

**Michigan Department of Agriculture
Bovine Tuberculosis Eradication Program
Proposed Director's Order
(Issued July 21, 2009)
Public Hearing and Comment Report**

Brad Deacon, Hearings Officer
September 8, 2009

Pursuant to the Animal Industry Act, (Public Act 466 of 1988, MCL 287.701, et seq.) the Director of the Michigan Department of Agriculture

may develop, implement, and enforce scientifically based movement restrictions and requirements including official bovine tuberculosis test requirements, prior movement permits, official intrastate health certificates or animal movement certificates to accompany movement of animals, and official identification of animals for movement between or within a disease free zone, surveillance zone, and an infected zone, or any combination of those zones. (MCL 287.709 (8)).

On July 21, 2009, Director Don Koivisto issued a proposed order for the Establishment of Zones for Bovine Tuberculosis. The proposed order will shrink the Modified Accredited Zone and affect all interstate and intrastate cattle and bison movement.

Part 1, Legal Requirements

Before issuing the final zoning requirements, the department must undertake a number of steps in order to assure that there has been notice to the public about the proposed changes, and opportunities for public comment. Those steps, required by the Animal Industry Act (MCL 287.709 (9)), include:

- 1) Develop scientifically based zoning requirements with advice and consultation from the livestock industry and veterinary profession.
- 2) Place the proposed zoning requirements on the commission of agriculture agenda at least 1 month before final review and order by the director. During the 1-month period described in this subdivision, written comments may be submitted to the director and the director shall hold at least 1 public forum within the affected areas.
- 3) Place the proposed zoning requirements at least 1 month before implementation in a newspaper of each county within the proposed zoning requirement area and at least 2 newspapers having circulation outside of the proposed zoning requirement area.

The department developed the scientifically based zoning requirements with the advice and consultation from the livestock industry, veterinary profession, and university. The original proposed zoning requirements were on the Commission of Agriculture's agenda

as informational on July 21, 2009. An update on the proposed zoning order, including the results of the informational meetings and the public hearings, is scheduled for the Commission agenda for the September 16, 2009 meeting.

The department modified the original order with input from the livestock industry, veterinary profession, university, and other stakeholders, as well as upon the advice of the Office of Attorney General.

The department issued a press release on June 23, 2009 announcing the public input forums. The written comment period began with a press release issued July 21, 2009, and another press release on August 28, 2009 extending the period for public comment until September 8, 2009, and announcing the public hearing dates, times, and locations.

The department went beyond the minimum required one public forum within each area. Public forums, in addition to the Commission meetings, were held between July 7, 2009 and July 10, 2009 in West Branch, Tawas City, Alpena, Atlanta, Gaylord, Cheboygan, Harbor Springs, and Traverse City. In addition, three formal public hearings were held: September 2, 2009 in Lansing; September 3, 2009 in Atlanta; and September 3, 2009 in Harbor Springs.

The proposed zoning requirements were placed in the Alcona County Review, the Alpena News, the Charlevoix Courier, Cheboygan Daily Tribune, Crawford County Avalanche, Gaylord Herald Times, Iosco County News Herald, Lansing Community Newspapers (Ingham County News, Williamston, Grand Ledge, and Holt), Montmorency County Tribune, Mt. Pleasant Morning Sun, Ogemaw County Herald, the Oscoda Press, Petoskey News Review, Presque Isle County Advance, Traverse City Record Eagle, and the Michigan Farm News. The legal notices ran between August 19, 2009 and August 26, 2009.

Part 2, Comments at Informational Forums

At each of the public forums, MDA presented background information on the Bovine TB program, and went through the proposed order and its requirements. MDA staff answered questions on a variety of areas. Attendees were invited to ask questions, and told that their comments and concerns would be noted and consolidated, and were also encouraged to put any additional comments in writing.

Producers generally expressed support for changing the zonal boundaries as part of the broader efforts to eradicate bovine tuberculosis and decrease the size of the areas impacted by movement and testing requirements. Producers within the Modified Accredited Zone expressed concern about the rest of the State moving forward while their area continues to have Bovine TB cases in both cattle and deer. Producers statewide expressed concerns about wildlife and management of deer and asked many questions about the Wildlife Risk Mitigation Program.

Part 3, Public Hearings

At the three public hearings, MDA staff presented background information on the program, went through the proposed order, and then answered questions. The public was invited to speak on the record about the proposed order. Attendees were told that their comments would be summarized for the Director and the Commission, and that anything in writing would be distributed to the Director and all Commissioners.

At the Lansing hearing, three members of the public attended and commented:

- Amy Spray, representing the Michigan United Conservation Clubs;
- Garry Wiley, representing the Michigan Cattlemen's Association;
- Monte Bordner, representing Bordner Farms and the Michigan Cattlemen's Association

Comments from cattle producers at the Lansing hearing included concerns that Michigan is being held to standards by the USDA-APHIS-Veterinary Services that are not being enforced on other states that have found Bovine Tuberculosis relating to testing and movement restrictions. They wanted to know what the proposed timeline is for pursuing TB-Free status for the majority of the Lower Peninsula, and expressed concerns that MDA and the State of Michigan has spent too much time and money looking for the disease where there wasn't any to find. They also questioned the commitment of the State to eradication of the disease, including both management of wildlife and MDA's vision to ultimately no longer have a Bovine TB program. Comments from MUCC included strong support for the Wildlife Risk Mitigation Plans and a suggestion that implementation of and compliance with those plans should be mandatory for producers to receive indemnification.

At the Atlanta hearing, eight members of the public attended. Those wishing to speak or have their attendance recorded included:

- Louella Byelich, Harrisville
- John Bradley, Hillman
- Adolph Schleben, Rogers City
- Beverly Bodem, representing Michigan Senator Tony Stamas
- Brandon Fewins, representing U.S. Senator Debbie Stabenow

Producers at this hearing had numerous questions about the Wildlife Risk Mitigation Program and wildlife management in general. Producers asked about prevalence numbers, and how individual producers could keep their herds from contracting the disease in an area of the state that continues to have a deer herd that has Bovine TB infection. Some of the producers expressed the belief that the State of Michigan, including both MDA and the Michigan Department of Natural Resources are not committed to eradicating the disease and instead are making it unlikely that livestock production will continue in the area into the future. They also said that to them it appears the Michigan cattle industry would also prefer to get out of having a bovine TB program by no longer having cattle in Northeast Michigan. One participant suggested that reductions by MDNR in locations to turn in deer heads for testing will make it more difficult for farmers to turn in the deer heads that are necessary to generate data on the disease. One participant suggested that the zonal border should also move Presque Isle

County into one of the subzones, as there have not been any recent infected cattle herds or deer found there.

At the Harbor Springs hearing, three people attended. Those who wished to speak and have their attendance recorded included:

- Mark & Toni Drier, of Levering

Questions at this hearing included the status of the Wildlife Risk Mitigation Program and whether the focus would be on winter, or on year round conditions. Producers also had specific questions about how the proposed zonal boundary would impact movement of animals across the boundaries and at markets. They also asked about the proposed implementation date of the Director's Order. Producers at this hearing also expressed concern about deer numbers and the ability to take and use permits. They also suggested that MDA post notice of informational meetings and public hearings at area feed stores and cooperative/elevators.



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
LANSING

DON KOIVISTO
DIRECTOR

MDA ANIMAL INDUSTRY DIVISION

Please fill out the following comment page regarding the proposal to change the zonal boundaries of the Modified Accredited Zone and create Subzones within the Modified Accredited Advanced Zone, with regulatory requirements specific to each zone as listed in the Proposed Zoning Rules for Bovine Tuberculosis, introduced and posted on the Michigan Department of Agriculture website at www.michigan.gov/mda.

PUBLIC COMMENT FORM

Comment period closes September 8, 2009

Name: Ernie Birchmeier

Address: 7373 W. Saginaw Hwy.

City/State/Zip Code Lansing, MI 48910

Email (optional) ebirchm@michfb.com

Comments and suggestions on the proposal to change the zonal boundaries of the Bovine Tuberculosis Modified Accredited and Modified Accredited Advanced Zones in Michigan:

(see attached)

Signature: Ernie Birchmeier

Date: Sept 8, 2009

Please email your comments before 5:00 p.m. on September 8, 2009 or postmark and return this form no later than September 8, 2009 to:

DavisJ6@michigan.gov
Jeanne Davis
Michigan Department of Agriculture
Animal Industry Division
P.O. Box 30017
Lansing, MI 48909



7373 West Saginaw Highway, Box 30960, Lansing, Michigan 48909-8460
Phone (517) 323-7000

September 8, 2009

Michigan Department of Agriculture
Animal Industry Division
PO Box 30017
Lansing, MI 48909

To whom it may concern:

On behalf of Michigan Farm Bureau (MFB), I appreciate the opportunity to provide comments regarding changes in the zonal boundaries of the Modified Accredited Zone and the creation of subzones within the Modified Accredited Advanced Zone for Bovine Tuberculosis. Given our involvement in the development process, Michigan Farm Bureau generally supports the proposed changes.

Michigan Farm Bureau policy calls for science based and specie specific testing protocol and the reclassifying of a portion of the Modified Accredited Zone to Modified Accredited Advanced. MFB policy also supports advancing the status in the areas of the state where Bovine Tuberculosis has not been found to be free of Bovine TB. It is imperative that an exit strategy be developed in a timely manner that moves the entire state of Michigan out of our Bovine Tuberculosis problem.

The Michigan Bovine Tuberculosis Advisory Committee, of which Michigan Farm Bureau is a member, has strongly supported swift and timely advancements in our program status. The upgrades in the proposed changes are a step in the right direction; however, many believe that they are not aggressive enough. If we have areas of the state that have not found the presence of Bovine Tuberculosis in timeframes that are consistent with USDA rules, then they need to be advanced in their status. This advancement would be both fiscally and programmatically responsible. More importantly, it would alleviate the economic and management burdens from the farmers who have to constantly deal with ongoing testing and regulation.

Again, thank you for the opportunity to provide comments. It is critical that we advance the status of our Bovine Tuberculosis program as swiftly as possible while maintaining the health of our beef and dairy industries.

Sincerely,

A handwritten signature in black ink that reads 'Ernie Birchmeier'.

Ernie Birchmeier
Livestock and Dairy Specialist
Michigan Farm Bureau



Michigan Milk Producers Association

41310 Bridge Street ■ P.O. Box 8002 ■ Novi, MI 48376-8002
Phone: (248) 474-6672 Fax: (248) 474-0924

August 20, 2009

Jeanne Davis
Michigan Department of Agriculture
P.O. Box 30017
Lansing, MI 48909

Dear Jeanne:

We appreciate the opportunity to review the proposed changes to the zonal boundaries of the Bovine Tuberculosis Modified Accredited and Modified Accredited Advanced zones in Michigan. We have reviewed the proposed zone changes and are fully supportive of the efforts to shrink the size of the MAZ. Reducing the zone boundaries will allow for more effective utilization of limited resources in order to assist in controlling the spread of Bovine TB.

Again, we appreciate the opportunity to review the proposed zonal changes and fully support the changes as presented.

Sincerely,

A handwritten signature in black ink that reads "Ken Nobis". The signature is written in a cursive style with a large initial "K".

Ken Nobis
President

cc: Gary Trimmer



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
LANSING

DON KOIVISTO
DIRECTOR

MDA ANIMAL INDUSTRY DIVISION

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PUBLIC COMMENT FORM

Comment period closes September 8, 2009

Name: Amy Spray, MUCC

Address: 2101 Wood St.

City/State/Zip Code Lansing, MI 48912

Email (optional) aspray@mucc.org

Comments and suggestions on the proposal to change the zonal boundaries of the Bovine Tuberculosis Modified Accredited and Modified Accredited Advanced Zones in Michigan:

We generally support this move to focus efforts on areas most at risk. We think the use of Wildlife Risk Mitigation Plans is critical, & would support their mandatory use, as ~~well as~~ well as tying these plans to future

Signature: Amy Spray

Date: 9/2/09

Please email your comments before 5:00 p.m. on September 8, 2009 or postmark and return this form no later than September 8, 2009 to:

DavisJ6@michigan.gov
Jeanne Davis
Michigan Department of Agriculture
Animal Industry Division
P.O. Box 30017
Lansing, MI 48909

Randomly indemnification, continued compliance checks for WL Risk Mit Plans are necessary.



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
LANSING

DON KOIVISTO
DIRECTOR

**Michigan Application for Bovine Tuberculosis Split State Status
Expansion of the Modified Accredited Advanced Zone (MAAZ)
August 19, 2009**

1. The authority, organization, and infrastructure of the veterinary services organization in the region.

a. What veterinary force is available in the region for carrying out regulatory programs for livestock diseases?

There are three categories of veterinarians involved in the statewide bovine tuberculosis (TB) testing program: Michigan Department of Agriculture (MDA); United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) Veterinary Services (VS); and state licensed, federally accredited, private-practice veterinarians eligible to conduct testing under a state authorized fee-basis or contract program.

The private veterinary industry in Michigan consists of approximately 2,400 practicing licensed veterinarians. There are currently 360 bovine tuberculosis (TB) fee-basis veterinarians approved to conduct bovine tuberculosis testing activities under state contract. These veterinarians are required to attend tuberculosis training programs, and are monitored for compliance with TB testing requirements.

The Michigan Department of Natural Resources (MDNR) has two veterinarians within the Wildlife Division working on the TB eradication project.

b. Are all officers veterinarians?

All testing for tuberculosis is administered by state or federally employed graduate veterinarians or by private veterinarians licensed and federally accredited in the state of Michigan.

c. Are any non-veterinary inspectors under the direct supervision of veterinary officers?

All non-veterinarian inspectors are supervised by state or federally employed veterinarians. There are no lay persons involved in a regulatory role outside state or federal employment.

d. What are the required procedures for specimen collection?

All bovine tuberculosis testing and tissue specimen collections are performed according to *USDA APHIS Bovine Tuberculosis Eradication – Uniform Methods and Rules (UM&R)*, VS Notices and Memorandums, and the *Michigan Animal Industry Act, P.A. 466 of 1988, as amended*.

e. What diagnostic procedures and techniques are routinely followed for each disease agent of concern?

Diagnostic procedures and techniques utilized in Michigan for the bovine tuberculosis eradication program follow the *UM&R*, VS Notices and Memorandums, and the *Michigan Animal Industry Act, P.A. 466 of 1988, as amended*.

f. What laws, regulations, and policies are in effect? For example, is waste feeding permitted and, if so, what restrictions apply (such as cooking the waste to specific temperatures and durations)?

MDA has authority through *Public Act 466 of 1988, as amended*, to issue orders (Zoning Orders) implementing surveillance and movement testing, animal identification, and movement certificate requirements. Prior to issuing an order the director must do the following:

- Consult with the veterinary profession and livestock industry.
- Have the proposed order introduced at the Commission on Agriculture, and allow for comment prior to issuing a final order.
- Publish notice of the proposal in newspapers of all counties in the affected area, and two newspapers outside the affected area.
- Hold at least one public forum in the affected area (this is done through holding formal hearings).

Zoning orders can be issued for immediate effect. The current zoning order is more restrictive than the federal requirements and will be put into effect with publication of an interim rule. The zoning process takes a minimum of 65 days to complete, and a new zoning order would become effective when all parties are satisfied that an interim rule will be published.

The new zoning order would include interzonal movement requirements that are as restrictive as those in the *Code of Federal Regulations (CFR)*, and allow less restrictive intrazonal movement of cattle from herds in the Modified Accredited Advanced zone (MAAZ) that have implemented a wildlife risk mitigation plan.¹

Michigan has collaborated on a *Memorandum of Understanding Between the Michigan Department of Agriculture (MDA) and the Michigan Department of Natural Resources (MDNR) and the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS)*, regarding Bovine Tuberculosis split state status designations

¹ See Attachment 28: *Proposed Zoning Order Draft 072009*

(signed June 25, 2007). This Memorandum of Understanding (MOU) is being amended.

The new MOU requirements will be as follows:

1. Testing requirements for the proposed Subzone 1 (S1) of the new MAAZ (Modified Accredited Advanced zone) (Antrim, Charlevoix, Cheboygan, Crawford, Emmet, and Otsego Counties):²

A. Surveillance testing

1. Breeding herds – whole herd test (WHT) every 12 months
2. Herds producing feeder calves – WHT every 24 months
3. Feedlots – WHT every 36 months

B. Movement testing for movements within the MAAZ

1. Herds with a verified Wildlife Risk Mitigation Action Plan (WRMAP): no additional movement testing (although a movement certificate will be required)
2. Herds without a verified WRMAP: TB test required within 60 days of movement

2. Movement testing requirements from the proposed MAZ (Modified Accredited zone) (Alcona, Alpena, Montmorency, Oscoda, and Presque Isle counties, and those portions of Iosco and Ogemaw counties that are north of the southernmost boundaries of the Huron National Forest and the Au Sable State Forest.) to the MAAZ:

Movement to another Zone within Michigan from the MAZ

- A. Cattle two months of age and older must comply with one of the following prior to movement:
 1. Originate directly from a bovine tuberculosis accredited free herd.
 2. Originate from a herd that has received a negative whole herd bovine tuberculosis test within 12 months prior to movement, and receive a negative bovine tuberculosis test within 60 days prior to movement (steers or spayed heifers do not need to meet the whole herd testing requirement).
- B. Cattle less than two months of age may be moved if they originate from a herd that has completed a whole herd test within 12 months prior to movement.
- C. Cattle may be moved to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, or through one concentration point to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, without meeting tuberculosis testing requirements.

² See Attachment 1: *MAAZ Subzone 1 – Proposed Requirements (Antrim, Charlevoix, Cheboygan, Crawford, Emmet, Otsego Counties)*

3. Movement of cattle from the proposed MAZ through livestock markets and collection points will continue to be monitored as follows:
 - A. Alpena collection point – this is a location for cattle from the eastern part of the proposed MAZ that acts to directly ship cattle only to the Gaylord saleyard (located in S1) on sale days only.
 1. This point is staffed by MDA or USDA personnel during operation.
 2. It operates on Wednesdays only.
 3. Between 10-45 head are collected each Wednesday.
 4. A Gaylord sale ticket is filled out and ID number, owner name, and type and number of cattle are filled out on the Alpena Collection Point report.
 5. Regulatory staff scan each animal into a PDA which accompanies the truckload to the Gaylord saleyard.
 6. Regulatory staff at Gaylord download the PDA information and check each animal for compliance with movement requirements upon check-in.
 - B. Gaylord saleyard.
 - All cattle are scanned and checked for compliance with requirements by regulatory personnel upon check in – this process will continue following publication of an interim/final rule.
 - C. Saleyards in proximity to the MAZ that handle a small amount of MAZ cattle.
 - The following saleyards will maintain weekly monitoring for receipt and repermitting of MAZ cattle: St. Louis, Clare, Cass City, Marion and Rosebush.
 - D. Cattle moved to a market where regulatory inspection and check in is maintained on sale day will continue to have information collected and downloaded into a tracking database in lieu of a preapproved movement certificate.

g. What security measures are in place at ports of entry to control importation of materials that might carry disease agents of concern?

MDA and USDA APHIS VS personnel work cooperatively to implement and oversee movement of cattle from the MAZ of Michigan into the TB Free and proposed MAAZ areas. Inventory reconciliation is conducted on all herds in the proposed MAZ and S1 when they receive a whole herd test.

MDA contracts with the Michigan State Police to conduct mobile patrol surveillance on cattle movements in and around the MAZ/MAAZ boundary. The MSP have made traffic stops of vehicles transporting livestock throughout Michigan and have not found repeat violations.

Michigan has had a comprehensive mandatory official identification program for cattle in place since 2000. All cattle are required to bear official identification eartags prior to movement, unless moving to a saleyard where the animals are identified upon arrival and owner information is submitted for entry into the animal and movement tracking database. The implementation of official electronic identification eartags became mandatory for all cattle within the MAZ in 2002, expanded to a voluntary program including the current TB

Free zone in 2004, and became mandatory for all cattle within Michigan March 1, 2007.

The mandatory electronic identification ear tag program, in conjunction with installation of electronic readers in all Michigan saleyards and seven slaughter plants throughout the United States, and mandatory permitting of cattle moved from Michigan farms, allows immediate epidemiologic investigation. Exposed animals sold from any TB infected herd can be quickly located, and removed for necropsy and testing. In addition, potential source herds can be quickly identified without dependence upon variability which may occur in producer records, or reliance upon the memory of herd owners or managers.

Livestock which enter livestock auction markets throughout Michigan are checked by MDA or USDA personnel to verify that cattle have official identification and/or the animals are properly tested to move. MDA maintains weekly inspection activities at the following livestock saleyards that handle almost all the cattle that are sold from the proposed MAZ and S1: Gaylord, St. Louis, Marion, Clare, Rosebush, and Cass City. The MDA Atlanta regional office transmits any permits issued for movement of cattle from the MAZ to licensed livestock auction markets within the proposed MAAZ prior to the sale. Regulatory personnel verify that the animal is received at the licensed livestock auction markets, and issue a re-permit for the animal to its final destination. A copy of the completed re-permit is submitted to the MDA office for entry into the movement tracking database.

A livestock inspection station is located at the north end of the Mackinac Bridge which separates the TB free zone in the Upper Peninsula from the MAZ and MAAZ in the Lower Peninsula. It is monitored 24 hours a day/7 days a week and all livestock vehicles, loaded or empty must stop at the inspection station and show documentation demonstrating compliance with TB program requirements. Cattle and bison must have a valid movement permit to reach their final destination.

2. Disease status - i.e. is the restricted disease agent known to exist in the region? If “yes,” at what prevalence? If “no,” when was the most recent diagnosis?

a. For each relevant hazard, is the pest or disease agent known to exist in the region?

Bovine TB is not known to exist in S1 in any program animals³, but is believed to exist at undetectable levels in the wild white-tailed deer population of the region.

b. If yes, at what prevalence?

The Michigan Department of Natural Resources (MDNR) estimates the prevalence of bovine TB in the wild white-tailed deer of S1 to be 0.06 percent, and estimates the total wild white-tailed deer population to be approximately 95,000. Surveillance testing in this area has included 20,566 deer and 12 have been found to be infected with bovine tuberculosis.⁴

The most recent detection of bovine TB in a wild white-tailed deer in S1 was a single deer found in Otsego County in 2002.⁵

The following table gives the prevalence of bovine TB occurring in cattle in S1.⁶ The five year average prevalence is 0.002 percent.⁷

| Calendar Year | Farms Tested | Cattle & Bison Whole Herds Tested | TB Infected animals per year | Prevalence |
|---------------|--------------|-----------------------------------|------------------------------|------------|
| 2004 | 381 | 15,532 | 0 | 0% |
| 2005 | 386 | 16,552 | 1 | 0.006% |
| 2006 | 397 | 15,917 | 1 | 0.006% |
| 2007 | 466 | 17,288 | 0 | 0% |
| 2008 | 418 | 16,681 | 0 | 0% |

c. If no, when was the most recent diagnosis or detection?

Not applicable.

³ Program animals include: cattle, bison, goats, and captive cervids.

⁴ See Attachment 2: *White-tailed Deer Population and TB Prevalence by MDA Proposed Testing Zones*; and Attachment 3: *1975-2008 Bovine TB Testing of Wild White-tailed Deer*

⁵ See Attachment 4: *Free-ranging White-tailed Deer Testing Positive for Bovine Tuberculosis in Michigan*

⁶ Data generated from MDA records.

⁷ $2/81,970 \times 100 = 0.002\%$

d. What breeds or species were affected?

Cattle (*Bos taurus*), wild white-tailed deer (*Odocoileus virginianus*) and coyotes (*Canis latrans*) infected with bovine TB have been found in S1.⁸

The breeds of cattle affected were:

- #24⁹ Holstein male – 16 months (July 2002)
- #25 Holstein female – 2 years (July 2002)
- #30 Belted Galloway – 2 years (May 2003)
- #36 Holstein male (steer) – 2 years (November 2005)
- #39 Holstein female – 7 years (April 2006)

e. How many cases were diagnosed and reported?

In S1 there have been five cases of bovine TB found in cattle:¹⁰

Antrim County: Three cows – one each in 2003; 2005; and 2006¹¹

Emmet County: Two cows in 2002¹²

There have been twelve cases of bovine TB in the wild white-tailed deer in S1:¹³

Antrim County: One deer in 1999¹⁴

Crawford County: Four deer – two in 1999; one in 2000; and one in 2001

Emmet County: Two deer – one in 2000 and one in 2001¹⁵

Otsego County: Five deer – one in 1998; three in 2000; and one in 2002

There have been three cases of bovine TB in coyotes. Two were found on MDNR surveys and one during a USDA APHIS Wildlife Services survey.

Emmet County: One coyote in 2000¹⁶

Crawford County: One coyote in 2001¹⁷

Cheboygan County: One coyote in 2008¹⁸

f. Is reporting the pest or disease agent required in the region?

Mycobacterium bovis is a reportable disease in the state of Michigan.

Under Public Act 466 of 1988, as amended, any person who has suspicion or knowledge of a reportable disease must immediately report that fact to the MDA. All reports of suspicion of disease or suspect tuberculosis test results

⁸ There have been three coyotes found with bovine TB. Two of these coyotes are referenced on the DNR map - see Attachment 5: *Non-Cervid Wildlife Positive for bovine TB*. The third coyote was found in Nov. 2008 during Are Berentsen's (USDA/APHIS/Wildlife Services) research - see Attachment 6: *Cheboygan County Coyote*.

⁹ The numbers listed here reference the enumeration of bovine TB infected cattle herds in Michigan in Attachment 7: *Summary of gross, histological examination and mycobacterial culture of tuberculosis cases in cattle and captive deer in Michigan 1996-2008*.

¹⁰ See Attachment 7 and Attachments 8.1-5: *Jean Ray's Epidemiological Summaries of these 5 farms*

¹¹ See Attachment 9: *Antrim County Locations of Bovine Tuberculosis Positive Cattle and White-tailed Deer*.

¹² See Attachment 10: *Emmet County Locations of Bovine Tuberculosis Positive Cattle and White-tailed Deer*, and Attachment 11: *Emmet County Case Study* for more details on the situation in Emmet County.

Note the Power Point referenced on page 2 of the *Emmet County Case Study* is Attachment 12.

¹³ See Attachment 4: *Free-ranging White-tailed Deer Testing Positive for Bovine Tuberculosis in Michigan*.

¹⁴ See Attachment 9.

¹⁵ See Attachment 10.

¹⁶ Personal communication with Jean Fierke of the MDNR. See Attachment 5: *Non-Cervid Wildlife Positive for bovine TB*

¹⁷ Personal communication with Jean Fierke of the MDNR. See Attachment 5.

¹⁸ Personal communication with Are Berentsen of Wildlife Services.

are immediately assigned for follow-up to state or federal veterinarians trained in the diagnosis and control of tuberculosis, and diagnostic procedures are followed as specified in the *UM&R*.

g. If the pest or disease agent was present and subsequently eradicated, what methods were used for eradication?

The disease is considered to be present, but at undetectable levels, in the free-ranging white-tailed deer in S1. The procedures and methods used to achieve statewide TB free status in 1979 were those in effect at the time of the program.

h. What geographic and environmental characteristics of the exporting region may influence the prevalence of the pest or disease agent?

The prevalence of *M. bovis* in the wild white-tailed deer population in the proposed MAZ represents a risk for livestock and other species in the area. The reservoir host, white-tailed deer, may be the source of infection for other wildlife species. The distribution of lesions in all other wildlife species that have been found to be infected with *M. bovis* have not indicated that they are a reservoir host themselves.

The vast majority of bovine TB infected livestock herds (40/45; 89 percent) and bovine TB infected free ranging white-tailed deer (613/630; 97 percent) are located within the proposed MAZ. The prevalence of TB in wild white-tailed deer is higher in and around Deer Management Unit (DMU) 452 of the MAZ than in other areas of the proposed MAZ. The prevalence of TB in wild white-tailed deer in the proposed MAZ is sporadic and considered to be below a detectable level and very low risk.

The MAZ is surrounded by the Straits of Mackinac to the north and Lake Huron to the east. The size of these features prevents free ranging deer and domestic animals from swimming across these water barriers.

The southern portion of the proposed MAZ has a buffer zone between the areas where TB has been found at a low prevalence and the boundary with the MAZ. This boundary buffer region consists of the Huron National Forest, the Au Sable State Forest, and the Au Sable River in Ogemaw and Iosco counties. There has been no finding of bovine TB in program animals in this buffer area. There have been three cases of bovine TB in free-ranging white-tailed deer in the MAZ area of Iosco County, and one case just south of the MAZ in Iosco County. To date there have been no bovine TB infected deer found in Ogemaw County. These buffer areas contain few livestock herds, and the free-ranging white-tailed deer herd in the State and National forests are intensively managed for lowered deer populations.

The main barrier to the spread of bovine TB to the west of the proposed MAZ (core bovine TB area) is distance.¹⁹

¹⁹ See Attachment 14: *Moving to a More Risk-Based Program Modeled Using the Principles outlined in the National Brucellosis Elimination Zone (NBEZ) Proposal*, and Attachment 15: *Estimated probability of white-tailed deer movement*.

3. The status of adjacent regions with respect to the agent.

- a. For each relevant hazard, is the pest or disease agent known to exist, or has it existed previously, in any region adjacent to the region proposing the trace?

MAZ

The proposed MAZ is directly adjacent to S1 to the east. Bovine (TB) was first detected in wild white-tailed deer in the proposed MAZ (Alcona, Alpena, Oscoda, Montmorency, Presque Isle and the northern portions of Ogemaw and Iosco Counties). The first case was a single doe found in 1975 in Alcona County. In 1994 a buck with bovine TB was found eight miles from the first case in Alpena County. To date 613 bovine TB infected wild white-tailed deer have been found in the proposed MAZ, as well as five elk, nineteen coyotes, eight raccoons, seven black bears, four bobcats, three red foxes, and two opossums.²⁰

Bovine TB was detected in a privately owned cervid facility in Presque Isle County in 1997. Since that time bovine TB has been detected in three other privately owned cervid facilities, all in Montmorency County (2006, 2008, and 2009).²¹

Bovine TB was first detected in cattle in a beef herd in Alcona County in 1998. Since 1998 bovine TB has been found on 35 separate farms in the proposed MAZ. Five of those farms have been infected twice. The most recent discovery of bovine TB was in February 2009 in Michigan's only test and removal herd, the third detection of bovine TB on this farm.²²

Subzone 2 of MAAZ

The proposed Subzone 2 (S2) (Arenac, Clare, Gladwin, Grand Traverse, Kalkaska, Missaukee, Osceola, Roscommon, and Wexford counties, and those portions of Ogemaw and Iosco counties not include in the Modified Accredited zone) lies directly south of S1. There have been three bovine TB infected wild white-tailed deer found in S2: one) in Osceola County in 1999; one in Roscommon County in 2003; and one in the MAAZ portion of Iosco County in 2007.²³

There have been no program animals found with bovine TB in S2 of the proposed MAAZ.²⁴

²⁰ See Attachment 2: *White-tailed Deer Population and TB Prevalence by MDA Proposed Testing Zones*; Attachment 4: *Free-ranging White-tailed Deer Testing Positive for Bovine Tuberculosis in Michigan*; Attachment 13: *Summary of Michigan Wildlife Bovine Tuberculosis Surveillance*; and Attachment 5: *Non-Cervid Wildlife Positive for Bovine T*. Note: One of the 4 bovine TB infected deer found in Iosco County was located within the MAAZ.

²¹ See Attachment 7: *Summary of gross, histological examination and mycobacterial culture of tuberculosis cases in cattle and captive deer in Michigan 1996-2008*.

²² See Attachment 7.

²³ See Attachment 4 and Attachment 16: *10 Mile Buffer Around Acid Fast TB Positive Deer in Iosco County, Michigan – 2007* (the slide is simply labeled *Iosco deer 2007*).

²⁴ See Attachment 7.

Subzone 3 of MAAZ

The proposed Subzone 3 (S3) (the remainder of the counties in Lower Michigan not included in the Modified Accredited zone and Modified Accredited Advanced zone Subzones 1 and 2) is not directly adjacent to S1, but is located directly south of S2. In S3 there have been two bovine TB infected wild white-tailed deer found: one in Mecosta County in 1999 and one in Shiawassee County in 2007.²⁵

There have been no program animals found with bovine TB in S3 of the MAAZ.²⁶

TB Free Zone

The TB Free Zone lies north of S1, with the straits of Mackinac, Lake Michigan, and Lake Huron separating the two zones. Bovine TB has not been found in either wild white-tailed deer or any program animals in the TB Free Zone.²⁷

b. If yes, at what prevalence? If no, when was the most recent diagnosis.

MAZ

The MDNR calculated the apparent prevalence of bovine TB in the wild white-tailed deer for this region at 0.89 percent in 2008. The estimated population of wild white-tailed deer in the proposed MAZ region is 130,743. Surveillance in wild white-tailed deer has included 68,714 deer, with 613 found to be infected with TB.²⁸

The highest prevalence area for bovine tuberculosis in wild white-tailed deer in Michigan is located in a 600 square mile area at the center of the proposed MAZ identified as DMU 452. The apparent prevalence of bovine tuberculosis in wild-white tailed deer in this area is 2.25 percent. There is an estimated population of 24,500 deer in DMU 452. Surveillance in wild white-tailed deer in DMU 452 has included 21,673 deer, with 488 found to be infected with TB.²⁹

If the apparent prevalence rate for DMU 452 is split out from the prevalence rate for the entire proposed MAZ, the prevalence rate for the area within the MAZ surrounding DMU 452 drops to 0.28 percent. There is an estimated 88,800 deer in the proposed MAZ that excludes DMU 452. Surveillance in wild white tailed deer (excluding DMU 452) has included 42,905 deer, with 122 found to be infected with TB.³⁰

²⁵ See Attachment 2: *White-tailed Deer Population and TB Prevalence by MDA Proposed Testing Zones* and Attachment 4: *Free-ranging White-tailed Deer Testing Positive for Bovine Tuberculosis in Michigan*.

²⁶ See Attachment 7: *Summary of gross, histological examination and mycobacterial culture of tuberculosis cases in cattle and captive deer in Michigan 1996-2008*.

²⁷ See Attachment 2 and Attachment 7.

²⁸ See Attachment 2.

²⁹ See Attachment 2.

³⁰ See Attachment 2.

The following table gives the prevalence of bovine TB occurring in cattle in the proposed MAZ.³¹ The five year average prevalence is 0.04 percent.³²

| Year | Farms Tested | Cattle & Bison Whole Herds Tested | TB Infected animals per year | Prevalence |
|------|--------------|-----------------------------------|------------------------------|------------|
| 2004 | 547 | 23,063 | 22 | 0.095% |
| 2005 | 500 | 24,134 | 12 | 0.05% |
| 2006 | 492 | 23,207 | 5 | 0.021% |
| 2007 | 559 | 24,134 | 7 | 0.028% |
| 2008 | 561 | 24,222 | 2 | 0.008% |

MAAZ Subzone 2

The prevalence of bovine TB in wild white-tailed deer for MAAZ S2 is 0.01 percent. There is an estimated population of 191,567 wild white-tailed deer in S2. Surveillance has included 30,748 wild white tailed deer in S2, with three found to be infected with TB.³³

There is no prevalence of bovine TB in program animals in S2.

TB Free Zone

There is no prevalence of bovine TB in either wild deer or program animals in the TB Free Zone.³⁴

c. When was the most recent diagnosis?

The most recent diagnosis of bovine TB in cattle was in the proposed MAZ in 2008. An adult Holstein cow in a dairy herd that has been quarantined under a test-and-removal program since 2004 was identified as TB infected during whole herd testing.³⁵

Thirty six (36) TB infected wild white-tailed deer were found in the proposed MAZ during 2008, principally during the autumn hunting season (November 16 – December 31, 2008).³⁶

There have been no occurrences of bovine TB in program animals in areas adjacent to S1 other than the proposed MAZ. The most recent occurrence of bovine TB in a free-ranging white-tailed deer outside of the proposed MAZ was one bovine TB positive deer in S2 (Iosco County) in 2007.³⁷

³¹ Data generated from MDA records.

³² $48/119,504 \times 100 = 0.04\%$

³³ See Attachment 2: *White-tailed Deer Population and TB Prevalence by MDA Proposed Testing Zones.*

³⁴ See Attachment 2 and Attachment 7: *Summary of gross, histological examination and mycobacterial culture of tuberculosis cases in cattle and captive deer in Michigan 1996-2008.*

³⁵ See Attachment 7.

³⁶ See Attachment 4: *Free-ranging White-tailed Deer Testing Positive for Bovine Tuberculosis in Michigan*; and Attachment 17: *2008 Bovine Tuberculosis Survey Result in Michigan – Cervids.*

³⁷ See Attachment 16: *10 Mile Buffer Around Acid Fast TB Positive Deer in Iosco County, Michigan – 2007* (the slide is simply labeled *Iosco deer 2007*)

d. Are there any relevant factors about the adjacent regions that should be taken into account (e.g., size, distance from the adjacent border to affected herds or animals)?

The prevalence of *M. bovis* in the wild white-tailed deer population in the proposed MAZ represents a risk for livestock and other species in the area. The reservoir host, white-tailed deer, may be the source of infection for other wildlife species. The distribution of lesions in all other wildlife species that have been found to be infected with *M. bovis* have not indicated that they are a reservoir host themselves.

The vast majority of bovine TB infected livestock herds (40/45; 89 percent) and bovine TB infected free ranging white-tailed deer (613/630; 97 percent) are located within the proposed MAZ. The prevalence of TB in wild white-tailed deer is higher in and around Deer Management Unit (DMU) 452 of the MAZ than in other areas of the proposed MAZ. The prevalence of TB in wild white-tailed deer in the proposed MAAZ is sporadic and considered to be below a detectable level and very low risk.

The MAZ is surrounded by the Straits of Mackinac to the north and Lake Huron to the east. The size of these features prevents free ranging deer and domestic animals from swimming across these water barriers.

The southern portion of the proposed MAZ has a buffer zone between the areas where TB has been found at a low prevalence and the boundary with the MAAZ. This boundary buffer region consists of the Huron National Forest, the Au Sable State Forest, and the Au Sable River in Ogemaw and Iosco counties. There has been no finding of bovine TB in program animals in this buffer area. There have been three cases of bovine TB in free-ranging white-tailed deer in the MAZ area of Iosco County, and one case just south of the MAZ in Iosco County. To date there have been no bovine TB infected deer found in Ogemaw County. These buffer areas contain few livestock herds, and the free-ranging white-tailed deer herd in the State and National forests are intensively managed for lowered deer populations.

The main barrier to the spread of bovine TB to the west of the proposed MAZ (core bovine TB area) is distance.³⁸

³⁸ See Attachment 14: *Moving to a More Risk-Based Program Modeled Using the Principles outlined in the National Brucellosis Elimination Zone (NBEZ) Proposal*, and Attachment 15: *Estimated probability of white-tailed deer movement*.

4. The extent of an active disease control program, if any, if the agent is known to exist in the region.

a. What is the extent of an active disease control program, if any, if the pest or disease agent is known to exist in the region, or recently existed in the region?

The most recent detection of TB in free-ranging white-tailed deer in S1 was one deer found in Otsego County in 2002.³⁹ The most recent detection of TB in livestock was in one small dairy herd in Antrim County in 2006.⁴⁰

Michigan has had an active TB eradication program in place in northeastern lower Michigan since 1995. The program was expanded based upon the results of surveillance testing from 1995 until 2004, when a comprehensive program for all herds within the current MAZ was implemented. The current eradication program in cattle includes annual surveillance testing of herds other than freezer beef herds in the current MAZ; pre-movement testing; response to disease introductions; animal movement tracking; monitoring of animal movements at saleyards and the Mackinac Bridge Livestock Inspection Point; mobile surveillance patrols at the MAZ/MAAZ border; and annual inventory reconciliation of herds tested.

There has also been an active disease control program in free-ranging white-tailed deer in the area since 1996.⁴¹ This program includes surveillance for TB in free-ranging white-tailed deer, prohibition of feeding and baiting of deer, liberalized hunting permits and expansion of hunting seasons, and enhanced law enforcement activities to enforce feeding and baiting bans.⁴² As of October 9, 2008, the Natural Resources Commission (NRC) permanently banned the baiting and recreational feeding of free-ranging white-tailed deer and elk in the entire Lower Peninsula of Michigan.

b. What epidemiologic investigations are done to trace the source of infection?

Epidemiologic investigations are completed under the direction of USDA approved TB epidemiologists and in accordance with the *UM&R*.

c. Are infected or exposed animals or premises quarantined? If so, for how long?

Infected and exposed premises are quarantined until they complete testing requirements necessary for quarantine release as specified in the *UM&R*, or following all requirements necessary to release quarantine following a test and removal program or herd depopulation.

³⁹ See Attachment 4: *Free-ranging White-tailed Deer Testing Positive for Bovine Tuberculosis in Michigan*.

⁴⁰ See Attachment 7: *Summary of gross, histological examination and mycobacterial culture of tuberculosis cases in cattle and captive deer in Michigan 1996-2008*.

⁴¹ See Attachment 18: *History of Legislation And Regulations For Bovine Tuberculosis Eradication in Michigan's Wildlife*.

⁴² See Attachment 19: *Summary of guidelines of issuance of Disease Control Permits through 2010*; Attachment 20: *2008 Disease Control Permit – Final*; Attachment 21: *Memorandum to the Natural Resources Commission: Disease Control Permits - September 17, 2007*.

d. Are affected premises monitored, and if so, how?

Infected premises are required to follow an approved repopulation herd plan following repopulation of a herd. This herd plan is monitored during all herd testing, and a minimum of once a year. Monitoring of herd plans is done at higher intervals for herds that may have a more complex plan, or that may have demonstrated an inability to follow previous herd plans.

e. What tests are performed prior to releasing of the quarantine?

Infected and exposed premises are quarantined until they complete testing requirements necessary for quarantine release as specified in the *UM&R*, or following all requirements necessary to release quarantine following a test and removal program or herd depopulation.

f. What procedures are used to clean up affected premises?

Procedures are used as detailed in the Code of Federal Regulations.

g. What treatment regimes are followed?

No treatments are used for this disease.

h. What breeding practices are followed?

No specific breeding practices are followed for this disease.

i. If depopulation is used, how are the carcasses disposed of (are they salvaged at abattoirs)?

All depopulated animals are moved either under official seal accompanied by a VS 1-27, or transported by regulatory personnel to the Michigan State University (MSU) Diagnostic Center for Population and Animal Health (DCPAH) or a USDA inspected slaughter plant.

j. Is indemnity paid on destroyed animals?

Indemnity programs are available for animals ordered destroyed for bovine tuberculosis within the Federal and State government.

k. Have premises, thought to have been cleaned up, later been found to still be infected?

Four farms that had undergone depopulation because of bovine tuberculosis have subsequently been found to be infected upon surveillance testing after repopulation. One herd has undergone a test and removal program and was subsequently found to be infected upon surveillance testing. All of these herds All of these herds are located in the proposed MAZ.⁴³

⁴³ See Attachment 7: *Summary of gross, histological examination and mycobacterial culture of tuberculosis cases in cattle and captive deer in Michigan 1996-2008.*

- 5. The vaccination status of the region. When was the last vaccination? What is the extent of vaccination if it is currently used, and what vaccine is being used?**
- a. Is the ownership and use of vaccine allowed?**
 - b. When was the last vaccination?**
 - c. What is the extent of vaccination if it is currently used?**
 - d. What types of vaccine (live, modified live, killed) are used?**
 - e. Who may vaccinate (herd owners, veterinarians, etc.)?**
 - f. Are records kept in the use of vaccine?**
 - g. Who produces the vaccine?**
 - h. Is the administration of serum permitted? If so, by whom and under what conditions?**

An approved bovine tuberculosis vaccine for use in animals is not currently available or licensed by USDA, APHIS. Under Public Act of 466 of 1988, as amended, the director of the MDA may:

" . . . pursue restrictions of the distribution and use of veterinary biologics when the director determines that such restrictions are necessary for the protection of domestic animals or the public health, interest, or safety. . . "
[MCL 287.743 Sec. 43 (3)]. This authority may be implemented to regulate vaccine usage if such a vaccine is developed.

Michigan is collaborating in an investigation with NARC on the potential use of bovine tuberculosis vaccine in wild white-tailed deer to further eradication efforts. It is projected that completion of studies necessary to obtain approval will take five to ten years.

6. The degree to which the region is separated from adjacent regions of higher risk through physical or other barriers.

a. To what degree is the region separated from regions of higher risk through physical or other barriers?

Portions of S1 and S2 of the proposed MAAZ are adjacent to the proposed MAZ, which is an area of higher risk. The proposed MAZ contains 89 percent of all the TB infected cattle herds found in Michigan and 97 percent of the TB infected wild white-tailed deer. A listing of the number and type of cattle herds in Michigan by zone is attached.⁴⁴

There are three potential methods of moving TB from an area of higher risk to an area of lower risk:

1. TB infected deer moving from a high risk to a low risk area and setting up a new focus of infection
2. Movement of cattle from a TB infected herd
3. Transmission of the bacteria through fomites

Risk from wild white-tailed deer

The highest level of risk for TB infection in wild white-tailed deer is in DMU 452, which is located at the center of the MAZ counties of Alcona, Alpena, Montmorency, and Oscoda.⁴⁵ This highest risk area is approximately 20 miles from the closest border with the adjacent MAAZ areas of S1 and S2. Using the estimated probability of white-tailed deer movement evaluation in the Risk Assessment conducted for bovine tuberculosis in Minnesota indicates that the 20 mile distance between the edge of DMU 452 and the outer edge of the proposed S1 and S2 would have a probability of movement of 0.01 at the greatest.⁴⁶

The risk of a wild deer being infected with TB diminishes significantly in the remaining area of the proposed MAZ outside DMU 452 and TB has only been found sporadically outside the proposed MAZ.⁴⁷ The probability of a wild white-tailed deer having TB decreases by magnitudes as you leave DMU 452, pass through the remainder of the proposed MAZ, and enter S1 and S2.⁴⁸

Risk from cattle movements

The risk of a cattle herd being infected with bovine tuberculosis is largely based upon it's location related to the prevalence of TB in the wild white-tailed deer population in Michigan. The risk for TB to spread from an area of higher risk through cattle movements is dependant upon the volume of cattle moved and the protective measures in place to prevent a herd from becoming infected or moving infected animals.

⁴⁴ See Attachment 22: *Michigan Cattle Herds by Type and Proposed Zone*

⁴⁵ See Attachment 2: *White-tailed Deer Population and TB Prevalence by MDA Proposed Testing Zones*; and Attachment 23: *DNR Apparently Prevalence comparison 1995-2008*

⁴⁶ See Attachment 15: *Figure 7. Estimated probability of white-tailed deer movement, cf. Assessment of Risk Associated with the Minnesota Proposed Plan for Split-State Status for Mycobacterium bovis (Bovine Tuberculosis)*, June 24, 2008, p. 38

⁴⁷ See Attachment 2.

⁴⁸ See Attachment 25: *Best estimate of finding A TB infected White-Tailed Deer*; and Attachment 26: *Most Conservative Estimate of Finding A TB Infected White-Tailed deer*

The highest risk for moving TB via livestock comes from the movement of potentially exposed animals from a TB infected cattle herd. This risk is highest from the proposed MAZ, where the potential for exposure to TB infected wildlife is highest. Available data indicates 7,749 animals moved from herds located in the proposed MAZ to herds located in the proposed S1 from 2002-2008.⁴⁹ There has been a decrease in the total number of movements occurring over that time period. Cattle herds located within the proposed S1 have had annual whole herd tests since 2004. This routine surveillance would have detected infections transmitted via cattle movements. Of the five bovine TB infected herds identified to date in the proposed S1, only one is thought to potentially be related to animal movement. The sole infected animal in that herd had been on the farm for only six months, had been backgrounded in Presque Isle County for approximately one year prior to that, and had a severe test reaction. However, this animal was test negative prior to movement and the source herd tested negative during trace testing. There was deer/cattle interaction on the S1 premises as well so transmission of infection from free-ranging white-tailed deer was also possible.⁵⁰

The Michigan TB program in livestock is designed with a number of layers or “safety nets” in place to prevent the transmission of TB. Over the past 10 years, surveillance testing in Michigan has detected TB infected herds early on when typically only one to two animals are infected.⁵¹ Since initial surveillance in the current MAZ was completed, all trace-out testing from Michigan TB infected herds has been negative.

The significant “safety nets” in place to prevent TB to move through cattle movements include:

1. Annual whole herd TB surveillance in all herds in the proposed MAZ other than freezer beef herds
2. Pre-movement testing of cattle consistent with 9 CFR requirements
3. Mandatory Radio Frequency Identification (RFID) of all cattle prior to movement
4. Movement certificates for movement of cattle from herds in the proposed MAZ

These “nets” will continue to be in place following implementation of this request.⁵²

An additional “net” is also being added to the program, the Wildlife Risk Mitigation Program. This program reduces the risk that an individual herd may become infected with TB from wild white-tailed deer and has begun

⁴⁹ See Attachment 27: *MI MAZ Intrazonal Movements*

⁵⁰ See Attachment 8.3: *Epidemiological Summary Report: Roger Dewey Farm* and Attachment 9: *Antrim County Locations of Bovine Tuberculosis Positive Cattle and White-tailed Deer.*

⁵¹ See Attachment 7: *Summary of gross, histological examination and mycobacterial culture of tuberculosis cases in cattle and captive deer in Michigan 1996-2008.*

⁵² See Attachment 28: *Proposed Zoning Order Draft 072009*

implementation for herds in the proposed MAZ and S1.⁵³ Over 300 herds have applied for the program since May, 2009.

Risk from fomites

The USDA Minnesota risk assessment report expressed concern about the potential for TB transmission via movement of cattle feed and hay.

The report acknowledged that there was no data available on hay movement and that Minnesota producers could freely move hay outside the MAZ. This is also true in Michigan. The movement of MAZ hay throughout Michigan during the past 10 years has not been documented to have resulted in TB transmission in this State. While it is true that it is difficult to definitively linking TB transmission with movement of contaminated feed, the distinct clustering of livestock disease in and around DMU 452 continues to suggest that this disease pathway plays a much less significant role compared to the first two.

⁵³ See Attachment 29: *Basic Wildlife Risk Mitigation Standards*; Attachment 30: *Wildlife Risk Mitigation Project Executive Summary*; Attachment 31: *Wildlife Risk Mitigation Project Overview*; Attachment 32: *Wildlife Risk *A* Syst Score Sheet*; Attachment 33: *Wildlife Risk Mitigation Action Plan form*; and Attachment 34: *Wildlife Risk Mitigation Verification form*

7. The extent to which movement of animals and animal products is controlled from regions of higher risk, and the level of biosecurity regarding such movements.

a. From what countries or regions does the requesting region import products that could potentially carry pest or disease agents of concern?

The proposed MAAZ may import cattle from the MAZ of Lower Michigan.

Cattle may also be imported from other states which have been identified as having herds that are infected with bovine tuberculosis or from other countries.

b. To what extent is the movement of such products controlled from regions of higher risk, and what is the level of biosecurity regarding such movements?

The Michigan Livestock TB program is designed with a number of layers or “nets” in place to prevent the transmission of TB (See Question 6 a. for additional information).

Over the past ten years, surveillance testing in Michigan has detected TB infected herds early on when typically only one to two animals are infected.⁵⁴ Since completion of initial surveillance testing, all trace-out testing from Michigan TB infected herds has been negative.

Movement of cattle from the MAZ is controlled and monitored through the following programs:

1. Weekly monitoring of cattle movements at five Michigan licensed livestock saleyards that handle almost all cattle from the MAZ. Checking in and repermitting of all cattle moved from the MAZ through saleyards.
2. Inventory reconciliation of all herds other than freezer beef herds in the MAZ following annual whole herd testing.
3. Mandatory livestock inspection point at the Mackinac Bridge.
4. Mobile surveillance patrols at the MAZ/MAAZ boundary.
5. Quarterly monitoring of slaughter verification rates for slaughter cattle sold from the MAZ through the Northern Michigan Livestock Association saleyard in Gaylord (this is the only saleyard located within the MAZ/MAAZ Subzone 1, and handles the majority of cattle sold from this area).
6. Requirements that all cattle moved from a herd in the MAZ, other than to a USDA approved livestock saleyard, receive a movement certificate prior to movement and have a copy of the certificate accompany the shipment.
7. Repermitting of all cattle sold from the Northern Michigan Livestock Association saleyard in Gaylord.
8. Maintenance of a comprehensive premises and individual animal identification database system that includes the following:
 - A. Tracking of all RFID tags issued to Michigan farms
 - B. Inventory of cattle tested on every MAZ and S1 farm during surveillance testing

⁵⁴ See Attachment 7: *Summary of gross, histological examination and mycobacterial culture of tuberculosis cases in cattle and captive deer in Michigan 1996-2008*

- C. Upload of information from passive readers located at Michigan livestock saleyards and 7 slaughter plants throughout the US that handle the majority of Michigan cattle.
- D. Collection of RFID eartag from custom slaughter plants in the MAZ and S1, and uploading of the information into the database
- E. Web-based movement certificate system that checks the herd and individual animal TB testing status and inventory locations of animals prior to allowing issuance of a certificate.

The USDA Minnesota risk assessment report expressed concern about the potential for TB transmission via movement of cattle feed and hay. The report acknowledged that there was no data available on hay movement and that Minnesota producers could freely move hay outside the MAZ. This is also true in Michigan. The movement of MAZ hay throughout Michigan during the past ten years has not yet been documented to have resulted in TB transmission in this State. While it is true that it is difficult to definitively linking TB transmission with movement of contaminated feed, the distinct clustering of livestock disease in and around DMU 452 continues to suggest that this disease pathway plays a less significant role compared to the first two.

c. What test procedures are used?

Testing protocols are used as specified in the *UM&R*, and any other applicable VS Memorandums or Notices. The following are the testing requirements for movement of cattle from the MAZ to any other zone in Michigan:

Movement to another Zone within Michigan from the MAZ

- Cattle two months of age and older must comply with one of the following prior to movement:
 - Originate directly from a bovine tuberculosis accredited free herd
 - Originate from a herd that has received a negative whole herd bovine tuberculosis test within 12 months prior to movement, and receive a negative bovine tuberculosis test within 60 days prior to movement (steers or spayed heifers do not need to meet the whole herd testing requirement).
- Cattle less than two months of age may be moved if they originate from a herd that has completed a whole herd test within 12 months prior to movement.
- Cattle may be moved to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, or through one concentration point to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, without meeting tuberculosis testing requirements.

d. Are animals quarantined that may carry the disease agent? If so, for how long and where?

All TB infected herds in Michigan are quarantined until depopulated, or until a test-and-removal program as specified in the *UM&R* is completed. Any cattle ordered destroyed as suspects or reactors to TB testing, or as exposed animals, are moved in sealed trailers on a VS 1-27 directly to the Michigan

State University Diagnostic Center for Population and Animal Health for diagnostics, or to a USDA approved slaughter plant.

e. Are import permits and health certification required?

All cattle are required to have a movement certificate issued prior to movement from a farm in the proposed MAZ and S1 of the proposed MAAZ unless being moved directly to the USDA approved saleyard at Gaylord where regulatory personnel are present at each sale to verify the testing status of all animals upon arrival. Michigan has state or federal regulatory personnel present each week at the livestock saleyards that handle the vast majority of MAZ and S1 cattle (Gaylord, St. Louis, Clare, Marion, Cass City) and at the dairy breeding sale in Rosebush. Movement of cattle from the proposed MAZ through livestock markets and collection points are monitored as follows:

1. Alpena collection point – this is a location for cattle from the eastern part of the proposed MAZ that acts to directly ship cattle only to the Gaylord saleyard on sale days only.
 - A. This point is staffed by MDA or USDA personnel during operation
 - B. It operates on Wednesdays only
 - C. Between 10-45 head are collected each Wednesday
 - D. A Gaylord sale ticket is filled out and ID number, owner name, and type and number of animals are filled out on the Alpena Collection Point report
 - E. Regulatory staff scan each animal into a PDA which accompanies the truckload to the Gaylord saleyard
 - F. Regulatory staff at Gaylord download the PDA information and check each animal for compliance with movement requirements upon check-in.
2. Gaylord saleyard
 - All cattle are scanned and checked for compliance with requirements by regulatory personnel upon check in – this process will continue following publication of an interim rule.
3. Saleyards in proximity to the MAZ that handle a small amount of MAZ cattle
 - The following saleyards will maintain weekly monitoring for receipt and repermitting of MAZ cattle - St, Louis, Cass City, Clare, Marion, and Rosebush.
4. Cattle moved to a market where regulatory inspection and check-in is maintained on sale day will continue to have information collected and downloaded into a tracking database in lieu of a preapproved movement certificate.

All cattle moved from the MAAZ to another zone in Michigan are required to obtain a movement certificate prior to movement, unless moved directly to a USDA inspected slaughter plant or to the USDA approved saleyard at Gaylord where regulatory personnel are present at each sale to verify the testing status of all animals upon arrival.

All cattle imported from other states or countries must meet all requirements for TB testing and movement certification contained within the *CFR*, the *UM&R*, and any other applicable VS Memorandums or Notices.

f. What other procedures are used?

Herds which contain cattle that are suspect or reactor to any tuberculosis tests are handled as outlined in the *CFR*, the *UM&R*, and any other applicable VS Memorandums or Notices. Cattle that are considered suspect, reactor, or double pokeweed failure on supplemental diagnostic testing in the MAZ have routinely been ordered destroyed and submitted to a diagnostic laboratory for further testing. It is not routine for cattle in that area to be quarantined for retesting as allowed in the *UM&R*. Of the approximately 100 cattle from the MAZ per year that are submitted for laboratory testing, less than 3% are determined to be TB infected. This procedure will continue to be in place for the proposed MAZ. It is possible that this procedure may remove potentially infected cattle from the population prior to the stage of infection in which TB is able to be identified by laboratory (Polymerase Chain Reaction (PCR) and culture) procedures.

8. Livestock demographics and marketing practices in the region.

a. How many herds, flocks, etc. of each relevant species are in the region?

There are approximately 13,000 active cattle herds in the Michigan database:⁵⁵

- Proposed MAZ – 662 herds
- Proposed MAAZ Subzone 1 (S1) – 570 herds
- Proposed MAAZ Subzone 2 (S2) – 1,275 herds
- Proposed MAAZ Subzone 3 (S3) – 9,617 herds
- TB Free Zone – 698 herds

b. How are they distributed (e.g. herd density, etc.)?

Seventy-five percent of all cattle herds are located in the lower half of Lower Michigan (S3). Within this area they are distributed in counties surrounding major population centers. The proposed MAAZ contains 90% of the total Michigan cattle herds, with the proposed MAZ containing 5% of the total cattle herds, and the TB Free zone containing 5% of the total cattle herds.⁵⁶

The proposed MAZ and S1 of the proposed MAAZ are located in mixed rural/public land/recreational land use areas of Michigan and the cattle herds are primarily small cow-calf operations. Dairy herds, which are primarily small in size, comprise 15% of the herds in the proposed MAZ and 5% of S1 in the proposed MAAZ. The proposed MAZ contain 6% of the total beef herds and 5% of the total dairy herds in Michigan, while S1 of the proposed MAAZ contains 5% of the state's beef herds and 1% of the dairy herds.⁵⁷

Throughout Michigan a fairly small number of cattle herds have fence line contact with other cattle herds.

c. What are the major marketing centers?

Michigan cattle producers conduct a high volume of business through livestock auction markets. There are 14 licensed livestock auction markets in Michigan that handle cattle and these markets are located primarily in areas with higher concentrations of cattle farms.⁵⁸ There are no livestock saleyards located within the proposed MAZ. One livestock saleyard (Northern Michigan Livestock Association in Gaylord) is located within S1 of the proposed MAAZ. The remaining livestock auction markets are located in Subzone 3 of the MAAZ. There is one saleyard in Michigan which handles primarily dairy breeding cattle (Rosebush). This dairy sale is located within Subzone 3 of the proposed MAAZ.

⁵⁵ See Attachment 35: *Herd Count by Zone and Type*.

⁵⁶ See Attachment 35.

⁵⁷ See Attachment 35.

⁵⁸ See Attachment 36: *Michigan Livestock Markets, Collection Points & Slaughter Facilities*.

d. What are the patterns of livestock movement within the region?

The livestock saleyard in Gaylord handles the majority of cattle sold from the MAZ and S1. Of the remaining movements of MAZ and S1 cattle through saleyards, the highest level of activity is at the livestock saleyard in St. Louis (S3). There are also a number of movements of cattle from the MAZ to the livestock saleyard in Cass City and these are primarily repeat movements of fed cattle from one farm.⁵⁹

From 2002-2008 there were 7,749 movements of cattle from the proposed MAZ to S1.⁶⁰ This is primarily movement of feeder cattle, with only 11% of the movements for breeding purposes.⁶¹

Marketing patterns are anticipated to be unchanged following implementation of the proposed zonal change.

e. How are the animals transported and handled during market transactions?

Michigan has state or federal regulatory personnel present each week at the livestock saleyards that handle almost all the MAZ and S1 cattle (Gaylord, St. Louis, Clare, Marion, Cass City) and at the dairy breeding sale in Rosebush. Movement of cattle from the proposed MAZ through livestock markets and collection points are monitored as follows:

1. Alpena collection point – this is a location for cattle from the eastern part of the proposed MAZ that acts to directly ship cattle only to the Gaylord saleyard on sale days only.
 - A. This point is staffed by MDA or USDA personnel during operation
 - B. It operates on Wednesdays only
 - C. Between 10-45 head are collected each Wednesday
 - D. A Gaylord sale ticket is filled out and ID number, owner name, and type and number of animals are filled out on the Alpena Collection Point report
 - E. Regulatory staff scan each animal into a handheld personal digital assistant (PDA) which accompanies the truckload to the Gaylord saleyard
 - F. Regulatory staff at Gaylord download the PDA information and check each animal for compliance with movement requirements upon check-in.
2. Gaylord saleyard
 - All cattle are scanned and checked for compliance with requirements by regulatory personnel upon check in – this process will continue following publication of an interim rule.

⁵⁹ See Attachment 37: *TB Program Activities at Livestock Markets*.

⁶⁰ See Attachment 27: *MI MAZ Intrazonal Movements*

⁶¹ See Attachment 27.

3. Saleyards in proximity to the MAZ that handle a small amount of MAZ cattle:
 - The following saleyards will maintain weekly monitoring for receipt and repermitting of MAZ cattle - St, Louis, Cass City, Clare, Marion, and Rosebush.
4. Cattle moved to a market where regulatory inspection and check-in is maintained on sale day will continue to have information collected and downloaded into a tracking database in lieu of a preapproved movement certificate.

9. The type and extent of disease surveillance in the region - e.g., is it passive and/or active; what is the quantity and quality of sampling and testing?

The proposed S1 of the MAAZ is a part of Michigan that has zero percent prevalence of cattle or bison herds affected with bovine tuberculosis, and has no findings of tuberculosis in any cattle or bison herds for the previous three years.

MDA will conduct active risk-based surveillance in the MAZ, S1 and S2, and trace testing for any epidemiological investigation.

Tuberculosis surveillance is conducted through the Michigan Risk Based Surveillance System listed below, slaughter surveillance at federally inspected slaughter plants throughout the United States, testing of animals for movement to other zones, states, or countries, and epidemiologic testing associated with tuberculosis investigations.

MDA's risk-based surveillance system for 2009 is as follows:

MAZ

Counties of Alcona, Alpena, Montmorency, Oscoda, and Presque Isle and those parts of Iosco and Ogemaw Counties included in the MAZ (high risk area)

- Annual whole herd test of all herds except freezer beef herds

MAAZ Subzone 1

Counties of Antrim, Charlevoix, Cheboygan, Crawford, Emmet, and Otsego (low risk area)

- Through August, 2009, annual whole herd test of all herds except freezer beef herds
- Beginning September 1, 2009
 - Breeder herds – Annual whole herd test
 - Feeder calf producers – Test one half of the herds each year
 - Will begin with fall 2009 testing
 - The first 170 herds that implement a provisional WRMAP prior to fall 2009 will be tested in fall 2010⁶²
 - The rest will remain on their normal schedule for 2009
 - Feedlots (sell only slaughter cattle) – Test every three years
 - Freezer Beef herds – no testing.

MAAZ Subzone 2

Counties of Arenac, Clare, Gladwin, Grand Traverse, Kalkaska, Missaukee, Osceola, Wexford, and those areas of Iosco and Ogemaw counties south of the MAZ (sporadic risk area)

- Continue second year of the three year program to test all herds in this area
 - Estimate 300 herds tested in 2009
- Complete circle testing in Iosco county
 - Estimate 30 herds
- Special testing – see below

⁶² If there are not 170 farms in this category with a verified WRMAP other criterion will be applied to bring the number up to 170 as this represents half of the number of producers producing feeder calves in S1.

MAAZ Subzone 3

All other counties in Lower Michigan (negligible risk area)

- Random selection of 70 herds
- Special Testing – see below

TB Free Zone

- Random selection to supplement Special Testing to reach a total of 25 herds tested

Special Testing for 2009

1. TB Free zone and MAAZ Subzones 2 and 3

- Test herds that have previously received exposed cattle and have not had an additional whole herd test since the trace testing
 - Estimate 40 herds

2. TB Free zone only

- Test herds that have received cattle from the MAZ from 2004 – 2008

Planned modifications for 2010

1. Customer testing in TB Free zone and MAAZ Subzones 2 and 3:

- Beginning January 1, 2010 breeding cattle sold from herds located in the proposed MAZ and SI of the proposed MAAZ that do not have a provisionally or annually verified Wildlife Risk Mitigation Action Plan (WRMAP) in place, will be required to have an individual TB test within 60-120 days following movement.
- This post-movement testing will apply to receiving herds located in S2 and S3 of the proposed MAAZ as well as the TB Free zone of Michigan.
- The testing may be completed by regulatory veterinarians or private accredited veterinarians.
- Testing in instances where the animal no longer resides at the movement destination (sold, died, etc.) will be handled as follows:
 - If the owner has documentation which identifies the location of the animal, the testing veterinarian will locate and complete testing of the animal at the current premises where it resides.
 - If the owner does not have documentation which identifies the location of the animal or if the animal designated for testing cannot be tested and located, the herd must conduct a whole herd tuberculosis test within six to twelve months from the date of movement into the herd.

- Implementation of testing of post-movement testing of cattle received from herds that do not have a provisionally or annually verified WRMP in place will follow the following schedule:

| Year | Class of Cattle | Date From Which Customers Will Be Subject to Testing |
|------|--|--|
| 2009 | Breeding animals from herds which do not have an initial provisional verified WRMAP by December 31, 2009 | January 1, 2010 ⇨ ∞ |
| 2010 | Breeding animals from herds which did not pass their winter verification | April 1, 2010 until verified (earliest possibility would be December 2010) |
| 2010 | Herds in townships with a high apparent prevalence of bovine TB in wild deer which do not have an initial provisional verified WRMAP by December 31, 2009. ⁶³ | January 1, 2011 ⇨ ∞ |
| 2011 | Herds in townships with a high apparent prevalence of bovine TB in wild deer which did not pass their winter verification. ⁵⁹ | April 1, 2011 until verified (earliest possibility would be December 2011) |
| 2011 | Remaining feeders from herds which do not have an initial provisional verified WRMAP by December 31, 2011 ⁵⁹ | January 1, 2012 ⇨ ∞ |
| 2012 | Remaining feeders which did not pass their winter verification ⁵⁹ | April 1, 2012 until verified (earliest possibility would be December 2012) |

2. Special Testing for 2009 will have been completed.
3. Complete three year program to TB test all herds in S2 of proposed MAAZ.
4. Continue any circle testing and trace testing from any newly infected herds.
5. Discontinue random selection of herds for testing in S3 of the proposed MAAZ and the TB Free zone.

Measurement of Surveillance

Surveillance will be considered successfully completed if both of the following occur:

1. The total number of herds tested in MAAZ Subzones 1, 2, 3 and the TB Free Zone equals at least 500 herds in 2009 and 400 herds in 2010.
2. The total surveillance value for each year using the scoring list below equals at least 1500 points.

⁶³ See Attachment 38: WRMP Priority Map

| Surveillance Category | Surveillance Value (points) |
|--|-----------------------------|
| Exposed and source herd testing (all zones and subzones) | 6 |
| Special Testing 2009 and 2010 | |
| 1. TB Free zone herds that purchased MAZ cattle | 5 |
| 2. Herds that have previously purchased exposed cattle (Subzones 2, 3, and TB Free zone) | 6 |
| 3. 2010 - Testing of animals in S2 and S3 of proposed MAAZ that came from non-WRM herds | 5 |
| Circle Testing | 4 |
| Surveillance herds in Subzone 1 | 5 |
| Other surveillance herds in Subzone 2 | 3 |
| Other surveillance herds in Subzone 3 | 1 |
| Other surveillance herds in TB Free Area | 1 |

a. Are serum surveys conducted, and if so, how frequently, what sample sizes are used, and what has been found?

Serum surveys are not used in the identification or diagnosis of bovine tuberculosis.

b. Is reporting of sick animals mandatory, and if so, what is the procedure by whom and to whom, and what penalties are involved for failure to report?

M. bovis is a reportable disease in the state of Michigan. Under *Public Act 466 of 1988, as amended*, any person who has suspicion or knowledge of a reportable disease must immediately report that fact to the MDA.⁶⁴

All reports of suspicion of disease or suspect tuberculosis test results are immediately assigned for follow-up to state or federal veterinarians trained in the diagnosis and control of tuberculosis, and diagnostic procedures followed as outlined in the *UM&R* and other applicable Federal Regulations.

Failure to report suspicion or knowledge of a reportable disease is a misdemeanor violation punishable by a fine of not less than \$300.00 or imprisonment of not less than 30 days, or both. In addition, any person who intentionally misrepresents the health or medical status for an infectious, contagious or toxicological disease to facilitate movement or transfer of ownership is a felony violation punishable by a fine of up to \$50,000.00 and imprisonment of up to five years.⁶⁵

⁶⁴ See Attachment 39: *Animal Industry Act 466 of 1988, Section 287-709, p. 6*

⁶⁵ See Attachment 39: *Animal Industry Act 466 of 1988, Section 287-709, p. 29.*

c. Are laboratory tests run on suspicious animals? If so, what is the procedure and to what extent e.g., what proportion of suspicious cases are evaluated using each of the specific laboratory procedures.

All suspicious cases are followed up as deemed necessary by federal animal health officials, in conjunction with state animal health officials.

All laboratory testing and follow up is completed in compliance with the *CFR*, the *UM&R*, and VS Notices and Memorandums.

d. Are quarantines imposed on premises with suspicious cases pending final diagnosis?

All premises that contain animals suspicious for the presence of *M. bovis* are quarantined as determined necessary by federal animal health officials, in conjunction with state animal health officials. All quarantines are instituted in compliance with the *CFR*, the *UM&R*, and VS Notices and Memorandums, to control the occurrence and spread of *M. bovis*.

e. What other procedures are followed regarding suspicious cases?

All procedures are followed as deemed appropriate by federal animal health officials, in conjunction with state animal health officials and MSU epidemiologists, and in compliance with the *CFR*, the *UM&R*, and VS Notices and Memorandums, to control the occurrence and spread of *M. bovis*.

10. Diagnostic laboratory capabilities.

a. What diagnostic laboratory capabilities are there?

Michigan State University Diagnostic Center for Population and Animal Health
Animal diagnostic activities in the state of Michigan are handled primarily by the Diagnostic Center for Population and Animal Health (DCPAH). DCPAH is a state of the art service facility of the College of Veterinary Medicine that is fully accredited by the American Association of Veterinary Laboratory Diagnosticians. It offers expertise in bacteriology/mycology, endocrinology, epidemiology, nutrition, parasitology, pathology (anatomic and histologic), toxicology, virology/serology, and immunodiagnostics. DCPAH services are available to veterinarians, regulatory officials, and animal owners, to assist in diagnosis and for consultation.

DCPAH examines sick or dead animals, animal tissues, blood and waste, feed, and samples from the environment. Its findings are coordinated with the referring veterinarian's clinical observations and animal histories in an effort to seek accurate diagnoses. DCPAH comprises 28 faculty members, over 60 technical, computer services and general support staff, and more than 40 part-time student employees. The facility occupies approximately 152,000 gross square feet.

Michigan Department of Community Health

The Michigan Department of Community Health (MDCH) Laboratory is a clinical laboratory, providing a wide variety of public health testing services. Its TB/Mycology laboratory unit has the primary responsibility for diagnostic testing of human specimens for presence of *Mycobacterium tuberculosis* and other *Mycobacterium* spp. involved in human disease and provides reference services to Michigan's clinical laboratories and county health departments. MDCH's TB/Mycology laboratory unit annually tests approximately 6,000 clinical specimens and 1,800 referred cultures for presence and identification of *Mycobacterium* spp.

Since MDCH tested and confirmed the first diagnosed case of *M. bovis* in Michigan's free ranging white tail deer in 1994, its laboratory has continued to develop and maintain the capability to perform microscopic examination, culture, identification and typing services for detection of *M. bovis*, partnering with MDA and MDNR in a cooperative effort to eradicate *M. bovis* from Michigan's wildlife and domestic animals.

Since 1994, MDCH has performed culture testing on more than 3,400 animals from 24 different animal species, including approximately 2,000 white tail deer and elk, detecting *M. bovis* in more than 500 of the animals tested. Using rapid culture and identification methods, confirmation of *M. bovis* from animal specimens is normally completed within six weeks of the date of receipt of the specimen. Reporting test results are accomplished using a computer generated reporting system with the capability of sending reports electronically to multiple agencies.

MDCH has also provided consulting, testing and training services to DCPAH, as well as, the National Veterinary Services Laboratory (NVSL) in Ames, Iowa. MDCH has participated in 24 research studies by providing diagnostic testing services to MSU, MDNR, MDA, USDA and NVSL and participates in a multi agency consortium of scientists dedicated to eradication of *M. bovis* from Michigan's domestic and wild animal populations.

b. Are there laboratories approved for agent isolation, identification, and typing (if yes, need names and addresses of each)?

The MDCH Laboratory is USDA approved for *M. bovis* isolation, identification, and typing. The address of this laboratory is:

The Michigan Department of Community Health
Bureau of Laboratories
Division of Infectious Diseases
Microbiology Section, Mycobacteriology Unit
3350 North Martin Luther King Boulevard
P.O. Box 30195
Lansing, Michigan 48909

c. If not, where specifically is such isolation, identification, and typing done?

USDA's NVSL is the laboratory where all livestock samples are sent for isolation, identification, and typing. This service is also available at DCPAH. Samples collected and submitted for surveillance of wildlife species are submitted to the MDCH laboratory.

d. What security measures are in place in laboratories within the region to prevent escape of biological agents?

DCPAH

DCPAH laboratories operate in Biosafety Level (BSL) 1, 2, or 3. Hazardous waste material, both chemical and infectious, is handled by MSU's Office of Radiation, Chemical and Biological Safety (ORCBS). This unit is responsible for establishing policies and procedures for hazardous waste material according to state and federal laws and regulations. MSU is one of only a few universities licensed as a hazardous waste treatment storage and disposal facility by the Environmental Protection Agency.

DCPAH is in compliance with ORCBS regulations. Infectious waste generated in the bacteriology/mycology, virology/serology, and parasitology sections is collected in containers labeled "Biohazardous Material." The containers are transported by ORCBS for incineration. Discarded tissue waste from the toxicology section is packaged in hazardous waste containers and is also incinerated. Chemical and radioactive waste from all laboratory sections is packaged and stored according to ORCBS guidelines, is picked up, and discarded.

All carcasses from the pathology service are incinerated on site. With respect to laboratory safety, all laboratory sections are inspected annually by ORCBS. Problems seen are reviewed by the internal DCPAH Safety Committee, corrective action taken, and documentation provided to ORCBS.

MDCH

MDCH laboratories are housed in a state of the art BSL 2 and 3 facility, which is used to test Class 1, 2, and 3 bio-hazardous etiologic agents. It is designated by CDC as an "LRN Confirmatory Laboratory" for testing agents of bio-terrorism and is certified by CDC to test "Select Agents". The BSL 3 TB/Mycology testing laboratory is secured by four layers of security using card access readers at each layer with a security guard at the first two outer layers.

Visitors are only allowed into the BSL 3 area, if accompanied by laboratory staff with authorized access. Entry and exit of unauthorized visitors is documented. Etiologic agents designated for disposal are decontaminated by autoclaving and rendered non-viable before being transported from the BSL 3 area. Transport of viable cultures for referral out of the facility, when necessary, is done in accordance with IATA and federal regulations.

e. What kind of training have the diagnostic personnel had regarding the specific disease agents of concern?

DCPAH

Personnel are well qualified to carry out the respective missions, and DCPAH has a highly qualified TB expert on staff from the National Animal Disease Center. All personnel working within DCPAH laboratories are required to undergo training with ORCBS prior to conducting activities within the facility.

MDCH

The Microbiology laboratory section director has over 22 years of experience in directing clinical microbiology laboratories. The TB/Mycology laboratory unit, with over 25 years of experience at testing animals for presence of *M bovis*, is staffed by six microbiologists and two paraprofessionals. Three microbiologists with primary responsibility for *M. bovis* testing with over 40 years of combined microbiology experience and are supervised by a microbiologist with over 35 years of experience.

The MDCH laboratories are accredited by the Centers for Medicare & Medicaid Services (CMS) Clinical Laboratory Improvement Amendments (CLIA) every two years. Laboratory testing performance is evaluated through bi-annually participation in both the Centers for Disease Control (CDC) and the College of American Pathologists (CAP) mycobacterial proficiency testing programs. Staff competencies are evaluated annually.

11. Policies and infrastructure for animal disease control in the region - i.e., emergency response capacity.

a. What policies and infrastructure exist for emergency response to outbreak situations?

The Animal Industry Division (AID) of the Michigan Department of Agriculture has an Emergency Response Plan for all diseases of livestock concern.⁶⁶ This plan has been used in real world response, and has been tested through multiple exercises including a full scale exercise in 2008 using a foot and mouth disease scenario. The Animal Disease response plan supports the MDA's overall emergency plans and aligns with the State of Michigan's Michigan Emergency Management Plan. MDA AID contains one program manager level veterinary position dedicated exclusively to emergency preparation, response and planning, training, and exercises.

MDA also maintains a volunteer veterinary corps, made up of private practice veterinarians and veterinary technicians who have attended training with MDA and USDA-APHIS-VS staff. This volunteer veterinary corps serves as part of the State's emergency response capacity. In addition, MDA has developed a sampling team, made up of inspectors and staff from throughout MDA, who can be called upon if necessary to perform non-veterinary response assistance in the event of an animal livestock disease emergency.

Michigan is a member of the Multi-State Partnership for Agriculture Security, the thirteen state group working collectively on development of response plans, risk communication, training, and exercising, including the June, 2009 National Veterinary Stockpile exercise.

⁶⁶ See Attachment 40: *Michigan Emergency Response Plan 2005*

Michigan Bovine Tuberculosis Eradication Program

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

Attachment A

ARTICLE 5 - COOPERATOR RESPONSIBILITIES

To have the best opportunity for long-term success, the program will be built according to the following guidelines:

- The program will be built in cooperation with producers and have realistic implementation goals, be cost-effective, and balance multiple potentially competing issues (examples: environmental preservation, animal welfare, disease control, and economic viability).
- Momentum must be developed early in the program by focusing on the things that are most acceptable and easiest to implement for the producer (see *WRMP Verification Requirements – short term implementation*).
- Major changes that require significant capital input will in turn require long-term implementation schedules and yet-to-be identified resources. Producers will demonstrate movement toward more resource intensive practices by taking the initial steps in pursuing funding (see *WRMP Verification Requirements – long-term implementation in high-risk areas*).
- The program must provide certainty to customers that there will not be retroactive consequences for purchasing from herds in the areas where the program is instituted (must not inject uncertainty in the markets). The implementation schedule will need to minimize the risk that there will be serious unintended effects on marketing of cattle.
- A verification program that is balanced in allowing for corrections, but minimizes the time needed to identify non-cooperative producers. The WRMP verifications will be carried out annually from November 16 to March 15 by MDA and USDA regulatory personnel.

**WRMP Verification Requirements
Short Term Implementation**

| Type of Change | Risk Mitigation Practice | Stage Verified | Timelines for Correction if Non-Compliant |
|----------------|--|---------------------------------|---|
| Management | Feeding cattle limited quantities daily | Winter verification | 14 days |
| Management | Feeding of cattle done 100 yards from deer cover | Winter verification | 14 days |
| Management | Hay in storage by Nov 15 th | Winter verification | 14 days |
| Structural | Exclusionary fencing – exclude cattle from ideal deer habitat in high risk areas | During Provisional verification | 30 days |
| Structural | Grain & concentrates stored in containers | During Provisional verification | 14 days |
| Structural | Measures used to protect hay & silage from deer contact | Winter verification | 14 - 30 days |

**WRMP Verification Requirements
Long-Term Implementation in High-Risk Areas**

| Type of Change | Risk Mitigation Practice | Minimum Producer Action Required |
|----------------|------------------------------------|---|
| Structural | Install feed storage fencing | Apply for cost-share or NRCS funding (must agree to take measures to protect feed while waiting for cost share practice to be installed.) |
| Structural | Install artificial watering system | Apply for NRCS funding |
| Structural | Install exclusionary fencing | Apply for NRCS funding |

WRM Project Verification Schedule

| Verification stage | Timeframe |
|---|--|
| Annual verification | Nov 16 th – March 15 th |
| 2 nd visit – if not compliant at first visit | As stated in <i>WRMP Verification Requirements - short term implementation table</i> |
| Not verified by March 31, 2010 | Considered not verified for movements April – Nov 2010 |

MEMORANDUM OF UNDERSTANDING
BETWEEN
MICHIGAN DEPARTMENT OF AGRICULTURE
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 three designations of State status regarding the risk of bovine tuberculosis (TB), namely, Modified Accredited status, Modified Accredited Advanced 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 (MDA) 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 2007, a previous MOU was signed by MDA, the Michigan Department of Natural Resources (DNR), and USDA, Animal Plant Health Inspection Service (APHIS), Veterinary Services (VS), which established criteria for maintenance of a Free, Modified Accredited Zone (MAZ) and Modified Accredited Advanced Zone (MAAZ) for bovine tuberculosis (TB) in Michigan. Pursuant to the CFR, the MOU was 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.

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.

MDA 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 is responsible for the following provisions:

1. Requiring electronic identification for any cattle and bison moved from premises in the Modified Accredited Zone and the Modified Accredited Advanced Subzone 1, and the ability to retrieve information concerning animal movements within 48 hours. Electronic records of movement are preferred over paper records. Cattle moved from a premises in the Modified Accredited Zone and the Modified Accredited Advanced Subzone 1 may move from a premises and receive electronic identification at a licensed livestock auction market if they do not cross a zonal boundary.
2. MDA will maintain and enforce a certificate system to track interzone cattle movements from farm of origin to final destination from the MAZ and MAAZ zones. This certificate system shall be substantially the same as CFR (77.3) requirements for interstate movements. Cattle moving directly from farm or feedlot to slaughter will be exempt from the movement certificate provided that the farm maintains records to identify the farm of origin of all animals shipped. 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 MDA and USDA, APHIS, VS can develop and implement an alternative certificate system that does not impede the flow of commerce.

One hundred percent (100%) of cattle and bison moved interzone from the MAZ will be required to receive a movement certificate prior to leaving the farm of origin, which confirms that the animals to be moved meet all tuberculosis testing requirements prior to issuance of such a certificate. 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.

In addition, all cattle and bison moved interzone from the MAAZ, except as exempted in this section, will be required to receive a movement certificate prior to leaving the farm of origin, or livestock saleyard if this is the origin of the movement across the zonal boundary, which confirms that the animals to be moved meet all tuberculosis testing requirements prior to issuance of such a certificate. All individual cattle and bison data as specified in 9 CFR, 77.2 Definitions, Certificate, will be included on the certificate and the certificate must accompany the cattle and bison upon movement. Certificates for movement are not required for the zone within Michigan with free status.

3. 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 MDA 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.
4. Movement of cattle and bison as defined in CFR Part 77, from the Lower Peninsula into the Upper Peninsula of Michigan will be monitored at the Mackinac Bridge throughout calendar year 2009 and 2010 whenever the bridge is open for transport of livestock. This monitoring is dependant upon maintaining funding to support this inspection point. MDA is currently anticipating funding to be available through FY 2010. If funding levels change, MDA and USDA will develop a mutually agreed upon plan for monitoring movements of animals from the Lower Peninsula that is consistent with controls necessary between modified accredited advanced and TB Free zones.

Cattle and bison transported across the bridge and livestock transportation equipment (vehicles) will be required to stop for inspection for compliance with State and Federal split state status requirements and this MOU. MDA will monitor compliance at the Bridge and evaluate the effectiveness of alternative enforcement strategies at the Bridge as part of a comprehensive movement control program. In 2009, at least 40 hours per week of law enforcement presence to immediately stop livestock transportation vehicles which do not stop for inspection will be maintained. Law enforcement officer work shifts will be varied among all days and shifts based on the risk of cattle movements and drive-bys. An activity log will be kept to record, verify, and document the inspections and compliance with this requirement.

5. MDA 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. MDA will maintain an agreement with the Michigan State Police for an average of 20 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. MDA 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.
6. Summary reports of the annual bridge activities, investigations, and vehicle inspections on public roads will be included in the required bovine tuberculosis reports (VS 6-38 Form narratives).
7. MDA 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 MDA, 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
8. MDA will continue to review normal agricultural practices as needed to identify and promote best management practices for agriculture resources that can be used to cost-effectively interrupt disease transmission within the MAZ.
9. MDA will continue to refine risk-based surveillance systems as follows:
MAZ
 1. Counties of Alcona, Alpena, Montmorency, Oscoda, and Presque Isle and those parts of Iosco and Ogemaw Counties included in the MAZ (high risk area)
 - Annual whole herd test of all herds except freezer beef herds
 2. Counties of Antrim, Charlevoix, Cheboygan, Crawford, Emmet, and Otsego (low risk area)
 - Through August, 2009, annual whole herd test of all herds except freezer beef herds
 - Beginning September 1 (now considered MAAZ Subzone 1)
 - Breeder herds – Annual whole herd test
 - Feeder calf producers – Test one half of the herds each year
 - Will begin with fall testing 2009
 - The first 170 herds that implement a provisional WRM plan prior to fall 2009 will be tested in fall 2010
 - The rest will remain on their normal schedule for 2009
 - Feedlots (sell only slaughter cattle) – Test every 3 years
 - Freezer Beef herds – no testing.

MAAZ

1. Counties of Arenac, Clare, Gladwin, Grand Traverse, Kalkaska, Missaukee, Osceola, Wexford, and those areas of Iosco and Ogemaw counties south of the MAZ – MAAZ Subzone 2 (sporadic risk area)
 - Continue 2nd year of the 3 year program to test all herds in this area
 - Estimate 300 herds tested in 2009
 - Complete circle testing in Iosco county
 - Estimate 30 herds
 - Special testing – see below
2. All other counties in Lower Michigan – MAAZ Subzone 3 (negligible risk area)
 - Random selection of 70 herds
 - Special Testing – see below

TB Free Zone

- Random selection to supplement Special Testing to reach a total of 25 herds tested

Special Testing for 2009

1. TB Free zone and MAAZ Subzones 2 and 3
 - Test herds that have previously received exposed cattle and have not had an additional whole herd test since the trace testing
 - Estimate 40 herds
2. TB Free zone only
 - Test herds that have received cattle from the MAZ from 2004 – 2008

Planned modifications for 2010

1. TB Free zone and MAAZ Subzones 2 and 3
 - Beginning January 1, 2010 breeding cattle sold from herds located in the MAZ and MAAZ subzone 1 that do not have a provisionally or annually verified wildlife risk mitigation program (WRMP) in place, will be required to have an individual TB test within 60-120 days following movement.
 - This post-movement testing will apply to receiving herds located in MAAZ subzones 2 and 3, and the TB Free zone of Michigan.
 - The testing may be completed by regulatory veterinarians or private accredited veterinarians.
 - Testing in instances where the animal no longer resides at the movement destination (sold, died, etc.) will be handled as follows:
 - If the owner has documentation which identifies the location of the animal, the testing veterinarian will locate and complete testing of the animal at the current premises where it resides.
 - If the owner does not have documentation which identifies the location of the animal or if the animal designated for testing cannot be tested and located, the herd must conduct a whole herd tuberculosis test within 6-12 months from the date of movement into the herd.
 - Implementation of testing of post-movement testing of cattle received from herds that do not have a provisionally or annually verified WRMP in place will follow the following schedule:

| Year | Class of Cattle | Date From Which Customers Will Be Subject to Testing |
|------|--|--|
| 2009 | Breeding animals from herds which do not have an initial provisional verified WRMAP by December 31, 2009 | January 1, 2010 ⇒ ∞ |
| 2010 | Breeding animals from herds which did not pass their winter verification | April 1, 2010 until verified (earliest possibility would be December 2010) |
| 2010 | Herds in townships with a high apparent prevalence of bTB in wild deer which do not have an initial provisional verified WRMAP by December 31, 2009. | January 1, 2011 ⇒ ∞ |
| 2011 | Herds in townships with a high apparent prevalence of bTB in wild deer which did not pass their winter verification. | April 1, 2011 until verified (earliest possibility would be December 2011) |
| 2011 | Remaining feeders from herds which do not have an initial provisional verified WRMAP by December 31, 2011 | January 1, 2012 ⇒ ∞ |
| 2012 | Remaining feeders which did not pass their winter verification | April 1, 2012 until verified (earliest possibility would be December 2012) |

2. Special Testing for 2009 will have been completed.
3. Continue any circle testing and trace testing from any newly infected herds.
4. Discontinue random selection of herds for testing in MAAZ Subzone 3 and the TB Free zone.

Measurement of Surveillance

Surveillance will be considered successfully completed if both of the following occur:

1. The total number of herds tested in MAAZ Subzones 1, 2, 3 and the TB Free Zone equals at least 500 herds in 2009 and 400 herds in 2010.
2. The total surveillance value for each year using the scoring list below equals at least 1500 points.

| Surveillance Category | Surveillance Value (points) |
|--|-----------------------------|
| Exposed and source herd testing (all zones and subzones) | 6 |
| Special Testing 2009 and 2010 | |
| 1. TB Free zone herds that purchased MAZ cattle | 5 |
| 2. Herds that have previously purchased exposed cattle (Subzones 2, 3, and TB Free zone) | 6 |
| 3. 2010 - Testing of animals in MAAZ Subzones 2 and 3 that came from non-WRM herds | 5 |
| Circle Testing | 4 |
| Surveillance herds in Subzone 1 | 5 |
| Other surveillance herds in Subzone 2 | 3 |
| Other surveillance herds in Subzone 3 | 1 |
| Other surveillance herds in TB Free Area | 1 |

10. MDA 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 (See Attachment A). In addition to any newly identified premises identified to be bovine TB infected, priorities in 2009 should be placed on assessing and mitigating wildlife risks for herds located in the following areas that sell breeding animals that are moved across zonal or subzonal boundaries:
 - a) MAZ five-county (Alcona, Alpena, Montmorency, Oscoda, Presque Isle, and those parts of Iosco and Ogemaw Counties included in the MAZ).
 - b) Subzone 1 (Antrim, Charlevoix, Cheboygan, Crawford, Emmett, and Otsego Counties). 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. The project matches incentives (cost-share and lowered surveillance and movement requirements in Subzone 1) and disincentives (testing of customers in both MAZ and Subzone 1, and movement testing for those without a Wildlife Risk Mitigation Action Plan (WRMAP) in Subzone 1) to increase the rate of this change.
11. MDA 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.
12. 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 by the Designated TB Epidemiologist (DTE).
13. 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. Five county endemic area, i.e. Alcona, Alpena, Montmorency, Oscoda, and Presque Isle counties: Active sampling of free-ranging deer at a rate of 3,500 deer annually. For the purposes of this MOU, active sampling is defined as testing of free-ranging cervids resulting from deliberate DNR 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. Passive surveillance will be conducted through examination and testing of potentially lesioned animals submitted to the DNR by hunters throughout Michigan. Hunters are educated to look for tuberculous lesions through information in the DNR's Hunting and Trapping Guide. For the purposes of this MOU, passive surveillance is defined as testing of free-ranging cervids voluntarily submitted to DNR by the public as a part of ongoing statewide monitoring of wildlife health. For example, DNR 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 DNR 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 the MAZ, heightened active sampling of free-ranging deer will be initiated within a 10 mile radius of the bovine TB-positive livestock facility, at a rate sufficient to detect a TB prevalence of at least 1% with 95% confidence (≥ 300 deer annually). Sampling will continue at the agreed upon rate for a period of at least five consecutive years following the last year that a case of bovine TB was detected in free-ranging cervids or livestock in that area. In the event the free-ranging deer population in an area is insufficient to allow the agreed upon rate to be met, e.g., predominantly urban areas, northern Upper Peninsula, etc., a sampling rate sufficient to meet the intent of this provision will be mutually agreed upon by USDA, APHIS, VS and DNR on a case-by-case basis.
3. If bovine tuberculosis is detected by MDNR passive surveillance in free-ranging cervids outside the five county endemic area, 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 (≥ 300 deer annually). Sampling will continue at the agreed upon rate for a period of at least five 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 DNR 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 five 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.

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5. The DNR, 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 MDA 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.
6. Providing support for acquisition and development for electronic identification, hardware and software in accordance with the National Animal Identification System (NAIS) and USDA regulations. Provide data entry assistance necessary to monitor tuberculosis testing and animal movements within the MAZ 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 on an annual basis, 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, MDA Responsibilities, Item 10.

ARTICLE 7 - MAINTENANCE OF STATUS

To maintain status, a yearly review is required by the Cooperators and Service that determines that the requirements and agreements of the MOU are 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 six (6) TB infected cattle and bison herds per year and up to four (4) affected herd years for maintaining status in the MAZ

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 DNR 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.

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The plan must be reviewed by DNR annually and a new plan jointly developed between the DNR 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 (MDA and DNR) 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

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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 MDA and DNR agree to the conditions for split-state status for bovine TB as defined in the final rule published in the Federal Register by APHIS. This MOU must be updated and re-approved annually (within 10 to 14 months from the previous signature date) 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: _____
John R. Clifford
Deputy Administrator of Veterinary Services

Date

MICHIGAN DEPARTMENT OF AGRICULTURE

BY: _____
Donald W. Koivisto
Director

Date

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

BY: _____
Rebecca A. Humphries
Director

Date



STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

DON KOIVISTO
DIRECTOR

Establishment of Zones for Bovine Tuberculosis
(Identification, Testing, Certificate, and Movement Requirements)
Pursuant to Public Act 466 of 1988, MCL 287.708 and MCL 287.709 (8-10)

Failure to comply with requirements under this zoning order may result in penalties under MCL 287.744.

Definitions

As used in this order the following terms are defined as:

“Cattle” means all bovine (genus bos) animals, bovine-like animals (genus bison) also commonly referred to as American buffalo or bison and any cross of these species unless otherwise specifically provided.

“Freezer Beef Herd” means a cattle herd approved by the director that passes an annual inspection verifying the herd is comprised of 6 or less head in which no breeding of cattle occurs, no cattle are moved to any other premises, and all cattle are raised only for personal consumption.

“Initial Identification” means the first time an official identification is placed on an animal, whether it is for tuberculosis testing, complying with movement requirements, or any other reason.

“Michigan Licensed Livestock Auction Market” means a premises licensed as a livestock auction under Public Act 284 of 1937, as amended, MCL 287.121 – 287.131.

“USDA Approved Livestock Market” means a premises where livestock are assembled and that has been approved under Title 9, *Code of Federal Regulations* (9 CFR), Section 71.20.

“Verified Wildlife Risk Mitigation Plan” means a written plan that contains structural and management requirements intended to reduce the risk that a herd will become infected with bovine tuberculosis that has been approved by the Department and verified by regulatory personnel to be in effect.

All Zones for Bovine Tuberculosis within Michigan

Livestock Inspection Check-Points

All livestock transportation equipment (vehicles) and anyone transporting livestock shall stop at any posted Livestock and Plant Inspection Point. Cattle or privately owned cervidae that are being transported shall be accompanied by documentation of the origin of shipment, copies of the animal's registration or permit, documentation indicating the shipping destination and any other information necessary to demonstrate compliance with livestock movement requirements. Such documentation shall be produced upon the request by a law enforcement officer or the director.

Modified Accredited Zone (Infected Zone) – This zone includes the entirety of Alcona, Alpena, Montmorency, Oscoda, and Presque Isle counties, and those portions of Iosco and Ogemaw counties that are north of the southernmost boundaries of the Huron National Forest and the Au Sable State Forest.

Cattle Identification Requirements

Initial identification of cattle, including cattle identified for TB testing or issuance of movement certificates, must utilize an RFID electronic identification ear-tag. Official identification tags are premises specific and may not be transferred to another premises or used on cattle not included in the herd on the premises to which the tags were issued. All cattle must be identified with official RFID electronic identification eartags prior to movement from a premises.

Surveillance Testing Requirements

All cattle herds shall complete an annual whole herd bovine tuberculosis test of all cattle 12 months of age and older, all non-natural additions of any age, and all goats, bison, or privately owned cervids 6 months of age or older that are in contact with the herd. Retesting of herds must be done within 9-15 months of the anniversary date of the initial whole herd test.

Any cattle herds which meet the requirements to be designated as freezer beef herds are exempt from the annual testing requirement.

Movement Testing Requirements

Movement within the Modified Accredited Zone

- Cattle must comply with one of the following prior to movement:
 - a) Originate directly from a bovine tuberculosis accredited free herd, or,
 - b) Originate from a herd which has received a whole herd test within 60 days prior to movement, or,
 - c) Receive a negative bovine tuberculosis test within 60 days prior to movement.
- Cattle less than 2 months of age may be moved if they originate from a herd that has completed a whole herd test within 12 months prior to movement.
- Steers or spayed heifers moving to a registered terminal operation or between registered terminal operations are required to only have a negative bovine tuberculosis test within 60 days prior to movement.
- Cattle may be moved directly to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, or through one Michigan licensed livestock auction market to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, without meeting the tuberculosis movement testing requirements.

Movement to another Zone within Michigan

- Cattle 2 months of age and older must comply with one of the following prior to movement:
 - a) Originate directly from a bovine tuberculosis accredited free herd, or,
 - b) Originate from a herd that has received a negative whole herd bovine tuberculosis test within 12 months prior to movement, and receive a negative bovine tuberculosis test within 60 days prior to movement
- Cattle less than 2 months of age may be moved if they originate from a herd that has completed a whole herd test within 12 months prior to movement.
- Steers or spayed heifers are required to only have a negative bovine tuberculosis test within 60 days prior to movement.
- Cattle may be moved directly to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, or through one Michigan licensed livestock auction market to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, without meeting the tuberculosis movement testing requirements.

Movement Certificate Requirements

Cattle being transported must be accompanied by a movement certificate(s) and the movement certificate(s) shall be produced upon the request of a law enforcement officer or the director.

An official movement certificate is required to be obtained prior to movement of any cattle from any premises in the Modified Accredited zone. Cattle moved to the USDA approved livestock market in Gaylord may move on sale day without a movement certificate if they comply with all other requirements and are delivered within designated arrival times, as designated by the director. All cattle with a destination of a Michigan licensed livestock auction market must receive a new official movement certificate that identifies the final destination of movement.

Modified Accredited Advanced Zone (Surveillance Zone) – This zone includes the remainder of the Lower Peninsula of Michigan.

Subzone 1 – This subzone includes the entirety of Antrim, Charlevoix, Cheboygan, Crawford, Emmet, and Otsego counties.

Cattle Identification

Initial identification of cattle, including cattle identified for TB testing or issuance of movement certificates, must utilize an RFID electronic identification ear-tag. Official identification tags are premises specific and may not be transferred to another premises or used on cattle not included in the herd on the premises to which the tags were issued. All cattle must be identified with official RFID electronic identification ear-tags prior to movement from a premises within the Modified Accredited Advanced zone.

Surveillance Testing Requirements

All cattle herds which sell or move to another premises one or more cattle on a movement certificate for the reason of BREEDING must complete an annual whole herd bovine tuberculosis test of all cattle 12 months of age and older, and all goats, bison, or privately owned cervids 6 months of age or older in contact with the herd, unless specifically exempted by the director. Retesting of herds must be done within 9-15 months of the anniversary date of the initial whole herd test.

Any cattle herds which do not sell or move to another premises animals other than directly to a federally inspected slaughter plant or through a Michigan licensed livestock auction market directly to a federally inspected slaughter plant will be tested on a 3 year interval as determined by the director.

All other cattle herds which move cattle that enter another livestock premises must complete a whole herd bovine tuberculosis test of all cattle 12 months of age and older, and all goats, bison, or privately owned cervids 6 months of age or older in contact with the herd every other year, unless specifically exempted by the director. Retesting of herds must be done within 21-27 months of the anniversary date of the whole herd test. The director will determine the date at which each herd must complete the first whole herd bovine tuberculosis test following the effective date of this order.

Any cattle herds which meet the requirements to be designated as freezer beef herds are exempt from surveillance testing.

Movement Testing Requirements

Movement within the Modified Accredited Advanced Zone

Cattle originating from herds that have been determined to have a Verified Wildlife Risk Mitigation Plan

- No TB testing required

Cattle originating from herds that have been determined to **NOT** have a Verified Wildlife Risk Mitigation Plan

- Cattle must comply with one of the following prior to movement:
 - a) Originate directly from a bovine tuberculosis accredited free herd, or,
 - b) Receive a negative bovine tuberculosis test within 60 days prior to movement.
- Cattle less than 2 months of age may be moved if they originate from a herd that is determined to not be overdue on tuberculosis surveillance testing.
- Cattle may be moved directly to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, or through one Michigan licensed livestock auction market to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, without meeting the tuberculosis movement testing requirements.

Movement to another Zone within Michigan

Cattle originating from herds that have been determined to have a Verified Wildlife Risk Mitigation Plan

- Sexually intact cattle 6 months of age or older must meet one of the following prior to movement:
 - a) Originate directly from a bovine tuberculosis accredited free herd, or,
 - b) Receive a negative bovine tuberculosis test within 60 days prior to movement.

- Cattle less than 6 months of age, steers and spayed heifers of any age, or cattle moving to an United States Department of Agriculture Food Safety Inspection Service approved slaughter plant or through one Michigan licensed livestock auction market prior to movement to an United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, do not need to meet tuberculosis movement testing requirements prior to movement.

- Sexually intact heifers that are moving to an approved feedlot as defined in *Bovine Tuberculosis Eradication Uniform Methods and Rules, Effective January 1, 2005* do not need to meet tuberculosis movement testing requirements prior to movement.

Cattle originating from herds that have been determined to **NOT** have a verified Wildlife Risk Mitigation Plan

- Cattle 2 months of age and older must comply with one of the following prior to movement:
 - a) Originate directly from a bovine tuberculosis accredited free herd, or,
 - b) Receive a negative bovine tuberculosis test within 60 days prior to movement

- Cattle may be moved to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, or through one Michigan licensed livestock auction market to a United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, without meeting tuberculosis movement testing requirements.

Movement Certificate Requirements

Cattle being transported must be accompanied by a movement certificate(s) and the movement certificate(s) shall be produced upon the request of a law enforcement officer or the director.

An official movement certificate is required to be obtained prior to movement of any cattle and bison from any premises. Cattle moved to the USDA approved livestock market in Gaylord may move on sale day without a movement certificate if they comply with all other requirements and are delivered within designated arrival times, as designated by the director. All cattle with a destination of a Michigan licensed livestock auction market must receive a new official movement certificate that identifies the final destination of movement.

Subzones 2 and 3 – Subzone 2 consists of the entirety of Arenac, Clare, Gladwin, Grand Traverse, Kalkaska, Missaukee, Osceola, Roscommon, and Wexford counties, and those portions of Ogemaw and Iosco counties not included in the Modified Accredited zone. Subzone 3 consists of the remainder of the counties in Lower Michigan not included in the Modified Accredited zone and Modified Accredited Advanced zone Subzones 1 and 2.

Cattle Identification

All cattle must be identified with official RFID electronic identification eartags prior to movement from a premises within Michigan. Official identification tags are premises specific and may not be transferred to another premises or used on cattle not included in the herd on the premises to which the tags were issued.

Surveillance Testing Requirements

All cattle herds shall obtain a premises identification number, and be placed into a database from which herds will be selected for whole herd testing in a bovine TB surveillance program approved by the director. Selected cattle herds, or herds selected as a replacement for herds determined ineligible for testing, shall be subject to whole herd testing of all cattle in the herd 12 months of age and older, and all bison, goats, and privately owned cervids 6 months of age or older in contact with the herd. This testing shall occur within 90 days after the person responsible for herd management receives notification that a whole herd test under this surveillance program is due and necessary.

Movement Testing Requirements

Movement within the Modified Accredited Advanced Zone

- No tuberculosis testing is required for movement of cattle and bison within the zone, or through a Michigan licensed livestock auction market to a final destination within the zone.

Movement to another Zone within Michigan

- Sexually intact cattle 6 months of age or older must meet one of the following prior to movement:
 - a) Originate directly from a bovine tuberculosis accredited free herd, or,
 - b) Receive a negative bovine tuberculosis test within 60 days prior to movement.
- Cattle less than 6 months of age, steers and spayed heifers of any age, or cattle moving directly to an United States Department of Agriculture Food Safety Inspection Service approved slaughter plant or through one Michigan licensed livestock auction market prior to movement to an United States Department of Agriculture Food Safety Inspection Service approved slaughter plant, do not need to meet the tuberculosis movement testing requirements prior to movement.
- Sexually intact heifers that are moving to an approved feedlot as defined in *Bovine Tuberculosis Eradication Uniform Methods and Rules, Effective January 1, 2005* do not need to meet tuberculosis movement testing requirements prior to movement.

Movement Certificate Requirements

Movement within the Modified Accredited Advanced Zone

- No official movement certificate is required for movement within Subzones 2 and 3 of the Modified Accredited Advanced zone.

Movement to another Zone within Michigan

- Cattle being transported must be accompanied by a movement certificates and the movement certificate(s) shall be produced upon the request of a law enforcement officer or the director.
- An official movement certificate is required to be obtained prior to movement of any cattle from any premises for movement to another zone within Michigan. Cattle moved to the USDA approved livestock market in Gaylord may move on sale day without a movement certificate if they comply with all other requirements and are delivered within designated arrival times, as designated by the director. All cattle with a destination of a Michigan licensed livestock auction market must receive a new official movement certificate that identifies the final destination of movement.

Bovine Tuberculosis Free Zone (Disease Free Zone) – This zone includes the entirety of the Upper Peninsula of Michigan.

Cattle Identification

All cattle must be identified with official RFID electronic identification eartags prior to movement from a premises within Michigan. Official identification tags are premises specific and may not be transferred to another premises or used on cattle not included in the herd on the premises to which the tags were issued.

Surveillance Testing Requirements

All cattle herds shall obtain a premises identification number, and be placed into a database from which herds may be selected for whole herd testing in a bovine TB surveillance program approved by the director. Selected cattle herds, or herds selected as a replacement for herds determined ineligible for testing, shall be subject to whole herd testing of all cattle in the herd 18 months of age and older, and all bison, goats, and privately owned cervids 6 months of age or older in contact with the herd. This testing shall occur within 90 days after the person responsible for herd management receives notification that a whole herd test under this surveillance program is due and necessary.

Movement Testing and Certificate Requirements

No tuberculosis testing or official movement certificate is required to move cattle within the bovine tuberculosis free zone, or to other zones within Michigan.

This order supercedes and replaces all prior bovine tuberculosis zoning orders including the immediately preceding order effective May 1, 2008.

Director
Michigan Department of Agriculture

Date