

# HB 661 STUDY OF STATE LABS

A Report Prepared for the  
Legislative Finance Committee

By  
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## INTRODUCTION

The 2017 Legislature adopted and the Governor signed into law HB 661, an interim study on Montana state laboratories. The intent of this bill was for the Legislative Finance Committee (LFC) to direct a study of the long-term future of and possible efficiencies to be gained from consolidating or collocating the state-supported labs that are currently located on the Montana State University campus in Bozeman. The study is being conducted by a bipartisan subcommittee comprised of two members each from LFC, Environmental Quality Council (EQC), and Economic Affairs Interim Committee (EAIC).

The goal of the subcommittee was to evaluate the function, condition, and needs of the six labs located within the MSU Bozeman campus and, if deemed appropriate, recommend a proposal to the LFC in regard to the subcommittee's findings. The labs included in the study are the Montana Department of Livestock Veterinary Diagnostic Lab, the Montana Agricultural Experiment Station's (MAES) Wool Lab, the MAES Seed Lab, the Montana Department of Fish, Wildlife, & Parks (FWP) Wildlife Lab, the Montana State University (MSU) Pulse Crops Diagnostic Lab, and the Montana Department of Agriculture Analytical Lab.

The purpose of this report is to convey the subcommittee's recommendation to the LFC, along with providing additional options for legislative consideration.

## SUMMARY

The process for the Study of State Labs included hiring a consulting team with lab design experience. LPW Architecture and Clark Enersen Partners were hired to conduct initial research, analysis, and conceptual information options to assist in developing recommendations. The team that was assigned to this process conducted detailed space needs analysis, interviews with stakeholders, and worked closely with the subcommittee to identify concerns and proposed solutions. The recommendations of their work are:

- Option 1 – Construct a new building for the Department of Livestock Veterinary Diagnostic Lab (VDL) and the Department of Agriculture Analytical Lab. The vacated space in Marsh Laboratory because of the VDL lab's departure would be renovated for the MAES Seed Lab, MSU Pulse Crops Diagnostic Lab, and the MAES Wool Lab. The FWP Wildlife Lab will remain in its current location
- Option 2 – Construct a new facility for the Department of Livestock Veterinary Diagnostic Lab only. The vacated space in Marsh Laboratory would be renovated for the Department of Agriculture Analytical Lab, MAES Seed Lab, and the MSU Pulse Crops Diagnostic Lab. The MAES Wool Lab and the FWP Wildlife Lab will remain in their current locations
- Option 3 – Construct a new facility for the Department of Livestock Veterinary Diagnostic Lab only. The MSU Pulse Crops Diagnostic Lab would move into unrenovated space in Marsh Laboratory. The Department of Agriculture Analytical Lab, MAES Seed Lab, MAES Wool Lab, and the FWP Wildlife Lab will remain in their current locations

Based upon review of the consulting team's report, the subcommittee chose to recommend two alternate options for legislative consideration:

- Option 1A – Construct a new building to for the Department of Livestock Veterinary Diagnostic Lab (VDL), the Department of Agriculture Analytical Lab, and the FWP Wildlife Lab. The vacated

space in Marsh Laboratory because of the VDL lab's departure would be renovated for the MAES Seed Lab, MSU Pulse Crops Diagnostic Lab, and the MAES Wool Lab

- Option 3A – Construct a new facility for the Department of Livestock Veterinary Diagnostic Lab and the FWP Wildlife Lab. The MSU Pulse Crops Diagnostic Lab would move into unrenovated space in Marsh Laboratory. The Department of Agriculture Analytical Lab, MAES Seed Lab, and MAES Wool Lab will remain in their current locations

The following report provides a background of the labs that were included in this study, the process the consulting team undertook to support their recommendations, and outlines the details of each recommendation along with possible sources of funding.

## **BACKGROUND & INVESTIGATION**

### **THE LABS**

This study analyzed six laboratories and associated programs located on the Montana State University campus. Each lab is a service lab that performs a variety of functions for stakeholder's primarily in Montana. The facilities that house these labs are the Marsh Laboratory, McCall Hall, Wool Lab, and the FWP Region 3 Headquarters.

The following paragraphs in this section are excerpts from the [Combined State Lab Study report](#) by Clark Enersen and LPW Architecture and provide a brief description of each lab, it's location within the MSU campus, and existing conditions and deficiencies noted during interviews with the design team.

#### Department of Livestock Veterinary Diagnostic Laboratory

The Dept. of Livestock Veterinary Diagnostic Laboratory (VDL) is the largest tenant housed in Marsh Laboratory. Located on West Lincoln Street, just west of 19th Avenue, the Marsh Laboratory complex was built in 1961 and has undergone numerous minor renovations and additions since then. The VDL is the only institution in Montana that is accredited by the American Association of Veterinary Laboratory Diagnosticians (AAVLD) and provides critical diagnostic testing serving Montana's food animal and veterinary industries. Like most accredited veterinary diagnostic laboratories, the facility is separated into dedicated laboratory sections, each with a specialized focus in the rapid detection of veterinary pathogens in the samples and animal carcasses that it receives every day.

Due to the age of the structure, outdated HVAC systems and continuously evolving methods and instrumentation in the diagnostic field, the current facility is in need of replacement and continuously in danger of losing its accreditation. The existing space allocation for the VDL includes 11,549 net square feet. Current deficiencies in the VDL include the following:

- Inadequate space sizes, allocation and organization
- Laboratory safety issues including inadequate safety showers, eye washes and egress
- Lack of standby emergency power
- Lack of general power
- Poor ventilation and inadequate make-up air
- Security issues due to multiple public corridors in close proximity to lab spaces handling unknown pathogens
- Biosecurity concerns due to the lack of a properly appointed and certified BSL-3 laboratory space
- Aged finishes and cleanability concerns
- Existence of hazardous materials (asbestos tile and insulation)

#### Montana Agricultural Experiment Station Seed Laboratory

The Montana Agricultural Experiment Station Seed Laboratory is also housed in Marsh Laboratory, occupying a relatively small footprint in the west wing. The organization provides seed analysis for farmers, regulatory agencies and industry groups. It also maintains a very large collection of seed samples that are intended to date back three years, but space constraints have made that policy difficult to meet.

The main laboratory area for the Seed Lab received a light renovation recently and the lab operations are not particularly stringent as there is little use of hazardous materials or chemicals. The main deficiency associated with the Seed Lab is a lack of space that is the result of sharing space with the expanding operations of the Pulse Crops Laboratory. If the Pulse Crops Lab were to be relocated in the Marsh Laboratory Complex, the Seed Lab could expand into that area with little or no renovations to alleviate most of their deficiencies. The existing space allocation for the Seed Laboratory includes 1,763 net square feet. Current deficiencies in the Seed Laboratory include the following:

- Inadequate space sizes
- Lack of standby emergency power (for growth chambers)
- Lack of general power
- Aged finishes and cleanability concerns

#### Montana State University Pulse Crops Laboratory

The Montana State University Pulse Crops Laboratory is the last of the three organizations housed in the Marsh Laboratory Complex. It is located in the west wing directly across and adjacent to the Seed Laboratory and shares some of its resources such as a sample receiving area, germination laboratory and growth chamber space.

The Pulse Crops Lab is presently occupying just 751 net square feet which is a small fraction of what it needs to perform efficiently. The lab also uses greenhouse space on campus and has requested that a small new greenhouse be constructed attached or adjacent to the Marsh Lab Complex to alleviate the problem of transporting plant materials on a regular basis. If the Pulse Crops Lab is provided with new or renovated space, it will be critical to ensure that the Seed Lab is located within the same building due to the continued sharing of functions, but the staffs of both labs have stated that the two areas do not need to be directly adjacent. Current deficiencies in the Pulse Crops Laboratory include the following:

- Inadequate space allocation and size – significant growth in lab and equipment space is needed
- Laboratory safety issues including inadequate safety showers, eye washes and egress
- Lack of standby emergency power
- Lack of general power
- Aged finishes and cleanability concerns
- Need of a small, local greenhouse

#### Department of Agriculture Analytical Laboratory

The Department of Agriculture Analytical Laboratory is located in McCall Hall at the northwest corner of Grant Street and 11th Avenue near the center of the Montana State University campus. It provides testing on pesticide residues in water, soil, vegetation and animal tissues as well as verification of product ingredients in pesticide, animal feeds and fertilizer. These services are provided to state ranchers, farmers, manufacturers, research organizations and regulatory agencies at the state and national level.

Of all the laboratory facilities included in this study, the Analytical Lab works with most chemically hazardous samples and materials and has the greatest need for properly functioning chemical fume hood containment devices and a properly balanced laboratory air flow system. The structure, built in 1952 originally housed what is now the film and photography department and included the university's television studio. The Department of Agriculture Analytical Lab has occupied most of the facility for many years and has made minor upgrades to accommodate new instrumentation and improve air flow

over the years. While a comprehensive engineering analysis has not been completed as part of this study, our on-site survey indicates that make up air, laboratory exhaust and laboratory air flow controls are inadequate for the hazardous chemical environment in the Analytical Lab. The facility users have stated that the building's location can sometimes be problematic for their clients due to heavy traffic in the heart of campus, lack of parking and unsuitable truck access. The facility is almost entirely occupied by the Analytical Lab and is comprised of approximately 6,708 net square feet. Current deficiencies in the Department of Agriculture Analytical Laboratory include the following:

- Space sizes are mostly adequate although some additional space could alleviate a few areas of concern for some of the instrumentation needs. The overall layout is not optimized for the general work and material flow for the lab
- The current layout of the building entrance and general organization of the plan compromises overall building security and monitoring
- Laboratory safety issues including inadequate safety showers, eye washes and egress
- Laboratory airflow and exhaust are major concerns due to the highly hazardous chemical nature of the work performed in the lab
- Lack of standby emergency power
- Lack of general power
- Aged finishes and cleanability concerns

#### Montana Ag Experiment Station Wool Laboratory

The Montana Ag Experiment Station Wool Laboratory is in a stand-alone historical building located at a major vehicular entrance on the north side of the Montana State University campus at the intersection of Harrison Street and 11th Avenue. The building was constructed in 1947 and is a two story, wood framed structure with a walk-out basement, storage attic and a large garage area in the rear. It is one of only two facilities in the country that provide wool fiber and fleece analysis to aid breeders in the selection of genetic traits, and the operation shares a long and significant history with Montana State University.

There are two major services provided by the Wool Lab that are difficult to accommodate in the historic structure. One of their most important analytical tools is the Optical Fiber Diameter Analyzer. This instrument should be located in a controlled laboratory environment where temperature and humidity can be reliably controlled, but no such space exists in the current facility. Another routine procedure involves boiling fleece samples in chemicals for which the existing exhaust system is not suitable. If the Wool Lab is to remain in the historic structure, certain spaces should be upgraded to accommodate these needs. Periodic national meetings and conferences involving breeders are also held in the Wool Lab and have become difficult to accommodate as the number of attendees has grown. Truck access is also a challenge on the existing site. The overall space and size of the facility is large enough to accommodate their needs now and into the future. The building is comprised of approximately 4,781 net square feet. Current deficiencies in the Wool Laboratory include the following:

- Laboratory safety issues including inadequate safety showers, eye washes and egress
- Poor vehicular and truck access
- Poor laboratory ventilation to accommodate certain procedures
- Lack of environmental temperature and humidity control for specialized instrumentation
- Security issues due to public corridors with direct access to the entrance of hazardous laboratory environments
- Aged finishes and cleanability concerns

#### Fish Wildlife and Parks Wildlife Laboratory

The Fish Wildlife and Parks Wildlife Laboratory is located on the east side of 19th Avenue across from Marsh Laboratory on the site of the FWP Region 3 headquarters. Situated in a stand-alone structure to the east of the main building, the Wildlife Lab consists of a main necropsy space with a small wet laboratory and walk-in cooler / freezer space.

The facility was undergoing a minor renovation at the time the initial discovery phase of this study began. The renovation has created the small wet lab space with a new chemical fume hood, improved the ventilation and made provision to add an overhead monorail system for the necropsy floor. The renovation also added a small storage room to accommodate a mobile x-ray unit that is often used in forensic investigation. The facility is not equipped with a means to dispose of carcasses, so the Wildlife Lab is required to transport its large animal waste across 19th Avenue to the incinerator at the VDL. This represents both a deficiency in both efficiency and biosecurity. Users of the Wildlife Lab, however, have stated that it is advantageous to be co-located with the FWP Region 3 for the purpose of increased interaction with field personnel and game wardens. Current deficiencies in the Wildlife Laboratory include the following:

- Lack of proximity to incinerator or digester for carcass disposal

## **THE INVESTIGATION PROCESS**

During the first phase of the process, the consultants spent a week on the MSU campus touring labs and conducting design charrettes with various stakeholder groups. This process allowed for the consultants to evaluate the condition and adequacy of the existing facilities, and the agencies/labs to explain their duties, use of existing facilities, and express their needs for expanded spaces and capabilities as their missions continue to evolve to meet the demands of their respective customers and stakeholders. During this evaluation process, the consultants communicated frequently with the lab stakeholders and returned to the site at various times to verify and confirm important aspects of their conclusions and recommendations.

A report of the existing conditions of the facilities and deficiencies was provided by the consulting team. There were some common trends throughout:

- Insufficient space sizes, allocation, and organization
- Aged finishes and cleanability concerns
- Laboratory safety issues including inadequate safety showers, eye washes, and egress
- Poor building ventilation and inadequate make-up air
- Lack of fume hoods and associated exhaust systems
- Lack of redundant mechanical systems for lab areas
- Lack of backup power for critical systems
- Security issues due to multiple public corridors in close proximity to lab spaces handling potential pathogens
- Biosecurity concerns

From this process the consultants developed a baseline space allocation for each lab compared to the existing space. The baseline provides an overall scope of a new complex if all six laboratories were to be constructed in a new location. The baseline encompasses an 84,647 gross square foot building at an escalated project cost of approximately \$51.2 million (excluding land acquisition and extension of utilities to the site). While the baseline is not a recommended option, it does provide the necessary details to begin developing the following recommendations that have been presented by the consultants.

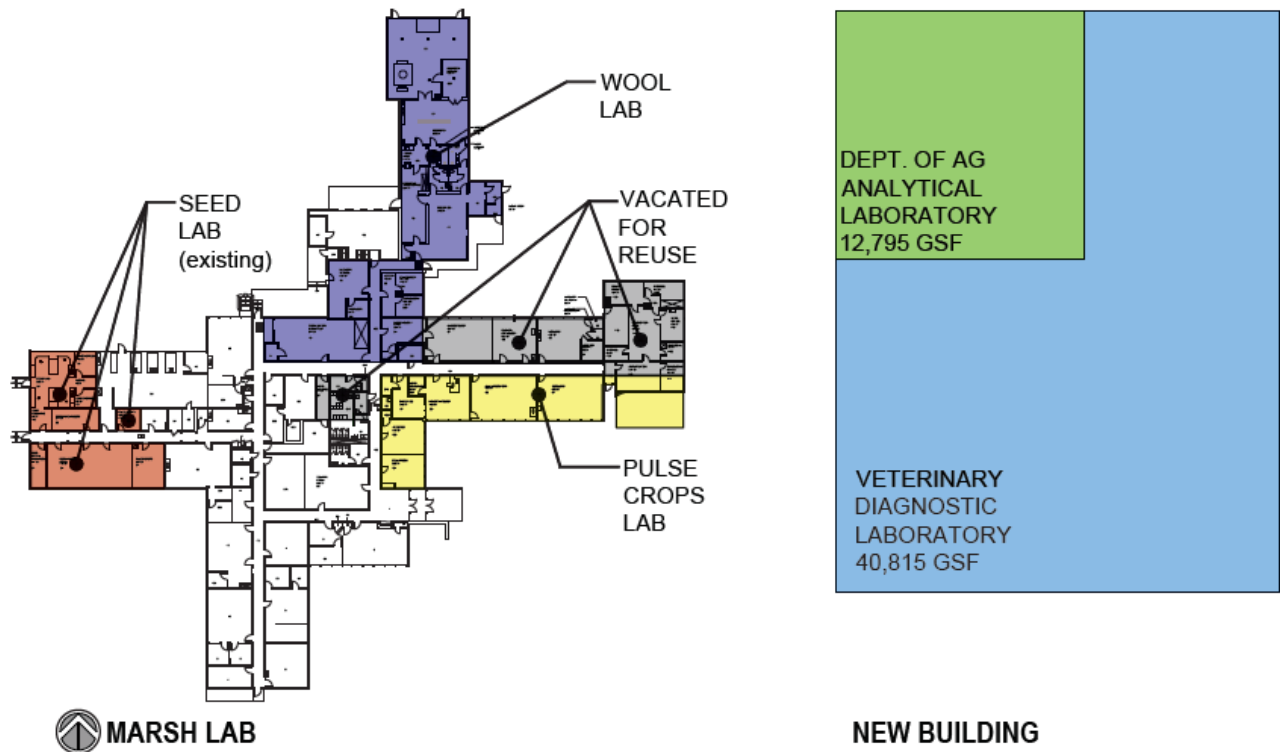
## **CONSULTANT'S RECOMMENDED OPTIONS**

The options presented were created by prioritizing the most critical program elements that were identified through the baseline process. The options then were created utilizing baseline data with some

reductions in square footage, which will be clarified in the various options. The projected costs shown with each option include the cost of building construction and renovation, construction cost inflation assuming project appropriation in the 2019 Legislative Session, and project associated costs such as design fees and lab fixtures, furnishings, and equipment. All options exclude the cost of land acquisition, sitework, and extension of utilities to site if necessary.

In all options other than the subcommittee recommendations, the FWP Wildlife Lab is proposed to remain in its current location. During the study of the labs, the Wildlife Lab was undergoing renovations to their existing space. These renovations were completed to overcome several deficiencies the that lab was experiencing. While there are some synergies between VDL and the Wildlife Lab, the consultant’s analysis concluded they were not enough to warrant a new building. Additionally, there are no specific functions or spaces that the administration or staff of either facility believe could be combined or shared. As such, the VDL and FWP have committed to continuing their relationship of lab testing and consulting. FWP has provided a response to the recommendations which is located in Appendix B.

## OPTION 1



Under Option 1, the recommendation is to build a new lab facility that would house the VDL and Analytical Lab. The new construction would be the first phase of the project. The new building would be a total of 53,610 gross square feet. This scenario increases the size of the VDL by 12,940 net square feet, this is slightly smaller than the original scope presented in the baseline, due to removing the food safety and DNA sequencing lab spaces since these are not functions the agency is currently offering. Also, the square footages of the new BSL-2 enhanced necropsy and BSL-3 labs were slightly reduced. The Analytical Lab, will gain approximately 1,000 net square feet.

Phase 2 of this option would be to renovate Marsh Lab to accommodate the MAES Wool Lab and expansion of both the MAES Seed Lab and MSU Pulse Crops Diagnostic Lab. The Pulse Crops Diagnostic Lab is the in the most critical need for additional space. Their existing space is 751 net square feet. This proposal expands this lab by 2,653 net square feet and re-locates them in Marsh Lab to another area that was vacated by the VDL. With minimal renovations, the Seed Lab would then be able to expand into the area that was housed by Pulse Crop Diagnostics. The Seed and Pulse Crops labs would remain adjacent to each other and continue to capitalize on the synergies they have. By moving the Wool Lab, this alleviates many of the access and safety/ventilation issues they are currently experiencing. The Wool Lab would occupy renovated vacated space and would be decreased by approximately 450 net square feet compared to their current location. This reduction will not impact any functions of the lab.

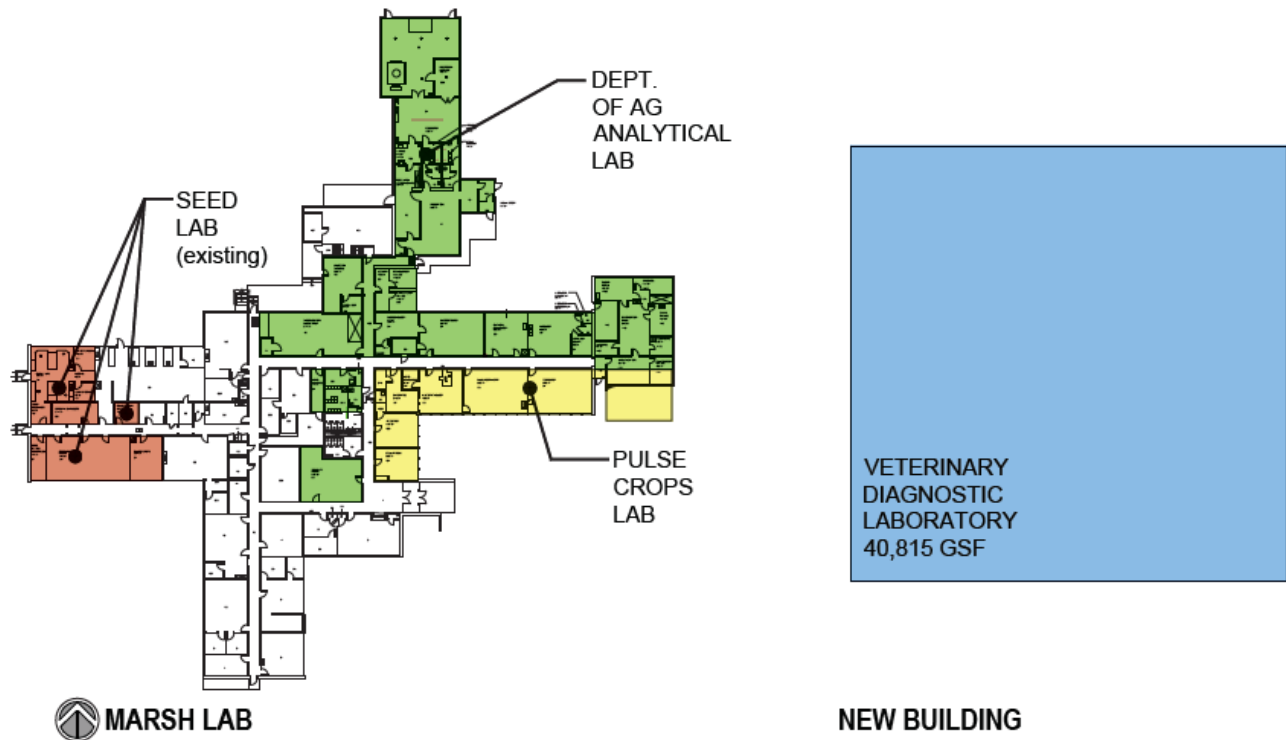
PHASE 1: New Building Construction Cost Summary		PHASE 2: Renovation Construction Cost Summary	
Building Construction	27,049,626	Building Construction	3,338,751
Project Associated Costs	6,762,407	Project Associated Costs	834,688
<b>New Building Cost</b>	<b>33,812,033</b>	<b>Renovation Cost</b>	<b>4,173,439</b>

OPTION 1 Total Construction Cost Summary	
Phase 1: New Building	33,812,033
Phase 2: Renovation	4,173,439
<b>Total Project Cost</b>	<b>37,985,471</b>



## OPTION 2



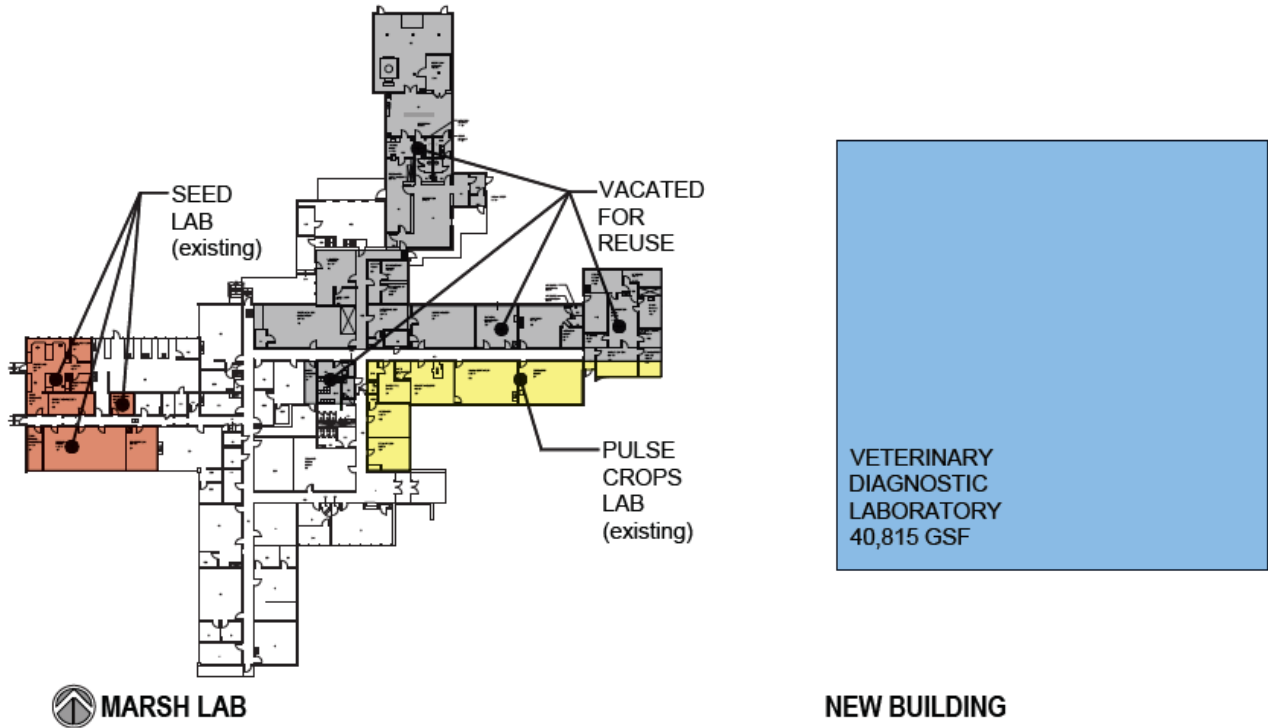
The second option presented is also a two-phase process. The first phase would be the construction of a new lab for the VDL. The new building would be a total of 40,815 gross square feet. This scenario increases the size of the VDL by 12,940 net square feet, this is slightly smaller than the original scope presented in the baseline, due to removing the food safety and DNA sequencing lab spaces since these are future functions desired by the agency. Also, the square footages of the BSL-2 enhanced necropsy and BSL-3 labs additions were slightly reduced.

Phase 2 includes renovation of 11,281 net square feet of vacated space in Marsh Lab. This option renovates most of the space for the Department of Agriculture Analytical Lab. By relocating into the Marsh Lab, the Analytical Lab will increase by approximately 1,200 net square feet. The remaining space would be the expansion of the MSU Pulse Crops Diagnostic Lab. Like option 1, the Pulse Crops Diagnostic Lab would increase by 2,653 net square feet. Without any renovation, the MAES Seed Lab would then be able to expand into the space vacated by move of the Pulse Crops Diagnostic Lab.

PHASE 1: New Building Construction Cost Summary		PHASE 2: Renovation Construction Cost Summary	
Building Construction	20,823,183	Building Construction	5,860,220
Project Associated Costs	5,205,796	Project Associated Costs	1,465,055
<b>New Building Cost</b>	<b>26,028,979</b>	<b>Renovation Cost</b>	<b>7,325,275</b>

OPTION 2	
Total Construction Cost Summary	
Phase 1: New Building	26,028,979
Phase 2: Renovation	7,325,275
<b>Total Project Cost</b>	<b>33,354,254</b>

### OPTION 3



The final option is the construction of a new lab for the VDL. The new building would be a total of 40,815 gross square feet. This scenario increases the size of the VDL by 12,940 net square feet, this is slightly smaller than the original scope presented in the baseline, due to removing the food safety and DNA sequencing lab spaces since these are future functions desired by the agency. Also, the square footages of the BSL-2 enhanced necropsy and BSL-3 labs additions were slightly reduced.

In a second phase, the MSU Pulse Crops Diagnostic Lab would move into a portion of the vacated space remaining in Marsh Lab. The MAES Seed Lab would be able to utilize the portion vacated by Pulse Crops Diagnostic Lab. Under this proposed option, no renovations have been included for the moving of Pulse Crops Diagnostic or MAES Seed Lab.

OPTION 3 Construction Cost Summary	
Building Construction	20,823,183
Project Associated Costs	5,205,796
Total Project Cost	26,028,979

## CONSIDERATIONS

As mentioned at the beginning of this section, project costs for the recommendations do not include acquisition costs for land or the associated costs for site work. The subcommittee worked closely with MSU and the Board of Regents (Regents) throughout the lab study and conceptual design process. A request was made by the subcommittee in February 2017 for MSU to consider allowing the state to use 15 acres of MSU land adjacent to the existing Marsh Laboratory for any new construction if a building was funded. The Board of Regents and MSU have not declined or accepted this request. At the time of the request, there were many unknown variables and the Regents needed further information. Further discussions will be necessary to determine if land is available for a lab complex at MSU.

Until a site is decided, the consultants provided a range of costs that would be associated with site and utility costs. The range of an additional \$1.0 to \$2.5 million, is dependent upon site selection, zoning, access, site utilities, etc. These additional costs will need to be a consideration in the overall scope of any project selected.

The options that have been presented detail renovations and recommendation on what facilities should be moved to an existing building that is owned by MSU. In addition, if a new building is constructed for the VDL and Analytical Lab this would leave vacated space totaling 18,257 net square feet.

MSU has been a significant help during the lab study process including attendance at all subcommittee hearings, as well as participating in building tours and providing building details and floorplans. However, at this point MSU and the Regents have not been officially consulted regarding their long-term building plans for Marsh Lab, MAES Wool Lab, MAES Seed Lab, or the MSU Pulse Crops Diagnostic Lab. Further discussion with MSU and the Board of Regents needs to take place if the legislature would like to proceed with any of the recommended options.

And finally, consideration needs to be made on the potential impacts to general fund once a new building is constructed. The labs that have been identified as a part of a new facility have minimal operation and maintenance (O&M) costs in their existing spaces. With a new building, additional and increased O&M would be anticipated creating a potential impact to general fund for the appropriation to those agencies. While both the VDL and Analytical Lab receive general fund, a portion could possibly be offset by the fees they charge for their services. A more in-depth analysis would need to be conducted to determine if their fee structure would be enough to offset any impacts to general fund or could their fees be increased to provide the funding source for the new O&M requirements. Please see Appendix A for an overview of the funding by source for the VDL, Analytical Lab, and FWP Wildlife Lab.

## SUBCOMMITTEE FEEDBACK

Based upon review of the consulting team's report, the subcommittee chose to recommend alternate Option 1A and 3A for legislative consideration which are detailed below. These variations are based

upon certain concerns they had about the FWP Wildlife Lab even after the current renovations of their facility is complete.

The first concern is about the safety of transporting carcasses to the VDL for incineration. Currently, carcasses are transported in an open bed pick-up and there is concern regarding potential contamination and exposure to the public of harmful pathogens. While it is outside the scope of this study to evaluate the safety regulations related to this activity, the design team concluded that current transport practices could be altered if necessary to comply with current regulations.

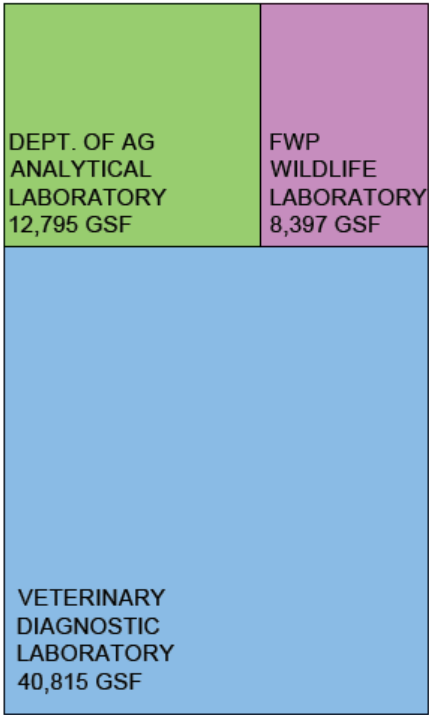
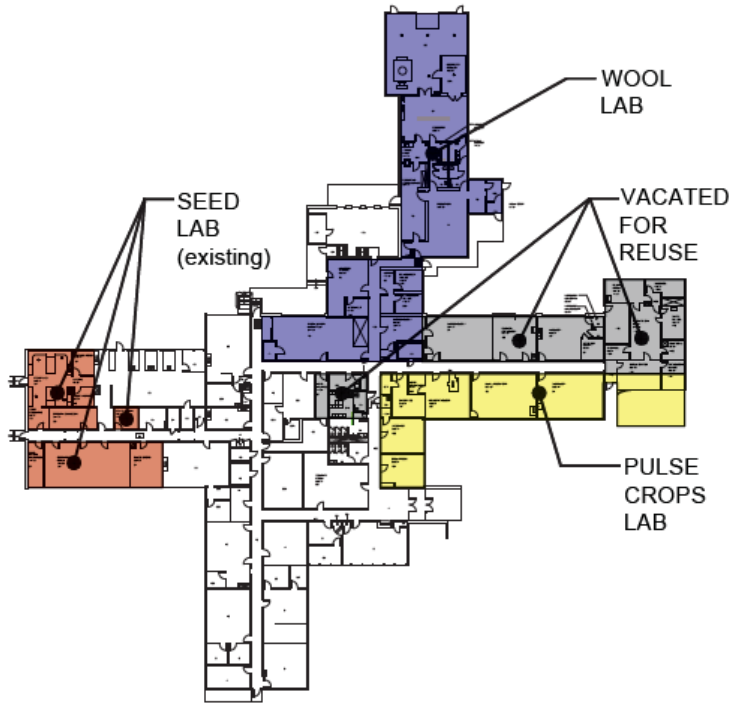
A secondary concern is the drainage system of the necropsy lab at FWP and the release of untreated effluent going to the waste water plant. Both the VDL and FWP Wildlife Lab are up to code requirements with their drainage systems. Both Department of Administration Architecture & Engineering Division and MSU University Services have provided confirming documentation. According to the lab consultants, effluent treatment is not required with the bio-safety level of labs that are included in this study. At such point in time as the regulations related to the labs changes to require effluent treatment, the consultants have identified a number of effluent sterilization systems that can be added to an existing lab. The design for new construction would incorporate the required code guidelines to ensure the drainage is following appropriate protocols based on the type of the effluent that is present.

And a third but primary concern to the subcommittee is the ability for Montana to conduct Chronic Wasting Disease (CWD) testing. Currently the FWP Wildlife Lab and VDL must send suspect samples to Colorado State University's Veterinary Diagnostic Lab for confirmation of CWD. Due to the limited number of labs that can conduct the diagnostic tests for CWD, the results can take up to six weeks to be returned to FWP and VDL. As an outcome of a new lab facility would be to provide the available space and equipment to allow VDL to conduct CWD diagnostic testing.

#### *Option 1A*

Under Option 1A, the recommendation is to build a new lab facility that would house the VDL, Analytical Lab, and the FWP Wildlife Lab. The new construction would be the first phase of the project. The new building would be a total of 62,007 gross square feet. This scenario increases the size of the VDL by 12,940 net square feet, this is slightly smaller than the original scope presented in the baseline, due to removing the food safety and DNA sequencing lab spaces since these are not functions the agency is currently offering. Also, the square footages of the new BSL-2 enhanced necropsy and BSL-3 labs were slightly reduced. The Analytical Lab will gain approximately 1,000 net square feet. An additional 2,046 net square feet would be added to the FWP Wildlife Lab.

Phase 2 of this option would be to renovate Marsh Lab to accommodate the MAES Wool Lab and expansion of both the MAES Seed Lab and MSU Pulse Crops Diagnostic Lab. The Pulse Crops Diagnostic Lab is the in the most critical need for additional space. Their existing space is 751 net square feet. This proposal expands this lab by 2,653 net square feet and re-locates them in Marsh Lab to another area that was vacated by the VDL. With minimal renovations, the Seed Lab would then be able to expand into the area that was housed by Pulse Crop Diagnostics. The Seed and Pulse Crops labs would remain adjacent to each other and continue to capitalize on the synergies they have. By moving the Wool Lab, this alleviates many of the access and safety/ventilation issues they are currently experiencing. The Wool Lab would occupy renovated vacated space and would be decreased by approximately 450 net square feet compared to their current location. This reduction will not impact any functions of the lab.



**MARSH LAB**

**NEW BUILDING**

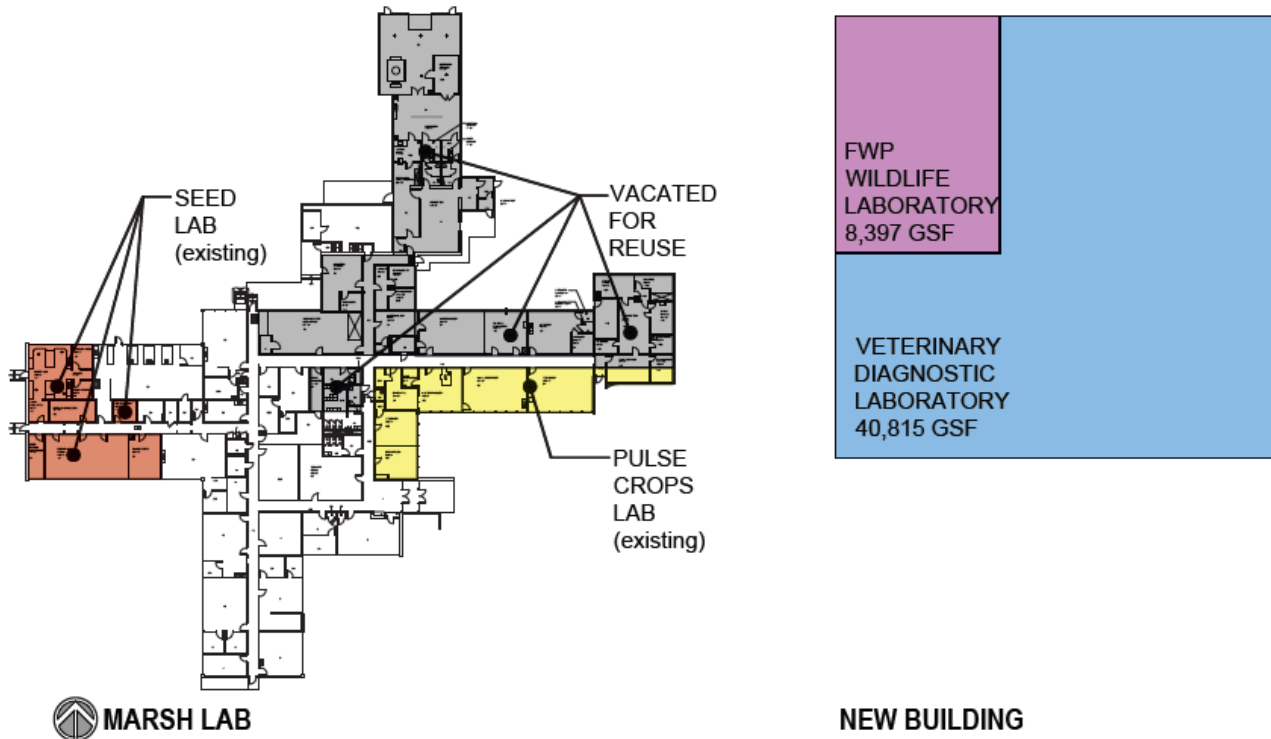
PHASE 1: New Building Construction Cost Summary		PHASE 2: Renovation Construction Cost Summary	
Building Construction	31,320,863	Building Construction	3,338,751
Project Associated Costs	7,830,216	Project Associated Costs	834,688
<b>New Building Cost</b>	<b>39,151,079</b>	<b>Renovation Cost</b>	<b>4,173,439</b>

OPTION 1A Total Construction Cost Summary	
Phase 1: New Building	39,151,079
Phase 2: Renovation	4,173,439
<b>Total Project Cost</b>	<b>43,324,518</b>

**Option 3A**

This option is the construction of a new lab for the VDL and the FWP Wildlife Lab. The new building would be a total of 49,212 gross square feet. This scenario increases the size of the VDL by 12,940 net square feet, this is slightly smaller than the original scope presented in the baseline, due to removing the food safety and DNA sequencing lab spaces since these are future functions desired by the agency. Also, the square footages of the BSL-2 enhanced necropsy and BSL-3 labs additions were slightly reduced. The FWP Wildlife Lab will gain approximately 2,000 net square feet.

In a second phase, the MSU Pulse Crops Diagnostic Lab would move into a portion of the vacated space remaining in Marsh Lab. The MAES Seed Lab would be able to utilize the portion vacated by Pulse Crops Diagnostic Lab. Under this proposed option, no renovations have been included for the moving of Pulse Crops Diagnostic or MAES Seed Lab.



OPTION 3A Construction Cost Summary	
Building Construction	25,094,419
Project Associated Costs	6,273,605
<b>Total Project Cost</b>	<b>31,368,024</b>

## FUNDING OPTIONS

There are a range of options that could be considered to fund the construction of a new lab complex. The viability of any funding option depends upon many factors including but not limited to: which mix of labs are included in the project; the overall cost of the project; availability of state or non-state funds available for a cash program; and level of legislative interest in a bonded construction program.

Historically, state and university projects similar to the labs have been funded through general fund appropriations, proceeds from the sale of GF general obligation bonds, federal grants, private donations, or a combination of those. During the 2017-2018 interim study into alternative financing concepts, LFD staff has provided additional funding options that have not traditionally been used for state or university-owned buildings and which would require statutory framework or change. Additional information about alternative funding concepts can be found at the following links:

- [Funding Concepts for State Building Projects](#), June 18, 2018 LFC Meeting
- [State and Local Infrastructure Financing Options](#), September 6, 2018 LFC Meeting

Of interest to the subcommittee are funds that may be available through federal programs, or the possibility of a public-private partnership. There currently is a proposed bill supported by Senator Tester which would supply funding for chronic wasting disease if passed. The current bill, S.2252 Chronic Wasting Disease Support for State Act would provide grant funds to eligible state agencies for the research, identification, and management of chronic wasting disease. Due to the bill not being passed at the date of this publication, there is uncertainty on the availability of these funds in the future.

The United States Department of Agriculture – Rural Development (USDA-RD) offers Business & Industry Loan Guarantees for purchase and development of land, business development, and other eligible purposes. In the case of a new lab complex, this program would allow a private lender to borrow funds with a federal guarantee to construct the complex. Public-private partnerships have been used by the university system for the construction of certain revenue-producing facilities such as dormitories, parking structures, and athletic facilities. The state, outside of the university system for revenue-producing facilities, has not ventured into this area of financing to date.

Staff will continue to research the public-private partnership option, as well as any other option(s) the LFC deems appropriate to determine each option's legality, necessary statutory changes, and other requirements.

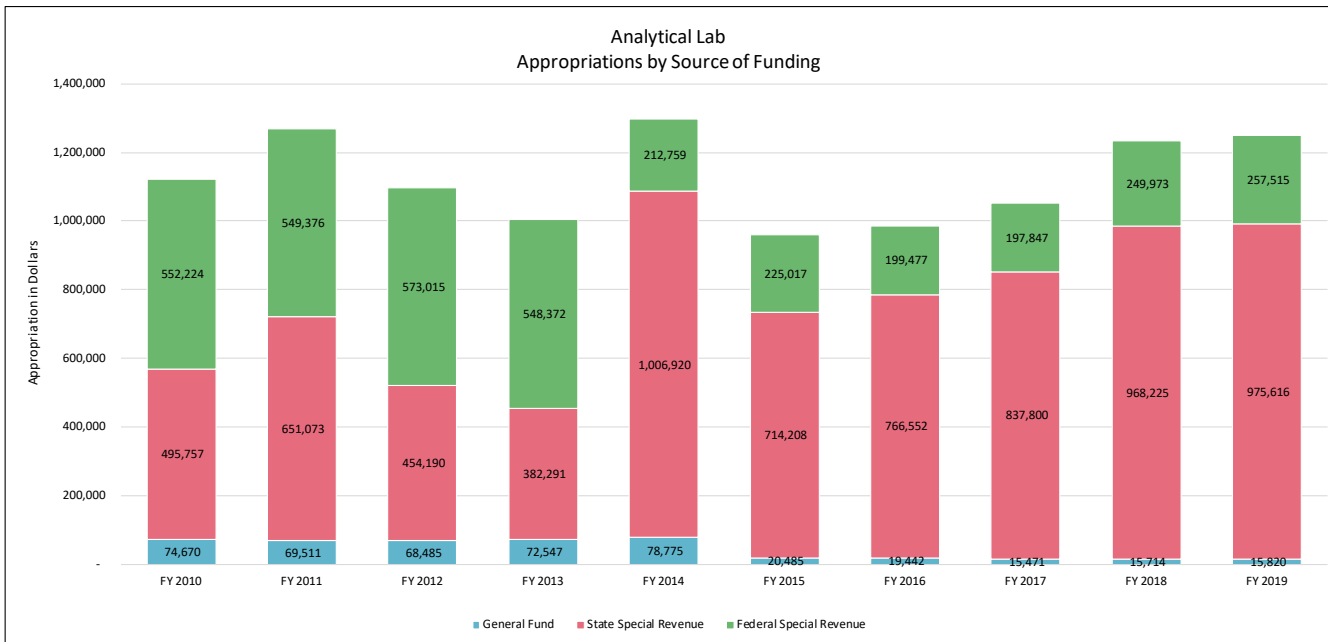
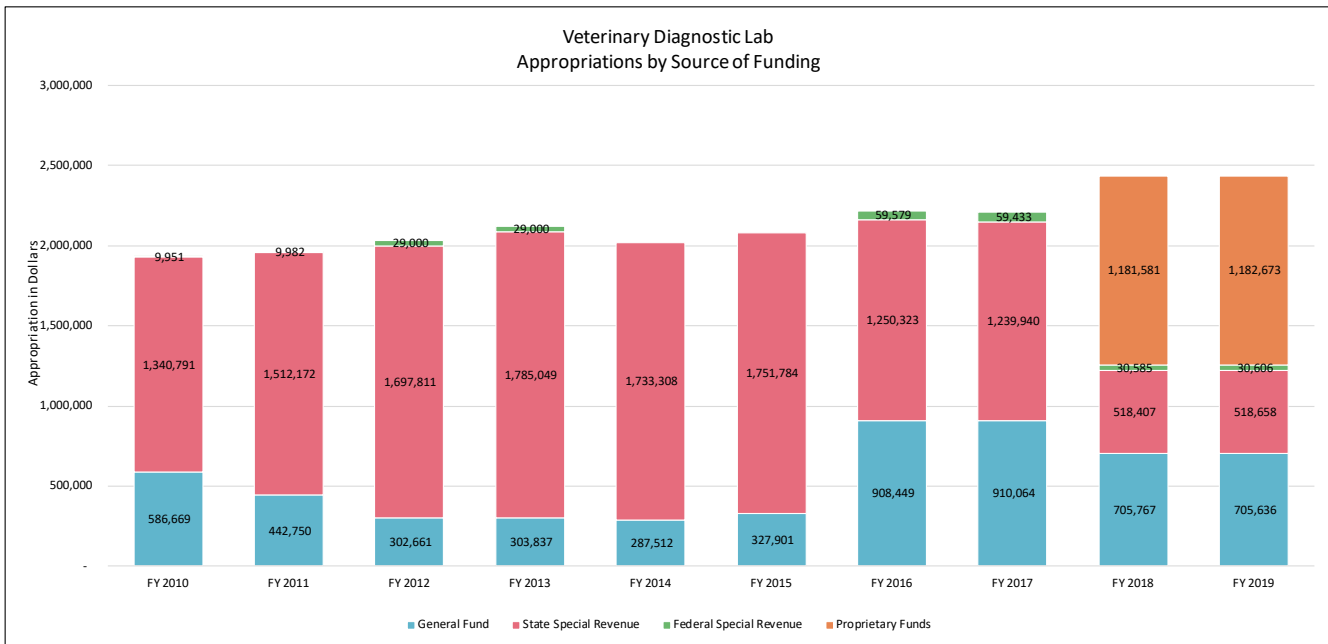
## **NEXT STEPS**

LFD and Legislative Services Division (LSD) staff is available and prepared to assist the LFC, should the committee desire additional information, research, or to draft committee legislation intended to appropriate funds to construct or renovate the state labs located on the MSU Bozeman campus. Alternately, individual legislators may seek similar assistance through the following contacts:

- Shauna Albrecht, LFD, [salbrecht@mt.gov](mailto:salbrecht@mt.gov), 444-1783, Capitol Building Room 110Q
- Joe Kolman, LSD, [kolman@mt.gov](mailto:kolman@mt.gov), 444-3747, Capitol Building Room 171B

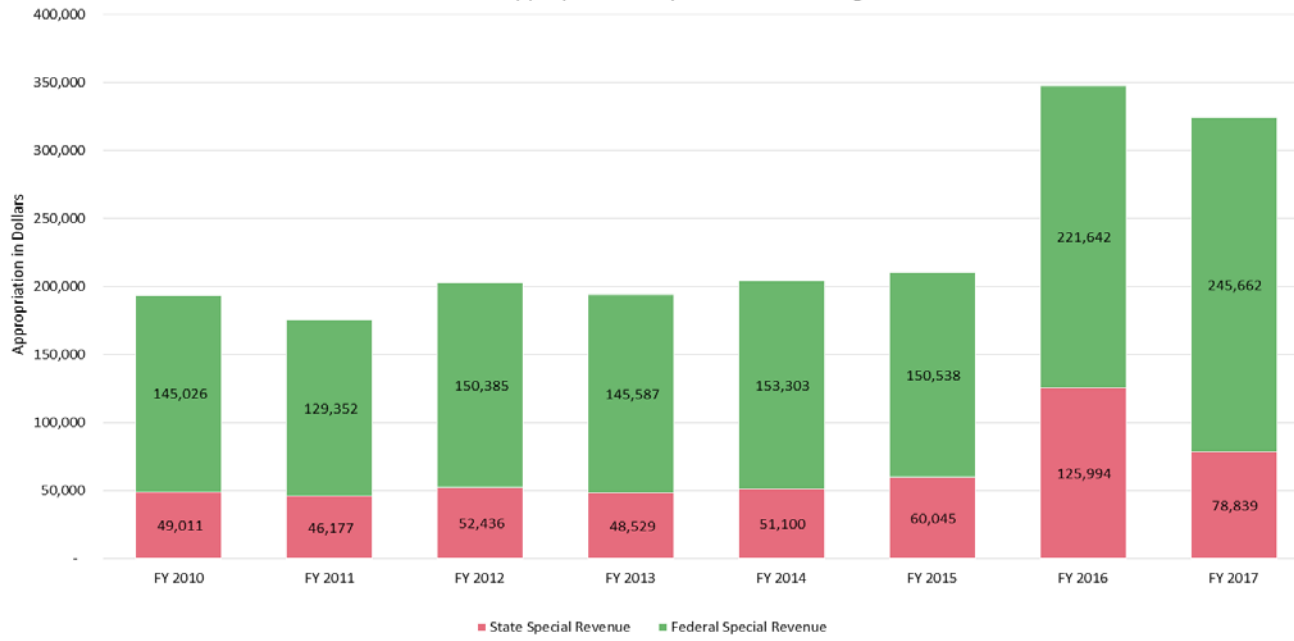
# APPENDIX A

The following charts provide an overview of the funding by source for the VDL, Analytical Lab, and FWP Wildlife Lab.





FWP Wildlife Lab  
Appropriations by Source of Funding



## **APPENDIX B**

### **Montana Fish, Wildlife and Parks' response to lab consultant report**

While Montana Fish, Wildlife and Parks (FWP) and the Montana Department of Livestock (DOL) have some similar lab needs, there are also differences in functional scope and quantity. Additionally, FWP is different from DOL in that we don't need additional lab space and do not face an ongoing lab accreditation situation.

We appreciate the concept of potential synergies with co-located lab facilities and the hard work by legislators, staff, and consultants working on this topic. However, given FWP's federal funding sources and the strings attached to them, it would be difficult to be part of a capital investment option unless the facility was owned and operated by the department and used to further specific fish and wildlife goals. For capital investment or leasing, FWP's federal funding involves grant writing, making the expenditure, and then being reimbursed by the U.S. Fish and Wildlife Service (USFWS). These funding stipulations and circumstances as represented by the USFWS make it more practical for FWP to be part of a tailored leasing arrangement rather than a joint capital project.

Out of the context described above, FWP does agree with the consultant report inasmuch that it accurately describes the FWP lab situation, including recent facility enhancements. If the FWP lab were not part of a joint facility, there would remain the need at some frequency to transfer biological samples or carcasses to a joint lab facility. Such efforts are now and can be appropriately managed with fitting protocols and procedures. As for the FWP lab drain, while it is not consistent with a biosecurity level 3 facility, a biosecurity level 3 facility is not needed by FWP except for a very small number of cases, as is the case with other comparable wildlife necropsy labs. The limited number of cases where pathogen exposure is of higher concern can be handled using specific protocols between the FWP and DOL labs. As for the relatively small volume of biosafety

concerns these specifics represent, they could be further addressed by being housed within a joint facility with DOL that allowed for higher biosecurity or perhaps future upgrades to the FWP facility. The recent upgrades include a class II biological safety cabinet that can be used to necropsy smaller animals that are suspect for infectious disease.

The consultant's report also recognizes the reduced interaction between FWP lab staff and other FWP staff if FWP were part of a joint facility. While accurate, FWP recognizes that loss would not be over- impactful to the FWP lab's mission because required, albeit reduced, interactions would necessarily continue in a joint facility.

To be clear, if the joint lab was to move forward without FWP we would still look for a significant service-for-fee relationship with the DOL Diagnostic lab. FWP would also maintain the option for additional biosafety enhancements at the FWP lab and would approach its lease expiration date (2026) with MSU under the assumption that a lease renewal option would maintain the current facilities.

In summary, FWP concurs with the consultant's recognition that current circumstances and functions do enable the FWP lab to continue as is, so long as we maintain our working relationship with the DOL Diagnostic lab. This, coupled with the constraints of FWP's federal funding and its complicated allocation process, does arguably make the case for a continued stand-alone FWP lab. That said, FWP respects the concept of shared efficiencies, and remains open to hear additional options for a shared lab if legislators wish to further explore that potential.