

National Bovine Brucellosis and Tuberculosis Updates



Q2 (January-March 2022) Report Fiscal Year 2022

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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Brucellosis (*B. abortus*)



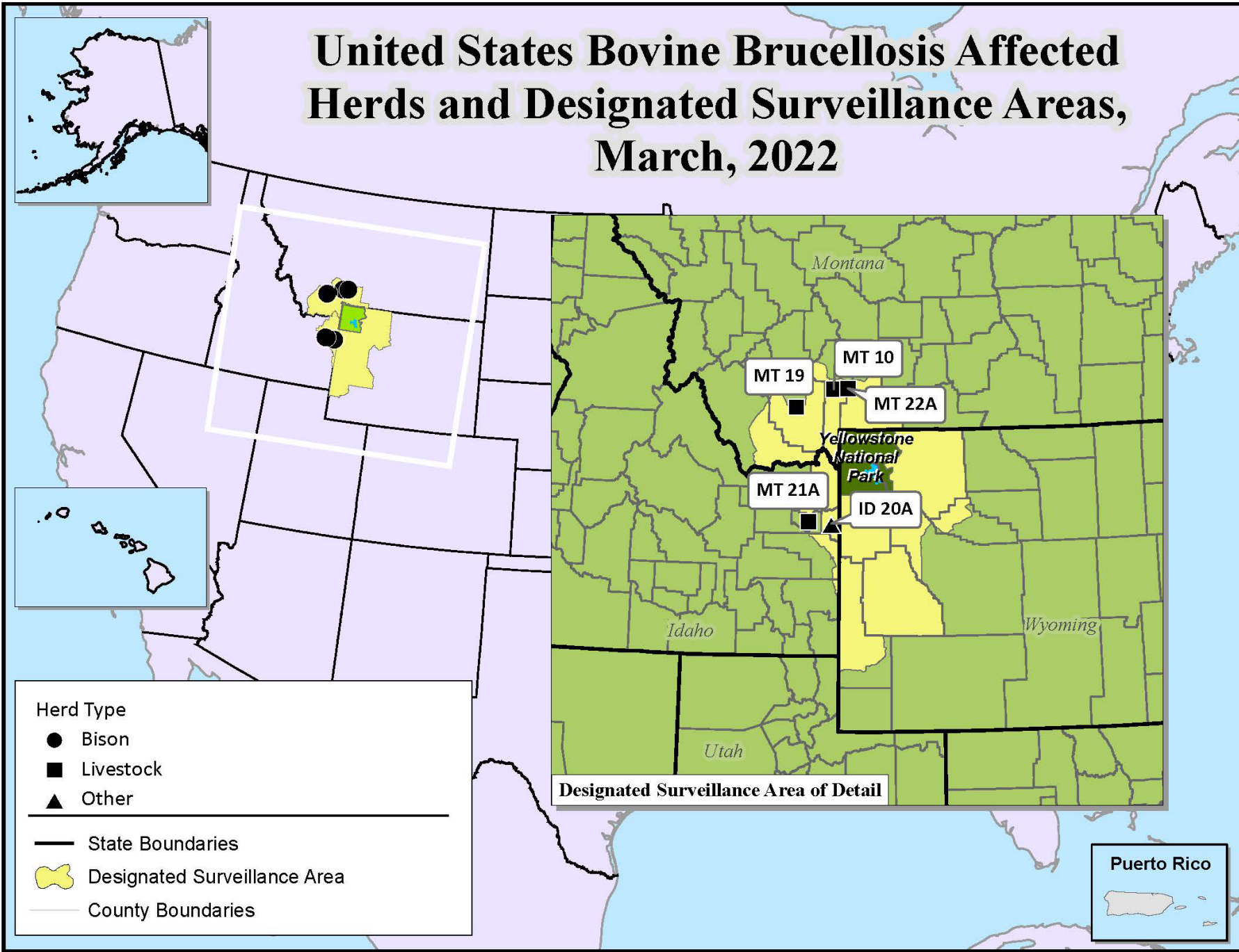
FY22 Q2 (Jan.-March 2022) updates

Brucellosis Affected Herds Under Quarantine in Q2 (Jan.-March 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	November 2022
MT 19	December 2019	DSA Surveillance Testing	Livestock	Test and Remove	Fall 2022
ID 20A	January 2020	DSA Surveillance Testing	Elk/Beef	Test and Remove	November 2022
MT 21A	November 2021	DSA Surveillance Testing	Livestock	Test and Remove	Post-Calving June 2022
MT 22A	January 2022	DSA Surveillance Testing	Livestock	Test and Remove	Assurance test June & Fall 2022

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.

United States Bovine Brucellosis Affected Herds and Designated Surveillance Areas, March, 2022



Brucellosis Affected Herd Updates

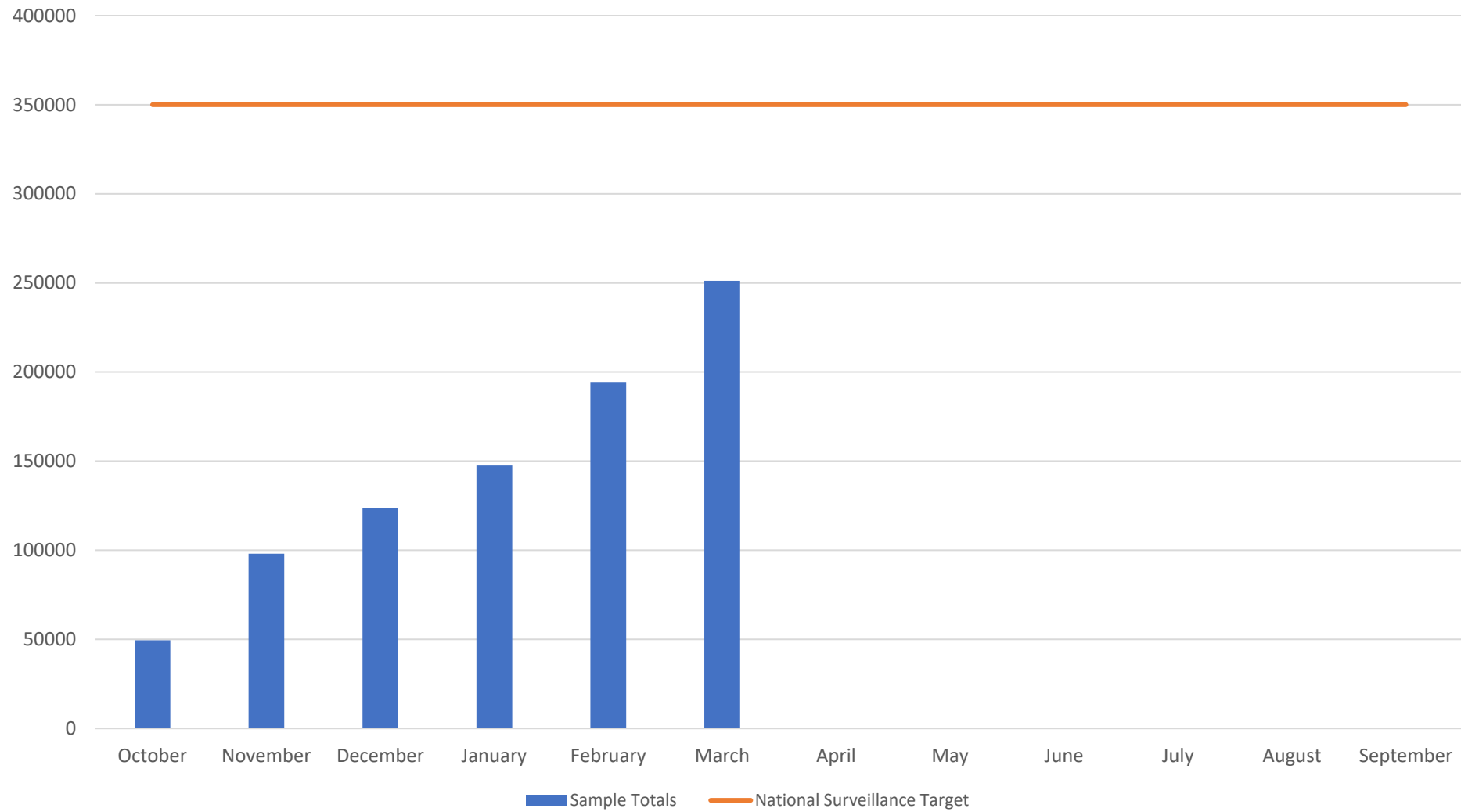
- Montana 19 → Identified on DSA Surveillance Testing
 - Culture positive identified during Fall 2021 WHT
- ID 20A → Identified on DSA Surveillance Testing
 - Last WHT negative
 - Next WHT late November 2022

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
 - **2nd WHT completed Feb.2022**
 - **Post-calving test planned for June 2022**

- **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**
 - **Assurance testing planned for June 2022 and Fall 2022**

FY2022 Cumulative National Brucellosis Slaughter Surveillance Samples



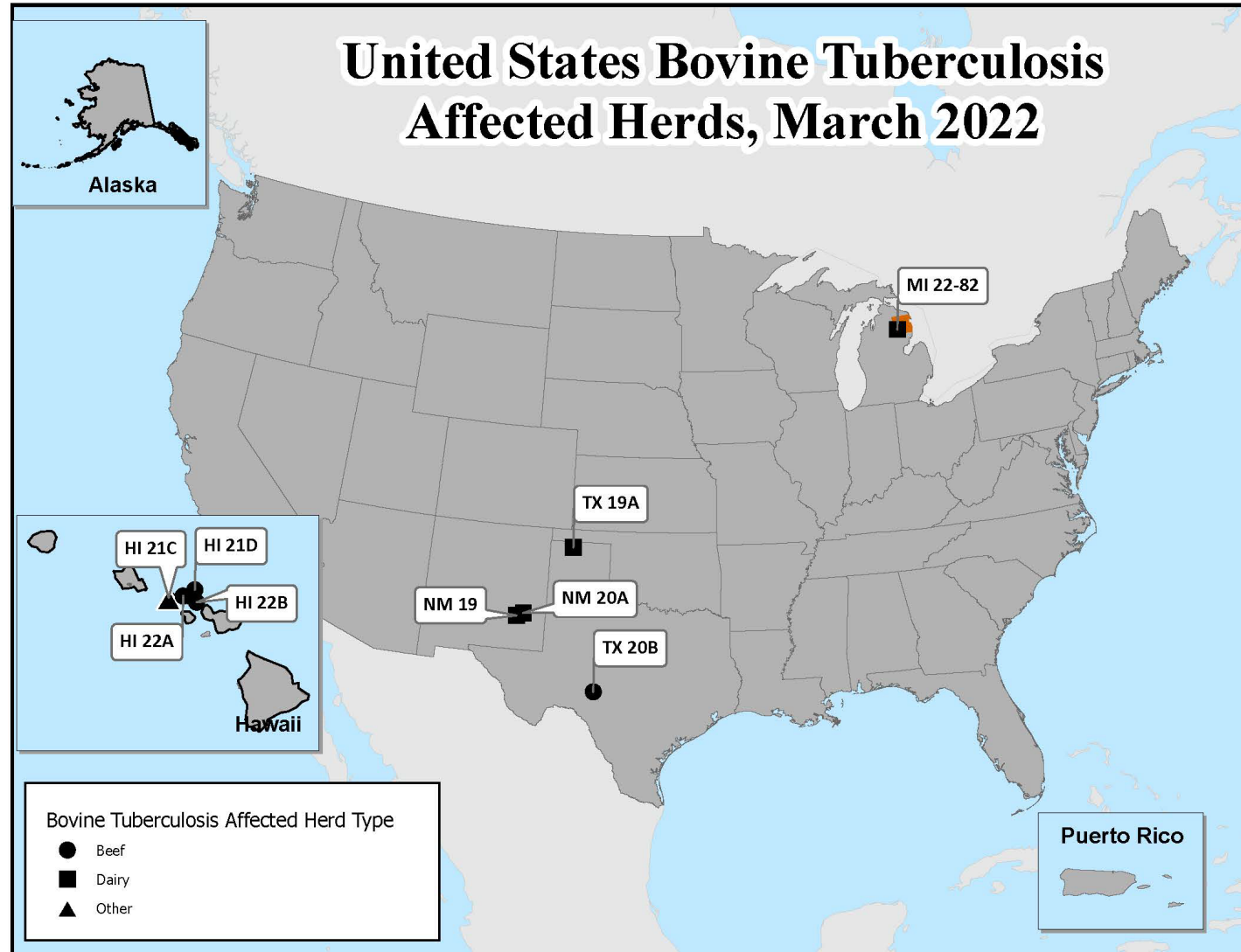
- The orange line represents our annual 350,000 surveillance sample target to detect disease with 95% confidence at a 0.001 percent or higher prevalence.

Tuberculosis (*M. bovis*)



FY22 Q2 (Jan.-March 2022) updates

United States Bovine Tuberculosis Affected Herds, March 2022



Affected herds are mapped to the center of their county.

TB Affected Herd Updates FY 22 Q2 (Jan.-March 2022)

Location ¹	Date Detected	Method of Detection	Herd Type	Herd Management Status	Next Test Tentative Start Date
MT 21A	October 2021	Slaughter Trace	Beef	Depopulation	N/A- Depop. completed
SD 21A	March 2021	Slaughter Trace	Beef	Test-and-Remove Phase	Assurance Test Jan 2023 Q released
MI 21-81	March 2021	Area Surveillance	Beef	Test-and-Remove Phase	Verification Test Completed Q released
MI 21-80	November 2020	Movement Test	Beef	Test-and-Remove Phase	Verification Test Completed
MI 20-77	January 2020	Area Surveillance	Beef	Test-and-Remove Phase	Verification Test Completed

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.

TB Affected Herd Updates FY22 Q2 (Jan.-March 2022)

Location ¹	Date Detected	Method of Detection	Herd Type	Herd Management Status	Next Test Tentative Start Date
HI 21A	July 2021	Movement Test	Beef	Depopulation Completed	N/A
HI 21B	August 2021	Epi Investigation	Beef	Depopulation Completed	N/A
HI 21C	November 2021	Slaughter Trace	Mixed* ²	Depopulation Completed	N/A
HI 21D	December 2021	Movement Test	Beef	Depopulation in Progress	N/A
HI 22A	January 2022	Epi Investigation	Beef	Pending	Awaiting Herd Plan Decision

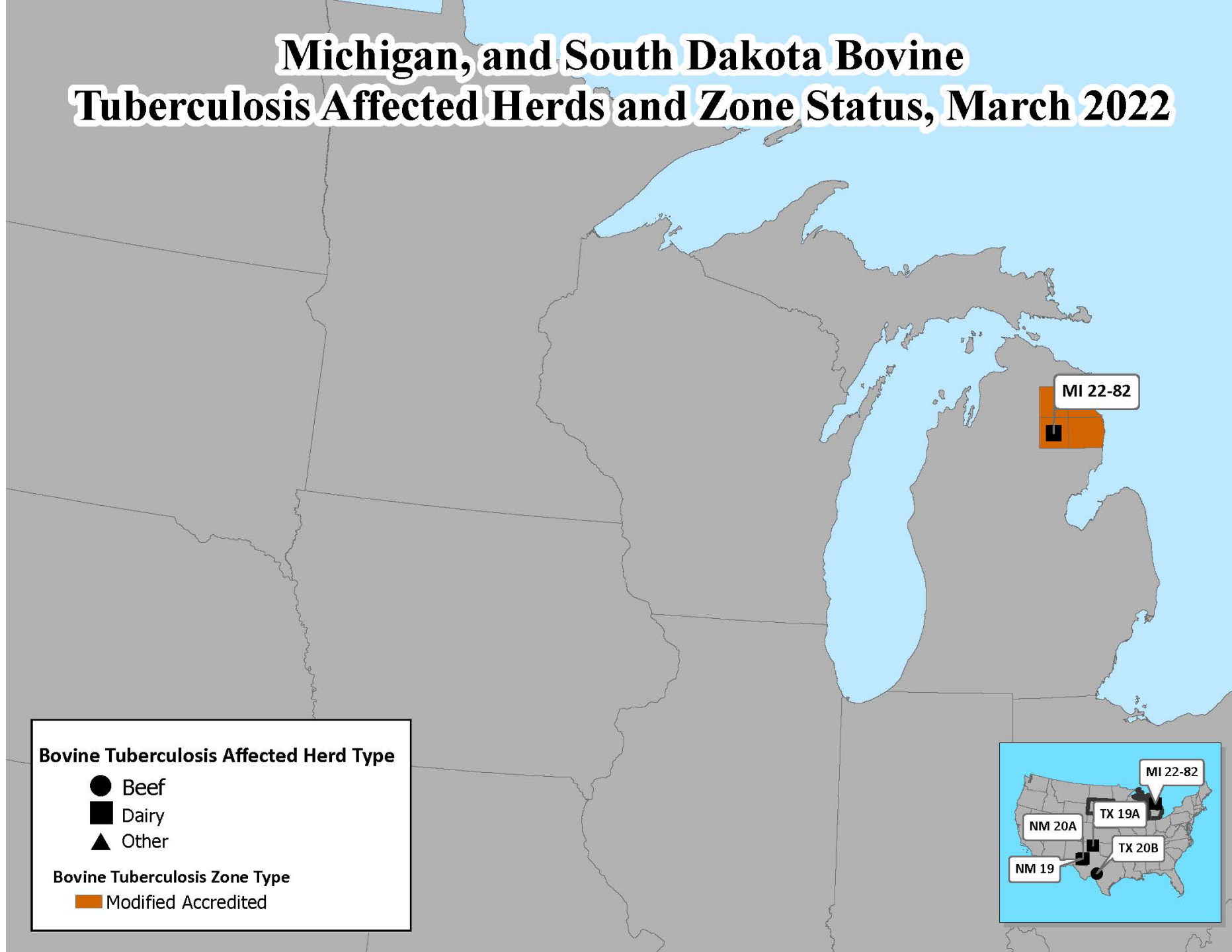
1. Herds are named with the last 2 digits of the calendar year and in order of occurrence within a state during that year, with Michigan's numbers being cumulative across years.
2. *Mixed species include; beef, sheep, and swine

TB Affected Herd Updates FY22 Q2 (Jan.-March 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	2 nd WHT May 2022
HI 22B	March 2022	Epi Investigation	Beef	Depopulation	Depopulation in progress

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.

Michigan, and South Dakota Bovine Tuberculosis Affected Herds and Zone Status, March 2022



Tuberculosis Affected Herd Updates (HI, MI)

- HI 21C → Identified from an infected pig on the premises at slaughter
 - Cattle classified as exposed and depopulated
 - Whole genome sequence related to the feral swine strain on the island.
 - Trace swine approved for indemnity and in progress of being depopulated
- HI 21D → Identified from Whole Herd Testing
 - Cattle herd adjacent to HI 21C
 - Depopulation approved and in progress

Tuberculosis Affected Herd Updates (HI, MI)

- HI 22A → Identified from epidemiologic investigation
 - Owners would prefer depopulation
 - Test-and-Remove Model completed by CEAH
 - Herd Management Plan TBD
- MI 22-82 → Identified on annual MAZ surveillance
 - 1st removal test completed with one cow NGL
 - 2nd removal test planned for May 2022
- HI 22B → Identified from epidemiologic investigation
 - Depopulation approved and in progress

TB affected herds under quarantine in FY22 Q2 (Jan.-March 2022) TX, NM

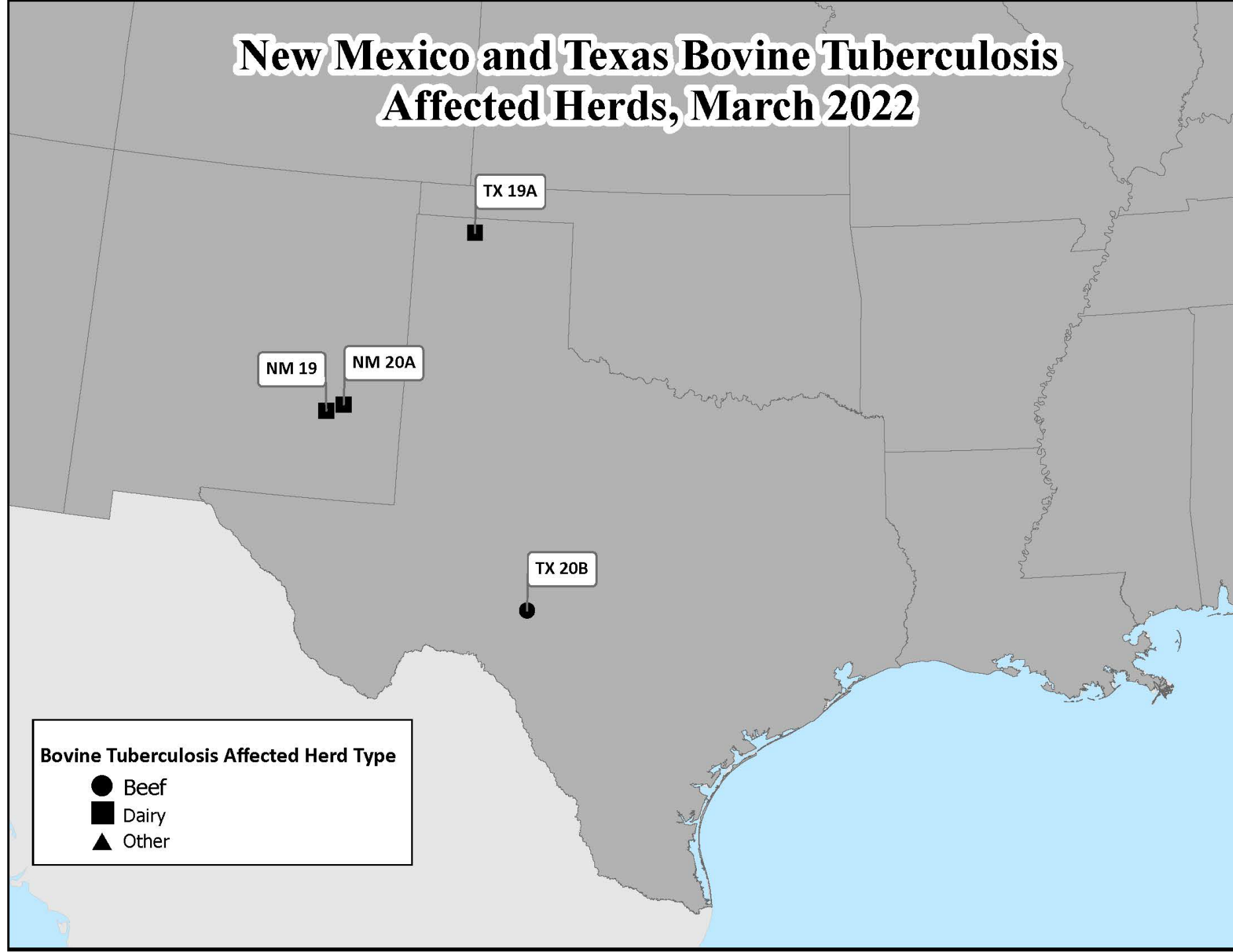
Location ₁	Date Detected	Method of Detection	Herd Type	Herd Management Status	Next Test Tentative Start Date
NM 20A	October 2020	Assurance Test	Dairy	Test-and-Remove Phase	May 2022
TX 20B	Sept. 2020	Slaughter Trace	Beef	Test-and-Remove Phase	June 2022
NM 19	May 2019	Slaughter Trace	Dairy	Test-and-Remove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

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 (TX,NM)

- NM 20A → Verification test scheduled for May 2022
 - 5th removal test completed Oct. 2021 with all negative
- TX 20B → Next herd test June 2022; Q release if herd plan met
- NM 19 → Removal test (12th) scheduled for May 2022
 - 1 positive (+culture) cow identified on Oct. 2021 herd test
- TX 19A → 8th WHT completed; NGL
 - Next test planned July 2022

New Mexico and Texas Bovine Tuberculosis Affected Herds, March 2022



Bovine Tuberculosis Affected Herd Type

- Beef
- Dairy
- ▲ Other

Bovine TB Cases Identified through Routine Slaughter FY2022 Q2 (Jan.-March 2022)

Slaughter Type	Month confirmed	Slaughter Plant State	Slaughter Origin State	Outcome/current status
Adult Cull	Oct. 2021	MN	MT	Depopulation Completed
Swine** Cull	November 2021	HI	HI	Depopulation in Process (HI 21C)

**Cattle commingling with swine were also PCR positive

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.”
- ***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