

Region: Northeast

Work Area: Sudbury & Parry Sound

Forest Health Technician: Will Byman – OMNR

Contact Information: (705) 564-7832 or will.byman@ontario.ca



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Maps and Areas of Major Forest Disturbances during 2010

Forest Tent Caterpillar

Malacosoma disstria Hbn.

Forest tent caterpillar caused moderate-to-severe defoliation on sugar maple (*Acer saccharum* (Marsh.)). The area within which this defoliation occurred was 141 hectares in the Vankoughnet area east of Bracebridge. This infestation is part of a larger area defoliated by forest tent caterpillar in the Peterborough, Midhurst, Bancroft and Guelph districts totaling 60,424 hectares. A map depicting the defoliated areas is located on page four of this document. One additional occurrence was noted on Manitoulin Island just south of Little Current on basswood (*Tilia americana* L.), however, no defoliation was found with the insect.

Pest Update – November 2010

This is the second and final report on forest health concerns within Sudbury and Parry Sound districts of the Ministry of Natural Resources. This report covers the forest disturbances caused by major insect pests, diseases, and abiotic factors affecting trees during the latter part of the 2010 growing season plus maps and areas for pests reported in the July 2010 Pest Update. This report is prepared by Will Byman of the Ontario Ministry of Natural Resources. If you have any questions or observations regarding the information presented in this report please contact Will Byman by telephone at (705) 564-7832 or by email at will.byman@ontario.ca.

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Figure 1 - Fifth instar forest tent caterpillar larva resting on a basswood (*Tilia americana* L.) leaf - Little Current, Manitoulin Island

Septoria Leafspot of Poplar

Septoria musiva (Peck)

This disease was found causing moderate-to-severe defoliation of balsam poplar (*Populus balsamifera* L.) in the City of Greater Sudbury. Found in conjunction with low levels of willow flea weevil (*Isochnus rufipes* (LeC.)) resulted in premature browning and dropping of leaves from all ages of balsam poplar. While unsightly, this is a late season defoliator and doesn't noticeably reduce the vigour of balsam poplar trees.

Pale Juniper Webworm

Aethes rutilana (Hbn.)

A call from a concerned landowner led to an investigation into browning of common juniper (*Juniperis communis* L.) in central Manitoulin Island. The culprit was the pale juniper webworm. This particular pest is quite small but given large enough numbers can cause severe defoliation on

common juniper, as seen west of Gore Bay on Manitoulin Island.



Figure 2 - Pale juniper webworm and damage on common juniper – Gore Bay, Manitoulin Island

Arborvitae Leafminer

Argyresthia thuiella (Pack.)

This pest is part of a group of leafminers referred to as 'cedar leafminers' and causes defoliation of eastern white cedar (*Thuja occidentalis* L.) by mining the inside of cedar leaves. Arborvitae leafminer was observed causing light defoliation throughout the western tip of Manitoulin Island.

Red Pine Cone Beetle

Conophthorus resinosae (Hopk.)

This beetle is known to mine both shoot tips on jack pine (*Pinus banksiana* Lamb.) and cones on

red pine (*Pinus resinosa* Ait.) in Ontario. In several locations the damage from this pest was noted. Areas with greater amounts of cone death and abscission on red pine occurred in the Pointe aux Baril islands.



Figure 3 - Cone damage on red pine caused by the red pine cone beetle - Hearts Content Island, Point aux Baril

Introduced Pine Sawfly

Diprion similis (Htg.)

This introduced pest caused minor defoliation to eastern white pine (*Pinus strobus* L.) in the Pointe Aux Baril area. Defoliation by this pest was light in June when first seen, however it is known to have two to three generations per year in Ontario and has the potential to increase population levels rapidly.



Figure 4 - Introduced pine sawfly feeding on eastern white pine - Pointe aux Baril

Gypsy Moth

Lymantria dispar (L.)

Two separate finds of gypsy moth were reported this year, both in the Sudbury District. The first was found resting on eastern white pine just north of Alban along the highway 69 corridor. The second location was north high falls on the Onaping River close to Dowling within the City of Greater Sudbury. At this location the larvae were actively feeding on speckled alder (*Alnus incana* ssp. *rugosa* (Du Roi)) causing severe defoliation of this important riparian area shrub. While such low numbers do not normally warrant inclusion in a pest update, this pest is known to cause severe defoliation to many species of trees in Ontario.

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Figure 5 - Gypsy moth larva resting on eastern white pine - Highway 69 near Alban

Willow Flea Weevil

Isochnus rufipes (LeC.)

This pest once again showed up in the City of Greater Sudbury on willow (*Salix*) species and along with septoria leafspot caused early browning and leaf drop on balsam poplar. Although less prominent than last year, there were several stands displaying copper leaves at the beginning of August. Close examination of these copper leaves shows small feeding holes and resting adults on the underside of the leaves.

Early Birch Leaf Edgeminer

Messa nana (Klug)

One of several insects referred to as 'birch leafminer' is the early birch leaf edgeminer which caused widespread light defoliation to white birch (*Betula papyrifera* Marsh.) in the birch transition

forest within the City of Greater Sudbury. This pest mines the inside of the leaf beginning from the outer edge creating round patches of light brown dead leaf tissue, effectively reducing the available area for photosynthesis and respiration.



Figure 6 - Defoliation of white birch caused by the early birch leaf edgeminer - Dowling

Oak Defoliator Complex

Red oak (*Quercus rubra* L.) in the Nobel area of Parry Sound District was defoliated by a number of different insects in 2010. In the Dinner Lake area along highway 69 the primary defoliator was oak olithreutid leafroller (*Pseudexentera cressoniana* (Clem.)). Additional pests in this complex were oak leafshredder (*Croesia semipurpurana* (Kft.)), leaf folder moth (*Acleris logiana placidana* (Robinson)), oak leafroller (*Argyrotaenia quercifolia* (Fitch)), and oblique-banded leafroller (*Choristoneura rosaceana* (Harr.)). This area had several red oak trees

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ranging from sapling to mature defoliated by this group of insects.

Any questions or comments can be directed to Will Byman via the contact information supplied in the header.



Figure 7 - Oak olithreutid leafroller resting on a red oak leaf - Dinner Lake area, Nobel

Attached to this pest update are tables detailing area defoliated in hectares by pest and maps illustrating areas defoliated within Sudbury and Parry Sound districts during 2010. For additional information regarding major forest disturbances in 2010 please refer to pest update #1 from July 2010.

All photos were taken by Will Byman unless otherwise noted. The next update will be distributed summer 2011.

Table 1 - Five year summary of major forest disturbances within Sudbury District

Sudbury	Aspen decline	Forest Tent Caterpillar (mod to severe)	Gypsy Moth (mod to severe)	Jack Pine Budworm (mod to severe)	Jack Pine Budworm Mortality	Large Aspen Tortrix (mod to severe)	Oak Mortality	Spruce Budworm Defoliation (mod to severe)	Spruce Budworm (Cumulative Mortality 1997 +)	Septoria Leafspot (mod to severe)
2010	-	-	-	14,667	-	9,845	-	281,254	64,998	28
2009	18,462	-	-	2,426	571	46,092	3,567	121,291	64,998	-
2008	-	29,963	15,507	4,092	-	-	-	102,917	6,974	-
2007	-	351,003	-	42,775	-	-	-	111,380	6,454	-
2006	-	355,532	-	14,038	-	-	-	72,739	5,312	-

Table 2 - Five year summary of major forest disturbances in Parry Sound District

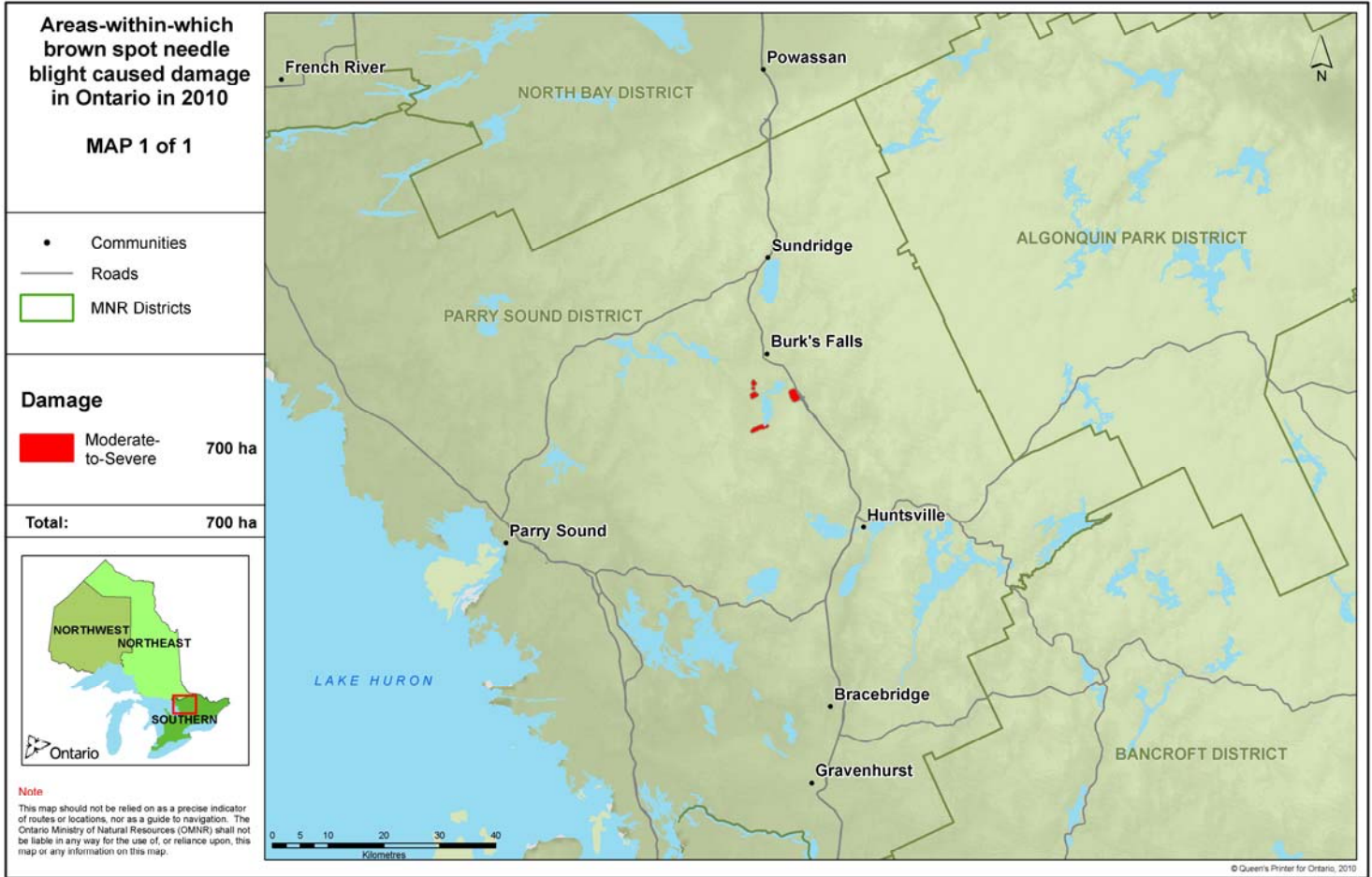
Parry Sound	Brown Spot Needle Blight (mod to severe)	Forest Tent Caterpillar (mod to severe)	Jack Pine Budworm (mod to severe)	Jack Pine Budworm mortality	Larch Casebearer (mod to severe)	Scorch/Frost (mod to severe)	Spruce Budworm (mod to severe)	Large Aspen Tortrix (mod to severe)	Oak Defoliator Complex (mod to severe)	Spruce Budworm (Cumulative Mortality 97-10)	Hemlock Damage (light to mod)
2010	700	141	23,762	-	1,289	103,733	1,164	-	-	-	-
2009	37	-	39,701	-	-	-	644	119	3,505	1,108	-
2008	-	224	4,760	1,326	-	-	4,121	-	-	-	1,010
2007	-	2,135	21,674	-	-	-	2,217	3,297	-	-	-
2006	-	10,281	4,548	-	-	-	2,796	5,937	-	-	-

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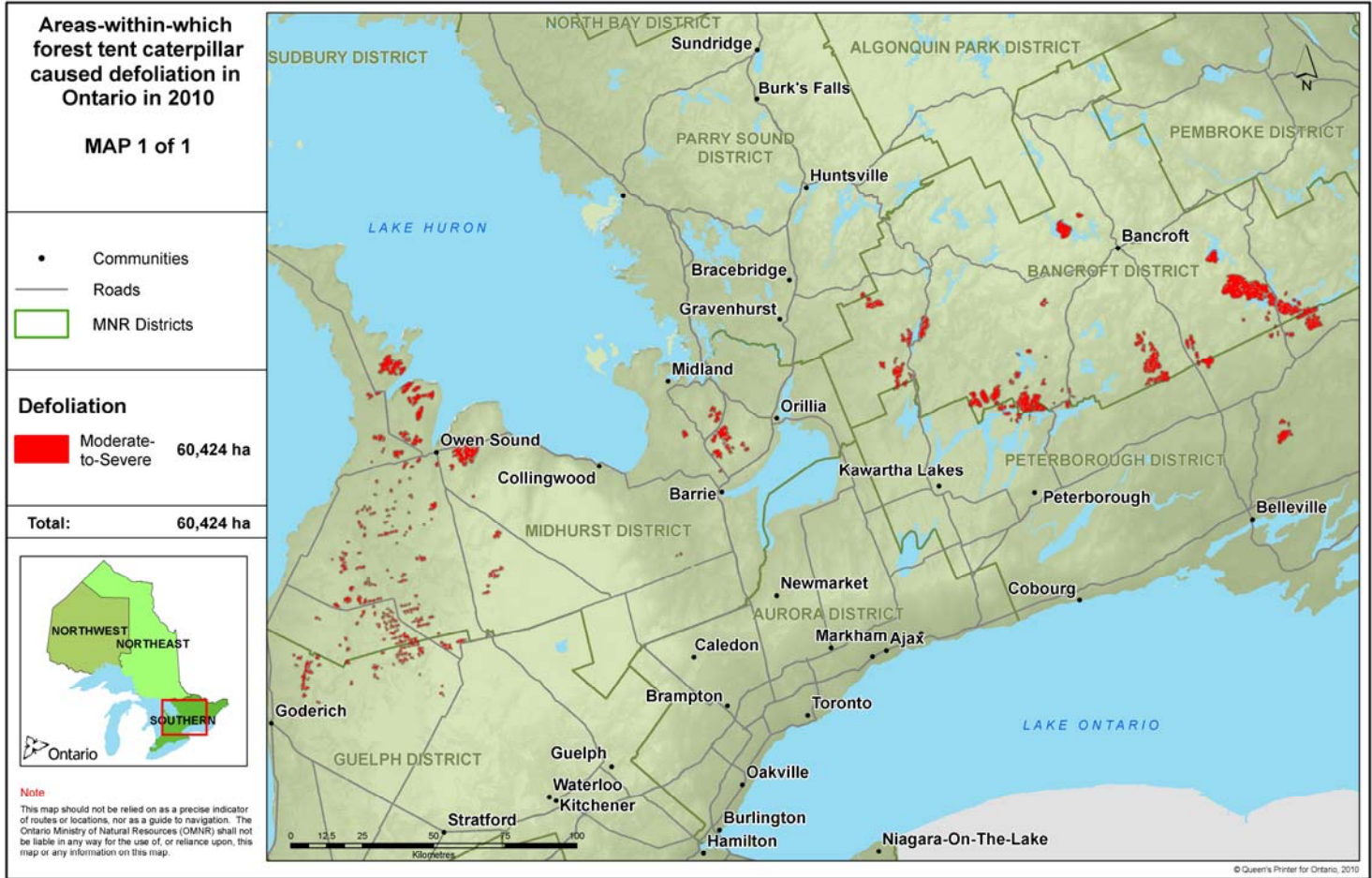


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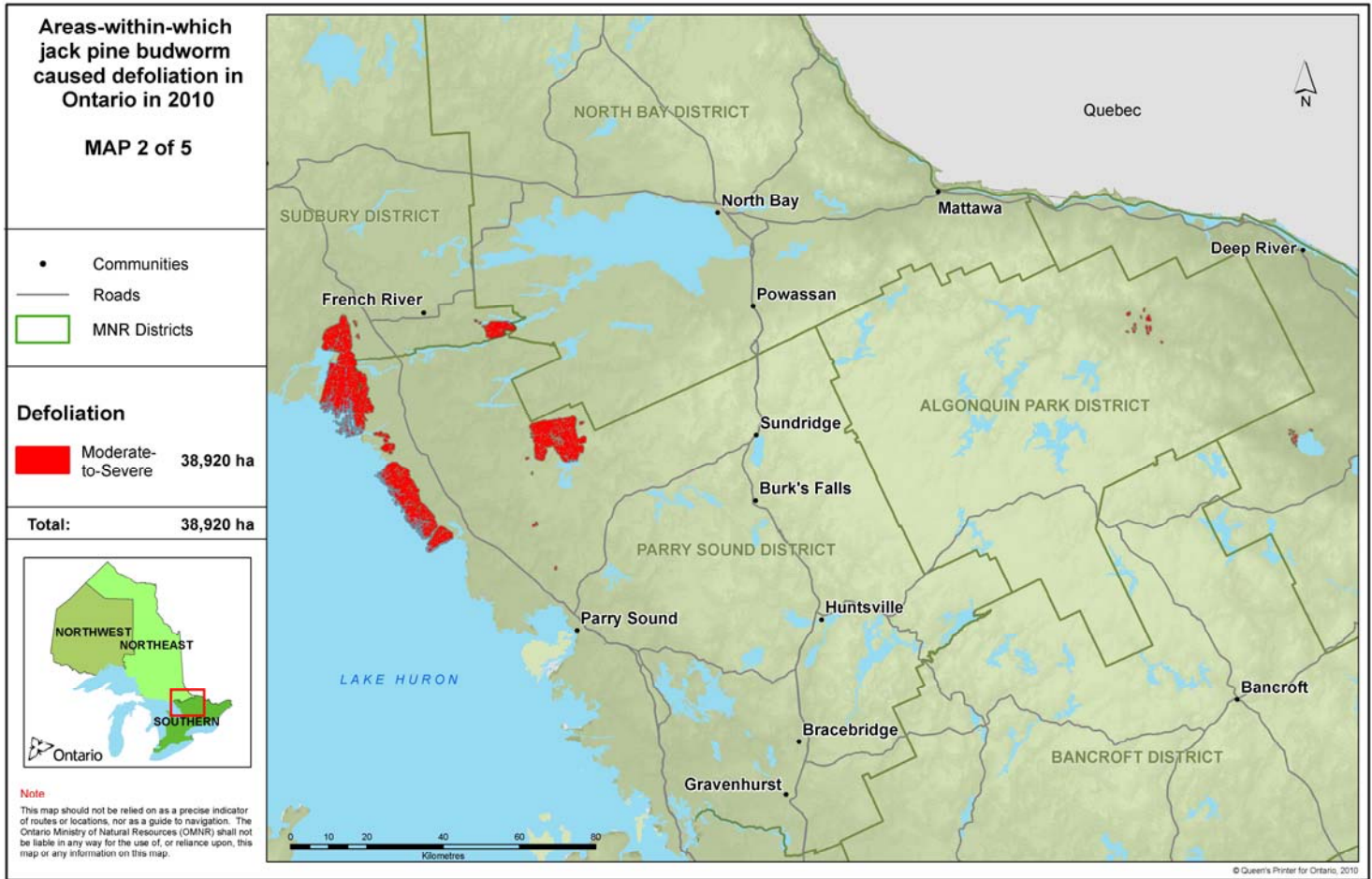


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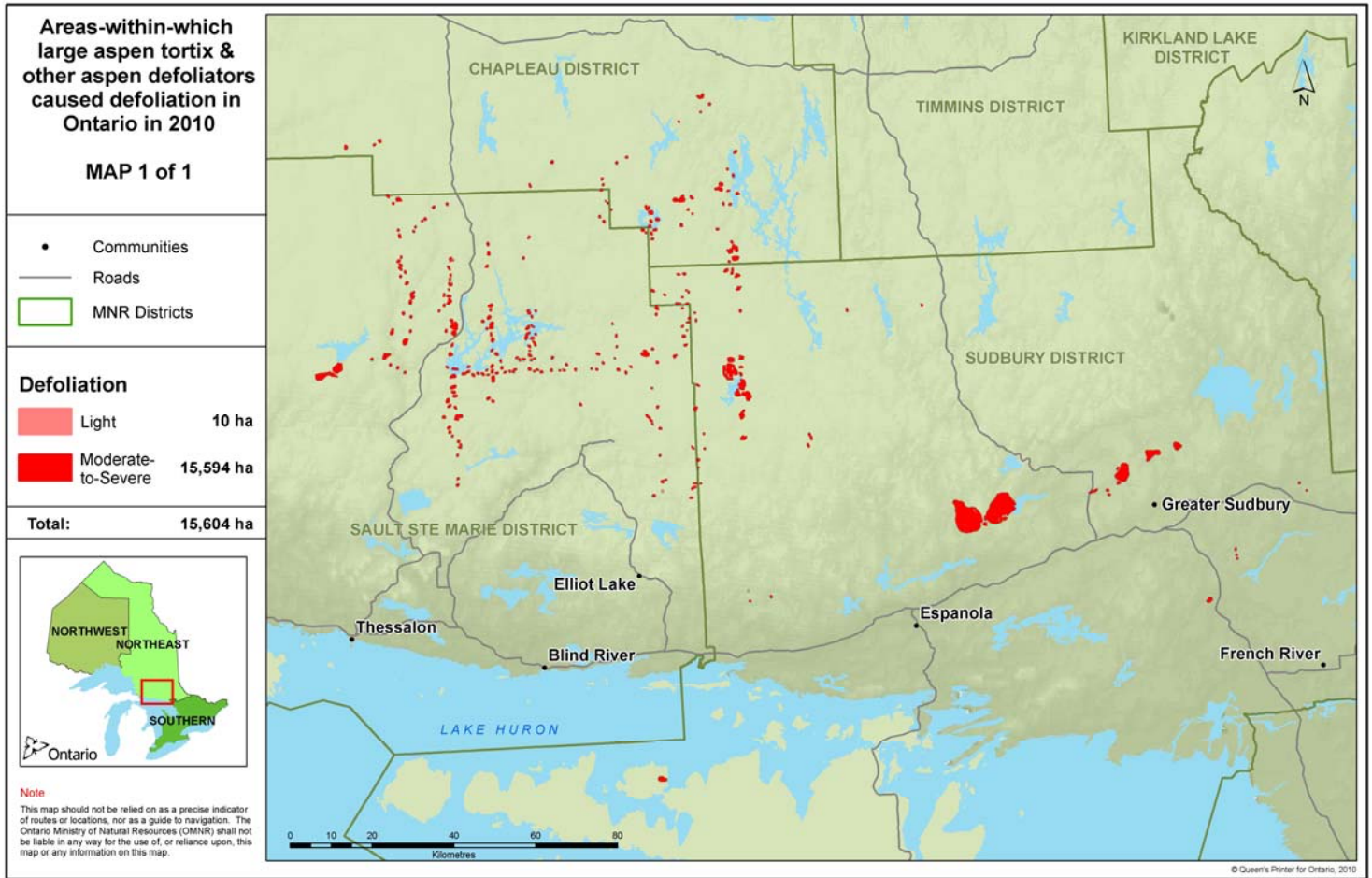


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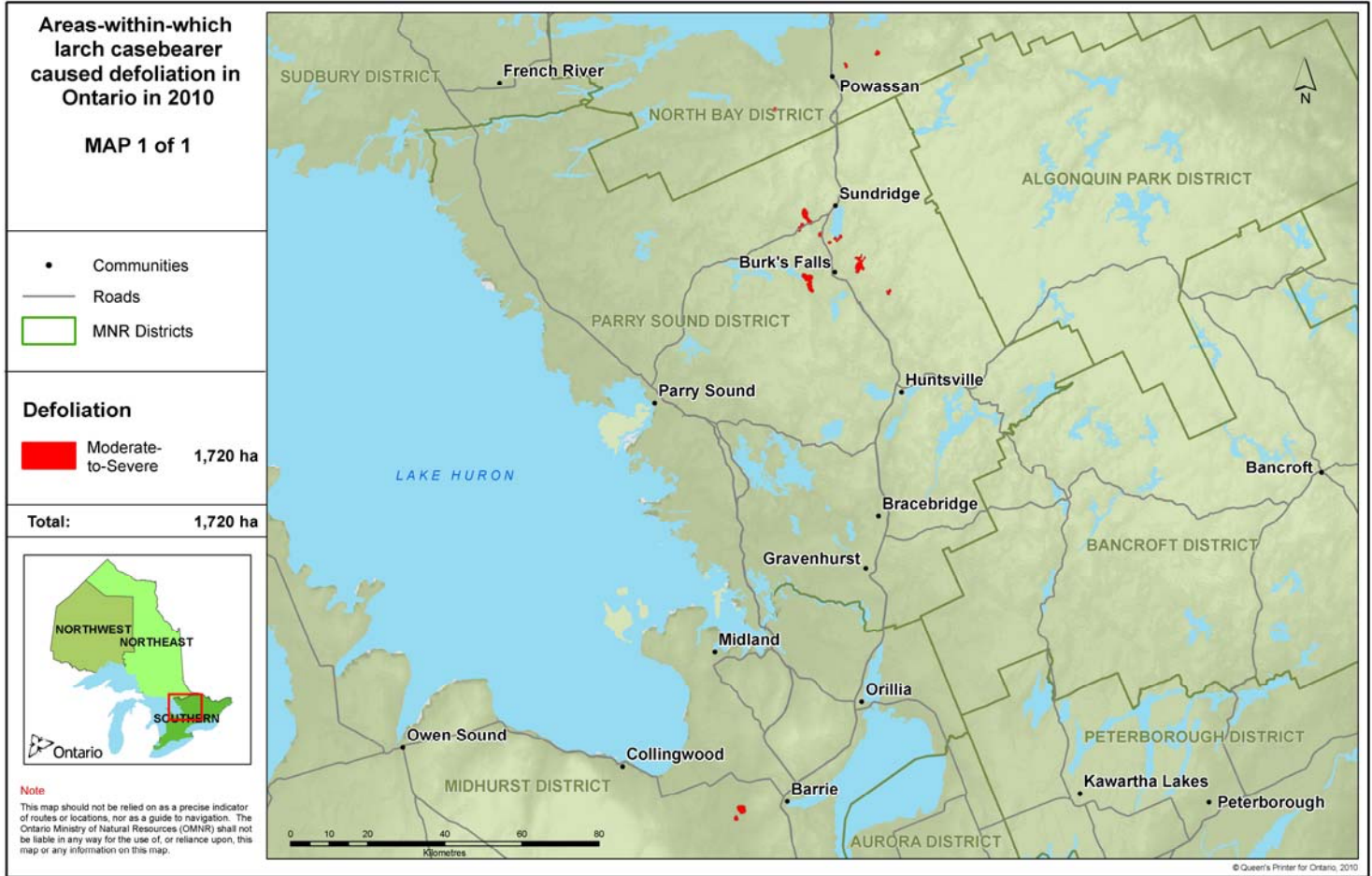


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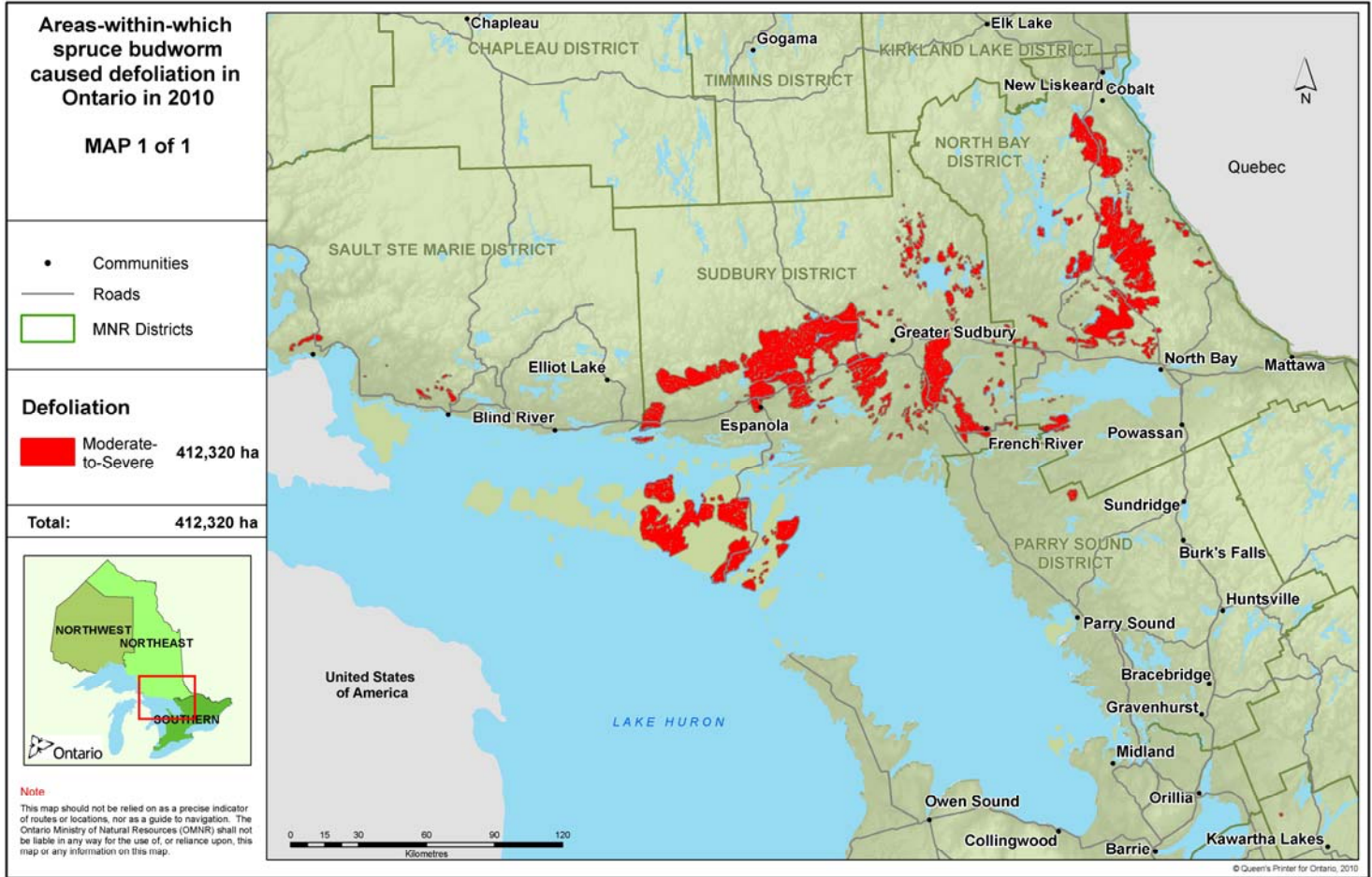


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