

Advancing Animal Disease Traceability (ADT) Road Map for Michigan

A Three-Year Plan

Submitted by:

NORA WINELAND, DVM, MS, DACVPM

STATE VETERINARIAN

MICHIGAN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

525 W ALLEGAN ST, PO BOX 30017

LANSING, MI 48913

800-292-3939

Submitted to:

ANGELA HINES, DVM, MPH

ACTING AREA VETERINARIAN FOR MICHIGAN

VETERINARY SERVICES

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

105 CORPORATE DR, STE H

PO BOX 399

FRANKFORT, KY 40601

502-848-2040

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I. EXECUTIVE SUMMARY

The Michigan Department of Agriculture and Rural Development, Animal Industry Division (MDARD AID) supports a functional, nationally accepted system for animal disease traceability. It is important to be able to accurately trace animals back to their premises of origin and forward through to their current premises, and to do so in a quick, efficient, and cost-effective manner. This is especially the case when dealing with contagious diseases that can spread rapidly, affect multiple species of animals, or have zoonotic potential.

Due to the presence of endemic bovine tuberculosis (TB) in one region of the state, Michigan has been on the cutting edge of animal disease traceability (ADT) with mandatory use of radio frequency identification (RFID) ear tags in cattle and bison since 2007 and the utilization of the USAHERDS database for tracing individual animals. Significant investments have been made to establish, maintain, and upgrade a technology infrastructure to capture and transmit RFID traceability data from veterinarians, livestock markets, and slaughter plants across Michigan and in nearby states. Recent advances in this infrastructure include upgraded low frequency (LF) RFID readers replacing outdated readers in three markets, as well as the installation of an LF RFID reader in a Michigan beef packing plant.

This plan builds upon previous investments through the installation of remaining LF RFID readers previously purchased to upgrade outdated equipment, via a long-term loan opportunity to eligible veterinarians of previously purchased handheld RFID wands, and by transitioning to AgEnterprise for a centralized, customizable approach to animal health and traceability information. These projects will increase electronic data capture, expand electronic data transmission, and enhance electronic data sharing with other States, Tribes, Territories, and the United States Department of Agriculture (USDA) nationally.

MDARD AID is committed to USDA's overarching goals for advancing traceability. Michigan will further advance ADT over the next three years by completing the following, prioritized objectives:

- Maintain and upgrade infrastructure supporting ADT.
- Implement and promote use of VET-CVI, a free electronic certificate of veterinary inspection (eCVI), to increase the number of certificates electronically transmitted from private accredited veterinarians directly to State animal health officials.
- Develop direct transmission of data from third-party eCVIs to AgEnterprise.
- Monitor efforts for electronic data sharing with USDA's Animal Health Event Repository (AHER) and implement when able.

- Conduct outreach aimed at large animal clinicians to educate on the benefits of electronic CVIs, test charts, and vaccination records, and how to capture and transmit electronic identification (EID) numbers to those documents using a handheld RFID wand.
- Offer a handheld RFID wand long-term loan opportunity to Category II accredited veterinarians to facilitate accurate EID capture and encourage use of electronic forms, such as certificates of veterinary inspection and test charts, for efficient data transmission, pending available funds.
- Expand outreach to federally inspected processors and custom slaughter facilities to increase RFID data collected for tag retirements.
- Phase out the use of paper CVIs from MDARD AID to Michigan's USDA-accredited veterinarians.
- Begin development of direct data transmission from AgView to AgEnterprise.
- Utilize AgEnterprise for storage and retrieval of movement records from the National Poultry Improvement Plan (NPIP) and commuter herd agreements.
- Replace MDARD AID's current tag distribution record systems with AgEnterprise.
- Develop and implement a procedure for data entry of cattle brucellosis test charts and vaccination records into AgEnterprise.
- Modify upload process to accept scrapie tags from the Animal Identification Number Management System (AIMS) State Report.
- Begin development of direct data transmission from AIMS to AgEnterprise.

II. CURRENT TRACEABILITY SITUATION

2.1 Who are we?

The Michigan Department of Agriculture and Rural Development, Animal Industry Division, in conjunction with the State Veterinarian, enforces Act 466 of 1988, known as the Animal Industry Act, and other animal-related legislation. MDARD AID is responsible for programs that control and eradicate reportable, contagious, infectious, and communicable diseases of livestock, poultry, aquaculture, equine and companion animals; control contamination of animals from toxic substances; enforce and support the humane treatment of animals; and promote Michigan's animal industries.

Michigan has the unique challenge of endemic bovine tuberculosis in free ranging white-tailed deer living in the northeastern portion of Michigan's lower peninsula. MDARD AID dedicates significant resources to monitoring and managing this disease alongside our partner agencies. Bovine tuberculosis could spread beyond the endemic area in Michigan

without mandatory disease testing requirements and a robust traceability system. Therefore, many ADT activities focusing on cattle have been implemented out of necessity to contain this disease.

Collaboration between MDARD AID, USDA Animal and Plant Health Inspection Service (APHIS), accredited veterinarians, livestock markets, slaughter facilities, and other key industry stakeholders strengthens the ADT program in Michigan. Meetings are held as needed to inform and gather feedback from these partners.

Traceability data is used internally to track livestock sightings and animal movements for disease investigations and disease control programs and to monitor for illegal movements. MDARD AID shares traceability data with USDA APHIS Veterinary Services (VS) on a routine basis under a material transfer agreement, and with other federal, state, and tribal government agencies, as needed, to assist with animal disease traces. MDARD AID also shares RFID reads with livestock markets and slaughter facilities from livestock scanned on site if they choose to include RFID in their records. Under the Animal Industry Act, information that identifies the owner of an animal suspected or confirmed to be affected by a reportable animal disease or toxic substance is confidential, unless deemed necessary by the director to protect public health or animal health.

2.2 Where are we now?

Animal disease traceability is integrated into many MDARD AID programs to support our mission. ADT is managed as an individual program; however, it cuts across many other programs and is a core component of our animal health information systems.

National Priority Tracing exercises (NPTs) are utilized to assess our successful and timely completion of assigned trace quotas using USDA's four trace performance measures (TPMs). Michigan's traceability capabilities are also measured using RFID read rates, with a minimum standard of 90% for tagged cattle at livestock markets, as well as the percentage of interstate CVIs issued electronically and the percentage of livestock dealer inspections completed.

Coordination with other division programs and our partner agencies is essential to a successful traceability program. Traceability topics are discussed at biweekly check-in meetings with CVI staff. Biweekly meetings with MDARD's Bureau Services Unit help drive forward purchases for traceability enhancement projects and address potential ADT violations. The ADT program manager meets at least monthly with the USDA Animal Identification Coordinator (AIC). ADT program updates and concerns are addressed during regular conference calls with field staff, and a summary is

included in the AID Weekly Update newsletter for division and department staff. The TB program, Michigan Department of Natural Resources (MDNR), USDA APHIS VS, and USDA APHIS Wildlife Services (WS) personnel are kept up to date on traceability issues during monthly bovine TB meetings.

When issues are identified, they are raised to the appropriate area to be addressed in a timely fashion. Input and feedback is sought from other programs and units when developing and initiating activities with traceability implications.

Statewide coordination includes informing veterinarians on traceability topics through accreditation presentations, quarterly Animal Health Update newsletters, directed outreach regarding eCVIs and RFID tags, resources posted to our website, and social media messaging. Solid working relationships with USDA Agricultural Marketing Services (AMS) Packers and Stockyards Division and ADT personnel in other states further strengthens MDARD AID's traceability program.

Historically, traceability efforts in Michigan have focused on cattle to support bovine TB eradication efforts. All cattle and bison in the TB Modified Accredited Zone (MAZ) and Presque Isle County must have a movement permit issued to leave the premises, with one exception; a movement permit is not required when the destination is the Northern Michigan Livestock (NML) market, where MDARD AID operates a real-time traceability system to verify herd status and test dates, and to capture each animal's seller and buyer information. The Michigan State Police, Commercial Vehicle Enforcement Division assists MDARD AID with enforcement via random traffic stops of livestock haulers around the zonal boundary to ensure they have a movement permit. MAZ cattle sold through any Michigan livestock market must be issued a new movement permit to their destination. Markets which routinely receive cattle from the MAZ are staffed by MDARD AID field inspectors during each sale whenever possible to ensure compliance with identification, testing, and movement requirements of the bovine TB program.

Michigan has 23 official RFID tag resellers in 20 counties to serve the needs of our cattle industry. Most RFID tag resellers are Animal Identification Number (AIN) tag managers and, as such, report tag distribution records to AIMS. The remainder submit tag distribution records directly to MDARD AID for entry into USAHERDS. MDARD AID also offers approved tagging site agreements to Michigan livestock markets allowing them to apply official RFID tags to cattle. To be eligible, a market must be an AIN tag manager and report tag distribution records to AIMS. Official RFID tag records from the AIMS state report are uploaded to USAHERDS on a

routine basis to create a more complete data set in the state database for users at MDARD AID and our partners at USDA APHIS VS.

MDARD AID has provided each of Michigan's 16 cattle markets with equipment to capture LF RFID tags, and 8 of these markets also have equipment to capture UHF RFID tags. MDARD purchased new LF RFID panels to replace outdated readers in major cattle markets, with installations expected to be completed by early 2027.

MDARD AID has LF RFID readers in Michigan's two beef packing plants, one of which also has an ultra-high frequency (UHF) RFID reader. LF RFID reads are also captured and shared with MDARD from beef packing plants in Wisconsin, Illinois, and Pennsylvania where Michigan cattle are routinely harvested. MDARD AID and USDA APHIS VS hold an agreement to share RFID tag data from these packing plants for tag retirements in AIMS.

Traceability data (market/plant premises, date/time stamp, and RFID number) from these markets and packing plants are sent to MDARD AID for uploading into USAHERDS. At least quarterly, MDARD AID field inspectors document the number of cattle sold at each market to calculate the read rate of RFID panel readers at each market. Read rates averaging below 90% are investigated to determine and fix the cause.

Many custom slaughter facilities in Michigan also voluntarily participate in RFID data collection in one of three ways: the facility scans RFID tags with a handheld wand provided by MDARD AID, the facility retains RFID tags for MDARD AID to collect on a regular basis, or the facility mails RFID tags to MDARD AID. Regardless of the method, RFID numbers from these tags are uploaded into USAHERDS to denote individual animals that have been slaughtered.

Historically, federal funding has enabled MDARD AID to maintain personnel for CVI reviewing and processing; purchase and distribute handheld RFID wands to livestock markets, custom slaughter facilities, and veterinarians; purchase and install UHF RFID readers at livestock markets, and replace outdated LF RFID reader systems at livestock markets. Federal funding will continue to have a significant impact on our ability to complete the traceability objectives outlined in this road map.

2.3 Strengths and Weaknesses

The strengths of MDARD AID's animal disease traceability program include mandatory official identification requirements, industry support, and technology integration.

State requirements to move livestock into Michigan are more strict than federal law. All livestock must have official identification with the ID number recorded on the interstate CVI to enter Michigan, unless moved directly to slaughter or to an approved tagging site. Official identification is also mandatory for intrastate movement of cattle, bison, captive cervids, sheep, goats, and exhibition swine. Since 2007, state law has required that official RFID ear tags must be used for the identification of cattle and bison.

Industry groups recognize the value of animal disease traceability in Michigan, especially its impact on the beef and dairy sectors to control endemic bovine TB. Over the last two decades, the cattle industry has been in support of strengthened requirements for official identification, testing, and documentation. They have seen that disruptions to commerce are minimized and limited State resources are used efficiently when State Animal Health Officials have tools in place to rapidly determine which herds to include in an animal disease investigation, and moreover which herds to exclude. For this reason, many livestock markets and beef processors protect their customers and the cattle industry through cooperation with MDARD AID to capture RFID sighting data.

RFID reader equipment is strategically placed at Michigan cattle markets and regional packing plants to capture and transmit RFID sighting events to MDARD AID without impeding the speed of commerce. Handheld RFID readers are used by field staff to electronically capture and transmit traceability data when conducting disease testing, reconciling herd inventories, issuing movement permits, and scanning tags collected by custom slaughter facilities. Over the last several years, education and outreach efforts have driven eCVI usage by Michigan's accredited veterinarians to more than 65%. Furthermore, MDARD AID is actively investing in next-generation technology to enhance the speed and accuracy of animal disease traceability data.

Weaknesses include voluntary premises registration, use of temporary animal identification numbers in market records, insufficient resources for routine monitoring of compliance at livestock markets, staffing levels for division workload, and use of multiple data storage systems.

Livestock premises registration is not mandatory in Michigan. This causes challenges in two ways. First, MDARD cannot reliably identify all livestock premises in a defined area. Second, registered premises might have missing or outdated information.

While key livestock species in Michigan are required to be officially identified, licensed livestock markets and collection points are not required

to record official identification numbers. Instead, temporary backtag numbers can be recorded and tied to animal origin and destination information. Moreover, licensed livestock dealers and haulers are not required to keep a record of animal identification numbers. The ability to trace animals may be hampered by these limitations in state law. Furthermore, while we have built positive, collaborative relationships with livestock markets and slaughter facilities to allow MDARD AID to capture RFID sightings on their premises, there is no requirement for them to do so. Consequently, they could revoke their voluntary cooperation at any time, necessitating the removal of state RFID readers and reducing Michigan's traceability capabilities.

While federal regulations require that USDA-approved livestock markets have a contracted veterinarian on site on sale days, specific requirements for on-site presence and duties are governed by state law. Several states require an official or attending veterinarian to be present at livestock auctions to enforce animal health regulations. These veterinarians are responsible for ensuring all animals meet state and federal health requirements, checking for signs of infectious disease, and verifying proper identification and documentation. USDA-approved livestock markets are scarce in Michigan, and there is no state law requiring the presence of an on-site veterinarian at livestock markets. Furthermore, MDARD AID staffing levels are insufficient to provide regulatory presence at each livestock market sale to ensure compliance with animal health and movement requirements.

Current staffing levels create challenges for timely review of CVIs during the busy animal movement season and during emergency disease outbreaks, such as highly pathogenic avian influenza. Contract staffing has provided additional capacity to aid with CVI indexing.

Animal health and traceability data is not stored in a centralized system. This information is currently housed across USAHERDS, spreadsheets, and unsupported databases, as well as paper files in two geographically separate offices. However, MDARD AID is actively pursuing a new information technology (IT) system to increase speed, accuracy, transparency, availability and accessibility of animal disease traceability data, including CVI data.

2.4 Opportunities and Threats

This plan will significantly enhance MDARD AID's ability to respond to foreign animal diseases and other emergencies in an effective and efficient

manner. Implementation of this plan provides opportunities for networking and data sharing to improve traceability beyond Michigan's borders, as well. Personnel resources are not expected to increase significantly; however effective use of technology enables us to do more with less. Therefore, we will identify and implement efficiencies regarding information collection and storage, provide data to State and Federal partner agencies as needed for effective emergency responses, and simultaneously protect information security. No alternate agency exists to execute this plan, and MDARD is prepared to meet the traceability objectives outlined in this road map.

2.5 Inventory of existing infrastructure and suitability assessment

MDARD AID has office space on the sixth floor of the Deborah A. Stabenow building in Lansing, as well as a small regional office in Atlanta, Michigan. Office staff are allowed to work remotely for up to 80% of each pay period. Permanent staff are issued laptops and cell phones with hotspot capability, and signal boosters are available as needed to ensure connectivity.

The Michigan Department of Technology, Management, and Budget (DTMB) is responsible for IT security and must approve all IT equipment purchases and software upgrades. Cybersecurity training is mandatory for all MDARD AID staff and DTMB is continuously monitoring for threats.

To improve animal disease traceability in cattle herds, MDARD AID began using USAHERDS as the main repository for animal health and movement data in 2010. This system is utilized to capture and coordinate premises information, official identification numbers, animal movement and sighting events, official test data, and more down to the level of the individual animal. RFID tag data captured at livestock markets, beef packing plants, and custom slaughter facilities is sent to MDARD AID and uploaded to USAHERDS. Data from AIN tag distributions to Michigan in AIMS are also uploaded to USAHERDS. This system is accessible to approved users 24 hours a day, 7 days a week. Efforts are underway to migrate data from USAHERDS and other sources to AgEnterprise, a new information system which will replace USAHERDS and operate as a central data warehouse for MDARD AID.

MDARD AID currently utilizes HP Content Manager, an electronic document management system, for interstate CVI storage and retrieval. Accessibility to this system is limited due to monthly user fees charged by DTMB. Contracts are being finalized to utilize USAHERDS for automated data transfer and storage of eCVIs. MDARD AID intends to capture all interstate CVIs in AgEnterprise when that system replaces USAHERDS.

MDARD AID personnel are granted access to USDA's animal disease traceability information systems (ADTIS) as needed to perform their duties.

Currently, paper versions of brucellosis test charts and vaccination records for cattle are filed in the Atlanta Regional office, and brucellosis test charts for other species are filed in the Lansing office. Paper versions of TB test charts are filed in the USDA APHIS VS Michigan office and data entry is completed in USAHERDS. MDARD AID tracks internal distribution of official identification tags either in USAHERDS, in an Access database, or on an Excel spreadsheet.

Additional traceability data which cannot be entered into USAHERDS or filed in another system are stored on the division's shared drive or on SharePoint. Information stored outside of USAHERDS is accessible during normal business hours when authorized personnel are available.

III. VISION AND MISSION CONTEXT FOR ADVANCING TRACEABILITY

3.1 Vision Statement

To be recognized as a national leader among state departments of agriculture through our expertise, effectiveness, application of sound science and delivery of quality service to our stakeholders.

3.2 Mission Statement

Protect, Regulate, and Promote Animal Health.

IV. TRACEABILITY REQUIREMENTS

The following categories must be described in the Road Map:

4.1 Strategic goal(s)

Inherent in applying and accepting Federal funding for advancing ADT is accepting the overarching strategic goals of ADT:

1. Enhance electronic sharing of data among Federal and State animal health officials, veterinarians, and industry; including sharing basic ADT data with the Federal Animal Health Events Repository (AHER);
2. Increase use of electronic ID tags for animals requiring individual identification to make the transmission of data more efficient.
3. Enhance the ability to track animals from birth to slaughter through a system that allows tracking data points to be connected; and
4. Elevate the discussion with States and industry to work toward a system where animal health certificates are electronically transmitted from private veterinarians to State animal health officials.

4.2 Programmatic goals (objectives)

To support the strategic goals, MDARD AID has the following programmatic goals:

2026

- Develop direct transmission of data from third-party eCVIs to AgEnterprise.
- Implement and promote use of VET-CVI, a free eCVI, to increase the number of certificates electronically transmitted from private accredited veterinarians directly to State animal health officials.
- Conduct outreach aimed at large animal clinicians to educate on the benefits of electronic CVIs, test charts, and vaccination records, and how to capture and transmit EID numbers to those documents using a handheld RFID wand.
- Offer a handheld RFID wand long-term loan opportunity to Category II accredited veterinarians to facilitate accurate EID capture and encourage use of electronic forms, such as certificates of veterinary inspection and test charts, for efficient data transmission, pending available funds.
- Modify upload process to accept scrapie tags from AIMS State Report.
- Develop and implement a procedure for data entry of cattle brucellosis test charts and vaccination records into AgEnterprise.
- Maintain and upgrade infrastructure supporting ADT.

2027

- Expand outreach to federally inspected processors and custom slaughter facilities to increase RFID data collected for tag retirements.
- Phase out the use of paper CVIs from MDARD AID to Michigan's USDA-accredited veterinarians.
- Replace MDARD AID's current tag distribution record systems with AgEnterprise.
- Maintain and upgrade infrastructure supporting ADT.

2028

- Monitor efforts for electronic data sharing with USDA's Animal Health Event Repository (AHER) and implement when able.
- Begin development of direct data transmission from AIMS to AgEnterprise.
- Begin development of direct data transmission from AgView to AgEnterprise.
- Utilize AgEnterprise for storage and retrieval of movement records from NPIP and commuter herd agreements.
- Maintain and upgrade infrastructure supporting ADT.

4.3 ADT Trace Performance Measures (TPMs)

Completion of assigned trace quotas must be achieved to maintain eligibility for ADT cooperative agreement funds. MDARD AID has a proven track record and will continue completing USDA's four traceability performance measures (TPMs) during national priority trace exercises (NPTs) to indicate measurable progress in Michigan's tracing capabilities. The TPMs used by USDA are measured by the response time to answer one or more of the following questions when presented with an official animal identification number:

TPM 1: In what State was an imported animal officially identified?

TPM 2: Where in your State was the animal officially identified?

TPM 3: From what State was an animal shipped?

TPM 4: From what location in your State was an exported animal shipped?

4.4 Data requirements

MDARD AID currently uses USAHERDS as the main traceability information system. USAHERDS communicates with USDA's Premises Management system for issuance of federal premises identification numbers (PINs). MDARD AID uses federal PINs for distribution records of official RFID tags, and state location identifiers (LIDs) generated by USAHERDS are used for scrapie flock IDs. USAHERDS houses RFID sighting events from tag allocations, TB test charts, chronic wasting disease test charts, intrastate movement permits, livestock markets, and slaughter facilities. Official RFID tag shipments to Michigan are uploaded into USAHERDS from AIMS, however scrapie tags are not compatible with the current upload process. USAHERDS has 24/7 accessibility to approved users within MDARD AID, MDNR, and the USDA APHIS VS Michigan office. Relevant data is shared with other regulatory animal health officials upon request for animal disease traces and investigation of movement violations. Data collected from RFID sighting events at slaughter facilities of interest are available 24/7 to dedicated personnel at the USDA APHIS VS Center for Informatics through a material transfer agreement, and limited data from all RFID sighting events will be transferred on an ongoing basis to the Animal Health Event Repository (AHER) once the system report developed for that purpose becomes available. MDARD AID will be transitioning from USAHERDS to AgEnterprise soon, and these systems are similar in functionality.

Currently, MDARD AID has several agreements with other states to accept alternate movement documents for interstate movement of livestock, in accordance with the federal regulations. Four commuter herd agreements are in place with Indiana for interstate movement of swine within a

production system. One commuter herd agreement is in place with Indiana and two are in place with Kansas for interstate movement of cattle within a production system. Movement reports are emailed to MDARD AID and stored on the shared drive.

Official metal tags for use in cervids are tracked on a spreadsheet and the accredited veterinarian requesting them is responsible for retaining a record of the tag distribution for at least five years.

No-cost RFID tags for cattle are used solely by MDARD AID staff or fee-basis vets during state-mandated bovine TB testing, and the TB test chart is the record of tag distribution at the testing premises.

MDARD AID currently stores interstate CVIs in Content Manager, an electronic document management system. Paper CVIs are scanned and converted into electronic documents, and then the paper CVIs and the PDF version of eCVIs are processed in the same manner. Interstate CVIs are forwarded to receiving states at least weekly, and interstate CVIs in violation of federal ADT regulations are forwarded to the USDA APHIS VS AVIC at least quarterly. Available personnel resources are not sufficient to capture official identification or group/lot numbers from CVIs; however, all other major data fields are keyed into Content Manager for searchability. Content Manager is accessible to approved users within MDARD AID during normal business hours and data is shared with other regulatory animal health officials upon request for animal disease traces and investigation of movement violations. Plans are being developed to use AgEnterprise for all interstate CVIs in the future. MDARD AID currently accepts all forms of official CVIs.

4.5 Information technology plan

IT support is crucial to enhancing and maintaining the State-wide infrastructure for our animal traceability program. USAHERDS and Content Manager systems, along with other traceability data stored on the shared drive, are backed up at least daily by DTMB.

USAHERDS and AgEnterprise are available to Michigan through a contract with Acclaim. MDARD AID recently created and filled a Data Systems Specialist position to move USAHERDS and legacy data systems into AgEnterprise, working with animal health programs to better utilize database functionality and improve the quality of system data. The Data Systems Specialist will also work with DTMB and Acclaim on updates and version releases. The ADT program manager and Data Systems Specialist will work cooperatively to complete many traceability objectives outlined in this plan.

The real-time RFID traceability market system in the MAZ is supported through a maintenance contract with the software vendor, Reference Systems, Canada. Additionally, back-up procedures are in place for core processes, such as verifying and permitting bovine TB movements from the MAZ, so the sale may continue if the system is down.

RFID tag numbers sighted by stationary panel readers at livestock markets and packing plants are routed through our cellular multiplexer and transmitted to vendor cloud-based portals with limited access. Routine equipment checks and data monitoring ensures rapid detection of technical errors. Until MDARD AID receives data transmissions directly to AgEnterprise, continuation of the vendor contracts will remain vital to the health of Michigan's traceability program.

4.6 Resource requirements

While there is considerable overlap of traceability activities with the bovine TB program and other animal health programs within the division, dedicated personnel are necessary to complete distinct functions to advance the traceability program. MDARD AID is currently utilizing contractors for CVI data entry and will continue making intermittent assessments for workforce planning.

A Departmental Technician will be added to the MDARD AID IT team to assist the Data Systems Specialist. This will include working with continued development of AgEnterprise and future systems.

MDARD AID will further encourage the use of eCVIs by offering VET-CVI at no cost and will increase the attractiveness by offering Bluetooth-enabled handheld RFID readers to Category II accredited veterinarians. Personnel resources for training and technical support are essential to meet this objective.

4.7 Organizational needs

Division organizational transformations are not needed to implement the ADT road map currently.

4.7.1 Executive support

Michigan's current Governor and the MDARD Director fully support a robust animal disease traceability system to protect the livestock industries in our state and our nation. Accountability for the ADT cooperative agreement is documented in quarterly progress reports. Current program metrics include RFID read rates at markets, eCVI usage rates, and successful completion of national priority traces. Additional metrics will be developed to measure progress and performance of key traceability objectives.

4.7.2 Coordination and oversight procedures

MDARD AID has one veterinarian program manager who oversees import/export activities, state-specific veterinary accreditation training, regulation of livestock markets and dealers, official tag distribution and RFID sighting data, and technology initiatives to enhance traceability. Coordination occurs with the Import/Export Coordinator, Data Systems Specialist, IT team, administrative support staff, and field staff, as well as the USDA APHIS VS Michigan office and other key stakeholders. In addition, there is considerable overlap of traceability activities with the bovine TB program and other animal health programs within the division.

4.7.3 Policy

Michigan's Animal Industry Act, specifically Sec. 9 (3)(b), prohibits the disclosure of animal premises data under the Freedom of Information Act unless it is necessary to protect the public or animal health as determined by the director.

Michigan's Licensing Livestock Dealers Act, specifically MCL 287.128 (3)(a), requires the official identification of each animal to be recorded by licensed livestock auctions, buying stations, and collection points. However, it allows a backtag number or breed registry tattoo to be recorded in place of the official ear tag number, even when the animal is officially identified. MDARD AID will explore updating this rule to better align with traceability goals.

MDARD AID's Compliance Investigative Unit utilizes multiple policies in a progressive enforcement approach to achieve voluntary compliance.

4.7.4 Staffing

Animal disease traceability information gathering overlaps with other disease programs within MDARD AID. Due to Michigan's split-state status for bovine TB, full-time staff are readily justified in ensuring a strong traceability system. Personnel needed to implement the plan include the ADT program manager, the Import/Export Coordinator, Data Systems Specialist, IT team, administrative support personnel, and the majority of MDARD AID's field staff. Contractors are also necessary to install and maintain MDARD AID's RFID reader infrastructure, and to support CVI processing. Most office staff, from our disease program managers to the supply procurement staff, also support

traceability in some capacity. In addition, staff from the USDA APHIS VS Michigan office and fee-basis veterinarians across the State play a crucial role in meeting Michigan's traceability objectives.

4.7.5 Budget requirements

All animal health programs, including animal disease traceability, are funded by Michigan General Fund. Licensing fees cover a portion of administrative costs associated with regulating livestock markets and dealers. Traceability resource needs which exceed the current budget allowances will be addressed in the federal cooperative agreement.

4.7.6 Outreach (required to be addressed within the Road Map)

4.7.6.1 *Accredited veterinarians*

MDARD AID will offer continuing education at the Michigan Veterinary Conference focused on the benefits of eCVIs and how to capture and transmit EID numbers to VET-CVI using a handheld RFID wand. Furthermore, handheld RFID wands will be offered to Category II accredited veterinarians to increase usage of this technology. MDARD AID will further encourage the use of eCVIs by discontinuing the shipment of paper CVIs to accredited veterinarians 6-12 months after VET-CVI becomes available statewide.

MDARD AID will continue educating veterinarians to improve data quality and submit official forms in a timely manner through letters of education, and will begin exploring progressive enforcement options.

Additionally, MDARD AID will continue providing traceability information to veterinary professionals in state-specific accreditation training, the Animal Health Update quarterly e-newsletter, at veterinary association meetings, via our website, and through teaching efforts at Michigan State University's College of Veterinary Medicine and licensed veterinary technician programs across the state.

4.7.6.2 *Slaughter plants*

One of Michigan's traceability objectives is to expand outreach to federally inspected processors and custom slaughter facilities with the goal of increasing RFID data collected for tag retirements. Partnering facilities may choose which method works best for their business:

1. Save and store physical tags for pick-up by MDARD AID field staff.
2. Save, clean, and mail physical tags to MDARD's Atlanta Field Office.
3. Scan each tag with an RFID wand, pending wand availability.

4.7.6.3 *Industry as a whole*

MDARD AID routinely communicates with the livestock and poultry industries. Our communications representative works closely with industry leaders, USDA APHIS VS, and Michigan State University to ensure consistent messaging on traceability and other topics. MDARD AID is frequently represented at industry meetings, conventions, and exhibitions to interact with producers, veterinarians, and other stakeholders. Livestock and poultry industries also participate in MDARD AID emergency exercises where they see the benefits of traceability in real-life scenarios.

4.8 **Monitoring and reporting interstate movement activity**

Interstate CVIs are reviewed by MDARD AID's Import/Export Coordinator for completion of data, timeliness, and satisfaction of movement requirements. Issuing veterinarians (or the origin state office, for import CVIs) receive a letter of education explaining deficiencies, and all ADT violations are reported to the AVIC for further investigation.

MDARD AID currently uses Content Manager, an electronic document management system, to capture searchable information from interstate CVIs, including origin name, city, and state of both the consignor and the animals, if different; destination name, city and state of both the consignee and the animals, if different; issuing veterinarian; issue date; certificate number; certificate type, certificate source, species; number of animals; and movement purpose. Additionally, MDARD AID monitors movement reports from cattle and swine commuter herds, as well as NPIP poultry

flocks reporting movements using the NPIP database or submitting VS 9-3 forms.

Animal disease traceability statistics stipulated by the ADT cooperative agreement will be reported quarterly, as required, and is available upon request.

V. ADVANCING TRACEABILITY

5.1 Ranking of priorities for advancement

The transition from USAHERDS and other legacy systems to AgEnterprise is necessary for the success of many traceability projects. The current priority ranking of objectives is as follows:

1. Maintain and upgrade infrastructure supporting ADT.
2. Implement and promote use of VET-CVI, a free eCVI, to increase the number of certificates electronically transmitted from private accredited veterinarians directly to State animal health officials.
3. Develop direct transmission of data from third-party eCVIs to AgEnterprise.
4. Monitor efforts for electronic data sharing with USDA's Animal Health Event Repository (AHER) and implement when able.
5. Conduct outreach aimed at large animal clinicians to educate on the benefits of electronic CVIs, test charts, and vaccination records, and how to capture and transmit EID numbers to those documents using a handheld RFID wand.
6. Offer a handheld RFID wand long-term loan opportunity to Category II accredited veterinarians to facilitate accurate EID capture and encourage use of electronic forms, such as certificates of veterinary inspection and test charts, for efficient data transmission, pending available funds.
7. Expand outreach to federally inspected processors and custom slaughter facilities to increase RFID data collected for tag retirements.
8. Phase out the use of paper CVIs from MDARD AID to Michigan's USDA-accredited veterinarians.
9. Begin development of direct data transmission from AgView to AgEnterprise.
10. Utilize AgEnterprise for storage and retrieval of movement records from NPIP and commuter herd agreements.
11. Replace MDARD AID's current tag distribution record systems with AgEnterprise.
12. Develop and implement a procedure for data entry of cattle brucellosis test charts and vaccination records into AgEnterprise.
13. Modify upload process to accept scrapie tags from AIMS State Report.

14. Begin development of direct data transmission from AIMS to AgEnterprise.

5.2 Implementation of objectives

Objectives are listed and ranked as priorities for each of the planned three years, aligning with the three-year budget plan.

2026

- Maintain and upgrade infrastructure supporting ADT.
 - Action: With funding support from the ADT Cooperative Agreement, install pre-purchased LF RFID panel readers at Michigan's cattle markets to replace outdated equipment that is no longer supported. Monitor functionality of equipment and collaborate with the contractor or vendor, when necessary, to identify and resolve issues.
- Implement and promote use of VET-CVI, a free eCVI, to increase the number of certificates electronically transmitted from private accredited veterinarians directly to State animal health officials.
 - Action: 1) Pilot with small group to ensure proper functionality and obtain feedback on training materials; 2) notify MI-eCVI users of transition to VET-CVI; and 3) offer to remaining accredited veterinarians authorized in Michigan using a multimodal communication approach.
- Develop direct transmission of data from third-party eCVIs to AgEnterprise.
 - Action: 1) Implement AgEnterprise; 2) conduct meetings with various eCVI companies to establish requirements for security of direct transfer of eCVI data; and 3) configure and activate data transfer connections between AgEnterprise and eCVI companies.
- Conduct outreach aimed at large animal clinicians to educate on the benefits of electronic CVIs, test charts, and vaccination records, and how to capture and transmit EID numbers to those documents using a handheld RFID wand.
 - Action: Present information as a continuing education opportunity at the Michigan Veterinary Conference.
- Offer a handheld RFID wand long-term loan opportunity to Category II accredited veterinarians to facilitate accurate EID capture and encourage use of electronic forms, such as certificates of veterinary inspection and test charts, for efficient data transmission, pending available funds.
 - Action: Provide handheld RFID wands to Category II accredited veterinarians during a continuing education opportunity at the Michigan Veterinary Conference.

- Develop and implement a procedure for data entry of cattle brucellosis test charts and vaccination records into AgEnterprise.
 - Action: 1) Implement AgEnterprise; 2) activate brucellosis modules in AgEnterprise; 3) begin capturing minimal data from brucellosis records; 4) develop and test upload process utilizing MIM or other on-farm digital brucellosis record system with appropriate vendors; and 5) run developed scripts on AgEnterprise and other appropriate systems.
- Modify upload process to accept scrapie tags from AIMS State Report.
 - Action: 1) Discuss with USAHERDS/AgEnterprise vendor the requirements of this upload process and get a quote for making modifications; and 2) test and run prepared script on USAHERDS/AgEnterprise to modify the existing processor to allow the processing of scrapie tags.

2027

- Maintain and upgrade infrastructure supporting ADT.
 - Action: Monitor functionality of equipment and collaborate with the contractor or vendor, when necessary, to identify and resolve issues.
- Expand outreach to federally inspected processors and custom slaughter facilities to increase RFID data collected for tag retirements.
 - Action: Issue outreach work orders for field staff to visit priority slaughter facilities.
- Phase out the use of paper CVIs from MDARD AID to Michigan's USDA-accredited veterinarians.
 - Action: Provide advanced notice to Michigan's accredited veterinarians using a multimodal communication approach, which will include resources for electronic alternatives to paper CVIs.
- Replace MDARD AID's current tag distribution record systems with AgEnterprise.
 - Action: 1) Implement AgEnterprise; 2) explore options for capturing tag distribution information with vendor; and 3) run prepared scripts if needed on AgEnterprise.

2028

- Maintain and upgrade infrastructure supporting ADT.
 - Action: Monitor functionality of equipment and collaborate with the contractor or vendor, when necessary, to identify and resolve issues.
- Monitor efforts for electronic data sharing with USDA's Animal Health Event Repository (AHER) and implement when able.

- Action: 1) Implement AgEnterprise; 2) discuss requirements for export of AHER data with vendor; and 3) run prepared scripts if needed on AgEnterprise.
- Begin development of direct data transmission from AgView to AgEnterprise.
 - Action: 1) Implement AgEnterprise; 2) gather MDARD data requirements; 3) discuss requirements and data needs with AgEnterprise and AgView vendors; 4) develop and test scripts from AgEnterprise and AgView; and 5) run developed scripts on production AgEnterprise
- Utilize AgEnterprise for storage and retrieval of movement records from NPIP and commuter herd agreements.
 - Action: 1) Implement AgEnterprise; 2) gather MDARD data requirements; 3) discuss requirements and data needs with AgEnterprise and NPIP vendors; 4) develop and test scripts for AgEnterprise and NPIP; and 5) run developed scripts on production AgEnterprise.
- Begin development of direct data transmission from AIMS to AgEnterprise.
 - Action: 1) Implement AgEnterprise; 2) discuss requirements of data transmission from AIMS with USDA technology staff; 3) Develop and test scripts and configurations in AgEnterprise and USDA AIMS systems; and 4) run developed scripts and configurations on both production systems.