally, and what public health role does the lab fulfill?
- ◆ Should the lab attempt to quantify its public health role, and if so, how would the lab attempt this quantification?
- ◆ What other considerations regarding the public-health role of veterinary diagnostic work should we be aware of?

In addressing these questions, we conducted interviews with lab personnel, management from the Department of Livestock's (department) Animal Health Division, the management of veterinary diagnostic labs in other states, and personnel from the Communicable Disease Control Bureau in the Montana DPHHS, and reviewed related documentation.

We determined the lab does indeed serve a public health role, but the quantification of this role as a percentage of the lab's work, and budgeting on that basis, presents concerns. Our work indicated that this practice is not seen elsewhere at veterinary diagnostic labs. This indicates that the most recent budget request was largely based on

a reaction to financial circumstances within the department, rather than best practices in the running of a veterinary diagnostic lab.

## **Stakeholders Believe State Needs Veterinary Diagnostic Lab**

In our work, we sought the opinions of various lab stakeholders and the Board of Livestock regarding the state of Montana's need to operate a veterinary diagnostic lab. We began this work through conversation with department animal health officials. They acknowledged a dual role for the lab with regards to animal and public health. This role was characterized as being born out of the use of data produced by the lab for surveillance and epidemiologic purposes. This data provides the animal health division of the department with the information it needs in order to keep a handle on animal disease that may negatively impact the health of Montana's livestock industry. Without the lab, the animal health personnel feared they would not have access to as much Montana-specific animal health and epidemiological information. In this conversation, many of the diseases tested for by the veterinary diagnostic lab were characterized as disease of primary concern to veterinarians and the livestock industry, but with the work protecting public health as well, due to the risk of certain animal diseases impacting the human population, if they are not caught and managed.

We reviewed results from surveys produced by the department and Montana Veterinary Medical Association (MVMA) and spoke to members of the Board of Livestock about the role they see the lab fulfilling. In 2015 surveys, both the one conducted by the department and the one conducted by the MVMA, a majority of respondents used the lab's services, and noted that they would be significantly impacted were the lab to be closed down. In both surveys, convenience and cost were major benefits offered by the use of the lab. Board of Livestock members generally supported the state's need for a veterinary diagnostic lab, with reasoning typically making mention of both the needs of the livestock industry as well as the public health concerns of animal diseases without a lab providing surveillance over such things.

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### **CONCLUSION**

*The Montana Veterinary Diagnostic Lab's stakeholders and the Board of Livestock all generally believe that Montana needs an accredited state veterinary lab, for purposes of industry health, public health, and fulfilling the Department of Livestock's mission with regards to animal health.*

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## **Veterinary Diagnostic Labs Serve a Public Health Role**

In order to examine the role that the veterinary diagnostic lab plays in protecting public health, we began by determining what duties for the lab are laid out in state law and administrative rules. Following this, we spoke to comparable labs in five regional states as well as officials for DPHHS involved in the management of communicable diseases and public health issues. We also reviewed relevant documentation regarding the veterinary diagnostic lab's role in a consortium of labs involved with public health in Montana, as well as documentation of communicable disease reporting to the federal Centers for Disease Control and Prevention (CDC).

Based on this work, there is widespread consensus that the veterinary diagnostic lab clearly serves a public health role through surveillance of diseases that may potentially impact human health through outbreaks in animal populations or the food supply. The public health role has both a basis in the administrative rule that outlines the organization of the department as well as a variety of practices by which the lab interacts with various public health functions at the state and national level. Administrative Rule of Montana 32.1.101 (2)(c) states that the functions of the lab “are to provide laboratory support for the Disease Control, Milk and Egg, and the Meat and Poultry Inspection Bureaus; provide laboratory diagnostic support to veterinarians and livestock producers; protect the public health by testing dairy products and performing diagnostic tests on suspected rabies cases and other zoonotic diseases; and provide test services to enhance the marketability of livestock.” The lab has adopted such language into a mission statement, as seen in its 2014 annual report. The mission statement describes a public health role for the veterinary diagnostic lab in terms of “control of zoonotic diseases.”

In the course of audit work, we determined the lab works to fulfill the general roles outlined as part of its public-health role indicated in the administrative rule. The lab maintains a section devoted to milk testing, and performs rabies testing while communicating its results with DPHHS, and the lab reports certain rare and dangerous zoonotic pathogens to the federal CDC and US Department of Agriculture's National Animal Health Laboratory Network (NAHLN). These working relationships were documented via reports to the CDC on the detection of certain pathogens as well as the participation of the lab in the “Montana Lab Forum,” a working group of laboratory partners in Montana put together by the DPHHS to determine opportunities for these labs to work together and assess the state of Montana's “public health lab system.”

## **Department of Livestock Quantified Public Health for Budget Purposes**

We first aimed to better understand the reasoning and methodology underlying the quantification of a portion of the testing performed at the lab as serving a public health purpose. We conducted this work through interviews with the management of the lab, as well as members of the Board of Livestock and Department of Livestock animal health officials. We also obtained and reviewed documentation explaining this quantification of public health to the 2014 EAIC and revisited the work done in relevant meetings of that committee, in order to better understand the context of the public health conversation surrounding the lab. It was the EAIC that initially asked the department to attempt to quantify the public health role of the lab.

The interest in further investigating and elaborating on the public health role of the veterinary diagnostic lab arose largely in reaction to the financial situation within the department. The amount of general fund authority provided to the lab has varied considerably over the past several biennia. Prior to the 2015 Legislative Session, the lab and department were looking to the lab's future and establishing some stability in the budget cycle, given how test volumes and, in turn, fee revenues gathered from performing tests vary. The duty of establishing a number that reflects the amount of testing serving a public health purpose fell to lab management.

Audit work indicated that, lacking clear outside criteria or guidance on how to calculate such a number, lab management created a methodology for doing so. Out of this work came the estimate that 31.6 percent of the tests performed can be said to have a public health component, and that public health number increases to 41 percent if regulatory milk testing is included. These percentages were derived by using the lab information management system to determine the number of tests performed for reportable, zoonotic diseases transferrable to humans, adding to that all testing performed by the milk lab section of the Montana Veterinary Diagnostic Lab, and dividing the resulting number by the total number of tests performed by the lab in the previous fiscal year. Working on this basis, the 2015 Legislative Session provided general fund authority to fund 41 percent (\$908,449 for fiscal year 2016) of the lab's projected operating costs.

## **Quantification of Public Health Role Is Not a Practice Seen Elsewhere**

A major component of our interviews with five comparable veterinary diagnostic labs in regional states during audit work was this quantification of public health. We sought to learn if this practice was commonly performed by the management of other veterinary diagnostic labs, and if such a quantified approach to public health

commonly factored into how other labs were funded. This topic was also touched on in our conversations with federal and professional organizations that work closely with state veterinary diagnostic labs.

This review of comparable veterinary diagnostic labs found that attempting to quantify a portion of the testing performed at said labs as serving a public-health purpose is not a practice seen elsewhere. None of the labs reviewed had ever conducted such a quantification exercise, nor had the management of these labs heard of such a quantification being performed in order to establish a basis for a diagnostic lab to receive public funding. Interviews with other relevant professional and federal government organizations echoed this perspective. The quantification of certain tests as serving the public health was perceived as unusual.

In addition to this exercise being widely perceived as unique during our review, the management of these other veterinary diagnostic labs perceived a number of methodological concerns with attempting to quantify a public health impact. The only consistent potential means of quantifying public health impact from this review was through disease-reporting relationships with federal and state-level public health agencies, although this necessarily excludes more general surveillance for zoonotic diseases. Thus, there was a concern that quantification based on test numbers may not accurately reflect the scope of disease surveillance. Further, the amount of testing for zoonotic pathogens may fluctuate considerably on a year-to-year basis, further complicating the use of such a basis in establishing a lab's budget and funding sources.

Overall, the quantification of the lab's public health impact in order to justify a certain portion of the lab's budget to be covered by general fund authority produced a budget that resembles that of other state veterinary diagnostic labs and was favorably received by department and lab management. However, despite having arrived at such a budget, the lab and the department appear to have done so in a manner that is not a best practice seen elsewhere and that additionally raises some methodological concerns.

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#### **CONCLUSION**

*The Montana Veterinary Diagnostic Lab plays a role in protecting public health, but this role is difficult to quantify in terms of workload or budget. The use of a quantified public-health role based on the volumes of tests in order to determine the amount of external financial support received is not a practice seen at other state veterinary diagnostic labs reviewed during audit work.*

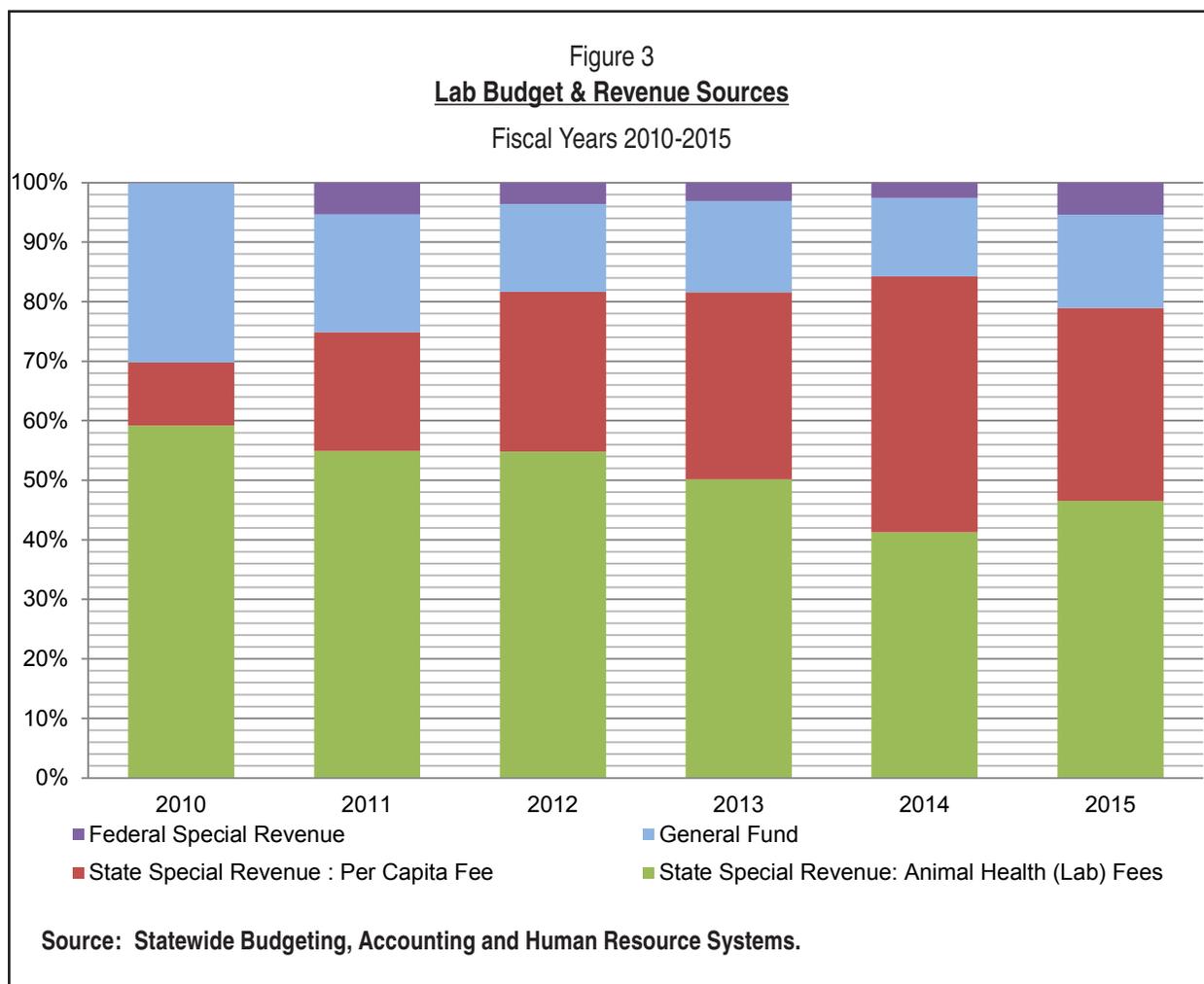
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## **Public Health Question Is Connected to Overall Lab Budget**

Given the connection between determining and quantifying the lab's public health role and the lab's receipt of general fund, we conducted research of the lab's historical sources of funding during audit work. When looking at the budget of the lab, we sought information on its funding from department management and lab management. Through our review of relevant documentation and interviews at the lab and department, we determined the lab has historically received the majority of its funding from three primary sources—general fund, livestock per capita fees, and revenues generated by fees charged for testing services.

The proportion of the lab's overall budget in terms of general and per capita funding that has been provided to the lab has fluctuated greatly throughout the lab's years of operation. These highly variable amounts of support present a challenge to the lab in preparing its budget and present questions when preparing funding requests; namely, what aspects of the lab's operations are general fund dollars paying for? In part due to this, the various sources of funding that make up the lab's budget have fluctuated greatly, with the department putting together the budget in a way that depended more on what amounts of funding are available from various sources, as opposed to basing the budget on what is needed to fund specific costs at the lab. Audit work indicated that, during the previous budget cycle, department management perceived a need to get the lab onto predictable footing.

In the current biennium, the lab's budget includes a substantial general fund component, and far less investment of per capita fee revenues in the lab. The department's allocation of per capita funds to lab operations was \$588,912 in fiscal year 2015, and an estimated \$23,029 in fiscal year 2016. The concurrent increase in general fund was appropriated on the grounds of the quantification of public health impacts, as discussed above.



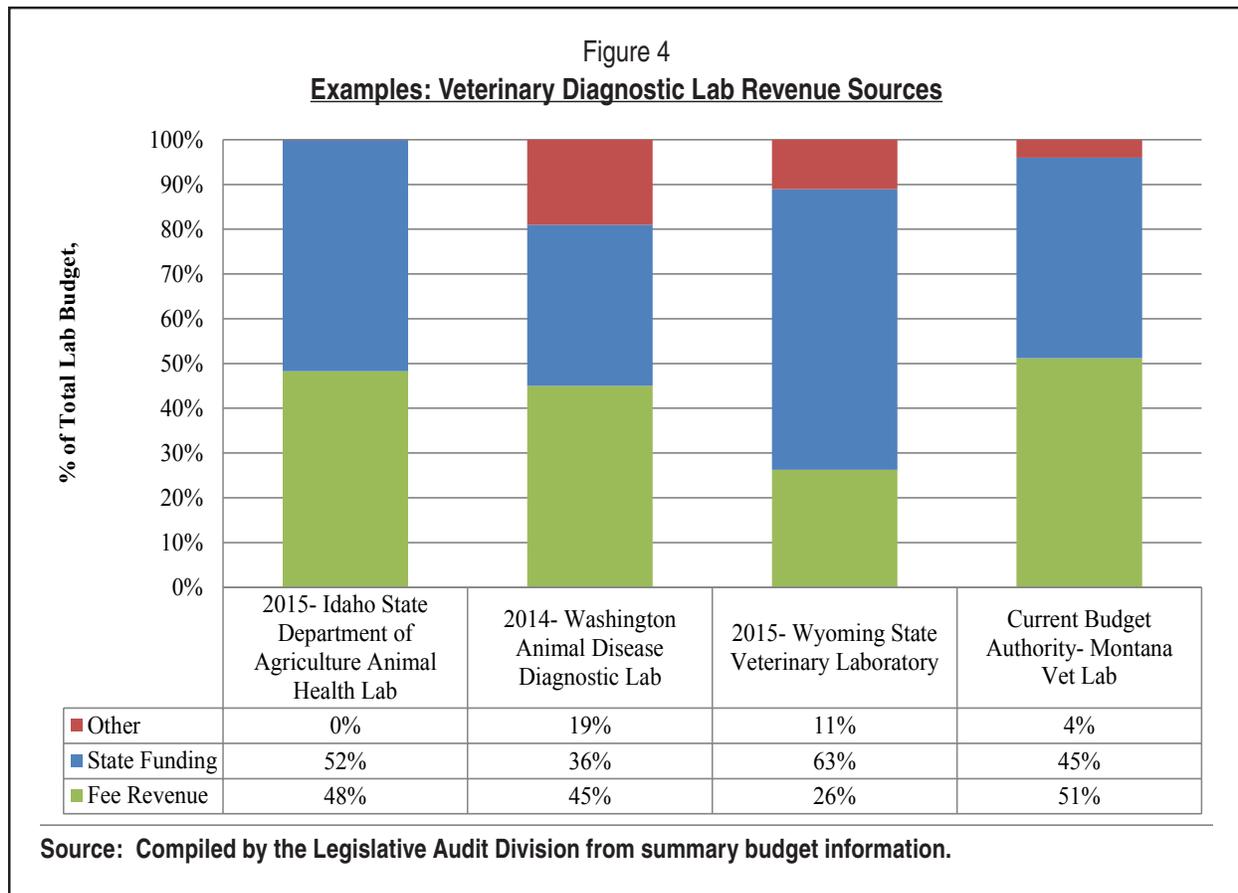
### State Veterinary Diagnostic Labs Typically Receive External Funding

A review of several comparable veterinary diagnostic labs in the region found that their budgets typically anticipate approximately half of their revenue from sources analogous to general fund, per descriptions from lab management in several states. Generally, this indicates that it is appropriate for the Montana Veterinary Diagnostic Lab to rely on some portion of non-fee funding sources in its budget. Further details regarding the sources of revenue for these veterinary diagnostic labs are as follows: for labs from which we received numbers, fee revenues as a portion of the lab's budget were most often between 45 and 50 percent, with remaining portions of lab budgets after accounting for general fund and fee revenues being made up of grants and contracts, or alternate streams of funding through universities. The majority of the comparable veterinary diagnostic labs spoken to in audit work were "Level Two" labs within the National Animal Health Laboratory Network (as is Montana's), entitling them to a

grant in the range of \$55,000 annually. The Montana lab uses this grant to fund its quality control manager position.

Based on the information gathered through this work, we determined that none of these other state veterinary-diagnostic labs are “self-sufficient.” That is to say, there are no public, state-level veterinary diagnostic labs that we reviewed as part of our sample that fund expenditures solely through revenues generated by test fees. Additionally, none of the Montana stakeholders or administrators of out-of-state labs spoken to through the course of audit work believed that it is reasonable to expect veterinary diagnostic labs performing work such as the veterinary diagnostic lab to achieve total budgetary self-sufficiency. The reasoning lies in costs associated with preparedness and offering certain necessary testing services, some of which are not profitable. These costs were described to us as “costs associated with readiness.”

Three of the comparable veterinary diagnostic labs spoken to during audit work were able to provide some financial trending information, noting more stable sources of revenue than those seen in recent years at the veterinary diagnostic lab.



## **Basis of Lab Budget Creates Concerns**

Based on the information received from other labs reviewed during audit work, the Montana Veterinary Diagnostic Lab's budget for the current biennium, in terms of how it is apportioned between fee revenues and general fund and per capita (representing the total support provided by the state to the lab), appears to be reasonably in line with norms for these operations. Using test activity as a basis for quantifying a public health impact and subsequently attaching a monetary amount to the quantified impact would imply that the recurring quantification of this public health impact would occur with the biennial budget cycle. However, there is no current indication the department seeks to do this. This, in conjunction with the fact that deriving a budget in such a way is highly unusual, the basis of the general-fund portion of the lab's budget can be called into question. Additionally, the department's budget was almost entirely allocated a one-time only basis for the current biennium.

## **Montana Veterinary Diagnostic Lab Revenue Sources Are Pooled**

While other labs universally receive funding from non-fee sources in order to remain viable, a difference between other labs and Montana's is a firm knowledge of what those funds pay for. The amount of general fund received by other labs is more often set based on the need to cover certain fixed costs, typically personnel costs such as salaries and benefits. For example, a university's contribution to a lab's budget may cover salaries for tenured lab staff.

Rather than linking all external revenue sources to particular expenses as is regular practice in other states, the department simply anticipates the lab's fee collections and an amount of per capita funding it will allocate, then requests general fund for the rest. This leaves uncertainty from budget to budget as to what will be allocated for the vet lab.

In recent years, test fees have amounted to approximately half of the lab's annual budget, which currently sits at just over \$2 million annually. If the department were to commit, for example, \$500,000 in per capita to the lab, to cover certain expenses, its requested general fund authority would also be around \$500,000, and the legislature would have a better idea what the people of Montana were getting for their contribution to lab operations. A smaller per capita commitment would mean the lab would require a larger portion of general fund authority to complete its budget, while a larger amount of per capita would lessen the lab's dependence on general fund authority.

**RECOMMENDATION #3**

*We recommend that when developing a budget for the Montana Veterinary Diagnostic Laboratory, the Department of Livestock determine a recurring, consistent, and sustainable level of per capita funding to be contributed to the lab budget as one source of non-fee revenue.*

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**Veterinary Diagnostic Lab Recently Implemented  
New Information Management System**

In 2015, the lab undertook a project to replace a legacy lab information management system (LIMS) that was developed in-house and was considered to have become rather outdated in some of its functionality. As we began audit work, the new software was being implemented in order to respond to shortcomings in the old LIMS noted during the lab's most recent management review, including tedious search capability (especially for the needs of the state veterinarian), inability to interface with department accounting operations, no website result posting capabilities, and poor management report generation. The replacement lab information management system is called VADDS (Vetstar Animal Disease Diagnostic System), a system used by multiple states that has been developed and installed through a contractor, as opposed to the old system, which was developed in-house. The system went live near the end of the summer of 2015 and lab staff has indicated that generally the system is working as anticipated.

During interviews with lab management regarding the lab's public health role, the functionality of the new lab information-management system arose in connection with the lab's ability to report public-health information to DPHHS. Following up on this, we reviewed how the VADDS system was fulfilling its role, with our interest being largely focused on its capabilities for enhancing how the lab fulfills its public health role.

**New Information Management System Could More  
Fully Assist Lab in Fulfilling Public Health Role**

We interviewed lab management and department information technology staff. We obtained and reviewed documentation of the desired capabilities for the VADDS system as expressed in the initial request for proposals (RFP) soliciting contractors to work on a lab information management system, the contract that eventually emerged

from the RFP process, as well as information about the federal grant funding that provided the funding for the system.

Audit work determined the VADDS system is largely operational but is still without a number of key functions that would bolster the lab's reporting accuracy as well as its interactions with the Animal Health Division, NAHLN, DPHHS, and the public. Though lab staff has indicated they are still in the process of fully implementing the system, the VADDS system is generally working as anticipated and as needed. However, several key elements of the system are not fully functional, including:

- ◆ USAHerds interface with Department of Animal Health in Helena.
- ◆ Flagging indication for reportable diseases within the system, to help ensure appropriate reporting to DPHHS and/or other public health entities.
- ◆ A portal linking the system to the NAHLN, of which the veterinary diagnostic lab is a member.
- ◆ A public-facing interface which would allow veterinarians or other customers to view test results via the Internet.

The department's assertion that the lab plays a significant role in protecting public health would be bolstered if the department were to prioritize complete interactivity and functionality for all aspects of the new VADDS, to ensure timely and accurate reporting of zoonotic diseases and more timely interaction with veterinarians and other customers of the lab. Because of these shortcomings, the lab faces the possibility of not fulfilling its public health responsibility to its fullest capacity. Additionally, as the entire contract was paid before the vendor completed all deliverables, the potential exists for the lab to be unable to receive the full value promised by the contract. Lab officials fully anticipate the vendor will complete the remaining items spelled out in the contract.

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***RECOMMENDATION #4***

*We recommend the Department of Livestock fully implement all features and functionality indicated in its information management system contract.*

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## Chapter IV – Lab Relationship With Montana State University

### Introduction

The Department of Livestock's (department) Veterinary Diagnostic Laboratory (lab) has not always been located in Bozeman. Through the 1950s the lab was located in the basement of the department's building in the Capitol Complex in Helena. When the lab's growing needs rendered that space inadequate, the 36th Legislature (1959) authorized \$290,000 (including \$190,000 in bond sale proceeds) for a new laboratory building in Gallatin County, which was to be built either on Montana State University (university) land, or on other land acquired by the state.

The result of that effort, the lab's current home, the Marsh Lab Building, is owned by the university, Montana's land grant university, and sits on university property. The lab staff make up the majority of the building's occupants, but a few university employees also work in the building.

Figure 5  
**The Department of Livestock's Veterinary Diagnostic Laboratory**



Source: Google Earth (street view).

Fieldwork identified two memoranda of understanding between the department and the university that spell out certain terms of the working relationship between the two entities. The more germane of these speaks to the Marsh Lab building. This document, signed in 2006, spells out various charges and responsibilities of both the university

and the department. (See below for additional information on this memorandum and the physical plant of the lab.)

While the department does not pay “rent” to the university, it does pay into a pool of money that supports a number of centralized services across the campus. This fund does not cover capital improvements but does cover basic day-to-day maintenance and some measure of operations. The “re-charges,” as they are called, cover items like mail service; custodial service; trash; building maintenance; facilities administration; property insurance; utility system operations and maintenance; safety/risk management; and campus police. Things like clogged drains or stuck doors are covered; facility upgrades are not.

A notable exclusion for the lab building is parking—the lab parking lot is not part of the university parking system, meaning parking stickers are not necessary and the lab does not pay for parking in its re-charges. So parking expenses do not factor into what the lab pays to the university. One result of this is that the lab is responsible for its own snow removal.

The department pays approximately \$120,000 per year for these expenses, which are supposed to represent a proportionate share of the lab’s centralized services utilization.

### **Montana State University Sees Current Lab Operations as Not Fitting with its Mission**

Throughout the audit we discussed the structure of the department and the lab within it with a number of stakeholders and interested parties. Of particular interest were the views of officials with the university. Diagnostic labs in several other states are administratively aligned with land grant universities (as opposed to executive branch agencies), and we wondered whether there would be any appetite for such a reorganization in Montana, and whether such a shift would be advantageous for the lab, the university, the state livestock industry, or all of these entities.

We learned that university leaders do not see a strong connection or overlap between the missions of the university and the lab, and are wary of taking on administrative and budget responsibility for the lab. In various meetings throughout the audit, several administrators indicated they believed the lab would be a poor and costly fit within the university. Administrators said they did not envision a scenario in which the university should give financial support to the lab when the lab does not have a strong connection to the university’s academic mission. Customer-oriented services such as those provided by the lab are a challenge to integrate with instructional and other academic activities

(research), they said. Administrators noted the university has closer ties to other labs housed on campus, but those relationships are statutorily guided. Leadership of the Agricultural Experiment Station at the university indicated its budget is already strained and could not take on the lab's operations.

Other administrators pointed out that unlike other states where the veterinary lab is part of the university, Montana State University–Bozeman does not offer a full four-year post-graduate veterinary doctoral degree, so there would be less need for a laboratory staff that doubles as teaching faculty. With a limited instructional role, the lab would be a poor fit with the university, particularly because it is not financially self-sustaining.

Speaking further to the question of a stronger relationship between the lab and the university, relatively few university students have any interaction with the lab currently. These interactions include two work-study students in an average year, along with as-needed diagnostic and incineration services, for which the university pays like any other customer. These limited interactions illustrate the difference in missions between the lab and the university, and university staff indicate that the separation between the lab and university is appropriate.

Montana students who wish to become veterinarians can apply to a relatively new regional program called the Washington-Idaho-Montana-Utah Regional Program (WIMU), through which a student completes one year of post-graduate study at Montana State University before transferring to Washington State University to complete the doctoral degree in veterinary medicine. A staff member involved in overseeing the program said 11 Montana students per year have participated in each of the program's first two years. The staff member said the first-year students do observe pathology work at the lab, which typically amounts to "a couple of afternoons per semester." In addition, the lab occasionally may provide "interesting" samples or specimens to the vet-med program, and there may be limited internship opportunities. The staff member echoed others' observations at the university that the missions of the lab and the university are more disparate than some may believe. He suggested that perhaps tighter integration between the lab and the university could become desirable if the state's participation in the WIMU program changed to provide two years of study at Montana State prior to moving to Washington State. There was more skepticism, though, that the need for veterinarians in the state would grow to the point that a larger and/or complete in-state veterinary medicine program would become necessary.

## **Livestock Officials, Industry Ambivalent About Lab Alignment**

We asked Board of Livestock (board) members and other stakeholders in the lab for their perspectives on the relationship between the diagnostic lab and the university. The comments we heard were mixed. Some board members believe moving the administration of the diagnostic lab to the university could result in more research into animal disease and ultimately be a benefit to both the university and the livestock industry. One member questioned why the department, and the lab administration in particular, has not been more proactive in sowing positive relations and potential integration with the university. Board members also suggested the diagnostic lab would have stronger financial support if the lab were to become part of the university. Some board members expressed hope that the nascent veterinary medicine program of which the university is a part could be beneficial to the lab, although subsequent interviews with university officials did not strongly support this possibility.

Other board members cautioned that moving the lab administration to the university could imperil the importance of the lab's functions, if, for example, future university administration did not view the lab as integral to the university's mission and operations. Keeping the lab within the department would allow the board to maintain the lab's mission and establish or adjust its priorities as necessary to meet the needs of livestock producers across Montana, who make up the lab's primary customer base.

The executive of a major state livestock industry group acknowledged the lab may be a poor fit for the university at the present time, but that an expanded veterinary medicine program could lead to more synergy between the two organizations. He suggested his group's membership of producers across the state would be amenable to a lab that was shared by the department and university.

## **Other States Share Positives, Negatives of University Relationships**

Our interviews with administrators at five regional labs included questions about the labs' relationships (if any) with land grant universities. If the lab in question is affiliated in any capacity with its state land grant university, we asked which aspects of the relationship worked well for the lab and for the livestock industry in the state, and what challenges are presented with the lab organized as part of the university and not under an executive branch agency.

## Positives

Administrators generally believe the labs' affiliation with universities and having an educational role in addition to their surveillance and disease prevention work allows the labs to recruit and retain higher qualified professional staff by providing them an "academic home." Salaries are higher for professional staff, upon whom there are expectations for teaching and research/publishing in addition to day-to-day lab work. One lab director suggested that if his lab were to leave the university and become part of the state Department of Agriculture, "at least half" of his staff would leave. Some lab directors indicated the intellectual/academic setting and resources available in the university environment represent a significant advantage over nonaffiliated labs when it comes to attracting professional staff. One administrator recalled his time in a Midwestern state that had two diagnostic labs, one at the university and another within the Department of Agriculture, and his perspective was that the university lab did higher quality work. In a state with a more robust veterinary medicine curriculum, the director indicated a number of postdoctoral veterinarians are working in the lab at a given time, and the university provides an excellent forum for the sharing of subject matter expertise.

## Negatives

Many of the cautionary comments we heard regarding labs affiliated with universities were in the area of university culture and shifting priorities at certain land grant institutions. In particular, one lab director expressed concern that the university was increasingly emphasizing the identification and procurement of external research grants as potential extra revenue streams for the university, and that these grants are more typically focused on human health and not the focus of the diagnostic lab, which has a mission based more upon surveillance and disease prevention than on research. Due to this, the director felt the lab was less of a priority for the university than it once was, a troubling trend he sees continuing. Another director shared a similar perspective and cautioned that veterinary labs seeking out research grants could compromise their focus on the primary disease surveillance mission. Generally, administrators of university-based labs feel their service-based functions are being increasingly overlooked by research-driven university administrations. Despite this, multiple directors indicated that unlike the prevailing view at the university, they believe their labs do have a role in fulfilling the mission of the land grant universities.

**CONCLUSION**

*While many state labs are aligned with land grant universities and not with executive agencies, there are positive and negative aspects to these relationships. Montana State University does not have interest in taking on oversight and management of the programmatic and laboratory functions of the lab. Other stakeholders in the lab suggested such a transition could be advantageous for the lab but would not be without potential pitfalls.*

**Building not a Priority for Montana State University**

In addition to discussing the diagnostic lab's current working relationship with the university and whether it can or should be strengthened, we discussed the lab's current physical plant, which is owned and maintained by the university. According to many stakeholders—including the department, the university, and the national organization that accredits the lab—the building is at the end of its safe and useful life.

A 2010 legislative study of state labs identified several problems with the Marsh Lab building, including inadequate office and work space; biosecurity concerns; inadequate electrical system; issues with fumes and air handling; asbestos; closets being used as lab space; a leaky ceiling; and a host of other concerns.

Large-scale repair and upgrades and/or replacement of the lab building do not rank highly on the Long Range Building Program ranking of the university. The university's most recent biennial compilation of priority building projects on the Bozeman campus includes new heating, ventilating, and air conditioning (HVAC) systems for the building, with an associated cost of \$1.5 million. This project ranks 16th on the university's list of priorities, which officials acknowledge

Figure 6  
**Vet Lab**



Source: Legislative Services Division

effectively means the project has no chance of reaching the long range building program included in the governor's budget. It is important to note that even though the project's low ranking practically ensures the project would not make the final budget, its inclusion on the list indicates the university has done its diligence and is aware of the problem, and the upgrade could earn higher ranking in future long range building documents.

In addition to having a low priority for major system replacement, the building's existing systems collectively rank among the most deficient on campus. (In this context, "deficient" indicates a building system that is no longer functioning as expected.) The university regularly performs a Facility Condition Index (FCI) appraisal of each building on campus, assessing the condition of each building once every three-plus years. In its most recent FCI, the Marsh Lab building scored a "Deficiency Ratio" of 27.4 percent, which a member of the university's planning staff characterized as "one of the highest ratios of the MSU-Bozeman buildings—indicating the building embodies significant deferred maintenance captured in the specific building systems and components." (For context, the university considers scores between 0-5 percent to be "good;" 6-10 percent "fair;" and greater than 10 percent "poor.") The Index measures such systems as the building's interior and exterior walls, roof, HVAC, ceilings, and insulation, as well as plumbing, lighting, and other fixtures.

Further, the university's long-range campus plan acknowledges that replacing the lab building will be necessary within the next quarter-century, though there is little guidance as to how this will happen. This is a less formal, forward-looking document that more generally provides planning guidance for the next two-plus decades and would not be expected to address in any detail the future of the lab, but it nonetheless indicates belief among university planners that the existing building is at the end of its useful life.

The department has not been proactive in producing an actionable plan for relocating the lab. Other than funding included in a bonding bill five years ago (the bill did not pass the legislature), the department has not produced any organized effort, either on its own or in conjunction with other labs or stakeholder groups, for moving forward with plans for new lab space. A 2010 study estimated the cost for a potential new building at \$7.5 million. No action was taken on this proposal.

The memorandum of understanding between the department and the university indicates that if the university identifies another use for the lab building or displaces the vet lab for any reason, the university "will collaborate to develop a displacement strategy" which "may" include identification of replacement space. (This displacement

presumably could be because the university decides to demolish the building, although this is not explicitly spelled out.) However, if the building becomes irreparably damaged by an earthquake, storm, or other peril, and the university decides to demolish or abandon it, the university is not obligated to work with the department in the lab's relocation. As it reads, the memo appears to oblige the university to offer some collaboration if it decides to proactively evict the lab for any reason, but the university has no obligation to help if the building becomes damaged by a fire or other natural event.

The national organization that provides accreditation to the diagnostic lab and similar labs across the country has singled out the deteriorating condition of the Marsh Lab building as a concern. In its 2015 site visit report, the organization recommended that the lab "continue working aggressively with the Board of Livestock, BoL executive officer, and Montana State University on funding for a new facility to replace the Marsh Laboratory. The Marsh Laboratory is reaching the end of its lifespan as a facility that can house a modern, accredited laboratory...All laboratory stakeholders should be cognizant of the economic, health, and public relations impact of a single adverse event arising from an inadequate laboratory facility."

With the building in poor physical condition, it is apparent the department needs to proactively think of the lab's future and plan for its existence beyond the Marsh Lab building.

The lab building is inefficient, less safe for employees than a modern lab facility would be expected to be, and at the end of its useful life. Repair and improvements to the building and its systems are not high on the priority lists for the university. Beyond an inclusion in a failed bonding bill three legislative sessions ago, the department has not made a significant effort to develop and put forth a specific plan for a new building, including space needs, system needs, and other details that would allow the legislature to more fully weigh the costs and benefits of providing a new facility for this division of the department.

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**RECOMMENDATION #5**

*We recommend the Department of Livestock develop a detailed and specific plan and timeline for replacing the Montana Veterinary Diagnostic Laboratory.*

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DEPARTMENT OF  
LIVESTOCK

DEPARTMENT RESPONSE



## STATE OF MONTANA

STEVE BULLOCK, GOVERNOR

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MILK & EGG BUREAU (406) 444-9761

May 24, 2016

RECEIVED

MAY 26 2016

LEGISLATIVE AUDIT DIV.

Tori Hunthausen, Legislative Auditor  
Legislative Audit Division  
PO Box 201705  
Helena, Montana 59620

Dear Ms. Hunthausen,

Thank you for the work compiled by your team of auditors as they worked with the Department of Livestock this year to perform a performance audit in the Montana Veterinary Diagnostic Laboratory (MVDL). From reports I received the auditors exhibited a high level of professionalism as they interacted with our staff during the course of the audit. We believe the performance audit process is crucial to gathering feedback and working to continually improve the management of our department. The following information conveys our thoughts and plans in regard to the findings and recommendations made by your team following their visit:

**Recommendation #1 – We recommend the Department of Livestock Regularly analyze and document the MVDL’s material and overhead costs of the tests performed at the lab.**

Department Response: Concur

The Department of Livestock does concur with this recommendation. We plan to do an annual review of costs at a section and per test level. This will allow us to easier demonstrate the need for fund sources beyond fees. Included in this analysis should be a determination of the fixed costs associated with the lab maintaining a basic state of readiness for plausible animal health crises that could affect the state causing either economic hardships or public health concerns. This would be another way to demonstrate the need for public support of the lab beyond the fee structure. This analysis needs to occur before December of 2016. It is true that having a documented procedure and timing for analyzing cost would aid the Department in managing the lab budget and determining appropriate pricing.

**Recommendation #2 – We recommend the Department of Livestock biennially review the MVDL fees in a systematic, documented manner that takes into account the direct and indirect material costs of the tests and a regional lab fees for competitive analysis.**

Department Response: Concur

The MVDL should do a biennial review of pricing and make changes as necessary. Previously, the Department has only looked at a market comparison on as needed basis. This should be done using both

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**STATE OF MONTANA**STEVE BULLOCK, GOVERNOR

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the cost analysis mentioned in the previous recommendation and a survey of the market. The market for lab pricing is largely dictated by a cohort of state labs that are also heavily state funded. This means that what is competitive pricing within the market may not in every case cover the per test costs. However, the Department should be able to demonstrate the difference between true cost and what may be charged to be competitive with like labs in the region. This will help the lab determine what services should or should not be offered as well as demonstrate the need for subsidy beyond the fee structure to maintain basic operations. This should be completed in conjunction with the first annual cost review as preparation for the 2019 Biennium and then performed for each biennium in the future.

**Recommendation # 3 – We recommend that when developing the budget for the MVDL, the Department of Livestock determine a recurring, consistent, and sustainable level of per capita funding to be contributed to the lab budget as one source of non-fee revenue.**

Department Response: Concur

The department concurs with this recommendation. In 2015, the Department sought and received general fund appropriations from the Legislature. Without this non-fee revenue the lab would not be able to maintain its operations. The Department will continue to push for a general fund appropriation in the future as the lab would not be able to maintain competitiveness with other labs in the region that have the personal services, facility or other indirect costs covered by some sort of state subsidy. Likewise, throughout the history of the lab the amount of per capita fee that has been apportioned to the lab's operation by the Board of Livestock has been inconsistent. The Board of Livestock will look at this as part of the new biennium budget to determine a reasonable amount of per capita that should be allocated to the lab and kept consistent over time. It is important that both of these non-fee revenues be used to cover the basic state of readiness to meet the state's economic and public health needs as opposed to being strictly based on the portion of tests that qualify as zoonotic or public health related as this can be highly variable. The fixed costs associated with basic readiness should not be variable and is a more reliable indicator of the public interest in the lab.

**Recommendation #4 – We recommend the Department of Livestock fully implement all features and functionality indicated in its information management system.**

Department Response: Concur

The Department is currently working with the vendor to ensure all aspects promised in the contract become operational. Some items mentioned in this finding are items that were part of the original project scope but have been delayed for one reason or another. Internally, we have asked a member of our IT staff to take the lead in working out the difficulties in relaying information from the VADDS system to other important departmental systems such as USA herds used by the Animal health division in its tracking and traceability efforts. The plan was to have much of this worked out this summer. The Department IT manager resigned to take a position in private industry in early May which will push the timeline on these efforts in to the fall.

**Recommendation #5 – We recommend the Department of Livestock develop a detailed and specific plan and timeline for replacing the MVDL.**

Department Response: Concur

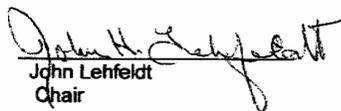
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The Department recognizes that the current facility is beyond its lifespan and no longer suitable to our needs. We also recognize the hesitance on the part of other parties such as Montana State University to engage more deeply with the lab because of alignment issues with the University mission and concerns over management. This finding within the report accurately depicted the advantages and disadvantages associated with operating these facilities through the University as opposed to a state agency. At present we know there is a public need for a VDL and that MDOL is the place that will be responsible to operate this function regardless of what best practices exist in other locations. A committee that is made up of members of the Board of Livestock as well as other state and industry organizations is currently in the very preliminary stages of working with operators of labs (Montana Wool Lab, FWP, Department of Ag, etc.) that have similar concerns. The idea is to create a new combined lab complex in the Bozeman area. MSU has been engaged to assist in finding a new location as the move of these labs would help the University gain access to needed real estate on their campus. The committee has asked each operator, including the Director of MVDL, to provide a list of facility needs to them this summer. From this list the committee intends to develop a plan, timeline and budget for the project. At present, the committee has indicated they are planning to approach the legislature during the 2019 session for funding options.

Sincerely,



John Lehfeldt  
Chair

Board of Livestock



Mike Honeycutt  
Executive Officer  
Board of Livestock