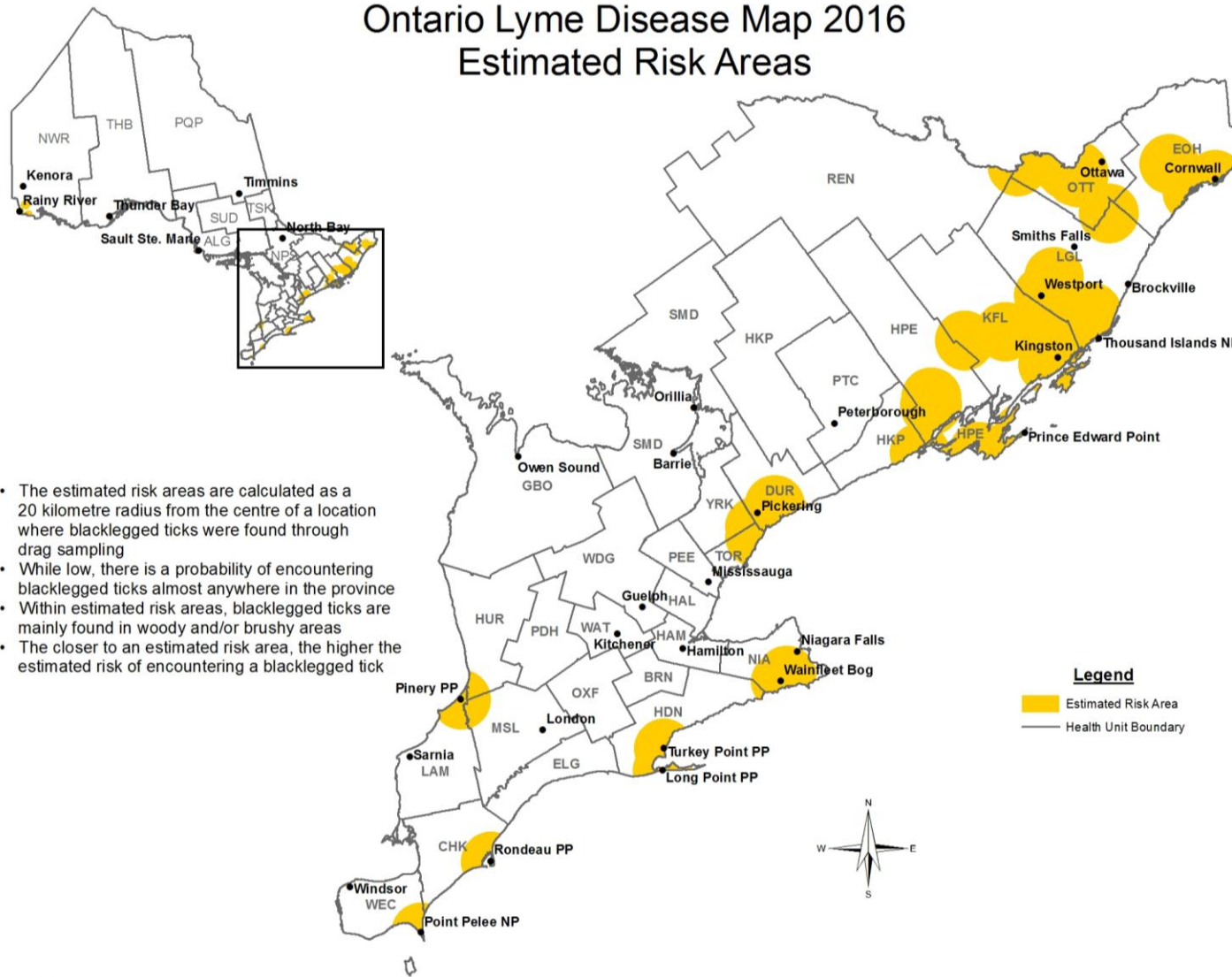


Ontario Lyme Disease Map 2016 Estimated Risk Areas



For more information, please visit www.publichealthontario.ca/lymedisease

Purpose of Lyme disease estimated risk area map

The map of estimated Lyme disease risk areas, updated on a yearly basis, has been developed to assist clinicians in the diagnosis and/or treatment of Lyme disease, with potential exposures or tick bites in the risk areas delineated on the map leading to greater concern about the risks of Lyme disease. Risk areas are represented on the map based on tick dragging conducted in 2015. In addition, public health professionals can use the risk areas delineated on the map to determine if reported case exposure locations represent known or possible new/emerging risk areas, thus helping to inform public health messages aiming to raise awareness of Lyme disease risk areas in Ontario.

Definition of estimated risk area

An estimated Lyme disease risk area in Ontario is defined based on the methods described in *Assessment of a screening test to identify Lyme disease risk*, by Ogden et al.¹ Ogden et al. describe methods for active tick surveillance that require conducting three person-hours of drag sampling in potential risk areas between May and October. In new locations with no history of blacklegged tick populations, tick dragging should be conducted at two different times in a one year period (spring and fall) to confirm the presence of the blacklegged ticks. They conclude that finding at least one blacklegged tick (*Ixodes scapularis*) during this time period may indicate a possible risk area for Lyme disease. Therefore, estimated risk areas are locations where blacklegged ticks have been identified or are known to occur and where humans have the potential to come into contact with infected ticks.

To warrant tick dragging, passive surveillance indicators must be present, and suitable conditions to support populations of blacklegged ticks must exist. Passive surveillance indicators may include, but are not limited to:

- information about ticks submitted for identification and/or testing for the Lyme disease bacteria
- assessment of exposure information from locally acquired human Lyme disease cases
- information from health care professionals

Estimated risk areas are calculated as a 20 kilometre radius from the centre of a location where blacklegged ticks were found through drag sampling. This is based on work done in Nova Scotia and adopted by the Public Health Agency of Canada for its Lyme disease risk mapping.^{2,3}

It should be emphasized that the habitat and host animal species necessary for the establishment and transmission of Lyme disease are not uniform within the estimated risk areas indicated on the map. Therefore, if there are no wooded or brushy areas (for example, a parking lot) within a section of the indicated risk area, it is expected that there would not be any blacklegged ticks present. As blacklegged ticks also feed on and are transported by migratory birds, it should also be noted that there is a low probability of encountering a blacklegged tick almost anywhere in Ontario. Reference locations are placed on the map to provide readers with geographic markers of where estimated risk areas are located. For information on ticks in your area, please contact your local public health unit.

Health Unit codes

Health Unit Code	Health Unit	Health Unit Code	Health Unit
ALG	Algoma District	NPS	North Bay Parry Sound District
BRN	Brant County	NWR	Northwestern
CHK	Chatham-Kent	OTT	Ottawa
DUR	Durham Regional	OXF	Oxford County
ELG	Elgin-St. Thomas	PEE	Peel Regional
EOH	Eastern Ontario	PDH	Perth District
GBO	Grey Bruce	PQP	Porcupine
HAL	Halton Regional	PTC	Peterborough County-City
HAM	Hamilton	REN	Renfrew County and District
HDN	Haldimand-Norfolk	SMD	Simcoe Muskoka District
HKP	Haliburton-Kawartha-Pine Ridge District	SUD	Sudbury and District
HPE	Hastings and Prince Edward Counties	THB	Thunder Bay District
HUR	Huron County	TOR	Toronto
KFL	Kingston-Frontenac and Lennox and Addington	TSK	Timiskaming
LAM	Lambton	WAT	Waterloo
LGL	Leeds-Grenville and Lanark District	WEC	Windsor-Essex County
MSL	Middlesex-London	WDG	Wellington-Dufferin-Guelph
NIA	Niagara Regional Area	YRK	York Regional

References

- <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/14vol40/dr-rm40-05/dr-rm40-05-2-eng.php>
- <http://novascotia.ca/dhw/populationhealth/documents/Lyme-Disease-Epidemiology-and-Surveillance-in-Nova-Scotia.pdf>
- <http://www.phac-aspc.gc.ca/id-mi/tickinfo-eng.php>

Suggested Citation

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For more information, visit www.publichealthontario.ca.

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