



**Legislative Report
January 11, 2021**

Bovine Tuberculosis Eradication Program Quarterly Update
Provided by the Animal Industry Division
Michigan Department of Agriculture and Rural Development (MDARD)

Act No. 166, Public Acts of 2020, approved by the Governor September 30, 2020, EFFECTIVE DATE: September 30, 2020.

- (1) On or before October 15, 2020, the department shall provide to the subcommittees, the fiscal agencies, and the state budget office a report on bovine TB status and department activities.
- (2) For each fiscal quarter following the report required in subsection (1), the department shall provide an update to the subcommittees, the fiscal agencies, and the state budget office. The quarterly update reports shall identify significant impacts to the program, including new incidence of bovine TB in this state, department activity associated with specific new incidence of bovine TB, any changes in USDA requirements or movement orders, and information and data on wildlife risk mitigation plan implementation in the modified accredited zone; implementation of a movement certificate process; progress toward annual surveillance test requirements; efforts to work with slaughter facilities in this state, as well as those that slaughter a significant number of animals from this state; educational programs and information for this state's livestock community; and any other item the legislature should be aware of that will promote or hinder efforts to achieve bovine TB-free status for this state.

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A. MDARD Bovine Tuberculosis Eradication Program Activities

Why We Do What We Do

Michigan's Bovine TB Eradication Program protects citizens from exposure to the bovine tuberculosis (TB) organism. The Michigan Bovine TB Program was established under Public Act 466, of 1988, as amended, the Animal Industry Act, and is required by Federal Law for Michigan producers to participate in interstate commerce of animals (9CFR Part 77) and to maintain a state status (9CFR Part 92). Bovine TB has economic and human health implications, and the program is of high visibility and interest to farmers, producer groups, hunters, and the federal government. The disease is also of high interest at the national level, and other states would close their markets to Michigan cattle, meat, and milk products if the program were reduced or eliminated. Approximately 12,000 cattle producers in Michigan maintain over 1.15 million cattle. The Michigan bovine TB program works to prevent, detect, and respond to cases of bovine TB and provides access to national and international markets for Michigan producers. The 37 dairy producers located within the Modified Accredited Zone (MAZ) can sell Grade A milk because of the program we have in place and the herds in the remainder of the state (AFZ) can freely move milk because of our split state status.

B. Special Surveillance Areas

Special TB Surveillance Areas in Allegan and Saginaw Counties

As a result of finding herd #78 and feedlot #6 in Allegan and Saginaw Counties respectively, Special TB Surveillance areas three miles in radius were established around each of these premises on April 16, 2020. All cattle herds located within this radius were to complete a whole herd TB test within six months of the designation, or by October 16, 2020. Nine herds in the Saginaw County TB Surveillance Area were required to be tested and all have completed that test; 19 herds in the Allegan County TB Surveillance Area were required to be tested and all have completed that test. There were no findings of bovine TB.

Beginning April 1, 2020 surveillance is required in MAZ Buffer Counties:

(Cheboygan, Crawford, Iosco, Ogemaw, Otsego, and Roscommon Counties)

MDARD's MOU with MDNR and USDA, signed in December 2019, and the current zoning order, effective April 1, 2020, require that 150 cattle herds be tested for TB annually for at least two years. Herds are selected for whole herd surveillance testing from the combined counties of Cheboygan, Crawford, Iosco, Ogemaw, Otsego, and Roscommon. At this time, 109 herds have been tested and 18 additional have been scheduled. 150 herds must be tested by March 31, 2021 to be compliant with the MOU. There have been no findings of bovine TB from the testing so far.

Beginning April 1, 2020 surveillance required in Presque Isle County:

MDARD's MOU with MDNR and USDA, signed in December 2019, and the current zoning order, effective April 1, 2020, require all cattle herds in Presque Isle County which have not completed a whole herd bovine tuberculosis test since January 1, 2019 to complete a whole herd bovine tuberculosis test prior to December 31, 2020. There are 29 herds that have been identified as requiring a test under the new requirement and at this time 24 herds have been tested and three are scheduled for testing after December 31, 2020. These herds will remain under quarantine until their tests can be completed. Two herds have not responded to multiple communications and have been referred to compliance for quarantine and follow up.

Beginning January 1, 2021 surveillance required in Presque Isle County

MDARD's MOU with MDNR and USDA, signed in December 2019, and the current zoning order, effective April 1, 2020, require all cattle herds, except Freezer Beef herds and approved feedlots, in Presque Isle County to have an annual whole herd TB test and obtain a movement permit prior to movement beginning January 1, 2021.

C. Bovine Tuberculosis Affected Herds

Infected Feedlot #4

On October 10, 2016, a bovine TB-positive steer was discovered during routine slaughter surveillance at a federally inspected slaughter plant. The animal originated from a feedlot in Huron County, which was declared affected on October 25, 2016, and placed under quarantine. All cattle have been slaughtered with no further finding of disease. Partial cleaning has been completed by the producer with disinfection completed by MDARD. The quarantine remains in effect pending complete cleaning of the remaining barns by the producer, after which MDARD can perform disinfection followed by 30 days downtime before the quarantine can be released.

Infected Herd #75

As part of required triennial whole herd testing in Presque Isle County, a small cow-calf beef herd was found to be positive for bovine TB in March 2019. This was the first positive herd in Presque Isle County since 2000. The herd was depopulated; the premises has been cleaned and disinfected. We are working with USDA on a herd plan and quarantine release.

Infected Herd #77

A medium-sized beef herd in Alcona County was found to be infected with TB during an annual whole herd test in December 2019. Seven animals from that test went to MSU VDL in January with six of the animals having lesions consistent with bovine TB. Confirmation of infection was made by PCR at the USDA's National Veterinary Services Laboratory (NVSL) on January 13, 2020. Subsequent testing has led to a total of 41 animals found to be lesioned in the herd. The Whole Genome Sequence (WGS) of the bTB was consistent with an Alcona County bovine TB strain, indicating infection was likely due to exposure to TB-infected free-ranging deer. A test-and-removal program is ongoing, and a wildlife biosecurity plan has been implemented to protect this herd from re-infection in the future.

Infected Feedlot #6

This Saginaw County feedlot was found by the epidemiologic trace from herd #77. Typically, exposed animals moved to a feedlot are fed out under quarantine until slaughter. However, the feedlot owner elected to have the exposed animals tested and one animal was a reactor to the test. The animal was taken to MSU VDL for necropsy and had lesions consistent with TB. On March 16, 2020 that animal was confirmed positive by PCR at the USDA's NVSL. The WGS of this herd confirms that the infection occurred at herd #77. The remaining animals from this herd were fed out and moved to slaughter, and cleaning and disinfection of the facilities has been completed. The quarantine was released in October 2020.

Infected Herd #79

A small-sized dairy herd in Montmorency County was found to be infected with TB during an annual whole herd test in July 2020. One animal from that test went to MSU VDL in June and had lesions consistent with bovine TB. Confirmation of infection was made by PCR at the USDA's National Veterinary Services Laboratory (NVSL) on July 1, 2020. This herd has been previously infected with TB. At this time, two positive animals have been found in the herd. Whole Genome Sequencing is most closely related to an elk harvested from Montmorency County in 2017. The owner of the herd has elected to no longer operate as a dairy herd, and the milking animals have been moved to a federally inspected slaughter plant. No evidence of TB was seen in any of these animals. The calves and feeder cattle remaining in the herd are continuing a test-and-removal program. The wildlife protection program for this herd has been implemented.

Infected Herd #80

A medium-sized beef herd in Alpena County, located in the Enhanced Wildlife Biosecurity (EWB) area of the MAZ, was found to be infected during a TB test performed for a movement permit on October 12, 2020. One animal from that test was sent to VDL for postmortem examination. Upon necropsy, conducted November 4, 2020, this animal had lesions consistent with bovine tuberculosis. On November 6, 2020, NVSL reported that the animal had microscopic lesions that were compatible with Mycobacteriosis and confirmed the animal as positive for bovine TB by PCR on November 10, 2020. A full whole herd assessment test was conducted in December 2020 and full results from that test are pending. The WGS from the infected animal shares a most recent common ancestor with a deer harvested in Alcona County in 2017. This herd is in the EWB, with full implementation of the enhanced biosecurity completed in June 2020. It is plausible that this herd became infected prior to full implementation of the biosecurity plan. A test-and-removal program is ongoing in this herd.

D. Wildlife Risk Mitigation and Enhanced Wildlife Biosecurity

The Wildlife Risk Mitigation Project began in 2008 with a goal to enroll all commercial cattle farms. Under this program, farmers implement measures that reduce the risk of cattle exposure to bovine tuberculosis from infected free-ranging white-tailed deer. The following steps help prevent disease transmission to cattle:

- Store feed behind a fence or in a building
- Feed cattle away from deer habitat
- Feed cattle daily so feed is not left over
- Provide water to cattle where it cannot be contaminated by deer
- Use Disease Control Permits from DNR to keep deer numbers down on cattle farms

Presently, 370 of the 414 active commercial farms (89%) in the present TB surveillance zone (MAZ and Presque Isle Counties) have a verified Wildlife Risk Mitigation plan in place.

Because of higher bovine TB prevalence in free-ranging white-tailed deer in the core area of the MAZ, the risk to cattle herds is greater than in other areas. Therefore, the TB Program, in conjunction with the TB Advisory Committee, developed an Enhanced Wildlife Biosecurity (EWB) Program to assist farmers with protection of their herds. Herd owners in the EWB Area work with specialized staff to evaluate their farm's specific risks and are provided a plan of action to mitigate the risk. Some risks may be addressed by changing the farm's management practices, while in other cases the pressure from wildlife necessitates an investment in physical improvements – primarily fencing. Producers in the EWB area were able to participate in a 90% State/10% Producer cost-share program to construct fences and protect feed storage facilities. Any commercial producer in the EWB area that is not verified under that program is limited to selling cattle direct to slaughter only.

New cost-share projects underway:

- Funding which remained after the EWB effort was completed was used to provide cost share assistance to producers for feed storage protection. This is a 90% State/10% Producer cost share program. This program was offered to 68 herd owners in the non-EWB area of Alcona county as well as to higher risk herds in other areas of the MAZ. Eleven producers requested participation in the program and have had feed protection fencing completed. The maximum amount per farm was \$6,000. Final invoices are pending on these projects.
- A limited amount of cost share money will be available in FY 2021. The plan for the new cost share program will be in place for fencing projects in the Spring of 2021.

E. Movement Permits

Under the new Zoning Order, effective April 1, 2020, all movements of cattle from herds in the MAZ counties (Alcona, Alpena, Montmorency, and Oscoda) and from herds in the Accredited Free Zone (AFZ) County of Presque Isle require a movement permit. Below is the movement permitting data for these counties.

	Number of Movement Permits	Number of Animals Moved
MAZ (Alcona, Alpena, Montmorency, and Oscoda Counties) Permits issued October 1, 2020 – December 31, 2020	253	1179
TB Free Surveillance Zone (Presque Isle County) Permits issued October 1, 2020 – December 31, 2020	35	178

F. Communications/Outreach

Goals:

- To ensure that cattle producers, hunters, and Michigan's citizens have a high level of trust and understanding of what we do and why.
- To provide information routinely to cattle producers, hunters, and community members about bovine tuberculosis program activities and initiatives.

MDARD has been working to keep the resources informing producers and the general public about the details of the bovine tuberculosis program accurate and up to date. Brochures of the current TB requirements in the MAZ and Presque Isle County were sent to producers in those areas and also mailed to any new herds that are established in those areas.

As for outreach, the program has written and sent letters to producers to inform them about unique cost-share opportunities to better protect their herds and designed a number of presentations to inform those outside of the state of Michigan about TB and the measures taken to mitigate the spread of the disease.

In addition, MDARD and the DNR have been working closely on communications to promote deer head collection in the MAZ, Presque Isle, and MAZ buffer counties in order to meet the surveillance requirements set by the MOU. The departments have partnered to author an article that was included in the September edition of *The Michigan Cattleman*, a publication of the Michigan Cattlemen's Association. Also, on September 23, 2020, both departments participated in a webinar hosted by MSU Extension. In the webinar, an audience comprised of hunters from across Michigan were able to learn about the history of TB and CWD in the state and the importance of submitting heads at check stations and drop boxes for testing. Further, both departments worked together to compose a letter for deer processors located in the buffer counties of the MAZ, which encouraged them to participate in a new pilot program that would reimburse them for submitting deer heads from their clientele for testing. This letter was then sent out by MDARD in early November 2020.

During the fall hunting seasons, MDNR and MDARD made concerted efforts to notify both hunters and producers of the need to submit samples. Both departments collaborated to write numerous messages emphasizing the importance of this sample testing, the location of check stations and drop boxes, the consequences of not reaching the quotas outlined in the MOU, and the later extension of the DCPs. These messages were then conveyed through a series of interviews, articles in hunting publications, mailings across government listservs, posts on department social media pages, and articles sent through the networks of external partners—such as Michigan Farm Bureau and Michigan Cattleman’s Association.

With the start of 2021, MDARD and the DNR will soon be meeting to plan communication messages and strategies for meeting our white-tailed deer surveillance goals next year.

G. Michigan’s Bovine TB Memorandum of Understanding and Zoning Order

A Memorandum of Understanding (MOU) between the Michigan Department of Agriculture and Rural Development (MDARD), the Michigan Department of Natural Resources (MDNR), and the United States Department of Agriculture (USDA) was signed on December 16, 2019. This MOU required MDARD to issue a new Zoning Order, which became effective April 1, 2020, and can be found at: www.michigan.gov/emergingdiseases in the livestock information section under bovine TB.

H. USDA’s Review of Michigan’s TB Program

In August 2020, a USDA Team conducted a review of Michigan’s TB eradication program. The initial assessment from the team was generally positive. The draft report on the findings of the review team were sent to MDARD for technical review in November 2020. Our technical edits were returned to USDA on December 5, 2020, and we are awaiting the final report.

I. COVID-19 Impacts on Michigan’s TB Program

Throughout the pandemic, MDARD field staff have been able to continue with TB testing while following precautions to limit the spread of COVID-19.

Although a few producers chose to delay their testing due to the pandemic, most allowed the testing to occur. This permission was critically important for MDARD to meet the increased testing requirements that were outlined in the December 2019 MOU. Also, USDA testing staff was impacted, with one of the two testing veterinarians unable to continue testing during this time.

In addition, MDARD, USDA Wildlife Services, and MDNR have been working closely together to find innovative ways to ensure that the necessary white-tailed deer surveillance samples are collected from the MAZ, Presque Isle County and the other buffer counties surrounding the MAZ. For example, MDNR began a pilot program with local deer processors, offering a monetary benefit for the submission of deer heads from counties where samples are needed. Also, MDARD staff has reached out to MDOT and County Road Commissions and provided them with the necessary equipment to collect and submit deer heads for surveillance.

To further supplement these efforts, MDNR is also manning and collecting heads from check stations and drop boxes in the area as well as working with local hunt clubs to obtain deer heads from their hunts. MDARD field staff have collected heads from producers who took deer on Disease Control Permits (DCPs). Also, USDA WS directly contacted people who received

Disease Control Permits in order to make them aware that their 2020 permits had been extended through December. Additionally, they offered assistance with taking deer on those DCPs; and if needed, making the submission of these heads easier by arranging to collect them.

Finally, MDNR and MDARD have made concerted efforts to get the word out about the need for hunters to submit samples. Both departments have written numerous messages emphasizing the importance of this sample testing, the location of check stations and drop boxes, the consequences of not reaching the quotas outlined in the MOU, and the later extension of the DCPs. These messages were then conveyed through a series of interviews, articles in hunting publications, mailings across government listservs, posts on department social media pages, and articles sent through the networks of external partners—such as Michigan Farm Bureau and Michigan Cattleman’s Association. Flyers were also distributed to producers at the Gaylord livestock market.