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ADVANCING ANIMAL DISEASE TRACEABILITY ROAD MAP FOR MARYLAND

A Three-Year Plan (2019-2021)

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I. EXECUTIVE SUMMARY

The Maryland Department of Agriculture (MDA), as lead for animal health in the State, and therefore lead for Animal Disease Traceability (ADT) in Maryland, is committed to optimizing traceability as part of the overall livestock and poultry disease control strategy for the State. Maryland assumes both the requirement of all animals moving interstate will need to have official identification, and animals within a state will need to be traced as close to their original premise as possible. Now the ADT federal rule is finalized, Maryland will continue taking steps, joining other states, to meet federal requirements and otherwise improve traceability state and nationwide.

Key to implementing ADT will be revising state regulations that will allow enforcement of requirements for identification of animals. MDA is revising regulations this year that incorporate identification requirements. Once regulations are revised, education and outreach will be used initially to inform industry, farmers, veterinarians and other stakeholders of these requirements. After a period of time (TBD), enforcement of the requirements will be imposed, primarily at markets, exhibitions, and in the review of Certificates of Veterinary Inspection (CVIs), as these are major components of the animal movement system and are already being inspected routinely. MDA is currently stepping up audits of markets to include regular recordkeeping checks and testing traceback capability, using current regulations that require identification in certain species at certain stages of movement. A revised Auction Audit Checklist was developed to facilitate this process. New regulations will be added to this audit process as they come on board.

Once regulations changed, several steps will need to be taken to implement these requirements to make a smooth transition that minimizes impacts on commerce. A summary of the steps to be taken is given below, and expanded upon in Appendix II of this document:

STEPS TO IMPLEMENT ADT IN MARYLAND:

- Maintain ADT management team
- Re-engage ADT Advisory group and obtain input from the group throughout process
- Develop alternatives to meet objectives by species;
- Recommend regulatory revisions or new cattle regulations to implement ADT;
- Determine specific tagging needs, mechanisms, inventory and maintenance systems
- Establish or improve recordkeeping system in MDA and in industry to maintain reliable tag records – ideally, obtain comprehensive database for animal health information that ties all program information together and ties into other state and national database programs.
- Formalize, in writing, traceback check system to test capability
- Continue to provide outreach and education to stakeholders regarding ADT requirements to promoting compliance
- Further promote and ensure compliance with enforcement measures:
 - Semi-annual market audits
 - Regular market inspections
 - CVI review and follow-up with accredited veterinarians
 - Fines and/or suspension of operations as necessary

Estimated costs of implementation over the next 3 years, not including any kind contribution of MDA operations staff and management, is estimated to be \$48 K in FY2019, with significant increases requested for FY2020 including committed funds for 100% for an ADT coordinator with 7% fringe at \$76K, and an increase of FTE commitment from 0.3 FTE to 0.5 FTE for an ADT Data Entry Specialist with 7% fringe at \$30K, totaling \$154K. Again,

significant increases for FY2021 are projected to include funding of upgraded software at the levels of the auction market and Maryland Fairs & Shows to become compatible with the RFID wands (\$55K) and with Show-Works software (\$30K). Additional funds will be requested for the procurement of an electronic data management system StateVet.com for \$25K, totaling \$264K. Projected budget details for FY 2019 are provided in Appendix III.

II. CURRENT TRACEABILITY SITUATION

2.1 Who are we?

The MDA Animal Health Program is the lead for the Animal Disease Traceability program in Maryland, in cooperation with the USDA, APHIS, and VS through the ADT Cooperative Agreement. Maryland works collaboratively with industry organizations, individual companies and farmers/producers. The primary constituents are represented in the ADT working advisory group and an ADT consulting group. The group consists of 15 representatives from various interests, a description of which is given below. The entire list with organization affiliation is provided as Appendix I.

- Primary constituents include:
 - Poultry and Livestock Industry Associations
 - Poultry and Livestock Corporations
 - Poultry and Livestock Producers/Farmers
 - University of Maryland Extension
 - Equine Associations and Board
 - Auction Market Operators/owners
 - Slaughterhouse Operator/owners
 - Maryland Farm Bureau
 - Public consumers
- External or secondary constituents include:
 - The Humane Society of the United States
 - University of Delaware Laboratories and Extension
 - Local humane societies
 - Local animal control departments
 - Maryland and Federal Health Departments
- What does statewide, tribal-wide, territory-wide mean?
 - All ADT requirements and policies will apply in all portions of the state, that is, statewide.
 - Maryland does not have any significant tribal groups that form a constituency for agricultural purposes.
 - Maryland does not have any geographic areas designated as a territory.
- How is traceability data used internally, externally?
 - ADT data will be used internally (within MDA, which will hold the confidential data) to provide location and statistical information for disease response preparation and control, and for animal health promotion planning purposes.
 - ADT data will only be provided externally to other partners, such as the state and federal health and environmental departments, or other industry partners, on a need-to-know basis based on a public health need such as disease response and control by the Order of the Secretary of Agriculture; this need is most likely to arise with spread of a zoonotic disease. Overall, confidentiality will be strictly maintained, and incorporated by regulation.
- What values guide the animal disease traceability system?

- Confidentiality
- Cost and Time Efficiency
- Protection of Commerce by minimizing delays in commerce or cost to industry
- Reliability of data
- Individual right to privacy
- Public right to consumer protection
- What is the make-up of the animal disease traceability advisory group?
 - The ADT advisory group is made up of representatives of primary constituent organizations and individuals, as indicated in 2.1 above. A full list of names and organizations is attached as Appendix I.
 - The ADT advisory group is scheduled to meet in conference annually and otherwise in-person biannually. Members are kept up to date by letter on the status or changes in proposed rules and proposed implementation plans, and are encouraged to comments in writing to the State and federal regulating agencies. State Animal Health Website info and links to federal websites are updated quarterly.

2.2 Where are we now?

Maryland views ADT as critical to rapid, efficient disease response and control. In addition, it will be used to better estimate resource needs for animal health promotion and disease response planning. It is not a stand-alone initiative; it is one strong element of a modern, efficient disease control system.

- What measures of traceability capability are currently being used?
 - Maryland has done and will continue to do tracebacks on real-time disease cases and tracked time to traceback or trace forward to test traceability capability for different species.
- What are the specific values and associated interpretation?
 - In general, tracebacks can be accomplished within 24 hours, and usually same day, indicating that recordkeeping at markets and exhibitions (primary intersections of animal movement) is adequate if not well-maintained.
 - Gaps occur when animals move through dealers; indicating that dealer record-keeping is variable and sometimes inadequate, and dealer cooperation can be slow.
- How is coordination being currently achieved within the Program?
 - All personnel in the Animal Health Program are kept aware of ADT requirements and the need to identify premises if no animal identification is on documentation. Headquarters, Field and Laboratory Operations personnel overlap and interact on a daily basis with other unit personnel; therefore, communication is relatively fluid to coordinate disease tracing efforts.
- How is coordination being currently achieved state-wide, tribal-wide, territory-wide?
 - MDA is in communication with Auction Market operators and individual producers, including ADT Advisory Group members, to utilize workable methods of implementation and/or comply with current ADT requirements.

- How does the present unit coordinate activities with other existing agencies/units?
 - Individual or conference calls are made to discuss and gain updates on ADT plans and implementation
 - Notifications are made by mail or electronically to disseminate information and/or solicit collaboration as need be.
- What standards for traceability are currently being used? Are they appropriate?
 - MDA aims to be able to traceback and trace forward any disease case within 24 hours, with an ideal goal of same day. This is appropriate given that same day traceback allows same day response to minimize any disease spread, but acknowledges that there will be some delay in contacting individual producers to confirm traces.
- What is the state of technology infrastructure? Capability in terms of size? Compatibility within and outside the agency/unit/department/etc. for sharing data when needed?
 - Currently, multiple logs or information systems are in use for multiple purposes, with no automated linkage. Many systems can be “hand” linked by downloading information to Excel spreadsheets, then reloading, but not efficiently, and not reliably.
 - Electronic ICVIs, CORE ONE and AIMS databases are more rapidly searchable but yield varying results as 70% of our ICVIs and test records are in paper format, therefore the majority of data is either hand-entered or not entirely stored electronically.
- Are requests for information available 24/7, or only available M-F, 40 hours per week, if authorized personnel are present?
 - Information stored in the database deemed necessary can be accessed 24/7 through radio links into the general databases; multiple key personnel have this ability using laptops that can access information at any distance within the United States mainland (haven’t tested Hawaii, Alaska, Puerto Rico or the Marshall Islands). Information not stored in the database but submitted weekly to Headquarters can be searched by hand 24/7.
- What is the impact of state, tribe, or territory funding on capability?
 - State funding is extremely limited do to current budget constraints, with no relief in sight. Comprehensive data management systems and software upgrades are necessary to collate and disseminate electronic information collected from eICVIs and associated electronic data as federal partners are requesting additional information in an expedited timeframe.
- How does Federal funding fit into the plan?
 - Federal funding will be needed to obtain an adequate data information system. MDA requests upgraded software at the levels of the auction market and with Maryland Fairs & Shows to become compatible with the RFID wands and with Show-Works software. Additional federal funds will be requested for the procurement of an electronic data management system StateVet.com discontinuing State Vet.com Lite which has inherent data migration issues
 - Federal funding will be needed to obtain and maintain a full-time ADT Coordinator, part-time ADT data specialist and part-time ADT

data entry (admin specialist) person, as the State has not funded these positions and will not provide funding in the future as far as can be projected.

2.3 Strengths and Weaknesses

- What are the strengths of the organization in terms of technology, human resources, personnel capabilities, etc.?
 - MDA is well versed in animal disease traceability concepts, needs and national plans, and has a combination of well-experienced and committed personnel to manage individual parts of the ADT program; notably, personnel with long auction market experience, knowledge and existing relationships in the livestock and poultry community that enable communication and implementation of ADT actions. Maryland is very proud to have in its cadre IT specialists well versed in federal and State-wide platforms.
- What are the weaknesses in terms of “lack of” technology, human resources, personnel capabilities, etc.?
 - MDA is lacking a fulltime ADT coordinator due to fiscal constraints, which makes management of the program problematic, and implementation of methods delayed. We are also lacking a comprehensive data information system (previously discussed) to manage and search data efficiently. MDA would like to contract a data entry specialist to collate electronic data, trouble shoot technology gaps and provide systems updates to auction market operators, fair and show integrators and here within MDA.

2.4 Opportunities and Threats

- Does this plan create an opportunity in ability to respond?
 - YES
- Does this plan enable or avoid consequences of potential threats?
 - YES. Increased traceability can decrease the spread of disease.
- Does this plan provide for better use of available resources than current approaches?
 - Yes; in preparing to enforce disease traceability requirements, increased emphasis on enforcement of existing regulations has improved use of field inspector personnel.
- Does this plan enhance networking opportunities?
 - Yes, this program provides another and discreet reason to contact producers and operators, along with Extension.
- If this plan is not implemented, what are the threats?
 - Decreased response time to disease events; loss of control of some disease events if traceback can not be established.
- If this plan is not implemented, will others be tasked with doing so?
 - No, there are no other government agencies likely to do this, although it is conceivable that federal agents might have to be involved, and/or producers and operators would have to figure out a system on their own to meet federal requirements for identification.

- Have previous efforts to coordinate with other entities within the applicant’s boundaries, and outside the applicant’s boundaries, been complicated or unavailable for not having this plan in place?
 - No

2.5 Inventory of existing infrastructure and suitability assessment

- Human resources: MDA has a 0.30 FTE Admin Assist II, and 196 hours of a State funded contract database entry person to manage the ADT program, with the remaining State funded field and operations staff (8) available to assist on any particular project.
- Space availability: MDA has limited space to house personnel, computers, yet adequate space for administrative supplies, including tags and readers.
- Connectivity resources, both in office and in the field: MDA has excellent field connectivity as all field and operations personnel are equipped with cell phones and laptops which have internet accessibility.
- Access to USDA animal disease traceability and animal health information resources: MDA to acquire these as long as they are available online.
- Organization of all existing paper record systems used to access animal disease traceability or animal health information: MDA has a records maintenance and retrieval system that is in accordance with State requirements and allows for five years of traceback from hard copies on non federal disease program information, and 10 years of herd data for brucellosis and tuberculosis cattle herds.
- MDA computerized data management capability: security is provided by e-authentication on USDA records and includes present storage size of 1.7TB on an MDA protected server for non USDA documents. Presently information is transferred by hand from ICVIs and is securely located on the MDA protected server.
- Automated data capture capability is by CORE ONE.

III. VISION AND MISSION CONTEXT FOR ADVANCING TRACEABILITY

3.1 Vision Statement

- Maryland shall be a State in which healthy animals produced under humane and environmentally sound conditions enhance the health, economic welfare, and quality of life of consumers and producers. Advancing traceability will be a key component for MDA Animal Health to optimize animal health by enhancing disease response and control.
- Goal is “*to identify premises and animals that had direct contact with diseases of concern*”, resulting in:
 - Reduced impact of animal health incidents or agro-terrorism events
 - Improved response to animal emergency events
 - Promotion of Industry and Producer Benefits:
 - *Maintain confidence in animal products*
 - *Gain market access and consumer demand*

3.2 Mission Statement

- The Mission of the Animal Health Program is to execute the authority of the Secretary of Agriculture to control contagious and infectious diseases

of livestock, poultry and other animals when they impact the health of livestock, poultry or the public. To that end, the program will continue to:

- Conduct animal disease prevention and control Programs involving field, laboratory and Administrative Operations.
- Promote Animal Traceability to facilitate rapid disease detection and response, and minimize disease control costs.
- Prepare for and execute if necessary, provisions in Emergency Support Function (ESF) 6 (Evacuation and Sheltering Operations and ESF 16 pertaining to Animal AG Emergencies.
- Exercise law and regulatory enforcement of the Secretary as it pertains to animal health and related matters.
- Provide veterinary and laboratory consultative and diagnostic services to the animal owning public.

IV. TRACEABILITY REQUIREMENTS

4.1 Strategic goal(s)

- Have surveillance plan and standards
- Establish state legal authority to administer animal health policies within jurisdiction
- Provide species specific performance measures
- Identify current capabilities
- Specify official animal ID numbering system standards for each species
- Specify how tag distribution records will be maintained
- Specify how tag number retirement will be addressed
- Specify acceptable methods of unique location ID
- Specify reportable animal movements activities by species
- Identify critical location points, i.e. markets, exhibitions, processors
- Specify how interstate animal movement records are being used for ADT purposes

The Traceability goals for the state of Maryland reflect a cooperative relationship between the Maryland Department of Agriculture, the Cooperator and the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), and Veterinary Services (VS). The mission-related goals, objectives, and anticipated accomplishments of the MDA Animal Health Program for conducting animal disease traceability are identical to the goals, objectives, and anticipated accomplishments of the USDSA, APHIS, and VS. Also, a successful Animal Disease Traceability program will add significant value to our state's livestock. Understanding that no program will have support of everyone impacted; the value of Animal Disease Traceability will be proportionate to the willing participation of those involved (producers, markets, dealers, etc). Maryland will achieve its described activities despite being understaffed. Maryland will strive to place more personnel in the field, as well as Administrative personnel to effectively implement the Animal Disease Traceability Program. Animal disease traceability will continue to be supported in Maryland with the aid of this Cooperative Agreement primarily through the following objectives:

1. **Traceability Performance Measures (TPMs):** using state and federally initiated traceback exercises and compliance audits at markets to identify gaps in traceability and for means of improvement.

2. **Administration of Official Identification devices** thru funding support to purchase equipment to at least one of our Tagging Stations with RFID readers and software to support the use of RFID tags. Additional resources requested to support purchase and shipment of low frequency HDX RFID tags to other auction markets, dealers, fair and show group operators, and veterinarians.
3. **Information Sharing of Animal Identification data** with state and federal partners through input of tag and premise data into CORE ONE software and thru quarterly electronic compilation of market tagging data;
4. **Outreach and Education to Stakeholders**, including the ADT Advisory Group, market operators, veterinarians and producers regarding official identification (tagging) movement documentation and record-keeping requirements; Additional resources are requested to support events.
5. **Electronic Records** will be collected in real time into the EMRS2 by the ADT Data Entry FTE for Traceability exercises. Tag, Vaccine and Testing Data will be compiled in CORE ONE federal database including market data. Non electronic data and electronic data from non-integrated software platforms are manually entered. Additional resources are requested to support a contract Data Entry specialist.
6. **Compliance and Enforcement of ADT regulations**, include daily ICVI examination, weekly ICVI compliance letters issued to affected State Veterinarians providing example and information regarding their accredited veterinarians' failure to comply with the importation rules of the state of Maryland, issuance of a three tiered non-compliance letter system (information, warning, and revocation). State inspections and enforcement of federal regulations at facilities linked to interstate commerce, and possibly joint inspections and enforcement procedures with federal partners, as agreed upon with the Area Veterinarian in Charge for Maryland, will continue in FY2019 as our presence at markets on and off auction days is common place.

4.2 Programmatic goals (objectives)

Objective	Planned Accomplishment – List Specific Performance Measures	Target Date: 3 Year Plan
1.0 Current parameters to measure traceability	1.1 Review all investigation tracebacks in Maryland this current year to identify gaps in the system 1.2 Identify parameters used -Trace reference animal to previous production unit of commingling -Trace reference animal to birth premises -Trace exposed animal (1 step forward) -Determine at risk animals and locations (from first index herd or location) 1.3 Develop or improve performance measure for traceability	Ongoing; complete report to APHIS May 2019
2.0 Performance measures to measure advancements in ADT; incorporate federal guidelines and terminology for performance measures	2.1 Document time to trace animals through the market 2.2 Document time to trace animals to the previous location of commingling 2.3 Time to report to the State/Tribe of official tagging/identifying of an animal in question that has moved interstate 2.4 Time for the State/Tribe of first officially tagging/identifying an animal in question that has moved interstate to provide a record of the official tag distribution, 2.5 Time to report to the State/Tribe from which an animal in question has moved interstate, and 2.6 Time for the State/Tribe from which an animal in question has moved interstate to provide the location and contact information from which the animal was moved interstate.	Ongoing
3.0 Staffing	3.1 Identify, fund and train coordinator for ADT 3.2 Provide human resources for website, outreach, data entry and IT support	Ongoing request for State funded budgetary increase to support staffing. Duties in meantime are divided between multiple existing staff as feasible.

4.0 Electronic systems and web updates to reflect USDA approach	4.1 Update MDA website on a quarterly basis 4.2 Remain current on program polices and industry view points 4.3 Make all ADT information, including emails, available on MDA website 4.4 Continue the refining of the Maryland Poultry Database	Ongoing
5.0 Outreach and Education for vets, markets, exhibitors and producer	5.1 Develop posters for display in markets, fairs and shows and vets office to promote ADT 5.2 Conduct outreach, by mailing to vets, industry associations and exhibitions.	Ongoing; Proofs of publications, brochures and posters available upon request. Outreach to veterinarians to promote electronic CVI use planned for 2 nd qtr FY2019.
6.0 Traceability Advisory Working Group	6.1 Invite key industry partners to participate in advisory working group 6.2 Organize one meeting of advisory working group in 2019	Advisory group re-constituted-Mar 2016 Maintain contact by mail and phone in 2017 and 2018. Next meeting - October 2019
7.0 Enhance information management systems	7.1 Capture data from office personnel monthly for disease programs and interstate movement 7.2 Capture number of animals associated with interstate movement 7.3 Work with office staff to begin to develop electronic searchable databases	Webinar training sessions are interspersed between upgrades for CORE ONE users. Internally a review of data systems has been completed review of MDA IT Global Vet Link was initiated and maintained through 2018 VSPS and mCVI were implemented in 2018 to integrate eICVIs information into CORE ONE IT system update goal, pending funding: Initiated Feb 2014- completion estimated Mar 2020. Request for Federal Funding for State Vet.com planned for FY2020.
8.0 Legal Review: Establish state legal authority to administer animal health policies within jurisdiction	8.1 Review current law/regulation on animal movement 8.2 Review current law/regulation on identification requirements to date 8.3 Draft proposed changes to any regulation to fix current issues for ADT	Regulation review completed- June 2011 Regulation revisions underway; ongoing completion of cattle and swine regulations: target July 2020 Revisions to incorporate federal final rule changes: as needed; ongoing

4.3 Animal disease traceability performance measures (required)

- How has performance been measured to date?
- What is the current baseline?
- Measures should be offered as performance per unit of time
- Establish objective assessment of animal disease traceability by providing baseline measures and projected advancements during the funding period by using the following four performance standard measures:

• MDA ANIMAL DISEASE TRACEABILITY PERFORMANCE MEASURES			
Performance Measure	Current Baseline	Projected Advancement or Goal	Target Date
Performance per unit time (hrs)			
1. time to report to the State/Tribe of official tagging/identifying of an animal in question that has moved interstate	<24 hrs for markets, exhibitions, producers; Variable for dealers (<24 to >week)	Improved time to report for dealer held animals to <48 hrs. TPM performance Measures drastically improved from CA'16 through CA 18 to an excellent rating	ongoing
2. time for the State/Tribe of first officially	<24 hrs for MDA	Improve time to	ongoing

tagging/identifying an animal in question that has moved interstate to provide a record of the official tag distribution,	issued tags for livestock; <24 hrs to >week for dealers /small markets for poultry and livestock	provide records from dealers/small markets to <48 hrs TPM performance Measures drastically improved from CA'16 through CA 18 to an excellent rating	
3. time to report to the State/Tribe from which an animal in question has moved interstate,	<24 hrs	TPM performance Measures drastically improved from CA'16 through CA'18 to an excellent rating	ongoing
4. time for the State/Tribe from which an animal in question has moved interstate to provide the location and contact information from which the animal was moved interstate.	<24 hrs for animals moving legally	Continue to educate public on CVI requirements TPM performance Measures drastically improved from CA'16 through CA 18 to an excellent rating	ongoing
5. time to trace forward through market to next premise	< 8hr	Adequate to date	
6. time to trace back from market to previous area of commingling	<8rs	Adequate to date	

4.4 (Reserved)

4.5 Information technology plan

The MDA IT has periodically updated systems to upgrade our Program's capabilities. Historically, MDA was part of a pilot project to use the CORE ONE system developed by the federal government for federal disease program data management. That system now in place, alternative systems will not be purchased, but will continue to be reviewed. Our internal capabilities are continually being adapted to integrate our laboratories systems into the federal software. SQL enhancements to auction markets, upgrades to ShowWorks for Maryland State Fairs and Shows and procurement of State Vet.com are planned in FY20-21.

4.6 Resource requirements

- Is specific expertise needed that is not currently available?
 - Not apparently, except possibly for IT resources.
- Will consultants be needed?
 - Periodically a software consultant will be needed to test the expansion of data collection possibilities with our integrators
- Is a continuity of operation plan (COOP) in place and how frequently is it tested?
 - Yes, and it is usually tested annually.
- Are automated data capture resources needed?

- It would be useful to expand our software interfaces within the State to collect useful data collected under additional data systems, i.e. data collected through the Maryland Veterinary Board's software could interface to collect information regarding official ID application, reporting Maryland fairs and shows groups could data merge statistical information with animal sightings and official ID application.
- Will additional or new space be required?
 - No

4.7 Organizational needs

- Does a need for organizational change exist? Is it recognized?
 - Yes, a funded ADT Coordinator to serve as the data systems management administrator through various State and Federal information platforms has been requested repeatedly. No funding or position has been provided to date.
- Can additional resources be leveraged within the current administrative structure?
 - No

4.7.1 Executive Support

- Is additional support from executive management needed?
 - Yes
- How is accountability provided?
 - Monthly reports and "State Stats" (statistics) are given to executive staff; monthly meetings are held with executive staff where ADT issues can be discussed; semi-annual meetings with fiscal to discuss current or future funding and expenditures are regularly held.
- How are officials briefed on progress and baseline measures of performance?
 - On an as needed basis with immediate supervisor; otherwise, annually.

4.7.2 Coordination and oversight procedures

- What is the make-up of the applicant's animal disease traceability advisory group? How frequently are they engaged?
 - See Appendix 1 for list of participants representing major stakeholders. They have been re-engaged. We plan to reconvene an annual meeting. (Unless new information directly impacting our industry develops, necessitating our meeting more frequently.) Those impromptu meeting will be by conference call in-lieu of an in person mtg.
- How are emergency preparedness resources engaged or responded to when necessary?
 - Monthly departmental meetings on emergency preparedness are held for coordination of activities; frequent (monthly to quarterly) state ER exercises are held in which MDA participates; MDA responds immediately when activated for an emergency.
- How is compatibility with other States, Tribes, Territories, and USDA monitored?
 - Conference calls or in person meetings are held multiple times through the year. Meetings may be held as part of NASDA calls, USAHA or regional USAHA meetings.
- How are responsibilities assigned for implementing the plan?
 - The State Veterinarian is responsible for implementing the plan;

- The designated ADT Coordinator assigns duties to staff where appropriate, administers the Cooperative Agreement and advises the State Vet on needed procedure, policy or funding matters.
- How are disputes arbitrated?
 - The State Veterinarian or his representative will meet with other agencies/states to discuss and develop consensus for any particular issue in dispute.
- How is feedback obtained relative to perception of successful implementation above and below the administrative authority?
 - Feedback is received usually directly, verbally, and in discussion.
- How is transition achieved when administrators are replaced?
 - New administrators will be briefed on programmatic goals and objectives.

4.7.3 Policy

- How do existing mandates assist, limit, or modify what is intended to be achieved?
 - Existing mandates are in concert with animal disease traceability goals. Existing mandates to monitor auction markets and exhibitions enable compliance checks for ADT at these venues without additional staff resources needed.
- Is there a need to address any specific mandates and act to modify them to align them with current goals and objectives?
 - No

4.7.4 Staffing Needs

- Planning, implementation and management of an animal disease traceability program in Maryland is currently done by one dedicated staff person, the Assistant State Veterinarian, who is working approximately halftime on ADT to handle the multitude of tasks that have been assigned (set up tagging and database tracking systems, as well as coordinate with other agencies, states, industries and federal offices). This person is also responsible for Field Services operations.
- A newly created, fully funded, ADT coordinator ideally will have extensive animal health experience in field work, particularly auction and stockyard work, and some experience with program management. A partial Full Time Equivalent (FTE) data entry person is presently assigned to enter tagging, premises and inspection data; an increase in federal support from 0.3 FTE to 0.5 FTE is requested. Job descriptions describing these duties are currently in use. Until such time that an administrator is hired to fill the coordinator role, ADT work is performed by a combination of operations and contract personnel.

4.7.5 Budget requirements

SEE APPENDIX III FOR PROJECTED FY 2019 BUDGET.

- How are you funded for animal disease traceability?
 - State and Federal funds.
- What are the funding requirements projected by year for FY2019, FY2020, and FY2021 for implementing this plan?
 - Budgetary funding requests for FY2020 and FY2021 will be similar to FY2019 but slightly increased.
- How can the applicant insulate against budget cuts and shortfalls?

- Management tasks are split between personnel that have other assignments, but are, to date, expected to have a position within the next year funded by the State and supplemented by two contract positions supported by federal funds. If federal funds are cut, work and implementation of programs will be consequently be delayed.
- Can other funding sources be leveraged to support this plan?
 - None known to date, there are very tight budgets in Maryland, we are mandated not to increase fees and have no appreciable revenue anticipated.

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

4.7.6.1 Accredited veterinarians

- What is the plan for informing accredited veterinarians of the new framework and the specific three-year plan for implementation?
 - They will be informed through monthly electronic messages or by mail.
- What continuing education is being planned for improving data quality relative to animal health information systems being used? Submitting official forms in a timely manner.
 - Vets not meeting standards will be informed in writing of specific inadequacies, and made aware that continued discrepancies put their accreditation at risk.
 - Initial Notices and Warning Letters are sent, as well as follow-up phone calls and in person meetings to discuss, explain and retrain veterinarians in filling out CVIs and test records appropriately and accurately.
- What is the plan for enhancing the use of ICVIs, if any?
 - Maryland has implementing the use of Global Vet Link in CY2012, VSPPS and mCVI in CY 2018, and has trained staff and informed veterinarians.
 - One major promotion for electronic CVI use is planned for FY19 with follow-up reminders and information on eCVIs.
- What role, if any, does the accredited veterinarian have in providing low-cost, official identification tags/devices to producers?
 - Upon request to our office, accredited veterinarians are issued 51 NEUS tags free of charge. These tags will be discontinued in CA 2020 and an upgrade of free RFID tags will be gradually implemented over CA '19 to meet gap in tag conversion.
 - Marketing is surveying the needs of veterinarians and producers CA 2019 for a promotional RFID tag and reader campaign roll-out in 2020.

4.7.6.2 Livestock markets

- What continuing education efforts are being planned for addressing the concerns of the livestock markets in the jurisdiction?
 - In person discussions, written descriptions of ADT requirements, posters provided, regular inspections, compliance audits to check record keeping systems are maintained.
- What is the plan for accessing or requesting traceability information from livestock markets?
 - We already access this information upon request. As a condition of their tagging agreement (updated in 2018), markets provide access to their tagging records monthly.

4.7.6.3 Industry as a whole

See Appendix II, for specific industry stakeholders and plans; generalities are given in statements below.

- How is industry being informed of the implementation plan?
 - Through the ADT advisory group; industry associations including Maryland Farm Bureau; mailings to producers using (confidential) market and association lists; public media campaigns; Press releases; public notices through the State process of proposed regulations.
- How is the advisory committee being leveraged for this continuing education purpose?
 - As above, through contacts with their part of the industry, and in public or association meetings.
- What other resources are available for industry outreach?
 - Industry has newsletters and mailing lists which can be used to send information. Local major farming newspapers will receive press releases, along with usual press release list members.
- What constitutes industry? What species are involved?
 - Commercial and/or integrated Poultry industry (broilers and layers), cattle, (beef and dairy – small), swine (small farms), sheep and goat (small farms), equine (racing industry, breeding) primarily.
- How are under-represented and under-served communities being included in the outreach plan?
 - They will be informed same as all others; through producer lists, press releases, newsletters, newspapers, farm bureau, etc. The underserved are rural counties which receive rural news through normal channels.

4.8 Monitoring and reporting interstate movement activity (required to be reported through cooperative agreements)

- How will the number of animals and the number of shipments be monitored that move interstate?
 - This data is tabulated monthly in the Governor’s “State Stats” program in excel, and compiled annually in the annual report.
- How will the data be verified or validated?
 - Currently, all ICVIs are reviewed by an administrative assistant, and veterinarians are contacted either in writing or by phone to address corrective actions needed.
- The following data has been reported in quarterly reports beginning with calendar year 2012. These breakouts will be incorporated into the monthly State Stat system to ensure the numbers are compiled routinely and reliably:
 - Number of ICVIs and other interstate movement documents created within the State/Tribe/Territory on a year-to-date basis for move-out animals
 - Number of ICVIs and other interstate movement documents received for move-in animals
 - Number of animals by species and class for move-in events associated with ICVIs and other interstate movement documents, indicating the number of animals officially identified and the number not officially identified
 - Number of animals by species and class for move-out events associated with ICVIs and other interstate movement documents, indicating the

number of animals officially identified and the number not officially identified

- Volume of distribution for each official numbering system/device issued by the State/Tribe/Territory and/or District 1 office, including back tags by market or processing (slaughter) facility
 - See Appendix D- ADT Cooperative Quarterly Statistical Report

V. TRACEABILITY IMPLEMENTATION

5.1 Ranking of priorities for advancement: details shown in Appendix II for each species.

- Maryland Priorities for advancement of ADT are as follows: please note, outreach/education and enhanced enforcement may be staggered, and/or delayed pending legislative and public review process for new regulations:
 - Poultry: Revision of regulations includes ADT additions as needed; set for October 2019, when new law will take effect affecting regulations.
 - Cattle: Revision of regulations includes ADT additions as needed. Target: June 2020.
 - Swine: Revision of State regulations includes ADT additions as needed. Target: Dec 2020.
 - Sheep and Goat: Revision of State regulations or policies and enhanced enforcement of federal Scrapie requirements or any new requirements. Target: Dec 2019.
 - Equine: Revision of State regulations or policies includes ADT and/or enhanced enforcement of current requirements. Target: Dec 2021
- What specific steps are needed to advance from where the initiative currently resides?
 - See Appendix II.
- Is a phased-in approach appropriate over the three-year period?
 - Yes
- Are various components dependent upon measureable successes rather than defined time periods?
 - Variable

5.2 Implementation of objectives.

See Appendix II for specific objectives, and target dates. Some objectives are dependent on final State regulations being adopted; therefore, target dates will be adjusted accordingly throughout the three year period. Set target dates are optimistic

Appendix I Maryland ADT Advisory Group

Name & Organization	Email
Dr. Janine Davenport—Maryland Department of Agriculture	janine.davenport@maryland.gov
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Steve Connelly—Maryland Department of Agriculture	steve.connelly@maryland.gov
Della Penn—Maryland Department of Agriculture	della.penn@maryland.gov
Emily Taylor—Maryland Department of Agriculture	emily.taylor@maryland.gov
Dr. Brooke Ridinger—USDA APHIS	brooke.m.ridinger@usda.aphis.gov
David Manning—USDA APHIS	charles.d.manning@usda.aphis.gov
David McElhaney—Allflex	dmcelhaney@allflexusa.com
Chris Anderson—UMD 4H Animal Science	Canders2@umd.edu
Jim & Barb Starliper—Four States Livestock Auction	fourstateslivestocksales@gmail.com
Colby Ferguson—Maryland Farm Bureau	cferguson@marylandfarmbureau.com
Edward Draper—Wye Angus	edraper@umd.edu
Robert Peters—UMD Extension	bobp@umd.edu
Dr. Josh Skipton—Mid Maryland Dairy Veterinarians	info@midmddairyvets.com
Dr. Matt Lager—Mid Maryland Dairy Veterinarians	info@midmddairyvets.com

Appendix II MD ADT CA'19 Work Plan

ADT	Metric Driven Goal	Proposed Activity	Quarter 1 Accomplishments - 4/1/19-6/30/19	Quarter 2 Accomplishments - 7/1/19-9/30/19	Quarter 3 Accomplishments - 10/1/19-12/31/19	Quarter 4 Accomplishments - 1/1/20- 3/31/20
Objective	Clearly and concisely state the project objectives for the funding period identified in the Recipient's ADT Road Map.	Explain the steps that will be taken to achieve the overall goal of the traceability activity. Objectives should lead to specific results and be measurable. Describe what surveillance or project activity will be achieved and why it is needed.				
Traceability Performance Measures	1.1. Provide an overview of how the Recipient will administer traces to complete the assigned number of TPMs in the Emergency Management Response System 2 (EMRS2).	1.1. Maryland has a solid understanding of the critical need to promptly complete the tasks set by our federal partners. Maryland has found it most productive to dispatch three employees on TPM days. One data entry specialist working with Core One; one ADT general staff member searches the archives of paper records; and an additional ADT data entry specialist with EMRS2 access is needed to complete the exercise.				
	1.1.1. States that had TPM values below the acceptable rating category for Elapsed Time and/or % Successfully Completed in the 4th year comparison (2017 cooperative agreement period) shall identify actions or activities they will implement to improve key tracing capability indicators. The State's 2017 TPM rating report is to be used to determine which TPMs are applicable for this work plan requirement. The Recipient should contact the Program Manager for their report if it was not previously received.	1.2. Maryland continues to be very well ranked on TPM tasks since 2016. We will continue with the above mentioned process through this cooperative agreement year, CA '19				
	1.2. Recipients that identify potential compliance issues in the course of administering TPMs shall report enforcement actions taken to their Assistant Veterinarian in Charge (AVIC) for inclusion in the VS quarterly ADT Enforcement Action Summary Report.	1.3. Maryland will report potential compliance issues in the course of administering TPMs to our area Assistant Veterinarian in Charge (AVIC) for inclusion in the VS quarterly ADT Enforcement Action Summary Report				
Administration of Official Identification	2.1. Explain how official identification devices will be made available to producers and options for increasing the use of official RFID tags. Explain how the RFID tags will be read electronically after the initial application of the tag to ensure the technology is well utilized.	2.1. A promotional campaign for purebred Angus, or closed herd cattle is planned to provide RFID tags to producers or their veterinarians. A wand to read and transfer data is included in the campaign. RFID is required, on all livestock species, for Maryland fairs and shows and may be scanned on entry by MDA officials or fair superintendents. It is the intention MDA will begin RFID tagging in the livestock markets in 2019.				
	2.2. Explain how the Recipient is maintaining records of official identification devices distributed and/or applied to ensure timely retrieval of such records when needed, including devices administered through accredited veterinarians, markets, tagging sites, etc. See the quarterly reporting tabs to report the number and type of official identification devices distributed and/or applied.	2.2. MDA will continue to distribute free NUES tags to producers in exchange for premise information to establish a Premise ID Number (PIN) or Location Identification (LID). MDA will continue to distribute free taggers with tags. If taggers are not available from the USDA warehouse when needed by producers, taggers will be ordered directly from the manufacturer. MDA will allow producers to order "MD" NUES tags directly from manufacturers. Manufacturers will maintain distribution information in their database and submit reports upon request from MDA. These NEUS tags will be discontinued in CA 2020 and an upgrade of free RFID tags will be gradually implemented over CA '19 to meet gap in tag conversion. Marketing is surveying the needs of veterinarians and producers CA 2019 for a promotional RFID				

		tag and reader campaign roll-out in 2020.				
Information Sharing	3.1. Explain what information systems are being used to support traceability and describe the process and in what format APHIS and other States will be provided access to the data when needed. Recipients must include a description of systems utilized for the distribution of official identification, program disease and movement record keeping. Contributing summary data from State traceability systems to AHER is required. Therefore, States must include a plan for sharing data with AHER from their systems supporting traceability and timelines for implementation.	3.1. The CORE ONE database software continues to be used for tag distribution, tag inventory, program disease and vaccination (TB, Brucellosis, Pseudorabies) record-keeping and animal record-retrieval. MDA will maintain records of tag distribution by MDA offices to producers or veterinarians in the CORE ONE inventory database (SQL).RFID tags distributed will be entered into CORE ONE/AIMS database. MDA requests access rights to re-allocate the owner/prem from MDA to the new owner/prem for each RFID distributed in the AIMS database. When training is provided, Maryland will comply with sharing contributing summary data into the AHER on a quarterly basis. Maryland expects to be trained and actively utilizing the AHER system during the Cooperative Agreement year 2019.				
	3.2. Recipients who have developed or obtained their own information systems should explain how their systems are aligned with established data and communication interfaces to ensure compatibility of information systems.	3.2. Not applicable. Maryland has neither developed nor obtained a standalone information system				
Electronic Records	4.0 In addition to the key elements noted in the Traceability Road Maps, activities to increase the volume of electronic records that optimize the search ability of potential animal disease traceability data shall be described. Priority areas to consider include distribution/tag applied records of official identification devices, ICVIs, and other sources deemed applicable for the Recipient (e.g., data from bovine brucellosis vaccination and testing, bovine tuberculosis testing, brand inspection certificates, etc.). Priority should be placed on increasing the utilization of electronic ICVI systems by Accredited Veterinarians. See the quarterly reporting tabs to report the number of category II accredited veterinarians using eCVI's, the number of electronic ICVIs issued per species covered under ADT, and a listing of the eCVI applications utilized by accredited veterinarians within the State.	4.0. Maryland does not have a fully integrated system that can communicate with other databases; most ICVI test chart data is hand entered into CORE ONE. Data will be shared with other states requesting tag traces via phone or email upon request. Electronic storage of ICVI data will not be pursued in 2019, except for those ICVIs already prepared in an electronic format. Implementation of total ICVI electronic storage is pending a national ICVI data standard. Test records are only received by mail and are neither electronic documents nor digital scans. MDA has a need for electronic TB and Brucellosis test records. Having these forms available electronically should decrease the manual data entry, limit the data entry errors, integrate into CORE ONE seamlessly, and decrease the time limitations on traceability. Daily data is entered into the CORE ONE. Weekly compilation of complete/incomplete/incorrect TB and Brucellosis records are compiled for audit. Monthly audit of TB records and Brucellosis test charts are reviewed with VS staff.				

<p style="text-align: center;">Outreach</p>	<p>5.0 Implementation of an outreach plan for the Recipient's approach to support ADT. See the ADT Cooperative Agreement Workbook quarterly reporting tabs for the reporting of ADT outreach activities.</p>	<p>5.0. Maryland will attend/ provide outreach and/or host: the ADT Advisory Group providing regional meetings with our stakeholders and federal and contiguous state partners to discuss regional movements, outreach, and resources. The Advisory Group will review new State regulations prior to comment period. Conference calls in lieu of in person meetings may be used to discuss ADT proposed policies on the State level, replacement of members and other interests or needs of the Advisory Group.; Market Operators- MDA ADT Data entry staff, with the assistance from an IT consultant; improve electronic capture at one market through focused technology sessions with market operator administrators; Continued Education Credit Units for Veterinarians -a class focusing on the integration of RFID tag technology software with the use of the electronic CVI. Participants will receive CEUs (as determined by the MD Veterinary Board), education on electronic forms in use, and an RFID applicator; Producers- Develop an outreach campaign to target and promote pure breed beef and niche operators use of RFID tag at the farm of origin; Fairs and Shows - Continue Policy of mandatory use of RFID for all species in Maryland Fairs and State Shows (MAFSS); provide upon request, RFID LPR and associated equipment to fair superintendents. Develop a schedule to incorporate RFID readers at 2020 MAFS, and county 4H weigh-ins prior to local Fairs and State Shows; and Information on new or existing policy will continue to be distributed at areas of commingling (sales, exhibitions) and sent to stakeholders by email or press release and social media as appropriate., targeting Auction Markets and local Fairs and Shows. At least one letter from MDA to producers regarding Approved Livestock Tagging Facilities and tag availability will be distributed at markets and through market bills, courtesy of market operators; internally VS local resources along with the Maryland Department of Agriculture will attend local meetings, have representation and participation in various round table discussions, and provide manned exhibition hall booth information regarding ADT.</p>				
<p style="text-align: center;">Compliance and Enforcement of traceability regulations</p>	<p>6.0 The Recipient, in collaboration with the AVIC, is to document processes to examine and report compliance with ADT requirements for official identification and interstate movement defined in 9 CFR Part 86. Additionally, the Program Manager and Recipient are encouraged to work cooperatively on ADT enforcement activities, in particular when the State has regulations that align with the Federal regulations. To avoid duplication of reporting, the State should provide their AVIC with counts of enforcement activities to augment the VS quarterly ADT Enforcement Action Summary Report.</p>	<p>6.0. Maryland will promulgate regulations which identify operators, species, requirements for tagging, requirements for records and records management utilizing the 2018 executed State Tagging Agreement to support fair, consistent implementation of effective enforcement actions; Education, Warning and Non-compliance letters have been developed and are issued for ADT non-compliant actions, such as untagged animals leaving a market, or untagged animals moving into a Maryland market from out of state without an Owner Shipper Statement. MDA will review, in conjunction with USDA APHIS Assistant District Director, consistent enforcement options for producers /owners/ tagging sites not compliant with ADT requirements for tagging and ICVI s moving interstate; MDA Animal Health staff will continue to inspect, audit, provide tagging assistance, data management assistance, education and outreach to four livestock auction</p>				

		<p>markets/ tagging stations- four and a half (4.5) times per week. MDA will utilize three (3) FTE Ag Inspectors, one (1) contractual Ag Inspector, and two (2) field veterinarians and one (1) Assistant State Veterinarian, not funded through this agreement, to complete the aforementioned tasks; MDA set new requirements for Official Identification of RFID tags in the 2017 Fair and Show Season. Alongside Maryland Extension agents, MDA Animal Health staff will inspect and provide education, outreach and tagging assistance before and during the 2019 Fair and Show Seasons. MDA will enforce RFID tagged animals for the 2019 Fair and Show season.</p>				
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Appendix III FY 2019 Maryland ADT Financial Budget

ADT DETAILED FINANCIAL PLAN

RECIPIENT NAME: Maryland

TIME PERIOD: April 1, 2019 - March 31, 2020

This Financial Plan must match the SF-424-A, Section B – Budget Categories. Funding requested under the budget categories must be described in detail within the narrative. If budget modifications are approved applicants must submit a revised ADT budget template with their final report.

Item	Quantity	Total Budget	
Personnel	ADT Data Entry FTE	0.3 FTE @ \$40,861/year	\$12,258.00
	Personnel Subtotal		\$12,258.00
Fringe Benefits	ADT Data Entry FTE	47%	\$5,762.00
	Fringe Subtotal		\$5,762.00
Travel			
	Travel Subtotal		\$0.00
Equipment - RFID Readers		0	
		0	
Equipment - IT Hardware			
Equipment - Other			\$0.00
	Equipment Subtotal		\$0.00
Supplies - Tags	RFID - LF (HDX)	4,250 tags @ \$1.75/ tag	\$7,438.00
	Swine tags	400 tags@ \$1.55/tag	\$700.00
	RFID - LF (HDX)	1000 tags @\$2.50/tag	\$2,500.00
Supplies - Other	Tag applicators	40 @ \$18.60/piece	\$744.00

	Outreach materials- vendor supplies and production copies		\$506.00
	Trimble PDA NMDAGM121-00 900C (MIMS-like PDA)	1 @ \$1360	\$1,360.00
	Supplies Subtotal		\$13,248.00
Contractual - IT Systems			
Contractual - Other			
	Contractual Subtotal		\$0.00
Other	Shipping for identification devices		\$300.00
	Regional ADT mtgs (coffee service, catering, registration, lodging, venue rental and supplies)		\$1,890.00
	Regional ADT continuing education training (coffee service, catering, registration, lodging, venue rental, and supplies)		\$1,500.00
	Regional USDA Emergency Response training (venue location, lodging , consultants, catering and supplies)		\$2,500.00
	Other Subtotal		\$6,190.00
Totals	TOTAL DIRECT COSTS		\$37,458.00
	INDIRECT COSTS (% On Total Direct Costs)*		\$10,099.00
	TOTAL PROJECT COSTS		\$47,557.00
	Less Cooperator Share		
	APHIS Cost Share		\$47,557.00