# Advancing Animal Disease Traceability (ADT) Road Map for Michigan

**A Three-Year Plan**

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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 an RFID-based market software system integrated with Michigan's USAHERDS database for real-time traceability, as well as ultra-high frequency (UHF) RFID readers to supplement existing low frequency (LF) RFID readers. Producer accessibility and compliance with RFID ear tags was expanded in the last several years through a statute change allowing untagged cattle to move to approved tagging sites. All approved tagging sites in Michigan adhere to ADT standards and report tag distribution records into a federal database to enhance national traceability. Over the last decade, MDARD AID centralized processing of interstate certificates of veterinary inspection (CVIs) to ensure a consistent response to improperly completed CVIs and to electronically file them in a searchable format for rapid retrieval during an animal disease event.

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

- Enhancing USAHERDS through version updates, legacy system integration, improved data quality, and automated data transmission.
- Sharing data with USDA's Animal Health Event Repository.
- Verifying livestock premises data on a recurring schedule.
- Conducting outreach with veterinarians to educate and encourage use of electronic forms and RFID wands to capture and submit traceability information accurately and efficiently.
- Educating slaughter facilities on animal disease traceability to encourage the collection of RFID tag data from carcasses.
- Continuing to integrate UHF RFID readers into existing LF RFID infrastructure.
- Improving traceability of sheep and goats at collection points.
- Enforcing interstate movement requirements of livestock in transit.

# II. CURRENT TRACEABILITY SITUATION

## 2.1 Who are we?

The Michigan Department of Agriculture and Rural Development, Animal Industry Division is led by the State Veterinarian to enforce 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; controlling contamination of animals from toxic substances; enforcing and supporting the humane treatment of animals; and promoting 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, USDA APHIS VS, USDA APHIS WS, and partner agencies dedicate significant resources to monitoring and managing this disease. Bovine tuberculosis could spread beyond the endemic area in Michigan without a robust traceability system. Therefore, many ADT activities focused on cattle were implemented out of necessity to contain this disease.

Collaboration between MDARD AID, USDA, 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 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 cattle 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. National Priority Tracing exercises (NPTs) are utilized to assess our trace capability based on successful and

timely completion of assigned trace quotas using USDA's four trace performance measures (TPMs). USDA's state report for Michigan during the 2022-2023 Cooperative Agreement period identified zero performance concerns and documented the average elapsed times for MDARD AID to successfully complete each trace performance measure:
TPM 1 = 0.16 hours
TPM 2 = 0.36 hours
TPM 3 = 0.34 hours
TPM 4 = 0.34 hours

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 ADT Information Technology (IT) meetings focus on identifying traceability issues in the field and driving forward traceability enhancement projects. 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 to division and department staff. The TB program, Compliance Investigative Unit, MDNR, USDA APHIS VS, and USDA APHIS WS personnel are kept up to date on traceability issues during biweekly bovine TB meetings. Anytime issues are identified, they are raised to the appropriate area to be addressed in a timely fashion. The ADT program 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 electronic CVIs and RFID tags, resources posted to our website, and social media messaging. Solid working relationships with USDA AMS Packers and Stockyards Division and ADT personnel in other states further strengthens MDARD AID's traceability program.

MDARD AID uses the United States Animal Health Emergency Reporting Diagnostic System (USAHERDS) as the main database for traceability and disease control activities. USAHERDS is currently running on version 2021 with additional upgrades and enhancements to be accomplished over the next year. This system is accessible to approved users 24 hours a day, 7 days a week. Information stored outside of USAHERDS is accessible during normal business hours when authorized personnel are present.

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 fee basis veterinarians; replace outdated LF RFID readers, and install additional LF and UHF RFID readers at livestock markets and packing plants. 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 industry support, mandatory official identification requirements, and use of technology to track animal movements.

Industry groups recognize the value of animal disease traceability in Michigan, especially the impact it's had on the beef and dairy sectors to control endemic bovine TB. Being able to rapidly determine which herds to include in an animal disease investigation, and moreover which herds to exclude, minimizes the disruption to commerce and uses limited State resources more efficiently.

Since 2007, State law has required that RFID ear tags be applied to cattle and bison prior to leaving a Michigan premises and purchasing official identification tags is a commonplace activity for our livestock producers. RFID tags are now mandatory for intrastate movement of cattle and bison, while other forms of official identification are required for intrastate movement of captive cervids, sheep, goats, and exhibition swine. In addition, all livestock species must be officially identified with the numbers documented on a CVI prior to interstate movement into Michigan. MDARD AID has a strong presence at livestock markets to monitor and enforce ADT requirements.

Our field veterinarians and inspectors have established relationships with local producers, livestock markets, dealers, truckers, and processors. Field staff are adept at using Bluetooth-enabled handheld RFID readers to electronically capture and transmit traceability data when conducting disease testing, reconciling herd inventories, issuing movement permits, and scanning RFIDs collected at slaughter to retire tags. Stationary equipment is strategically placed at livestock markets and slaughter facilities to passively capture and transmit RFID sighting events without impeding the speed of commerce. Education and outreach efforts over the last several years have resulted in over 50% of CVIs being issued electronically in Michigan. MDARD AID is prioritizing enhanced use of technology to increase the accuracy and availability of animal health information and traceability data.

Weaknesses include a lack of a premises data quality plan, challenges acquiring IT hardware and software, misaligned state and federal ADT

requirements, recent staffing shortages, and use of multiple systems to store animal health and traceability information.

Livestock premises registration is not mandatory in Michigan, and premises which are registered may have missing or outdated information. While key livestock species are required to be officially identified in Michigan, official identification numbers are not required to be kept in records by MDARD-licensed livestock markets, collection points, dealers, and haulers. Similarly, there is no requirement for livestock markets and slaughter facilities to capture or allow MDARD AID to capture RFID sightings on their premises. Consequently, those which have allowed MDARD AID to install RFID readers in their facility or whose staff scan or collect RFID tags for MDARD AID could revoke their voluntary cooperation at any time, significantly reducing Michigan's traceability capabilities.

DTMB security firewalls have prevented MDARD AID from receiving electronically transmitted data from third parties, such as CSV files from electronic CVI servicers. MDARD AID is currently using USAHERDS version 2021 released in May 2021 while all other USAHERDS states are using version 2022 and upgrade annually. As a result of using older version, MDARD AID has not been able to take advantage of the improvements and enhancements made to the database. In addition, MDARD AID has experienced a continued decline in functionality over the years because database components that fail cannot be fixed since the vendor does not support previous versions. This has resulted in data discrepancies between USDA's Premises Management system and Michigan's USAHERDS's database decreasing traceability effectiveness.

Although it is advantageous that Michigan's animal movement requirements are stricter than federal ADT requirements, the discrepancies are confusing and sometimes difficult for out-of-state producers, shippers, and veterinarians trying to comply. These differences also challenge MDARD AID staff attempting to educate, monitor, and enforce animal movement requirements.

Since the start of the COVID-19 pandemic, MDARD AID has experienced a shortage of staff to support the ADT program, resulting in a significant backlog of CVIs to be processed. Additionally, several objectives from the previous ADT road map were put on hold while existing staff helped to fill the gaps. MDARD AID is working to address these challenges by filling open staff positions, identifying current and future needs, and exploring alternative staffing solutions.

Animal health information and traceability data is not stored in a centralized system. Instead, multiple databases, spreadsheets, and paper

files are used across two geographically separated offices. MDARD AID plans to integrate all information systems into USAHERDS in the near future to eliminate data silos.

## 2.4 Opportunities and Threats

This plan will significantly enhance MDARD AID's ability to respond to emergencies such as foreign animal diseases and natural disasters effectively and efficiently. 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 Constitution Hall building in Lansing, as well as a small regional office in Atlanta, Michigan. Office staff are allowed to work remotely 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.

The ADT program is managed by a veterinarian who also oversees the Livestock Market and Dealer program. The ADT program is directly supported by the Import/Export Coordinator, a lead field inspector, and IT personnel including a new position for a USAHERDS Specialist. The program manager completes the ADT Road Map, Cooperative Agreement, and quarterly reports, is responsible for ADT outreach and enhancement projects, works with IT personnel towards improving database function, and manages agreements for commuter herds and approved tagging sites. The Import/Export Coordinator reviews incoming and outgoing interstate CVIs, trains and oversees staff processing CVIs, educates stakeholders on animal movement requirements, and completes the USDA NASS livestock movement report. The lead field inspector provides training on

RFID wands, assesses functionality of RFID read equipment and monitors incoming data, and works closely with technical contractors on enhancement projects and equipment troubleshooting at markets and slaughter facilities. IT personnel manage USAHERDS, provide training and support to Mobile Information Management (MIM) users, provide input on enhancement projects, facilitate IT purchases, and maintain equipment inventories.

To improve animal disease traceability, especially cattle herds in certain areas of Michigan where bovine tuberculosis is present, MDARD AID began using USAHERDS as the main repository for animal health data on January 4, 2010. This system enables MDARD AID and USDA APHIS VS to capture and coordinate premises information, identification numbers, animal movement and sighting events, official test data, and more down to the level of the individual animal. USAHERDSMDARD AID personnel are also granted access to USDA animal health information systems when required to perform their duties.

All cattle and bison in the TB Modified Accredited Zone (MAZ) and Presque Isle County must have a movement permit issued in USAHERDS 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 in USAHERDS to their final destination.

Since March 1, 2007, Michigan has required the application of radio frequency identification (RFID) ear tags in cattle and bison prior to leaving any premises in Michigan, unless moved directly to an approved tagging site. In addition, all captive cervids, sheep, and goats must have official identification prior to leaving any premises in Michigan, and swine must have official identification prior to being exhibited in Michigan. Cattle and bison in the MAZ and Presque Isle County, as well as all privately owned cervids, are also required to have a secondary ear tag with a visible and unique identification number. Livestock being imported to Michigan for purposes other than immediate slaughter must have official identification, as well.

Michigan has 23 official RFID tag resellers across 20 counties to serve the needs of our cattle industry. Most of these RFID tag resellers are 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. AIN 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.

All but one major cattle market in Michigan have voluntarily allowed MDARD AID to install low frequency (LF) RFID panel readers, and the exception market scans all consigned cattle with a handheld RFID wand. Preparations are in progress to integrate ultra-high frequency (UHF) RFID readers into the existing LF infrastructure at most of these markets, as well. Several livestock markets now utilize software that allows for the correlation of RFID numbers with backtag numbers. 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 permitting requirements of the bovine TB program. MDARD AID receives traceability data (market premises, date/time stamp, and RFID number) from these markets at least weekly for uploading into USAHERDS. At least quarterly, MDARD AID field inspectors document the number of cattle sold at each sale to calculate the read rate of RFID panel readers at each market. Read rates averaging below 95% are investigated to determine and fix the cause(s).

The only major beef packing plant in Michigan has stationary readers for both LF and UHF RFID tags and traceability data (plant premises ID, date/time stamp, and RFID number) is transmitted from this facility after each operating day for uploading into USAHERDS. Additionally, MDARD AID regularly receives traceability data from LF RFID panel readers in five regional packing plants which routinely receive Michigan cattle: two in Wisconsin, one in Illinois, and two in Pennsylvania. 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.

Michigan reviews all interstate CVIs for accuracy and compliance with state and federal requirements. Paper CVIs are scanned and saved as a PDF. Currently, all CVIs are stored in HPE Content Manager, an electronic document management system, and key data fields are manually entered for searchability. In calendar year 2022, MDARD AID staff

processed approximately 27,000 interstate CVIs, of which 53% were issued and submitted on an electronic CVI.

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.

USAHERDS accepts automated data transmission from USDA MIM. Data files from RFID read equipment and AIMS can be uploaded manually through the external messages queue of USAHERDS. Automated data capture capability, including data from electronic CVIs, will increase when USAHERDS is upgraded to a newer version.

# 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)

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.

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.
5. Improve the existing state-wide infrastructure for advancing animal disease traceability compatible with State and Federal standards.

## 4.2 Programmatic goals (objectives)

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

2023

1. Upgrade USAHERDS to the latest version.
2. Develop and implement a plan to improve the quality of existing data in USAHERDS.
3. Develop direct transmission of data from third party eCVIs, and then utilize USAHERDS for the storage and retrieval of eCVIs from GlobalVetLink (GVL) and Veterinary Services Process Streamlining (VSPS).
4. Implement and promote use of VET-CVI, a free electronic certificate of veterinary inspection, to increase the number of certificates electronically transmitted from private accredited veterinarians directly to State animal health officials.
5. Process backlogged CVIs with additional staff support and/or data entry contractors.
6. Implement changes based on review recommendations from the National Scrapie Eradication Program to bolster traceability of sheep and goats in Michigan.
7. Purchase and install UHF RFID readers at additional Michigan cattle auction markets with existing LF RFID infrastructure, pending available funds.
8. Monitor efforts for electronic data sharing with USDA's Animal Health Event Repository (AHER) and implement when able.

2024

1. Develop a plan to verify and update active Michigan livestock premises on a recurring basis.
2. Continue transitioning storage of siloed data, such as CVIs, and legacy systems to USAHERDS for enhanced integration of and access to traceability information.
3. Conduct outreach at large animal clinics to educate on the benefits of electronic CVIs, test charts, and vaccination records, and how to capture and transmit electronic identification numbers to those documents using a handheld RFID wand.

4. Offer a handheld RFID wand cost-share opportunity to accredited veterinarians to facilitate accurate RFID capture and encourage use of electronic forms, such as certificates of veterinary inspection and test charts, for efficient data transmission, pending available funds.
5. Expand outreach to FSIS-inspected processors and custom slaughter facilities to increase RFID data collected for tag retirements.

2025

1. Institute a procedure to verify and update active Michigan livestock premises on a recurring basis.
2. Discontinue the distribution of paper CVIs from MDARD AID to Michigan's USDA-accredited veterinarians.
3. Purchase and install UHF RFID readers at remaining Michigan cattle auction markets with existing LF RFID infrastructure, pending available funds.
4. Develop a plan with the AVIC to monitor and enforce interstate animal movement regulations while animals are in transit.

## 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 uses USAHERDS as the main traceability system. It is linked to USDA's Premises Management system for issuance of federal premises identification numbers (PINs). MDARD AID exclusively uses

federal PINs for distribution records of official 840 AIN tags, however state location identifiers (LIDs) generated by USAHERDS are used for scrapie flock IDs and other purposes. USAHERDS houses RFID sighting events from tag allocations, test charts, intrastate movement permits, livestock markets, and slaughter facilities. USAHERDS has 24/7 accessibility to approved users within MDARD AID, MDNR, and the USDA APHIS VS Michigan office, and 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 USAHERDS report developed for that purpose is available.

Currently, MDARD AID has no agreements with another State or Tribe to accept animal identification or movement documents for covered livestock other than those recognized in the Code of Federal Regulations and the ADT General Standards document. Commuter herd agreements are in place with states such as Indiana and Ohio for interstate movement of swine within a production system, with others planned. The two Indiana swine herds send notifications prior to pig movement using Indiana Board of Animal Health's Online Permitting System, and this information is emailed to MDARD AID and the USDA APHIS VS Michigan office monthly. The Ohio swine herd emails Interstate Swine Movement Reports prior to pig movement to the Ohio Department of Agriculture and MDARD AID and monthly to the USDA APHIS VS offices in Ohio and Michigan. These movement reports are stored on the MDARD AID shared drive.

Official metal NUES tags are requested by Category II accredited veterinarians only on rare occasions, and MDARD AID expects to have a surplus of metal NUES tags once they are no longer considered official ID. NUES tag distribution to accredited veterinarians is tracked on a spreadsheet and the accredited veterinarian is responsible for retaining a record of the tag distribution for at least five years.

Interstate CVIs are forwarded to receiving states at least weekly, and interstate CVIs in violation of federal ADT regulations are shared to the USDA APHIS VS AVIC at least quarterly. MDARD AID currently stores interstate CVIs in HPE Content Manager, an electronic document management system. Available personnel resources are not sufficient to capture official identification or group/lot numbers from CVIs in the current system. HPE Content Manager is only accessible to approved users within MDARD AID during normal business hours and is shared

with other regulatory animal health officials upon request for animal disease traces and investigation of movement violations.

## 4.5 Information technology plan

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

USAHERDS is available to Michigan through a contract with Acclaim. MDARD AID recently created and filled a USAHERDS Specialist position to move legacy data systems into USAHERDS, work with animal health programs to better utilize database functionality and improve the quality of system data. The USAHERDS Specialist will also work with DTMB and Acclaim on updates and version releases. The ADT program manager and USAHERDS Specialist will work cooperatively to complete the USAHERDS-based 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. Additionally, back-up procedures are in place for core processes, such as verifying and permitting bovine TB movements from the MAZ, so they 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 can receive these data transmissions directly to USAHERDS, 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 exploring staffing solutions, such as contractors for CVI data entry, and is looking to fill existing position vacancies. Division leadership will continue making assessments for workforce planning.

MDARD AID will further encourage the use of electronic CVIs by offering VET-CVI at no cost and will increase the attractiveness by

offering Bluetooth-enabled handheld RFID readers to Category II accredited veterinarians through a cost-share initiative. Available funds and personnel resources for cost-share administration, field outreach, and technical support are essential to meet these objectives.

Efforts to capture UHF RFID sightings from additional auction markets and gathering RFID data from additional custom slaughter facilities for RFID tag retirements will require some funding as well as increased time from field staff, administrative personnel, and IT support for field visits, tag data uploads, and preparing equipment for installation.

## 4.7 Organizational needs

Division organizational transformations are not needed to implement the ADT road map at this time.

### 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. Program metrics will be reviewed for appropriateness.

### 4.7.2 Coordination and oversight procedures

MDARD AID has one veterinarian program manager who oversees import/export activities, RFID tag distribution and sighting data, regulation of livestock markets and dealers, and technology initiatives to enhance traceability, and who also serves as a Planning Section Chief on the Incident Management Team. Coordination occurs with the Import/Export Coordinator, IT team, 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, which does not align with current traceability goals. MDARD AID will explore updating of the Michigan Licensing Livestock Dealers Act.

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

### 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 to ensure a strong traceability system. Personnel needed to implement the plan include the ADT program manager, the Import/Export Coordinator, the USAHERDS Specialist, MDARD AID's IT team, administrative support personnel, and the majority of MDARD AID's field staff. 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 small portion of 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*

In conjunction with the USDA APHIS VS Michigan office, MDARD AID will continue refining educational resources, like state-specific

accreditation training and updates to the Michigan Accredited Veterinarian Handbook, to provide traceability information to accredited veterinarians. MDARD AID will continue providing information to veterinarians in 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. Direct communication with users of the MI-eCVI will provide timeline updates and transition assistance with VET-CVI. This plan includes educating accredited veterinarians on the benefits of electronic CVIs, test charts, and vaccination records, and how to capture and transmit electronic identification numbers to those documents using a handheld RFID wand. Furthermore, a handheld RFID wand cost-share opportunity will be offered to accredited veterinarians to further encourage use of electronic forms for livestock species.

In addition, MDARD AID will continue educating veterinarians to improve data quality and submit official forms in a timely manner through letters of education.

#### *4.7.6.2 Slaughter plants*

One of Michigan's traceability objectives is to expand outreach to FSIS-inspected processors and custom slaughter facilities to increase RFID data collected for tag retirements. Facilities choose the method that works best for their business:

1. Save and store physical tags for pick-up.
2. Save, clean, and mail physical tags to MDARD's Atlanta Field Office.
3. Scan each tag with an RFID wand, pending wand availability (physical tag may be discarded once the carcass passes inspection).

#### *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 for import and export 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; destination name, city and state; issuing veterinarian; issue date; certificate number; species; number of animals; and movement purpose. Additionally, MDARD AID monitors swine movement reports from 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.

## V. ADVANCING TRACEABILITY

### 5.1 Ranking of priorities for advancement

1) Enhance USAHERDS through version updates, legacy system integration, improved data quality, and automated data transmission.
2) Share data with USDA's Animal Health Event Repository.
3) Verify livestock premises data on a recurring schedule.

4) Conduct outreach with veterinarians to educate and encourage use of electronic forms and RFID wands to capture and submit traceability information accurately and efficiently.
5) Educate slaughter facilities on animal disease traceability to encourage the collection of RFID tag data from carcasses.
6) Continue integrating UHF RFID readers into existing LF RFID infrastructure.
7) Improve traceability of sheep and goats at collection points.
8) Monitor and enforce interstate movement requirements of livestock in transit.

## 5.2 Implementation of objectives

Specific programmatic goals to advance animal disease traceability in Michigan are described for each year in Section IV 4.2 of this Road Map.