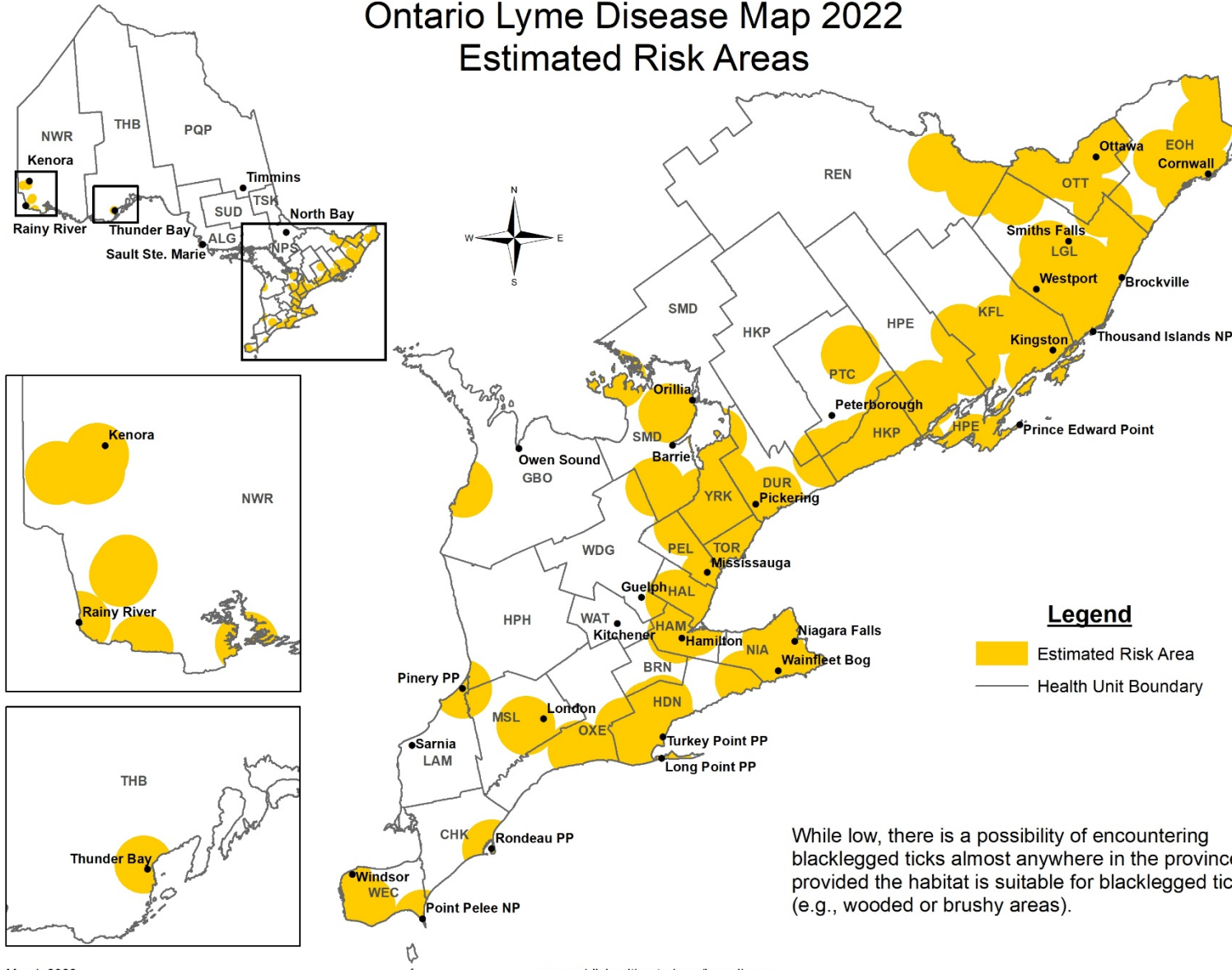


Ontario Lyme Disease Map 2022 Estimated Risk Areas



While low, there is a possibility of encountering blacklegged ticks almost anywhere in the province, provided the habitat is suitable for blacklegged ticks (e.g., wooded or brushy areas).

March 2022

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SURVEILLANCE REPORT

Ontario Lyme Disease Map 2022: Estimated Risk Areas

Purpose

The Ontario Lyme Disease Map: Estimated Risk Areas is updated annually. It provides information to assist public health professionals and clinicians in their management of Lyme disease.

Public Health professionals

The map assists local public health units as they conduct Lyme disease case investigations. It will also help to inform public health messages aimed at raising awareness of Lyme disease risk areas in Ontario.

Clinicians

The map provides clinicians with background information on estimated risk areas when considering potential exposures to blacklegged tick (*Ixodes scapularis*) bites. This can help with decisions to pursue testing, prophylaxis and/or treatment.

Despite these estimated risk areas, it is important to note that blacklegged ticks feed on and are transported by migratory birds, meaning there is a possibility of encountering an infective blacklegged tick almost anywhere in Ontario.

Estimated Risk Areas: Definition and Methods for Identification

Definition

Estimated risk areas are locations where blacklegged ticks have been identified or are known to occur and where people have the potential to come into contact with infective ticks.

Estimated risk areas are calculated as a 20 km radius from the centre of a location where blacklegged ticks were found through drag sampling. This definition is based on work done in Nova Scotia and adopted by the Public Health Agency of Canada for its Lyme disease risk mapping.^{1,2}

Methods

An estimated Lyme disease risk area in Ontario is determined by methods described in *Assessment of a screening test to identify Lyme disease risk*, by Ogden et al.³ Initially, passive surveillance indicators are required to establish an estimated risk area, and are used to inform where tick dragging should be conducted. Passive surveillance indicators may include, but are not limited to:

- Information about the location of ticks submitted from the public and health care providers for identification.
- Assessment of exposure location information from locally acquired human Lyme disease cases.
- A suitable tick habitat.

Once passive surveillance indicators are present, tick dragging should take place. Ogden et al.'s methods require conducting three person-hours of drag sampling in potential risk areas between May and October.³ In new locations with no history of blacklegged tick populations, tick dragging should be conducted at two different times in a one-year period, during the spring and fall, to confirm the presence of blacklegged ticks. Finding at least one blacklegged tick during both the spring and fall indicates a risk area for Lyme disease.

The habitat and host animal species required for tick establishment and Lyme disease transmission are not uniformly distributed within the estimated risk areas indicated on the map in yellow. Ticks require wooded and brushy areas to establish themselves. Therefore, if there are no wooded or brushy areas present within a section of the indicated risk area (for example, a parking lot), it is expected that blacklegged ticks will not be present.

Public Health Unit Codes

Public Health Unit Code	Public Health Unit
ALG	Algoma Public Health
BRN	Brant County Health Unit
CHK	Chatham-Kent Health Unit
DUR	Durham Region Health Department
EOH	Eastern Ontario Health Unit
GBO	Grey Bruce Public Health Unit
HAL	Halton Region Public Health
HAM	Hamilton Public Health
HDN	Health and Social Services Haldimand and Norfolk
HKP	Haliburton, Kawartha, Pine Ridge District Health Unit
HPE	Hastings and Prince Edward Public Health
HPH	Huron Perth Public Health
KFL	Kingston, Frontenac, Lennox & Addington
LAM	Lambton Public Health
LGL	Leeds, Grenville & Lanark District Health Unit
MSL	Middlesex-London Health Unit
NIA	Niagara Public Health
NPS	North Bay Parry Sound District Health Unit
NWR	Northwestern Health Unit
OTT	Ottawa Public Health
OXE	Southwestern Public Health
PEL	Peel Public Health
PQP	Porcupine Health Unit

Public Health Unit Code	Public Health Unit
PTC	Peterborough Public Health
REN	Renfrew County and District Health Unit
SMD	Simcoe Muskoka District Health Unit
SUD	Public Health Sudbury & District
THB	Thunder Bay District Health Unit
TOR	Toronto Public Health
TSK	Timiskaming Health Unit
WAT	Waterloo Region Public Health and Emergency Services
WEC	Windsor-Essex County Health Unit
WDG	Wellington-Dufferin-Guelph Public Health
YRK	York Region Public Health

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