

National Bovine Brucellosis and Tuberculosis Updates



Q1 (October- December 2022) Report Fiscal Year 2023

U.S. Department of Agriculture - Animal and Plant Health Inspection Service
Veterinary Services

Strategy and Policy - Ruminant Health Center

Cattle Health Center

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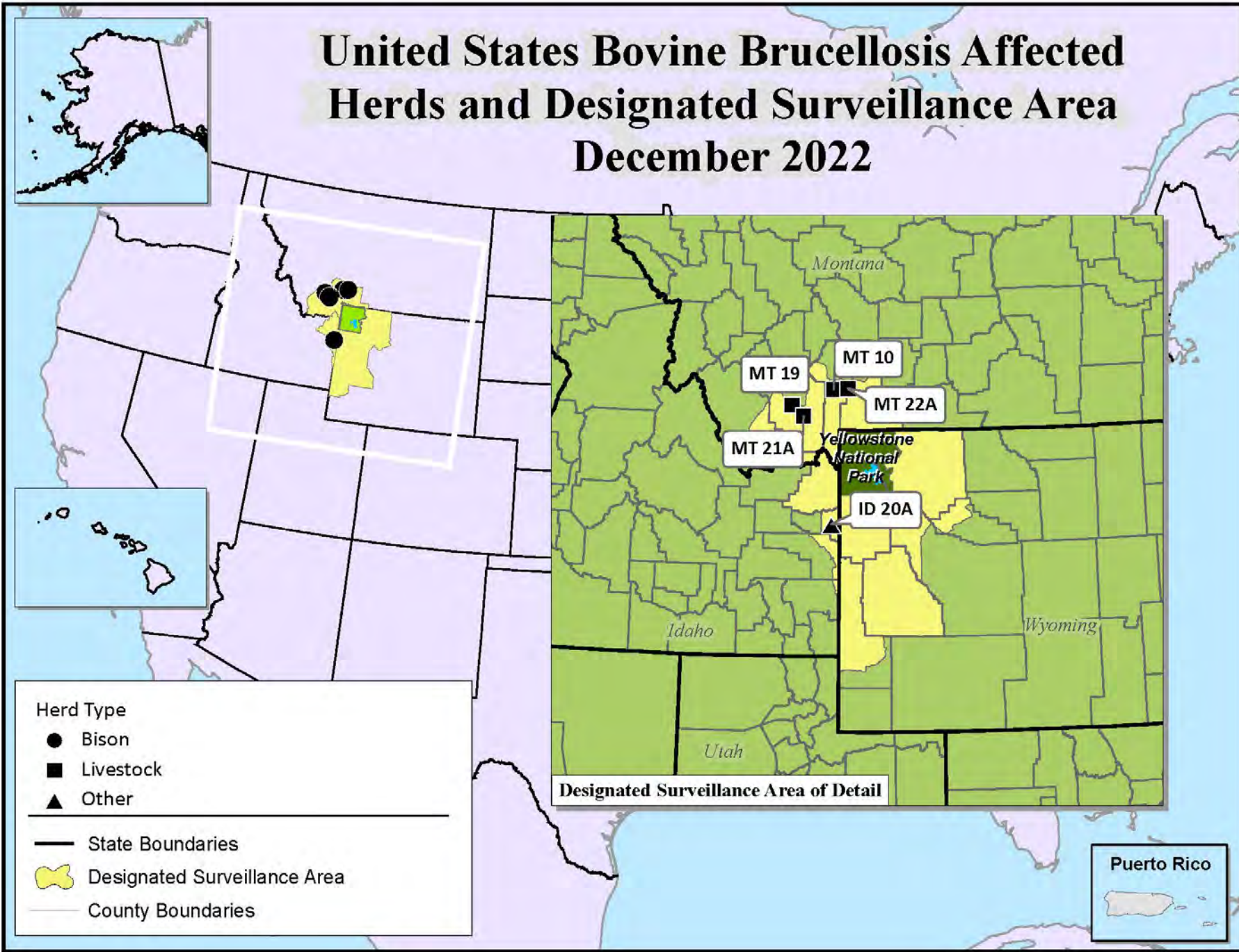
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Brucellosis (*B. abortus*)



FY23 Q1 (Oct.- Dec. 2022) Updates

United States Bovine Brucellosis Affected Herds and Designated Surveillance Area December 2022



Brucellosis Affected Herds Under Quarantine in Q1 (Oct.-Dec. 2022)

Herd ¹	Date Detected	Method of Detection	Herd Type ²	Herd Management Status	Next Test Tentative Start Date
MT 10	November 2010	DSA Surveillance Testing	Livestock	Test and Remove	Fall 2023
MT 19	December 2019	DSA Surveillance Testing	Livestock	Test and Remove	Fall 2023
ID 20A	January 2020	DSA Surveillance Testing	Elk/Beef	Test and Remove	January 2023
MT 21A	November 2021	DSA Surveillance Testing	Livestock	Test and Remove	Assurance Test Winter 2023
MT 22A	January 2022	DSA Surveillance Testing	Livestock	Test and Remove	Assurance Test Winter 2023

1. Herds are named with the last 2 digits of the calendar year and in order of occurrence within a state during that year.
2. Current Montana state statute prevents public disclosure of herd type.

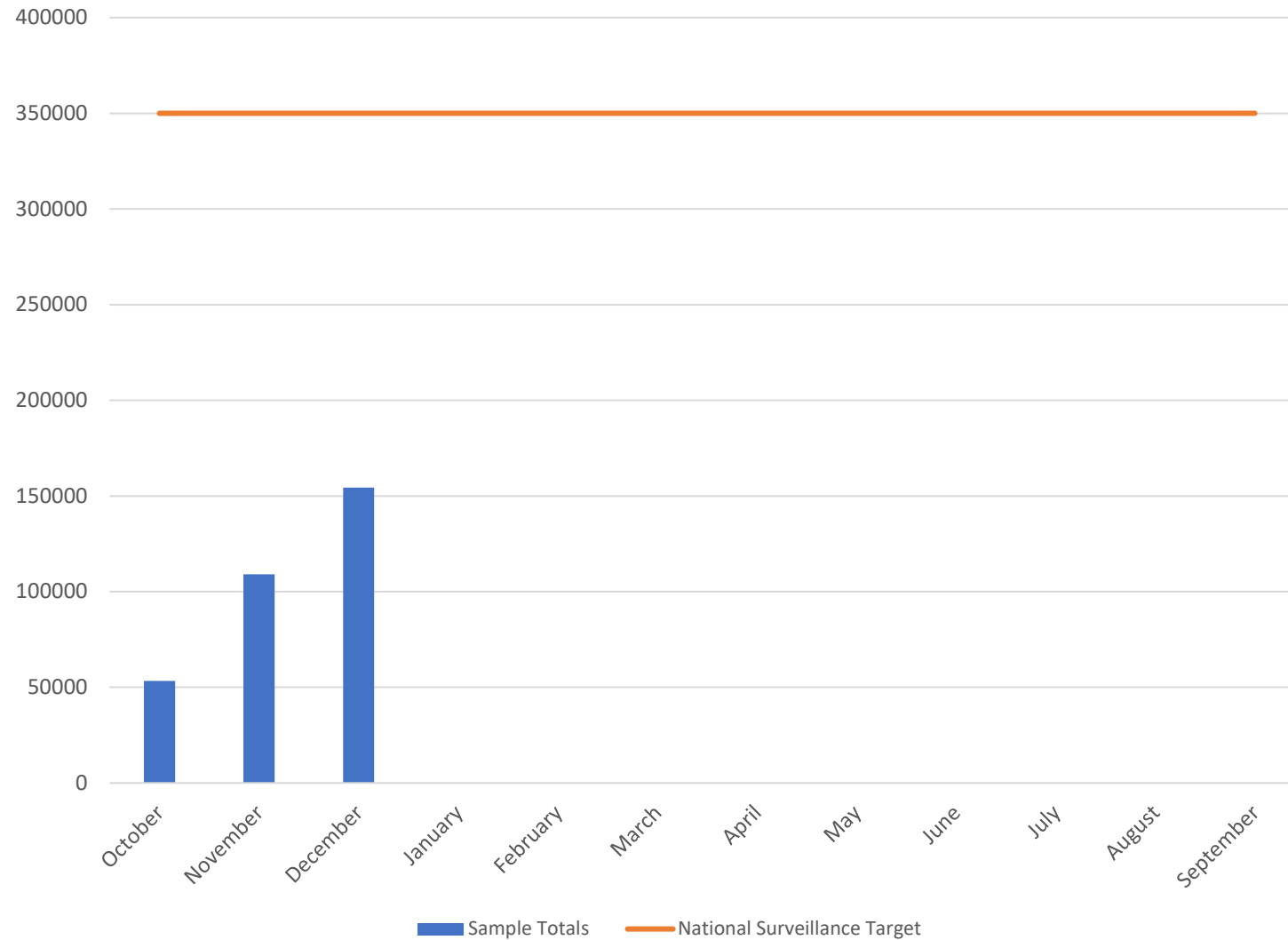
Brucellosis Affected Herd Updates

- Montana 19 → Identified on DSA Surveillance Testing
 - Culture positive identified during Fall 2021 WHT
 - WHT planned for Fall 2023
- ID 20A → Identified on DSA Surveillance Testing
 - WHT planned for January 2023

Brucellosis Affected Herd Updates

- **Montana 21A** → Livestock herd identified on routine herd testing.
 - Identified November 2021
 - Test and remove management plan
 - All adjacent/contact herds have tested negative
 - Post-calving testing completed
 - **Assurance test winter (early) 2023**
- **Montana 22A** → Livestock herd identified on routine herd testing.
 - Identified January 2022
 - Test and remove management plan
 - All adjacent/contact herds have tested negative
 - Final WHT completed March 2022
 - Quarantine released April 2022
 - No suspects on assurance testing conducted Fall 2022
 - **Assurance test winter (early) 2023**

FY2023 Cumulative National Brucellosis Slaughter Surveillance Samples

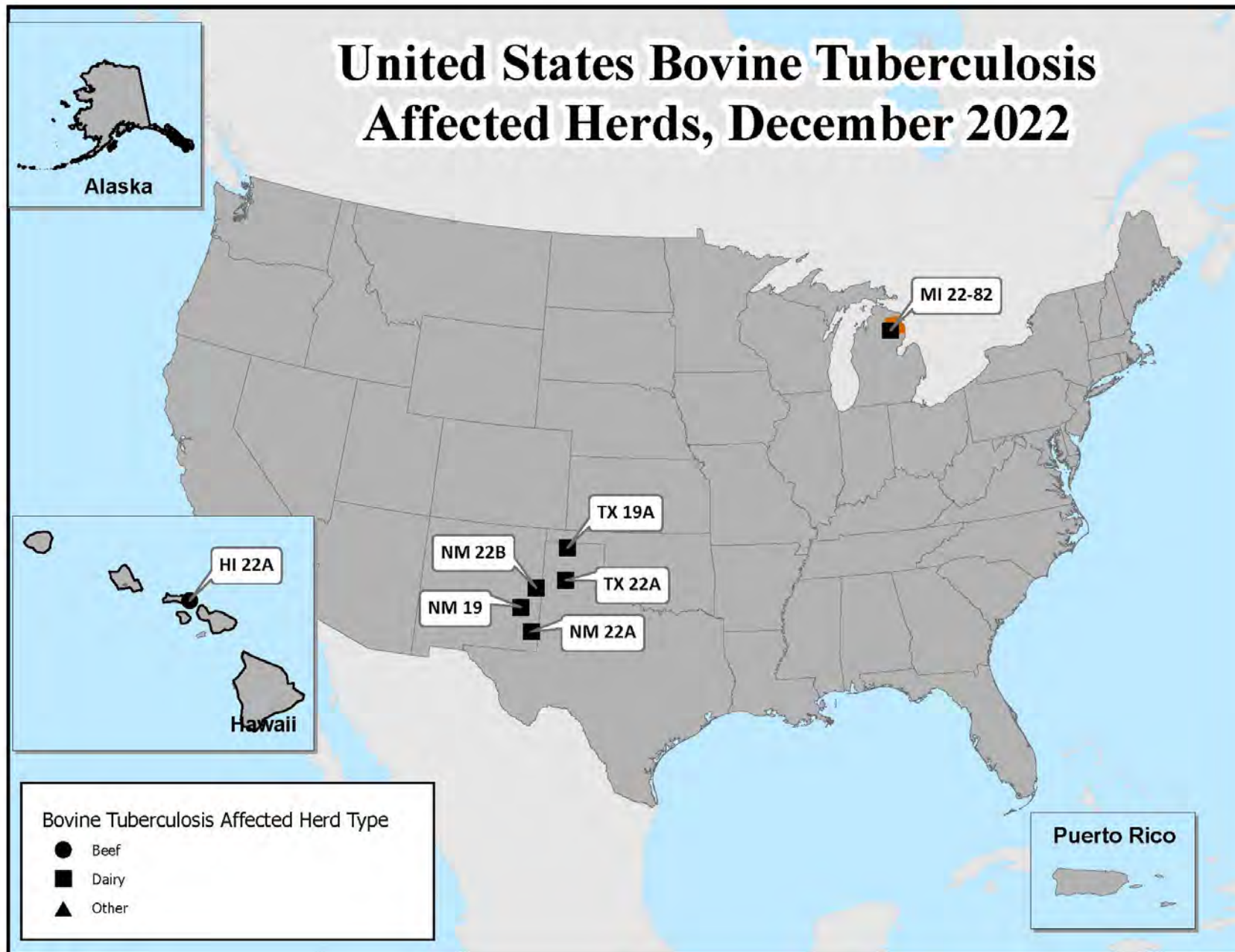


- The orange line represents our annual 350,000 surveillance sample target to detect disease with 95% confidence at a 0.001 percent or higher prevalence.

Tuberculosis (*M. bovis*)



FY23 Q1 (Oct.- Dec. 2022) Updates



Affected herds are mapped to the center of their county.

TB Affected Herd Updates FY23 Q1 (Oct.-Dec.2022)

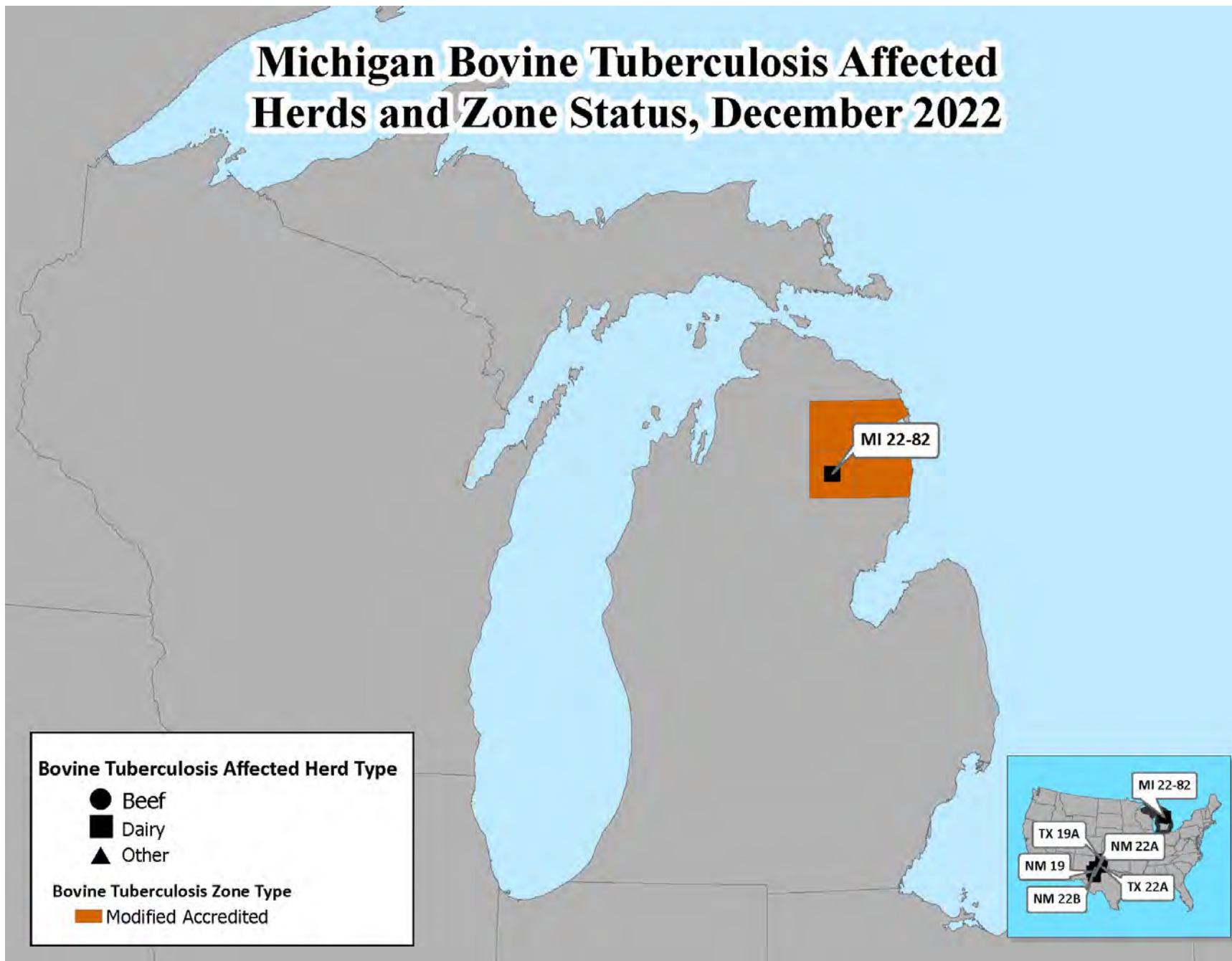
Location ¹	Date Detected	Method of Detection	Herd Type	Herd Management Status	Next Test Tentative Start Date
HI 22A	January 2022	Epi Investigation	Beef	Depopulation Completed	N/A

1. Herds are named with the last 2 digits of the calendar year and in order of occurrence within a state during that year, with Michigan's numbers being cumulative across years.

Tuberculosis Affected Herd Updates FY 23 Q1- Hawaii

- HI 22A → Identified from epidemiologic investigation
 - Test-and-Remove Model completed
 - **Depopulation completed Dec. 2022**

Michigan Bovine Tuberculosis Affected Herds and Zone Status, December 2022



Affected herds are mapped to the center of their county.

TB Affected Herd Updates FY23 Q1 (Oct.-Dec.2022)

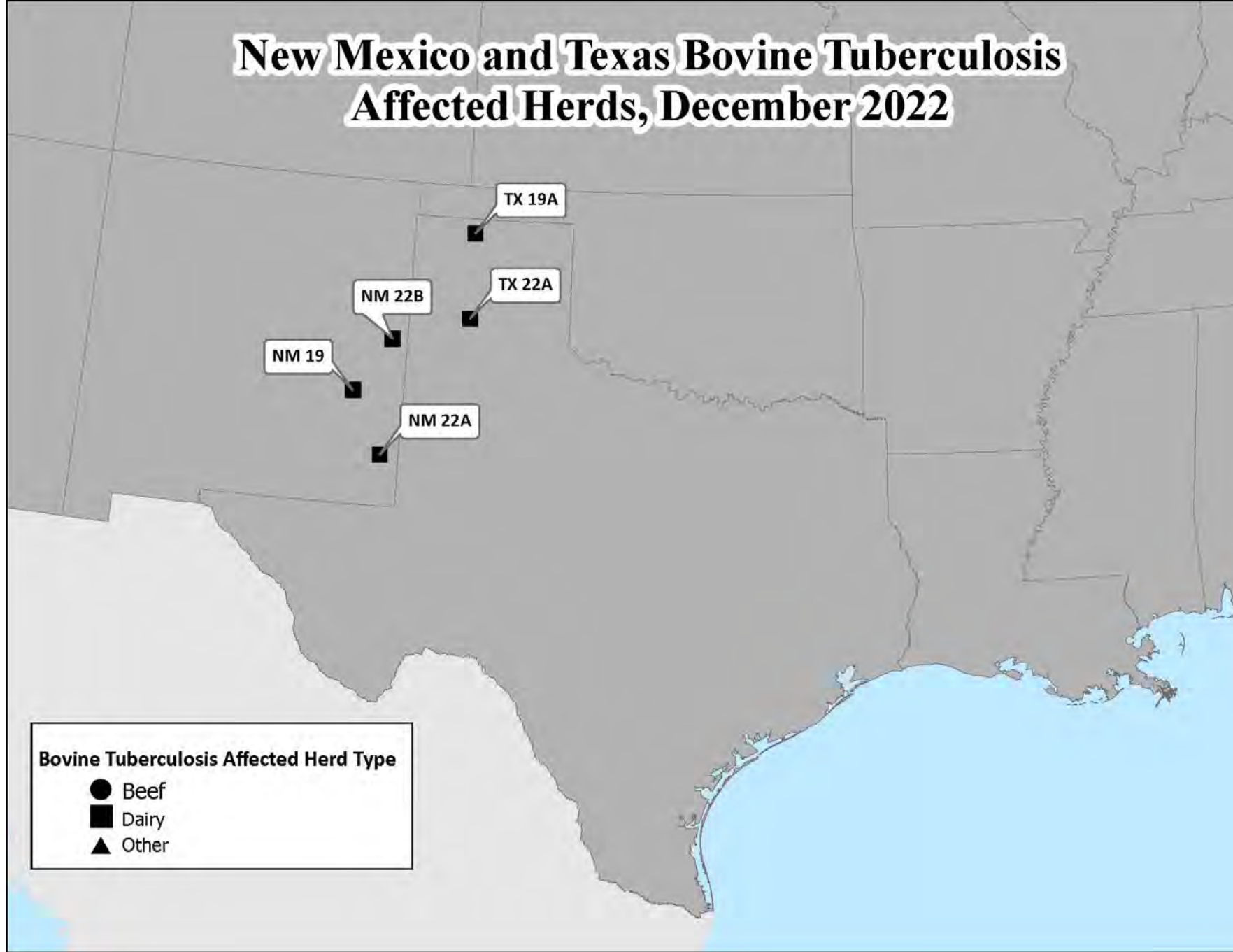
Location ¹	Date Detected	Method of Detection	Herd Type	Herd Management Status	Next Test Tentative Start Date
MI 22-82	January 2022	Surveillance	Dairy	Test and Remove Phase	Verification Test Jan. 2023

1. Herds are named with the last 2 digits of the calendar year and in order of occurrence within a state during that year, with Michigan's numbers being cumulative across years.

Tuberculosis Affected Herd Updates FY 23 Q1- Michigan

- MI 22-82 → Identified on annual Modified Accredited Zone (MAZ) surveillance
 - 1st removal test completed with one cow NGL
 - 2nd removal test completed May 2022
 - 3rd removal test completed July 2022
 - Verification test planned for January 2023

New Mexico and Texas Bovine Tuberculosis Affected Herds, December 2022



Affected herds are mapped to the center of their county.

TB Affected Herd Updates FY23 Q1 (Oct.-Dec.2022)- TX, NM

Location ¹	Date Detected	Method of Detection	Herd Type	Herd Management Status	Next Test Tentative Start Date
TX 19A	February 2019	Epi Investigation	Dairy	Test and Remove Phase	Pending
NM 19	May 2019	Slaughter Trace	Dairy	Test and Remove Phase	Pending
TX 20B	Sept. 2020	Slaughter Trace	Beef	Test and Remove Phase	Assurance Test July 2023
NM 20A	October 2020	Assurance Test	Dairy	Test and Remove Phase	Assurance Test August 2023
NM 22B	July 2022		Dairy	Test and Remove Phase	March 2023
TX 22A	July 2022		Dairy	Test and Remove Phase	March 2023

1. Herds are named with the last 2 digits of the calendar year and in order of occurrence within a state during that year

Tuberculosis Affected Herd Updates FY 23 Q1- TX, NM

- TX 19A → Removal test (9th) completed July 2022
 - Next removal test pending IFG results
- NM 19 → Removal test (14th) conducted October 2022
 - 1 positive (+culture) cow identified on Oct. 2021 herd test
 - Next removal test pending IFG results
- TX 20B → Herd test completed in June 2022 with no suspects
 - Q released July 2022
 - Assurance test scheduled for July 2023
- NM 20A → Culture from verification test negative; quarantine released August 2022
 - 5th removal test completed Oct. 2021 with all negative
 - Assurance test scheduled for August 2023

Tuberculosis Affected Herd Updates (TX,NM)

- NM 22B → still conducting WHTs of herds within complex
 - Confirmed July 2022
 - Test-and-Remove Model completed by CEAH
 - **Next removal test (3rd) March 2023**
- TX 22A → Still conducting WHTs of herds within complex
 - Confirmed July 2022
 - Test-and-Remove Model completed by CEAH
 - Epidemiologically linked to NM 22B
 - **Next removal test (2nd) March 2023**

Bovine TB Cases Identified through Routine Slaughter FY23 Q1 (Oct.-Dec.2022)

Slaughter Type	Month confirmed	Slaughter Plant State	Slaughter Origin State	Outcome/current status
Beef	December 2022	MI	MI	Assessment Testing

Tuberculosis (*M. bovis*)

Terms and Definitions



Designation of Herds as “Quarantined”

- Affected herds are considered “quarantined” due to a formal quarantine order of the entire herd or informal hold order for subgroups of exposed animals.
- Herds under quarantine due to tracing investigations are generally excluded from this report due to the temporary nature of their restrictions.
- Quarantined herds are removed from this report once the quarantine or hold order is removed, typically after verification testing.

Methods of Detection of TB-Affected Herds

- **Area surveillance:** Surveillance in a defined area such as counties in or bordering the modified accredited zone in Michigan.
- **Assurance test:** Herds identified during the assurance testing phase of a test and remove herd plan.
- **Epi investigation:** Herds identified as part of epidemiologic investigations associated with TB-affected animals or TB-affected herds.
- **Movement test:** Herds identified through testing of animals for routine movements, e.g., export and interstate commerce.
- **Slaughter trace:** Herds identified as the source of animals with suspicious lesions during routine slaughter surveillance. Also called “6-35 traces”

Definitions and Acronyms

- **6-35 Trace:** Tracing of the source of a suspected or confirmed case of TB that was identified during slaughter surveillance and reported on a VS 6-35 form; known otherwise as a “slaughter trace.”
- **DSA:** Designated Surveillance Area
- **IFG:** Interferon gamma
- ***M. bovis:*** *Mycobacterium bovis*, known as bovine or zoonotic tuberculosis
- **NGL:** No gross lesions on postmortem examination
- **NVSL:** National Veterinary Services Laboratories
- **PCR:** Polymerase Chain Reaction; A molecular biology method of assessing for presence of segments of generic material, i.e., DNA and RNA
- **WGS:** Whole Genome Sequencing of TB bacterial DNA; used to assess relatedness among TB bacterial strains

Definitions and Acronyms

- **WHT:** Whole herd test
- **Q Released:** Quarantine released

Questions?

- Please contact the Cattle Health Center at: vs.sp.chc.all@usda.gov