



Ancient Forest Exploration & Research

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SITE VISIT REPORT #8

An Old-growth Forest Assessment for the
Eels Lake Old-Growth Forest Complex
 Peterborough County, Ontario
 prepared January 6, 2020 by Carling Dewar

Site Information

Property name and location:	Eels Lake Old-Growth Forest Complex 1. West Eels Forest (West Eels), 44.874125, -78.201477 2. Fire Route 74 Forest (FR74), 44.883353, -78.136297
Surveyors:	AFER staff: Carling Dewar, Laura Collings, Peter Quinby (July 8 only), and Hayley McGregor
Land designation(s):	1. West Eels: Crown land 2. FR74: Crown and private land

Summary

Forests within this complex contain mature and old trees but recent and widespread logging prevents them from being classified as “old-growth” forests. Several old-growth trees at FR74 have not been harvested, which positions this forest closer to the “old-growth condition” than the forest at West Eels. Further exploration of these forests—in particular FR74—may result in discoveries of other old-growth forest remnants.

Site Descriptions

The Eels Lake Old-Growth Forest (OGF) Complex is located in the Township of North Kawartha and can be accessed via West Eels Lake Road and Fire Route 74. According to 1987-2003 Forest Resources Inventory (FRI) age data, the Eels Lake OGF Complex contains dozens of diverse old-growth forest stands (Figure 1). According to more recent (2007) data; there are much fewer and less diverse old-growth stands (Figure 2). To investigate these stark differences, we travelled to two areas within the complex, which we named the West Eels Forest and Fire Route 74 Forest (FR74) (Figure 1). We also checked the outer portions of some forest stands during roadside stops, indicated by arrows in Figure 1.

West Eels Forest Site Description: A trail leads into this Crown forest from West Eels Lake Road (see beginning of track in Figure 3), which after a short distance, forks to provide access to surrounding lakes. The original purpose of these trails is unknown, but recent logging (likely within the last five years) is evident and the area supports a wide variety of recreational activities including hunting and fishing based on conversations with locals. The lead species’ distributions specified in the 1987-2003 FRI map (Figure 1, eastern hemlock and sugar maple) are accurate. Of four trees that we cored here, only one was identified as old growth: an eastern hemlock at 157 years old (46.3cm DBH).

“Roadside reconnaissance” (see arrows in Figure 1) yielded some large white cedars, as predicted by the 1987-2003 FRI map (see Figure 1, yellow polygon, ‘CE’ in legend); but did not yield any red maples as expected based on FRI data (see Figure 1, orange-red polygon, ‘MR’ in legend). An abandoned logging road was found on the south side of the road within this “red maple” area (also visible in Figure 4) and logging was scheduled here this fall although this has not been confirmed (MRNF 2018a,b; Figure 4 and Figure 5).

We were also interested in investigating the tamarack stand shown in the 1987-2003 FRI map (Figure 1, aqua polygon, ‘LA’ in legend), as data indicates that this stand is 152 years old. We travelled approximately 50m from the road to assess this stand but it was very dense and swampy which prevented further exploration. Only a few live tamaracks were found but none exceeded the minimum old-growth size for the species (Quinby, 2019). We did not assess tree ages or dead wood here.

Three trips were made to this forest:

- Friday July 5, 2019 for reconnaissance and protocol testing
- Monday July 8, 2019 to review protocols and assess forest with Dr. Peter Quinby, and
- Friday August 23, 2019 to test our iNaturalist project: the [Peterborough Old-Growth Forest Project – Level 1](#) (AFER 2019)

Visits in July were during peak bug season. While there were less bugs active at the end of August, this site had relatively higher bug activity than other sites visited during the summer. It is also worth noting that we received cell phone service throughout this forest.

FR74 Forest Site Description: Fire Route 74 is a narrow dirt road that provides access to cottages on the south shore of Eels Lake. We drove almost to the end of this road before finding an appropriate parking spot (see beginning of track in Figure 3). Near the edge of the forest we found several stumps within a second-growth area. We hiked to the inlet and found some larger trees along the way, although they were widely separated. At the inlet we found a shoreline trail, likely made by exploring cottagers, then returned via a valley just west of where we entered. When we were almost back to our parking spot, we encountered a newly-constructed driveway on the west side of the valley. This area contained several small stands of eastern hemlock mixed with birch and sugar maple species, but was not necessarily “eastern hemlock-dominant”, especially in the valley. We did see numerous eastern hemlock-dominant stands while driving along this road, although it was too narrow to stop in most places. Parking at forks in the road and walking to these areas may be the best option if reconnaissance continues in this area. One trip was made to this forest on Friday August 23, 2019 for reconnaissance and to test our iNaturalist project (Protocol 1).

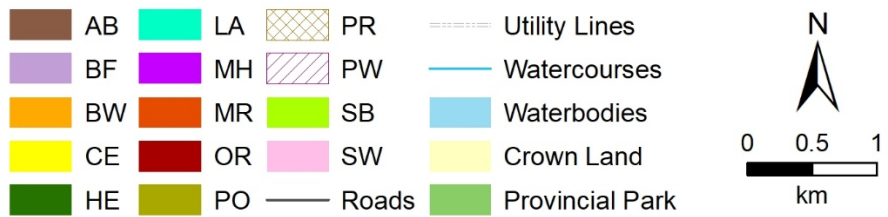
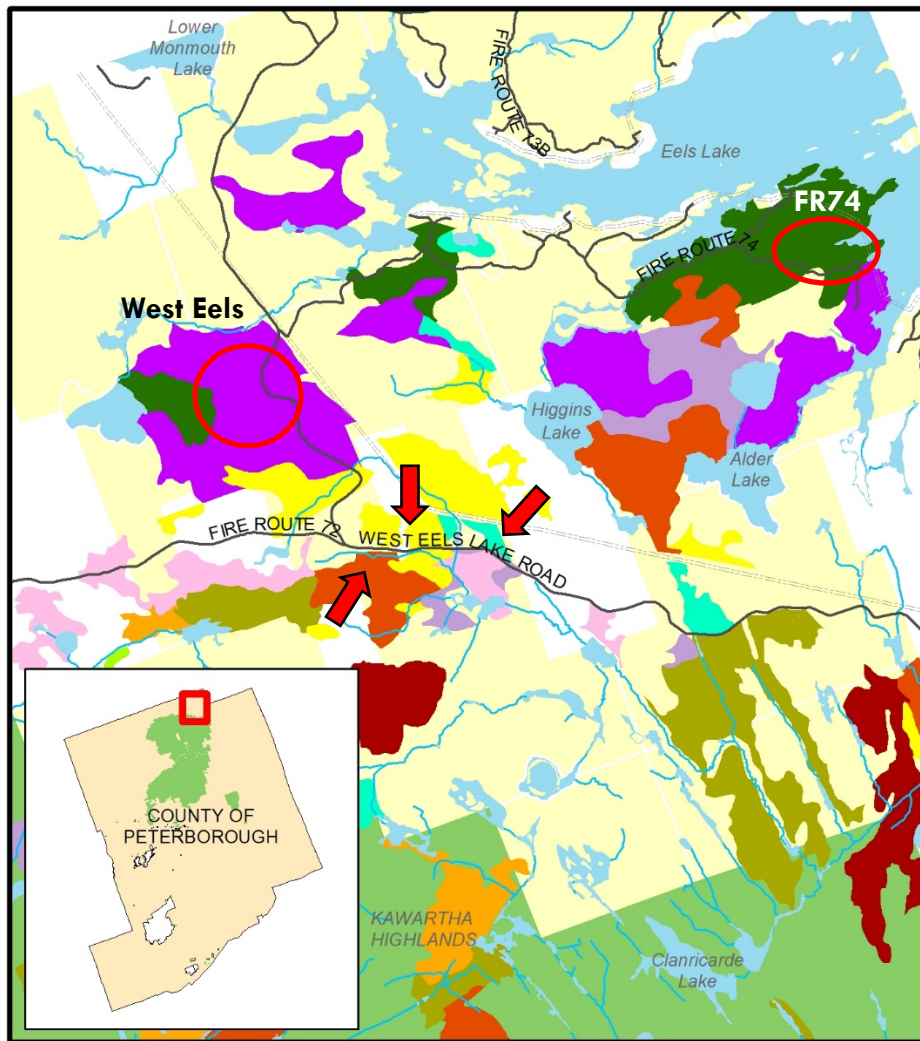
In each of these forests (FR74 and West Eels), we decided to survey using only protocol 1¹ due to evidence of recent logging and, at West Eels, due to few trees meeting the minimum size requirement for old-growth (Quinby 2019).

In addition to information provided here, several tree observations were added to our Peterborough Old-Growth Forest iNaturalist project (AFER 2019):

- West Eels visit <https://www.inaturalist.org/observations/31403248>
- FR74, visit <https://www.inaturalist.org/observations/31607564>

¹ For details on protocols visit www.peterborougholdgrowth.ca/our-protocols

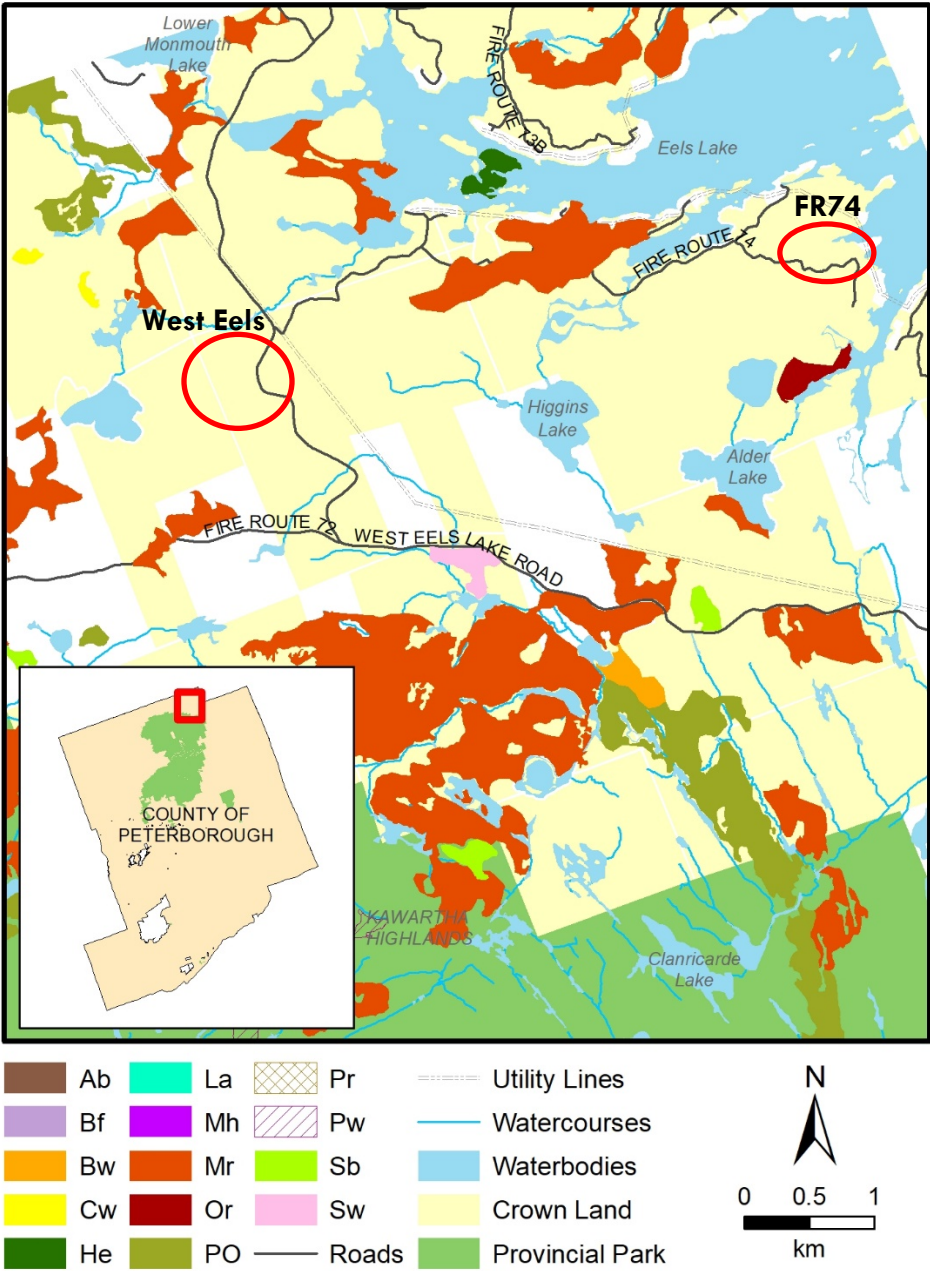
1987-2003 FRI Age Data for the Eels Lake OGF Complex, Including Areas Visited



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Figure 1. 1987-2003 FRI age data for the Eels Lake OGF Complex with locations of the West Eels Forest, Fire Route 74 Forest and "roadside reconnaissance" areas (red arrows). See Appendix A for acronyms.

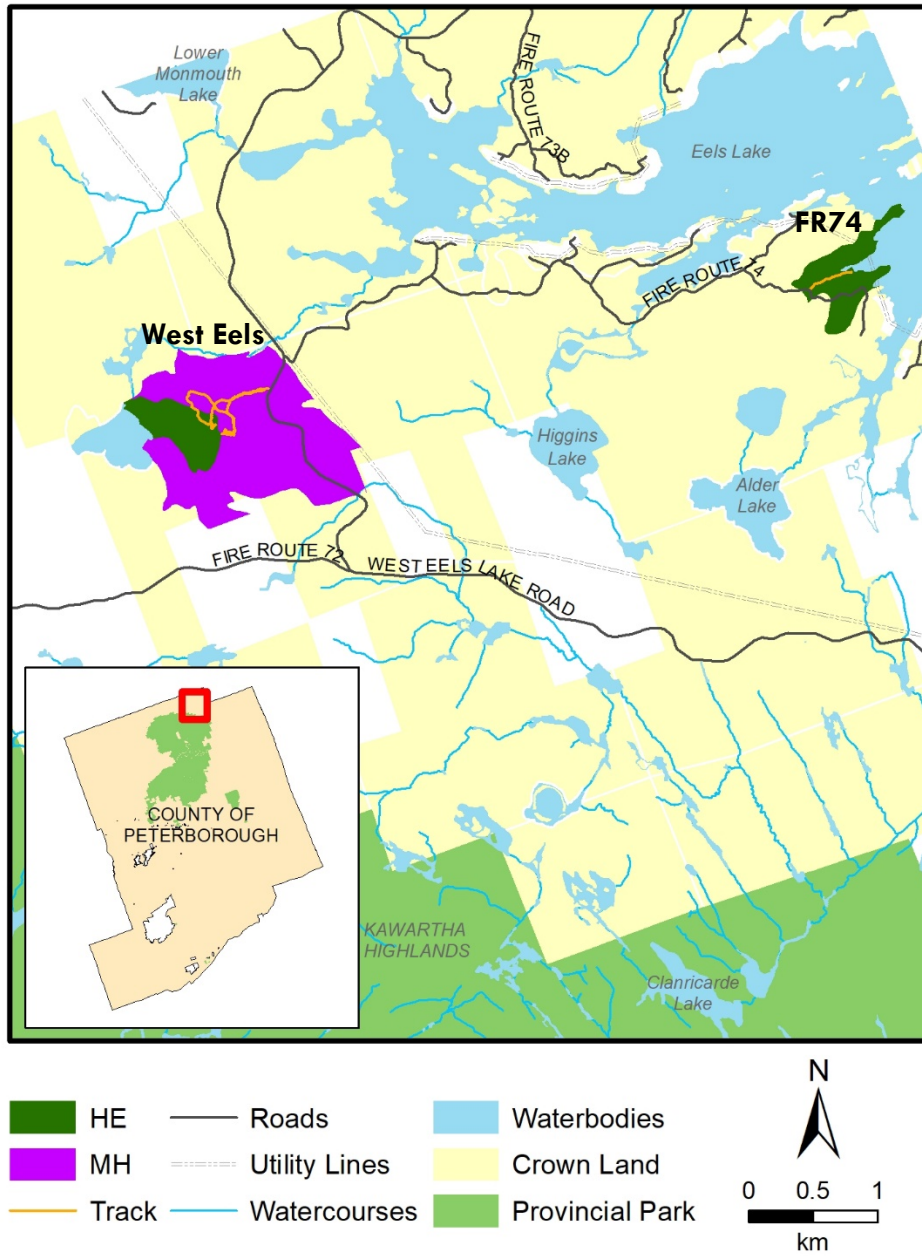
2007 FRI Age Data for the Eels Lake OGF Complex, Including Main Areas Visited



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Figure 2. 2007 FRI age data for the Eels Lake OGF Complex, including areas visited. See Appendix A for acronyms.

Tracks in West Eels Forest and FR74



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Figure 3. Tracks (orange lines) for West Eels and FR74 in the Eels Lake OGF Complex, obtained with a GPS unit. See Appendix A for acronyms.

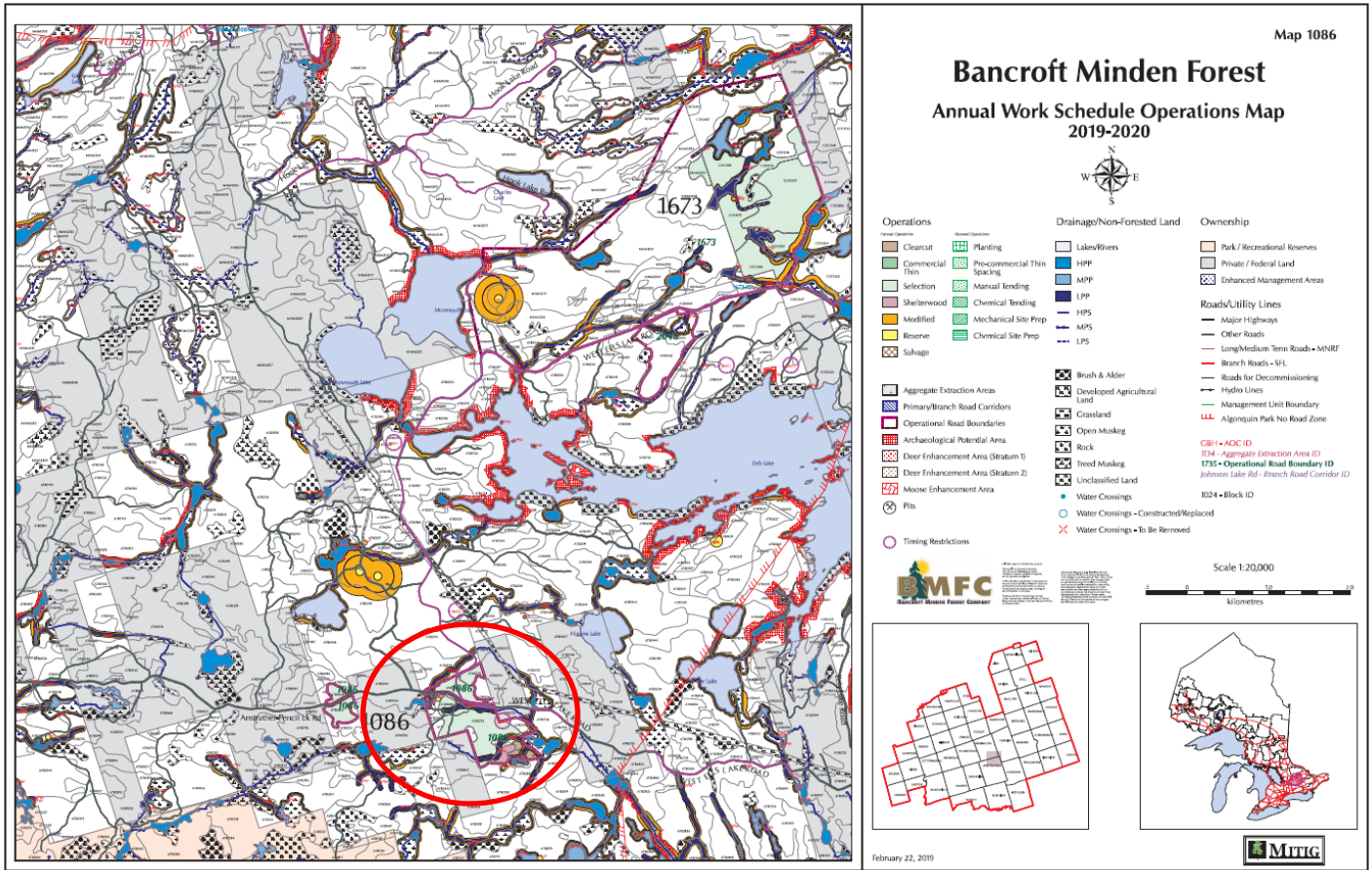


Figure 4. 2019-2020 Bancroft Minden Forest Company Annual Work Schedule Operations Map for block 1086 (MNR 2018b). Light green-shaded area near bottom of the map, within red circle, coincides with some “roadside reconnaissance” areas.

BLOCK #	TOWNSHIP	LICENSEE	JOBBER	Pre-harvest inspection/tree marking direction Complete	Tree Marking Status	Best Guess of Start-up	Carry over from 2018-19 AWS
17	Monteagle/Carlow	H.W. Robinson Haulage	H. Robinson	N/A (salvage)	N/A	ASAP	N
1001	Airy	Algonquin Firewood & Forestry	J. Chartrand	Y	N/A	spring	N
1052	Cardiff	G. Dillabough Forest Products Ltd	Dillabough	Y	Complete	summer	Y
1062	Dungannon	Freymond Logging Co. Ltd.	Freymond	Y	Complete	fall	Y
1066	Mayo	Freymond Logging Co. Ltd.	Young	Y	Complete	spring	Y
1069	Mayo	G.Dillabough Forest Products Ltd	Dillabough	Y	Complete	winter	Y
1074	Cashel	Freymond Logging Co. Ltd.	Freymond	Y	Complete	summer	Y
1078	Cashel	Neilson Lumber Ltd.	Snider	Y	Complete	winter	N
1086	Anstruther	Neilson Lumber Ltd.	Snider	Y	Complete	fall	Y

Figure 5. 2019-2020 Bancroft Minden Forest Company Annual Work Schedule (MNR 2018a; highlight added).

Old-growth Features

1. Tree ages

West Eels

- White birch (16.6cm DBH): 132 years (extrapolated from 6.6cm core with 89 rings) – growth likely suppressed by hemlocks; very shady
- Eastern hemlock (46.3cm DBH): 157 years (extrapolated from 10cm core with 68 rings)
- Eastern hemlock (43.8cm DBH): 137 years (extrapolated from 21.7cm core with 135 rings)
- Eastern hemlock (22.1cm DBH): 90 years

FR74

- Eastern hemlock (65.5cm DBH): 165 years (see photo below)
- Yellow birch (56.5cm DBH): 198 years (extrapolated from 13.1cm core with 90 rings; very difficult to count)

2. Species present

West Eels

Mid-late succession species: eastern hemlock, sugar maple, white cedar, American beech, white pine

Early-succession species: balsam fir, white birch, red maple

FR74

Mid-late succession species: eastern hemlock, sugar maple, yellow birch, American beech, red oak

Early-succession species: white birch

3. Coarse woody debris (*none, uncommon, common, abundant*)

West Eels: uncommon

FR74: uncommon

4. Snags (*none, uncommon, common, abundant*)

West Eels: uncommon

FR74: uncommon, although a few very large dead trees found

5. Super-canopy trees present?

West Eels: Yes

FR74: Not noted

6. Pit and mound topography present? Not noted for either location.

7. Evidence of human disturbance? Yes, many stumps and trails observed in both locations

Wildlife observations: West Eels: bear claw marks observed on an American beech (see photo below).

FR74: Not noted.

Photos

West Eels:



Left: AFER staff core a 157-year-old eastern hemlock (46.3cm DBH); right: a 46cm DBH American beech (deceased). Bear claw marks are visible on the trunk of this snag.

FR74:



Left: second-growth area near forest edge (notice stumps in mid-ground and background); centre: a 61.2cm DBH sugar maple; right: a 165-year-old eastern hemlock (65.5cm DBH).

Forest Designations²

Young

Mature

Old

Old-growth

Notes: Although old-growth trees were found in both locations, recent logging is evident in both areas. Several old-growth trees at FR74 have not been harvested, which puts this forest closer to the “old-growth condition” than West Eels. Multiple designations indicate that some areas of the forest are older than others.

References

- Ancient Forest Exploration & Research (AFER). 2019. [Peterborough Old-Growth Forest Project – Level 1](#). Available from <https://www.inaturalist.org>. Accessed December 6, 2019.
- Ministry of Natural Resources and Forestry (MNRF). 2018a. [Bancroft Minden Forest](#): Annual Work Schedule Text: Text. Appendix 1: Monitoring – Inspection – Reporting. Accessed December 6, 2019.
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- Quinby, P. 2019. Minimum Diameters for Old-growth Trees in Ontario’s Northern Temperate Forests. Forest Landscape Baselines No. 36, Ancient Forest Exploration & Research. Powassan & Peterborough, Ontario. (https://14b54489-f611-4cf7-9e23-d1b121227c63.filesusr.com/ugd/1eacbf_d0fad9641f2a464986ae5d9b7478ed6a.pdf)

Acknowledgements

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Appendix A: Acronyms

AB: black ash

BF: balsam fir

BW: white birch

CE: white cedar

HE: eastern hemlock

LA: larch/tamarack

MH: sugar maple (aka hard maple)

MR: red maple

OR: red oak

PO: poplar species

PR: red pine

PW: white pine

SB: black spruce

SW: white spruce

² Definitions for designations are in progress.