Ontario

Ontario's Living Legacy

Statement of Conservation Interest

Wapus Creek Conservation Reserve (C1595)

December 2002
Kirkland Lake District
Ministry of Natural Resources

Kirkland Lake District
Ministry of Natural Resources

APPROVAL STATEMENT

I am pleased to approve this Statement of Conservation Interest (SCI) for the Wapus Creek Conservation Reserve.

Direction for establishing, planning and managing conservation reserves is defined under the Public Lands Act and current policy. "Ontario's network of natural heritage areas has been established to protect and conserve areas representative of the diversity of the natural regions of the province, including species, habitats, features, and ecological systems which comprise that natural diversity." (Policy 3.03.05, MNR 1997).

This SCI will provide guidance for the management of the conservation reserve and the basis for the ongoing monitoring of activities. More detailed direction at this time is not anticipated. Should significant facility development be considered or complex issues arise requiring additional studies, more defined management direction, or special protection measures, a more detailed Conservation Reserve Management Plan will be prepared with full public consultation.

The public was consulted on this site prior to its regulation during the planning for Ontario's Living Legacy (MNR, 1999). Furthermore, the public was notified during a 30 day period in September, 2002 concerning a draft of this SCI. Comments from the notification period have been considered in the development of this document.

The conservation reserve will be managed under the jurisdiction of the Elk Lake/Matheson Area Supervisor of the Ministry of Natural Resources, Kirkland Lake District.

Plan Author: Ilsa Schoenijahn
Ontario's Living Legacy Resource Manager
Kirkland Lake District

Approved by: Craig Greenwood, District Manager: **Signed on March 25,2003**

Date: _____

Approved by: Rob Galloway, Regional Director: **Signed on May 30, 2003**

Date: _____

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1.0 INTRODUCTION

Ontario's network of natural heritage areas has been established to protect and conserve areas representative of the diversity of the natural regions of the province, including species, habitats, features and ecological systems which comprise that natural diversity. Protected natural heritage areas are a key component in sustainable management of natural resources. They ensure that representative sites within the larger sustainably managed landscape are permanently retained in their natural state.

Natural Heritage areas are considered to be sensitive, requiring protection from incompatible activities if their values are to endure over time. The Ministry of Natural Resources has established conservation reserves as a new tool to offer protection for these areas on public lands, while permitting many traditional public lands uses to continue. Such uses include the traditional activities of Aboriginal Peoples.

Ontario's Living Legacy Land Use Strategy (*OLL LUS)* (MNR, 1999) sets the direction for the administration and management of parks and protected areas on Crown lands within three planning regions including; the Boreal West, Boreal East and Great Lakes – St. Lawrence areas. This strategy's natural heritage objectives include protection of natural and cultural heritage values and the provision of opportunities for outdoor recreation, heritage appreciation and tourism (MNR, 1999).

Protected areas designated within the *OLL LUS* have been selected based on their representation of the spectrum of the province's ecosystems and natural features including both biological and geological features, while minimizing impacts on other land uses. Representation was described using landform and vegetation combinations based on Hill's (1959) site district concept.

The Wapus Creek Conservation Reserve is a 2,216 ha parcel of crown land that is situated approximately 25 kilometers southwest from the town of Gowganda. It is found within Leonard, Leith, Ray and North Williams Townships. These townships are located in the Kirkland Lake District within the MNR's Northeast Region. The conservation reserve will be managed under a Statement of Conservation Interest (SCI).

SCI documents are the minimum level of management direction established for any conservation reserve and generally are brief management plans. This SCI will govern the lands and waters within the regulated boundary of the Wapus Creek Conservation Reserve. However, to ensure MNR protection objectives are being fully met within the conservation reserve, the surrounding landscape and related activities should consider the site's objectives and heritage values. In addition, it is the intent of the SCI to create public awareness that will promote responsible stewardship of protected areas and surrounding lands. With

management partners such as Ontario Parks, industry and local governments. MNR District staff will be able to pursue and advance sound environmental, economic and social strategies and policies related to the protection of conservation reserves and provincial parks.

The purpose of this SCI is to identify and describe the values of the Wapus Creek Conservation Reserve and outline the Ministry's management intent for the conservation reserve. The management direction will protect the site's natural heritage values and demonstrate its compatibility within the larger sustainable landscape. This direction will comply with land use intent as stated by the OLL Land Use Strategy (MNR, 1999).

2.0 GOALS AND OBJECTIVES

2.1 Goal of Statement of Conservation Interest

The goal of this SCI is to describe and protect natural heritage values on public lands while permitting compatible land use strategies.

2.2 Objectives of SCI

2.2.1 Short Term Objectives

The short-term objectives are to identify the State of Resource with respect to natural heritage values and current land use activities for the Wapus Creek Conservation Reserve. A priority will be placed on the protection of the site's natural values via specific guidelines, strategies and prescriptions detailed in this plan. Finally, legislated planning requirements will be met (e.g. SCI development within three years of regulation).

2.2.2 Long Term Objectives

The long-term objectives will be able to establish representative targets (e.g. future forest conditions) and validate the site as a potential scientific benchmark. To ensure protection of natural and cultural heritage features and values, this SCI will establish an evaluation process to address future new uses and commercial activities associated with them (e.g. Test of Compatibility Procedural Guideline B in Conservation Reserve Policy PL 3.03.05). Finally, this SCI will identify research/client services and marketing strategies.

Figure 1. Aerial view of trapper's cabin on Spear Lake. Photo taken by William Foy, 2001.

3.0 MANAGEMENT PLANNING

3.1 Planning Area

The planning area for this site will consist of the area within the regulated boundary for the Wapus Creek Conservation Reserve (See Land Use Map, Appendix 7). This landbase will form the area directly influenced by this SCI. The SCI will recognize the protection of values within the planning area; however, to fully protect values within the conservation reserve, the lands beyond the regulated boundary may require additional consideration within larger land use or resource management plans. Nevertheless, any strategies noted within this plan related to the site's boundary or beyond will need to be presented for consideration within a larger planning context.

3.2 Management Planning Context

The Wapus Creek Conservation Reserve was first designated as a candidate conservation reserve by MNR in the OLL Proposed Land Use Strategy (MNR March, 1999) and ultimately as a conservation reserve in the final OLL Land Use Strategy (MNR, 1999). The site was regulated with the filing of Ontario Regulation 148/02 made under the Public Lands Act on May 8, 2002. Management and planning direction for this site will follow the *OLL LUS* (MNR, 1999) and this management statement. The area encompassed by this site has also been removed from the Timiskaming Forest Alliance Inc. Sustainable Forest License (SFL) landbase.

By regulation this conservation reserve cannot be used for commercial forest harvest, mining or hydroelectric power development (MNR, 1999). Existing permitted uses within this reserve may continue such as fishing, hunting and trapping. This SCI document and future management will continue to try and resolve conflicts regarding incompatibility between uses and to ensure that identified values are adequately protected.

This SCI will only address known issues or current proposals with respect to permitted uses or potential economic opportunities brought forward to the District Manager during this planning stage. However, in terms of approving future permitted uses and/or development(s), there are established mechanisms in place to address such proposals. Any future proposals will be reviewed using the Procedural Guideline B - Land Uses – Test of Compatibility *Public Lands Act Policy PL 3.03.05* (MNR, 1997) or other standard MNR environmental screening processes.

Consideration of proposals pertaining to cultural resources may be screened through Conserving a Future for our Past: Archaeology, Land Use Planning & Development in Ontario, Section 3 (MCzCR, 1997), or in processes such as that used by MNR to establish Area of Concern (AOC) descriptions and prescriptions for cultural heritage resources within forest management plans (FMPs).

These planning tools will help refine the review process once the proposal satisfies the direction and intent of the Public Lands Act, associated policies and this planning document.

3.3 Planning Process

Once a conservation reserve is passed into regulation, it must be determined what level of management planning is required to fulfill the protection targets. There are two policy documents involved. A Statement of Conservation Interest (SCI) is the minimal requirement for providing planning direction, and a Resource Management Plan (RMP) that deals with more complex issues where several conflicting demands are placed on the resources. The guidelines for the preparation of these documents are outlined in Procedural Guideline A –

Resource Management Planning (Conservation Reserves Procedure PL3.03.05 *Public Lands Act*). The appropriate plan must be completed within three years of the regulation date.

For current planning purposes, the Wapus Creek Conservation Reserve will be managed under the auspices of a Statement of Conservation Interest. Interested parties from both the private and public sector were consulted during the OLL planning process from candidate conservation reserve to regulation. The public was widely consulted during the regulation process and further consultation is not required at this time. In addition, a public notification of a draft of this SCI document occurred for a period of 30 days during September 2002. The intent of this SCI is to fulfil the commitments made within the *OLL LUS* (MNR, 1999).

The revised SCI was reviewed by the Kirkland Lake District Manager (DM). Upon approval by the DM the SCI was presented to the Regional Director (RD) for final approval.

Following RD approval, interested public, user groups and industry were notified that the Statement of Conservation Interest for the Wapus Creek Conservation Reserve was approved.

Public consultation will be solicited as part of any future reviews of land use proposals that would require new decisions to be made. In addition, any future proposal and/or any new, significant management direction considered will be published on the Environmental Bill of Rights Registry (EBR).

The SCI is a planning document that will provide background information, identify values to be protected and establish management guidelines for use in the administration of the reserve.

The implementation of the SCI will be the mandate of the MNR at the District level; however, associations with various partners may be sought to assist in the delivery. This SCI is a working document, and as a result, it may be necessary to make revisions to it from time to time.

4.0 BACKGROUND INFORMATION

4.1 Location and Site Description

4.1.1 Location

The following table describes the location and provides administrative details of the Wapus Creek Conservation Reserve:

Name	Wapus Creek Conservation Reserve
Site Region – Site District (Hills)	Temagami site District 4-E4
MNR Administrative Region/District Area	Northeast Region/Kirkland Lake District in the Elk Lake/Matheson Area
Total Area	2,216 ha
UTM co-ordinates	050 5000E, 5261 000N
Nearest Town/Municipality	Southwest of Gowganda
Township(s)	Leonard, Leith, Ray, North Williams
OBM Numbers	490052600, 490052500, 500052600, 500052500
Topographical Map Name/Number	Gowganda and Smoothwater Lake 41 P/10 – 41 P/7
Wildlife Management Unit	40
Forest Management Unit	Timiskaming

Table 1: Location Data

4.1.2 Site Description

4.1.2.1. Physical Description

The Wapus Creek Conservation Reserve is located approximately 25 km southwest of the town of Gowganda, Ontario, and consists of approximately 2 216 hectares of land. This site is found within Leonard, Leith, Ray and North Williams Townships in the District of Timiskaming (Locator Map, Appendix #7). The conservation reserve is located in Hills' Temagami Site District 4E-4 (Hills, 1959), which is characterized by a rolling plain of rock-knob uplands, shallowly covered with stony silty sand, broken by occasional trains of sorted coarse and medium sand (gravelly in places). Bedrock is dominantly low base and frequently moderately resistant to weathering. The materials are a mixture of low base and granite (Poser, 1992). Most of the site's boundaries are formed by a series of line segments to follow the contour of several small lakes and a small portion of the eastern boundary follows Wapus Creek. The Site Regional forest climate is mid-humid, warm boreal with well-drained glacial deposits which

occupy the hill slopes and basins, with peatlands restricted to local wet plains and depressions. A broken area of gently sloping uplands and moderate broad valleys of sand and silt characterize the site district (Poser, 1992). Wapus Creek Conservation Reserve is located within the Temagami Forest Section of the Great Lakes St. Lawrence Forest Region. This is a large upland area north of Lake Huron, stretching east and west from Lake Temagami, and occupying a generally southward sloping surface.

Landform information provided by OFRI (1994) showed that the majority of the site consists of lacustrine deposit; however, aerial reconnaissance and photo interpretation by Kristjansson (2002) suggests a much different landform interpretation. The primary earth science features are contained within the extensive areas of ice-contact stratified drift deposits mainly esker-kame-kettle complexes. The site also contains large deposits of glaciofluvial outwash deposits. In addition, the site contains small deposits of bedrock drift and organic deposits (Map 1b, Appendix #8).

The first ice marginal position (i.e. the southern, more prominent position) is demarcated by a steep, well defined, ice-contact slope associated with a discontinuous, low-relief ridge, which is oriented approximately transverse to glacier flow. The area upglacier of the ice-marginal position is underlain predominantly by deposits of ice-contact stratified drift with marginal position hummock and kettle forms. In this area, a number of esker systems mark the position of subglacial conduits along which water and sediment was transported to the ice margin. The area downglacier of the ice marginal position is occupied by extensive outwash plains, consisting of proglacial outwash sand and gravel. Also, two of the larger esker systems are apparent in the area downglacier of the ice marginal position.

The second ice marginal position is located in the northeast part of the conservation reserve approximately 1.3 km to the north of the first ice marginal position. This feature is not as prominent, nor as well-developed, as the first ice marginal position. For more information on the Earth Science features, see Earth Science Planning Summary (C1595) (Appendix 9).

This forest section consists of eastern white pine with scattered white birch and white spruce, although the spruce frequently rivals the pine in abundance. Another common but variable type is a mixture of the birch, pine, spruce, with balsam fir, trembling and largetooth aspens. Both red and jack pine are present, the former predominant in bluffs, along ridges and the latter generally restricted to the driest sandy or rocky sites. The tolerant hardwoods, yellow birch and sugar maple, have only a scattered occurrence. The prevalent forest cover on the uplands is clearly a reflection of periodic past fires, and the sandy soils have provided conditions especially favorable for propagation of eastern white pine, red pine and jack pine. The FRI data on the AWS (Annual Work Schedule) maps show Scots pine as well. On the lowlands, in poorly drained depressions and in

wetlands, black spruce with tamarack or eastern white cedar, form well-marked communities (Rowe, 1972).

4.2 Administrative Description

The legal boundaries of the Wapus Creek Conservation Reserve were filed on December 18, 2001 with the Office of the Surveyor General, Ministry of Natural Resources in Peterborough, Ontario. This site was passed into regulation on May 8, 2002 (O.Reg. 148/02).

4.3 History of Site

Historically the site has been used for commercial fish and wildlife activities. The site contains portions of three Bear Management Areas, one Baitfish Operation, and one trapline.

4.4 Inventories

The following table indicates the natural heritage inventory that has occurred or is required in the near future.

Survey Level	Earth Science	Life Science	Cultural	Recreational	Other
Reconnaissance	August, 2001	August, 2001	Not required at this time	June/July/ August 2001	
Detailed					
Requirement		Silvicultural assessment of the clear-cut areas in the site.			

Table 2. Inventory Data

5.0 STATE OF THE RESOURCE

Representation:

This site has a great esker complex south of Irene Lake, which has been affected to some extent by roads. Much of the site is mixed forest of white birch, jack pine and trembling aspen. Trembling aspen is regenerating in the disturbed areas. Tertiary roads within this old stand are well developed. The jack pine and scots pine are regenerating nicely; however, these trees were planted in rows, which takes away from the natural look. A large clear cut is present in the northern section of the conservation reserve. Most of the forest communities throughout the site are mixed although coniferous species dominate the lakeshores. A jack

pine plantation along the eastern boundary was also observed during the aerial reconnaissance survey (Table 2. Inventory Data; Thompson, 2001). A stand of large white pine and red pine is present above Tremble Lake in the lower sections of the protected area. White birch and trembling aspen communities are growing on the top of the esker features. In general, the forest communities follow the earth science features.

The site's life science features have been greatly affected with the planting of Scots pine, road networks, and old clear-cut areas. There is little regeneration of the white birch forest communities on the outwash deposits in the southwest and northeast sections of the conservation reserve. A small disturbance just east of Irene Lake and just north of the site was also observed during the aerial reconnaissance survey (Thompson, 2001). Old clear-cuts to the east of Spear Lake make the chain of lakes stand out on the landscape.

The chain of lakes adds a good variety of features to the conservation reserve as well as the many kettles and earth science features. Tremble Lake and the small unknown lake to the south have shores with extensive "ring" beach areas with water levels dropping significantly to expose near shore habitats and creating slightly sloped beach areas.

Quality of Representation:

The quality of the representation or the current characteristics of the natural features found within the conservation reserve are as important as the overall representative features that are being protected. A number of factors are considered in evaluating a site and they include the following criteria: diversity, condition, ecological factors, special features and current land use activities.

a) Diversity:

Diversity is a measure of the site's life and earth science heterogeneity. The evaluation is based on the number and range (variety) of the natural landscape features and landforms for earth science values and the relative richness and evenness of the site's life science components. Natural landscapes and known generalized vegetative communities will be the scale used for this SCI. Future aerial or ground reconnaissance surveys will enhance the MNR's knowledge of these features and possibly allow verification at a lower scale (e.g. species assemblages).

There are three major landform or earth science features present within the site including ice-contact stratified drift deposits, glaciofluvial outwash deposits and an esker crest that follows most of the eastern boundary (Map 1b, Appendix #8). Life science diversity contains a minimum of 76 landform: vegetation combinations. This richness based on the number of cover types is high for such a small site. The proportion of cover type is somewhat skewed towards the white

birch and jack pine communities (Map 2a, Appendix #8). However, most forest stands observed during the aerial survey in 2001 contained a wide assemblage of tree species. Wetland and aquatic values added to the site's diversity but were not considered significant (Map 3b, Appendix #8). Overall, the number of communities present within this small site and the large percentage of mature forest all contribute to its high life science diversity rating. By protecting the full diversity of landforms in the conservation reserve, a greater diversity of vegetation types and plant and animal species is to be expected. The faunal diversity of the site is likely normal for the boreal region. However, a more definitive assessment of both floral and faunal diversity cannot be made at present, given that this was a reconnaissance level survey. A full biological inventory and evaluation would provide a more complete species list.

b) Condition:

Condition is the degree of past human and natural disturbance observed or recorded for the site. Disturbance is ranked moderate to high due to the extensive road networks and clear-cut areas associated with this site. The site's life science features have been greatly affected with the scots pine plantations, road networks, and old clear cuts with little regeneration. In addition, there has been a large amount of cutting around the conservation reserve. Two larger regenerating stands were observed including an old clear cut jack pine stand west of Spear Lake and a white birch – trembling aspen stand in the northeast corner of the site. At present, these sites are listed as not sufficiently regenerated. Overall, the site is heavily disturbed and rehabilitation options should be reviewed.

c) Ecological Factors:

Ecological factors refer to the current design of the conservation reserve as noted by its size, shape, buffering capacity to adjacent land use activities.

A northern section of the eastern boundary follows Wapus Creek and the southern portion of the eastern boundary follows several small lakes, both good natural boundaries. The entire southern boundary follows a small tributary of Wapus Creek, a natural boundary. In addition, a portion of the western boundary follows a small stream. The other boundaries are formed by line segments and some of the key earth science features extend north outside the site's boundaries. The site's small size, vectored boundaries and road networks will continue to make management and protection of the core areas challenging. The site's design leaves many of the core forest communities and earth science features insufficiently protected. The site is considered to be sensitive to existing uses. In the near future, ground reconnaissance should confirm current level of disturbance especially the large clear-cut areas.

Aggregate extraction and road construction associated with forest operations would affect the morphological integrity of the features of this site. Due to the

course grained character of the sediments, which generally underlie the conservation reserve, the potential for significant erosion and gully formation following the removal or alteration of the natural vegetation cover is low. However, erosion of the numerous steep slopes characteristic of this site may be a problem.

d) Special Features:

The major features that are present within this conservation reserve include:

- The esker system, ice-contact slopes and associated low-relief ridges and outwash plains.
- The chain of lakes, kettles, and associated earth science features.
- The presence of large white and red pine forest communities.

e) Current Land Use Activities

Only a small number of uses are known to be associated with this site. Activities include fishing, hunting, trapping, ATV use, snowmobiling, and hiking.

Summary:

Wapus Creek Conservation Reserve's contribution to the parks and protected areas system has not been assessed at the Site District level to date; therefore, its role as a provincially significant area must be determined and compared to all existing and new OLL protected areas. Furthermore, the site's remoteness, current level of forest land disturbance within the site and within the surrounding landscape limits the site's current geographical significance and its backcountry travel qualities. However, in time as forest lands are regenerated and if access to the site is maintained, the current earth science features could offer future visitors some excellent backcountry travel experiences – especially with the landscapes associated with the esker complexes and chain of lakes shorelines and landscapes. Future planning will need to address the two large disturbances and currant rate and type of regeneration occurring, the presence of ornamental Scots pine located northeast of Spear Lake and future access needs. In addition, present values and existing uses within the conservation reserve will need to be considered as well.

Natural Heritage Representative Features

This site consists of at least four esker and kame complexes, hummock forms and kettles and impressive ice contact depressions that contain a chain of lakes. Mixed and pure stands of jack pine, and a jack pine – scots pine plantation, and pure stands of white birch were observed during an aerial reconnaissance survey.

Landform – Vegetation (LV) Type

Landform	Vegetation
Lacustrine Deposit	White Birch
Lacustrine Deposit	Jack Pine (Young)
Lacustrine Deposit	Trembling Aspen Mixed wood
Lacustrine Deposit	Treed Muskeg
Lacustrine Deposit	Cedar Old Growth
Lacustrine Deposit	Open Muskeg
Moderately Broken Ground Moraine	Jack Pine (Old)
Moderately Broken Ground Moraine	Black Spruce
Moderately Broken Ground Moraine	Trembling Aspen Mixed Wood

Table 3: Vegetation Types

Forest Resource Inventory (FRI) Data

- Dominant species, wetlands, and depleted areas
- See Species Composition Map (Map 2a Appendix #8)

5.1 Social/Economic Interest in Area

a) Linkage to Local Communities:

The Wapus Creek Conservation Reserve is a 2,311 ha parcel of crown land that is situated south of highway 560 and approximately 25 km southwest from the town of Gowganda, Ontario. The conservation reserve is located within North Williams, Leith, Leonard and Ray townships (Map 1).

Current uses are related to consumption of fish and wildlife resources and snowmobiling. Potential recreational activities could include ATV riding, canoeing, and possible non-consumptive uses such as bird watching, photography or nature study.

b) Heritage Estate Contributions

The Wapus Creek Conservation Reserve contributes to the province's parks and protected areas system through its regulation, representation and the long-term management of natural heritage values. By allocating these lands to the parks and protected areas system, the province has ensured a certain level of permanence by distinguishing the site and its values from the broader general use or more extensively managed landscape. In addition, its natural features are, and will be available for present and future generations to enjoy and explore.

c) Aboriginal Groups

The site is located within the Matachewan First Nation's area of interest and the Temagami First Nation's land claim area.

d) Mining Interests:

There are no known current mining interests within the conservation reserve. Mining and surface rights have been withdrawn from staking within the conservation reserve's boundaries under the Mining Act (RSO 1990 Chapter M.14).

e) Forest and Fire Management History:

This site has been affected by recent forest management activities. A recent aerial reconnaissance survey showed significant pre-OLL harvest areas throughout the site. In 1998, there was considerable area harvested in the northern portion of the site, and west of Spear Lake. This was done prior to the OLL Land Use Strategy (MNR, 1999) and the interim protection standards.

The site has no recent burned areas within its boundary.

5.2 Natural Heritage Stewardship

Analysis of the life science targets based on landform/vegetation combinations have shown that the conservation reserve contains a minimum of 76 landform: vegetation combinations. A total of 10 separate forest communities were identified (Map 4) with cedar old growth present within the site (Map 9). Jack pine and white birch communities dominate the site with eastern white cedar, trembling aspen, black spruce, and red pine complementing the other forest communities (see Table 3. Vegetation Types). Finally, old growth, wetlands and the beautiful chain of lakes further enhance the site's natural heritage values and diversity.

5.3 Fish and Wildlife

The Fisheries Values identified are lakes with cool-water and cold-water fish communities. Fisheries information is limited to a mixed fishery of northern pike, yellow perch, and white sucker in both Bond Lake and Banak Lake. Spear Lake, located in the central portion of the site, was stocked with walleye annually from 1994 to 2000. It also contains northern pike, white sucker, and white fish. Also, a class Environmental Assessment was performed on Tremble Lake to determine if it was suitable for stocking brook trout. The management decision for stocking in Tremble lake was deferred until the completion of this SCI (please refer to section 6.2 Fish and Wildlife). Currently, no fisheries information is available for the other isolated lakes and creeks within the site. Further

assessment and management will continue under the Kirkland Lake District, Elk Lake/Matheson Area Supervisor.

This area is also used for hunting and trapping. There is a hunting trail that connects Spear and Tremble Lake. The dominant forest stands as well as sections that have been harvested and open kettle lakes and bogs, provide year round habitat for moose and other species. A variety of animals inhabit the site, these include black bear, moose, white-tailed deer, and marten. These features are accessible through numerous roads and trails.

5.4 Cultural Heritage Stewardship

To date, a detailed assessment of cultural resources has not been carried out.

5.5 Land Use/Existing Development

The conservation reserve is situated entirely on Crown Land and is unencumbered by any land use permits, leases or mining claims. There is a trap cabin located on the west shore of Spear Lake. Mining and surface rights have been withdrawn from the reserve (MNDM G-Plan M-0282 December 12, 2001).

5.6 Commercial Land Use

Present commercial use activities include three bear management areas (KL-30-12, KL-40-18, KL-40-17), one trapline (KL-99), and one baitfish operation (Baitfish Block KL-19).

5.7 Tourism/Recreation Use/Opportunities

Some of the features within the site associated with possible recreational use include large and small mammals, mixed forests, and aquatic flora and fauna. Existing recreational uses in this site and immediately surrounding the site include trapping, large game hunting, small game hunting, snowmobiling, canoeing and fishing. There is also potential for activities such as ATV use, bird watching and nature study.

For a more detailed report and summary of the recreational use and potential, refer to the Recreational Inventory Check-sheet (Appendix 3).

5.8 Client Services

Currently, visitor services are limited to responding to inquiries about access, natural heritage features and boundaries. No formal information or interpretive facilities currently exist within the conservation reserve. Other client services include providing clients with maps, fact sheets, and other information gathered on the area, such as the Earth/Life Sciences and Recreational inventory work.

6.0 MANGEMENT GUIDELINES

6.1 Management Planning Strategies

The land use intent outlined in the *OLL LUS* (MNR, 1999) provides context and direction to land use, resource management, and operational planning activities on Crown Land in the planning area and within OLL site boundaries. Commitments identified in the *OLL LUS* and current legislation (Policy 3.03.05 *PLA*) forms the basis for land use within the Wapus Creek Conservation Reserve. Management strategies for these uses must consider the short and long-term objectives for the conservation reserve. For up to date information on permitted uses refer to the Crown Land Use Atlas (MNR, 2002) (www.ontarioslivinglegacy.com/crownlanduseatlas/).

Proposed new uses and development will be reviewed on a case-by-case basis. A Test of Compatibility, (Procedural Guideline B – Land Uses (PL 3.30.05)) must be completed before proposals can be accepted. In all cases, ensuring that the natural values of the conservation reserve are not negatively affected by current and future activities will be the priority. Therefore any application for new specific uses will be carefully studied and reviewed.

6.2 "State of the Resource" Management Strategies

The development of this SCI and the long term management and protection of the Wapus Creek Conservation Reserve will be under the direction of the MNR's Kirkland Lake District, Elk Lake Matheson Area Supervisor. The following management strategies have been created to achieve the goal and objectives stated earlier in this management document.

Natural Heritage Stewardship

The management intent for the Wapus Creek Conservation Reserve is to allow for natural ecosystems, processes and features to operate undisturbed with minimal human interference while providing educational, research and recreational activities. Forest ecosystem renewal will only be entertained via a separate vegetation management plan. As part of any future vegetation management plan the site and its Site District will be re-evaluated with respect to their known landform/vegetation features to determine if the past harvested areas could contribute additional landform/vegetation values to the Site District.

In addition, the vegetation management plan will need to determine but not be limited to:

- the restoration ecology objectives (e.g. representation) for the area in context with the Site District;
- consider current provincial strategies (e.g. white pine);

- consider larger long-term conservation reserve (e.g. recreational objectives) and possibly landscape objectives (e.g. contributions to landscape wildlife objectives).

Forest fire protection will be carried out as on surrounding public lands, under the direction of the provincial fire strategy. All wildfire occurrences will be considered a high priority and will actively be suppressed. Prescribed burning will be conducted only under the direction of the provincial fire strategy and authorized for the conservation reserve under a separate vegetation management plan. Prescribed burning may be utilized if deemed necessary to emulate natural disturbances and renew forest communities, prepare seed beds for research and/or education purposes, or to meet additional objectives determined within a separate vegetation management plan.

Defining compatible uses, enforcing regulations and monitoring and mitigating issues will protect all earth and life science features. Industrial activities such as commercial timber harvest and new hydro generation will not be permitted within the conservation reserve. Permits for fuel-wood will not be issued. New energy transmission, communication and transportation corridors or construction of facilities are not permitted within the boundaries of the conservation reserve. Such structures negatively impact the quality of the representative features that require protection. Alternatives should be reviewed via larger landscape planning processes. New roads for resource extraction will not be permitted. Other activities that do not pass a Test of Compatibility will be prohibited (MNR Policy 3.03.05, 1997).

The introduction of exotic and/or invasive species will not be permitted. Programs may be developed to control forest insects and diseases where they threaten significant heritage, aesthetic, or economic values. Where control is desirable, it will be directed as narrowly as possible to the specific insect or disease. Biological or non-intrusive solutions should be applied whenever possible.

The collection/removal of vegetation and parts thereof will not be permitted; however, subject to a Test of Compatibility, the Area Supervisor may authorize such activities for purposes of rehabilitating degraded sites within the reserve, collecting seeds for maintaining genetic stock and /or for inventory or research purposes.

Silvicultural assessment of the previous clear-cut areas in the northern section of the site should be conducted to support any future vegetative management plan. The evaluation should consider but not be limited to the following objectives:

- describing the current forest condition;
- determining soil type and depth;
- defining potential restoration prescriptions. Such prescriptions must consider current silvicultural science and guidelines and additional objectives established by the MNR.

MNR will provide leadership and direction for maintaining the integrity of this site as a heritage estate. To ensure MNR protection objectives are fully met within the conservation reserve, activities on the surrounding landscape must consider the site's objectives and heritage values. Research, education and interpretation will be encouraged to provide a better understanding of the management and protection of the natural heritage values and will be fostered through local and regional natural heritage programs, initiatives and partnerships.

The conservation reserve will be managed by allowing natural ecosystems, processes, and features to function normally, with minimal human interference.

Fish and Wildlife

Fish and wildlife resources will continue to be managed in accordance with specific policies and regulations defined by the Ontario Ministry of Natural Resources under the Fish and Wildlife Conservation Act and the Kirkland Lake District, Elk Lake/Matheson Area Supervisor. The final decision to allow stocking in the Wapus Creek Conservation Reserve was approved by the Kirkland Lake District Manager.

Fishing and hunting is expected to continue at a low level of intensity. A planned trail and viewing area development may enhance wildlife viewing activities. Any future trail development will require a test of compatibility.

Cultural Heritage

When possible, the Ministry of Natural Resources will continue to work with the Ontario Ministry of Culture, Tourism and Recreation in identifying archaeological sites to be protected. To more fully manage and protect sites, the development of field surveys would be required. However, at this time additional field surveys within the conservation reserve are not recommended.

Development, research and education proposals may be considered in accordance with the Test of Compatibility and *Conserving a Future for our Past: Archaeology, Land Use Planning & Development in Ontario*, Section 3 (MCzCR, 1997).

Land Use and Development

The sale of lands within the conservation reserve is not permitted as per the *OLL LUS* (MNR, 1999). Existing authorized trails can continue to be used and maintained, unless there are significant demonstrated conflicts. New trails will only be allowed if a Test of Compatibility is passed. Any new trail development will require an amendment to the SCI. The cutting of trees for non-commercial

purposes (e.g. fuelwood) is not permitted except as required for approved development activity (e.g. trail, viewing site, etc.).

New roads for resource extraction will not be permitted. Abandoned forest extraction roads will not be actively maintained.

There are no other forms of tenure in the conservation reserve other than legal agreements with registered trappers, bear management area operators and baitfish licensees. There is a trap cabin located on the west shore of Spear Lake. The construction of new trap cabins will not be permitted; however, existing cabins will be allowed to continue (*LUS* MNR, 1999).

Traditional uses within the conservation reserve will continue to be permitted; however, the goal will be to resolve conflicts regarding incompatibility between uses and to ensure that identified values are adequately protected.

Commercial Use

All existing commercial bait fishing and commercial bear hunting (within BMAs) operations are permitted to continue. Commercial bear hunting operations is permitted and the transfer of existing licenses is allowed.

Existing commercial fur harvesting operations are permitted to continue. New operations may be considered subject to a Test of Compatibility.

Aboriginal Interests

The Wapus Creek Conservation Reserve is within the Matachewan First Nation's area of interest and the Temagami First Nation's land claim area. Aboriginal and treaty rights will continue to be respected throughout the management of this conservation reserve. Any future proposal(s) and or decision(s) that have potential impact(s) on individual aboriginal values and or communities will involve additional consultation with the affected aboriginal groups. Neither the regulation of this conservation reserve nor the approval of this SCI will have bearing on the Temagami land claim.

Tourism/Recreation

The earth and life science features and their protection, shall be the overall theme for tourism. Small-scale infrastructures for enhancing tourism and recreation (i.e., warm-up shelter) may be considered, providing they pass a Test of Compatibility and other MNR requirements.

Most recreational activities that have traditionally been enjoyed in the area can continue provided they pose no threat to the natural ecosystems and features

protected by the conservation reserve. These permitted activities include walking, hiking, wildlife viewing, fishing, hunting, snow shoeing, and cross-country skiing.

Snowmobiles and All Terrain Vehicles (ATVs) are permitted on existing trails and forest access roads within the Conservation Reserve. Under the *OLL LUS* (MNR, 1999), all mechanized travel is restricted to existing trails. Off trail vehicle use is permitted for the retrieval of game only. The use of existing trails, within the Wapus Creek Conservation Reserve, does not degrade the values of this site.

Existing trails for hiking, snowmobiling, ATV use, cycling, horseback riding and cross-country skiing can continue. To ensure the quality of the representation is maintained, all trails and old forest access roads within the site should be identified via new technologies (i.e. GPS) to ensure a record of these features exists. New trails can be considered through a Test of Compatibility.

Finally, conflict resolution between recreational uses will be a priority. This will be achieved by adhering to the objectives of this SCI with input from relevant user groups. The level of safety and compatibility between activities will determine permitted uses (i.e.Test of Compatibility).

Client Services

Clients indicating their interest in the management, planning and future use of this conservation reserve will be put on a mailing list and notified of any future planning concerning the site.

Present client services such as supplying maps, fact sheets and other information will also continue. Information may be delivered from different sources; however, MNR will be the lead agency for responding to inquiries regarding access, permitted and restricted activities, values and recreation opportunities. A management agreement may be pursued with an appropriate partner to share responsibilities for information services and the delivery of other aspects of this SCI in the future.

6.3 Specific Feature/Area/Zone Management Strategies

There are no specific management strategies for the maintenance/protection/enhancement of selected resources within the conservation reserve. Development of such strategies will require an amendment to the SCI.

6.4 Promote Inventory, Monitoring and Assessment Reporting (IMAR), and Research.

Scientific research by qualified individuals, which contributes to the knowledge of

natural and cultural history, and to environmental and recreational management, will be encouraged.

Additional life science inventory or research is required at this time to refine values and features. Additional assessment and monitoring of the disturbed areas, including trail and old road locations, within the site should occur prior to any additional management direction being finalized in a vegetation management plan for the area.

Research related to the study of natural processes will be encouraged provided it does not harm the values of the reserve. The Elk Lake/Matheson Area Supervisor or District Manager may approve the removal of any natural or cultural specimen by qualified researchers. All such materials removed remain the property of the Ministry of Natural Resources. All research programs will require the approval of the Ministry of Natural Resources and will be subject to Ministry policy and other legislation.

New research developments such as campsites, privies, trails or developed access points or activities will not be considered until a Test of Compatibility is conducted and the proposal is approved by the Elk Lake/ Matheson Area Supervisor or District Manager. The Test of Compatibility or environmental screening process could include a review of the demand for structures or activities and may require more detailed life or earth science or cultural information and possibly more detailed management plan.

Approved research activities and facilities will be compatible with the site's protection objective. Permanent plots or observation stations may be established to which researchers can return over time. Any site that is disturbed will be rehabilitated as closely as possible to its original state.

6.5 Implementation, and Plan Review Strategies

Wapus Creek Conservation Reserve SCI will be reviewed on an ongoing basis and as required.

Implementation of the SCI and management of the reserve are the responsibility of the Elk Lake/Matheson Area Supervisor. Partnerships may be pursued to address management needs.

If changes in management direction are needed at any time, the significance of the changes will be evaluated. Minor changes that do not alter the overall protection objectives may be considered and approved by the District Manager without further public consultation and the plan will be amended accordingly. In assessing major changes, the need for a more detailed Resource Management Plan will first be considered. Where a Resource Management Plan is not considered necessary or feasible, a major amendment to this SCI may be

considered with public consultation. The Regional Director must approve major amendments.

6.6 Marketing Strategies

Wapus Creek Conservation Reserve will be marketed as a representative natural area having earth and life science values, as well as certain recreational values. Marketing efforts to increase use are not a priority and will be kept to a minimum.

6.7 Boundary Identification

There is no stated policy to mark the boundaries of a Conservation Reserve. Local management discretion can be used to determine where boundary marking may be appropriate. In order for restrictions to be enforceable, signs must be placed in accordance with the Trespass to Property Act or subsection 28 (1) of the Public Lands Act to advise against any recreational activities.

Figure 2.0 Photo of the northwest corner of the site, incorporating Wapus Creek and its tributary. Photo by Erica Coulson, 2000.

7.0 REFERENCES

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_____. Transmission Lines 1:600 000 Mapping.

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Appendix #1
Public Consultation Summary

SCI Public Consultation Summary (C1595)

Date Received	Client	Comment	Action Taken	Date Responded
07-Sep-00	#1	Was concerned with future use of OLL sites and about access to lakes within this particular site.	Explained that he can continue to hunt, fish and trap but no hydro, mining or forestry development will occur. Also explained that access to lakes would not be affected, as long as it was an existing road or trail.	07-Sep-00
06-Oct-00	#2	Was not happy with consultation package or map sizes. Also was concerned with fishing and hunting in OLL sites. Also wanted information on roads and access to sites.	Explained that because of the variety of sizes of the sites, that it is not possible to have both scale and paper sizes the same for all sites. Also, fishing and hunting could continue as it had in the past, as well that existing roads would continue to be available for access including maintenance and upgrading.	23-Oct-00
08-Sep-00	#3	Client was concerned that the MNR will not be able to monitor and protect these new proposed protected areas because of the staff shortage.	She was sent a package of the 26 sites currently being proposed for OLL including maps and fact sheets.	08-Sep-00
08-Feb-01	#4	Requested maps and some info regarding all OLL sites, as he was speaking on behalf	He was sent, via mail, info on existing and new trails, as well as	08-Feb-01

		of a snowmobile club. He was asking about trails and development of new trails for the purpose of snowmobiling.	provided with the strategy and all 26 site maps.	
18-Jan-02	#5	Wanted to know if there were any changes from previous correspondence on OLL sites (Bear Management Areas). Was also interested in updated maps for comparison.	Advised client that there is a website regarding OLL. Forwarded copy of permitted uses for OLL sites.	18-Jan-02
18-Jan-02	#6	Requested better maps showing boundaries of OLL sites.	Sent email with web address for OLL.	18-Jan-02
27-Jan-02	#7	Client had questions regarding forest reserves within conservation reserves. Also had questions on mining activities in OLL sites.	Explained that no information specifically on forest reserves was in the report. Forwarded sections on natural heritage stewardships to help answer any questions. Also sent info on mining interest.	28-Jan-02

Appendix #2
SCI Consultation Ad

Preparation of Statements of Conservation Interest

Kirkland Lake District

As part of the ongoing implementation of Ontario's Living Legacy, the Kirkland Lake District Ministry of Natural Resources (MNR) is preparing Statements of Conservation Interest (SCI) for six conservation reserves. The ministry invites you to participate in the review of the draft statements of conservation interest for the Wapus Creek, Brace Creek Outwash Plain, Big Spring Lake Bedrock, Hilliardton Marsh, McGarry Township Forest, and East Larder River Bedrock Conifer Conservation Reserves.

The statements of conservation interest will clarify the values and uses within the individual conservation reserves and provide direction on how the area will be managed.

The six sites are located in the following townships:

CONSERVATION RESERVE	AREA (ha)	TOWNSHIPS
C1595 Wapus Creek	2 216	Leonard, Leith, Ray, North Williams
C1599 Brace Creek	4 705	Ray, Leckie
C1617 Big Spring Lake Bedrock	973	Barber, Cane
C1704 Hilliardton Marsh	5 787	Ingram, Pense, Hilliard, Brethour, Harley, Casey
C1705 McGarry Township Forest	1 634	McGarry, McFadden
C1707 East Larder River Bedrock Conifer	7 089	McFadden, Rattray, Skead, Bayly, Mulligan

The Ministry of Natural Resources (MNR) is collecting comments and information regarding the draft statements of conservation interest under the authority of the *Environmental Assessment Act* to assist in making decisions and determining future public consultation needs. Comments and opinions will be kept on file for use during the plan's operating period and may be included in the study documentation, which is available for public review.

Under the *Freedom of Information and Protection of Privacy Act* (1987) personal information may be used by the Ministry of Natural Resources to seek public input on the other resource management surveys and projects. For further information on this Act, please contact **Eleanor Moro at (705) 568-3244.**

If you wish to become part of the local mailing list for these sites or if you have specific questions or concerns, please contact:

Shaun Walker
District Planner
Ministry of Natural Resources
Kirkland Lake District
P.O. Box 910, 10 Government Road East
Kirkland Lake, ON
P2N 3K4
Tel: (705) 568-3231
Fax: (705) 568-3200

Please respond by September 17, 2002

Renseignement en français: (705) 568-3222

Ontario

Appendix #3
Recreational Inventory Checksheet

Appendix #4
Procedural Guideline B – Land Uses – Test of Compatibility
(PL Procedure 3.03.05)

Appendix #4
Procedural Guideline B – Land Uses – Test of Compatibility
(PL Procedure 3.03.05)

The Conservation Reserve policy provides broad direction with regard to the permitted uses. The policy provides **only an indication** of the variety of uses that will be considered acceptable in Conservation Reserves. The only caution is that **"any new uses, and commercial activities associated with them, will be considered on a case by case basis and, they must pass a test of compatibility to be acceptable."**

What does a "test of compatibility" mean? An examination of this must start from the premise of why an area is set aside – specifically, its representative natural heritage values. Criteria are then identified to guide compatibility considerations. These criteria apply to the long-term acceptability of both existing uses and new uses.

1. **Conformity to SCI/RMP**: SCI describes values for which an area has been set aside and the range of appropriate uses that will be permitted in the area. SCI may also speak to the acceptability of other 'new' uses currently not occurring in the area.

   The first 'test' is: "do proposed new land uses and/or commercial activities conform to the direction of the SCI/RMP for the Conservation Reserve? Would the new use(s) depart from the spirit of appropriate indicator land uses in the SCI/RMP?"

2. **Impact Assessment**: If the proposed use(s) pass test 1 it is important to determine their impact on the area before they are approved. This should include the following:

   - Impact on **natural heritage values**: "will the new use(s) impact any natural values in the area? If so, how and to what degree? Is it tolerable?
   - Impact on **cultural values**: "will the new use(s) impact any historical or archaeological values in the area?
   - Impact on **research activities**: "will the new use(s) affect research activities in the area?"
   - Impact on **current uses**: "will the new use(s) have any negative impact on the array of current uses?"
   - Impact on **area administration**: "will the new use(s) increase administrative cost and/or complexity?" (For example, the cost of area monitoring, security or enforcement).
   - Impact on **accommodating the use outside** the Conservation Reserve: "Could the use(s) be accommodated as well or better outside the Conservation Reserve?"

- Impact on **socio-economics of the area**: "will the new use(s) affect the community (ies) surrounding the area in a positive or negative way?" (For example, will the new use make an area less remote thereby affecting a local tourism industry that is dependent on the area's remoteness for its appeal?).
- Impact on **area accessibility**: "does the new use(s) give someone exclusive rights to the area or a portion of the area to the exclusion of other existing uses?"

Appendix #5
Procedural Guideline C – Research Activities in Conservation Reserves

Appendix #5
Procedural Guideline C – Research Activities in Conservation Reserves

Purpose

To encourage contributions to the goal of conservation reserves by:

- Providing direction for research activities associated with conservation reserves: and
- Establishing a process for the review and approval of proposals by researchers, which could have an impact on the values protected by the conservation reserve.

Definition

Research means any investigation or study of the natural, cultural, social, economic, management or other features of characteristics of conservation reserves.

Guidelines

Research will be encouraged to provide a better understanding of the natural values protected by a conservation reserve and to advance their protection, planning and management. The Statement of Conservation Interest will define, for each conservation reserve, the key research issues, set out the parameters within which research may occur and identify research needs.

Applications and Approvals

Researchers must apply in writing to the Area Supervisor for permission to conduct research. The request letter must contain a statement explaining why the proposed research should be undertaken in the particular conservation reserve in preference to another location.

Proposals will be reviewed and approved by the Area Supervisor, guided by the Statement of Conservation Interest prepared for each reserve (See Guideline A – Resource Management Planning) and using Guideline B- Land Uses – Test of Compatibility. Permission must be granted in writing, including any conditions to be met in conducting the research, prior to the undertaking of any research project.

Terms and Conditions

Permission to conduct research under this policy will be valid for a period of 12 consecutive months from date of issue. Permission to continue a research project for additional periods of 12 months or less may be granted upon submission of a

written request and progress report. The Ministry may require the posting of collateral to assure that the terms and conditions of granting permission are to be met.
The Area Supervisor may suspend or revoke permission at any time for failure on the part of the researcher to meet:

1. The intent or conditions of this policy.
2. The requirements under the Public Lands Act, including all amendments, where applicable.
3. The requirements under any other Act or Regulations or Ontario or Canada, including those governing the taking, handling, storing, confining, trapping, excavating and marketing any specimen, artifact, information or action (for example, scientific collector's permit).
4. The conditions and agreements specified in granting permission.

Final Report

The researcher will submit copies of reports, publications and theses following from the results of the project to the Area Supervisor.

Appendix #6
Crown Land Use Atlas – Policy Report

Ministry of Natural Resources

Ontario

CROWN LAND USE ATLAS – POLICY REPORT

C1595
Wapus Creek *Updated: September 25, 2002*

IDENTIFICATION

ID:	C1595
Area Name:	Wapus Creek
Area (ha):	2 216
Designation:	Conservation Reserve (Ontario's Living Legacy)
District(s):	Kirkland Lake

Description:

This site represents part of an outwash plain marking an ice marginal position during the deglaciation of northeastern Ontario. The ice marginal position is demarcated by a steep, well defined, ice-contact slope associated with a discontinuous, low-relief ridge. The area upglacier of the ice marginal position is underlain predominantly by deposits of ice-contact stratified drift with numerous hummock and kettle forms. In this area, at least four esker systems mark the position of subglacial conduits along which water and sediment was transported to the ice margin. The area downglacier of the ice marginal position is underlain by post-glacier outwash sand and gravel.

Wapus Creek was regulated as a conservation reserve on May 8, 2002.

Land Use Intent

Management of this area is also governed by the general policies contained in the Land Use Strategy (1999).

Management Direction:

Those uses and management activities not listed in the following table are governed by existing conservation reserve policy. Over time the management direction will be elaborated in a Statement of Conservation Interest or Resource Management Plan. Any new uses, and commercial activities associated with conservation reserves, will be considered on a case by case basis, and they must pass a test of compatibility to be acceptable. Compatibility is normally determined through a planning process.

ACTIVITY	PERMITTED	GUIDELINES
COMMERCIAL ACTIVITIES		
AGGREGATE EXTRACTION	No	
BAITFISHING		
Existing:	Yes	Existing uses are permitted to continue, unless there are significant demonstrated conflicts. New operations can be considered, subject to the 'test of compatibility".
New:	Maybe	
COMMERCIAL FISHING		
Existing:	No	Existing uses are permitted to continue, unless there are significant demonstrated conflicts. New operations can be considered, subject to the 'test of compatibility".
New:	Maybe	
COMMERCIAL FUR HARVESTING		
Existing:	Yes	Existing uses are permitted to continue, unless

New:	Maybe	there are significant demonstrated conflicts. Existing trap cabins can continue; new cabins are not permitted. New operations can be considered, subject to the 'test of compatibility".
COMMERCIAL HYDRO DEVELOPMENT	No	
COMMERCIAL TIMBER HARVEST	No	
COMMERCIAL TOURISM		
Existing:	No	Existing authorized facilities can continue,
New:	Maybe	unless there are significant demonstrated conflicts. New tourism facilities can be considered as part of planning process.
▪ Bear Hunting by Non-residents (guided)		
Existing:	Yes	Existing authorized operations permitted to
New:	No	continue. New operations not permitted
▪ Outfitting services		
Existing:	Yes	Existing authorized operations permitted to
New:	Maybe	continue. New operations can be considered as part of planning process.
▪ Outpost camps		
Existing:	No	Existing authorized operations permitted to
New:	Maybe	continue. New operations can be considered as part of planning process.
▪ Resorts/lodges		
Existing:	No	Existing authorized facilities permitted to
New:	Maybe	continue. New facilities can be considered during the planning for an individual reserve.
ENERGY TRANSMISSION AND COMMUNICATION CORRIDORS		
Existing:	No	These facilities should avoid conservation
New:	No	reserve lands wherever possible.
FOOD HARVESTING (COMMERCIAL)		
Existing:	Maybe	
New:	Maybe	
MINERAL EXPLORATION AND DEVELOPMENT	No	
PEAT EXTRACTION	No	
WILD RICE HARVESTING		
Existing:	No	
New:	Maybe	
LAND AND RESOURCE MANAGEMENT ACTIVITIES		
CROWN LAND DISPOSITION		
Private Use:	Maybe	Sale of lands is not permitted, except for minor
Commercial Use:	Maybe	dispositions in support of existing uses (e.g. reconstruction of a septic system). Renewals of existing leases and land use permits are permitted. New leases or land use permits permitted for approved activities. Tourism facilities can apply to upgrade tenure from LUP to lease.
FIRE SUPPRESSION	Yes	Fire suppression policies are similar to adjacent Crown lands, unless alternative fire

		policies have been developed through a planning process.
FISH HABITAT MANAGEMENT	Maybe	
FISH STOCKING	Maybe	Conservation Reserve Policy indicates that 'featured species management' may be permitted.
INSECT/DISEASE SUPPRESSION	Maybe	Control of insects will be addressed on a case-by-case basis.
INVENTORY/MONITORING	Yes	
PRESCRIBED BURNING	Maybe	
ROADS (RESOURCE ACESS)		
Existing:	Yes	Existing roads can continue to be used.
New:	No	Continued use will include maintenance and may include future upgrading. New roads for resource extraction will not be permitted, with the exception of necessary access to existing forest reserves for mineral exploration and development.
VEGETATION MANAGEMENT	Maybe	Conservation Reserve policy indicates that Featured Species Management and Natural Systems Management may be permitted. Vegetation Management can be considered in the planning process.
WILDLIFE POPULATION MANAGEMENT	Maybe	
SCIENCE, EDUCATION AND HERITAGE APPRECIATION		
COLLECTING	Maybe	
HISTORICAL APPRECIATION	Yes	
NATURE APPRECIATION	Yes	
PHOTOGRAPHY AND PAINTING	Yes	
RESEARCH	Yes	
WILDLIFE VIEWING	Yes	
RECREATION ACTIVITIES AND FACILITIES		
ALL TERRAIN VEHICLE USE		
ON TRAILS:	Yes	Existing use permitted to continue where it does not adversely affect the values being protected. ATV use off trails is not permitted, except for direct retrieval of game.
OFF TRAILS:	No	
CAMPGROUNDS	Maybe	
FOOD GATHERING	Yes	
HORSEBACK RIDING (TRAIL)	Yes	Existing use on trails permitted.
HUNTING	Yes	
MOUNTAIN BIKE USE	Yes	Existing use on trails permitted.
MOTOR BOAT USE		
Commercial:	Yes	
Private:	Yes	
NON-MOTORIZED RECREATION TRAVEL	Yes	
PRIVATE RECREATION CAMPS (HUNT CAMPS)		
Existing:	No	
New:	No	
ROCK CLIMBING	Maybe	
SNOWMOBILING		

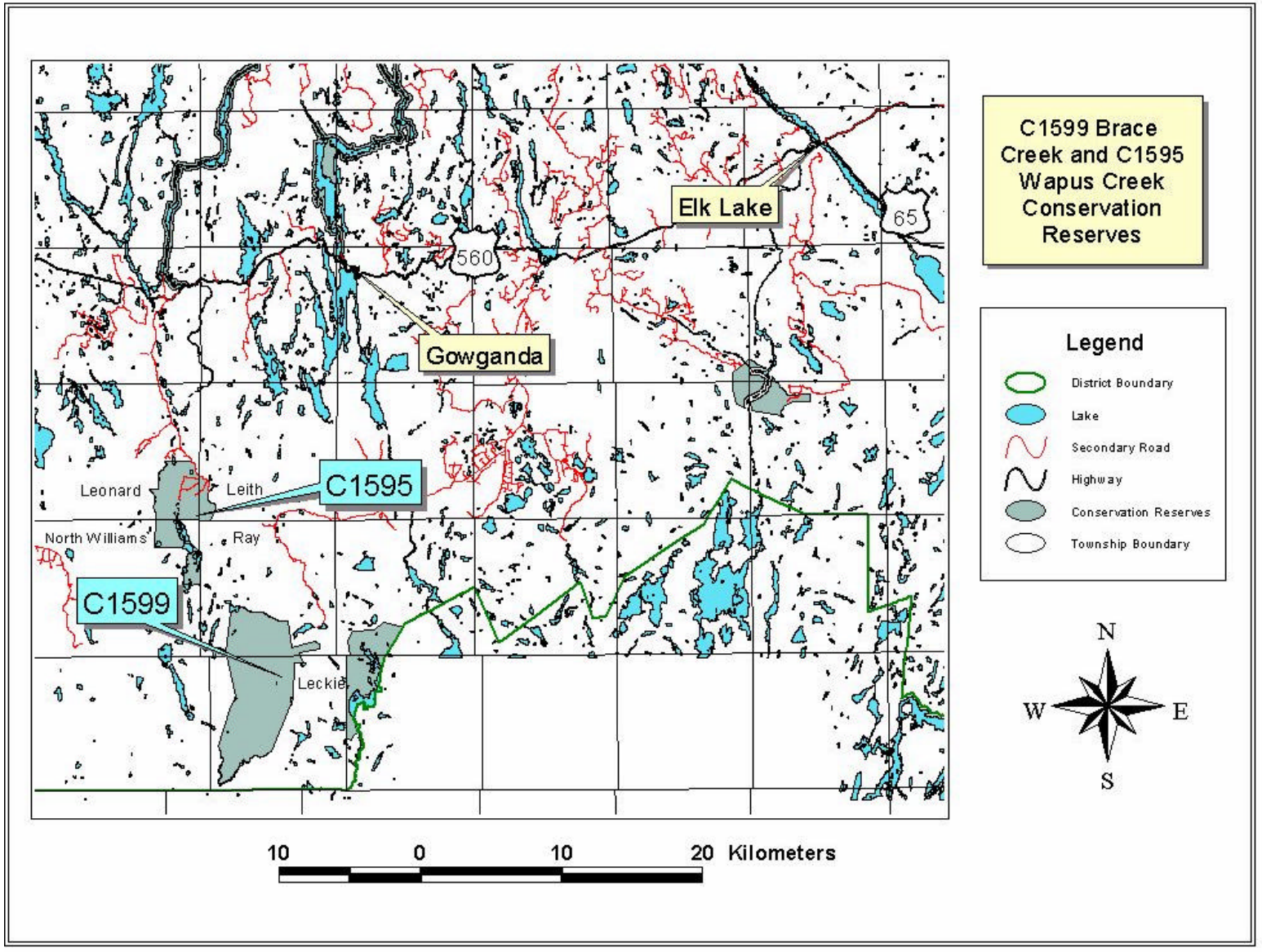
On Trails: Off Trails:	Yes Maybe	Existing use permitted to continue where it does not adversely affect the values being protected. Snowmobile use off trails is not permitted, except that snowmobiles may be used for direct retrieval of game.
SPORT FISHING	Yes	
TRAIL DEVELOPMENT	Maybe	Development of trails for a variety of activities (e.g. hiking, cross-country skiing, cycling, horseback riding, and snowmobiling) can be considered as part of the planning process.
Note: the policies outlined in this table do not supersede any Aboriginal or treaty rights that may exist, or other legal obligations.		

Source of Direction:

Management of this conservation reserve is carried out within the context of Conservation Reserve policy as amended by the policies for new conservation reserves outlined in the Ontario's Living Legacy Land Use Strategy.

Ontario's Living Legacy Land Use Strategy (1999)

Appendix #7
Locator Map


C1599 Brace Creek and C1595 Wapus Creek Conservation Reserves
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560
Gowganda
C1595
Leonard
Leith
North Williams
Ray
C1599
Leckie
Legend
District Boundary
Lake
Secondary Road
Highway
Conservation Reserves
Township Boundary
N
W
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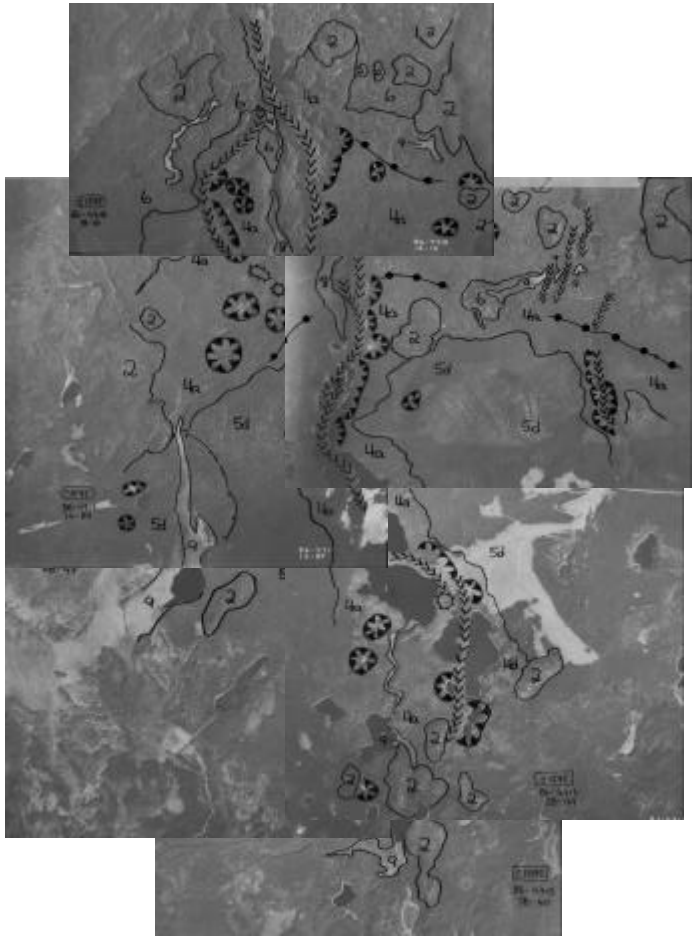
10
20 Kilometers



Map 1a
C1595 - Wapus Creek Conservation Reserve
Landforms

Scale 1:75,000

Projection: UTM NAD83 Zone 17

Landforms

- 9 Organic Deposits
- 8 Alluvial Deposits
- 6 Glaciolacustrine Deposits
- 5 Glaciofluvial Outwash Deposits
- 5d Glaciofluvial Outwash Deposits - outwash plain
- 4a Ice-Contact Stratified Drift Deposits - esker, kame, kettle complex
- 4d Ice-Contact Stratified Drift Deposits - end moraine (dominated by stratified sediment)
- 2 Bedrock-Drift Complex
- Beach Ridge or Nearshore Bar Form
- Ice-Contact Slope
- Kettle Hole
- Esker Crest or other ice-contact ridges
- Kame Hill
- Fluvial Scarp

N

Data Source:
Kristjansson, R. 2002. Surficial landform interpretation.

Map Compiled By:
Mélanie Lajeunesse
Ministry of Natural Resources
Ontario Government Complex
Hwy 101 E - P.O. Bag 3020
South Porcupine, Ont
P0N 1H0
16 July 2002

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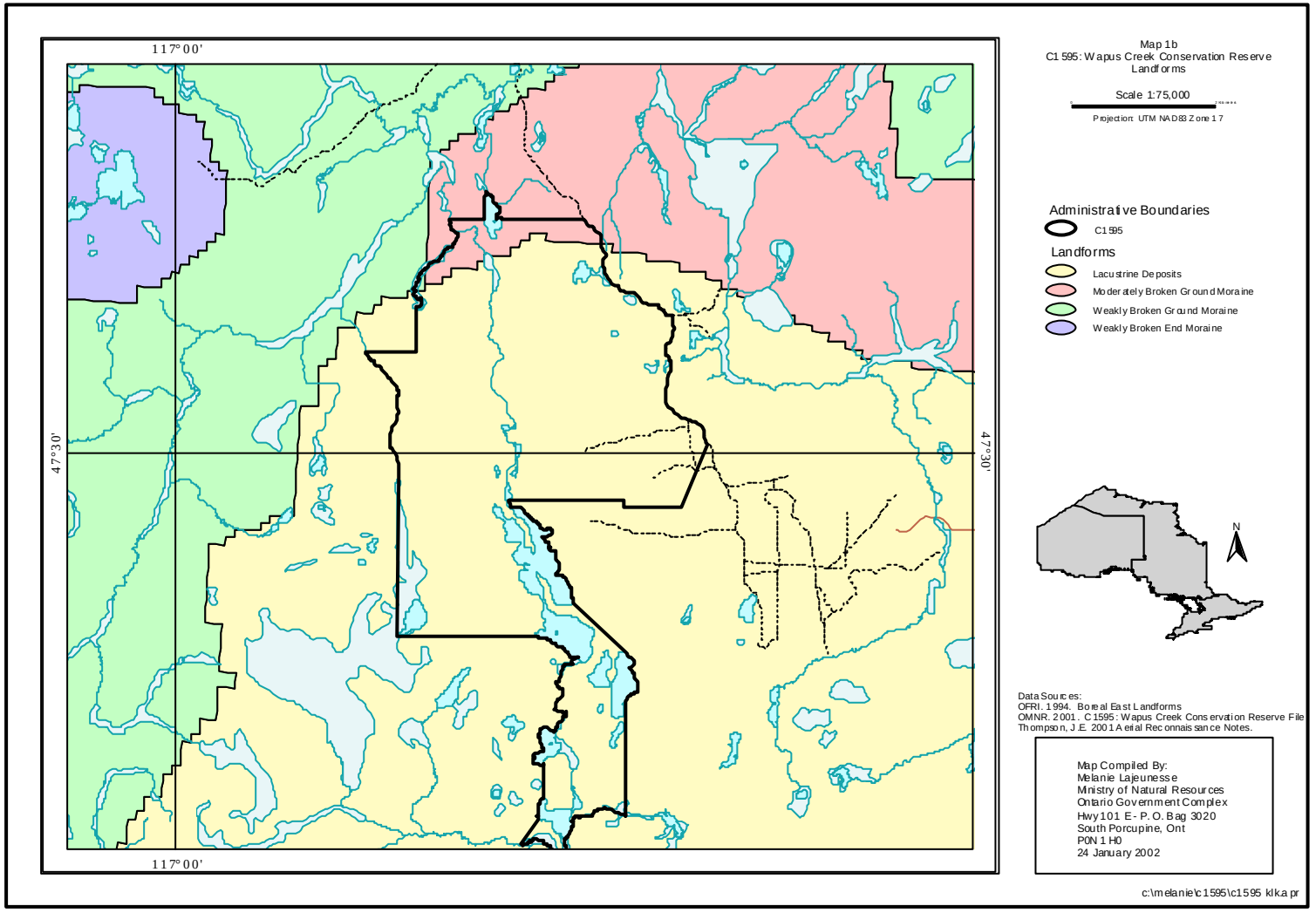
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47°30'
47°30'
117°00'
Map 1b
C1595: Wapus Creek Conservation Reserve
Landforms
Scale 1:75,000
Projection: UTM NAD83 Zone 17
Administrative Boundaries
C1595
Landforms
Lacustrine Deposits
Moderately Broken Ground Moraine
Weakly Broken Ground Moraine
Weakly Broken End Moraine
N
Data Sources:
OFRI. 1994. Boreal East Landforms
OMNR. 2001. C1595: Wapus Creek Conservation Reserve File
Thompson, J.E. 2001 Aerial Reconnaissance Notes.
Map Compiled By:
Melanie Lajeunesse
Ministry of Natural Resources
Ontario Government Complex
Hwy 101 E- P.O. Bag 3020
South Porcupine, Ont
P0N 1H0
24 January 2002
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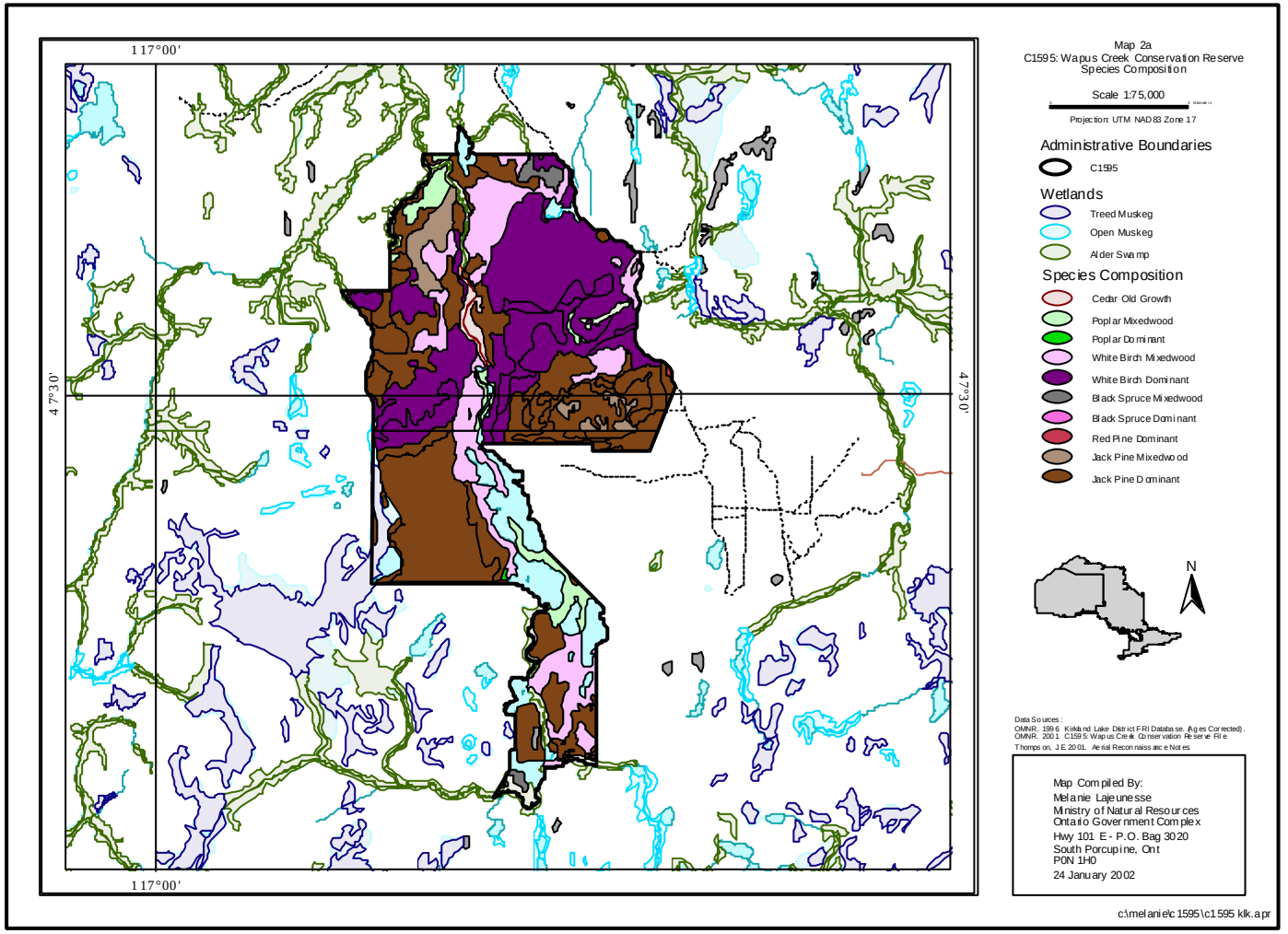
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47°30'
47°30'
117°00'
Map 2a
C1595: Wapus Creek Conservation Reserve
Species Composition
Scale 1:75,000
Projection: UTM NAD83 Zone 17
Administrative Boundaries
C1595
Wetlands
Treed Muskeg
Open Muskeg
Alder Swamp
Species Composition
Cedar Old Growth
Poplar Mixedwood
Poplar Dominant
White Birch Mixedwood
White Birch Dominant
Black Spruce Mixedwood
Black Spruce Dominant
Red Pine Dominant
Jack Pine Mixedwood
Jack Pine Dominant
N
Data Sources:
OMNR. 1996 Kirkland Lake District FRI Database. (Ages Corrected).
OMNR. 2001 C1595: Wapus Creek Conservation Reserve File
Thompson, J E 2001. Aerial Reconnaissance Notes
Map Compiled By:
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Ministry of Natural Resources
Ontario Government Complex
Hwy 101 E - P.O. Bag 3020
South Porcupine, Ont
P0N 1H0
24 January 2002
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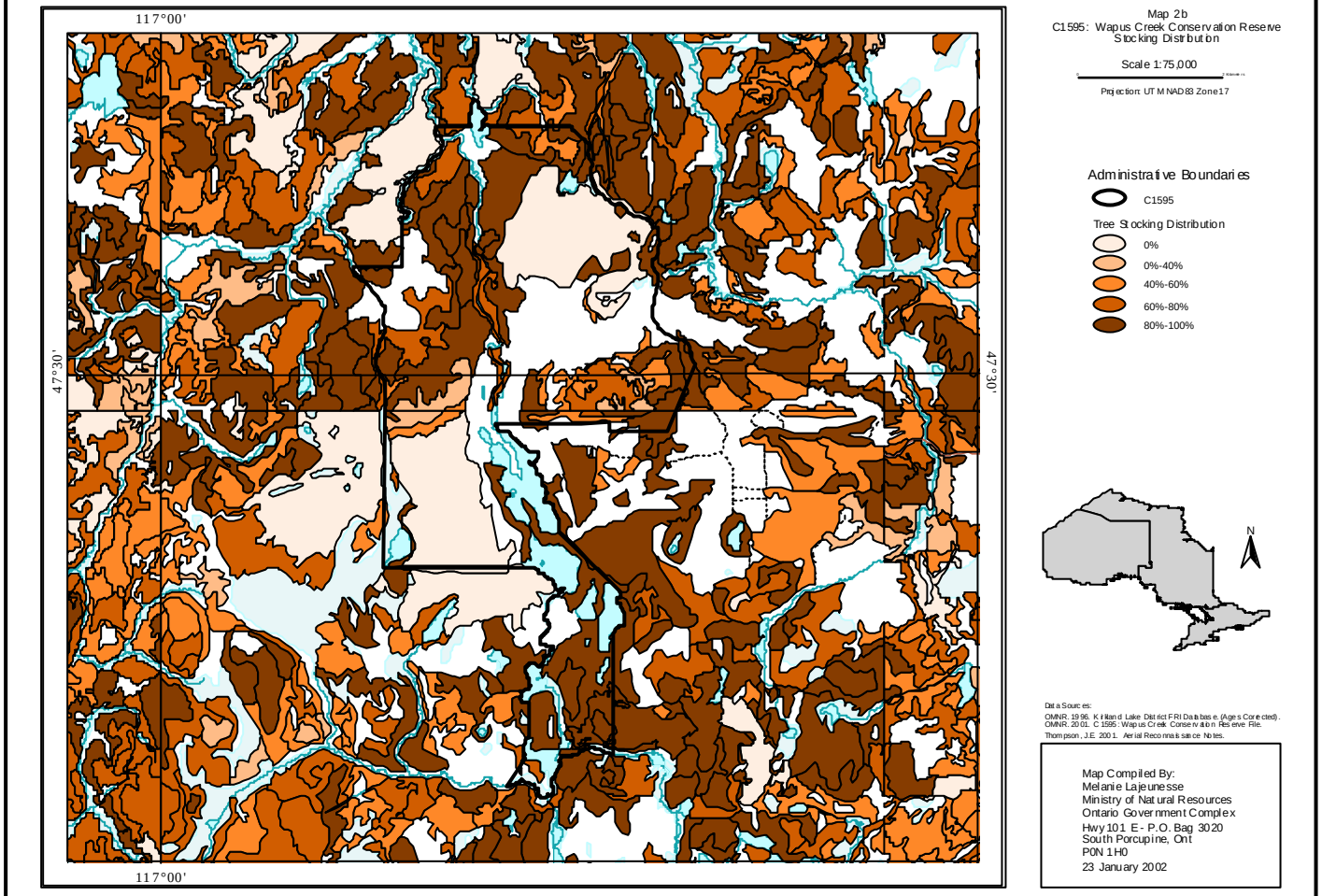

Map 2b
C1595: Wapus Creek Conservation Reserve
Stocking Distribution

Scale 1:75,000

Projection: UTM NAD83 Zone17

Administrative Boundaries

C1595

Tree Stocking Distribution

0%
0%-40%
40%-60%
60%-80%
80%-100%

Data Sources:

OMNR. 1996. Kirkland Lake District FRI Database. (Ages Corrected).
OMNR. 2001. C1595: Wapus Creek Conservation Reserve File.
Thompson, J.E. 2001. Aerial Reconnaissance Notes.

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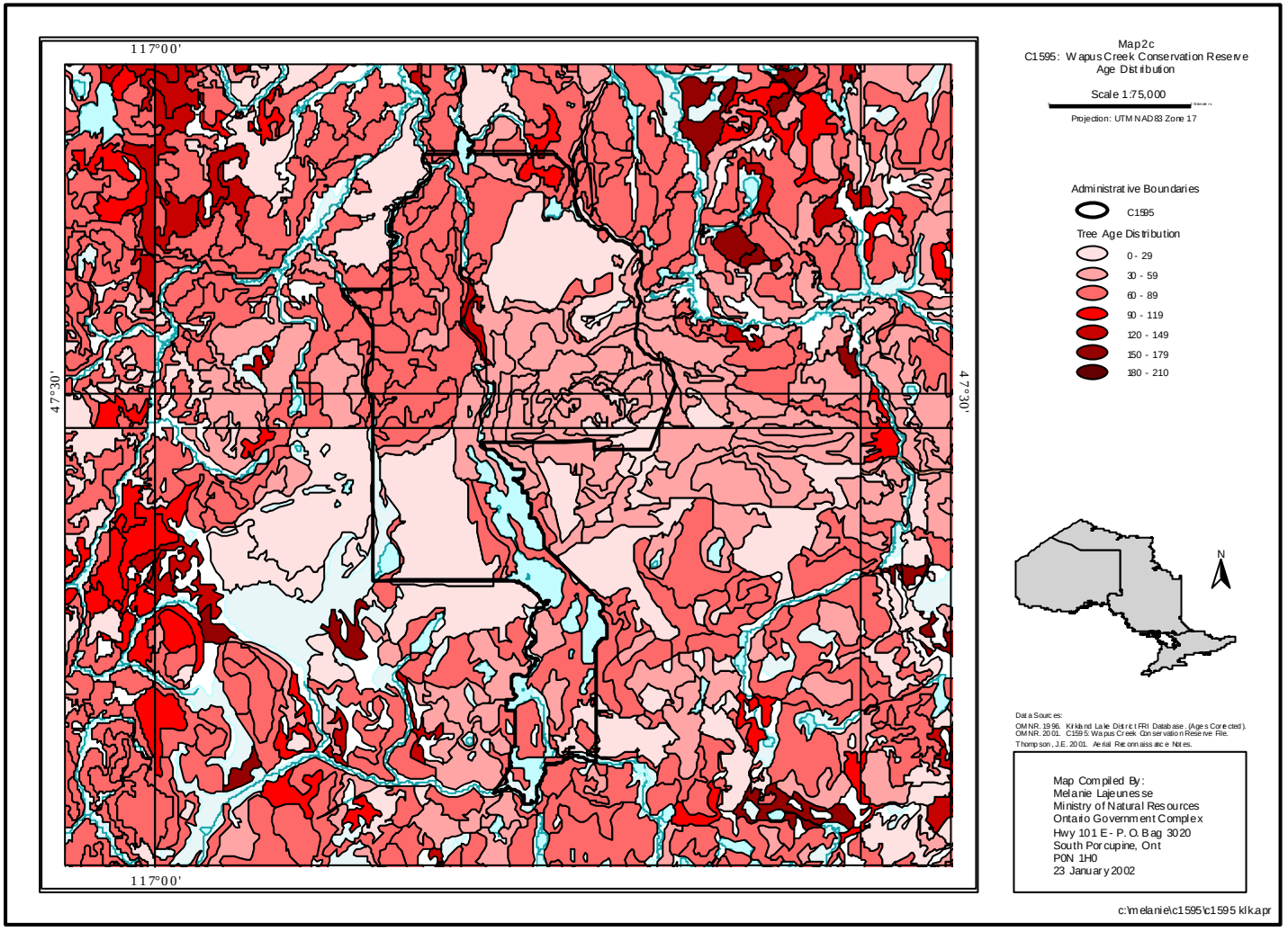
117°00'
47°30'
47°30'
117°00'
Map 2c
C1595: Wapus Creek Conservation Reserve
Age Distribution
Scale 1:75,000
Projection: UTM NAD83 Zone 17
Administrative Boundaries
C1595
Tree Age Distribution
0 - 29
30 - 59
60 - 89
90 - 119
120 - 149
150 - 179
180 - 210
N
Data Sources:
OMNR. 1996. Kirkland Lake District FRI Database. (Ages Corrected).
OMNR. 2001. C1595 Wapus Creek Conservation Reserve File.
Thompson, J.E. 2001. Aerial Reconnaissance Notes.
Map Compiled By:
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South Porcupine, Ont
P0N 1H0
23 January 2002
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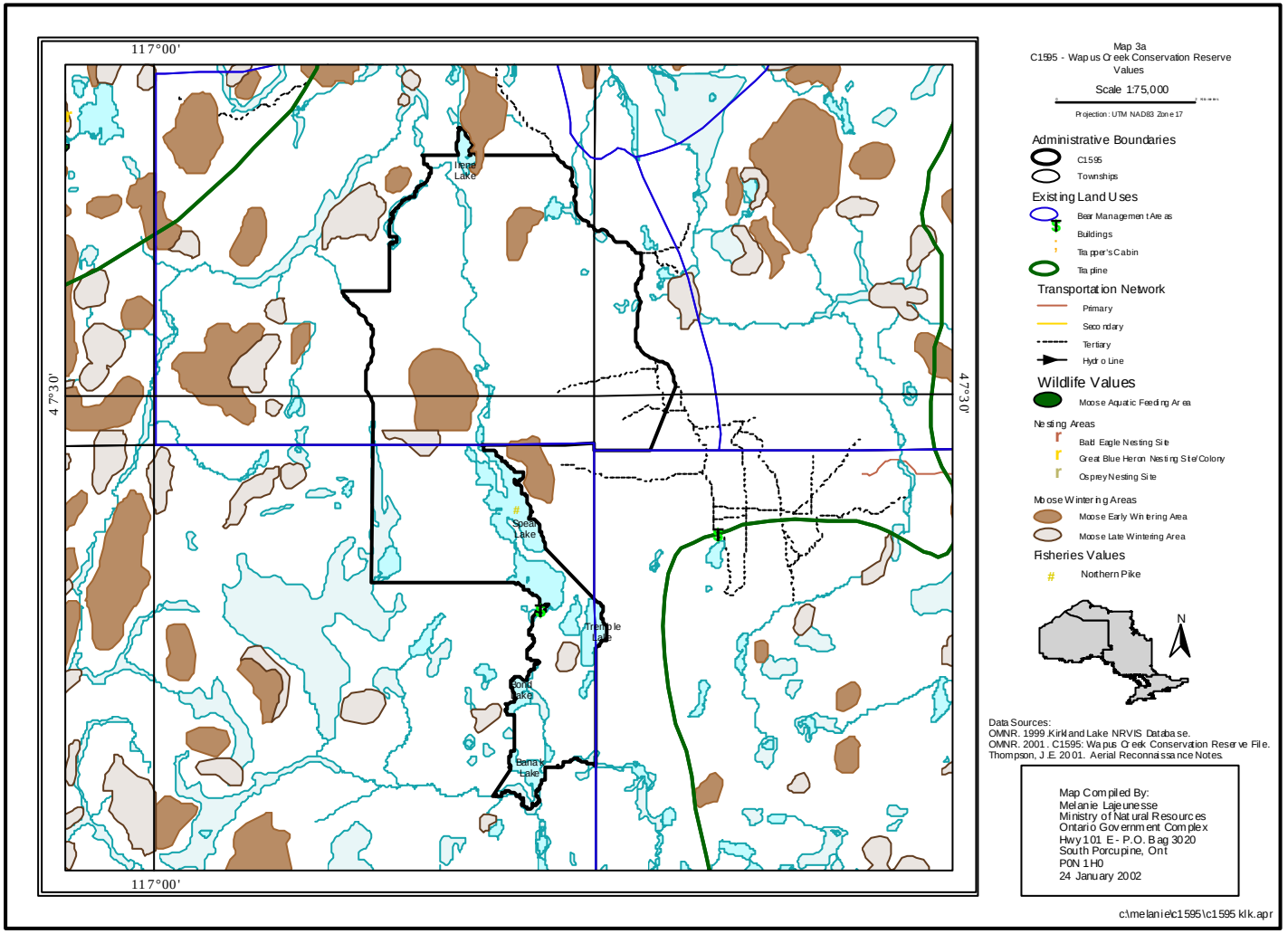
117°00'
47°30'
Irene Lake
Speal Lake
Triangle Lake
Bond Lake
Banana Lake
Map 3a
C1595 - Wapus Creek Conservation Reserve Values
Scale 1:75,000
Projection: UTM NAD83 Zone 17
Administrative Boundaries
C1595
Townships
Existing Land Uses
Bear Management Areas
Buildings
Trapper's Cabin
Trapline
Transportation Network
Primary
Secondary
Tertiary
Hydro Line
Wildlife Values
Moose Aquatic Feeding Area
Nesting Areas
Bald Eagle Nesting Site
Great Blue Heron Nesting Site/Colony
Osprey Nesting Site
Moose Wintering Areas
Moose Early Wintering Area
Moose Late Wintering Area
Fisheries Values
Northern Pike
N
Data Sources:
OMNR. 1999. Kirkland Lake NRVIS Database.
OMNR. 2001. C1595: Wapus Creek Conservation Reserve File.
Thompson, J.E. 2001. Aerial Reconnaissance Notes.
Map Compiled By:
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P0N 1H0
24 January 2002
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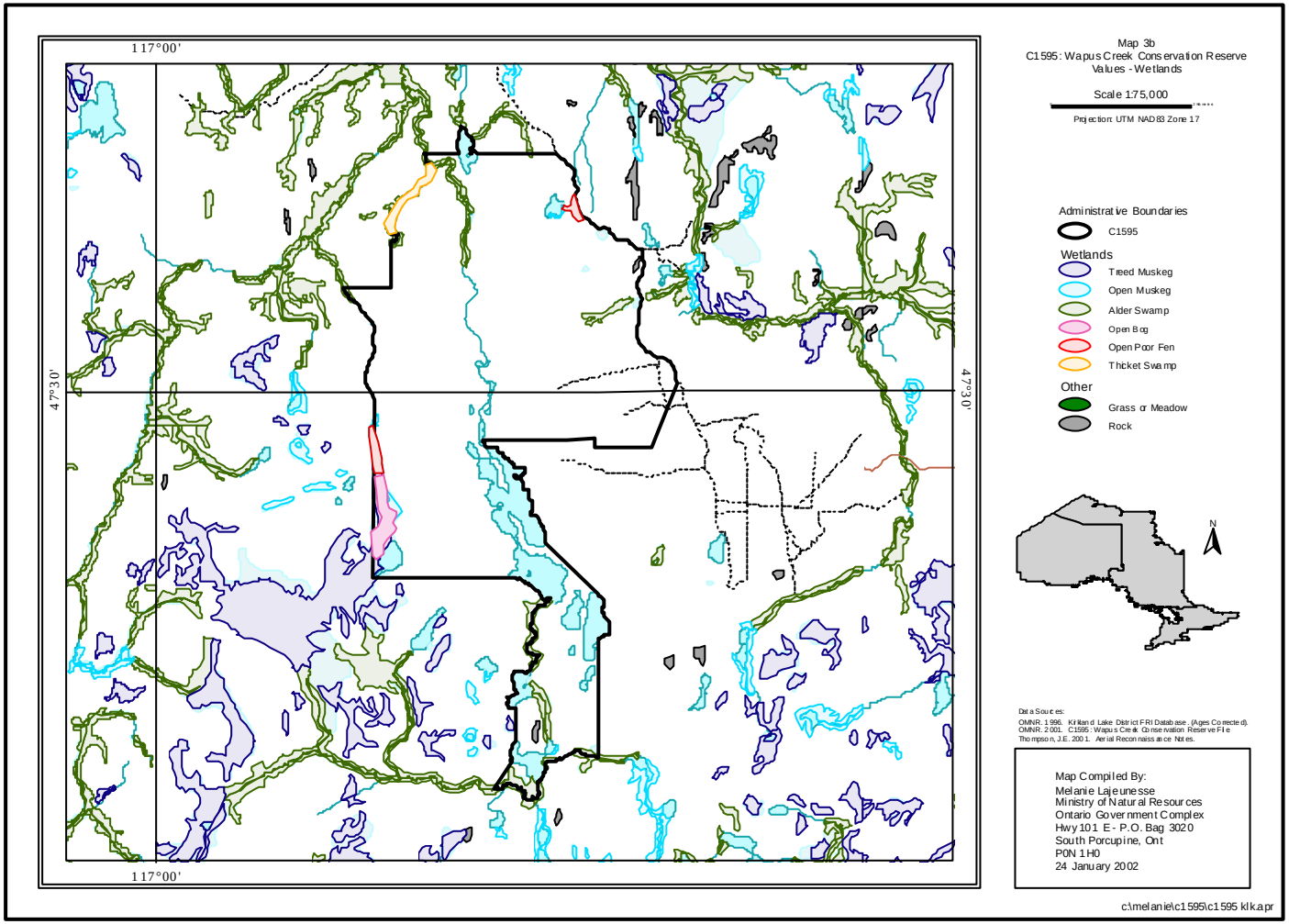
117°00'
47°30'
47°30'
117°00'
Map 3b
C1595: Wapus Creek Conservation Reserve
Values - Wetlands
Scale 1:75,000
Projection: UTM NAD83 Zone 17
Administrative Boundaries
C1595
Wetlands
Treed Muskeg
Open Muskeg
Alder Swamp
Open Bog
Open Poor Fen
Thicket Swamp
Other
Grass or Meadow
Rock
N
Data Sources:
OMNR. 1996. Kirkland Lake District FRI Database. (Ages Corrected).
OMNR. 2001. C1595: Wapus Creek Conservation Reserve File
Thompson, J.E. 2001. Aerial Reconnaissance Notes.
Map Compiled By:
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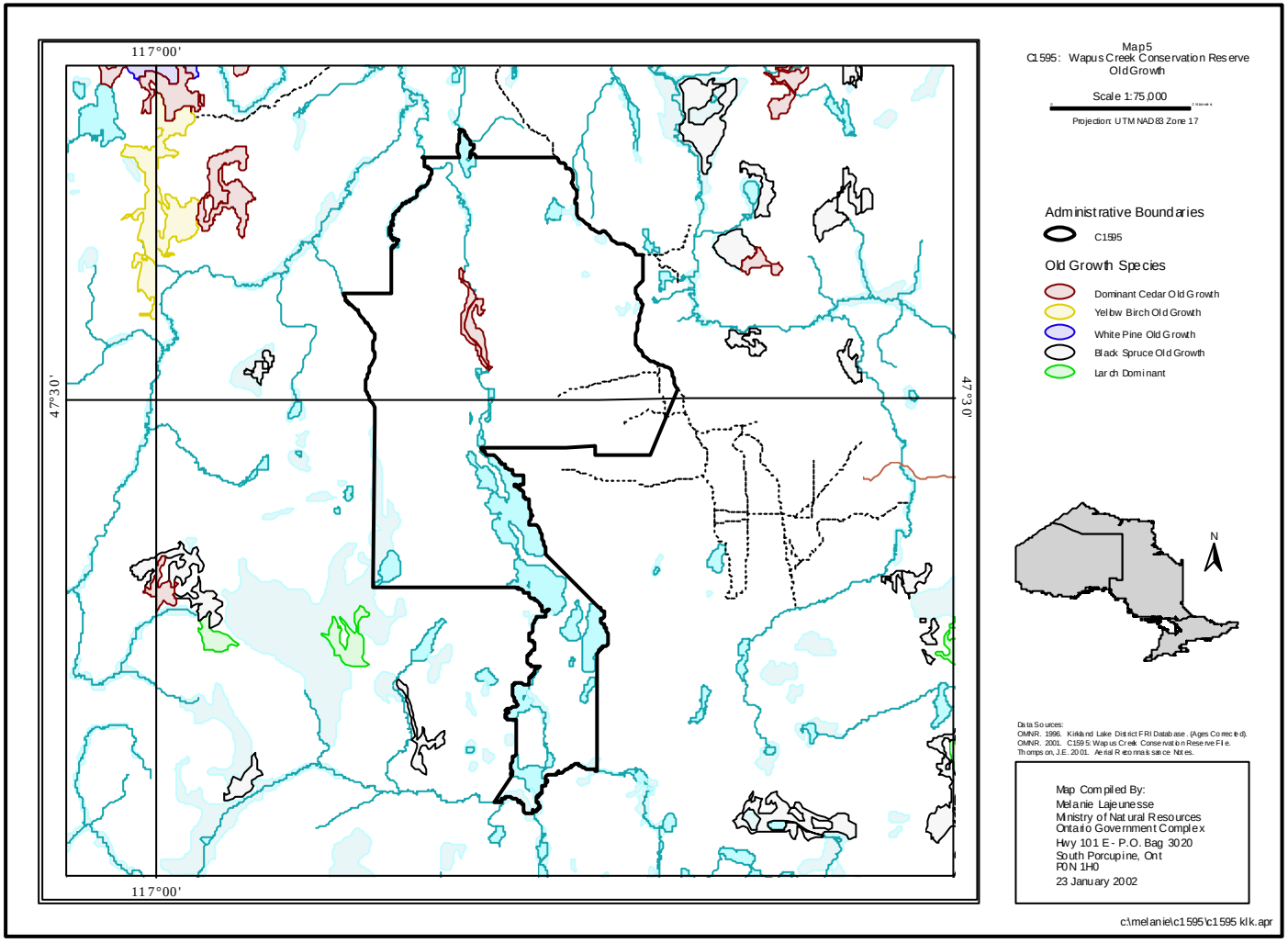
P0N 1H0
24 January 2002
c:\melanie\c1595\c1595 klka.pr


117°00'
47°30'
47°30'
117°00'
Map 5
C1595: Wapus Creek Conservation Reserve
Old Growth
Scale 1:75,000
Projection: UTM NAD83 Zone 17
Administrative Boundaries
C1595
Old Growth Species
Dominant Cedar Old Growth
Yellow Birch Old Growth
White Pine Old Growth
Black Spruce Old Growth
Larch Dominant
N
Data Sources:
OMNR. 1996. Kirkland Lake District FRI Database. (Ages Corrected).
OMNR. 2001. C1595 Wapus Creek Conservation Reserve File.
Thompson, J.E. 2001. Aerial Reconnaissance Notes.
Map Compiled By:
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P0N 1H0
23 January 2002
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Appendix 8
Natural Heritage Area – Life Science Checksheet

NATURAL HERITAGE AREA – LIFE SCIENCE CHECKSHEET

Name	Map Name		Map Number	UTM Ref.
C1595 – Wapus Creek Conservation Reserve	Gowganda Smoothwater Lake		41P/10 41P/7	050 5000, 5261 000
Locality Timiskaming	Lat. 47 29’	Long. 80 57’	NAD 83	Min. Alt. 1200 m	Max. Alt. 1350 m

Township
Leonard, North Williams, Leith, Ray

Area
2 216 ha

Ownership
Crown

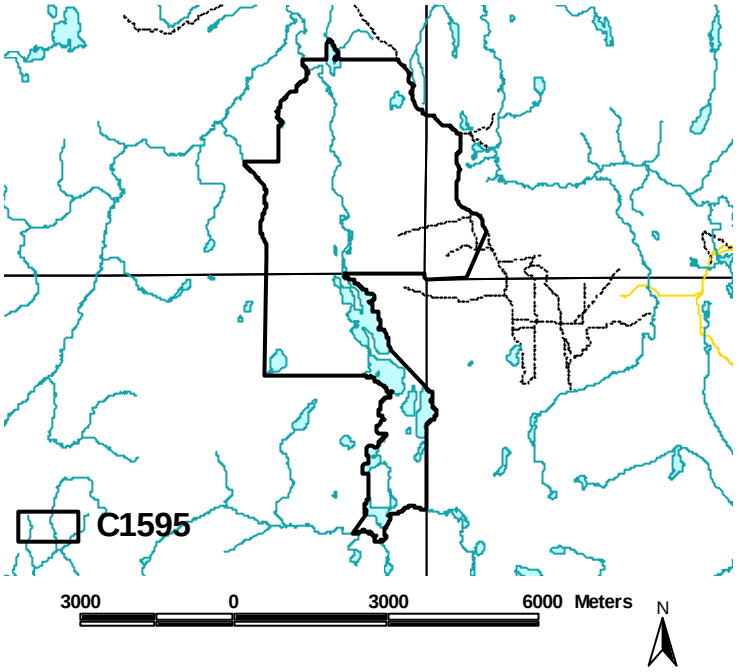
MNR Region
Northeast

MNR District	Ecoregion and Ecodistrict
Kirkland Lake	4E-4 (Hills)

Landform Unit(s)
Organic Deposits (9)
Alluvial Deposits (8)
Glaciolacustrine Deposits (6)
Glaciofluvial Outwash Deposits – outwash plain (5d)
Ice-Contact Stratified Drift Deposits (4)
Esker-kame-kettle complex (4a)
End moraine (dominated by stratified sediment) (4d)
Bedrock-Drift Complex – unsubdivided (2)
Esker
Ice-Contact Slope
Kettle Hole
Approximate Ice Marginal Position
Kame Hill
Glaciofluvial or Fluvial Scarp

Aerial Photographs
Year – Roll – Flight Line – Numbers

1986-4715-58-40
1986-4716-58-48
1986-4717-14-89 to 91
1986-4718-18-16 to 17



Physical and Biological Features

Representation

The Wapus Creek Conservation Reserve is located approximately 25 km southwest of the town of Gowganda, Ontario. The Wapus Creek Conservation Reserve, consists of approximately 2 216 hectares of land. This site is found within Leonard, North William, Leith and Ray Townships in the District of Timiskaming. The conservation reserve is located in Hills’ Temagami Site District 4E-4 (Hills 1959), which is characterized by a rolling plain of rock-knob uplands, shallowly covered with stony silty sand, broken by occasional trains of sorted coarse and medium sand (gravelly in places). Bedrock is dominantly low base and frequently moderately resistant to weathering. The materials are a mixture of low base and granitic (Poser 1992). Most of the site’s boundaries are vectored or follow the contour of several small lakes. A small portion of the eastern boundary follows Wapus Creek. The Site Regional forest climate is mid-humid, warm boreal with well-drained glacial deposits which occupy the hill slopes and basins, with peatlands restricted to local wet plains and depressions. A broken area of gently sloping uplands and moderate broad valleys of sand and silt characterize the site district (Poser 1992). Wapus Creek Conservation Reserve is located within the Temagami Forest Section of the Great Lakes St. Lawrence Forest Region. This is a large upland area north of Lake Huron, stretching east and west from Lake Temagami, and occupying a generally southward sloping surface.

This forest section consists of eastern white pine with scattered white birch and white spruce, although the spruce frequently rivals the pine in abundance. Another common but variable type is a mixture of the birch, pine and spruce, with balsam fir, trembling and largetooth aspens. Both red and jack pine are present, the former often predominant in bluffs, along ridges and the latter generally restricted to the driest sandy or rocky sites. The tolerant hardwoods, yellow birch and sugar maple, have only a scattered occurrence. The prevalent forest cover on the uplands is clearly a reflection of periodic past fires, and the sandy soils have provided conditions especially favorable for the propagation of eastern white pine, red pine and jack pine. On the lowlands, in poorly drained depressions and in wetlands, black spruce with tamarack or eastern white cedar, form well-marked communities (Rowe 1972).

Landform information provided by OFRI (1994) showed that the majority of the site consists of lacustrine deposit, however, aerial reconnaissance and photo interpretation by Kristjansson suggests a much different landform interpretation. The primary earth science features are contained within the extensive areas of ice-contact stratified drift deposits mainly esker-kame-kettle complexes. The site also contains large deposits of glaciofluvial outwash deposits. In addition, the site contains small deposits of bedrock drift and organic deposits (Map 2). For more information on the Earth Science features see Wapus Creek Earth Science Checksheet (Kristjansson 2002 (in prep)).

This site has a great esker complex south of Irene Lake, which have been effected to some extent by roads. Much of the site is mixed forest of white birch, jack pine and trembling aspen. Trembling aspen is regenerating in the disturbed areas and is at pole size, about six feet tall. Tertiary roads within this old stand are well-developed. The jack pine and Scots pine is regenerating nicely and looks in good shape. However, the trees were planted in rows, which takes away from the natural look. A large clear-cut is present in the northern section of the conservation reserve. Most of the forest communities throughout the site are mixed however coniferous species dominate the lake shores. A jack pine plantation along the eastern boundary was also observed during the aerial reconnaissance survey (Thompson 2001). A stand of large white pine and red pine is present above Tremble Lake approximately in the lower sections of the protected area. White birch and trembling aspen forest communities are growing on the top of the esker features. In general, the forest communities follow the earth science features.

The site's life science features have been greatly affected with the planting of Scots Pine, road networks, old clear-cut areas. There is little regeneration of the white birch forest communities on the outwash deposits in the southwest and northeast sections of the conservation reserve. A small disturbance just east of Irene Lake and just north of the site was also observed during the aerial reconnaissance survey (Thompson 2001). Old clear cuts to the east of Spear Lake make the chain of lakes stand out on the landscape.

The wetland along the western boundary of the site show some beaver meadow wetlands at the north, leading into a poor fen to open muskeg or bog to the south leading to peat mat to the shores of the small unknown lake (Map 8). The chain of lakes adds a good variety of features to the conservation reserve as well as the many kettles and earth science features. Tremble Lake and the small unknown lake to the south have shores with extensive "ring" beach areas with water levels dropping significantly to expose near shore habitats and creating slightly sloped beach areas.

Reviewing the OFRI (1994) landform data is was noted that the majority of the site was classified as lacustrine deposit that does not correspond to the known earth science values present within the conservation reserve. Refinement of the landforms based on this site represents part of an outwash plain marking an ice marginal position during the deglaciation of northeastern Ontario. A steep, well-defined, ice contact slope associated with a discontinuous, low relief ridge demarcates the ice marginal position. The area upglacier of the ice marginal position is underlain predominantly by deposit of ice-contact stratified drift with numerous hummock and kettle forms. In this area, at least four esker systems mark the position of subglacial conduits where water and sediment were transported to the ice margin. The area downglacial of the ice marginal position, is underlain by, post glacier outwash sand and gravel. Also, some of the larger esker systems, with adjacent planar expanses of outwash sediments, are apparent in the area downglacier of the ice marginal position.

Aerial reconnaissance survey conducted in 2001 and the aerial photo interpretation provide by Kristjansson, showed the site to have three major landform types with ice-contact stratified drift deposits dominating the site. Using Kristjansson's interpretation, the best available FRI data and note completed in the field by Thompson (2001) a minimum of 76 landform: vegetation combinations were noted (Appendix A).

Fisheries information is limited to a mixed fishery of northern pike, yellow perch and white sucker in both Bond Lake and Banak Lake. Northern pike, white sucker and white fish are present in Spear Lake. In addition, Tremble Lake supports a stocked brook trout fishery. Currently, no fisheries information is available for the other isolated lakes and creeks within the site (Map 7).

In summary, a total of 10 separate forest communities were identified (Map 4) with cedar old growth present within the site (Map 9). Jack pine and white birch communities dominate the site with eastern white cedar, poplar, black spruce and red pine complementing the other forest communities. Finally, old growth, wetlands and the beautiful chain of lakes further enhance the site's natural heritage values and diversity.

Condition

Disturbance is ranked moderate to high due to the extensive road networks and clear-cut areas associated with the site. In addition, there has been a large amount of cutting around the conservation reserve. The site's life science features have been greatly affected with the Scot pine plantations, road networks, and old clear cuts with little regeneration. Overall, the site is heavily disturbed and rehabilitation options should be reviewed.

Diversity

Diversity is a measure of the site's life and earth science heterogeneity. The evaluation is based on the number and range (variety) of the natural landscape features and landforms for earth science values and the relative richness and evenness of the site's life science components. There are three major landform or earth science features present within the site including ice-contact stratified drift deposits, glaciofluvial outwash deposits and an esker crest that follows most of the eastern boundary (Map 2). Life science diversity contains a minimum of 76 landform: vegetation combinations (Appendix A). This richness based on the number of cover types is high of such of small site. The proportion of cover type is somewhat skewed towards the white birch and jack pine communities (Map 4). However, most forest stands observed during the aerial survey in 2001 contained a wide assemblage of tree species. Wetland and aquatic values added to the site's diversity but were not considered significant. Overall, the number of communities present within a small site and the large percentage of mature forest all contribute to the site's high life science diversity rating. By protecting the full diversity of landforms in the conservation reserve, a greater diversity of vegetation types and plant and animal species is to be expected. The faunal diversity of the site is likely normal for the boreal region. However, a more definitive assessment of both floral and faunal diversity cannot be made at present, given that this was a reconnaissance level survey. A full biological inventory and evaluation would provide a more complete species list.

Ecological Considerations

The overall design of the conservation reserve is poor, since the site contains several vectored boundaries with many of the landforms and forest communities extending beyond the site's borders. A northern section of the eastern boundary follows Wapus Creek and the southern portion of the eastern boundary follows several small lakes, both good natural boundaries. The entire southern boundary follows a small tributary of Wapus Creek, a natural boundary. In addition, a portion of the western boundary follows a small stream. The other boundaries are vectored and some of the key earth science features extend north outside of the site's boundaries. The site's small size, vectored boundaries and road networks will continue to make management and protection of the core areas problematic. The site's poor design leaves many of the core forest communities and earth science features poorly protected. The site is considered to be sensitive to existing uses. In the near future ground reconnaissance should confirm current level of disturbance especially in the large clear-cut areas. Additional protection of the conservation reserve's values will have to occur outside of the site, during larger management planning exercises (FMPs).

Aggregate extraction and road construction associated with forest operations would affect the morphological integrity of the features of this site. Due to the coarse-grained character of the sediments, which generally underlie the conservation reserve, the potential for significant erosion and gully formation following the removal or alteration of the natural vegetation cover is low. However, erosion of the numerous steep slopes characteristic of this site may be a problem.

Special Features

The esker system, the ice-contact slopes and associated low-relief ridges and outwash plains are remarkable features found within the site. In addition, the chain of lakes adds a good variety of features to the site as well as the many kettles and associated earth science features. Also, the presence of large white pine and red pine forest communities north of Tremble Lake.

Major Information Sources

Boissonneau, A.N., 1968. Timiskaming and Nipissing, Surficial Geology; Cartography by Lands and Surveys Branch.
Chamber, B.A., Naylor, B.J., Niepollar, J., Merchant, B., and Uhlig, P. 1997. Field Guide to Forest Ecosystems of Central Ontario.
Crins, W.J. and P.W.C. Uhlig 2000. Ecoregions of Ontario: Modifications to Angust Hills' Site Regions and Site Districts– Revisions and Rationale.
Geomatics International. 1994. CCEA Case Studies on Ecoregions Gary Analysis: Proposed Methodology for Determination of Representiveness. Report prepared for the Canadian Council on Ecological Areas.
Hills, G.A. 1959a. A Ready Reference to the Description of the Land of Ontario and its Productivity.
Hills, G.A. 1959b. Hills Mapping.
Kristjansson, R. 2002. Earth Science Checksheet, in prep. and aerial landform/surficial material interpretation.
NTS topographic mapping (41K/16 and 41K/9).
OFRI. 1994a. Boreal East Landforms Mapping – Satellite Imagery.
Ontario Ministry of Natural Resources. 1:20,000 1994 Air Photos.
Ontario Ministry of Natural Resources. 1997c. Ontario Watershed Mapping.
Ontario Ministry of Natural Resources. Lakes 1:600,000 Mapping.
Ontario Ministry of Natural Resources. MTO Roads 1:600.000 Mapping.
Ontario Ministry of Natural Resources. Patent 1:600,000 Mapping.
Ontario Ministry of Natural Resources. Railway 1:600,000 Mapping.
Ontario Ministry of Natural Resources. Townships 1:600,000 Mapping.
Ontario Ministry of Natural Resources. Transmission Lines 1:600,000 Mapping.
Ontario Ministry of Natural Resources Sault Ste Marie District. 2001. C289 Searchmont South Forest Conservation Reserve.
Ontario Ministry of Natural Resources Sault Ste Marie District. 1995 Forest Resource Inventory Mapping (Ages Corrected).
Poser, S. 1992. Report of the status of provincial parks in the site region and districts of Ontario. Ministry of Natural Resources Report.
Rowe, J.S. 1972. Forest Regions of Canada.
Thompson, J.E. 2001. Aerial Reconnaissance Notes.

Significance Level (Provincial/Regional/Local) and Brief Summary of Major Representative Values

The esker systems, ice-contact slope and associated low-relief ridge and outwash plain are part of the Chapleau Moraines and were constructed following glacier readvance from the Chapleau I ice marginal position to the Chapleau II position. The landforms are spectacular and, as such, are considered to be provincially significant (Boissonneau 1968).

Recommendations

The following recommendations should be considered in any future planning initiatives.

1 – Any future trail development must consider the core values– especially the earth science features that are protected within the boundaries of the conservation reserve, the rational for developing trails within the site and availability of current access through the site and surrounding lands. The vegetation and shallow soils could be somewhat susceptible to disturbance along a broad front such as rock climbing. In addition, trail development in low-lying areas and wetlands should be discouraged.

2 – Any future economic or development proposals for the site will need to go through a "Test of Compatibility" that considers but not limited to the following; the current quality of representation within the site, significance and sensitivity of the values present, objectives of such proposals, abilities to provide economic opportunities outside of the site, option development, etc.

3 – Natural water level fluctuations should be allowed to continue unchecked throughout the conservation reserve. Fluctuating water levels are an important mechanism for maintaining species and community diversity in wetlands. There are no known human-made dams upstream of the reserve. Future planning should recognize that the wetlands are dependent upon natural water level fluctuations.

4 – The site should be reviewed as a potential monitoring and/or research site. The presence of old growth eastem white cedar, white pine and red pine forest communities and the excellent access could provide the Ministry of Natural Resources or associated partners with potential sampling or monitoring areas.

5 – Further analysis and classification of the vegetative communities within the site – especially the wetlands present should be considered in any future assessment of the conservation reserve.

6 – Boundaries will need to be clearly marked – especially along the vectored boundaries to ensure core values are protected. Industrial activities (e.g. Forestry) or developments associated with vectored boundaries need to ensure values within the site are considered in adjacent land use plans.
7 – At the very least the disturbed deciduous stands of poplar and white birch should be monitored over time to record the natural succession that is occurring is favorable to the parks and protected areas system. Opportunities to add vegetative diversity should be considered with local silvicultural specialists and follow directions offered from any future gap analysis evaluation that shows landform/vegetation combinations that are missing within the Site District and in which C1595 could contribute. Such direction should be part of any future forest objectives that are developed for the site.

Time Effort Spent on Site
August 15, 2001 from 3:10 p.m. to 4:21 p.m.

Date Compiled	**Compiler**
July 16, 2002	Mélanie Silver

Table 1: Landform, Forest Community Types with Ecosite Equivalents and Age Classes

C1595: Wapus Creek Conservation Reserve	White, Birch, Jack Pine, Black Spruce, Poplar	White Birch, Jack Pine, Poplar, White Spruce	White Birch, Poplar, Scots Pine	Cedar, Black Spruce, Jack Pine	Jack Pine, White Spruce, Poplar, Black Spruce, Red Pine	Jack Pine	Poplar, Jack Pine, White Birch, White Spruce	Red Pine, Jack Pine	Black Spruce, Cedar, White Spruce	Black Spruce, Larch, Black Ash
Ecosite	3[1]	3	3	13r	19	2	6c	19	13r	12
Organic Deposits						2				
Alluvial Deposits - unsubdivided				3						
Glaciolacustrine Deposits - unsubdivided						2	2		2	
Glaciofluvial Outwash Deposits - unsubdivided										
Glaciofluvial Outwash Deposits - outwash plain			2		2	2		2		
Ice-Contact Stratified Drift Deposits - esker, kame, kettle complex	2[2]	2		3		2	2	2		2
Ice-Contact Stratified Drift Deposits - end moraine										
Bedrock-Drift Complex - unsubdivided		2				2				
Beach Ridge or Nearshore Bar Form										
Ice-Contact Slope	2	2					2			2
Kettle Hole						2				
Esker Crest	2	2				2	2			
Kame Hill							2			
Fluvial Scarp										

[1] Ecosite Equivalent based on Chambers et al., 1997 and OMNR, 1999.
[2] Age Classes based on classification of ages by Geomatics International, 1997.
1 – Immature
2 - Mature

Appendix 9
Earth Science Planning Summary
Wapus Creek (C1595)

Earth Science Planning Summary

Wapus Creek (C1595)

Earth Science Features: Based on a brief helicopter reconnaissance survey and interpretation of relatively recent aerial photography (1986), the area encompassed by the Wapus Creek Conservation Reserve is immediately underlain by areas of Bedrock-Drift Complex (Unit 2), Ice-Contact Stratified Drift Deposits (Unit 4a), Glaciofluvial Outwash Deposits (Unit 5d), Glaciolacustrine Deposits (Unit 6), Alluvial Deposits (Unit 8), and Organic Deposits (Unit 9). Please refer to the attached aerial photographic interpretation for the occurrence and distribution of these surficial geological units within the conservation reserve.

The surficial geology of this conservation reserve is dominated by Ice-Contact Stratified Drift Deposits (Unit 4a) and Glaciofluvial Outwash Deposits (Unit 5d). These deposits are significant because they record at least two ice marginal positions during the deglaciation of this part of northeastern Ontario. The location of these ice marginal positions is indicated on the attached aerial photographic interpretation by the Approximate Ice Marginal Position symbol.

The first ice marginal position (i.e., the southern, more prominent position) is demarcated by a steep, well-defined, ice-contact slope associated with a discontinuous, low-relief ridge. The ice-contact slope and associated discontinuous, low-relief ridge are oriented approximately transverse to glacier flow. The area upglacier of the ice marginal position is underlain predominantly by deposits of ice-contact stratified drift with numerous hummock and kettle forms. In this area, a number of esker systems mark the position of subglacial conduits along which water and sediment was transported to the ice margin. The area downglacier of the ice marginal position is occupied by extensive outwash plains, consisting of proglacial outwash sand and gravel. Also, two of the larger esker systems are apparent in the area downglacier of the ice marginal position.

The second ice marginal position is located in the northeast part of the conservation reserve approximately 1.3 kilometres to the north of the first ice marginal position. This feature is not as prominent, nor as well developed, as the first ice marginal position.

Significance: The indicated landforms and deposits are part of the Chapleau End Moraine System. The landforms, particularly the landforms associated with the southern, more prominent ice marginal position, are spectacular, and are considered to be provincially significant.

Sensitivity: Due to the coarse-grained character of the sediments, which generally are anticipated within the conservation reserve, the potential for significant erosion and gully formation following the removal or alteration of the natural vegetation cover is low. However, erosion of the numerous steep slopes

characteristic of this site may be a problem following the removal or alteration of the natural vegetation cover.

Recommendations: With reference to any proposed future development (e.g., access or trail development), it is strongly recommended that the Kirkland Lake District Office undertake a “test of compatibility” to ensure that the condition of the earth science values is maintained.