

Enhanced Statement of Conservation Interest

for the

Kwinkwaga Ground Moraine Uplands Conservation Reserve

(C1509)

By Tom Kenerknecht, R.P.F.
November 2002

(Revised October 2004)



Ministry of
Natural
Resources

Ministère des
Richesses
naturelles

Approval Statement

I am pleased to approve this Statement of Conservation Interest (SCI) for the Kwinkwaga Ground Moraine Uplands Conservation Reserve (C1509).

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" (OMNR, 1997).

This Enhanced 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 Resource Management Plan (RMP) will be prepared with full public consultation.

This document was prepared with input from the Wawa District Information/Resource Management Team and a draft was provided to the MNR Regional Planning Unit for review.

The public was consulted prior to Kwinkwaga Ground Moraine Uplands Conservation Reserve's regulation in December 2000. This Enhanced SCI was reviewed by the Local Citizens Committee and the Pic Mobert First Nations. Comments and concerns registered then are reflected in this Statement of Conservation Interest.

The conservation reserve will be managed under the jurisdiction of the Wawa Area Supervisor of the Ministry of Natural Resources, Wawa District.

Submitted by: original signed by _____ February 25, 2005 _____
Tom Kenerknecht, R.P.F. Date
Plan Author

original signed by _____ February 25, 2005 _____
Terry Taylor Date
District Manager Recommendation

Approved by: original signed by _____ April 10, 2005 _____
Rob Galloway Date
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1.0 INTRODUCTION

In the late 1990's, a major land use planning process was undertaken which resulted in the July 1999 approval of *Ontario's Living Legacy Land Use Strategy*. Preparation of the strategy included an extensive public consultation process carried out by three citizen roundtables.

The Ontario Living Legacy (OLL) strategy provides a general framework for future land and resource use, and establishes land use categories for which more detailed management direction is given. The OLL planning area encompasses the central 45% of Ontario's land and waters, and excludes the far north and far south.

One of the four main objectives of the OLL strategy is the completion of Ontario's system of parks and other protected areas. Protected areas contribute to the representation of the province's ecosystems and natural features, and provide a wide variety of opportunities for recreation, natural and cultural heritage appreciation, and scientific study. The addition of the protected areas recommended in OLL will complete the Provincial Parks system in the OLL planning area and protect 12% of its land and water base.

During the preparation of OLL (originally the planning process was entitled *Lands for Life*) the Boreal East Roundtable, made up of members of the public representing a wide spectrum of interests, presented 5 preliminary land use options to the public. One of the five preliminary land use options included a protected area in the Kwinkwaga Ground Moraine area. However, the Boreal East Roundtable did not include this area in its *Draft Land Use Planning Recommendations*. The area was included in the next planning stage, the *Ontario's Living Legacy Proposed Land Use Strategy*, released in March 1999. Following a province-wide public review of the proposed OLL Strategy, the final *Ontario's Living Legacy Land Use Strategy* was released in July 1999. The final approved strategy recommended that a Conservation Reserve (CR), C1509, be established south of the Kwinkwaga Lake area. Recommendations for the management of the Kwinkwaga Ground Moraine Conservation Reserve have been outlined in the *Crown Land Use Policy Atlas* (<http://crownlanduseatlas.mnr.gov.on.ca>) revised October 4, 2004.

On December 21, 2000, after a public consultation phase on boundary refinement and after consultation with the Pic Mobert First Nation, Kwinkwaga Ground Moraine Uplands Conservation Reserve was regulated under the Public Lands Act. The planning area will include the regulated boundary of the CR and the two associated forest reserves (see map 8.1).

The purpose of this Statement of Conservation Interest (SCI) is to identify and describe key features in the Kwinkwaga Ground Moraine Uplands, and develop objectives and strategies to protect and enhance them. It has been decided that an Enhanced Statement of Conservation Interest will appropriately fulfill the planning and protection objectives

for this site. However, as a stewardship document, the SCI is the minimum level of direction for the conservation reserve.

The Kwinkwaga Ground Moraine Uplands CR is located in Wawa District near the Pic Mobert First Nation. An expansion of the First Nation Reserve is currently being negotiated, and an Agreement-in-Principle between Canada, Ontario, and the Pic-Mobert First Nation has been signed. The reserve expansion will result in the new reserve being diagonally adjacent to the CR (see Map 8.1).

The Conservation Reserve is 12623 hectares in area, and is administered by the Wawa District of the Ministry of Natural Resources.

Although the planning area will not extend past the Conservation Reserve and Forest Reserve boundaries, and this SCI will not provide management prescriptions to areas adjacent to the CR, the Kwinkwaga Ground Moraine will not be managed in isolation. Potential impacts from common activities (eg forest management) are identified, described, and potential mitigation measures are discussed (see section 5.0). Similarly, the CR's role in the surrounding lands and in the province's park and protected areas system is briefly discussed.

The CR will complement Ontario's system of protected areas and contribute to achievement of park class targets. The site is composed mainly of weakly broken to moderately broken ground moraine with predominantly mixed wood forest cover. Perhaps the most significant feature of the CR is the fact that most of it was burned by wildfire in 1999. The fire erupted during an unusually hot early May, and burned through a wide variety of weather, topography, and vegetation conditions leaving a wide array of post fire conditions. This will provide an excellent opportunity for the scientific study of post-fire stand development. As well, its location along the Trans-Canada Highway also provides an excellent opportunity for more casual nature appreciation, and tourism. The potential of the site for natural heritage study is described more fully in section 4.1.2.1.

2.0 GOALS AND OBJECTIVES

2.1 Goal of Conservation Reserves

The goal of Conservation Reserves is to protect natural heritage values on public lands while permitting compatible land use activities.

2.2 Objectives of the Statement of Conservation Interest

2.2.1 Short Term Objectives

- To identify the State of the Resource with respect to natural heritage values and current land use activities for the Conservation Reserve.

- To manage the Conservation Reserve to protect the integrity of its natural values via specific guidelines, strategies, and prescriptions detailed in this plan.
- To meet the planning target of developing an SCI within 3 years of regulation.

2.2.2 Long Term Objectives

- To establish representative targets (e.g. future forest conditions) and validate the site as a potential scientific benchmark.
- To identify research strategies.
- To identify client services and marketing strategies.
- To give direction to evaluate future new uses or economic ventures.
- To provide neighbouring communities with opportunities for sustainable economic development.

3.0 MANAGEMENT PLANNING

3.1 Planning Context

3.1.1 Planning Area

The planning area, as shown on Map 8.1 includes the regulated area of the CR, and the two Forest Reserves within or adjacent to the Conservation Reserve. The two Forest Reserves, in which there are existing mining claims, will be added to the CR if the claim or lease is retired.

Some values on or near the boundary of the CR may require consideration in other Resource Management Planning (particularly Forest Management Planning) for areas and activities outside the CR. Although the actual boundary of the CR will not be considered as a value in Forest Management Planning, specific values located on or near the boundary (e.g. an eagle nest) will be considered. These values are discussed in section 5.0, and strategies for protection are recommended in section 6.0. As plan implementation and management of the reserve progresses after completion of this SCI, other values requiring protection may be identified. These will also be addressed in other upcoming Resource Management Planning, and may not require amendment of this Statement of Conservation Interest.

3.1.2 Management Planning Context

The Kwinkwaga Ground Moraine Uplands Conservation Reserve was established by Ontario Regulation 686/00, under authority of the Public Lands Act (O. Reg. 805/95). Since commercial forestry is not permitted in a Conservation Reserve, the site was removed from Domtar's Sustainable Forest Licence 501500 in August 2000.

The CR is within Land Use Areas 1 (Integrated Multiple Resources Management) and 12 (Crown Land Recreation Access) of the *Wawa District Land Use Guidelines* (DLUG) (OMNR, 1983). However, with the implementation of the *Consolidated Land Use Strategy*, and the creation of the *Ontario Land Use Atlas*, the Conservation Reserve has been placed into its own Land Use Area. Management direction has been updated to be consistent with the OLL Strategy and Conservation Reserve Policies. For example, industrial resource extraction activities including hydroelectric power development, commercial forestry, the extraction of aggregate and peat, and mineral exploration and development are prohibited by Ontario Regulation 805/94 made under section 4 of the Public Lands Act. Other activities, including the construction of new roads, non-trail snowmobile or ATV use, new private recreation camps, and new trap cabins, are prohibited in Conservation Reserves by policy. Section 6.1.1 and Appendix 9.2 outlines permitted uses in detail.

Some uses and activities are discretionary, and are determined by the planning process for the Kwinkwaga Ground Moraine Statement of Conservation Interest. Proposals for future new uses and commercial activities associated with them need to follow *Procedural Guideline B – Land Uses – Test of Compatibility Public Lands Act Policy PL 3.03.05* (OMNR, 1997) (Appendix 9.3). Section 6.1 discusses management direction for the CR in detail.

3.2 Planning Process

Management direction for Conservation Reserves is provided by a Statement of Conservation Interest which can be either a Basic or Enhanced SCI or a Resource Management Plan, based on the level of planning required for the site. Since interest was expressed by the Pic Mobert First Nation during boundary consultation, it was determined that an Enhanced SCI will provide the management direction and planning for the Kwinkwaga Ground Moraine Uplands.

The general public expressed little interest in the Kwinkwaga Ground Moraine Uplands CR during public consultation on pre-regulation boundary refinement. However, during information-sharing meetings, the Pic Mobert First Nation indicated a positive interest in participating in planning and management of the area. As a result, a representative of Pic Mobert has been designated to participate in plan preparation. As well, the White River Area Co-Management Committee has and will continue to be updated on plan progress, and invited to comment and provide suggestions on an ongoing basis.

Public involvement opportunities in plan preparation will include a public review of the draft plan, and an inspection of the final plan. However, if public review of the draft plan results in major changes to the draft plan, a second draft will be made available for public review prior to release of the final plan. Since most of the management direction for this SCI is from legislation and higher level plans and documents (particularly the *OLL Land Use Strategy*), the plan will not be considered a policy, and therefore formal EBR notice will not be necessary.

4.0 BACKGROUND INFORMATION

4.1 Location and Site Description

4.1.1 Location

The Kwinkwaga Ground Moraine Uplands Conservation Reserve is located in the administrative districts of Algoma and Thunder Bay. The 12623 hectare CR is managed by the Ontario Ministry of Natural Resources' Wawa District. The site is found in the Hornpayne Ecodistrict 3E-2 and Folyet Ecodistrict 3E-5 within the 3E Ecoregion (Crins and Uhlig, 2000; Hills, 1959). The CR encompasses six townships; Cecile, Flood, Bryant, McCron, Common, and Johns.

Kwinkwaga Ground Moraine Uplands Conservation Reserve is approximately 10 km northwest of the town of White River at N 48°42'48" E 85°25'41" (NAD 83).

4.1.2 Site Description

4.1.2.1 Physical Description

The Kwinkwaga Ground Moraine Uplands Conservation Reserve is characterized by early Precambrian bedrock terrain covered with deposits of glacial material of varying depths. Bedrock exposure is predominantly moderate, but major exposures are associated with the higher elevations of the southeast quadrant.

As shown on Map 8.2, most of the area is composed of moderately to weakly broken ground moraine, with areas of moderately to weakly broken outwash deposit extending into the central portion of the Conservation Reserve.

A detailed description of the geological features of the CR is provided in the Earth Science Checklist (Kristjansson, 2002).

The Kwinkwaga Ground Moraine is located in the Central Plateau Forest Section of the Boreal Forest (Rowe, 1972). Before the Crocker Lake Fire of May 1999 burned over most of the CR, forest cover on the site had been predominantly mixed, mature to overmature forest, fairly typical of the Central Plateau Section of the Boreal Forest. Map 8.3 shows the species composition of the pre-fire forest, Map 8.4 shows stocking levels, and Map 8.5 depicts its age classes. The relatively old age of the pre-Crocker fire forest was due predominantly to the absence of recent fires, and relatively low harvest rates. As shown on Map 8.6, except for a small section in the north of the CR that was burned by the Kwinkwaga fire of 1954, the site had escaped fire in recent time.

Some of the pre-Crocker Fire forest had been classified as "old growth" as shown on Map 8.7. As is the case with "old age" in humans, "old growth" cannot be defined by age alone. However these stands have reached an age at which they are likely to exhibit

characteristics of old growth forests such as declining net primary productivity (the amount of organic matter created by plants), the development of more layers in the stand as the main canopy dies and creates growing space, an increase in the amount of coarse debris including fallen trees, a thickening of the organic mat, and the development of arboreal lichens. In terms of conservation of old growth forests, some of this old growth survived the Crocker fire, but more importantly, overmature forests are common in the surrounding area, and a key strategy for the managed forest is to maintain a component of overmature forest.

Climate in the Uplands is cold-continental, with cool summers, and very cold winters. Precipitation in nearby White River averages 850 mm annually, with about 1/3 of it occurring during the winter. The growing season averages a short 150 days, and the frost-free period is 80 days.

Kwinkwaga Ground Moraine lies within the Lake Superior Basin in the tertiary watershed 2BC. Upland topography dominates the site thus wetlands are relatively rare. However, alder swales are common along the White River, and a few other wetlands are scattered throughout the Conservation Reserve. Map 8.8 shows the location of wetlands in the Conservation Reserve.

A more detailed description of natural heritage information of the CR is provided in the Interim Earth (Kristjansson, 2002) and Life Science Checksheet (Thompson, 2002).

4.2 Administrative Description

The Kwinkwaga Ground Moraine is within the Ministry of Natural Resources' Wawa District, in the Northeast Region. It is located in the Territorial District of Thunder Bay. Table 1 summarizes the administrative details for this CR. Map 8.1 shows the boundary of the Kwinkwaga Ground Moraine Uplands Conservation Reserve.

Table 1. Location and Administrative Details for Kwinkwaga Ground Moraine Uplands Conservation Reserve.

Name of Site	Kwinkwaga Ground Moraine Uplands - C 1509	
Ecoregion and Ecodistrict	3E-2 and 3E-5 (Hills, 1959) and 3E-5 and 3E-2 (Crins and Uhlig, 2000)	
MNR Administrative Region/District/Area	Northeast Region, Wawa District, White River Area	
Size	12,758 ha	
Nearest Town	White River	
OBM Number	160960	
Topographical Map Name/Number	White River, Cedar Lake, White Lake and Kwinkwaga Lake	
Latitude/Longitude	N 48°42'48" E 85°25'41"	
Elevation	Minimum altitude: 558 m	Maximum altitude: 596 m
Watershed	2BC -- White River tertiary watershed division	
Wildlife Management Unit	21B	
Forest Management Unit	White River Forest	

4.3 History of the Site

Glaciers retreated from the Kwinkwaga Ground Moraine Uplands approximately 9000 years ago, and most of the area's history since that time has not been recorded in writing. Before European contact, highly mobile communities inhabited the general area, and the CR's proximity to the White River canoe route may have resulted in use of the site for collection of food and other resources. The presence of high elevations in the Uplands may have been of benefit for reconnaissance or for ceremonial purposes.

The area was later used by European fur traders, and various companies operated trading posts at the mouth of the Pic River and later at the mouth of the Shabotik River. After the construction of the railway, a trading post was established in 1886 at the site of present day Mobert. The trading post became a focal point for commerce and a Native community was established near the post. In 1925, 18 families purchased 36.8 acres of land and this became the basis for the Pic Mobert Indian Reserve which was formally recognized in 1971 as an Indian Reserve under the Indian Act.

The construction of the Canadian Pacific Railway involved cutting of local timber for railway ties. Information at the Wawa District Office does not show precisely where harvesting took place, but the Kwinkwaga Ground Moraine's proximity to the railway and the White River suggest that tie cutting may have occurred in or near the Conservation Reserve.

In 1935, Austin Lumber Limited built a mill at the former town site of Bertrand, about 3 km southwest of the Conservation Reserve. Austin Lumber harvested the surrounding 5 townships, but it was not a heavy harvest, consisting of a high-grade lumbering operation and the cutting of railway ties.

Abitibi Pulp and Paper Company conducted harvest operations in the general area, beginning at Puckasaw in 1921. After a 1936 wildfire, Abitibi established a depot near Herrick Lake to salvage timber from the burned areas. In 1942, this depot was moved to the former town site of Regan, about 9 kilometres to the west of the CR, and logging progressed north and westward for 22 years. Abitibi's logging was concentrated in conifer stands at this time.

In 1977, Abitibi built a sawmill in White River, about 15 kilometres southeast of the site. Harvesting throughout the area, including the Conservation Reserve, has continued since that time, and the continuing emphasis on improving utilization has resulted in more complete harvests that leave fewer residuals in cutovers. As well in the last 2 decades, there has been more logging in hardwood and mixedwood stands.

From the late 1970's until a natural population crash in 1986, a severe spruce budworm infestation decimated balsam fir, white spruce, and to a lesser extent black spruce, in the White River Forest. Prior to the epidemic, balsam fir had been far more common in the Kwinkwaga Ground Moraine Uplands. In addition to being very common in the understorey of most stands except wet sites or poorly stocked forests on shallow soils, it

was a component of the main canopy of many stands. In fact, particularly in Bryant Township, balsam fir was the predominant species in many areas, composing up to 80% of the canopy of some stands. Much of the harvesting in the CR in the 1970's and 1980's was a salvage-cut in heavily damaged stands.

In 1999, the Crocker Lake Fire swept through the area. The fire started about 2 kilometres south of the CR on May 4, 1999, during an unusually hot and dry spring. By the end of the first day, it had just barely reached the CR, burning into an area just west of Lovedee Lake. On the second day of the fire, extremely hot temperatures and high winds created almost ideal burning conditions, and the fire raced over the Conservation Reserve. In the second day it burned not only the entire remainder of the CR, but burned an area about twice the size of the CR (see Map 8.6), an area of about 12 kilometres by 25 kilometres. Fire behaviour and thus the post-fire vegetation varied greatly. In some areas, the fire apparently swept through the crown leaving a relatively intact forest floor. In other areas, the fire moved slowly, burning through the duff, and exposing extensive areas of mineral soil. Similarly, seed sources in some areas were eliminated when fire moved into the crown, while in other areas ground fires killed roots or girdled stems but left crowns not only intact, but left jack pine cones unopened. Because of the widely different fire conditions, post fire forest composition can be expected to vary considerably as the forest renews itself.

4.4 Inventories

Table 2 illustrates the inventories/surveys completed for Kwinkwaga Ground Moraine Uplands CR, as well as any future requirements for earth and life sciences, cultural, recreational or other categories. The detailed Earth (Kristjansson, 2002) and Life Science Checksheets (Thompson, 2002), and sections 4.1.2 and section 5.0 describe the key features of the CR.

Table 2: Inventory and Survey Information for Kwinkwaga Ground Moraine Uplands Conservation Reserve

Survey Level	Earth Science	Life Science	Cultural	Recreational	Other
Reconnaissance	Completed Fall 2001 Rik Kristjansson Checksheet completed	Completed February 2001 Barb Burkhardt Checksheet Completed		Completed December 2001 Shawn Fortin Checksheet completed	
Detailed					
Requirement					

5.0 STATE OF THE RESOURCE

Most of the CR's geological features, as described in the Intrim Earth Science Checklist (Kristjansson, 2002) and shown on Map 8.2, are common in the general region.

However, the landforms and sediments associated with the White River in the west half of the CR are probably of regional significance. The delineated areas of earlier post-glacial alluvium with abandoned channel forms filled with organic materials and the multiple terrace remnants (associated with at least one area of earlier post-glacial alluvium) suggest a complex alluvial stratigraphy.

Another earth science feature of note is the presence of dune forms west of Pakoawaga Lake and northeast of Mephitis Lake. These areas were logged in the late 1940's, but the logging equipment and methods of the era apparently left them intact. The dunes are relatively sensitive to disturbance, and in addition to the prohibition of industrial activities, ATV trails and trails for other motorized-wheeled vehicles will not be approved in the dune areas. Snowmobile trails through or into the dune areas will be discouraged, with the exception of low impact trails associated with natural heritage appreciation.

No habitats of vulnerable, threatened or endangered species have been identified in the CR. If such habitats are identified in the future, the absence of industrial activity in the site will be instrumental in habitat protection, but some restrictions on recreational use may also be necessary. In some cases, vegetation may have to be managed, but the Kwinkwaga Ground Moraine Uplands, because of its varied post-wildfire conditions, is not likely to require prescribed burning in the foreseeable future.

The 1999 Crocker Lake Fire has had positive effects on the forest ecosystem. Other protected areas near the Kwinkwaga CR face the challenge of managing a disturbance-based forest ecosystem in the absence of wildfire. However, the vegetation in the Kwinkwaga Ground Moraine Uplands, resulting from a large wildfire, will provide a unique opportunity for the study and appreciation of a fire origin forest.

Detailed post-fire ground surveys of the CR have not been done, but casual observations suggest a relatively high number of vegetative communities are present, since the fire burned in a variety of conditions through a variety of pre-fire forest types on a rugged and variable landscape. The encouragement of scientific research may provide more details on the number and significance of landform/vegetation combinations.

Linkages to other protected areas are an important principle in protected areas planning. However, the Kwinkwaga Ground Moraine is within a remote forested landscape and linkages to nearby parks are not as essential as in areas where deforestation and development fragment forest habitat, and impede wildlife movement.

The most notable characteristics of the site are durable bedrock and glacial geological features that generally exhibit low sensitivity to the typical activities occurring near the boundaries of the site. However, some industrial operations near or adjacent to the boundary may be modified to protect wetlands and prevent erosion of steep or otherwise unstable slopes.

Protection of the site is complemented by an ecosystem approach to managing the adjacent forest. The White River Forest is being managed by Domtar Inc. under Sustainable Forest Licence 5015000.

The Crocker Lake Fire, not surprisingly, greatly reduced the amount of old growth forest in the reserve. However, overmature forests are common in Ontario's boreal forest, and in nearby parks in Wawa District. A planning strategy in the surrounding White River Forest will keep its proportions of overmature forest within ranges of natural variation for each Forest Unit.

As discussed earlier, fire suppression, usually the most significant human intervention in protected areas in Northeastern Ontario's Boreal Forest, will not need to be countered by a prescribed burning strategy. The site should remain characteristic of a natural boreal forest ecosystem for generations, and will be of value in natural heritage representation and study.

A section of the White River that includes the portion flowing through the CR is designated as a Category "B" canoe route in the *Wawa DLUG* (OMNR, 1983). The Kwinkwaga Uplands section of the White River route is slow moving and meandering, and no portages are necessary. Highway 17 serves as an informal but convenient launching point just before and just after the White River enters the Conservation Reserve. The shore of Pakoawaga Lake has some excellent campsites with sand beaches.

In summary, the CR's main features are a well-developed moraine, and a wildfire-origin forest. The moraine has not been heavily impacted, and the site's status as a protected area will ensure that it remains so. The large fire origin forest is unique in protected areas in Wawa District, and is of value for scientific study and representation. The CR's convenient location along the Trans-Canada Highway adds to the site's value for scientific study, tourism, and recreation.

5.1 Social and Economic Interest in the Area

Before history was recorded in writing, native people in the area used the Kwinkwaga Ground Moraine Uplands and this interest and use continues today.

During the 20th century, the CR was logged, and it provided some employment and contribution to the local economies. The removal of the Kwinkwaga Ground Moraine from Domtar's Sustainable Forest Licence is a loss of operable area for the company. However, a large amount of the existing timber was consumed by the 1999 Crocker Lake Fire.

Mineral potential in the area has not yet been fully investigated, but there are two mining claims within the Conservation Reserve. These existing claims are still available for development, but the possibility of unknown ore bodies in the CR represents a potential economic loss.

The Kwinkwaga Ground Moraine Uplands is part of Ontario's Living Legacy's major expansion of protected areas in which 16 new protected areas are being created within 100 kilometres of White River. The First Nation community of Pic Mobert is adjacent to the Kwinkwaga CR and the expanded White Lake Provincial Park. These and other nearby communities will be able to market these protected areas for tourism. The Pic Mobert First Nation is in a particularly good position to promote and outfit canoe trips along the White River.

The CR is situated along the Trans Canada Highway, and this provides an opportunity for commercial recreation and tourism.

The CR's contribution to the protection of Ontario's Heritage is considerable. The positive effect of a catastrophic fire in 1999 is that an area of over 12,000 hectares has given origin to a new forest that is representative of the natural boreal forest ecosystem. More importantly, for the entire 21st century, it will remain typical of fire origin stands of an age commonly found in the natural boreal forest. This condition is unlike nearby boreal forest parks in Wawa District, which, without wildfire, will proceed to ages that become increasingly rare in the natural boreal forest. The CR also differs from the surrounding managed forest in which fire disturbance is emulated, but not replicated, by harvesting and renewal. Appendix 9.1 gives a brief description of the major differences between a natural wildfire, a managed forest, and a prescribed burn.

The Trans-Ontario Provincial System (TOPS) snowmobile trail is located along the southern boundary of the site. Trail clearing activities, including felling of hazardous dead or dying trees on the edge of the Reserve will be permitted. However, hazard reduction in the CR itself will be limited to hand felling (e.g. chainsaw or handsaw).

5.2 Natural Heritage Stewardship

A formal post-fire vegetation survey has not been conducted on the CR, and none are planned. However, as described in Section 6.4, it is hoped that the CR's uniqueness as a large, accessible, recent burn will attract scientific study. Informal knowledge of the area shows a wide variety of post fire conditions and regeneration, and a mixed, predominantly even-aged forest will develop on the site.

Water quality in the site is considered good. The CR and its waters receive the "normal" atmospheric pollutants but there are no significant industrial or commercial sources of contamination along the White River or in the CR's waterbodies.

The Kwinkwaga Uplands Ground Moraine is in the Great Lakes/St. Lawrence Watershed. The White River is the main drainage into Lake Superior, flowing through the CR, past the Pic Mobert First Nation, entering Lake Superior near the northwest corner of Pukaskwa National Park.

5.3 Fisheries and Wildlife

There are no critical wildlife habitats in the Kwinkwaga Uplands, and no known occurrences of Vulnerable, Threatened or Endangered (VTE) species. The White River contains walleye spawning areas however other values for this area are not known.

One of the effects of the 1999 Crocker Lake Fire is an expected increase in species richness. Although no pre-fire inventories were performed, wildfire typically increases the number of species on a site, and informal visual inspections show a wide variety of shrubs and herbaceous plants. The exception to the increase in species richness is in tree species: all boreal forest species occurred on the site before and after the fire. Another possible exception is the number of soil species. Little is known about species diversity in soil microorganisms, but the reduction of the organic mat has significantly reduced their habitat.

5.4 Cultural Heritage Stewardship

There are no identified archaeological sites in the Kwinkwaga Ground Moraine. First Nation Values have been identified in Forest Management Planning, but will remain confidential and referred to only to ensure that activities in the CR do not negatively impact these values. The Pic Mobert First Nation will be asked to review any proposals that have potential to damage Native Values.

There is an old logging camp in the south portion of the Conservation Reserve. In order to discourage 'souvenir collection', the location of this camp will not be made public in this plan.

5.5 Land Use/Current and Past Development

As described in Section 4.3, logging took place in much of the CR during the 20th century. Since the site's regulation as a Conservation Reserve, commercial forest harvesting has been discontinued.

Mineral exploration has occurred in the CR, and two mining claims are located in the site. These mining claims can be developed, and necessary access through the CR will be permitted with consideration of the CR's values. If however a claim is surrendered, the claim area, currently classified as a Forest Reserve, will be added to the Conservation Reserve.

The Conservation Reserve is no longer available for hydroelectric power development, aggregate or peat extraction, commercial forestry, or mineral exploration and development.

5.6 Commercial Use

Three active traplines are located in the Conservation Reserve (see map 8.9). Beaver and marten are the main species harvested from the 3 licences. These traplines will be permitted to continue indefinitely, and renewals and transfers will be permitted. No new trap cabins will be permitted, but maintenance, including reconstruction and relocation, of existing authorized cabins is acceptable.

There are 4 baitfish licence areas in the CR, and one licence area is reserved. Baitfish licences will continue indefinitely, and renewals and transfers will be permitted. The reserved area may be assigned at a future date.

There are 3 Bear Management Areas (BMA's) in the Uplands (see map 8.9). These existing operations can continue indefinitely, but new operations will not be permitted. Lapsed BMA's will not be reactivated, and transfer requests will be dealt with on a case-by-case basis.

If circumstances change substantially, the above direction could change. For example, there are no known critical wildlife habitats in the Kwinkwaga Ground Moraine, but if important habitat or other yet unknown values are identified, wildlife harvesting could be restricted, and the corresponding licences or agreements modified or cancelled. This will be done through an amendment to this Statement of Conservation Interest. This amendment may involve public consultation.

Largely because of the Crocker Lake Fire, blueberries are plentiful during good blueberry years. Blueberry picking will continue to be a permitted activity but commercial harvesting will not be permitted but may be directed to other crown land.

The *Wawa DLUG's* prohibit wild rice harvesting in Land Use Areas 1 and 12, in which the CR is located (OMNR, 1983). Wild Rice can have significant impacts on the production of a lake, and other suitable lakes are available outside protected areas. Therefore, even if the *Wawa DLUG* is amended to allow wild rice production, it will not be permitted in the Kwinkwaga CR. As stated earlier in this SCI, wild rice harvest under aboriginal and treaty rights cannot be affected by this or any other Resource Management Planning document.

5.7 Mining

This Conservation Reserve contained two mining claims at the time of regulation, which have been designated as forest reserve.

A forest reserve is a land use designation applied to areas that were initially identified for inclusion in the Conservation Reserve but where subsequent detailed examination determined that there were existing mining claims or leases.

Mining and surface rights have been withdrawn from staking within the Conservation Reserve boundaries under the Mining Act (RSO 1990 Chapter M.14). Therefore, no new claims can be staked within the CR boundary. The intent is that forest reserve areas will

be added to the Conservation Reserve if a claim or lease is retired through normal process.

Policies for forest reserves are similar to the policies for new Conservation Reserves, except that mining and related access will be allowed in a forest reserve.

There is one mining claim in the north-central portion of the Kwinkwaga Reserve and one at the western end. The Ontario's Living Legacy Land Use Strategy guarantees necessary access to existing claims for mineral exploration and development, providing that there is appropriate consideration of Conservation Reserve values. If and when improved access to the mining claim in the CR becomes necessary, the specific proposal will be considered in the context of protection of values. The proximity of the mining claim to the CR boundary and existing access will minimize the area affected, and there are no known significant values in the area to the north of the mining claim.

5.8 Tourism and Recreation Use and Opportunities

Topography in the Uplands, especially in the more precipitous eastern sections, enhances the aesthetics of the Uplands. Although the 1999 fire has temporarily affected the view from the Trans-Canada Highway, as the area greens up and young forests are established, the area should be quite picturesque.

The site's post-fire vegetation and associated wildlife provides a viewing opportunity for birdwatchers, naturalists, and other nature enthusiasts.

Several rocky hilltops in the western section of the CR provide potential scenic lookouts. Hiking trail construction to these lookouts will be encouraged, subject to protection of CR values.

As described earlier, non-commercial blueberry picking and other food gathering is permitted.

The White River Canoe Route runs through the Conservation Reserve. Future enhancement of the route, including portage and campsite development and maintenance will be encouraged. Maintenance of the White River Canoe Route was done by the MNR in the 2002 season. The route is important to local tourism and recreation, and the Kwinkwaga Ground Moraine Uplands and the extension of White Lake Provincial Park should add to its marketability for tourism.

The Kwinkwaga Ground Moraine's potential for commercial tourism can be enhanced by development. Currently, the main tourism use is the White River Canoe Route. The route is the most heavily used river route in Wawa District, but there is potential for improved maintenance and increased marketing. On the other hand, current users may see increased marketing and use as being detrimental to the canoeing experience. Since only a small portion of the canoe route is in the Kwinkwaga Uplands, future management

of the CR's section will complement planning processes for areas outside the CR (e.g. The White River Forest Management Plan, the White River Water Management Plan).

The CR's value as an ecologically representative area provides potential for development of interpretive services. This kind of development will be encouraged by the Ministry of Natural Resources, and the MNR can assist by providing expertise.

These potential developments, and any others that may be identified, will be assessed before implementation. The "*Test of Compatibility*" (Appendix 9.3) will be a starting point for reviewing development proposals.

5.9 Client Services

At present, no interpretive or recreation services are planned for the CR. Canoe route maintenance is periodically done by the MNR, and this will be encouraged to continue.

The proximity to White Lake Provincial Park and the CR's value for nature interpretation and appreciation provide an opportunity for the CR to be included in the White Lake Park Visitor program.

6.0 MANAGEMENT GUIDELINES

6.1 Management Strategies

The CR has considerable value as an example of a natural-origin forest ecosystem. The prohibition of industrial activities including commercial forestry, mineral exploration and development, aggregate extraction, and hydroelectric power development was achieved through the site's regulation as a Conservation Reserve. Other activities and uses are discretionary and decisions on if and how they may take place are made in this Statement of Conservation Interest, and summarized in the next section.

6.1.1 Discretionary Uses

Appendix 9.2 provides an outline of key potential uses that are prohibited by legislation or policy. The following paragraphs outline planning direction for discretionary uses; permitted uses are also summarized in table 3.

Table 3. Summary of Permitted Uses in Conservation Reserves (OMNR, 1999)

Use	New Use		Existing Use Permitted
	Permitted	Not Permitted	

Commercial timber harvest, commercial hydro development		✓	
Mineral exploration and mining		✓	
Bait fishing, commercial fishing, commercial fur harvesting, wild rice harvesting			✓
Sport hunting	✓		
Sport fishing	✓		
Seasonal recreation camps ("hunt camps")			✓
Commercial bear hunting		✓	✓
Tourism Facilities (for resource based tourism) and recreational trails			✓
Land Disposition			✓
Roads		✓	✓

Trails will be addressed on a case by case basis and will be subject to a “*Test of Compatibility*” (Appendix 9.3) and approved only if they do not result in significant negative impacts. For example, trails and roads through the sensitive dune areas will not be permitted.

Informal food collection will be permitted. However commercial food collection will be prohibited in the Conservation Reserve. In particular, some commercial mechanical blueberry harvesting methods can damage plants, and deplete the crop available for recreational pickers, and thus will not be permitted.

The collection/removal of vegetation and parts thereof (including *Taxus Canadensis*) will not be permitted. However, subject to a *Test of Compatibility* (Appendix 8.2), the Area Supervisor may authorize the collection of plants and/or parts for the purposes of rehabilitating degraded sites within the reserve if required and for research or scientific study.

Salvage of standing, fallen, or sunken dead trees will not be permitted, except when authorized in conjunction with approved maintenance activities. For example, if removal of merchantable dead trees along the TOPS snowmobile trail, or the hydro transmission corridor is necessary for safety reasons, utilization of merchantable trees would be appropriate.

Research will be encouraged, but some destructive or consumptive sampling techniques will not be permitted. For example, felling of large numbers of trees or collection of large numbers of fish will not normally be permitted.

Existing baitfish operations will be permitted to continue indefinitely, and renewals and transfers will be permitted. The reserved baitfish area may be allocated at a future date.

Existing traplines may continue indefinitely and renewals and transfers will be permitted. No new cabins will be authorized, but existing authorized cabins can be maintained, reconstructed or relocated, subject to approval by the MNR to ensure that the scale or function of the cabin is not significantly altered. Trails associated with trapping can normally be permitted subject to a review to ensure that no significant damage to CR values occurs. Non-trail snowmobile and ATV use will be permitted only for retrieval of game and/or bait.

Forest renewal by artificial means will not be appropriate for a natural area. Similarly, control of native pests will not be permitted. However, control of invasive non-native pests will be permitted, subject to a review to ensure that control measures do not have significant negative impacts on native species.

Maintenance of the TOPS snowmobile trail, and the hydro transmission corridor that form the southern boundary of the CR may involve the felling of a few hazardous trees within the Conservation Reserve. Debris on the trail or corridor must be removed to the south side of the trail and right-of-way, and not into the CR. If herbicides are used in the hydro corridor, herbicide drift into the CR must be minimized.

New transportation or communication corridors in the CR are not foreseen at this time. They will be permitted only in extenuating circumstances when no reasonable alternative exists.

Motorized boating will be permitted. The section of the White River canoe route that flows through the CR is not a good motorboating area, and thus a conflict with canoeists is unlikely. However, personal motorized watercraft (i.e. Jet Skis) will not be permitted on the section of the White River in the site. Better areas for personal motorized watercraft exist on crown land near the CR, and thus users can be directed to nearby areas where they will not impact canoeists and kayakers. Even where permitted, some restrictions on noise levels for motorized watercraft will be considered if noise becomes a nuisance to other users, or wildlife.

Changes to direction on permitted and non-permitted use can be made through an amendment to this SCI. In the case of changes to legislation, or provincial policy an administrative or ‘bookkeeping’ amendment will suffice. Discretionary changes that are expected to generate significant public interest will require public consultation.

Some uses or activities that are not foreseen at this time are not included in these management guidelines. These uses can be addressed on an ongoing basis, and the “*Test of Compatibility*” (Appendix 9.3) will be applied in this review. Depending on the significance of the proposed new use, an amendment to this SCI may be required.

6.2 State of the Resource Management Strategies

The Kwinkwaga Ground Moraine Uplands Conservation Reserve is a fire-origin forest ecosystem in a protected area, free from industrial development. Unlike other boreal forest parks in Wawa District, the CR is not dominated by mature to overmature forest. Unlike burned areas within managed forests, including adjacent areas of the White River Forest that were burned by the same fire in 1999, the CR will not experience forest management activities such as timber salvage, artificial regeneration, tending, or protection from insects and disease.

It is the CR’s uniqueness as a large fire-origin ecosystem in a protected area that sets it apart, and this is the value that will be maintained. For the most part, a ‘hands off’ approach will be all that is necessary, and to a large degree this has been achieved through the site’s regulation as a protected area free from industrial impacts.

The MNR recognizes fire as an essential process fundamental to the ecological integrity of conservation reserves. In accordance with existing *Conservation Reserve Policy* and the *Forest Fire Management Strategy for Ontario*, forest fire protection will be carried out as on surrounding lands.

Whenever feasible, the MNR fire program will endeavor to use “light on the land” techniques, which do not unduly disturb the landscape, in this conservation reserve. Examples of light on the land techniques may include limiting the use of heavy equipment or limiting the number of trees felled during fire response efforts.

Opportunities for prescribed burning to achieve ecological or resource management objectives may be considered. These management objectives will be developed with public consultation prior to any prescribed burning, and reflected in the document that provides management direction for this conservation reserve. Plans for any prescribed burning will be developed in accordance with the *MNR Prescribed Burn Planning Manual*, and the *Class Environmental Assessment for Provincial Parks and Conservation Reserves* (approval pending).

Domtar Inc. manages the area around the CR under an ecosystem management approach, and this complements protection of the Conservation Reserve. For example, the need for

linkages to other protected areas is of far less importance than if the CR was in an urban or agricultural area. Despite logging and other disturbances, the surrounding White River Forest is composed of native species, and through active management, species composition, the amount of “old-growth” forest, disturbance patterns and other factors are to be kept within estimated natural levels of variation. Thus, the need for wildlife corridors or other linkages to nearby parks is not expected to be required for protection of species known to exist in the Uplands.

6.3 Specific Feature Management Strategies

The Kwinkwaga Ground Moraine Uplands CR has not been delineated into zones for management of a specific resource. The site’s primary value is as a representation of a fire-origin forest, and a “hands-off” approach is merited. One foreseeable eventuality that could warrant delineation would be a major scientific study. Research in the CR will be encouraged, and some research activities could conceivably require special conditions such as elimination of noise or restrictions on harvesting of wildlife. Zoning of the CR for management of special features will require an amendment to this SCI.

6.4 Promotion of Inventory, Monitoring, and Assessment

The Uplands have several attributes that provide high potential for research. Most importantly, it has value as a fire-origin forest. More specifically, the Crocker Lake Fire of 1999 burned in a variety of conditions through varied topography and soil types, leaving a highly diverse post-fire forest. Its location along the Trans-Canada Highway, and the presence of roads and canoe routes within the CR provide access to and within the site.

Agencies that could be potentially interested in studying post-fire forest community development will be included in the distribution of this SCI. The MNR can cooperate in research by other agencies by providing expertise, sharing equipment and facilities, and may provide funding in a partnership with some researchers.

No additional inventories are scheduled for the CR, but informal reconnaissance by MNR staff will occur indefinitely due to the site’s uniqueness. Any additional information on fish and wildlife values may be collected through the Forest Management Planning process.

6.5 Implementation and Plan Review Strategies

Management of the CR will be done largely on a “hands-off” approach. For the short term, the forest community will develop without intervention, and low impact activities described in the plan will continue. Nonetheless, circumstances may change as a result of major development or research proposals, and the following procedure will apply.

If and when a significant activity is proposed, it will be reviewed by the MNR. If the proposal is consistent with this SCI, and meets other requirements, it will be approved. If

the activity conflicts with the SCI, the proposal and the SCI will be reviewed. The proposed activity could be modified to conform to the Plan, the proposal could be rejected, or the Statement of Conservation Interest could be amended. Any major amendments will require public consultation and the approval of the Regional Director. Major amendments will include changes that could generate significant public interest, or that could affect the achievement of the long-term objectives for the Uplands.

6.6 Marketing Strategies

The Kwinkwaga Ground Moraine Uplands' value for scientific study will be actively marketed by the MNR. Potentially interested Universities, Colleges, and Research institutions will be provided with a copy of the draft and final Statements of Conservation Interest to ensure that they are aware of the site's potential in the study of a post-fire forest ecosystem.

The site will also be more generally promoted as part of the Living Legacy initiative, and at the current time information on the Uplands is available worldwide on the Ontario Living Legacy website at (<http://www.ontarioslivinglegacy.com/regulated.htm>).

The Kwinkwaga Uplands will be an asset for local tourism, and marketing by the private sector is expected.

Nearby Obatanga and White Lake Parks are popular areas for day use and camping, and park users will be made aware of the Kwinkwaga Ground Moraine Uplands Conservation Reserve.

7.0 REFERENCES

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