

Strengthening Virginia's Animal Health Laboratory System

NOVEMBER 2022



*VIRGINIA DEPARTMENT
OF AGRICULTURE AND
CONSUMER SERVICES*

Animal Health Lab System Overview

Regional Animal Health Labs (RAHL)

located in:

- Harrisonburg
- Lynchburg
- Warrenton
- Wytheville



Animal Health Lab System Overview

Four Laboratories + Central Office in Richmond

- Harrisonburg, Lynchburg, Warrenton, Wytheville
- At one time the system included 8 laboratories

All sites provide basic diagnostic services, regulatory services

- Some site-specific test functions
- Most sites provide necropsy service

Supports diverse animal industry sector in VA

- Poultry, Cattle, Dairy, Equine, Swine, Aquaculture

Funded through state appropriations, grants, testing fee revenue

Ranking of Test Counts/Revenue

- Harrisonburg >> Warrenton > Lynchburg/Wytheville



Animal Health Lab System Overview

Provides regulatory and diagnostic testing for veterinarians, food manufacturers, agricultural animal producers, pet owners, and other government program areas.

Over 300,000 samples tested per year.

Services Provided:

- Bacteriology
- Serology
- Parasitology
- Dairy Microbiology
- Molecular Testing (PCR)
- Necropsy



Strengthening Virginia's Animal Health Laboratory System

- A multi-year, producer-focused approach to improvement in order to achieve a top-tier, best in class status for Virginia's Animal Health Laboratory System
- Animal agriculture is the largest component of Virginia's agriculture sector, the single most economically important industry in Virginia
- Providing support to livestock and poultry health through the operation of the lab system is one of the Virginia Department of Agriculture and Consumer Services' top priorities
- A best-in-class lab system is essential to optimally support Virginia's thriving animal agriculture industry. What does this look like?
 - Excellent customer service throughout the state
 - Efficient use of taxpayer funding
 - Reliable, accurate, and timely lab results

Background of the Review

- In 2021, meetings were held with stakeholders, including Virginia Farm Bureau, Virginia Agribusiness Council, Virginia Poultry Federation, Virginia Cattleman's Association, Virginia Dairyman's Association, the Virginia Veterinary Medical Association, and Virginia Maryland College of Veterinary Medicine to consider the state of the lab system in Virginia, and determine if changes were needed.
- As part of that, stakeholders requested an independent review of the lab system, to include recommendations for improvement
- VDACS engaged the services of two nationally known animal health laboratory experts to conduct the review and make recommendations
- The report was finalized in May of 2022

Purpose of the Review

Purpose: Review the current facilities and operations of the Regional Animal Health Laboratory System (RAHLS) of the AFIS Office of Laboratory Services (OLS), conduct a strategic analysis, and make recommendations for moving forward to ensure the mission of the RAHLS is met.

Summary of key goals for the review:

- Examination of testing and services offered → Improve efficiency
- Analysis of resources, equipment, and diagnostic capabilities
- Analysis of staffing capabilities and compensation compared to other laboratories
- Assessment of current Quality System → determine needed changes to pursue AAVLD Accreditation
- Assessment of laboratory fees
- Suggestions for outreach to increase submissions
- Recommendations to develop and submit a long-term strategic plan for the laboratory system

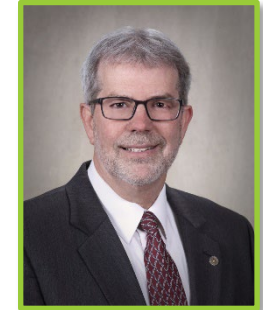
Reviewers

DR. DAVID ZEMAN, DVM, PHD,
DACVP



- Auditor (has audited 50+ animal health laboratories in the US and Canada)
 - Provides input into operations, assessments, and recommendations
- 20 year + Director of premier animal diagnostic laboratory in South Dakota
- Past President of AAVLD, numerous committees including Accreditation
- Boarded Pathologist

DR. BRUCE AKEY, DVM, MS



- Has supervised and participated in development and implementation of multi-year strategic plans for veterinary diagnostic labs in VA, NY, and TX
- Has worked with USDA with scoping and planning efforts
- Numerous laboratory operations reviews
- Past President of AAVLD, numerous committees

Summary of Reviewers' Activities

1. Met with key leaders virtually to discuss goals of the review and analysis work
2. Collected data including, but not limited to, compensation, revenue, employee work profiles
3. On site review of facilities at all four regional diagnostic labs and VMCVM
4. Met with key state leaders and stakeholders in person
5. Generation of a written analytical report
6. On-site presentation of report to VDACS



VDACS Lynchburg Lab

Central and Eastern VA

Beef Cattle, Equine Industry Focus

Facility:

- 25 years old, 8,400 sq ft of space (BSL1,2)
- Office space in separate building
- Concerns about adequate testing space

Personnel:

- Microbiologist Supervisor
- Three Bench Analysts

Caseload:

- Tests: 26,333 (2021) → 9% of total RAHLS
- Revenue: \$261,732 (2021) → 15% of total RAHLS

A2LA Accreditation (12 tests on scope)

FDA Vet -LIRN Laboratory

Test Focus:

- Cattle
- Food Safety (sole laboratory for this discipline)



VDACS Harrisonburg Lab

Shenandoah Valley focused

Heavily devoted to poultry industry

Facility:

- 15 years old, 14,750 sq ft of space (BSL1,2,3)
- Office space

Personnel:

- Two Diagnosticians (Poultry + Mammalian)
- Microbiologist Supervisor
- Six Bench Analysts
- Support Staff

Caseload:

- Tests: 203,811 (2021) → 71% of total RAHLS
- Revenue: \$827,393 (2021) → 53% of total RAHLS

NAHLN Level 2 Laboratory

A2LA Accreditation (14 tests on scope)

Test Focus:

- Poultry
- Dairy
- Molecular



VDACS Warrenton Lab

Northern VA

Companion Animal (Forensic), Dairy, Equine
Industry Focus

Facility:

- 25 years old, 8,400 sq ft of space (BSL1,2)
- Concerns about adequate testing space

Personnel:

- One Diagnostician
- Microbiologist Supervisor
- Three Bench Analysts
- Support Staff

Caseload:

- Tests: 30,957 (2021) → 11% of total RAHLS
- Revenue: \$434,885 (2021) → 28% of total RAHLS

A2LA Accreditation (11 tests on scope)

Test Focus:

- Equine
- Companion Animal (heavy focus on forensics)
- Hematology/Clinical Pathology (sole laboratory for this discipline)



VDACS Wytheville Lab

SW and Southern VA

Beef Cattle, Fish Industry Focus

Facility:

- 30-60 years old, 11,500 sq ft of space (BSL1,2)
- Office space
- Concerns about adequate testing space

Personnel:

- One Diagnostician (Mammalian)
- System Histopathologist
- Microbiologist Supervisor
- Three Bench Analysts
- Support Staff

Caseload:

- Tests: 27,741 (2021) → 10% of total RAHLS
- Revenue: \$267,338 (2021) → 17% of total RAHLS

A2LA Accreditation (15 tests on scope)

Test Focus:

- Cattle
- Dairy
- Fish (DWR) (sole laboratory for this discipline)



Virginia Tech Animal Laboratory Services (ViTALS) at VMCVM

VMCVM Teaching Hospital

Focus on VMCVM Teaching Hospital diagnostic work, heavy clinical pathology

Facility:

- 39 years old, 4,939 sq ft of lab space (BSL1,2)
- Office space shared

Personnel:

- 3.0 FTE Pathology
- 1.6 FTE Clinical Pathology
- 0.5 FTE Clinical Microbiology
- 0.5 FTE Clinical Parasitology
- 13 FTE Support Staff
- 2.0 FTE After hours technicians

Caseload:

- Tests: ~40,000-50,000 cases per year
- Necropsies: ~ 700/year (50/50 Ag and Companion)

AAVLD Accreditation

FDA Vet -LIRN Laboratory

NAHLN Level 3 Laboratory

Test Focus:

- Small Animal/Teaching Hospital Patients



Report's Comparison of RAHLs to Other State Veterinary Diagnostic Laboratories

Proper staffing is key

The lack of career advancement opportunities puts the RAHLS at a disadvantage

- Financial rewards must be part of this plan
- Beneficial to formulate two career tracks → technical and supervisory

Current salary structure is a challenge to recruitment and retention

Unreasonable technical expectations, high turnover of staff, retention/recruitment failures

AAVLD Accreditation is premier and most comprehensive option for overall diagnostics, quality, and operational management

Report's Comparison of RAHLs to Other State Veterinary Diagnostic Laboratories (cont.)

Revenue/Fee Schedule

- Some tests were below average, some higher than average

Organizational Structure

- Virginia is among the last of states to have multiple small to medium labs scattered throughout the state
- Current transportation logistics (eg overnight shipping) allows for ability to ship samples to location where testing can be performed in more cost-effective manner
- Nearly all states have transitioned to one or two strategically located laboratories
 - More efficient, successful, sustainable model with staffing and equipment.

NC opened a new \$90 million animal health lab in 2021, and MD opened a new \$20 million animal health lab in 2022

“The RAHLS would rank as Middle Tier in its strongest areas and Bottom Tier in others”*

- * This refers to the overall system, including support provided to all of animal agriculture throughout the state, and does not apply to specific labs or reliability of results, which are assured by accreditation of the lab system.

Strategic Recommendations from Report

STAFFING

Improve staff recruitment and retention

All laboratories need adequate administrative support staff to perform the duties that will allow analysts to remain at their primary analytical testing tasks

Develop a training program for new employees with proper steps performed and documented before any new analyst is released to perform tests for clients without supervision

Establish Subject Matter Experts

Implement reasonable levels of cross-discipline training, utilization, and rotation.

OPERATIONS

Establish an External Advisory Committee

Change workflows to improve testing turnaround times

Enhance the annual formal fee review process

Consolidate testing to take advantage of sample processing and testing

Upgrade existing Laboratory Information Management System

Increase support and resources for Quality Management System and streamline

Explore additional outreach and communication efforts

Improve Laboratory Safety Program

Strategic Recommendations from Report

LABORATORY SYSTEM STRUCTURE

Develop a multi-year transition plan to move from the current RAHLS structure to one comprised of two, state-of-the-art, facilities at Harrisonburg and Blacksburg in collaboration with the VMCVM

ACCREDITATION

Seek full AAVLD accreditation as quickly as possible



Proposed Framework for Advancement

Phase 1: Share the report and gather feedback from Virginia's agriculture industry

- External Advisory Committee being formed
- Also implement recommended changes that are possible within the existing lab system

Phase 2: Expand the Harrisonburg Laboratory

- Capital funding for this was allocated in the 2022 Budget
- Hopeful to break ground in 2024, with completion by 2027-2028

Phase 3: Explore opportunities for closer or more formalized collaborations with the Virginia Maryland College of Veterinary Medicine that benefits lab users, VDACS, and ViTALS

- The College is raising funds for a capital expansion project as part of their overall plan

Phase 4: Evaluate the structure of the VDACS lab system and where various tests and services can be most efficiently conducted, while maintaining accessibility and convenience for lab users

- “Where along the possible spectrum between separate-but-collaborate and fully-integrated with the VMCVM the system ends up should be thoughtfully explored with all parties, with the goal to maximize the benefits to all (RAHLS, VMCVM, and stakeholders).”
- “Part of the development will be determining the preferred level of collaboration or integration between the RAHLS and the VMCVM.”