Protected Areas in the Algoma and Northshore Forests

A report prepared to address the requirements of FSC Canada's National Boreal Standard

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Part 1 Introduction and Background

Introduction

The province of Ontario has a well rationalized system in place to identify and protect ecologically important representative areas. The system is consistent with others used around the world. This introduction describes Ontario's approach and puts it into context to support the discussion that follows regarding requirements of the FSC standard (Principle 6.4). The report also discusses in detail the specific parks and protected areas currently in the Algoma and Northshore Forests, along with efforts made to facilitate gap analysis and the filling of those gaps.

Background – The Ecological Rationale for Parks and Protected Areas

According to Langhammer et al. (2007[1]), parks and protected areas make a critical contribution to the overall conservation of biological diversity in parts of the world where permanent habitat loss or conversion is of serious concern. Examples are areas where widespread deforestation is an issue or where particularly species rich or geographically important areas exist (e.g., Important Bird Areas, Key Biodiversity Areas). The Island of Madagascar serves as an illustration; almost 90% of its original forest cover has been converted to farmland or other uses, ~85% of its plants and animals are endemic to the island (found nowhere else), and slash and burn agriculture is encroaching on the remaining forest (Primack 1998[2]). In an effort to conserve its unique complement of biological diversity, the government of Madagascar made a commitment in 2003 to triple the island's protected areas network within 5 years (Dudley et al. 2005[3]).

Globally, there has been a broad commitment to establish parks and protected areas. Dudley et al. (2005) stated that there are now more than 100,000 protected sites covering about 12% of the Earth's land surface, making "protected areas" (of some type) one of the earth's most significant land uses. However, around the world, strict "protection" (the exclusion of extractive uses) is not always a necessary criterion for protected area status. This idea is well illustrated by the six categories of protected areas identified by the World Conservation Union (IUCN) and promoted in the National Boreal FSC Standard (NBS Appendix 4):

Category 1: Strict nature reserve/wilderness area – managed mainly for (a) science or (b) wilderness.

Category II: National Park – managed mainly for ecosystem protection and recreation.

Category III: Natural Monument – managed mainly for conservation of specific features.

Category IV: Habitat/species management area – managed mainly for conservation through management intervention.

[1] Langhammer, F. et al. 2007. Identification and gap analysis of key biodiversity areas: targets for comprehensive protected areas systems. IUCN, Switzerland.
[2] Primack, R. 1998. Essentials of conservation biology. Sinauer Associates, Sunderland, Massachusetts.
[3] Dudley, N., K.J. Molongoy, S. Cohen, S. Stolton, C.V.Barber, and S.B. Gidda. 2005. Towards effective protected area systems. An Action Guide to Implement the Convention on Biological Diversity Program of Work on Protected Areas. Secretariat of the Convention on Biological Diversity, Montreal, Technical Series no. 18, 108 pages.

Category V: Protected landscape/seascape – managed for conservation and recreation.

Category VI. Managed resource protected area – managed for sustainable use of natural ecosystems.

"Use" or "active management" is clearly suggested by Categories IV and VI, but Neave and Neave (2005[4]) concluded that "sustainable use" is actually a primary, secondary or an "acceptable" objective in all but categories Ia and III. This broad view of "protection" is rather widely held; Dudley et al. (2005[5]) noted that "Over the last 40 years, there has been a paradigm shift in the role of protected areas from national parks and reserves [affording strict protection] to a broader conceptual and practical approach including sustainable use areas". The broad protected area classifications of the IUCN have enabled Spain, for example, to claim 24% of its forest is "protected" (under one of the 6 categories), while only ~1% is "strictly protected". According to an MNR document, "protected areas in Europe tend to accommodate farming, grazing, villages and other activities"[6]. In contrast, Canada has taken an exceptionally conservative approach to the official accounting of protected areas, reporting only those in Categories I, II and III (Neave and Neave 2005).

The National Boreal FSC Standard (glossary) explicitly defines a protected area as:

> "An area protected by legislation, regulation, or land-use policy to control human occupancy or activity. Protection can be of many different forms. The IUCN identified six main categories of protected areas."

As written, the FSC definition implies that any of the six IUCN categories would qualify as a "protected area".

Compared with their role in Madagascar, the conservation value of parks and protected areas is not as clear on landscapes where sustainable forest management (SFM) is practiced. Two examples follow. (i) The Canadian Council of Forest Ministers (CCFM), which represents every province and territory, endorses a core commitment to "manage forests in a way that will maintain the biological diversity, productivity, and resilience of these ecosystems"[7]. (ii) Ontario's Crown Forest Sustainability Act (S.O. 1994, c 25), the primary legislation governing forest management in Ontario, includes the conservation of biological diversity as a guiding principle. To facilitate the conservation of biological diversity, OMNR has developed a variety of policies and policy instruments such as the Old Growth Policy, Forest Management Planning Manual, Natural Disturbance Pattern Emulation Guide, the Fish Habitat Guidelines, and species-specific habitat protection guidelines for wildlife such as the bald eagle, osprey, marten, pileated woodpecker, and many others. These guidelines are being updated to reflect the most recent science. These guidelines "control human activity", and thus the Crown forests managed under their direction would fall into the IUCN protected areas Category VI. Within these Crown forests where forest management is regulated there are zones further restricting activity. In these "enhanced management areas", there may be access controls, additional reserve requirements, and other restrictions further regulating human activity.

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[4] Neave, D. and E. Neave. 2005. The web of conservation lands across Canada's Forest. Pp. 15-39 *In*: McAfee, B., and C. Malouin. Conservation lands – integrating conservation and sustainable management in Canada's forests. Natural resources Canada, CFS, Ottawa.

[4] http://nfsc.forest.ca/strategy_e.htm

[5] Dudley, N., K.J. Molongoy, S. Cohen, S. Stolton, C.V.Barber, and S.B. Gidda. 2005. Towards effective protected area systems. An Action Guide to Implement the Convention on Biological Diversity Program of Work on Protected Areas. Secretariat of the Convention on Biological Diversity, Montreal, Technical Series no. 18, 108 pages.

[6] OMNR. 2004. It's in our nature – a shared vision for parks and protected areas legislation. Queen's Printer for Ontario.

[7] Neave, D. and E. Neave. 2005. W eb of conservation lands across Canada's Forest. Pp. 15-39 *In*: McAfee, B., and C. Malouin. Conservation lands – integrating conservation and sustainable management in Canada's forests. Natural resources Canada, CFS, Ottawa.

Some ecologists (e.g., Lindenmeyer and Franklin 2002[8], Neave and Neave 2005, Wiersma et al. 2004[9]) observe that, on many landscapes, most of the forest is likely to be outside of parks and protected areas and the managed forest "matrix" has the more critical role in conserving biological diversity. Wiersma and Nudds (2003[10], 2006[11]) maintain that conservation areas alone are unlikely to capture an appropriate area to assure species persistence, that attributes of the surrounding landscape are of particularly critical importance for large mammals with large home ranges, and that a single fixed percentage target for protected areas across the landscape is inappropriate.

If a key target of the International Convention on Biological Diversity (CBD) is achieved, the distinction between the role of parks and managed forests in conserving biological diversity will be even less evident:

" All protected areas to have effective management in existence by 2012, using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programs, drawing upon existing methodologies and a long-term management plan with active stakeholder involvement." Dudley et al. 2005, page 33

This target for protected areas mirrors closely the requirements for the managed forests of Ontario, as defined by the Class Environmental Assessment for Forestry[12] and the Forest Management Planning Manual[13].

Clearly, the distinction between the role of parks and protected areas and the role of the bulk of the managed landscape in conserving biological diversity has narrowed greatly. Despite this, conservationists appear to agree that it is desirable to embed, within the working forest, a system of parks or protected areas unaffected by development. These areas may act as "benchmarks" or "source populations". In Ontario, this concept is enshrined in the law; the Provincial Parks and Conservation Reserves Act (2006) includes the following objective for parks and conservation reserves:

> "To facilitate scientific research and provide points of reference to support monitoring of ecological change on the broader landscape."

In the National Forest Strategy[14] the CCFM suggests that both (i) sustainable forest management (SFM) and (ii) a system of parks and protected areas are important mechanisms to achieve the conservation of biological diversity. Similarly, parties to the International Convention on Biological Diversity recognize that protected areas, together with conservation, sustainable use, and restoration on the wider landscape, are all essential components of strategies to conserve biological diversity (McAfee and Malouin 2002)[15].

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[8] Lindenmeyer, D., and J. Franklin. 2002.Conserving forest biodiversity – a comprehensive multiscaled approach. Island Press, Washington, D.C.

[9] Wiersma, Y., T. Nudds, and D. Rivard. 2004. Models to distinguish effects of landscape patterns and human population pressures associated with species loss in Canadian national parks. Landscape Ecology 19:773-786.

[10] Wiersma, Y. and T. Nudds. 2003. On the fraction of land needed for protected areas. Chapter 7 IN: Bondrup-Nielsen, S. and N. Munro (editors). Making Ecosystem Based Management Work. Proceedings of the 5th International Conference on Science and Management of Protected Areas. CD-ROM proceedings. Available at: http://www.sampaa.org/PDF/ch7/7.6.pdf.

[11] Wiersma, Y. and T. Nudds. 2006. Conservation targets for viable species assemblages in Canada: are percentage targets appropriate? Biodiversity and Conservation 15:4559-45567.

[12] MNR-71, Declaration Order Regarding MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario, Ministry of the Environment, June 2003.

[13] Forest Management Planning Manual for Ontario's Crown Forests, Ontario Ministry of Natural Resources, September 1996, revised June 2004.

[14] http://nfsc.forest.ca/strategy_e.htm

[15] McAfee, B., and C. Malouin. Conservation lands – integrating conservation and sustainable management in Canada's forests. Natural Resources Canada, CFS, Ottawa.

Parks as Representative Areas

If parks and protected areas are to act as benchmarks, they must be representative of natural conditions on the landscape.

The idea of representation has a long global history. For example, under the Convention on Biological Diversity (CBD), nations (including Canada) have committed to protected areas networks sufficiently large to represent all known species and all ecosystems (Dudley et al. 2005). The "Program of Work" identified by Dudley et al. (2005) to support the CBD stresses that protected areas should be "comprehensive, effectively managed, and ecologically representative". In Ontario, the concept of representation has been a key feature of parks policy for a long time, but it was firmly enshrined in Ontario's Provincial Parks and Conservation Reserves Act (2006, c. 12, s. 1), which explains that the purpose of Ontario's parks and conservation reserves is:

> "To permanently protect a system of provincial parks and conservation reserves that includes ecosystems that are representative of all of Ontario's natural regions, protects provincially significant elements of Ontario's natural and cultural heritage, maintains biodiversity and provides opportunities for compatible, ecologically sustainable recreation."

Achievement of this purpose is used by Ontario as an Indicator of Forest Sustainability and is reported periodically in the State of the Forest Report[16] (indicator 1.1.3; "representation of ecological features by protected areas category").

History of Ontario's Network of Parks

Today, parks and protected areas within Ontario's Crown Lands are the responsibility of the Ministry of Natural Resources which maintains a dedicated branch - Ontario Parks. However, long before there was a Parks Branch, protection of significant features was a cornerstone of the provincial government's approach to parks. For example, Ontario's first provincial park, Algonquin, was established in 1893 in "the largest remaining undeveloped tract in southern Ontario" (OMNR 1992). This was followed by the addition of Rondeau Provincial Park in 1894, and Quetico Provincial Park in 1913. In 1913 the first Provincial Parks Act was passed. By 1945 eight parks had been established (with the addition of Long Point, Presquile, Ipperwash, Lake Superior and Sibley) to achieve a particular combination of recreation and preservation objectives (OMNR 1992). In 1954 a Division of Parks was created in the Department of Lands and Forests (predecessor to the Ministry of Natural Resources) and the Provincial Parks Act was strengthened. Thereafter, the parks system began to expand rapidly and to focus more on protection than on recreation (OMNR 1992).

In 1978, OMNR released its "Provincial Parks Policy" statement, which defined provincial parks and six park types:

- Wilderness parks
- Nature reserves
- Historical parks
- Natural environment parks
- Waterway parks
- Recreation parks

The Provincial Parks and Conservation Reserves Act (section 16) prohibits industrial forest management in all 6 of these park types, except in a portion of Algonquin Park. However, sport fishing, and in some cases baitfish harvesting and hunting are permitted in many parks as a result of the

[16] OMNR. 2007. State of the forest report 2006. OMNR. Queen's Printer for Ontario.

Ontario's Living Legacy (OLL) land use planning exercise (OMNR 1999[17]). The OLL also resulted in designation of "enhanced management areas" (EMAs), each one intended to maintain a specific value or range of values (i.e., natural heritage, fish and wildlife, recreation, remote access, Great Lakes Coastal Areas; see OMNR 1999). MNR does not count these EMAs toward achievement of its protected areas targets, although as noted above, some would probably qualify as protected areas under IUCN categories IV, V and VI. Since the FSC standard (P 6.4) appears to endorse the IUCN categories, some EMAs might qualify as protected areas for FSC purposes.

Major land use planning initiatives in the 1980's, with extensive public consultation, resulted in development of MNR's District Land Use Guidelines; these DLUGs included recommendations for new parks (OMNR 1992). This was followed by the Ontario's Living Legacy Land Use Strategy (OLL) in 1997-1999.

The OLL (OMNR 1999) resulted in the addition of significant area to the protected areas system in the Area of the Undertaking (AOU). The AOU covers an area of ~39 million hectares of lands and waters and represents 45% of Ontario. During that process, recommendations for parks and protected areas were developed principally by three citizens' Round Tables (Great Lakes-St. Lawrence, Boreal East, Boreal West) consisting of 12-14 citizens from diverse backgrounds (OMNR 1999). The Round Tables performed extensive consultation, hearing from more than 15,000 Ontarians.

The proportion of Ontario's land base included in parks and protected areas over time is shown in Table 1. As of July 1, 2008, Ontario's system of parks and protected areas included 330 provincial parks and 294 conservation reserves [18]. The system contains over 9.6 million hectares, which is 9.0% of the province. In a recent announcement [19], the Ontario government made a commitment to permanently protect "at least" an additional 225,000 square kilometers (22.5 million ha) as part of the Far North Planning Initiative. This will increase the total protected area to 32.1 million ha or 30% of the provincial land base. Considering the province's record of conservatively reporting on protected areas, the new protected areas will most likely be equivalent to IUCN categories I, II or III.

During the OLL process, OMNR discussed with the forest industry and the Partnership for Public Lands (a coalition of environmental groups) mechanisms to enhance the Round Table recommendations to better achieve the goals of the OLL. These discussions resulted in the "Forest Accord - a Foundation for Progress[20]". The Accord outlines an agreed upon framework for when and how new parks and protected areas are to be established. One of its commitments was to map 12% of the planning area (excluding the Great Lakes) as parks and protected areas excluding logging, mining, and hydro-electric development, and to go beyond the 12% using a "Room-to-Grow" formula that "shares the benefits of increased [forest] productivity", meaning permanent increases in wood supply. The Accord was formally recognized in the Class Environmental Assessment for Forestry (Declaration Order 48[21]).

Methods of Gap Analysis

a) OMNR Method

OMNR's provincial Parks Policy Statement (1978) listed nine principles to guide the selection of parks and help to prioritize areas: permanence, distinctiveness, representation, variety, accessibility, co-ordination system, system, classification, and zoning. "Representation" was described this way:

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[17] OMNR. 1999. Ontario's living legacy – land use strategy. Queen's Printer for Ontario.
[18] Current status of the parks system based on unpublished Ontario Parks statistics, "*Protected Area Summary July 1, 2008*".
[19] News Release, July 14, 2008, "Protecting Ontario's Northern Boreal Forest", http://www.premier.gov.on.ca/news/Product.asp?ProductID=2353&Lang=EN

[20] Forest Accord - http://www.mnr.gov.on.ca/en/Business/LUEPS/2ColumnSubPage/STEL02_165803.html
[21] MNR-71, Declaration Order Regarding MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario, Ministry of the Environment, June 2003.

”Provincial Parks are established to secure for posterity representative features of Ontario’s natural and cultural heritage. Wherever possible the best representations of our heritage will be included in the park system.”

Park targets and requirements for “representation” were refined by OMNR in the 1990s. Hills site classification system was used to subdivide the province hierarchically into meaningful units (site region, site district). Each park class (above) was assigned targets based on the most relevant of these units. For example, the target for wilderness parks is one wilderness park and complimentary wilderness zone in each of the 11 more northerly site regions where competing land uses do not preclude such parks. The target for natural environment parks and waterway parks is one of each type of park in each of the 71 site districts.

To support the requirement of the policy statement to represent natural and cultural heritage features, OMNR developed 3 separate classification frameworks: (i) biological resources – Life Science Features (ii) geological resources – Earth Science Features, and (iii) cultural resources – Archaeological and Historical Features. The Earth Science framework seeks to represent physical elements of the landscape created by geological processes and distinguished by their stratigraphy (layers) and topography (OMNR 1992). The Life Science framework uses progressively finer units (finer scales) to recognize biophysical patterns or landscapes, site classes, biotic communities, and plants and animals (OMNR 1992). The Cultural Resources Framework recognizes 13 themes for representation (e.g., early post-glacial immigrants, indigenous settlers, the fur trade, and others).

In an effort to identify and provide interim protection to important biological and geological areas for representation in future parks and protected areas, OMNR undertook “Life Science Gap Analyses” in the 1990s. Since all biological diversity has not been catalogued, OMNR chose to use a surrogate to capture the diversity of biological resources – a combination of landforms and ecological associations (Davis 2005[22]). Each site district was assessed for representation of its landform-vegetation complexes. Areas that best met five selection criteria were identified as “Areas of Natural and Scientific Interest” (ANSI; e.g., Crins 1996[23], Bergsma 1998[24]). The five criteria were:

- Representation
- Condition (tenure, infrastructure, values, disturbance)
- Diversity (ecosystems, habitats, species, other features)
- Ecological Functions (hydrological benefits)
- Special Features (species at risk, localized geological features)

OMNR’s minimum target for representation of landform-vegetation associations in a site district is at least 1% or 50 ha, but at the time gaps were initially assessed and ANSIs identified, no assumptions about minimum size were made – all the best sites existing at the time were identified, regardless of size (Crins 1996). ANSIs were an interim designation that would be considered for incorporation into parks and protected areas during the OLL process. The “best” representatives were designated as provincially significant; they were not available for forest harvesting. The best and the rest of the ANSIs were reviewed during the OLL process and, where possible and necessary, rolled into parks or conservation reserves. The flow chart in Figure 1 illustrates how ANSIs were identified.

OMNR has automated the above process of life science representation assessment using a computer application called GapTool and the best available data sets. Crins and Kor (2000[25]) described the

[22] Davis, R. 2005. GapTool user’s guide. OMNR, Peterborough, Ontario.
[23] Crins, B. 1996. Life science gap analysis for site district 4E-3. OMNR report, Central region, Huntsville.
[24] Bergsma, B. 1998. Life science gap analysis for site district 5E-1. OMNR report.
[25] Crins, B. and P. Kor. 2000. Natural Heritage Gap Analysis Methodologies Used by the Ontario Ministry of Natural Resources. Version 2.0. OMNR, lands and Natural Heritage Branch, Peterborough.

OMNR method in detail. Davis et al. (2006[26]) noted that OMNR has used the five criteria described above for more than 30 years. They described representation as "the backbone" of the approach with the other four criteria assisting in identification of the "best" candidates to fill gaps. These selection criteria were also used to identify priority areas for protection during development of District Land Use Guidelines in the 1980s, priorities for red and white pine protection in the 1990s, and in the OLL process as well (Davis et al. 2006).

b) Other methods of gap analysis - global

Dudley et al. (2005) noted that many organizations have developed methods to identify sites of global biodiversity conservation significance, such as:

- Alliance for Zero Extinction – areas of high extinction risk ,
- Birdlife International -Important Bird Areas, and Endemic Bird Areas,
- UK Plantlife Organization - Important Plant Areas in Europe
- Key Biodiversity Areas (tying several systems together)[27],
- RAMSAR - Wetlands of International Importance
- Conservation International – biodiversity hotspots[28]
- World Wildlife Fund – Global 200 Ecoregions

c) Other methods of gap analysis - national

The Nature Conservancy has a detailed system for selecting and agreeing on conservation targets and sites within ecoregions called "Designing a Geography of Hope"[29]. The Wildlife Conservation Society identifies what they believe to be ecologically meaningful conservation areas through their "landscape species strategy[30]". It focuses on the species that need large, ecologically diverse areas and that have significant impacts on the structure and function of natural ecosystems. World Wildlife Fund (WWF Canada) promotes a method that assesses gaps on the basis of the representation of large landforms (the "Area of Representation Tool"). Table 2 compares key attributes of the WWF and OMNR approaches to gap analysis.

[26] Davis, R., L. Chora and W.J. Crins. 2006. GapTool: An analytical tool for ecological monitoring and conservation planning. Parks Research Forum of Ontario, Transboundary Protected Areas, Research and Planning. G. nelson and B. Dempster editors. Available at: http://www.prfo.ca/

27 GÜVEN EKEN et al. 2004. Key biodiversity areas as site conservation targets. BioScience 54(12):1110-1118

[28] http://www.biodiversityhotspots.org/xp/hotspots/caucasus/Pages/conservation.aspx
[29] NatureServe methodology - http://conserveonline.org/2000/11/b/GOH2-v1.pdf
[30] Wildlife Conservation Society Methodology - http://wcslivinglandscapes.com/media/file/Sanderson_et_al_20021.pdf

Figure 1: Process followed by OMNR to identify ANSIs (Crins 1996).

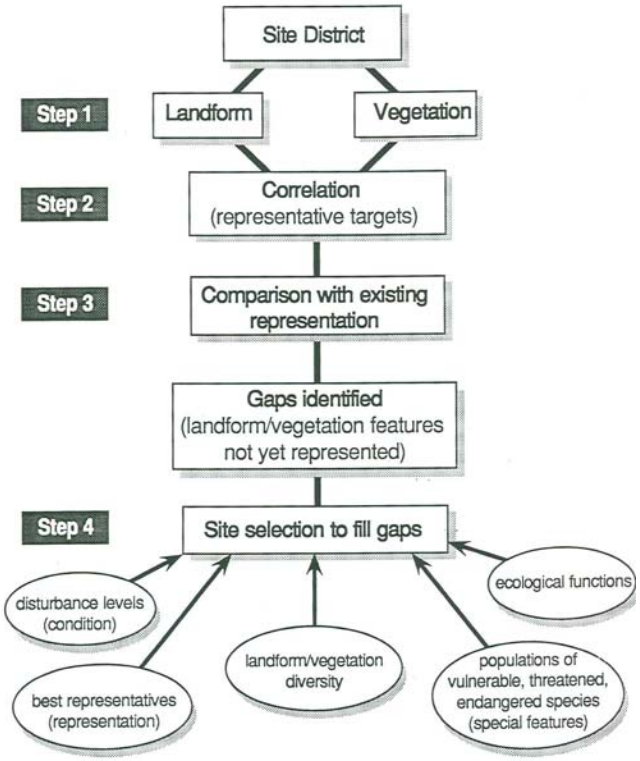


Table 1: Cumulative Regulation of Provincial Parks, Conservation Reserves, and Wilderness Areas in Ontario[31]

Year	Area of PA's (Ha)	Number of PA's	% of Province
1983-1949	1,432,533	8	1.3 %
1950-1959	1,465,846	39	1.4 %
1960-1969	1,703,146	90	1.6 %
1970-1979	4,317,221	124	4.0 %
1980-1989	6,273,256	269	5.8 %
1990-1999	7,164,230	332	6.6 %
2000	7,166,969	347	6.6 %
2001	7,333,366	400	6.8 %
2002	7,577,527	464	7.0 %
2003	8,561,063	558	7.9 %
2004	8,729,667	576	8.1 %
2005	9,227,991	610	8.6 %
2006	9,393,591	632	8.7 %
2007	9,393,591	632	8.7 %
2008	9,395,214	635	8.7 %

Proportional representation of landscape features has been advanced by some groups as the approach of choice for the identification of candidate protected areas (e.g., the WWF Area of Representation Tool). However, this approach was not endorsed by OMNR. Crins (1996, p. 19) explained that it would be "inconsistent with the existing systematic approach to identifying natural heritage areas in Ontario", that selection of a percentage is an arbitrary process, that a fixed percentage is likely inadequate to address all natural heritage features, and that variation across landscape types is unlikely to be captured with a fixed percentage target. Crins (1996) proposed that the condition of the surrounding landscape is an important indicator of "how much [protection] is enough". The recent research of Wiersma and Nudds (2003, 2006) supports those propositions.

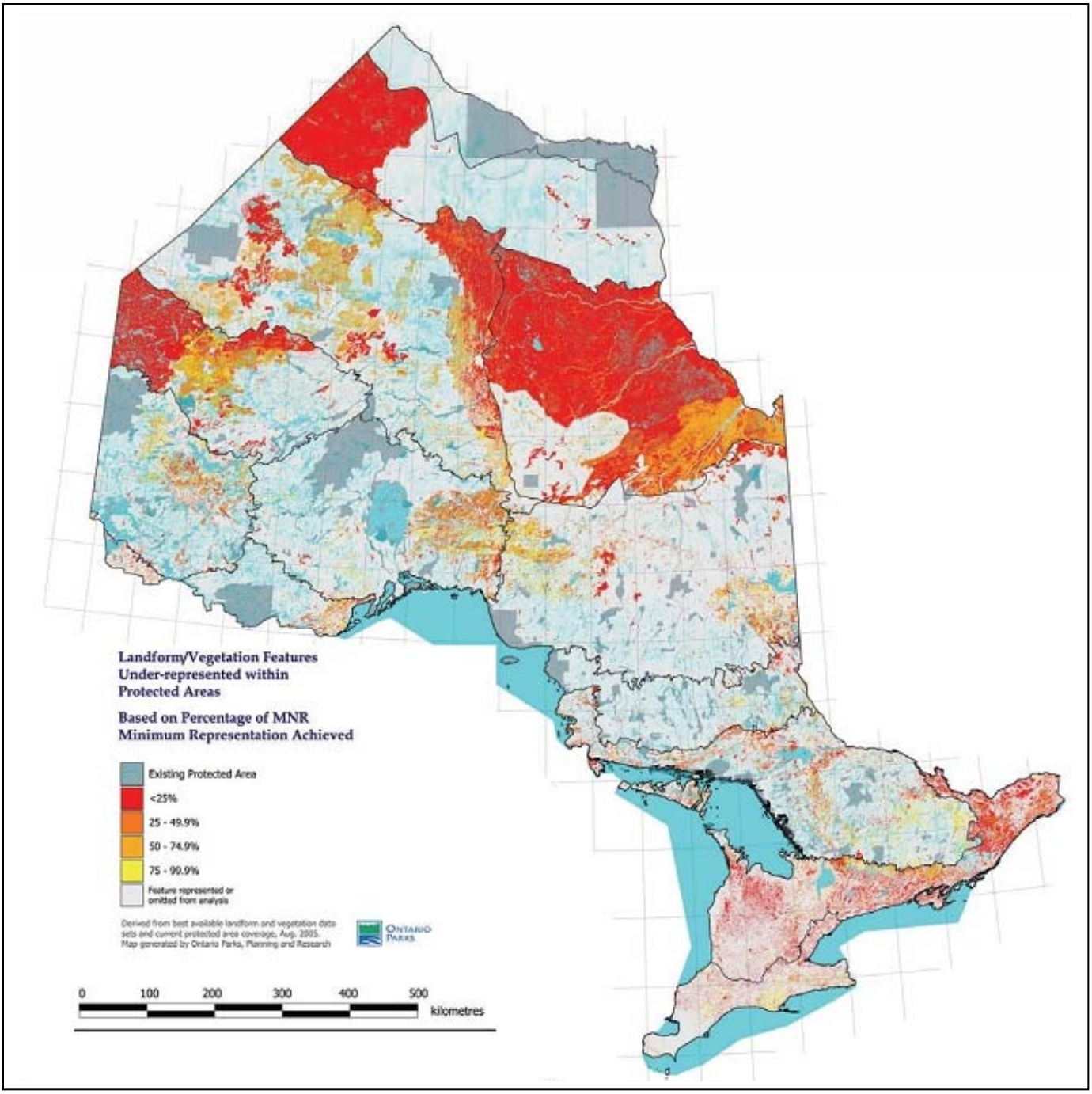
[31] Table 1: Cumulative Regulation of Provincial Parks, Conservation Reserves, and Wilderness Areas based on unpublished Ontario Parks Statistics, *Cumulative Protected Areas Summary July 1, 2008.*

Table 2: Comparison between key attributes of the WWF AOR Tool and OMNR GapTool for Gap Analysis (Davis and McCalden 2004[32], Iacobelli et al. 2006[33])

	WWF AoR Gap Tool	OMNR Gap Tool
Goal	Sustaining key ecological values (processes) and maintaining viable populations of focal species within protected areas.	Represent the full spectrum of natural features and ecosystems using the best examples, if possible.
Assessment Area	WWF Ecodistrict	OMNR Ecodistrict
General Approach	Coarse scale using large landforms (not vegetation) identified in the "Soil Landscapes of Canada" dataset.	Finer scale (more precise mapping) using combinations of 23 smaller landform units (NOEGTs mostly; Quaternary Geology if necessary) and broad vegetation classes (e.g., deciduous, coniferous, mixed, disturbed, open fen, etc.)
Focus	Consistent % representation. Size (62% of score), topographic variation, shoreline forest, road density.	Best examples of undisturbed (by humans) landform-vegetation condition, considering connectivity, & species at risk habitat. Acknowledge that other conservation objectives can be added later.
Area Threshold for "gaps"	Based on equations that generally result in a target of 10% to 14% (or more) of the enduring feature area.	Minimum 1% of the landform-vegetation combination, or 50 ha, whichever is greater.
Scoring of Candidates	Out of 8 points: 50% for size; 12.5% for connectivity; 12.5% for environmental gradients; 12.5% for including shoreline habitat; 12.5% for road density.	None, but an illustration of all potential candidates, and an assessment of which landform-vegetation associations are critical to achieving representation across an ecodistrict. Size is not an objective. Intent is to define an "efficient" system of protected areas with maximum representation and minimum impact on other values and interests.

Results of OMNR's Provincial Gap Analysis

Figure 2, from OMNR's State of the Forest Report 2006 (Chapter 4, p. 142; indicator 1.1.3), illustrates the degree to which OMNR's minimum representation requirements have been met for specific landform-vegetation association combinations (features).



Addressing FSC Requirements for Parks and Protected Areas

Criterion 6.4 of the FSC Principles and Criteria for Forest Stewardship[32] concerns the protection of representative ecosystems.

> 6.4 Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.

FSC Canada's National Boreal Standard[33] contains 7 indicators and associated verifiers, which are used as the basis for certifying forests against criterion 6.4 within Canada's Boreal Forest. National standards provide the regional interpretation of FSC's Principles and Criteria. The indicators contain the performance direction which applicants must meet or to which they must adhere. Verifiers provide a means of assessing whether the requirements of an indicator have been met. Verifiers are not mandatory; they are provided as advice.

> 6.4.1 The applicant completes (or makes use of) a peer-reviewed scientific gap analysis to address the need for protected areas in the eco-region(s) and ecodistrict(s) in which the forest is situated. The applicant uses the gap analysis and elements including representation, connectivity, intactness, age of the forest, rare ecosystems and other HCVF attributes to identify the location and extent of additional protected areas.
>
> 6.4.2 The applicant designs, identifies and contributes candidate protected areas that make a maximum contribution to filling gaps in the protected areas system (per 6.4.1) based on the relative responsibility of the applicant. The applicant's responsibility is determined by:

- The level of representation of enduring features within the forest; and,
- The regional significance of the conservation values (e.g., quality or rarity).

> 6.4.3 The applicant works cooperatively with interested parties (e.g., Environmental-NGO's, Indigenous People) in the analysis of gaps and candidate protected areas.
>
> 6.4.4 Results of the candidate protected area identification process described in indicator 6.4.2 are mapped.
>
> 6.4.5 The applicant has documentation demonstrating support by interested parties (e.g. Environmental NGOs and Indigenous Peoples).

[32] FSC Principles and Criteria for Forest Stewardship, FSC-STD-01-001 (version 4-0) EN, Approved 1993, Amended 1996, 1999, 2002, Forest Stewardship Council, A.C.

[33] Forest Stewardship Council Canada Working Group, National Boreal Standard, Accredited by FSC, August 6, 2004.

6.4.6 Forest operations including harvesting, silviculture and road building are not undertaken in protected areas or candidate protected areas.

6.4.7 The applicant is working within their sphere of influence to move candidate protected areas to full regulated protection as soon as possible.

The attributes identified as important for the identification of potential parks under FSC indicator 6.4.1 have been used by OMNR as well (see Table 2 and the above description of the OMNR approach).

Representative Samples of Existing Ecosystems

The purpose of Ontario's *Parks and Protected Areas Act* is compatible with Criterion 6.4 in the FSC Standard. Both require the protection of representative ecosystems.

> The purpose of this Act is to permanently protect a system of provincial parks and conservation reserves that includes ecosystems that are representative of all of Ontario's natural regions, protects provincially significant elements of Ontario's natural and cultural heritage, maintains biodiversity and provides opportunities for compatible, ecologically sustainable recreation.

As described in the introduction, MNR has put a high priority on the representation of terrestrial life science, aquatic life science, and earth science features with the protected areas system for more that 30 years. Ecological (life science) representation provides the basis for protecting examples of Ontario's life science diversity and most closely resembles the FSC requirement.

A detailed description of the process followed to identify gaps on the Algoma and Northshore Forests, as per criterion 6.4.2, is presented below in Part 2.

PART 2 Rationale and Strategy for Completion of Analysis

There was consensus between the managers of the Algoma and Northshore Forests to utilize the existing GAP analysis information and methodology developed by the Government of Ontario (OMNR). To accomplish this several different workshops were initiated inviting the Ministry of Natural Resources (local, regional, and provincial staff) as well as other interested groups (ENGOs, local citizens, and First Nations) to explore possibilities to fill any GAPs in the MNR system from the individual forests. Potential sites were identified using the OMNR GapTool described above in Part 1and the best available data sets. Using the GapTool results, the group looked at levels of representation in individual ecodistricts and opportunities for filling gaps within those ecological zones. Enduring feature representation was also looked at during these discussions. This resulted in several different options being identified. The feasibility of each option was assessed by looking at the each area in detail and determining if it met the criteria for a candidate protected area. For more detail, refer to Part 4 and Appendix 2.

The process involved the examination of each potential GAP site on the forest that was identified at the workshops to determine its suitability for protection. The results of this analysis by Ecodistrict and Forest were used to identify candidate sites to present to the Ministry of Natural Resources. In addition, where possible the analysis also looked at the incorporation of any adjacent HCVF features. Specific information regarding the results of each individual workshop can be found in Appendix 2.

As part of the process it was necessary to categorize the current representation of parks and protected areas from the forests as well as their relationship to the Ecodistrict. Table 3a and Table 3b list the existing parks and protected areas in each forest. Table 4 summarizes the current representation by Ecodistrict and Forest. Table 5 summarizes the current protected area by Ecodistrict.

The two forests have been active in the development of the parks and protected areas over the past decade. The tables below illustrate the success of over 290,000 hectares in parks and protected areas on the two forests alone. The tables show that the Algoma and Northshore Forests contribute importantly to the 1,173,708 hectares of parks found in the ecodistricts in which they occur.

As such this latest analysis equates to a search for the remaining possible areas that may have been missed in the earlier examinations. Both forests have experienced considerable human intervention in the past through forestry, agriculture, mining and habitation. It is not expected that additional areas will move the template substantially because the systems of parks and protected areas is already well developed. Rather, it should help fill some of the final missing GAP sites and help to contribute to the overall representation in each Ecodistrict.

Table 3a: Existing Parks & Protected Areas (Algoma Forest)

ID #	Name	Type	Total Area (ha)	Forested Area (ha)
C1517	SOUTH MICHIPICOTEN RIVER-SUPERIOR SHORELINE	Conservation Reserve, Regulated	2,203	1,910
C1520	MAGPIE RIVER TERRACES	Conservation Reserve, Regulated	2,073	1,567
C1526	NORTH MONTREAL RIVER MORAINE	Conservation Reserve, Regulated	546	505
C1535	WINDERMERE GOLDIE LAKE	Conservation Reserve, Regulated	400	365
C1763	TIKAMAGANDA LAKE	Conservation Reserve, Regulated	2,939	2,695
C1914	RANGER NORTH	Conservation Reserve, Regulated	6,959	6,067
C245	JOLLINEAU	Conservation Reserve, Regulated	767	723
C246	ECHO RIVER HARDWOODS	Conservation Reserve, Regulated	10,156	8,857
C248	LA VERENDYRE/OGIDAKI	Conservation Reserve, Regulated	1,031	946
C258	THESSALON RIVER DELTA/ROCK LAKE RED OAK	Conservation Reserve, Regulated	293	264
C260	ROSE LAKE DUNE PEATLAND COMPLEX	Conservation Reserve, Regulated	250	135
C262	STUART LAKE WETLAND	Conservation Reserve, Regulated	656	605
C263	GARDEN RIVER FOREST	Conservation Reserve, Regulated	297	273
C281	TILLEY CREEK WEST	Conservation Reserve, Regulated	593	575
C284	WABOS NORTH	Conservation Reserve, Regulated	948	925
C286	WABOS SOUTH	Conservation Reserve, Regulated	575	564
C289	SEARCHMONT SOUTH FOREST	Conservation Reserve, Regulated	621	585

ID #	Name	Type	Total Area (ha)	Forested Area (ha)
C291	GOULAIS RIVER BEACH RIDGES	Conservation Reserve, Regulated	921	484
C294	O'CONNOR	Conservation Reserve, Regulated	890	861
C298	HARMONY FOREST	Conservation Reserve, Regulated	1,003	955
C1519	LAKE SUPERIOR HIGHLANDS	Conservation Reserve, Un-Regulated	61,260	57,007
P1511	NIMOOSH (WATERWAY CLASS)	Provincial Park, Regulated	3,526	3,288
P1768	MICHIPICOTEN	Provincial Park, Regulated	232	199
P1872	BATCHAWANA	Provincial Park, Regulated	15	5
P1877	MONTREAL RIVER	Provincial Park, Regulated	44	40
P253	GOULAIS RIVER (WATERWAY CLASS)	Provincial Park, Regulated	5,042	4,300
P273	ALGOMA HEADWATERS (NATURAL ENVIRONMENT CLASS)	Provincial Park, Regulated	30,283	25,219
P277	AUBINADONG-NUSHATOGAINI RIVERS (WATERWAY CLASS)	Provincial Park, Regulated	3,913	2,171
P278e	PANCAKE BAY (RECREATION CLASS)	Provincial Park, Regulated	1,423	1,226
P282	BATCHAWANA RIVER (WATERWAY CLASS)	Provincial Park, Regulated	2,660	2,378
Totals			142,518	125,691

Source: OMNR Protected Area Boundary and Company Forest Inventory data

Table 3b: Existing Parks & Protected Areas (Northshore Forest)

ID #	Name	Type	Total Area (ha)	Forested Area (ha)
C212	SHAKESPEARE FOREST	Conservation Reserve, Regulated	214	174
C215	GOUGH OUTWASH FOREST	Conservation Reserve, Regulated	399	298
C218	LA CLOCHE RIDGE	Conservation Reserve, Regulated	3,975	2,463
C223	FLAT CREEK OLD PINE	Conservation Reserve, Regulated	433	410
C227	GLENN N. CROMBIE	Conservation Reserve, Regulated	6,900	5,464
C229	BRENNAN HARBOUR	Conservation Reserve, Regulated	221	150
C243	WAGONG LAKE FOREST	Conservation Reserve, Regulated	2,364	1,715
C244	RAWHIDE LAKE	Conservation Reserve,	4,600	3,020

ID #	Name	Type	Total Area (ha)	Forested Area (ha)
		Regulated		
C247	BYRNES LAKE WHITE BIRCH	Conservation Reserve, Regulated	1,557	1,197
C256	BASSWOOD LAKE HEMLOCK	Conservation Reserve, Regulated	103	97
C257	BASSWOOD LAKE	Conservation Reserve, Regulated	147	146
C260	ROSE LAKE DUNE PEATLAND COMPLEX	Conservation Reserve, Regulated	20	7
C266	GALBRAITH PEATLAND	Conservation Reserve, Regulated	120	79
C371	OUR COLLEAGUES	Conservation Reserve, Regulated	91	89
P187	KILLARNEY LAKELANDS & HEADWATERS (NATURAL ENVIRONMENT CLASS)	Provincial Park, Regulated	5,492	3,351
P1873	AUBREY FALLS	Provincial Park, Regulated	4,817	3,494
P1876	MISSISSAGI DELTA PROVINCIAL NATURE RESERVE	Provincial Park, Regulated	921	586
P191e	MISSISSAGI (NATURAL ENVIRONMENT CLASS)	Provincial Park, Regulated	8,271	6,573
P192	SPANISH RIVER (WATERWAY CLASS)	Provincial Park, Regulated	990	735
P2017	CHUTES	Provincial Park, Regulated	109	61
P221	MATINENDA (NATURAL ENVIRONMENT CLASS)	Provincial Park, Regulated	28,545	19,277
P228	RIVER AUX SABLES (WATERWAY CLASS)	Provincial Park, Regulated	2,261	1,842
P238e	MISSISSAGI RIVER (WATERWAY CLASS)	Provincial Park, Regulated	44,210	29,533
P242e	LA CLOCHE	Provincial Park, Regulated	4,687	2,813
P261	LITTLE WHITE RIVER (WATERWAY CLASS)	Provincial Park, Regulated	12,680	8,694
P265	BLIND RIVER (WATERWAY CLASS)	Provincial Park, Regulated	5,362	3,298
P269	NORTH CHANNEL INSHORE (WATERWAY CLASS)	Provincial Park, Regulated	3,719	2,939
P273	ALGOMA HEADWATERS (NATURAL ENVIRONMENT CLASS)	Provincial Park, Regulated	272	201
P274	WENEBEGON RIVER (WATERWAY CLASS)	Provincial Park, Regulated	1,724	1,417
P277	AUBINADONG-NUSHATOGAINI RIVERS (WATERWAY CLASS)	Provincial Park, Regulated	973	849
P319	AUBINADONG RIVER	Provincial Park, Regulated	2,675	2,178
P331e	KILLARNEY (WILDERNESS CLASS)	Provincial Park, Regulated	13	11
Totals			148,862	103,162

ID #	Name	Type	Total Area (ha)	Forested Area (ha)

Source: OMNR Protected Area Boundary and Company Forest Inventory data

Table 4: Current Protected Area by Eco District

Ecodistrict	Area (ha) all ownerships				Current Protected Area (ha)			
	Algoma Forest	Northshore Forest	Sum of two Management Units	Ecodistrict Total	Algoma Forest*	Northshore Forest	Sum of two Management Units	Ecodistrict Total
3E-4	198,225	-	198,225	639,741	66,988	-	66,988	250,343
3E-5	211,678	-	211,678	4,053,707	2,473	-	2,473	277,705
4E-1	291,352	-	291,352	473,923	3,718	-	3,718	196,880
4E-3	274,030	697,901	971,932	2,260,884	52,627	86,833	139,460	300,868
5E-1	137,614	257,591	395,204	394,923	754	40,380	41,134	42,962
5E-13	412,164	-	412,164	416,785	15,958	-	15,958	26,690
5E-3	-	41,070	41,070	80,132	-	9,781	9,781	46,415
5E-4	-	253,885	253,885	726,572	-	11,868	11,868	30,450
6E-17	36,684	-	36,684	350,983	-	-	-	1,395
Totals	1,561,747	1,250,447	2,812,194	9,397,650	142,518	148,862	291,380	1,173,708

* includes un-regulated protected area(s)

Source: OMNR Eco-Site and Protected Area Boundary data

Table 5: Percent of Crown Forest Currently Protected

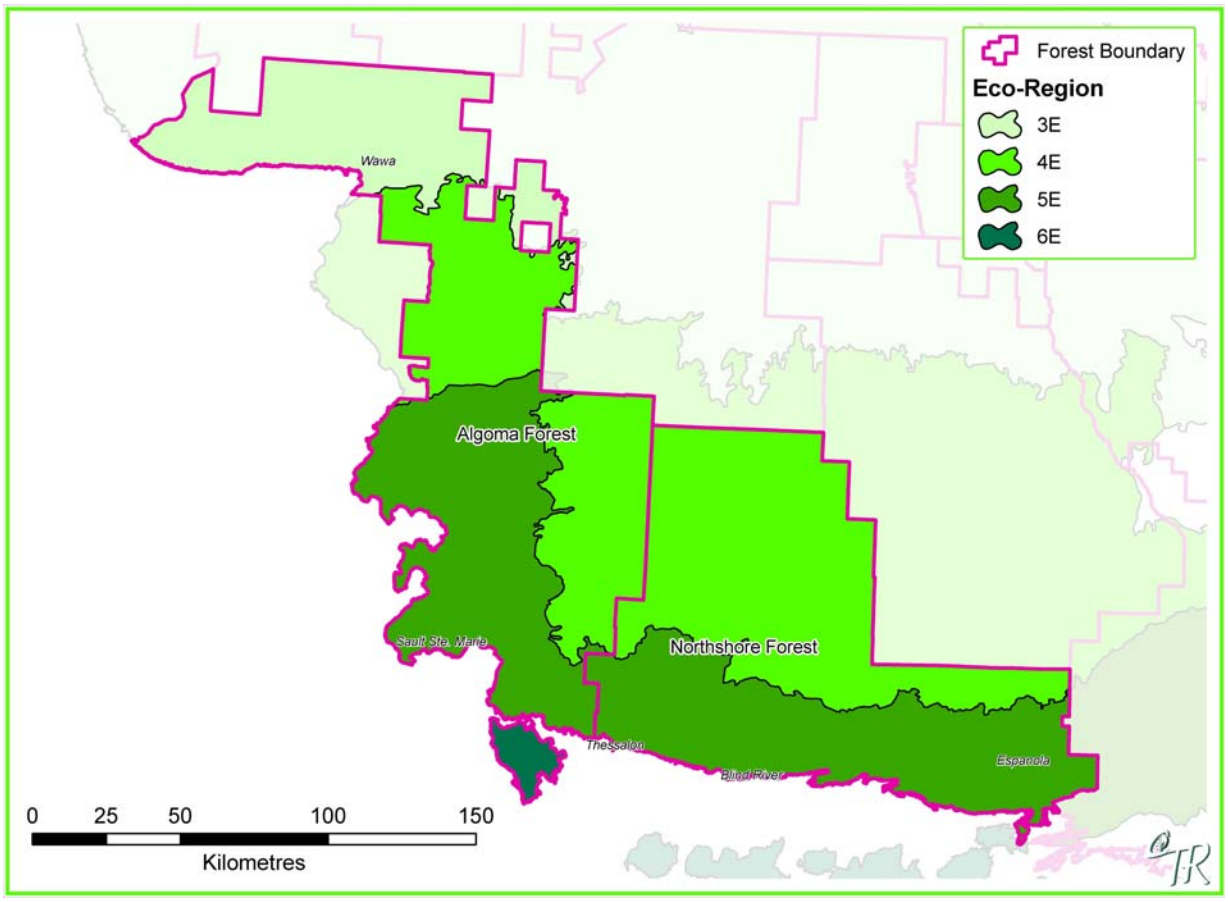
Ecodistrict (ED)	Overall Area Protected in ED	MUs Contribution to Protection of ED Total	Proportion of MU Crown Area in ED	Proportion of MU Crown Area in Protection	Description of Access	Other Considerations
3E-4	39.1%	10.5%	21.9%	47.7%	Very few roads in Protected Areas (~0.05 km road per square km)	Crown portion of zone is currently well-protected with Pukaskwa National Park and Lake Superior Highlands CR.
3E-5	6.9%	0.1%	1.6%	3.7%	Protected Areas well roaded (~0.7 km road per square km)	Crown area is fragmented by many small to medium-sized parcels of land. Total crown area is ~65 sq. km.
4E-1	41.5%	0.8%	45.8%	1.7%	Very few roads in Protected Areas (~0.1 km road per square km)	Zone includes LSP which is surrounded by Algoma Forest on three sides
4E-3	13.3%	6.2%	42.5%	14.5%	Protected Areas well roaded (~0.6 km road per square km)	Current protection is sufficient
5E-1	10.9%	10.4%	48.5%	21.5%	Protected Areas well roaded (~0.6 km road per square km)	Current protection is sufficient.
5E-13	6.4%	3.8%	56.5%	6.8%	Protected Areas well roaded (~0.9 km road per square km)	
5E-3	57.9%	12.2%	21.3%	57.4%	Protected Areas heavily roaded (~1 km road per square km)	Current protection is sufficient
5E-4	4.2%	1.6%	26.2%	6.2%	Protected Areas well roaded (~0.6 km road per square km)	
6E-17	0.4%	0.0%	0.5%	0.0%	Zone is heavily accessed (~1.2 km road per square km).	Crown portion is very small on MUs (~17 sq. km) and highly fragmented (largest parcel of land = 202 ha).

Source: Company Forest Inventory and OMNR Ownership data

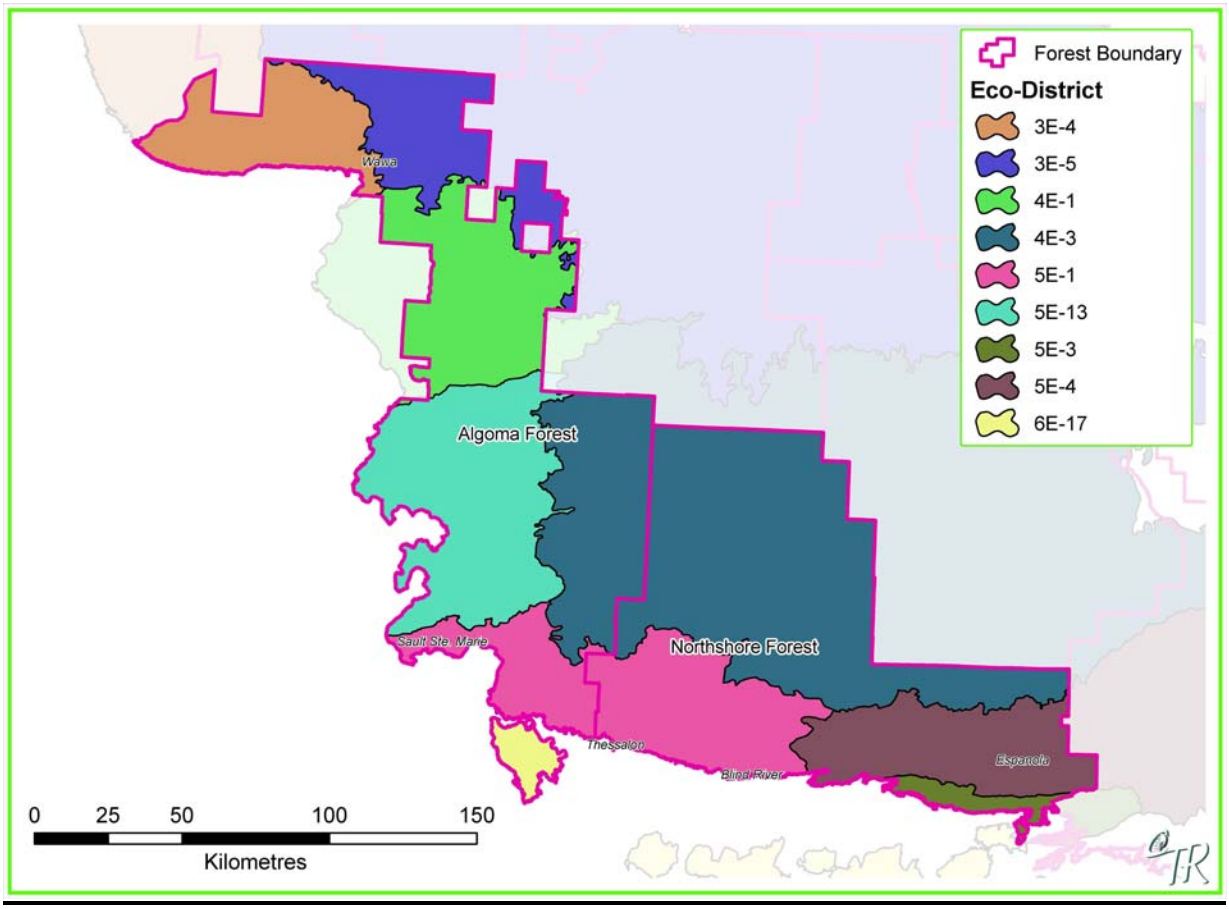
PART 3Gap Analysis and Detailed Look at Potential Candidates

The OMNR defines ecological units on the basis of bedrock, climate (temperature, precipitation), physiography (soils, slope, aspect) and corresponding vegetation, creating an Ecological Land Classification (ELC) system. These ecological units are based on Angus Hills' Site Regions and Districts, which were first adopted in the 1950's. Ontario's ELC system presently is composed of three upper level nested ecological units: ecozones, ecoregions and ecodistricts.

Ecoregions (formerly referred to as Site Regions) are ecological subdivisions of the land, based upon a combination of climate, physiography, and biological productivity. The Site Regions of Ontario were originally developed and mapped by Angus Hills (Hills 1961). The boundaries of each of the two forests looked at in this GAP analysis overlap one or more of the following ecoregions: 3E, 4E, 5E and 6E. Figure 3 shows the boundaries of the Algoma and Northshore Forests in relation to these four ecoregions.



Ecodistricts are defined by a set of physiographic characteristics including bedrock and or surficial geological features and topography. These features play a major role in determining the vegetation of an Ecodistrict in terms of successional pathways, patterns of species association and habitats. In addition to physiography, local climatic patterns, such as lake effect snowfall may also characterize ecodistricts. Figure 4 shows the ecodistricts that fall within the boundaries of the Algoma and Northshore Forests.



The following text provides a general description of each ecoregion and ecodistrict as well as the GapTool results and candidate area identified to increase representation in each ecodistrict. Candidate areas were accepted or rejected through an iterative process of looking at intactness, current and future forest management plans, past disturbance, stand history, artificial regeneration efforts, road density, non-timber values, and ecological integrity.

Ecoregion 3E

Ecoregion 3E, which is part of the Ontario Shield Ecozone, can be divided into 2 areas of relatively equal size. In the northeast, the Clay Belt is a glacial lake formation of deep, fine textured soils, generally poorly drained and overlain with varying depths of organic matter (OMNR 2003). The remainder of the ecoregion (which overlaps with the two forests) is characterized by acidic, coarse-textured podzols, and has more variable, steep terrain with rock outcrops that have little or no soil scattered amongst areas of deeper, well drained soils (OMNR 2003b). The climate in this ecoregion is generally classified as humid, cool and continental, with short, warm summers and long, cold, snowy winters (Chapman and Thomas 1968).

Ecoregion 3E is dominated by black spruce, white spruce, jack pine, balsam fir, trembling aspen and white birch. White pine and red pine also form a minor component of the forests in Ecoregion 3E and are most often found growing together in small, isolated concentrations.

Ecodistrict 3E4

Ecodistrict 3E-4, located in the northwest section of the Algoma, consists of white birch dominated forest on shallow soils. The frequent rock outcrops and rugged terrain of the area makes forestry practices difficult and costly. The majority of protected area in the ecodistrict is within the regulated Pukaskwa National Park and the un-regulated Lake Superior Highlands Conservation Reserve (CR). Both areas are completely within this ecodistrict.

This ecodistrict has undergone extensive mining claim activity in the recent past due to the high prosperity in the mining industry, and recent industrial diamond finds in this ecodistrict. Also, gold deposits are known and claimed here with one large gold mine currently working one of these deposits.

Initial MNR GapTool Results

This ecodistrict still contains some gaps. Lake Superior Highlands Conservation Reserve is a larger, unregulated protected area that will exist in this area but the final configuration is still being sorted out as part of the Michipicoten First Nation land claim settlement.

Candidate Areas to Fill MNR Gaps

Two areas were considered as having potential to fill OMNR life science representation gaps in Ecodistrict 3E-4. These were the unregulated but approved Lake Superior Highlands Conservation Reserve (C1519) and an area called Block 1 – Expansion of the Conservation Reserve at the East Pukaskwa River. Both of these areas are on the Algoma Forest.

Algoma Analysis

Lake Superior Highlands Conservation Reserve:
This 61,260 hectare area has been identified as a candidate area for protection. Although the Lake Superior Highlands CR is unregulated, Clergue Forest Management is supportive of maintaining the extent of the current protected area in terms of size (total area), and has adopted the current boundary location into the forest management planning process. Unresolved mining claims within the current CR boundary, and a recent aboriginal land claim settlement agreement to adjust a portion of the eastern boundary of CR to further protect the Lake Superior shoreline has resulted in the MNR working with all interested parties to adjust the boundary location to meet everyone's interests. Clergue Forest Management is making best attempts to ensure the revised boundary will encompass as much area possible of under-represented landform-vegetation associations. The total protected area is expected to remain the same as an area neutral boundary adjustment is being worked on.

Once regulated this conservation area will significantly increase representation in 3E-4.

Block 1 - Expansion of Conservation Reserve at East Pukaskwa River:
This area was originally proposed during discussions with workshop participants. This area may no longer be feasible as a suitable candidate as it has been since identified as part of the mining disentanglement exercise for the Lake Superior Highlands Conservation Reserve.

Results of Gap Analysis

Table 6a MNR GapTool Results for Ecodistrict 3E4

Candidate Area	Description	Proposed
C1519	Contains 20 critical[1] landform/vegetation (L/V) combinations, 4 of which meet or exceed minimum thresholds[2]. This is a large protected area, at least as designed in the OLL Land Use Strategy, and as such contains 32 other L/V combinations that exceed 50 ha in extent.	Yes
Block 1	Contains 5 critical landform/vegetation combinations, over and above those contained within other protected areas within the Ecodistrict and those contained within C1519, 1 of which meets or exceeds the minimum threshold. 5 other L/V combinations exceed 50 ha in extent.	No
Initial Critical L/V Representation		52.1%
Resulting Critical L/V Representation		56.2%
% Change in Landform/Vegetation (L/V) Representation		4.1%

[1] Critical landform/vegetation combination refers to a landform/vegetation combination contained within an existing or proposed protected area that, if removed from the Ecodistrict, would take that L/V combination below the minimum threshold.

[2] Minimum threshold refers to either 50 ha or 1% of the spatial extent of the L/V combination within the Ecodistrict, whichever is greater. In cases where an L/V combination occupies less than 50 ha within the entire Ecodistrict, the minimum threshold is equal to the area occupied by that L/V combination in the Ecodistrict.

Ecodistrict 3E-5

The Algoma Forest portion of Ecodistrict 3E-5 is approximately five percent of the gross area for the zone. The portions of this ecodistrict on the crown portion of the Algoma Forest are highly fragmented due to private/patent land, the management unit boundary, and the ecodistrict boundary.

Initial MNR GapTool Results

There are very few gaps on the crown portions of the Algoma Forest in 3E-5.

Candidate Areas to Fill MNR Gaps

Potential areas for protection were not proposed within this ecodistrict due to the relatively small portion of ecodistrict land base available on the forest, and the relatively small amount of under-represented areas on the Crown land portion.

Results of Gap Analysis

N/A

<u>Ecoregion 4E</u>

Ecoregion 4E, which is also part of the Ontario Shield Ecozone, is characterized by rock outcrops and coarse textured podzols, with gleysols and brunisols also common (Crins et. al. 2008). The terrain is more broken than in Ecoregion 3E, with abundant north-south flowing river systems (OMNR 2003). The climate in this ecoregion is warmer than that of Ecoregion 3E with comparatively higher mean annual summer and winter temperatures and a longer growing season (Chapman and Thomas 1968). Precipitation across Ecoregion 4E is similar to Ecoregion 3E, except at the eastern shore of Lake Superior where it increases slightly (OMNR 2003).

Ecoregion 4E is dominated by tree species that are transitional in nature between the boreal forest region in Ecoregion 3E to the north and Great Lakes St. Lawrence forest region to the south. Tree species such as white pine, red pine, sugar maple, red maple, red oak, and yellow birch are more abundant in this ecoregion (Rowe 1972). Boreal species such as black spruce, white spruce, jack pine, balsam fir, trembling aspen and white birch are also common as the transition between the two major forest regions is diffuse.

Ecodistrict 4E-1

Ecodistrict 4E-1 is mostly within the Algoma Forest and regulated Lake Superior Provincial Park. A very small portion of the ecodistrict is located in the Superior Forest immediately east of the Algoma Forest.

Initial MNR GapTool Results

There are very few landform-vegetation (L-V) association gaps within this ecodistrict due to the large area of parks currently situated within the zone. Small areas of gaps do occur, however, along the outer-edge of the district and are justified by their L-V type and their geographic location near the edge of the zone.

Candidate Areas to Fill MNR Gaps

Lake Superior Park, surrounded on three sides by the Algoma Forest and fourth by Lake Superior, should be considered as part of the Algoma Forest contribution to protection. The park is a 152,000 hectare natural environment park, located adjacent to the Algoma Forest, and is not used by any other forest for protection benefit purposes.

Algoma Analysis

Block 5 - West of Shoals Provincial Park:
This area overlaps with an MNR gap and is formerly part of an ANSI. It is located adjacent to the Jack Pine River and is predominantly black spruce dominated upland with one large concentration of white birch. A marten core area, approximately 2,000 ha, in size is being established adjacent to this area

Results of Gap Analysis

Table 6b MNR GapTool Results for Ecodistrict 4E1

Candidate Area	Description	Proposed
Block 5	Contains 4 critical landform/vegetation combinations, 0 of which meet or exceed minimum thresholds. No other L/V combinations exceed 50 ha in extent.	Yes
Initial Critical L/V Representation		58.5%
Resulting Critical L/V Representation		60.0%
% Change in Landform/Vegetation (L/V) Representation		+1.5%

Ecodistrict 4E-3

4E-3 consists of gently rolling plains of stony sand till over bedrock with flats and ridges of water-laid sand of granitic origin. Soils on the rock knob upland areas range from dry to wet depending on depth of soil and degree of slope. There has been forest management activity throughout the area over the past 50 years, which included harvest, renewal and access.

Initial MNR GapTool Results

Currently there is good representation across the ecodistrict with a total area of 13.3% currently in protected areas. The ecodistrict is present in both of the forests in this analysis.

There are few gaps as there is are substantial protected areas currently in place as a result of previous analyses and public consultation.

Candidate Areas to Fill MNR Gaps

Algoma Analysis

During the gap identification exercise, the Algoma Forest portion of Ecodistrict 4E-3 was not selected for candidate areas due to the high proportion of protection already and because of the forest management activities undertaken in the recent and not so distant past. Therefore no suitable candidates were identified

Northshore Analysis

As described below, there were three possible candidate areas identified by MNR which were rejected due to unsuitability in the initial phase. Further research confirms that the sites have seen recent disturbance and are not suitable for further protection.

Kindiogami Road – Piche Township:
This area has been previously harvested or salvaged after the Mississaugi burn. There is a primary road (Kindiogami) and numerous tertiary roads through the site. It was therefore removed as a suitable candidate.

Spike Lake Road – Timbrell Renwick Townships:
This area has seen extensive harvest in the 1970's and 80's both as a clearcut and as stripcuts. The current stands are in the 10-30 year range and there are trails and tertiary roads in the area. It was therefore removed as a suitable candidate.

Aubinadong – Renwick Twp:
Harvested in the 1990's under a partial harvest system with cedar and some intolerant hardwoods remaining scattered in the regeneration. There is a secondary road adjacent and tertiary roads in the area. It was therefore removed as a suitable candidate

Candidate Areas to Fill MNR Gaps

Currently there is good representation across the Ecodistrict.

Results of Gap Analysis

N/A

<u>Ecoregion 5E</u>

Ecoregion 5E, which is part of the Ontario Shield Ecozone, consists of lowland areas of water-laid materials frequently broken by bedrock outcrops and upland areas of rolling bedrock covered with gravel to silty sand. The ecoregion is underlain by massive, crystalline, acidic, Archean bedrock that forms broad, sloping uplands and lowlands. Strongly glaciated, it is characterized by ridged to hummocky rock outcrops covered with discontinuous acidic morainal tills, and significant areas of coarse, fluvioglacial, and lacustrine deposits. The climate in this ecoregion is strongly influenced by Lake Superior and Lake Huron.

A combination of intolerant and tolerant hardwoods (yellow and white birch, hard and red maple, red oak, poplar and white ash) and conifers (red, white and jack pine, black and white spruce, larch, cedar and hemlock) which are common to the Great Lakes St.-Lawrence forest grow throughout this region.

Ecodistrict 5E-1

5E-1 is a lowland area with pockets of lake-laid clay, silt and sand associated with thinly covered bedrock, eskers and morainic materials. Coarse sand and gravel are of an acid igneous origin while much of the bedrock is low-base, with large areas of acid igneous and metamorphic rocks.

Initial MNR GapTool Results

This ecodistrict is located at the south end of the mainland portion of the Algoma Forest and covers a portion of the Northshore Forest. The entire ecodistrict is greater than fifty percent private/patent land and the Algoma Forest contributes only 16,000 hectares of crown land of the total 190,000 hectares of crown land. Due to the significant amount of private land and the fragmented portions of crown land it is difficult to identify candidate areas for protection.

Ecodistrict 5E-1 contains the highest proportion of under-representation on crown land than any of the seven ecodistricts. For this reason Clergue Forest Management felt it was important to identify a candidate area for protection that could capture several significant Landform-Vegetation associations.

There are several current conservation reserves and there is high human disturbance on the crown land which is interspersed among private land. Many of the current stands are a result of aforestation of old farmlands.

Candidate Areas to Fill MNR Gaps

Algoma Analysis

Bass Lake:
This area, located directly adjacent to the Stuart Lake Wetland Conservation Reserve, is predominantly tolerant hardwoods with some small areas of hemlock. It has been heavily harvested commercially and for fuelwood. In addition, a significant amount of stand improvement work for yellow birch hardwood release has also been undertaken within the proposed area.

Northshore Analysis
Red Rock Lake – Wells Township:
This area is mixed with private land and has had recent harvest and more area is scheduled to be harvested in the current forest management plan. It was therefore removed as a suitable candidate.

Results of Gap Analysis

Table 6c MNR GapTool Results for Ecodistrict 5E1

Candidate Area	Description	Proposed
Block 6	Contains 10 critical landform/vegetation combinations, 1 of	Yes

	which meet or exceeds minimum thresholds. 2 other L/V combinations exceed 50 ha in extent.	
Initial Critical L/V Representation		28.7%
Resulting Critical L/V Representation		29.3%
% Change in Landform/Vegetation (L/V) Representation		+0.6%

Ecodistrict 5E-3

5E-3, The La Cloche Site District, is a steeply rolling area of acid igneous rocks with small areas of clay and silt ranging from high to low lime content, with flats of acid granite sands.

Initial MNR GapTool Results

Very good representation with well over 50% in protected area. As a result there are virtually no gaps in this Ecodistrict.

Candidate Areas to Fill MNR Gaps

Currently there is good representation across the Ecodistrict.

Results of Gap Analysis

N/A

Ecodistrict 5E-4

5E-4, the Sudbury Site District, has moderate to small-sized pockets of water-laid silt and sand, gravel plains and bedrock outcrops shallowly covered by stony granitic sand and stone free silt, underlain by low-base metamorphic and acid igneous rock.

Initial MNR GapTool Results

There are quite a few gaps, however the majority are located on private lands tenure or are small parcels surrounded by private lands. Mining activity is also prevalent as it overlaps the Sudbury basin.

Candidate Areas to Fill MNR Gaps

Northshore Analysis

Block 2 - Cameron Creek – Sauble River – Tennyson Township:
The area is surrounded by high disturbance including harvest, renewal, hydro development and private land. There is an area of approximately 1000 hectares that could function as a conservation reserve.

Block 3 - East Whiskey Lake:
There is a large conservation reserve established to the west known as the Crombie Conservation Reserve. It terminates at the lake boundary as there is a lodge, major access road, cottages and private land adjacent to the lake. There is however a small GAP area along the shore that could be considered as and addition to the Crombie Reserve. The area is shown on Map 5 as Glen N. Crombie Addition and is approximately 450 hectares in size.

Kecil Lake – Victoria Township:
This block is small and in a highly disturbed area along the highway 17 corridor. There is past harvest in the area and several tertiary roads running through the block. Cottaging nearby has also affected the area through fuelwood harvesting. It was therefore removed as a suitable candidate.

Hannah Lake – Truman Township:
This area has both private and crown tenure and has seen considerable disturbance from previous harvesting. The Primary road provides access to cottages in the area. It was therefore removed as a suitable candidate.

Results of Gap Analysis

Table 6d MNR GapTool Results for Ecodistrict 5E4

Candidate Area	Description	Proposed
Block 2	Contains 26 critical landform/vegetation combinations, 0 of which meet or exceeds minimum thresholds. 2 other L/V combinations exceed 50 ha in extent.	Yes
Block 3	Contains 8 critical landform/vegetation combinations, 0 of which meet or exceeds minimum thresholds. 0 other L/V combinations exceed 50 ha in extent.	Yes
Initial Critical L/V Representation		15.9%
Resulting Critical L/V Representation		17.0%
% Change in Landform/Vegetation (L/V) Representation		+1.1%

Ecodistrict 5E-13

Formerly Site District 4E-2, this ecodistrict is located entirely in the Algoma Forest. It is south of the Montreal River along Lake Superior and just north of Sault Ste. Marie.

Initial MNR GapTool Results

During the OMNR "Lands for Life" initiative considerable effort was undertaken to identify and protect as many land cover-vegetation association gaps possible. The re-classification of this zone to Site Region 5E and an adjustment of boundary lines have resulted in 'new' gaps within this zone. Many of the gaps are situated on private/patent land. Currently, 15,958 hectares (6.8% of the crown forest) is already protected in regulated areas.

There are several current conservation reserves and there is high human disturbance on the crown land which is interspersed among private land. Many of the current stands are a result of aforestation of old farmlands.

Candidate Areas to Fill MNR Gaps

Algoma Analysis

Block 4 - Gapp Township:
One area has been identified on the Algoma Forest that will provide a 'best case' scenario to protect as many land cover-vegetation associations requiring protection in one parcel of land. This area, located in Gapp Township south of Mekatina Road, is dominated by intolerant hardwood and boreal mixedwood forest types. It has seen significant harvesting in the distant past and the mature forests present are typical of the extensive silviculture that was undertaken.

Results of Gap Analysis

Table 6e MNR GapTool Results for Ecodistrict 5E13

Candidate Area	Description	Proposed
Block 4	Contains 18 critical landform/vegetation combinations, 8 of which meet or exceeds minimum thresholds. 2 other L/V combinations exceed 50 ha in extent.	Yes
Initial Critical L/V Representation		18.4%

Resulting Critical L/V Representation	22.0%
% Change in Landform/Vegetation (L/V) Representation	+3.8%

Ecoregion 6E

Ecoregion 6E extends southward from a line connecting Lake Huron in the west to the Ottawa River in the east. The underlying bedrock is primarily dolostone and limestone. Many areas along the northern fringe of this ecoregion are characterized by extensive bare bedrock plains. The remainder of the ecoregion is draped with thick deposits of glacial and post-glacial sediments in the form of massive moraines (Oak Ridges) and broad till sheets (OMNR 2007). The climate in this ecoregion is strongly affected by the Great Lakes with prevailing winds crossing these lake basins result in generally high precipitation.

The ecoregion also falls within the Great-Lakes St. Lawrence Forest Region, with a greater diversity of southern species than the Georgian Bay Ecoregion. Currently, 57% of the ecoregion exists as agricultural land, with deciduous and mixed forests covering a majority of the remaining natural landscape (OMNR 2007).

Ecodistrict 6E-17

Ecodistrict 6E-17 within the Algoma Forest is situated entirely on St. Joseph's Island. The island is almost entirely private land with many small crown parcels dispersed across it. Total crown land on the island is seventeen square kilometers (~5% of the total island area). These crown parcels are widely dispersed with the largest being only approximately two square kilometers in size.

Initial MNR GapTool Results

There are no significant gaps within the Algoma Forest.

Candidate Areas to Fill MNR Gaps

Only a small portion of this ecodistrict is located within the Algoma Forest. Due to the size and distribution of Crown area there is little opportunity to establish candidate protected areas on St. Joseph's Island.

Results of Gap Analysis

N/A

PART 4 – Public Involvement in the GAP Analysis for the Forests

Several different workshops were initiated inviting the Ministry of Natural Resources (local, regional, and provincial staff) as well as other interested groups (ENGOs, local citizens, and First Nations) to explore possibilities to fill any GAPs in the MNR system from the individual forests.

The first workshop was held on April 9, 2008 in Sault Ste. Marie, Ontario. Participants included representatives from Local Citizens Committees (Blind River, Sault Ste. Marie), ENGOs (The Nature Conservancy, World Wildlife Fund), OMNR Head Office, OMNR Regional Office, OMNR District Office, local forest industry and Sustainable Forest Licence companies (Clergue FMI, Northshore FI). Representatives from First Nations (Northshore Tribal Council) and the Wawa Local Citizens Committee were also invited but were unable to attend.

During this one day meeting, the two forests were quantified in terms of their current level of representation under both the OMNR GapTool and WWF Enduring Features approach to gap analysis. In addition, the Nature Conservancy also provided an overview of its approach to protection. This led to some discussion and the identification of some specific focus areas for moving forward at well as a number of other items that needed to be considered in moving forward. In addition, a number of data issues were also identified that needed to be addressed in order to better quantify the results of the two gap analysis tools. As a result, a number of data sets were to be updated and provided to OMNR and WWF. Upon receipt of updated data, both organizations were to re-run their models for the next meeting.

The above action items were completed and the group reconvened for a 2-day workshop in Sault Ste. Marie, Ontario on June 11 & 12, 2008. Participants at this workshop included representatives from Local Citizens Committees (Blind River, Sault Ste. Marie), ENGOs (The Nature Conservancy, World Wildlife Fund), OMNR Head Office, OMNR Regional Office, OMNR District Office, and Sustainable Forest Licence companies (Clergue FMI, Northshore FI). Representatives from the local forest industry (St. Marys Paper Corp), First Nations (Michipicoten First Nation) and the Wawa Local Citizens Committee were also invited but were unable to attend.

During this meeting, both OMNR and WWF presented the refined results from the models. The group then started the process of looking at representation in individual ecodistricts and opportunities for filling gaps within those ecological zones. Enduring feature representation was also looked at during these discussions. Several different options were identified and the feasibility of each one was assessed by looking at the each area in detail. Once the optional areas were established, each model was rerun to determine the impact on representation. The end result of this meeting was a set of options to take to MNR for consideration. Those areas are summarized in the above discussion.

The minutes from the two workshops have been included in Appendix 2.

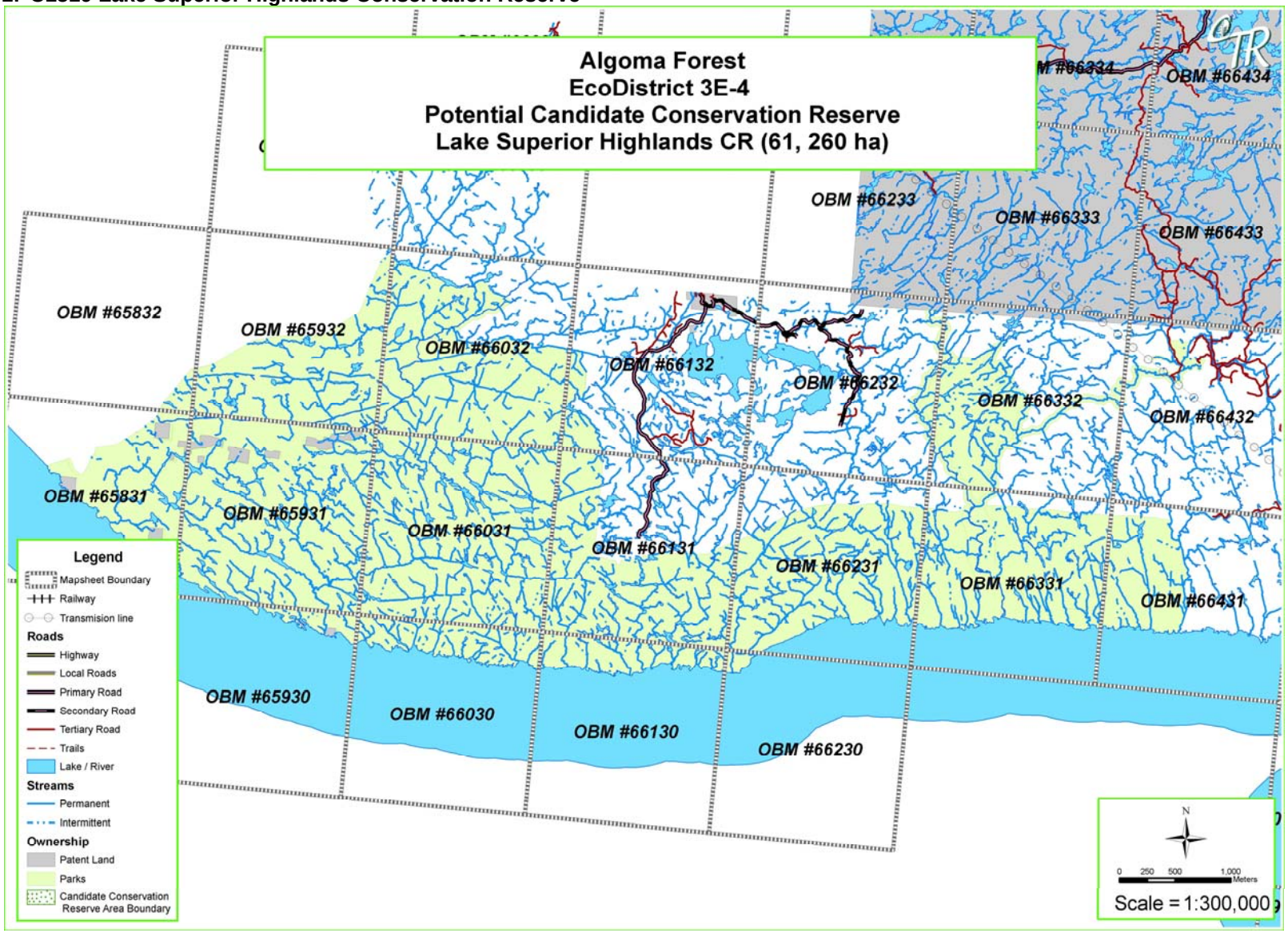
PART 5– Summary and Conclusions

The Algoma and Northshore Forests have been involved in a continuous process of GAP analysis and protected area development over the past decade. As a result there has been very good progress in addressing the GAP areas according to the MNR approved process. This process, and the criteria used to identify and fill gaps in ecological representation, are consistent with the goals and approaches for parks used around the world, and with requirements of the FSC Standard. This latest analysis for the Algoma and Northshore Forests resulted in the identification of five specific additional areas covering a total of 4262 hectares. These areas will be in addition to the 142,518 hectares previously classified as protected areas in the Algoma Forest, the 148,862 hectares of protected area in the Northshore Forest, and the 1,173,708 hectares of protected area already located in the ecodistricts in which the Forests occur.

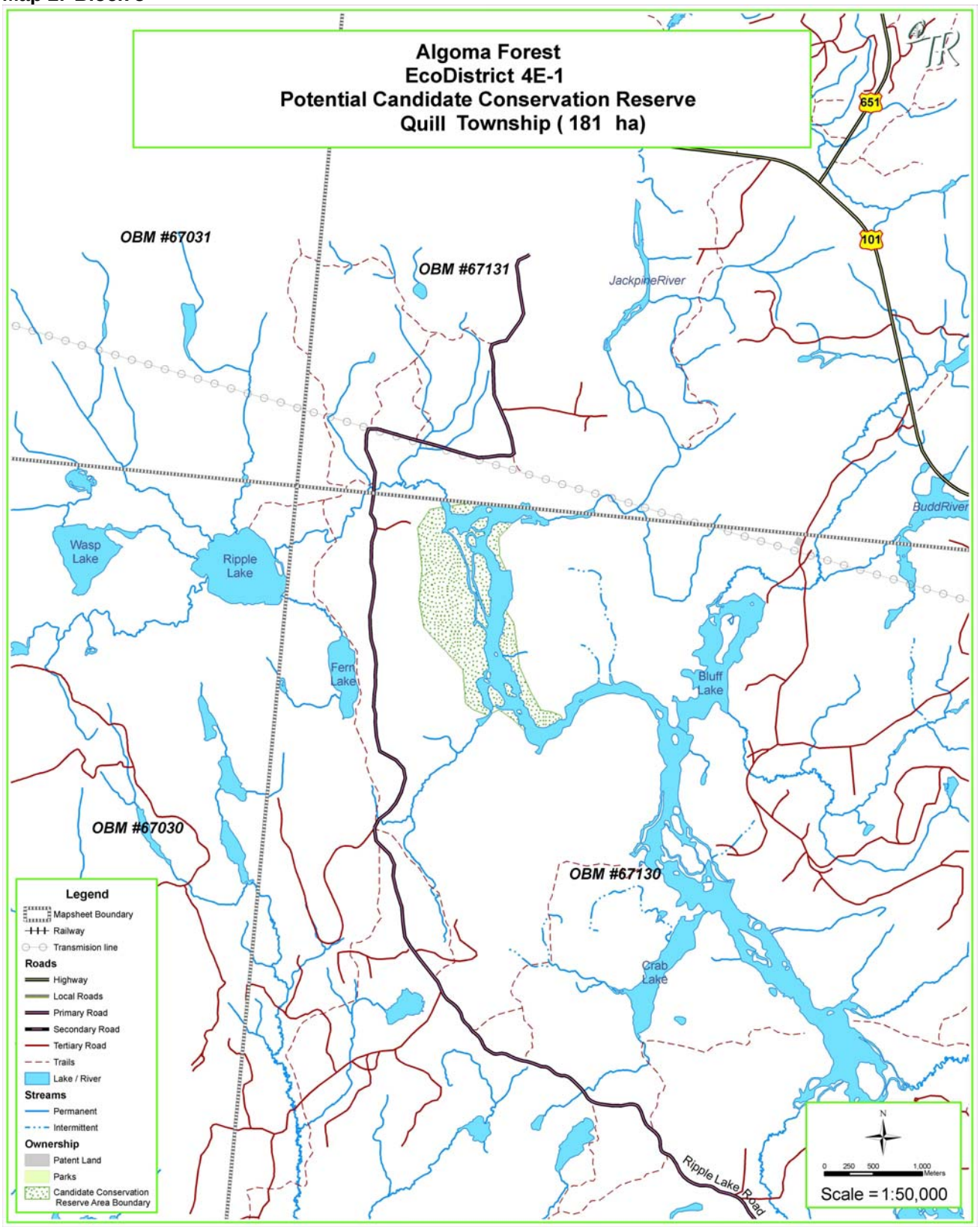
All five of the proposed areas (Blocks) contribute to the filling of OMNR life science representation gaps, as does the approved but unregulated conservation reserve, C1519. The degree of improvement in representation achievement in each of the five Ecodistricts examined varies, from quite minimal (+0.6% improvement in Ecodistrict 5E-1) to relatively substantial (+4.1% in Ecodistrict 3E-4 and +3.8% in Ecodistrict 5E-13).
The candidate areas are relatively efficient in containing under-represented landform/ vegetation combinations while minimizing the amount of landform/vegetation types that already have reached or exceeded the minimum thresholds, except in the case of the Lake Superior Highlands Conservation Reserve (C1519), which is intended to protect Lake Superior shorelines, highlands, and Woodland Caribou habitat connectivity.

Appendix 1 _ Candidate Map

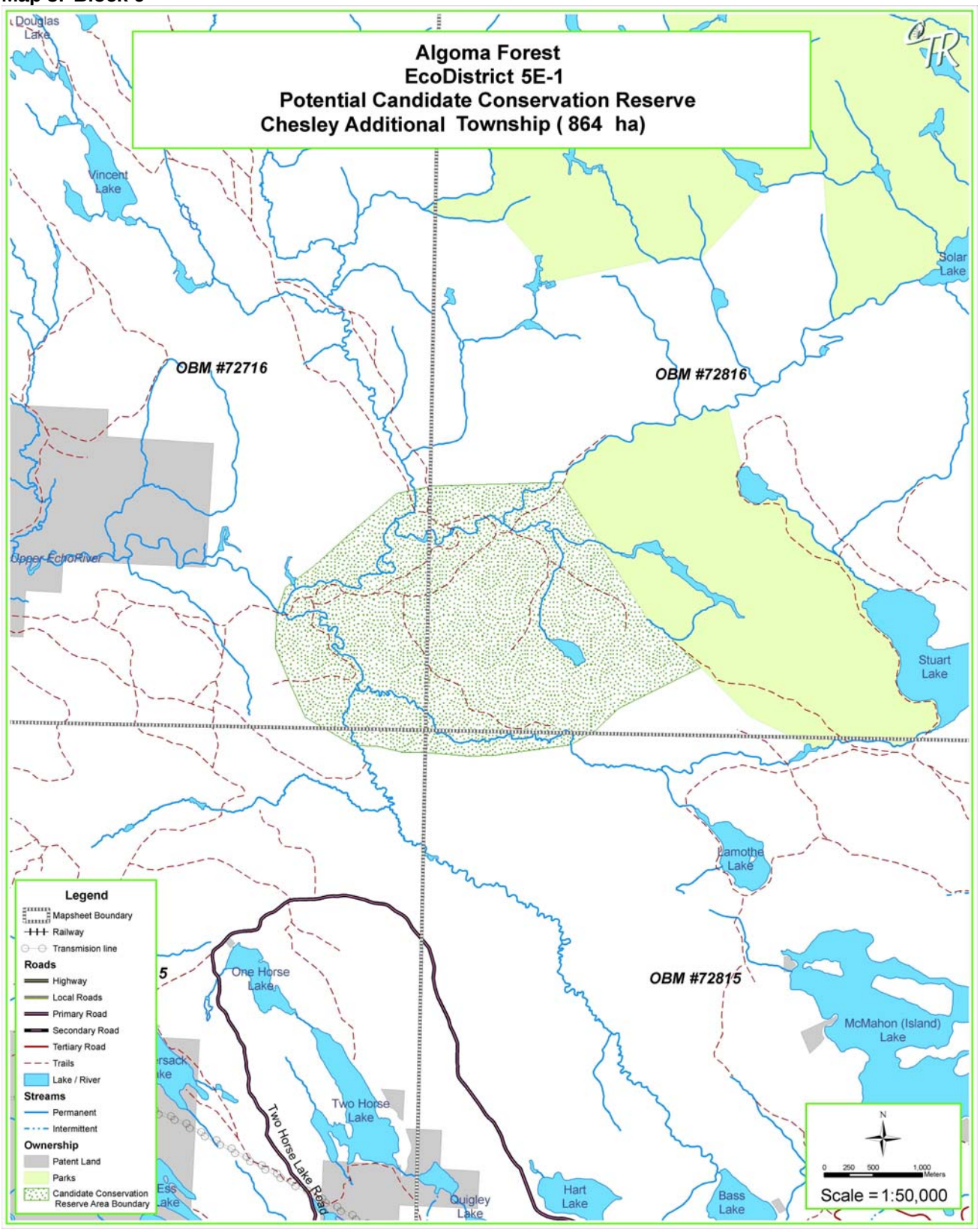
Map 1: C1519 Lake Superior Highlands Conservation Reserve



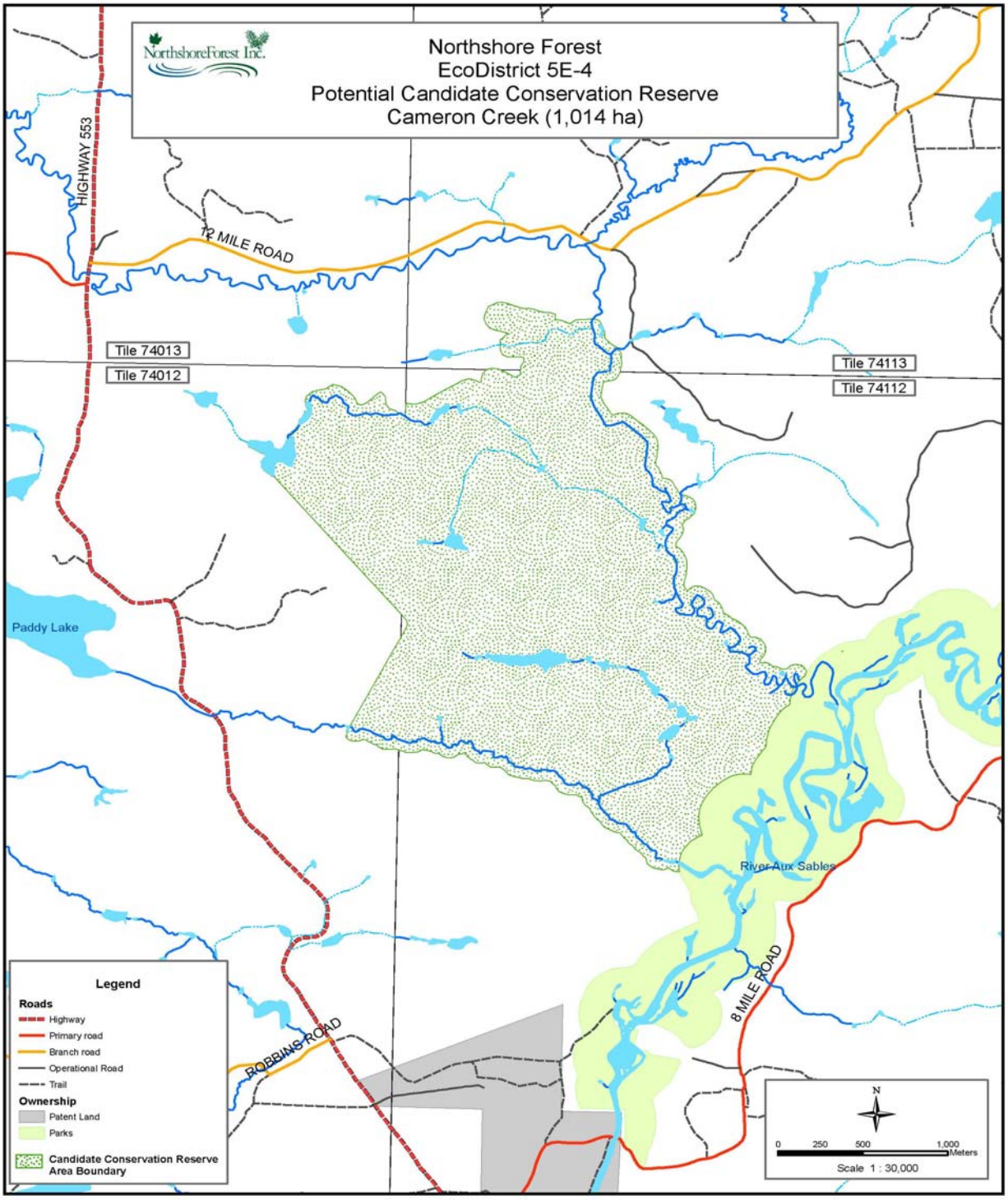
Map 2: Block 5


Algoma Forest
EcoDistrict 4E-1
Potential Candidate Conservation Reserve
Quill Township (181 ha)
OBM #67031
OBM #67131
OBM #67030
OBM #67130
JackpineRiver
BuddRiver
Wasp Lake
Ripple Lake
Fern Lake
Bluff Lake
Crab Lake
651
101
Ripple Lake Road
Legend
Mapsheet Boundary
Railway
Transmision line
Roads
Highway
Local Roads
Primary Road
Secondary Road
Tertiary Road
Trails
Lake / River
Streams
Permanent
Intermittent
Ownership
Patent Land
Parks
Candidate Conservation Reserve Area Boundary
N
0 250 500 1,000 Meters
Scale = 1:50,000

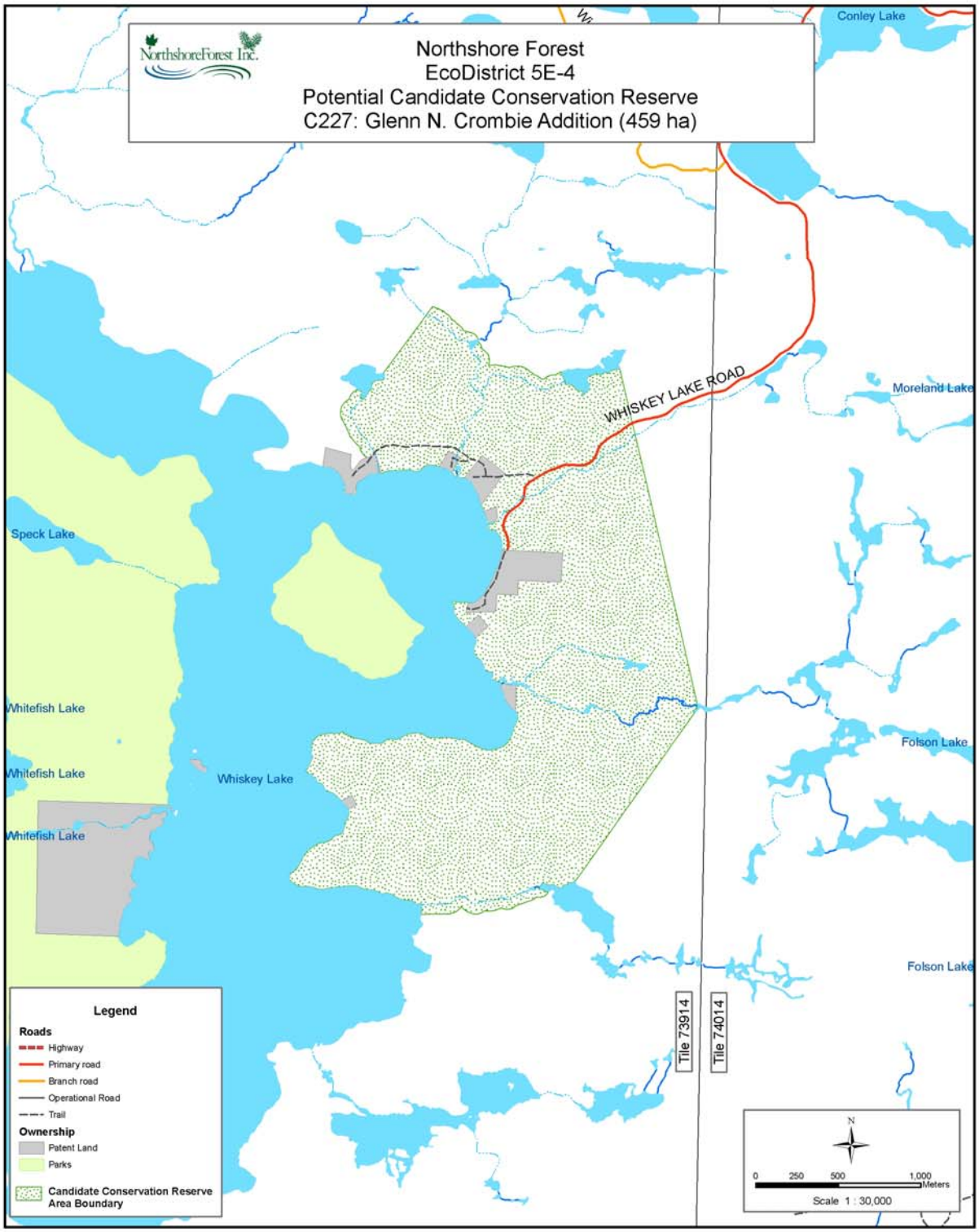
Map 3: Block 6


Algoma Forest
EcoDistrict 5E-1
Potential Candidate Conservation Reserve
Chesley Additional Township (864 ha)
Douglas Lake
Vincent Lake
Solar Lake
OBM #72716
OBM #72816
Upper Echo River
Stuart Lake
Lamothe Lake
One Horse Lake
OBM #72815
McMahon (Island) Lake
Two Horse Lake
Two Horse Lake Road
Quigley Lake
Hart Lake
Bass Lake
Legend
Mapsheet Boundary
Railway
Transmision line
Roads
Highway
Local Roads
Primary Road
Secondary Road
Tertiary Road
Trails
Lake / River
Streams
Permanent
Intermittent
Ownership
Patent Land
Parks
Candidate Conservation Reserve Area Boundary
N
0 250 500 1,000 Meters
Scale = 1:50,000

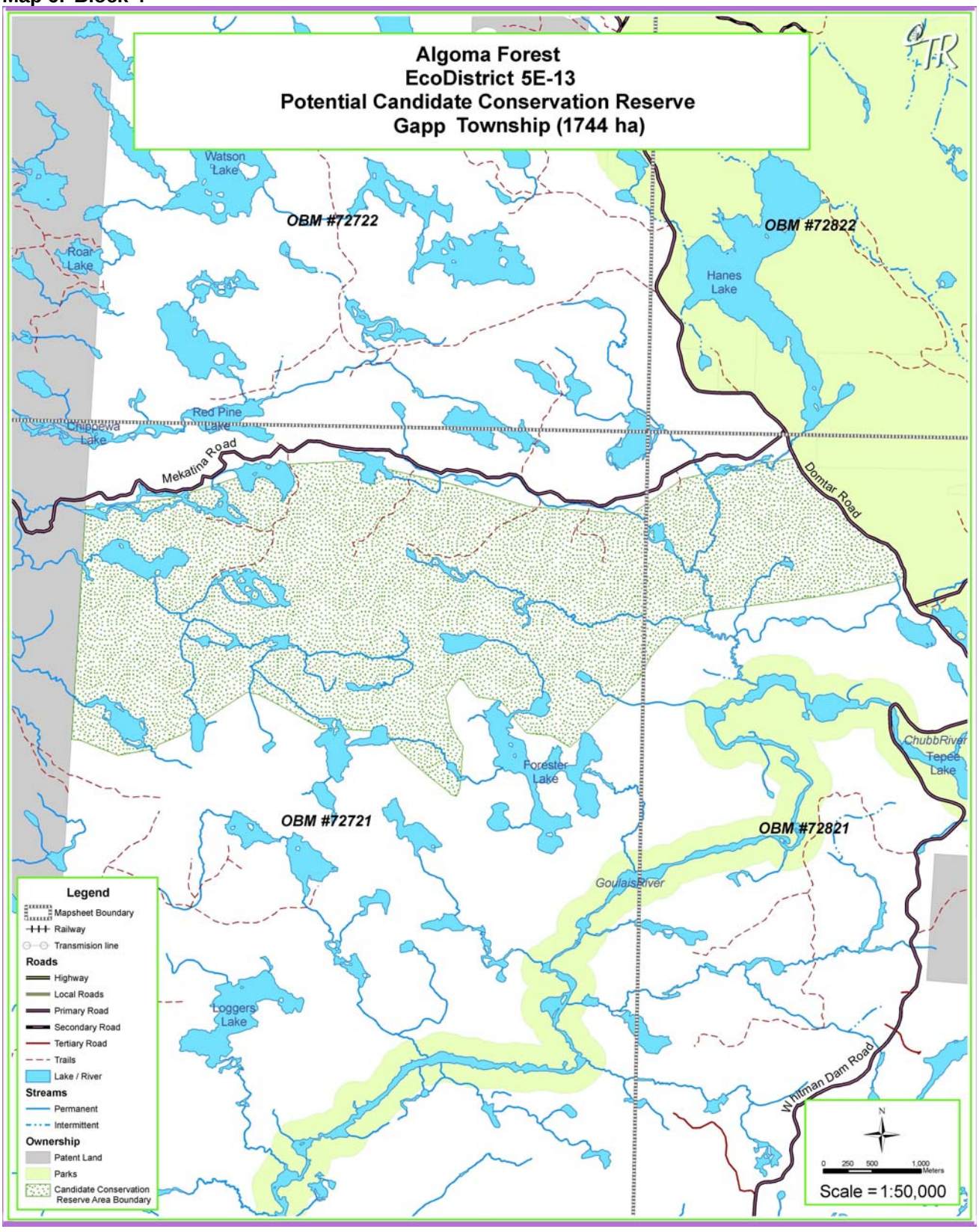
Map4: Block 2


Northshore Forest
EcoDistrict 5E-4
Potential Candidate Conservation Reserve
Cameron Creek (1,014 ha)
HIGHWAY 553
12 MILE ROAD
Tile 74013
Tile 74012
Tile 74113
Tile 74112
Paddy Lake
River Aux Sables
8 MILE ROAD
ROBBINS ROAD
Legend
Roads
Highway
Primary road
Branch road
Operational Road
Trail
Ownership
Patent Land
Parks
Candidate Conservation Reserve Area Boundary
N
0 250 500 1,000 Meters
Scale 1 : 30,000

Map 5: Block 3


Northshore Forest
EcoDistrict 5E-4
Potential Candidate Conservation Reserve
C227: Glenn N. Crombie Addition (459 ha)
NorthshoreForest Inc.
Conley Lake
WHISKEY LAKE ROAD
Moreland Lake
Speck Lake
Whitefish Lake
Whitefish Lake
Whitefish Lake
Whiskey Lake
Folson Lake
Folson Lake
Tile 73914
Tile 74014
Legend
Roads
Highway
Primary road
Branch road
Operational Road
Trail
Ownership
Patent Land
Parks
Candidate Conservation Reserve Area Boundary
N
0 250 500 1,000 Meters
Scale 1 : 30,000

Map 6: Block 4


Algoma Forest
EcoDistrict 5E-13
Potential Candidate Conservation Reserve
Gapp Township (1744 ha)
Watson Lake
OBM #72722
OBM #72822
Roar Lake
Hanes Lake
Red Pine Lake
Chippewa Lake
Mekatina Road
Domtar Road
ChubbRiver
Tepee Lake
Forester Lake
OBM #72721
OBM #72821
GoulaisRiver
Loggers Lake
Whitman Dam Road
Legend
Mapsheet Boundary
Railway
Transmision line
Roads
Highway
Local Roads
Primary Road
Secondary Road
Tertiary Road
Trails
Lake / River
Streams
Permanent
Intermittent
Ownership
Patent Land
Parks
Candidate Conservation Reserve Area Boundary
N
0 250 500 1,000 Meters
Scale = 1:50,000

Appendix 2 _ Workshop Results

ALGOMA / NORTHSHORE FOREST
FSC Certification – Gap Analysis Workshop 1
April 9, 2008

Great Northern Resort & Conference Centre
Sault Ste. Marie, ON

Agenda:

1. Introductions
2. Description of the two forests
3. MNR current GAP tool and results
4. WWF initiative in Parks & Protected Areas
5. The Nature Conservancy
6. Specific Analysis of the Forests/Discussion
7. Summary and Next Steps

Present:

Phil Bunce (Northshore Forest)
Colin Ingram (Northshore Forest)
Tom Croswell (Clergue Forest Management)
Tim Reece (Clergue Forest Management)
James Snider (WWF Canada)
Ronnie Drever (The Nature Conservancy)
Bill Crins (OMNR, Peterborough)
Dick Hagman (OMNR, Blind River)
Michael Young (OMNR, Blind River)
Marg Carruthers (OMNR, Sault Ste. Marie)
Gordon King (OMNR, Timmins)
Karen Hartley (OMNR, Timmins)
Jeff Hinich (LCC Sault Ste. Marie)
Dan Bowes (LCC Sault Ste. Marie/St. Marys Paper Corp)
J. P. Pruneau (RMAC Blind River)

Regrets:

Dean Assinewe (North Shore Tribal Council)
Paul Wyatt (LCC Blind River)
Bruce Welbourne (LCC Wawa)

1. Introductions – Phil Bunce

Agenda was outlined.

2. Description of Two Forests / Why are we here? – Tom Croswell & Phil Bunce

Tom and Phil gave an overview of Clergue Forest Management Inc. and Northshore Forest Inc. including a description of the forests and the management responsibilities of each SFL.

FSC Criterion 6.4 requires that representative samples of existing ecosystems be protected in their natural state. Both SFLs have been issued similar conditions of certification with respect to this criterion and are required to work with ENGOs, First Nations, and other stakeholders to identify gaps in the protected area representation and shall lead a process of approaching the provincial government

with proposals or options for the completion of the network of protected areas. Progress towards meeting this condition needs to shown before the next annual FSC audit (June 2008).

3. OMNR Approach to Gap Analysis & Gap Tool Results – Bill Crins

Bill gave a history of how the current protected area concepts and Gap Tool have evolved from work that has been completed over the past 30 years in Ontario including earth/life science features and site district work for ANSIs in the '70s and '80s, old growth pine studies in the late '80s and early '90s (i.e. Iles Report, Megasin Lake EA) and the Lands for Life initiative of the late 1990's.

The fundamental principle is to identify and protect terrestrial life science features based on landform/vegetation associations on 71 site districts across the province. The minimum threshold is to protect at least 1% or 50ha or each landform/vegetation association within each eco-district. Those that fall below the minimum threshold are called gaps.

MNR uses a computer application called GapTool to identify these gaps. This program uses the best available data sets and utilizes the following criteria to identify gaps:

- Representation
- Condition (tenure, infrastructure, values)
- Diversity (landscape/species)
- Ecological Functions (hydrology)
- Special Features (rare species, IBAs)

GapTool could be used in combination with the WWF enduring features approach in order to refine gap requirements. Information such as depletions and infrastructure need to be updated as gaps are influenced by the level of disturbance that is present on the landscape.

4. WWF AOR Analysis – James Snider

James gave a brief overview of the status of FSC certification in Northeastern Ontario relative to other jurisdictions. The key focus areas for WWF are Criterion 6.4 and Principle 9 (HCVF).

WWF has developed a different approach for looking at ecological representation. This system is GIS based analysis tool that identifies soils landscape and climate associations that are called enduring features which are nested into natural ecological regions (eco-districts).

Representation criteria consist of:

- Size Guidelines
- Connectivity/Adjacency
- Environmental Gradients
- Important Physical Habitat Types (shorelines)
- Habitat quality

The EF AOR tool scores each Enduring Feature in terms of its level of representation (i.e. adequate, moderate, partial, little or none). Areas of High Responsibility have been identified for those enduring features that are deemed to be more critical for maintaining representation. The next step is to overlay the enduring features with HCVs to fill AOR gaps.

5. The Nature Conservancy – Ronnie Drever

Ronnie provided the group with some thoughts on how to approach protection. He stated that the size of protected areas needs to be considered when looking at maintaining a higher level of richness of terrestrial mammals. While Ontario has a lot of protected areas relative to other jurisdictions, the majority of these areas are small. Large protected areas are generally considered to be greater than

3,000 km2. Maintaining larger protected areas of intact forest needs to be considering when looking at this subject.

6. Specific Analysis & Discussion– All

The following focus areas where identified by the presenters as areas that the SFLs should be looking at going forward:

- Look at largest clusters first (Bill)
- Overlaying the 2 gap analyses & refine to smaller locations (James)
- Overlay HCVs and look at proximity to other protected areas/existing boundaries (James)
- Look at having 1 or 2 larger protected areas (Ronnie)

The rest of the group identified the following items that should be considered when addressing gaps:

- Both forest already have a lot a representation – Northshore is at 13%
- Ownership is critical (a lot of the gaps are on private land)
- WWF & MNR systems are similar
- Remove outliers (i.e. 6E17)
- Adopt fair share concept (private land/Crown)
- AOCs should count towards protection (FSC will restrict Stand & Site Guide)
- Work with adjoining SFLs/forestry companies
- Net down effect for private lands
- Need to manage for socio-economics/other users
- MNR supports certification – have RTG program – could be a tool to facilitate RTG
- No support for land use planning – complete protected areas (OLL non-regulated areas)
- Make positive approach to take to public
- Look at biofibre – increased potential for use (RTG) - Gaps
- Need to look at economic impacts on companies and SFL
- Need to maintain balance - industry in crisis – wood supply need to be stable
- Mining policy on environment – lessening footprint – mitigation
- Need site verification to ensure areas do not have managed silvicultural sites in them – early silvicultural work expected to fill gap in AHA
- Keep higher productivity sites in managed forest
- Do not land lock managed forest area
- Acquire new data and do ground truthing
- LCCs, First Nations and others need to be engaged
- Persistence protection – Tolerant Hardwoods (move from shelterwood to selection)
- Avoid hard edges (i.e. ACR lands)
- Visit local groups for input
- Balanced approach is best
- Adjacent FSC forest – need to engage in discussion/decisions on gaps
- Use combination of approaches
- Use privates lands
- Improve data sets
- Engage First Nations

7. Data Issues– All

In order to improve the analyses it is important to that data sets are up to date. After some discussion, it was determined that the following data sets need to be updated and provided to the Bill and James (the person(s) responsible for acquiring/disseminating the data set is identified in brackets):

- Mining Fabric (Gord)
- Transportation Network (Colin & Tim)
- Parks & Protected Areas (Louis P.)

- Disturbance (Colin & Tim)
- Ownership (Marg)

The following data sets were identified as data that needs to be updated and made available for the design stage:

- Proposed Harvest & Primary/Secondary Roads (SFLs)
- HCVF Layers (SFLs/MNR)
- Mineral Potential (Marg)
- Soils – verifier – FlaPS (MNR)
- Hydrology (MNR/Louis P.)
- NCC – National Data – Blue Print Data (Ronnie)

8. Next Steps – All

Next steps were identified as follows:

- Data sets refined by May 10, 2008
- Re-run model by June 1, 2008
- Next Meeting June 11-12, 2008 @ MNR SSM District Office
    - Present model results
    - Look at common features
    - Make further refinements

ALGOMA / NORTHSHORE FOREST
FSC Certification – Gap Analysis Workshop 2
June 11-12, 2008

Great Northern Resort & Conference Centre
Sault Ste. Marie, ON

Agenda:

8. Introductions/Overview
9. Presentation of results of refined MNR GAP tool analysis
10. Presentation of results of refined WWF analysis
11. Define common areas (apparent gaps)
12. Explore different options/scenarios
13. Summary/Next Steps

Present:

Phil Bunce (Northshore Forest)
Bill Moryto (Northshore Forest)
Tom Croswell (Clergue Forest Management)
Tim Reece (Clergue Forest Management)
James Snider (WWF Canada)
Ronnie Drever (The Nature Conservancy)
Bill Crins (OMNR, Peterborough)
Louis Chora (OMNR, Peterborough)
Michael Young (OMNR, Blind River)
Marg Carruthers (OMNR, Sault Ste. Marie)
Gordon King (OMNR, Timmins)
Karen Hartley (OMNR, Peterborough)
Jeff Hinich (LCC Sault Ste. Marie)

Regrets:

Chief Joe Buckell (Michipicoten First Nation)

1) Introductions/Overview - Tom Croswell/Phil Bunce

Agenda and objectives for meeting were outlined as well as a brief overview of the key focus areas, considerations and action items arising the April 9, 2008 meeting.

2) MNR Refined Gap Analysis - Bill Crins

MNR gap tool was re-run using the revised base data. In spite of the database refinements, there was not a lot of change in terms of gaps in protected area representation. The results for each eco-district were as follows:

3E4 Still some gaps present. Lake Superior Highlands CR is a large protected area that will exist in this area but the final configuration is still being sorted out as part of the Michipicoten First Nation land claim settlement.

3E5 Contains only a small piece in Algoma and none of Northshore (mostly under private land) - nothing in the way of gaps.

3E1 Only remaining gaps are at the edge of the eco-district (2 small area on east side).

5E13 More gaps in this eco-district but there is a lot of private land and there has been heavy cutting in this area as well. There is some area on Algoma that could require additional protection.

5E1 There are several current conservation reserves and there is high human disturbance on crown land intermingled with private lands. Many current plantations are a result of aforestation.

4E3 There are not a lot of gaps in 4E3 as a substantial number of protected areas already exist. There is one gap in the vicinity of Ranger (on both forest) and one in the Echo River hardwoods that could be looked at.

6E17 Falls almost entirely on private land.

5E4 There are quite a few gaps however the majority are located on private land tenure or are small parcels surrounded by private lands. Mining activity is also prevalent as it overlaps the Sudbury Basin.

3) WWF Refined EF Analysis - James Snider

The WWF EF analysis was also re-run using the revised base data. The results were as follows:

- Includes area regulated and withdrawn.
- Similarities with MNR analysis
- 41% in Cat "C"
- High responsibility – 2 features in Cat "D" on Northshore & 3 features in Cat "C"

The enduring features (EF) that need to be considered include:

4E1 EF83160 & EF83170 are not High Responsibility EFs – These areas do tie into MAFAs, Moose wintering areas, and NCC Blueprint Sites.

NCC blueprint sites deal with watersheds, not eco-districts, and were developed in partnership by NHIC and NCC.

5E4 EF84224 - High responsibility EF - Mineral disposition coincides with this EF. EF84226 - Falls under mining claim areas.

5E41 EF83896 – Opportunity to build onto some existing protected areas, NCC Blueprint Site - possible priority area

4E3 EF83238 – potential to build onto existing protected area and NCC blueprint sites.

5E3 (EF83896) & 5E1 (EF83900) – some gaps HCV, NCC blueprint sites, potential to increase connectivity

4) Define Common Areas & Explore Options & Results

The following principles were used to define common areas, analyze results and explore options:

- Look at largest clusters first
- Overlap 2 gap analyses and refine to smaller locations
- Look at HCVs and proximity to other protected areas
- Look at having 1 or 2 larger protected area
- Fair share concept

Each eco-district was looked at in terms of option areas and the 2 models were re-run. The following test summarizes the discussion and subsequent results for each option:

3E-4

1) Lake Superior Highlands

- Lake Superior Highlands CR (proposed)
- Land Claim Settlement w/ Michipicoten FN
- Mining Disentanglement

Option 1 – look at impact of regulating CR

MNR Results – Initial L/V rep = 52.1% increases to 56.2% with CR

Option 2 – expand CR at East Pukaskwa River

MNR Results - L/V rep increases to 56.8%

5E-4

1) Cameron Creek _ Sauble River

Option

- Potential replacement for Shakespeare Forest Reserve 800 ha
    - private land prevalent
    - high disturbance
    - Highway 17 corridor

2) East Whiskey Lake (Common WWF & MNR)

- MNR gaps overlap with High Responsibility WWF feature
- High forestry value
- Enduring Feature 84224 only occurs once in region – James to confirm what feature is

Option

- Capture MNR gaps adjacent to Whiskey Lake and adjacent to Crombie Conservation Reserve
    - private cottages and Lodge on shoreline

MNR Results - Combined analysis for both Cameron and Whiskey Lake Initial L/V rep = 15.9% increases to 17.0% (42.4% area)

3) Other candidates in 5E-4 that were dismissed included:

Block 20 Kecil Lake - Victoria Township
- adjacent to private land along Highway 17 corridor
- past harvest and tertiary access

Block 21 Hannah Lake – Truman Township
- mixture of land tenures
- primary and tertiary access
- past partial harvests

5E-13

1) Area South of Mekatina Road
- beside Algoma Headwaters

CFMI to look at:

- Batchewana West (disturbance - look at in detail)
- Garden River (canoe route)

MNR Results – Initial L/V rep = 18.4% (47.6% area) increases to 22.2% (52.1% area)

4E-1

1) Not many MNR gaps – what is enduring feature (EF 83160)? looking for 7,000 ha – 83,000 ha; Not a High Responsibility EF – partially in Martel Forest – no overlap with MNR gaps – does not fit with principles – look at rare communities – no action at this time.

Option 1: South of Shoals - overlaps with MNR gap – formerly part of ANSI

MNR Results – Initial L/V rep 58.5% (90.9% area) increases to 60 (91.6% area)
Marten core area ~ 2,000 ha

Follow up on Thursday – potential to build on CR?

2) EF 83170 – overlap with gap MNR – revisit at later date

5E-3

Virtually no gaps – high number of parks & EF rating of A

5E-1

1) Much of area is heavily disturbed area with plantations on old farmland. Overlaps with NCC blueprint areas on NSF. Rare community HCV (Red Spruce) protected through AOCs – asking to add to NRVIS.

2) Bass Lake – heavy fuelwood cut area – hardwood strip cuts – yellow birch hardwood release – some hemlock areas (small) – 25,000 ha/227,000 ha Category C EF High Responsibility

Option 1: Stuart Lake – MNR gaps & hemlock community

MNR Results: L/V rep = 28.7% (49.1% area) increases to 29.3% (49.6% area) – a lot of area is on private land – 8.5% protection w/in eco-district – ANSIs may be part of equation.

WWF Results: Addition of blob changes from a category C to a category B

Option 2: General Interest WWF - Option 1 plus connection of 2 NCC areas with road access

Other Candidate in 5E-1 that were Dismissed:

Block 8 Red Rock Lake – Wells Two 5E-1
- past harvest and scheduled harvest in 2005-10
- surrounded by patent land

4E-3

- Not a lot of MNR gaps – pixilated and scattered
- Ranger Lake – heavily roaded & disturbed - look at disturbance history
- Mining claims – Elliott Lake – no areas
- Kindogami Road – look at history

EF 83238 – small MNR gaps – protected areas adjacent – small NCC BP areas within – waterway PP within – what is light brown area? – no action at this time – asked to refine data for further analysis

Other Candidates in 4E-3 that were dismissed:

Block 2 Kindiogami Road – Toobee Lake –Piche Twp
- previous harvest and salvage of Mississaugi burn
- primary road as well as tertiary roads through out

Block 4 Spike Lake Road - Timbrell Renwick Twp
- strip and clear cut harvest in 70s & 80s
- young stands 10-30 years old
- tertiary access

Block 5 Aubinadong – Renwick Twp
- partial harvest system in the early 90s
- predominantly cedar remaining with some intolerant hardwoods
- secondary and tertiary access

3E5

Very few gaps – small areas – low priority Cat "C" – no area

WWF Results:

- Other than Bass Lake (5E-1) not a lot of change in re-categorization of Enduring Features from AOR analysis on 2 forests. Suggested that need to go to local knowledge to calibrate areas. There is additional opportunity to use NCC blueprint sites to tie into protected areas.
- Both forests need more rationale for EF to understand what they are. In addition, need to incorporate fair share concept – adjacent forests, private land.
- Do marten core areas contribute to EF (10–year deferrals)?

Summary:

Need to explore fair share concept – what is threshold? Who will decide what level is going to be? How are other jurisdictions going to be tied in? How will private land contribute?

Jeff H. noted that there appears to be no mechanism for protecting from mining claims expansion. Can withdraw land from staking (Gord K.).

Need to deal with private land in some way – expect that gap will be adjusted accordingly – need to figure out how this works.

OMNR - Bill Crins looked at large clusters of gaps and looked at proposals – done as much as we can on 2 forests to meet MNR gaps.

Action item: Bill to confirm MNR position regarding options explored at this workshop.

Action Item: James and Louis to provide results of respective analyses to group.

Action Item: James to provide additional descriptive information regarding EF.

Action Item: Further discussion on EF that are High Responsibility or low representation to occur between WWF/NCC and Clergue/Northshore. Need to consider looking at marten cores, AOCs, protection forest, and NCC sites during those discussions.