



**Legislative Report
July 12, 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.

Table of Contents

Topic	Page
A. MDARD Bovine Tuberculosis Eradication Program Activities	2
B. Special Surveillance Areas	2
C. Bovine Tuberculosis Affected Herds	3
D. Wildlife Risk Mitigation and Enhanced Wildlife Biosecurity	4
E. Movement Permits	5
F. Communications/Outreach Activities	5
G. Bovine TB MOU and Zoning Order	6
H. Covid-19 Impacts on Michigan's TB Program	6

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 zoonotic 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 36 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

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. One hundred fifty-six herds were tested between April 1, 2020, and March 31, 2021. One TB positive animal was discovered in Cheboygan County during the 20-21 testing season. That affected herd was designated Herd #81. The second round of surveillance testing in these counties began on April 1, 2021 and will continue through March 31, 2022. Since April 1, 2021, twenty-nine herds have been tested with no additional positive animals detected.

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 28 herds that have been identified as requiring a test under the new requirement and at this time all have been tested.

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, requires all cattle herds, except Freezer Beef herds and approved feedlots, in Presque Isle County to meet the same requirements as those in the MAZ. This includes an annual whole herd TB test, double tagging with RFID and an approved supplemental tag, movement testing and movement permits. All requirements are now in effect in Presque Isle County.

C. Bovine Tuberculosis Affected Herds

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 44 animals in the herd found to be culture positive for *M. bovis*. 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. This herd is eligible for a verification test in December 2021. If no additional infected animals are found, the herd will be released from quarantine after that test.

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. A verification test is scheduled to be completed in July 2021, if no additional positive animals are found through that test the herd will be released from quarantine.

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. 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 Enhanced Wildlife Biosecurity area (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. This herd is eligible for a verification test in October 2021. If no additional infected animals are found, the herd will be released from quarantine after that test.

Infected Herd #81

A medium sized beef herd in Cheboygan County was found to be infected on March 11, 2021. This herd was identified by the buffer county surveillance testing program that began last year. On October 16, 2020, one animal in the herd was found to be a suspect on comparative cervical testing. The animal was sent to MSU VDL on March 2, 2021, for post-mortem examination. On this test, the animal was found to have lesions consistent with bovine tuberculosis. The lesions were then found to be histocompatible for bovine tuberculosis at USDA's National Veterinary Services Laboratory (NVSL) on March 8, 2021 and confirmed positive for *Mycobacterium tuberculosis* complex by PCR on March 11, 2021. A herd plan is in place for this herd. This is the first positive bovine TB herd found in Cheboygan County since the surveillance program began in 1998. The Whole Genome Sequence (WGS) for the infected animal was a match to free-ranging white-tailed deer harvested in Alcona County in 2017. A test and removal program is ongoing in this herd.

D. Wildlife Risk Mitigation and Enhanced Wildlife Biosecurity

The Wildlife Risk Mitigation (WRM) 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

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.

Presently, 368 of the 457 active commercial farms (81%) in the present TB surveillance zone (MAZ and Presque Isle Counties) have a verified WRM or EWB plan in place.

New Cost-Share Projects Underway

Some funding which remained after the EWB effort was completed is available to be used to provide cost-share assistance to producers for feed storage protection outside of the EWB area. The cost-share program includes a 90% State/10% Producer payment to cover infrastructure needed on farms to protect them from TB in deer, such as fencing of feed storage areas. A Working Group of the TB Advisory Committee (referenced below) has recommended that this funding be prioritized to be used on high-risk farms in Presque Isle County. Five herds in Presque Isle County have been evaluated during this reporting period, with three deciding to not participate and two in the process of project design. Four herds in the MAZ have also been evaluated and are awaiting completion of evaluation of the remaining high-risk herds in Presque Isle County. Additionally, a TB Advisory Committee Workgroup was convened to determine future cost-share approaches, discussed below.

TB Advisory Committee WRM Working Group

The TB Advisory Committee convened a Working Group to review and make recommendations on the programs in place to protect cattle herds from TB in wild deer. The Working Group discussed the EWB, and Targeted Deer Removal Programs present in the higher risk area of the MAZ, and the WRM program that is in place in the lower risk areas of the MAZ and in Presque Isle County. This group met multiple times from March through June 2021 and will present proposed recommendations to the TB Advisory Committee meeting being held July 14, 2021. The recommendations from this group will help to guide future cost-share programs.

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 April 1, 2021 – June 30, 2021	364	1581
TB Free Surveillance Zone (Presque Isle County) Permits issued April 1, 2021 – June 30, 2021	43	174

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 informational resources for producers and the public about the details of the bovine tuberculosis (TB) program accurate and up to date. Informational publications are routinely updated and distributed through mailings and at livestock markets. MDARD is planning to attend a public meeting hosted by Farm Bureau in the Prescott area on July 13, 2021. This meeting is intended to share new information and answer questions regarding the bovine TB program.

Also, MDARD is working together with the MDNR to finalize a summer issue of the *Herd and Hunter* newsletter. The content of the upcoming newsletter will not only provide its usual updates but also present the same type of information that would have ordinarily been discussed during a public meeting.

Beyond these efforts, MDARD and MDNR are working collaboratively to broaden and strengthen their communication efforts for the 2021 deer surveillance season. Agency staff and external stakeholders have created a workgroup to further refine and plan communication objectives, strategies, and messages, which will help to meet the white-tailed deer surveillance goals this year. As an example of this additional messaging, MDARD and MDNR have partnered to develop a one-pager that will help MDARD field staff better answer producers' key questions about bovine TB surveillance in free-ranging deer and the submission of deer heads for testing. Additional strategies to meet deer surveillance goals includes MDNR's expansion of a program that began in 2020 to obtain additional samples for TB testing from deer processors and maintaining deer check stations at 2019 levels for the 2021 hunting season as well as adding unmanned deer head drop stations.

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 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. The current MOU expires in December 2021. Discussions with USDA concerning any changes for a new MOU will begin on July 19, 2021.

H. 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. MDARD office staff continue to work remotely until September 7, 2021. Despite the Covid-19 restrictions, MDARD staff met the additional surveillance requirement goals outlined in the December 2019 MOU and maintained compliance with all other requirements of the MOU.