

Michigan Tick Data

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Abstract

The Michigan Environmental Public Health Tracking Program (MiTracking) worked with the Michigan Department of Health and Human Services Emerging Zoonotic and Infectious Disease (MDHHS EZID) Section to create a dataset that includes resident-submitted tick reports.

The data include the number of ticks reported in Michigan by county, year and type of tick.

This dataset is updated every year.

All users are recommended to read and fully comprehend the metadata prior to data use. To access these data, please visit the [MiTracking Data Portal](#).

Purpose

This dataset allows for a better understanding of the spatial and temporal patterns of tick species across Michigan. The public Data Portal provides data and information about the five most common ticks in Michigan for public health professionals, researchers and the public. The data can be used to determine the number of ticks submitted for identification through the [MDHHS Tick Identification Program](#).

Supplemental Information

Ticks are significant carriers of pathogens that can cause human and animal disease. Listed below is a ranked order of the [ticks most likely to bite humans in Michigan](#):

1. American dog tick (*Dermacentor variabilis*)

- **Distribution:** Widespread throughout Michigan forests and grassy areas.
- **Key Facts:** These ticks are active from early May to November and bite both humans and companion animals.
- **Diseases:** Rocky Mountain spotted fever and tularemia.

2. Blacklegged tick (*Ixodes scapularis*)

- **Distribution:** Emerging in Michigan.
- **Key Facts:** Found on low forest vegetation, often along human and animal trails. They can bite both humans and companion animals.
- **Diseases:** Lyme disease, anaplasmosis, babesiosis, deer-tick virus and other emerging pathogens.

3. Lone star tick (*Amblyomma americanum*)

- **Distribution:** Occasionally found in wooded and grassy areas across the state.
- **Key Facts:** An aggressive biter of humans and companion animals. Adult females have distinctive “Lone Star” marks.
- **Diseases:** Human ehrlichiosis, Southern Tick-Associated Rash Illness (STARI), Alpha-gal Syndrome and tularemia.

4. Woodchuck tick (*Ixodes cookei*)

- **Distribution:** Found most commonly on pets throughout Michigan.
- **Key Facts:** Usually found near dens of skunks and woodchucks. They can bite both humans and companion animals.
- **Diseases:** Powassan encephalitis.

5. Brown dog tick (*Rhipicephalus sanguineus*)

- **Distribution:** Occasionally found in Michigan.
- **Key Facts:** Can survive and breed in indoor environments. Has been associated with kennel, shelter and breeding facilities. Good hygiene practices can prevent indoor infestations. They may bite both humans and companion animals.
- **Diseases:** Rocky Mountain spotted fever, canine babesiosis and canine ehrlichiosis.

Keywords

Tick, Ticks, Blacklegged, Dog, Lone Star, Woodchuck, Lyme, Lyme disease, Rocky Mountain spotted fever, Anaplasmosis, Babesiosis, Deer-tick, Ehrlichiosis, Tularemia, Powassan encephalitis, Tick-borne, Tick-related, Emerging disease, Woods, Wooded, Forest, Outdoor, Vector, Insect, Insects, Bite, Bites, Insect bite, Tick bite, Alpha gal syndrome, AGS, red meat allergy.

Bounding Coordinates

Geographically, all cases in this dataset occurred for animals reported in the state of Michigan. This means that all cases were within the latitude/longitude coordinates listed below.

- West Bounding Coordinate: -90.418133999999995.
- East Bounding Coordinate: -82.418394000000006.
- North Bounding Coordinate: 48.189534000000002.

- South Bounding Coordinate: 41.696088000000003.

Other Information on Data

- Level of Geographic Detail: Statewide, County.
- Currentness Reference (when data were last updated): 1/15/2025.
- Frequency at which the data are updated: Annually.
- Data Status: Complete.

Completeness Report

These data are complete for all reports as of 1/15/2025. Data from 2014 are currently unavailable in electronic format. For information about ticks reported in 2014, contact the MDHHS EZID Section at 517-335-8165.

Data Processing Description

Data Source: The MDHHS Tick Identification Program created this dataset. Prior to 2017, the Michigan Department of Agriculture and Rural Development administered the program and provided data to MDHHS. MDHHS began administering the program in 2017.

Inclusion Criteria: All ticks and pictures of ticks submitted by healthcare providers and the public were counted and included in the dataset. Lyme disease testing for blacklegged ticks was available until April 2020 but has since been discontinued.

Data Calculations: Data points relevant to the MiTracking Data Portal include the county where the tick encounter likely occurred, date of collection and tick species. All new ticks submitted and each Michigan county where the tick was believed to be encountered were counted. Those numbers were filtered by tick species. These steps were repeated for each available year of data.

Access Constraints

There are no access constraints for data available through the MiTracking Data Portal.

Use Constraints

It is recommended that all users read and fully comprehend the metadata prior to data use. Efforts have been made to assure the accuracy of the data. These data are supplied by the MDHHS EZID Section for the MiTracking Program for the purposes of compiling, integrating and disseminating environmental hazard, exposure and health effects data. MDHHS specifically disclaims responsibility for any analyses, interpretations or conclusions made by those who access this information.

These data remain the property of the MDHHS EZID Section and cannot be used for commercial purposes and shall not be used to engage in any method, act or practice to

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Data users are prohibited from attempting to learn the identity of any person included in the data and from linking these data with any other data for the purpose of matching records to identify individuals or entities (such as hospitals).

The MiTracking Program has released these data in collaboration with the MDHHS EZID Section, abiding by their quality controls.

Security Handling Description

If data are distributed, the use constraints specified in this metadata apply to all recipients of the data.

Distribution Liability

The MiTracking Program is maintained, managed and operated by the Environmental Health Bureau (EHB) within MDHHS. In preparation of these data, every effort has been made to offer the most current, correct, complete and clearly expressed information possible. Nevertheless, some errors in the data may exist. In particular, MDHHS disclaims any responsibility for source data, compilation and typographical errors and accuracy of the information that may be contained in these data.

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Custom Order Process

For access to national and multi-state unrestricted or public use data, visit [Centers for Disease Control and Prevention's Environmental Public Health Tracking program](#).

For access to unrestricted or public use Michigan-specific data, please contact the MDHHS EZID Section at 517-335-8165.

For access to restricted or secure data, contact the MiTracking Program at MDHHS-MiTracking@michigan.gov.

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