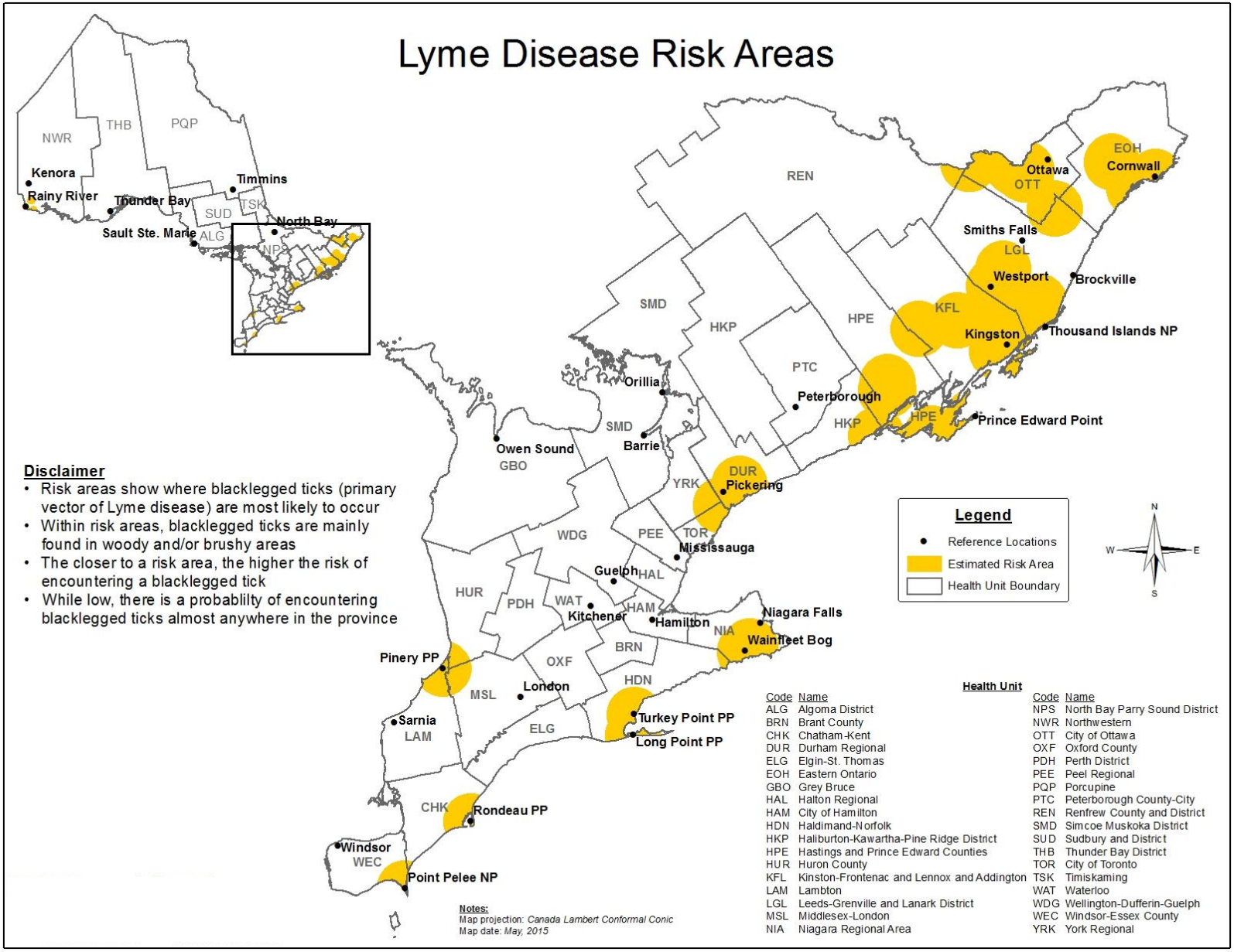
Public Health Ontario | Santé publique Ontario

Lyme Disease Risk Areas



Health Unit

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

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Background Information

The map of Lyme disease Risk Areas 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. 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.

A Lyme disease risk area in Ontario is based on the methods described in the publication by Ogden et al.[1]. Ogden et al. described methods for active tick surveillance that involved conducting three person-hours of drag sampling of areas of concern between May and October. They concluded that finding at least one blacklegged tick (*Ixodes scapularis*) during this time period may indicate a possible risk area for Lyme disease. Therefore, risk areas are zones defined around 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 drag sampling, passive surveillance indicators and suitable conditions to support populations of blacklegged ticks must be present. 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, and information from health care professionals. In new locations with no history of blacklegged tick populations, it would be expected that tick dragging be conducted at two different times (spring and fall) to confirm the presence of the blacklegged ticks.

The estimated risk areas are calculated as a 20 kilometer 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 their Lyme disease risk mapping[2,3]. It should be emphasized that habitat and host animal species necessary for the establishment/transmission of Lyme disease are not uniform within the risk areas indicated on the map. Therefore, if there are no wooded or brushy areas within a section of the indicated risk area, it is expected that there would not be any blacklegged ticks present, e.g. a parking lot. As blacklegged ticks will also feed on and be 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 the Lyme disease risk locations are located.

Suggested Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Map of Lyme Disease Risk Areas. Toronto, ON: Queen's Printer for Ontario; 2015.

Disclaimer

This document was developed by Public Health Ontario (PHO). PHO provides scientific and technical advice to Ontario's government, public health organizations and health care providers. PHO's work is guided by the current best available evidence.

PHO assumes no responsibility for the results of the use of this document by anyone.

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