

**MEMORANDUM OF UNDERSTANDING  
BETWEEN  
MICHIGAN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT  
AND THE  
MICHIGAN DEPARTMENT OF NATURAL RESOURCES  
AND THE  
UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE  
VETERINARY SERVICES**

**ARTICLE 1 - PURPOSE**

The purpose of this Memorandum of Understanding (MOU) is to outline and agree on the principles required for continuing and advancing the two designations of State status regarding the risk of bovine tuberculosis (TB), namely, Modified Accredited status and Accredited Free status pursuant to Title 9, Code of Federal Regulations (CFR) Part 77, and the Tuberculosis Eradication Program's Uniform Methods and Rules, Effective January 1, 2005, (UM&R). It outlines an agreed upon framework for implementing and assessing new risk-based strategies to address bovine TB in both livestock and wildlife in Michigan with the objective of achieving Accredited Free status.

**ARTICLE 2 - BACKGROUND**

In October 2004, the Michigan Department of Agriculture and Rural Development (MDARD) submitted an application for split-state status using the criteria established by the United States Department of Agriculture (USDA) for recognition of a zone or region with distinct bovine tuberculosis status, as delineated in 9 CFR 77.3 *et seq.*

Bovine tuberculosis regulations as delineated in 9 CFR 77.4(a)(3) require, in pertinent parts, that a state must enter into an MOU with APHIS in which the state agrees to adhere to any condition for zone recognition particular to that request within the Cooperative Tuberculosis Eradication Program.

In 2009, 2011, and 2014 MOU's were signed by MDARD, the Michigan Department of Natural Resources (MDNR), and USDA, Animal Plant Health Inspection Service (APHIS), Veterinary Services (VS), which established criteria for maintenance of an Accredited Free, Modified Accredited Zone (MAZ) and Modified Accredited Advanced Zone (MAAZ) for bovine tuberculosis (TB) in Michigan. Pursuant to the CFR, the MOU's were executed by the State of Michigan in order to agree on conditions for maintaining and advancing zones based on disease risk, and to continue progression toward the ultimate goal of eradicating bovine tuberculosis from the northern portion of Lower Michigan. Michigan obtained Accredited Free status for all counties except Alcona, Alpena, Montmorency, and Oscoda on September 10, 2014.

### ARTICLE 3 - AUTHORITIES

The USDA APHIS VS (referred to as the "Service") authority to control and/or eradicate bovine TB exists under the Animal Health Protection Act, in section 10411 (7 USC 8310) and in 10409 (7 USC 8308), and provides, among other things, the authority for the Service to cooperate with States or political subdivisions thereof, domestic or international associations or organizations, Indian Tribes, and individuals, to improve livestock and to control or eradicate any communicable diseases of livestock.

MDARD and MDNR's authorities exist under Michigan's Animal Industry Act, P.A. 466 of 1988, as amended; the Natural Resources and Environmental Protection Act, P.A. 451 of 1994, as amended; and the Privately Owned Cervidae Producers Marketing Act, P.A. 190 of 2000, as amended.

### ARTICLE 4 - MUTUAL AGREEMENT

It is mutually agreed upon that the cattle, bison, and cervid rules and regulations of the National Tuberculosis Eradication Program will be followed, including VS Memos, VS Notices, pertinent parts of the Code of Federal Regulations; the Uniform Methods and Rules, January 1, 2005, including any future revisions; and the Cervidae Uniform Methods and Rules, January, 1999, including any future revisions.

### ARTICLE 5 - COOPERATOR RESPONSIBILITIES

Michigan Department of Agriculture and Rural Development is responsible for the following provisions:

1. Requiring official electronic identification for any cattle and bison moved from premises in the Modified Accredited Zone and the ability to retrieve information concerning animal identification and animal movement within 48 hours.

Cattle may move from a premises and receive official electronic identification at a licensed livestock auction market if they do not cross a zonal boundary.

2. All MAZ cattle will be required to be double tagged at the time of TB testing with a producer supplied official electronic identification tag and a secondary identification tag.
3. MDARD will maintain and enforce a certificate system to track interzone cattle movements from farm of origin to final destination from the MAZ-and non-WRM verified herds in the counties of Cheboygan, Otsego, and Presque Isle. This certificate system shall be substantially the same as CFR (77.3) requirements for interstate movements. All individual cattle and bison data as specified in 9 CFR, 86.1 Definitions, Interstate Certificate of Veterinary Inspection (ICVI), will be included on the certificate. The certificate must accompany the cattle and bison upon movement across a zonal boundary except as exempted below:
  - Cattle moving directly to slaughter from the first livestock market can move on the market invoice listing the individual animal back tags, as an interim measure, until MDARD and USDA, APHIS, VS can develop and implement an alternative certificate system that does not impede the flow of commerce.
  - This requirement does not apply to cattle moving to the Gaylord market because the tuberculosis test status of all incoming animals is verified on-site. The invoice generated by the Gaylord market meets this requirement provided it contains the same information required on a movement certificate (excluding the sellers name and address and animal age) along with individual animal weights.

4. Movement of cattle other than directly to slaughter from herds in the MAZ that do not maintain WRM verified status will be prohibited.
5. Movements of cattle and bison from the MAZ will be monitored in livestock auctions within the state on sale days to confirm that the cattle and bison are identified, tested, and permitted, as required, and through other methods as necessary to ensure compliance with requirements. Market coverage by MDARD and/or USDA APHIS VS staff will be based on the likelihood of MAZ animals being sold in each market. The following markets will have routine and continuous coverage on sale days: Gaylord, St. Louis, Cass City, and Marion. Other markets will be monitored as needed to verify compliance with applicable laws.
6. MDARD will utilize State authority to randomly intercept and inspect vehicles that are transporting livestock on public roads within Michigan for compliance with State and Federal split state status requirements and this MOU. MDARD will maintain an agreement with a law enforcement agency for an average of 10 hours of patrols per week conducting stops and inspections pertaining to vehicles that may be transporting cattle between zones within Michigan to ensure that they are being moved in compliance with testing, official identification, and movement certificate requirements. MDARD will establish the amount of monitoring to be done (which includes, on the average, at least one stop per three days) and routinely evaluate data to ensure that if the trend for illegal movements over the period of one year is increasing, that additional measures are implemented to decrease illegal movements. Total movements will be calculated by the number of permits and certificates issued.

If funding levels change, MDARD and USDA will develop a mutually agreed upon plan for monitoring movements of animals that is consistent with controls necessary between Modified Accredited and TB Free zones.

7. Summary reports of investigations and vehicle inspections on public roads will be included in the required bovine tuberculosis reports (VS 6-38 Form narratives).
8. MDARD will include information regarding the following in the annual bovine TB reports (VS Form 6-38 Form narratives)
  - Surveillance, education, and other activities in custom slaughter plants.
  - The number of cattle sent to slaughter by zone of origin.
  - The activities completed and progress made by cattle and bison owners, with assistance by MDARD, in implementing wildlife-risk reduction practices on farms in the areas with highest prevalence of bovine tuberculosis in free-ranging cervids so that on-farm risk reduction practices can be assessed and measured.
  - Other activities as specified in VS Memorandum 552.29.

9. MDARD will conduct risk-based surveillance for bovine tuberculosis in cattle as follows:

MAZ - Counties of Alcona, Alpena, Montmorency, and Oscoda

1. Whole Herd TB Testing

- a. Annual whole herd testing of all herds except freezer beef herds.
- b. Whole herd testing will include all cattle 12 months of age and older, and all non-natural additions of any age.

**Current TB Free Zone** - All other counties in Lower Michigan and the entirety of Upper Michigan

1. Whole Herd TB Testing in the counties Cheboygan, Otsego, and Presque Isle for two years.
  - a. Whole herd testing of cattle herds which have not completed a whole herd test since April 1, 2014.
  - b. Testing will be completed on two cycles: April 2016 – March 2017 and April 2017 – March 2018.
  - c. Approximately one half of the herds will be included in each testing cycle.
  - d. Freezer beef herds and feedlots where all animals are sold directly to slaughter or through a licensed livestock market directly to slaughter are not included in this testing.
  - e. Whole herd testing will include all cattle 24 months of age and older, and all non-natural additions of any age.

If no TB infected cattle, bison, privately owned cervidae, or free-ranging cervidae are identified in these areas by April 1, 2018 MDARD and USDA will re-evaluate the requirement for whole herd testing surveillance in these areas.

2. Pre-movement testing of cattle sold from herds in the counties of Cheboygan, Otsego, and Presque Isle that do not have a verified Wildlife Risk Mitigation Status.
3. Trace Source testing (6-4A).
4. Trace Exposed testing (6-4B).
5. Slaughter Trace testing (6-35)
6. Circle testing of all cattle herds within a 10 mile radius around any instances of TB identified in a cattle herd, done with the consultation and concurrence of USDA Veterinary Services based on epidemiologic considerations.
7. Circle testing of all cattle herds within a 10 kilometer radius around any instances of TB identified in free-ranging cervidae, done with the consultation and concurrence of USDA Veterinary Services based on epidemiologic considerations.

Any herds which are not in compliance with surveillance requirements will be handled according to MDARD Compliance and Enforcement Policies.

10. MDARD will quarantine all premises that contain animals suspicious for the presence of *M. bovis* as outlined in the 2005 Uniform Methods and Rules until determined to be negative for bovine tuberculosis. On a case by case basis, USDA APHIS VS may approve movement of animals off a quarantined premises where animal welfare or other concerns related to quarantined animals exist. USDA APHIS VS will expedite appraisal and approval of indemnity for suspect or reactor animals that are ordered destroyed.

All TB infected herds in Michigan are quarantined until depopulated or until a test-and-removal program as specified by USDA is completed.

11. MDARD and the Service will continue to collaborate with USDA APHIS Wildlife Services (as USDA, APHIS, Wildlife Services resources allow), university and agency based researchers, and representatives of livestock producers to revise the strategy for Wildlife Risk Mitigation Project (WRMP) development as determined by a mutually agreed upon risk-based assessment process. The Wildlife Risk Mitigation Project is designed to change the long-term cattle raising practices that may lead to an increased risk of bovine TB infecting herds from surrounding deer populations.

MDARD, USDA APHIS VS, or USDA APHIS WS personnel will conduct winter inspections of each Wildlife Risk Mitigation verified herd located in the MAZ on an annual basis.

MDARD, USDA APHIS VS, or USDA APHIS WS personnel will conduct winter inspection of each Wildlife Risk Mitigation verified herd located in the counties of Cheboygan, Otsego, and Presque Isle on a biennial basis. Any herds which have had a violation on a winter inspection must receive a winter inspection the following year.

12. MDARD will complete herd inventory reconciliation for freezer beef herds and any whole herd test performed in the MAZ by regulatory or accredited veterinarians within 60 days of a whole herd test. Herd inventory reconciliation means comparing herd inventories between two dates, identifying animals that cannot be accounted for by current databases, contacting owners to gather any additional information, and assigning animals to the compliance unit for investigation or placing the animal on the watch list. It is recognized that prioritization of workload during high-volume testing and movement seasons may result in herds extending beyond the 60 day timeline.
13. All testing for quarantine release or testing of high-risk herds will be performed by regulatory veterinarians only. High-risk herds shall consist of:
  - a. 60 day whole herd retests after the removal of a reactor animal, 90 days for privately owned cervids (POC).
  - b. Herds under test and remove herd plans.
  - c. Herds with a history of lesions suggestive of bovine TB.
  - d. Newly assembled herds on premises where a herd has been depopulated because of bovine TB.
  - e. Herds in contact with affected herds, e.g., fence line contact.
  - f. 6-4A herds (trace-ins).
  - g. 6-4B herds (trace-outs).
  - h. 6-35 herds (slaughter traces)
  - i. Other herds of high interest as defined through collaboration with VS and the Cattle Health Program.
14. A bovine TB management plan will be maintained and updated as significant developments occur that may alter the implementation of the plan, or within six months following the end of the bovine TB management plan period.

Michigan Department of Natural Resources is responsible for the following provisions:

1. Developing and maintaining a successful Wildlife Disease Management Plan. This plan must include the following minimum provisions:
  - A. Alcona, Alpena, Montmorency, and Oscoda Counties: Active sampling of free-ranging deer at a rate of 2,800 deer annually. For the purposes of this MOU, active sampling is defined as testing of free-ranging cervids resulting from deliberate MDNR actions to gather samples (e.g., active promotion of testing of hunter-harvested deer at check stations, mandatory testing of all elk, mandatory testing of deer taken under Disease Management Assistance permits, crop damage permits, Disease Control Permits, etc.).
  - B. Cheboygan, Crawford, Iosco, Ogemaw, Otsego, Presque Isle, and Roscommon Counties: Active sampling of free-ranging deer (as defined in A. immediately above) at a rate of 1,500 deer annually, geographically distributed as follows: at least 300 deer each from Iosco and Presque Isle Counties, with the remainder obtained from

the remaining five counties as deer harvest and staff allow. In the event the free-ranging deer harvest in a particular year is insufficient to allow the agreed upon rate to be met, a sampling rate sufficient to meet the intent of this provision will be mutually agreed upon by USDA, APHIS, VS and MDNR on a case-by-case basis. Grouping of deer in these counties for the purposes of this MOU does not mean MDNR considers them to belong to the same biological or sampling populations.

- C. Passive surveillance will be conducted through examination and testing of potentially lesioned animals submitted to the MDNR by hunters throughout Michigan. Hunters are educated to look for tuberculosis lesions through information in the MDNR's Hunting and Trapping Guide. For the purposes of this MOU, passive surveillance is defined as testing of free-ranging cervids voluntarily submitted to MDNR by the public as a part of ongoing statewide monitoring of wildlife health. For example, MDNR receives approximately 100 deer for examination per year from members of the public concerned about the health of a particular animal. Other than being promoted through MDNR public education efforts, passive surveillance does not entail active effort on the part of the agency to acquire samples.
2. If bovine TB is detected in livestock in a county outside those named in 1.A&B above, heightened active sampling of free-ranging deer will be initiated in an area surrounding the herd that is determined appropriate with the consultation and concurrence of USDA Veterinary Services based on epidemiologic considerations. Sampling will continue at the agreed upon rate for a period of at least three consecutive years following the last year that a case of bovine TB was detected in free-ranging cervids or livestock in that area.
  3. If bovine tuberculosis is detected by MDNR passive surveillance in free-ranging cervids in a county outside those named in 1.A&B above, heightened active sampling of free-ranging deer will be initiated within a 10-mile radius of the location of the TB-positive cervid, at a rate sufficient to detect a TB prevalence of at least 1% with 95% confidence ( $\geq 300$  deer annually). Sampling will continue at the agreed upon rate for a period of at least three consecutive years following the last year that a case of bovine TB was detected in free-ranging cervids in that 10 mile radius area. In the event the free-ranging deer population in an area is insufficient to allow the agreed upon rate to be met, a sampling rate sufficient to meet the intent of this provision will be mutually agreed upon by USDA, APHIS, VS and MDNR on a case-by-case basis.
  4. For the purposes of this MOU, if no case of bovine TB has been detected in free-ranging cervids or livestock by sampling at the agreed upon rate for a period of at least three consecutive years, the prevalence of bovine TB will be considered to have reached an undetectable level. No further active surveillance will be mandated until such time as bovine TB is once again detected in either free-ranging cervids or livestock.
  5. The MDNR, with collaborators, will continue to conduct research concerning the epidemiology of bovine tuberculosis and potential intervention strategies. Relevant research findings will be incorporated into existing surveillance and disease reduction activities as resources allow.
  6. Reporting of indices that are used to monitor and evaluate the progress of the Wildlife Disease Management Plan will be included in the annual bovine tuberculosis report (VS 6-38 narrative).

## ARTICLE 6 - SERVICE RESPONSIBILITIES

USDA, APHIS, VS (referred to as the "Service") is responsible for the following:

1. Providing expertise in epidemiology, diagnostic support, risk assessment, and testing.
2. Providing assistance with improving slaughter surveillance at Federal slaughter establishments, including assisting MDARD with obtaining cattle movement data from other States.
3. Assisting with indemnity payments for whole herd depopulations, diagnostic removal of supplemental test reactors, animal and specimen transportation fees, laboratory analysis, data storage, and management support. The Service will assume responsibility for timely appraisal and payment for animals indemnified with federal funds.
4. Assisting the Cooperator with cattle and bison movement monitoring and compliance investigations involving movement of cattle between zones and interstate through the activities of USDA, APHIS Investigative and Enforcement Services (IES) officers.
5. Assisting USDA, APHIS, Wildlife Services (WS) with wildlife-risk management activities on farms located within the MAZ and the counties of-Cheboygan, Otsego, and Presque Isle.
6. Providing support for acquisition and development for electronic identification, hardware and software in accordance with Animal Disease Traceability and USDA regulations. Provide data entry assistance necessary to monitor tuberculosis testing and animal movements within the MAZ and the counties of Cheboygan, Otsego, and Presque Isle, and between zones, and assist with fulfilling reporting requirements of split state status and this MOU.
7. Reviewing the progress of the bovine TB eradication activities covered under the split-state status and this MOU and to report recommendations to the Cooperators.
8. Recognizing that bovine TB may exist at an undetectable level in free-ranging deer in any county that has undergone surveillance at the agreed upon rate with no findings of bovine TB in free-ranging deer for a period of five consecutive years.
9. Supporting implementation of the Wildlife Risk Mitigation Project as outlined in Article 5, MDARD Responsibilities, Item 11.

## ARTICLE 7 - MAINTENANCE OF STATUS

To maintain status, the requirements and agreements of the MOU must be in place, and the prevalence rates in cattle and bison for each zone are in compliance with requirements of the *CFR*. The administrator will use his/her discretion to allow up to three (3) newly identified TB affected cattle and bison herds during any consecutive 12-month period for maintaining status in the MAZ. In the event that more than (3) newly infected herds are identified in the MAZ in any consecutive 12 month period USDA will conduct an evaluation and develop a recommendation for the Administrator regarding TB Status determination.

To be eligible for application for increased status, the following requirements apply:

1. Advancement from MAZ to MAAZ status -

"To qualify for modified accredited advanced status, a modified accredited State or zone must demonstrate to the Administrator that it complies with the provisions of the Uniform Methods and Rules--Bovine Tuberculosis Eradication, Effective January 1, 2005 and that tuberculosis has been prevalent in less than 0.01 percent of the total number of

herds of cattle and bison in the State or zone for the most recent 2 years. "Except that: The Administrator, upon his or her review, may allow a State or zone with fewer than 30,000 herds to have up to three affected herds for each of the most recent two years, depending on the veterinary infrastructure, livestock demographics, and tuberculosis control and eradication measures in the State or zone. Title 9 Code of Federal Regulations Part 77.11.

2. Advancement from Modified Accredited Advanced to Accredited Free status -

"To qualify for accredited-free status, a modified accredited advanced State or zone must demonstrate to the Administrator that it complies with the provisions of the Uniform Methods and Rules--Bovine Tuberculosis Eradication,-Effective January 1, 2005 has zero percent prevalence of affected cattle and bison herds, and has had no findings of tuberculosis in any cattle or bison in the State or zone for the previous five years.

"Except that: The requirement of freedom from tuberculosis is two years from the depopulation of the last affected herd in States or zones that were previously Accredited free and in which all herds affected with TB were depopulated, three years in all other States or zones that have depopulated all affected herds, and three years in States or zones that have conducted surveillance that demonstrates that other livestock herds and wildlife are not at risk of being infected with TB, as determined by the Administrator based on a risk assessment conducted by APHIS." Title 9 Code of Federal Regulations Part 77.9

Progress toward both preventing the spread of tuberculosis among and eradicating the disease from wildlife through a successful Wildlife Management plan, will be monitored utilizing trends over time in three indices within Deer Management Unit (DMU) 452:

1) apparent prevalence in deer of all ages other than fawns; 2) apparent prevalence in yearling deer (ages 1 and 1.5 years); and 3) age-specific force of infection.

Reporting of these indices will be included in the annual bovine tuberculosis report. Other trend indices may be added to or substituted for these as mutually considered appropriate by MDNR and USDA. For purposes of this MOU, trends will be assessed over the 5 year period including and preceding the most recent deer hunting season.

The Wildlife Management plan must be reviewed by MDNR annually and a new plan jointly developed between the MDNR and the Service when needed. If two or more of the Wildlife Management plan indices noted above demonstrate a statistically significant increasing trend over the preceding five year period for three consecutive reporting years, a review of the bovine tuberculosis wildlife management program will be conducted by the Service to determine the recommended action for the Administrator to take, which may include impacts on state or zonal status. For the purposes of this MOU, statistical trends in prevalence will be assessed using a two-tailed Cochran-Armitage Test for Trend.

#### ARTICLE 8 - FINANCIAL OBLIGATION

Execution of this MOU does not constitute a financial obligation on the part of the Service or Cooperator. Each signatory party is to use and manage its own funds in carrying out the purpose of this MOU.

#### ARTICLE 9 - LIMITATIONS OF COMMITMENT

This MOU, and any continuation thereof, shall be contingent upon available funds appropriated by each party's funding source. The Service receives its funds through appropriations from the Congress of the United States. It is understood and agreed that any monies allocated for purposes covered by this MOU shall be expended in accordance with its terms and in the manner prescribed by the fiscal regulations and/or administrative policies of the party making the funds available. If fiscal resources are to transfer, a separate agreement must be developed by the parties.

Cooperator (MDARD and MDNR) funds are subject to and contingent upon, available funding from the Michigan Legislature and/or Executive branches. Funds may be limited, discontinued, or eliminated if the Legislature fails to appropriate sufficient funds, or if an Executive Order, directive, or departmental decision limits, discontinues, or eliminates the ability of the Cooperator to utilize appropriated funding.

#### ARTICLE 10 - CONGRESSIONAL RESTRICTION

Pursuant to 41 USC 22, no member of or delegate to Congress shall be permitted to share any or part of this MOU or to any benefit to arise there from.

#### ARTICLE 11 – LIABILITIES

APHIS will hold the Cooperator harmless from any liability arising from the negligent act or omission of the APHIS officer or employee acting within the scope of his or her employment to the extent compensation is available pursuant to the Federal Tort Claims Act (FTCA), except for negligent actions or omissions of the Cooperator, its employees, agents or subcontractors, and employees or agents of the subcontractor(s). Such relief shall be provided pursuant to the procedures set forth in the FTCA and applicable regulations.

The United States of America will not be held liable for any property damage or personal injury resulting from the use of federally owned real estate and personal property loaned to the Cooperator under this MOU. The Cooperator assumes responsibility for any and all property damage and personal injury resulting from the use of said real and personal property and further agrees to save and hold harmless the United States of America from any and all claims for such property damage and personal injury. The Cooperator further agrees to reimburse the United States of America by and through the Service for any property damage to any Federally-owned real and personal property, less normal wear and tear, which may occur through the use of said property under this MOU.

#### ARTICLE 12 – CONDITIONS

Upon signature of this MOU, the State of Michigan MDARD and MDNR agree to the conditions for split-state status for bovine TB as defined in 9 CFR Part 77. This MOU is subject to review annually by both the Cooperator and the Service in order to maintain split-state status for bovine TB in Michigan.

#### ARTICLE 13 – AMENDMENTS AND TERMINATION

This MOU may be amended at any time by mutual agreement of the parties in writing. This MOU may be terminated by either party upon sixty (60) days written notice to the other party.

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE  
VETERINARY SERVICES

BY:   
Langston D. Hull, DVM, PhD  
Director  
Cattle Health Center

5/19/2016  
Date

MICHIGAN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

BY:   
Jamie Clover Adams  
Director

4/8/16  
Date

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

BY:   
William E. Moritz, PhD  
Director

4/20/16  
Date