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**Developing Crown Land in Northern Ontario for the Purposes
of Adventure and Nature Tourism**

By

Jeff Violi

A Masters Degree Project submitted to the Faculty of Environmental Design
in partial fulfillment of the requirements for the degree of Master of
Environmental Design: Planning.

Faculty of Environmental Design
Calgary, Alberta

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Abstract

Developing Crown Land in Northern Ontario for the Purposes of Adventure and Nature Tourism

March 1999

Prepared in partial fulfillment of the requirements for the degree of Master of
Environmental Design: Planning.

Supervisor: Professor Theresa Baxter

Over the last fifty years the world has seen dramatic changes in the way people travel from one place to another. In fact, it is not only the manner of travel that has changed but so too the destinations, the reasons, and the frequency. From this change a contemporary form of travel that espouses a deep respect for the people, places, and things being visited has evolved with specialized foci on conservation, the respectful inclusion of local people in the planning process, and natural environments. This type of travel is known as ecotourism and encompasses subsets such as adventure and nature tourism. Canada, and more specific to this report, Ontario, inherently offer tremendous opportunities to seek out such travel, particularly throughout their vast northern lands.

It is the purpose of this Masters Degree Project to determine the potential for expanding adventure and nature tourism in Northern Ontario. Potential will be discussed in context of: the degree of interest shown by the provincial government and its various ministries; an inventory of applicable adventure and nature resources; the regulations pertaining to land development for tourism facilities; and possible development constraints. These objectives will be accomplished using a variety of tools including: literature surveys, personal communications, a case study, map and air photo interpretation, and field observations. Recommendations are proposed relating to such issues as: adventure and nature tourism inventories of provincial and national parks, and private sector facilities; recognition of adventure and nature tourism in policy documents and initiatives; reductions in pollution; adventure and nature tourism inventories of all Crown Land; the need for full environmental impact assessment in tourism facility development; and distinguishing consumptive and non-consumptive tourism facilities.

Key words: ecotourism, adventure and nature tourism, wilderness planning, land planning, Crown Land development.

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Chapter One: Introduction

Context

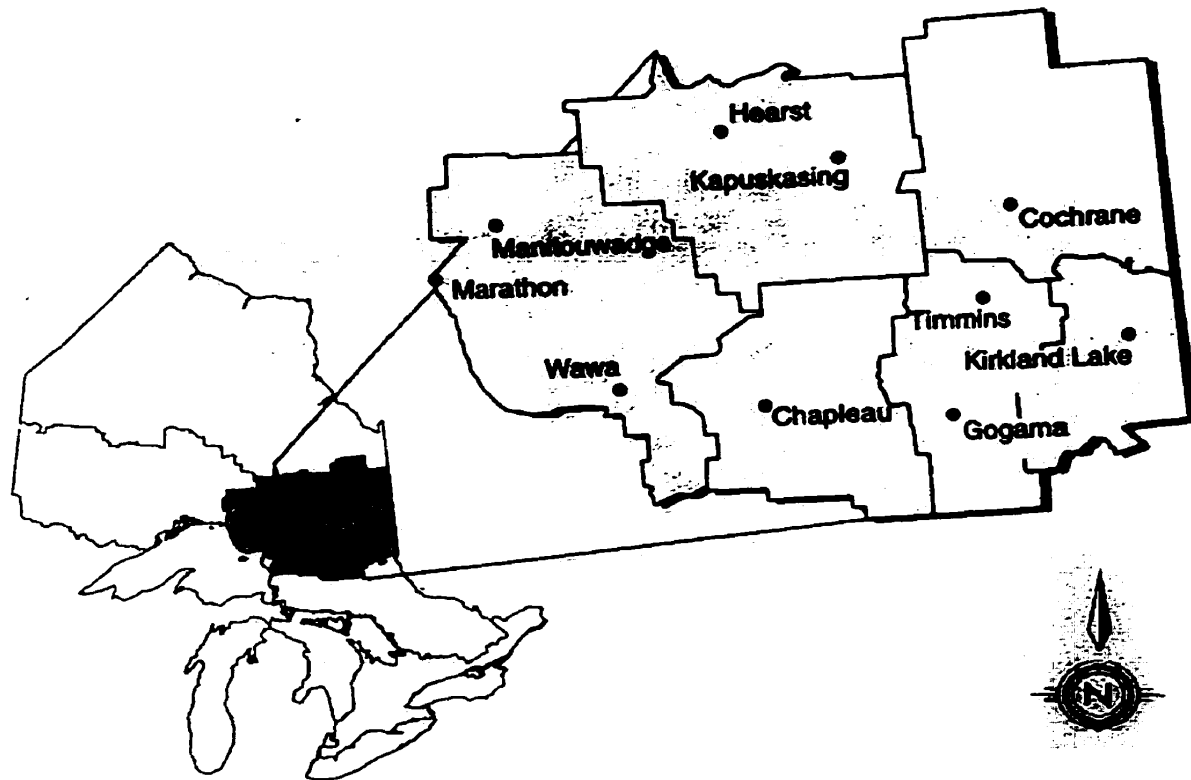
Throughout Ontario there exists thousands of parks, resorts, and lodges. Their purpose is to provide a launching point for a diversity of recreational opportunities in natural environments. This outdoor recreation attracts millions of residents and non-residents on an annual basis and by doing so makes it a form of tourism. Typically, this type of tourism can be classified as being consumptive or non-consumptive, extreme or moderate.

Consumptive outdoors activities are those that require fuel, a conversion of land from its original state, or the removal of a resource. Examples of such activities include motor boating, downhill skiing, and hunting. Non-consumptive activities are those that can be practiced without any significant expenditure to the environment. Examples of this type of activity include canoeing, hiking, and wildlife watching. Around the world, the practice of non-consumptive outdoor activities is recognized as a specific type of tourism known as “ecotourism”. In Canada two frequent subsets of ecotourism are “adventure tourism” and “nature tourism”. Respectively, these two terms are used to distinguish the practice of outdoor activities that are extreme or moderate depending on the personal danger and amount of physical exertion involved. Because they are otherwise identical, these terms can be used in conjunction to create the title of “adventure and nature tourism”.

It is the feasibility of adventure and nature tourism in Northern Ontario that is the focus of this project. In this study, several issues will be addressed:

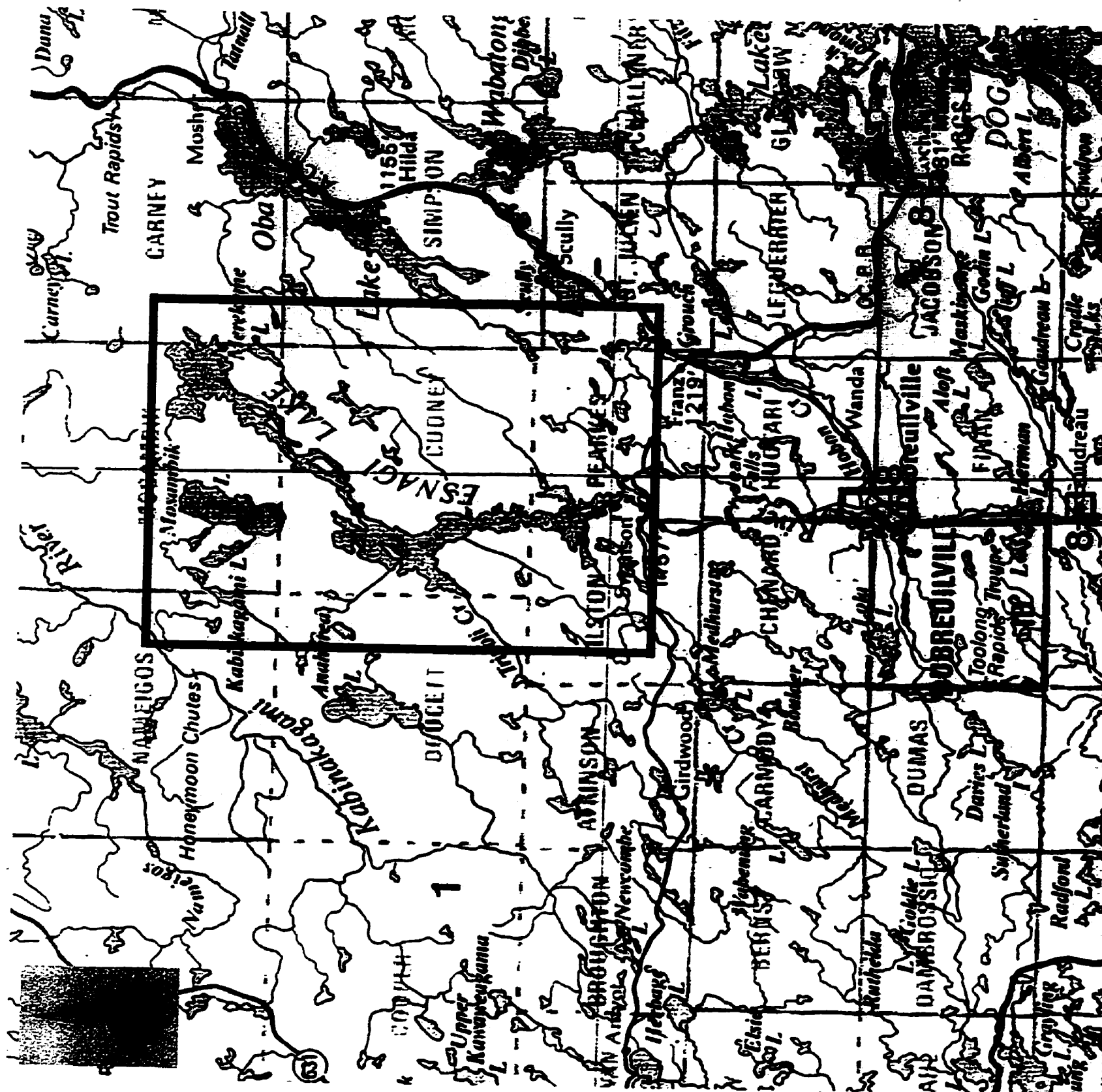
- From international, national, and provincial perspectives, what is the potential for expanding adventure and nature tourism in Northern Ontario?
- Are the land planning and land development processes conducive to promoting or constraining tourism on Crown Land in Northern Ontario?
- To what extent have the public and private sectors evaluated resources relevant to adventure and nature tourism in Northern Ontario?

These issues will be considered in context of a case study, Esnagi Lake of the Boreal East Planning Area, Northern Ontario. As shown in Map 1, Boreal East is located in north central Ontario and was chosen because it was considered a likely candidate for adventure and nature tourism attractions.



Map 1: The Boreal East Planning Area of Northern Ontario
Source: Boreal East Tabloid #3, 1998. Map not to scale.

Esnagi Lake was found after a search of this area. Shown in relation to its local and provincial surroundings in Maps 2 and 3 respectively, Esnagi Lake is a remote lake within Ontario's Boreal forest. At present (1999), the Ontario Ministry of Natural Resources officially recognizes this lake as a tourism destination, particularly for hunters and fishers. There are no roads leading to the lake and access is therefore restricted to float plane and rail line. The intention of this feature is to preserve its remote qualities. As a component of the Magpie Forest, it shares resources with other industries, including logging.



Map 3: Esnagi Lake in Context of Provincial Surroundings

Source: National Geographic, 1985.

Scale – 1: 7 936 855

Objectives

The objectives of this Masters Degree Project are:

1. To outline the potential that Canada and Ontario hold as travel destinations for adventure and nature tourists.
2. To investigate the relative importance placed on travel and tourism in Northern Ontario by the provincial government and its various ministries.
3. To consider legal and practical conditions that restrict the placement of future adventure and nature tourism facilities (such as a lodge or interpretive centre).
4. To identify a wilderness area case study in Northern Ontario, and to evaluate its suitability for the development of a new adventure and nature tourism facility.
5. To investigate the land development process in context of the case study identified in objective four.
6. To make a series of recommendations relating to the issues analyzed in objectives 1 through 5.

Methods

The methodology for this Masters Degree Project included the following steps:

1. A literature survey was undertaken to provide background information on tourism, the land planning process as it relates to tourism, and the land development process in context of tourism destination facilities. This survey relied heavily on reports provided by the Ontario Ministry of Natural Resources, descriptive documents pertaining to Ontario's north, and academic texts and journals relating to tourism.
2. A case study, in the form of a land sector, was used to confirm and evaluate Northern Ontario's natural resources as they pertain to the expansion of adventure and nature tourism.
3. A search process was created to locate the case study area (Esnagi Lake). This process consisted of an applied map interpretation on the Boreal East Planning Area of Northern Ontario. The intention was to find an unpolluted wilderness block with

superior forest, lake, and river features on territory owned and operated by the people of Ontario known as Crown Land. For the purposes of this search, wilderness environment was defined as an area with:

- An absence of human development (post Industrial Revolution).
- An absence of permanent human activity.
- An approximate size of 4,000 km².

The search was conducted inside the Boreal East Planning Area because it was considered the most likely sector in Northern Ontario to contain true wilderness areas suitable for adventure and nature tourism while still maintaining some degree of proximity to the tourism market of Southern Ontario.

4. An evaluation of the chosen case study land sector was conducted. The purpose of this evaluation was to clarify issues of urban settlement, climate, geomorphology, industry, wildlife, history, culture, pollution, and recreation and therefore to assess the area's suitability for adventure and nature tourism and the development of a tourism destination facility. This task was accomplished using a number of tools including:
 - A *literature review* focusing on descriptive texts and internet pages of Northern Ontario.
 - An *air photo interpretation* designed to highlight physical traits of the case study land sector including:
 - Micro-environments suitable for the construction of a tourism facility.
 - Human movement corridors on land and in water.
 - Ecological, historical, geomorphological, and cultural points of interest.
 - Logging sites and/or other resource extraction activities.
 - Change in the environment over time.
 - An *informal interview* with Walter Lee, the operator of a lodge located in the vicinity of the case study land sector. This interview clarified the purpose of his establishment and the relationship held with the nearby logging industry.
 - A *site visit* to complement and verify office work with actual field observations. This involved observation by road, rail, plane, and canoe.

5. Personal correspondence was undertaken with the Ontario Ministry of Natural Resources. Information was gathered specifically from the Wawa district office. This correspondence took the form of letters, telephone communications, and informal interviews with key informants.

Limitations

This methodology was not without its limitations. Most notable were those associated with the map and air photo interpretations as they:

- Relied on aged and potentially outdated information from maps and air photographs of 1963 through 1985.
- Attempted to find true wilderness on Crown Land; a commodity that rarely exists outside of the national and provincial parks systems.
- Were accomplished manually as applicable computerized geographic information systems were still in development.

Report Organization

Following the introduction, Chapter two delves into contemporary trends in international travel. Specifically, this chapter explores the history of travel and how it has evolved over time to give rise to an entirely new concept: tourism. As a continually evolving concept, tourism oriented towards natural environments is reviewed. This type of tourism, largely known as “ecotourism”, is explored.

Chapter three builds upon the information in Chapter two by researching the potential Canada and Ontario hold for a specific type of ecotourism known as adventure and nature tourism. This research includes a synopsis of the current state of outdoor facilities in the province. Its purpose is to establish whether or not there is room for an increase in the number of tourism destination facilities. The ethics of promoting increased tourism in natural environments are also explored.

Chapter four investigates the relative importance placed on travel and tourism in Northern Ontario’s strategic land planning process known as *Lands For Life*. This

involves an examination of how the provincial planning agency allocates land and resources for travel oriented purposes in context of other competing demands (including logging, mining, and hydro electricity industries). Importance is also measured by the amount of research the Ontario government has invested into contemporary tourism knowledge including qualitative and quantitative measurements.

Chapter five details the constraints on the development of land that has potential as a destination for adventure and nature tourists. Most important of these imperfections is pollution and the damage it causes to tourism resources.

Chapter six outlines and applies the search process for the case study area. The focus of the search is to find wilderness environment with superior forest, lake, and river features inside the Boreal East Planning Area of Northern Ontario. This search was largely accomplished using map interpretation.

Chapter seven follows up on chapter six by describing the chosen case study area. This is accomplished using information gathered from a literature review, an air photo interpretation, and a site visit. The purpose of the description is to evaluate the potential for adventure and nature tourism activities and the construction of a destination facility.

Chapter eight investigates the land development process for the construction of tourism destination facilities. Specifically, in reference to the case study, it explores issues of land acquisition and development approval.

The final chapter, chapter nine, concludes the project with a series of recommendations relating to the issues raised throughout the project.

Chapter Two: Contemporary Trends in Tourism

Tourism

Tourism in its simplest terms is the event of visiting another place and the experience that comes from having accomplished it. For those who are engaged, the experience is typically focused on enjoyment. However, because enjoyment is particular to the individual it is difficult to summarize the concept of tourism in one example. For this reason tourism is considered by many to be abstract and abstract concepts, by definition, result in varied interpretations (Burns & Holden, 1995).

Tourism is a concept that has evolved from the event of travelling and is regarded principally as a legacy of the twentieth century. It was during this period that the large and newly emerging middle classes of Europe and North America found the increased time and financial resources so important to its practice. This free time, or leisure time as it came to be known, was simply time in which people did not have to work (Rybczynski, 1991).

As it is today, leisure time in the first quarter of the century was found most often on the weekends. This was made possible by the continuing reduction in the number of hours in the workweek, from sixty to fifty to forty. This reduction, coupled with greater access to transportation and more disposable income made it possible for this emerging middle class to pursue recreational activities both at the end of the week and during annual intervals (Rybczynski, 1991).

Holidays were another occasion when one did not have to work. In Western culture holidays were either centred around religious and heritage events or were extended periods of leave granted by employers. During these holidays, some people had the ability and the inclination to spend time away from home. This act of seeing and experiencing a new place became the act of tourism. Initially, tourism took place within the individual's own city, province, region, or country. Ultimately, international travel became a reality (Rybczynski, 1991).

As a result of breakthroughs in aircraft technology, 1950 is seen as the year international tourism was born (Burns & Holden, 1995). It has grown steadily since that time. In fact, pushed by world-wide traveller arrivals in the magnitude of 661 million annually, tourism presently accounts for one in nine jobs globally, ten percent of global wages and ten percent of the world gross domestic product (Burns & Holden, 1995). Because tourism is such an integral component of the modern human lifestyle it has even become the world's single greatest revenue generator, with total economic value of goods and services reaching \$3.6 trillion U.S. in 1996 (Economist, Jan 10 1998).

Ecotourism

While most tourism that occurs on an international level occurs in and between the nations of the economically developed world, much of the debate about tourism's effects is centred upon less developed countries or LDCs (Burns and Holden, 1995). LDCs are defined as those countries with moderate industrialization and Gross National Products per capita (Miller, 1994). Typically, these countries are located in the Southern Hemisphere continents of Africa, Asia, and South America. The tourism problem stems from the fact that scarce local resources in the LDCs are used for the enjoyment of wealthy foreigners. Moreover, the economic benefits of this industry tend to accrue in foreign companies and among local elites (Burns & Holden, 1995). These issues of injustice are difficult to resolve because the patterns of industrial growth, natural resource exploitation, and consumerism are ingrained in contemporary Western civilization (Ceballos-Lascurain, 1996).

The nature of tourism as it has been described indicates that some LDCs are becoming victims of environmental degradation. It occurs because the environment and its resources are viewed by tourists and tourism operators as free public goods, and as with any public goods that have a zero price are subject to excess demand, over utilization, and abuse (Buhalis & Fletcher, 1995). This phenomenon is often referred to as the *tragedy of the commons* and while more prevalent in the developing world, is by no means limited to its borders.

As tourists become aware of the damage their actions are causing, some respond by modifying their behaviour both at home and abroad. Modifications if adopted en masse become trends, in this instance trends towards heightened environmental awareness. The result is a powerful new influence on tourism called ecological tourism or ecotourism and it is permeating all age classes and types of travellers worldwide (Burns and Holden, 1995).

There are a number of organizations worldwide that have taken an interest in ecotourism. The International Union for the Conservation of Nature, or IUCN, is one of them. The IUCN is a unique world partnership with 800 states, government agencies, and non-governmental organizations spread across some 132 countries. Their goal is to “influence, encourage, and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable” (Ceballos-Lascurain, 1996: ii). The IUCN has gone to great lengths to determine how tourism can be changed in order to achieve this goal. Not least among these achievements is the organization of a World Congress on national parks and protected areas. Held every ten years since 1962, these congresses have focused on how tourism and more recently how ecotourism can play a role in conservation. The IUCN has since become a leader in this area of study. They define ecotourism as:

Environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features - both past and present) that promotes conservation, has low visitor impact, and provides for beneficially active socio-economic involvement of local populations. (Ceballos-Lascurain, 1996: 20).

The IUCN has also developed a set of criteria for a facility or activity to be considered under the ecotourism umbrella. There are nine criteria in all:

1. Respect for the environment is promoted amongst participants.
2. Care is taken to minimize consumption and degradation of resources.
3. Concentration is focused on the intrinsic value of resources as opposed to the extrinsic value of accommodation and services.
4. Resources are accepted as they are and are not changed or modified for the convenience of tourists.

5. Benefits to the ecosystem should be easily discernible both locally and regionally.
6. A first hand encounter with the natural environment must be experienced.
7. Local communities must be actively involved in the tourism process.
8. Gratification is measured in terms of education and appreciation rather than thrill seeking or physical achievement.
9. Preparation and knowledge are required on the part of both the leaders and participants. (Ceballos-Lascurain, 1996).

In addition to the IUCN, other experts and organizations have defined ecotourism over the years. Two such organizations are the Ecotourism Society and the Canadian Environmental Advisory Council. The Ecotourism Society is a U.S. based non profit organization founded in 1990. Its purpose is to link outdoor travel entrepreneurs, researchers, and conservationists in the pursuit of sustainable development. According to this society, ecotourism is “responsible travel to natural areas that conserves the environment and sustains the well being of local people” (Ecotourism Society, 1998: internet page).

The Canadian Environmental Advisory Council is not an ecotourism focused organization but a government body that answered to the federal Ministry of the Environment in the early 1990s. At this time the council carried out a report on the status of ecotourism in Canada. It defined ecotourism as “an enlightening nature experience that contributes to conservation of the ecosystem while respecting the integrity of host communities” (Scace, Grifone, & Usher, 1992: 14). This definition, like those presented by the IUCN and the Ecotourism Society, focuses on three aspects of the concept: conservation, the respectful inclusion of local people, and natural areas. This means that ecotourism operations should:

- Minimize use of fuel and electric power.
- Minimize the conversion of land from its original state.
- Minimize the removal of resources from the environment.
- Involve local people in the tourism planning process.
- Ensure that local people share in the economic benefits and in the use of facilities.

- Ensure that local people are not culturally maligned.
- Take place in natural outdoors environments. (Ceballos-Lacurain 1996; Ecotourism Society Internet Page, 1998; Scace, Grifone, & Usher, 1992).

Unfortunately, the third component of ecotourism, that it should focus on nature or natural environments, was not strictly defined by any of the three organizations. Logically though, it can be deduced that wilderness or some degree of wilderness environment is implied. In all there are three criteria that define a wilderness environment:

- A history absent of human development (although development prior to the Industrial Revolution is often accepted).
- An absence of permanent human activity.
- Size, as it must be large enough to allow the largest animals to move freely and maintain healthy and diverse populations. Typically this is an area no smaller than 4,000 square kilometres or roughly half the size of Algonquin Provincial Park in Ontario. (Keating, 1992; Miller, 1994; Quammen, 1998).

If all the criteria cannot be met or if all cannot be met perfectly then this implies a diminishment in wilderness quality.






When discussing wilderness it should also be recognized that it comes in many different forms. The greatest of these distinctions in form is between the aquatic and the terrestrial. Aquatic wilderness is commonly divided into oceanic or inland water environments. Terrestrial wilderness can also be divided and is often done so according to biomes.

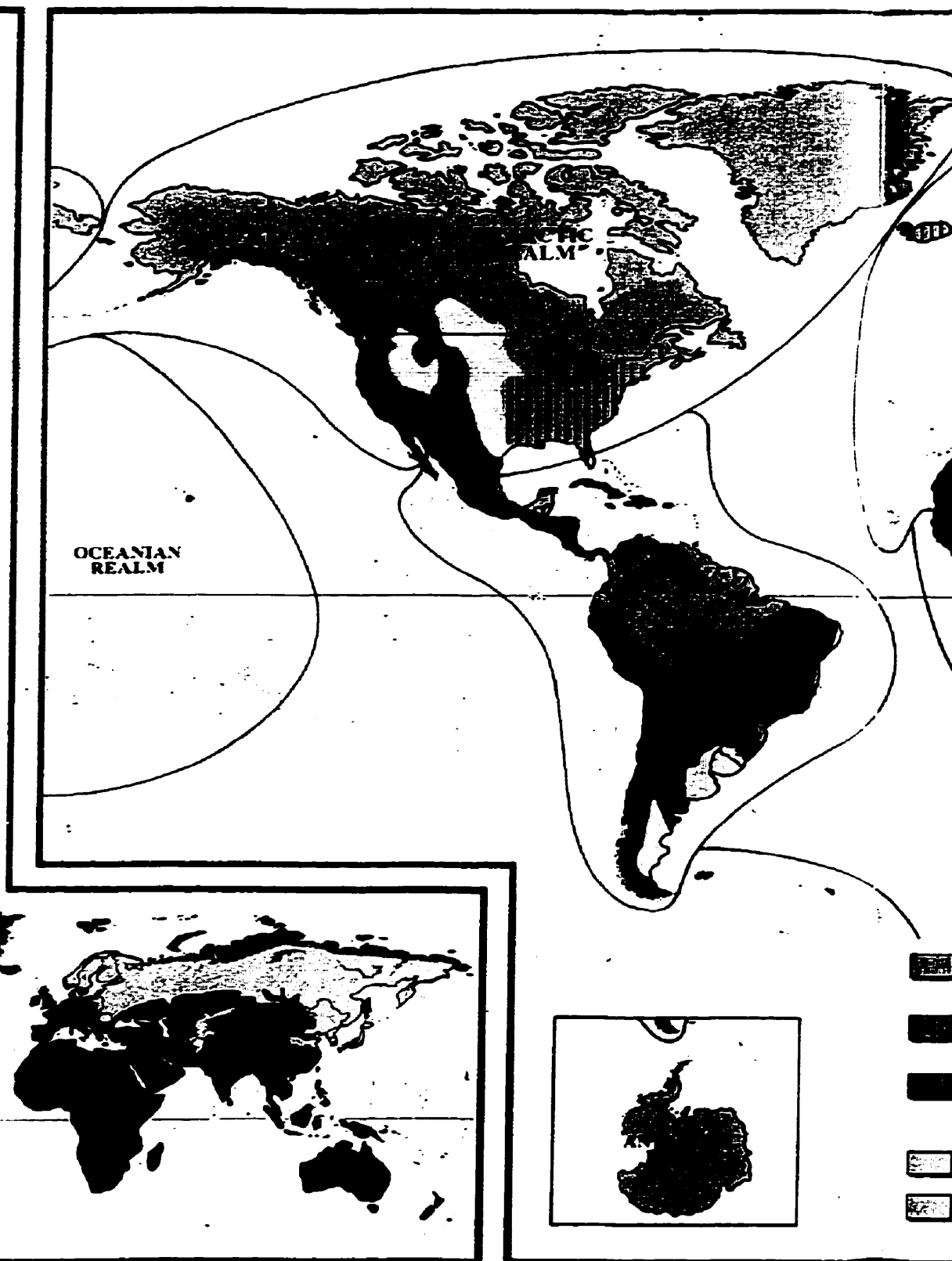
Biomes are terrestrial regions that are defined in terms of the dominant life forms they harbour and are typically identified by their prevailing vegetation. In all, there are fourteen terrestrial biomes on Earth (Lean, Hinrichsen, & Markham, 1990). They are shown in Map 4. From this map, it can be calculated that of Earth's 150 million square kilometres of land, thirty percent is desert, fifty percent is forested, and the remaining twenty percent is composed of a number of smaller biomes including grasslands, savannas, and mountains.

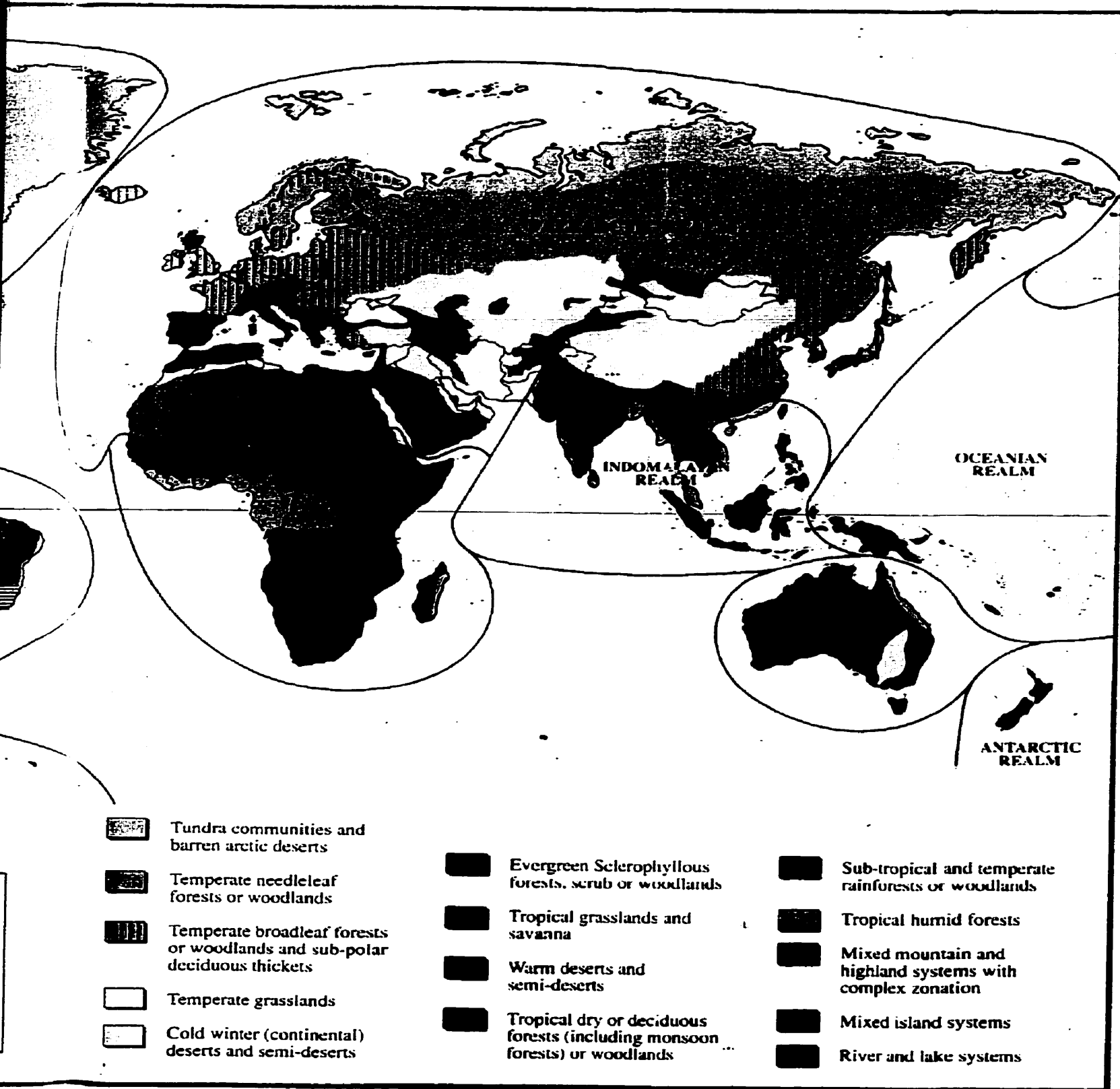
Major biomes

Biomes are ecological regions, defined in terms of their plant and animal life, and usually identified with the prevailing vegetation types. Unesco has designated 14 major biomes, distributed across eight zoogeographical realms: the Nearctic, the Neotropical, the Palearctic, the Afrotropical, the Indomalayan, the Australian, the Oceanian and the Antarctic.

Climatic regions

-  Polar
(Ice cap & tundra)
-  Cooler humid
(Subarctic & continental)
-  Warmer humid
(Marine west coast, humid subtropical & Mediterranean)
-  Dry
(Steppe & desert)
-  Tropical humid
(Savanna & rain forest)





Fifty thousand years ago, all of this terrestrial area was wilderness but with the successful expansion of the modern human species it has been greatly reduced in size. In fact, only one-third of the terrestrial planet can still be considered wilderness today with the vast majority consisting of the inhospitable mountains and deserts of Antarctica, the high Arctic, Greenland, Tibet, and the Sahara (Keating, 1992).

In regards to ecotourism, making this distinction in the quality and form of the wilderness is important. Quality is important because tourists have a fascination with that which is pure (Burns & Holden, 1995). Likewise, form is important because tourists appreciate diversity and choice. Both make a contribution to the educational component of the tourism experience.

The Current State of Ecotourism

Despite its infancy, ecotourism is now estimated to account for seven percent of the international tourism process (Eagles, 1996). It has also been reported that ecotourist numbers are rising by over eight percent annually, three times the growth rate of tourism overall (Milne, 1996). Moreover, ecotourism is so popular that it is currently present in some form or another on every continent of the world including Antarctica. A combination of circumstances is responsible for this phenomenal growth including: increases in leisure time, affluence, and education; an expanding interest in natural environments; and a strong infrastructure of airlines, accommodation, and supporting facilities (Ceballos-Lascurain, 1996).

Conclusions

In this chapter the concept of tourism was introduced. From this introduction it was learned that tourism has evolved significantly over a very short period of time. In recent years this evolution has continued and has resulted in the creation of ecotourism, a form of tourism that has a number of particular foci including: conservation, the respectful inclusion of local peoples in the planning and development processes, and natural environments or wilderness. This new form of tourism appears significant on an international scale. In regards to this project, the growth of ecotourism provides a sound

argument for the expansion of ecotourism facilities the world over. It remains to be determined if ecotourism has potential in Canada, and more specifically in Ontario.

Chapter Three: Adventure and Nature Tourism

Introduction

In the previous chapter the concept of ecotourism was introduced. From this introduction it was learned that ecotourism, unlike other forms of tourism, works to conserve rather than consume and has a particular focus on natural outdoor environments. The following chapter will continue to explore these concepts including the application of ecotourism as adventure and nature tourism in Canada and Ontario.

Adventure and Nature Tourism in Canada

In Canada, a subset of ecotourism that is currently being investigated by the federally operated Canadian Tourism Commission is "adventure tourism." This commission also recognizes both "hard" and "soft" adventure tourism depending on the degree of danger and physical exertion involved in the practice of activities. As it happens, experts worldwide often refer to softer adventure tourism as "nature tourism" (Whelan, 1991; Valentine, 1992). In combination, both hard and soft ecotourism can therefore be referred to as "adventure and nature tourism", particularly in context of the Canadian lexicon.

A canoe trip and a bird watching excursion can be used to differentiate the subtleties of adventure tourism and nature tourism. During a canoe trip there are variables that are unknown. Will the water levels be low? Will the insects be numerous? Is the map accurate? These unknown variables combine and in some instances magnify one another, creating an entirely new and unforeseeable experience each time the trip is taken. The fact that the final outcome is unknown implies that the process is an adventure with an element of risk. A bird watching excursion on the other hand has a defined set of parameters. The purpose is to visit an area known to attract a certain species of bird. The outcome is easily predicted because very little about the excursion is unknown. Risk is therefore minimized. Again, both adventure and nature tourism are identical, it is the level of risk and the degree of certainty in outcome that makes the distinction.

The following is a list of activities that fall under the adventure and nature tourism category. The list was principally prepared by the Canadian Tourism Commission, and all

examples were therefore considered within a Canadian context. What is important to note is that all of these activities in and of themselves are minimally consumptive in nature. That is to say that participation does not require fuel, the removal of a resource, or a conversion of land from its original state. Activities such as motorized dirt biking, golfing, and sport fishing therefore do not qualify as adventure and nature tourism. Mountain biking, trail blazing (hiking), and camping have however, been included as non-consumptive activities because the associated conversion of land does not require foreign or permanent building materials. In addition, catch and release fishing and photography hunting have been included as non-consumptive versions of their traditional counterparts.

Land Activities:

- hiking/backpacking
- rock climbing
- horse riding
- mountain biking
- cave exploration
- camping

Water Activities:

- canoeing & kayaking
(short, medium, & long distance)
- rafting
- sailing/windsurfing
- scuba diving
- snorkeling
- skating

Flora & Fauna Observation Activities:

- bird watching
- carnivore & ungulate tracking
- whale watching
- insect and reptile identification
- tree & plant identification

Winter Activities:

- dog sledding
- cross country skiing
- snowshoeing
- ice climbing

Air Activities:

- hang gliding
- aerial courses

Sporting Activities:

- catch & release fishing
- photography hunting

Represented in Canada are five of the fourteen global terrestrial biomes (Lean, Hinrichsen, & Markham, 1990). Listed in order of magnitude they are:

1. Temperate needle leaf forests and woodlands.
2. Tundra communities and barren arctic deserts.
3. Mixed mountain and highland systems.

4. Temperate grasslands.
5. Temperate broad leaf forests and sub-polar deciduous thickets.

Map 4 used in the previous chapter helps to provide a picture of how these biomes once looked. It is a picture of a vast northern wilderness that would easily lend itself to a variety of adventure and nature tourism activities. However, Canada's wild areas are not the same as they were as recently as 150 years ago. This is because the worth of our wilderness was, and still is, measured in terms of the natural resources that could be harvested and extracted. When combined with human population growth and settlement the consequence is a distinct absence of the Atlantic hardwood forests, the wetlands of southwestern Ontario, the prairie grasslands of Alberta, Saskatchewan, and Manitoba, and the coastal rain forests of British Columbia in an unaltered state. What does exist today is primarily a mix of planned and unplanned regeneration leaving true wilderness areas confined to the far north and to the national and provincial park systems (Keating, 1992).

Despite the current predicament, Canada's regenerated wild places are still of ecological interest as they maintain outstanding scenery, unspoiled natural surroundings, uncrowded back countries, and diversity in wildlife (Violi, 1998, pers. obs.). It is this last observation about wildlife that is perhaps the most interesting as very few of Canada's wildlife are dangerous to humans. Consider that aside from the Massasauga Rattler snake and the Black Widow spider, no Canadian creatures including reptiles, amphibians, and insects harbour enough poison to kill a human (Bennet & Tiner, 1993). While some indigenous plants and fungi are poisonous, this is only true if ingested. By and large Canadian species are harmless with the worst violator being Poison Ivy, a plant that causes a skin irritation upon contact. In regards to top predators, only the black bear, the grizzly bear, the polar bear, the cougar, and perhaps the wolf are considered threats to human life. But of these five, only the black bear is encountered with some degree of regularity. Fortunately, black bears are not known to specifically target and attack humans (Bear Facts Brochure, 1998).

This absence of dangerous life forms on Canadian lands and in Canadian waters is a definite benefit for adventure and nature tourism, as it is not a common trait throughout the world. The United States, Central America, South America, Africa, the Middle East, Southern Asia, and Oceania are all populated to varying degrees by predators and venomous creatures. The Northern Asian Republics appear to be some of the few exceptions with flora and fauna similar in nature to that of Canada. Promising is that Canada also possesses a number of other attributes that other countries focusing on adventure and nature tourism fail to match. Such attributes include political stability, variety in transportation, and modern medical facilities.

These strengths, taken in context of international competition, are enough to prompt the Canadian Tourism Commission to state that, "Canada could easily become a world leader in adventure travel" (Canadian Tourism Commission, 1995: 1). The Canadian Environmental Advisory Council echoed these same thoughts in 1992. As was previously discussed, this council carried out a report on the status of ecotourism in Canada and came to the conclusion that "Canada has immense potential for the development of ecotourism ... [and] has an immediate opportunity to become a world leader" (Scace, Grifone, & Usher, 1992: 31). Given that both these statements were published in the recent past they accentuate the fact that Canada has not yet fully explored its potential.

Regardless of Canada's current positioning, some progress in these newer domains of tourism is being made. Since 1990 the number of operators, the size and diversity of the client base, and the scale of investments associated with recreation amenities have all increased in Canada. Financial statistics support this argument as total adventure travel revenue was estimated at \$165.1 million Cdn in 1993. When major investments are included, the figure increases to more than \$192 million. This was an overall increase of 12.9% over 1992, a growth rate that far exceeded that of the overall economy (2.6%) as measured by the Gross Domestic Product (Canadian Tourism Commission, 1995).

It is also important to consider the progress of adventure and nature tourism within a North American context. Presently it is the fastest growing sector of tourism (Canadian

Tourism Commission, 1995). This growth has been fueled largely by the baby boom segment of the Canadian and American populations. As people in this group age, their interests and needs evolve with them. As a result, they are generally less inclined to engage in high risk activities but show a fondness for nature tourism such as bird watching (Canadian Tourism Commission, 1995). In fact, bird watching is reported to be the fastest growing wildlife recreation activity in North America. It involves between twenty and thirty million people and results in economic expenditures of twenty billion dollars U.S. annually (Ceballos-Lascurain, 1996).

In addition to economic incentives, there are other more pressing reasons to pursue adventure and nature tourism in Canada. One such reason is conservation. Conservation of the world's remaining wilderness is important because it is an example of what the natural world used to be and as such, is a legacy for future generations. But as previously stated, two thirds of the planet's original wilderness has already been developed. To preserve the remaining third and to restore former wilderness grounds to past conditions, economic development should look to newer industries and processes that do not result in the removal of resources or a significant impact on the environment. Three of Canada's larger conservation organizations including the Federation of Ontario Naturalists (FON), the Wildlands League, and the World Wildlife Fund Canada (WWF) believe that adventure and nature tourism is one of the few means of achieving this uncommon blend of conservation and socio-economic development (Reid, 1998).

The promise of a more ecologically sustainable form of development such as tourism is also recognized by the Canadian Environmental Advisory Council. In 1992, this council stated that "every effort must be made to pursue this potential and to ensure that public and private development strategies recognize and incorporate ecotourism as a viable use of our natural and cultural resources" (Scace, Grifone, & Usher, 1992: 31). This council even went so far as to make a direct appeal to provincial, territorial, and federal governments to promote ecotourism. Among their recommendations, this agency urged:

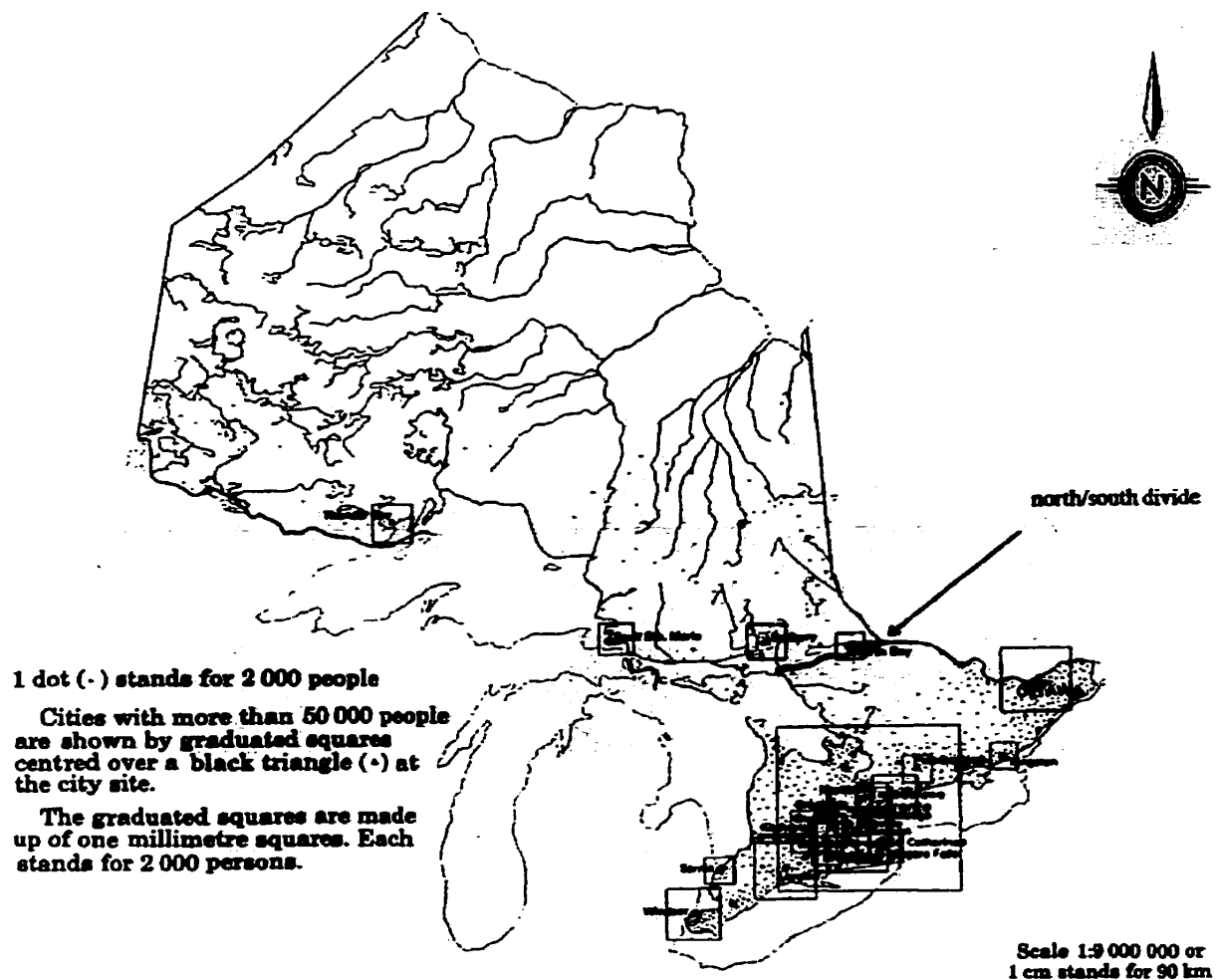
- That Canada take inventory of its natural resources and ecotourism assets.

- That government agencies work to develop a streamlined approval process for new ecotourism businesses.
- That qualified ecotourism operators be produced.
- That ties be strengthened with a willing corporate sector to secure funding. (Scace, Griffone, & Usher, 1992).

Adventure and Nature Tourism in Ontario

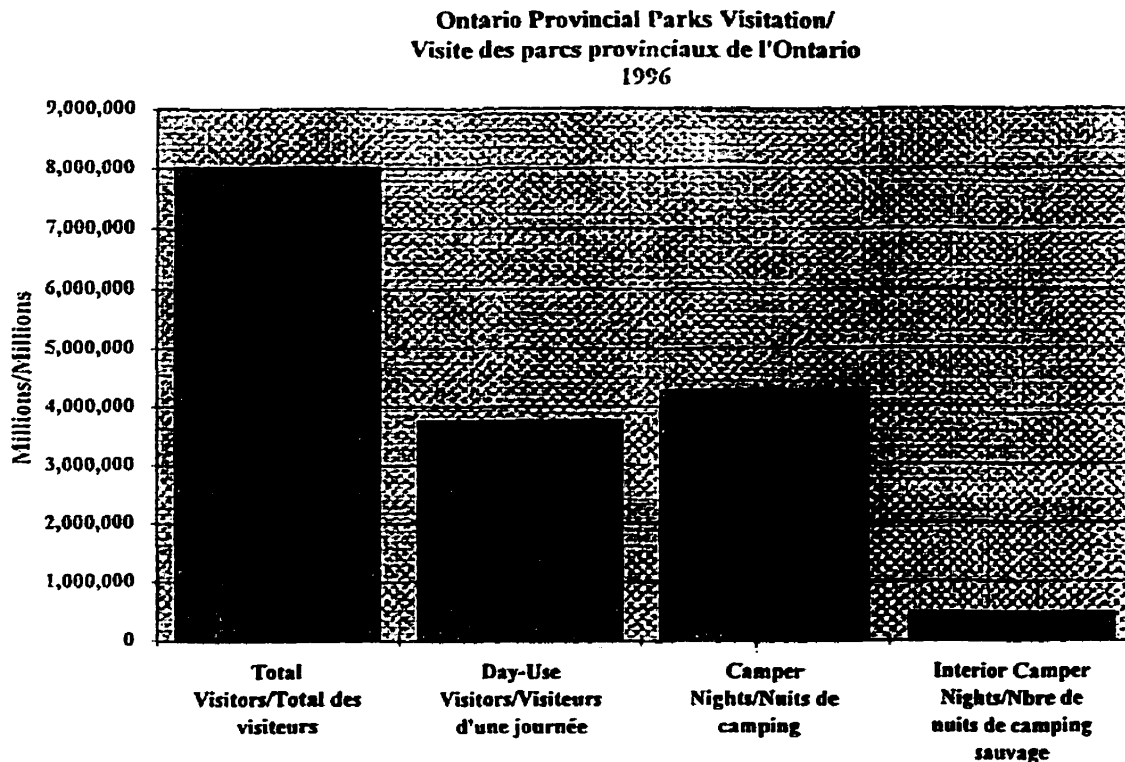
At just over one million square kilometres or ten percent of the total surface area of Canada, the sheer size of the Ontario resource base should guarantee suitable resources for adventure and nature tourism. This resource base, which consists primarily of forests and water systems, has traditionally been divided into two sectors: the north and the south. The division takes place at the French and Mattawa River systems creating two sectors that share an inverse relationship, as the north is massive in size but near absent in population while the south is very small but represents over ninety percent of Ontario's inhabitants. These relationships are demonstrated on Map 5.

The current state of adventure and nature tourism in Ontario can be inferred through the public and private tourism accommodation sector as they provide a launching point for activities. Most important of the public sector adventure and nature tourism accommodation is the national and provincial park systems. In all, Ontario possesses two hundred and seventy-two provincial parks and six national parks covering approximately 6.8% and 0.2% of the total provincial land base respectively. This combined area represents 70,000 km² (Parks Statistics, 1996; Stephenson, 1991). Visitor numbers in the provincial parks have fluctuated little over the last ten years. In fact, both 1987 and 1996 attracted the same amount: 8.01 million people. The six national parks attracted an additional 931,157 people, bringing the combined national/provincial park total to 8.94 million people in 1996 (Various National Parks Staff, 1999).



Map 5: Ontario's North/South Population Distribution
Source: Thinking About Ontario, 1981.

In regards to adventure and nature tourism, the best statistic available to serve as an indicator of its recent level is the number of *interior camping nights*. Interior camping nights are those nights spent by campers away from the main campground. This implies that hiking, canoeing, or some other form of non-consumptive transportation is involved. As Graph 1 indicates, this type of camping is still relatively small in comparison to day-use camping and campground camping in provincial parks. Of the six national parks, only Pukaskwa in the north is suited to interior camping. In 1996 1,131 such campers were recorded in this park (Kurvits, 1999).



Graph 1: Interior Camping Nights as a Measure of Adventure and Nature Tourism in Ontario's Provincial Parks.

Source: Parks Statistics, 1996.

In addition to this parks system, there are also as many as 2,000 private tourism facilities scattered to even the most remote sectors of the province. These facilities vary in size from multiple hectare resorts to single room wooden cabins. Unfortunately, the number of guests serviced by these businesses annually has not been tabulated in a comprehensive document.

Adventure and Nature Tourism in Southern Ontario

The parks in Southern Ontario, including Algonquin, Killarney, Tobermory, and Point Pelee, offer a great diversity of adventure and nature tourism activities including: hiking, canoeing, bird watching, fishing, and camping. In addition, many have interpretive centres, picnic shelters, children's playgrounds, playing fields, and rental cabins to assist in the transition from urban to natural outdoor experience. Culture and heritage also play

a key role in the parks system with the support of historical attractions, museums, and sites of aboriginal importance (Ontario's Parks Guide, 1998).

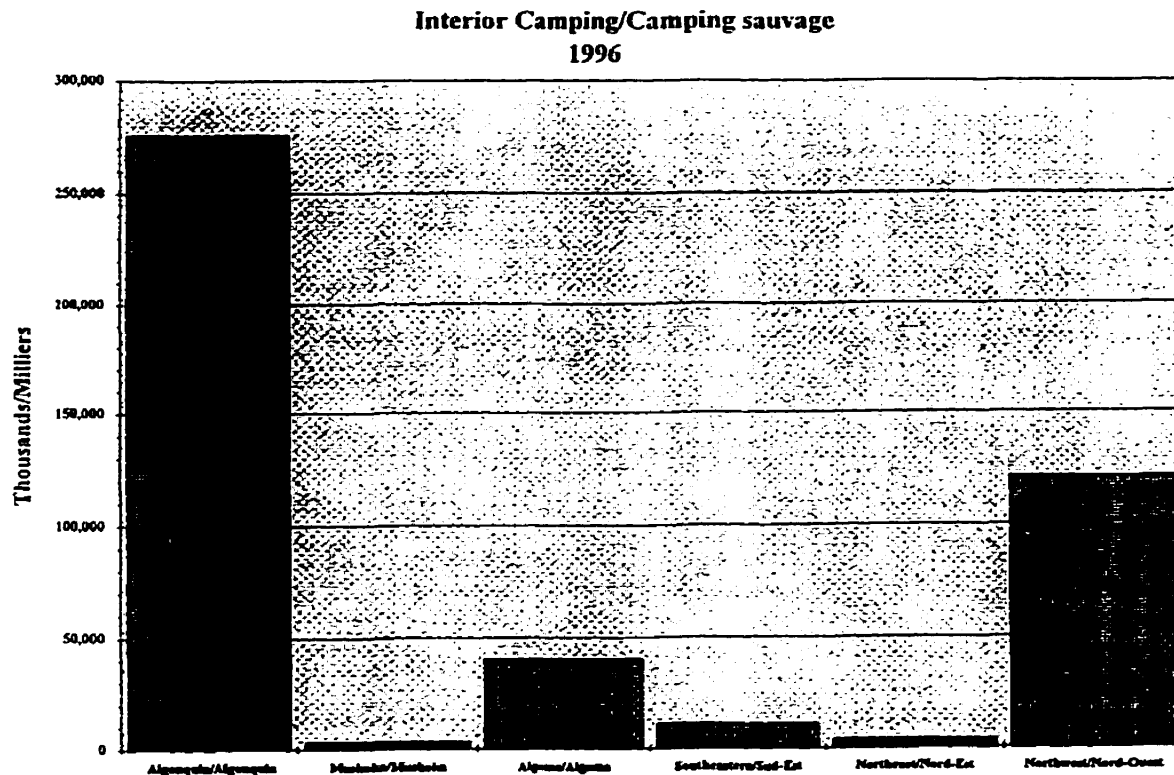
The total area covered by these southern national and provincial parks is approximately 9,000 km². Having received 7.3 million guests in 1996, eighty two percent of the annual park visitors were therefore concentrated on thirteen percent of the national and provincial park land. It is believed that the skewed park use can in part be explained by the popular and easily accessible Algonquin and Point Pelee Parks in the south.

Southern Ontario also has a number of private enterprises whose purpose is to provide a diversity of indoor and outdoor recreation in rural and semi-wilderness environments. In all there are more than two hundred private tourism facilities. They vary in style from fully serviced water based resorts, hotels, and lodges to simple inland based cottage units. Country inns (sometimes referred to as Bed & Breakfasts) are another form of tourism accommodation in Southern Ontario. They often consist of historic buildings and are typically located in rural areas. The vast majority of these accommodations are not explicitly designed to promote adventure and nature tourism but can act as launching points for many of the activities that were previously identified in this chapter.

Adventure and Nature Tourism in Northern Ontario

Northern Ontario, like the south, has a great number of parks and private tourism enterprises. The parks, including such giants as Pukaskwa, Quetico, Woodlands-Caribou, and Polar Bear, account for ninety percent of the total park area and concentrate on offering more adventurous tourism activities such as long distance canoeing. In some places they are also the focus of exposed native artifacts, particularly the rock face paintings known as pictographs. Despite these offerings, these parks are still known chiefly for the outstanding remote fishing they provide (Various Ontario Ministry of Natural Resource parks publications). Because of their large size and remote locations, these parks are also the closest approximation to true wilderness in the province.

As was previously indicated these parks receive few visitors in comparison to the south. Pukaskwa National Park, for example, receives only 9,000 visitors annually (Kurvits, 1999). In slight contradiction, however, the interior camping nights are remarkably high within the northern national and provincial parks. Graph 2 shows the interior camping nights of the Northern Ontario provincial parks to be almost half that of those in the south.



Graph 2: Interior Camping in Ontario's Provincial Parks: North vs South
Note: North = Algonia/Northeast/Northwest. Source: Parks Statistics, 1996.

This slightly irregular statistic can be explained in part by two factors. The first is the number of large and popular parks such as Blue Lake, Kakabeka Falls, Quetico, and Sleeping Giant which offer excellent hiking, canoeing, nature observation, and fishing for more experienced campers. The second is that these parks are a long way from populated centres, implying that once the trip is made the park system has a captive audience.

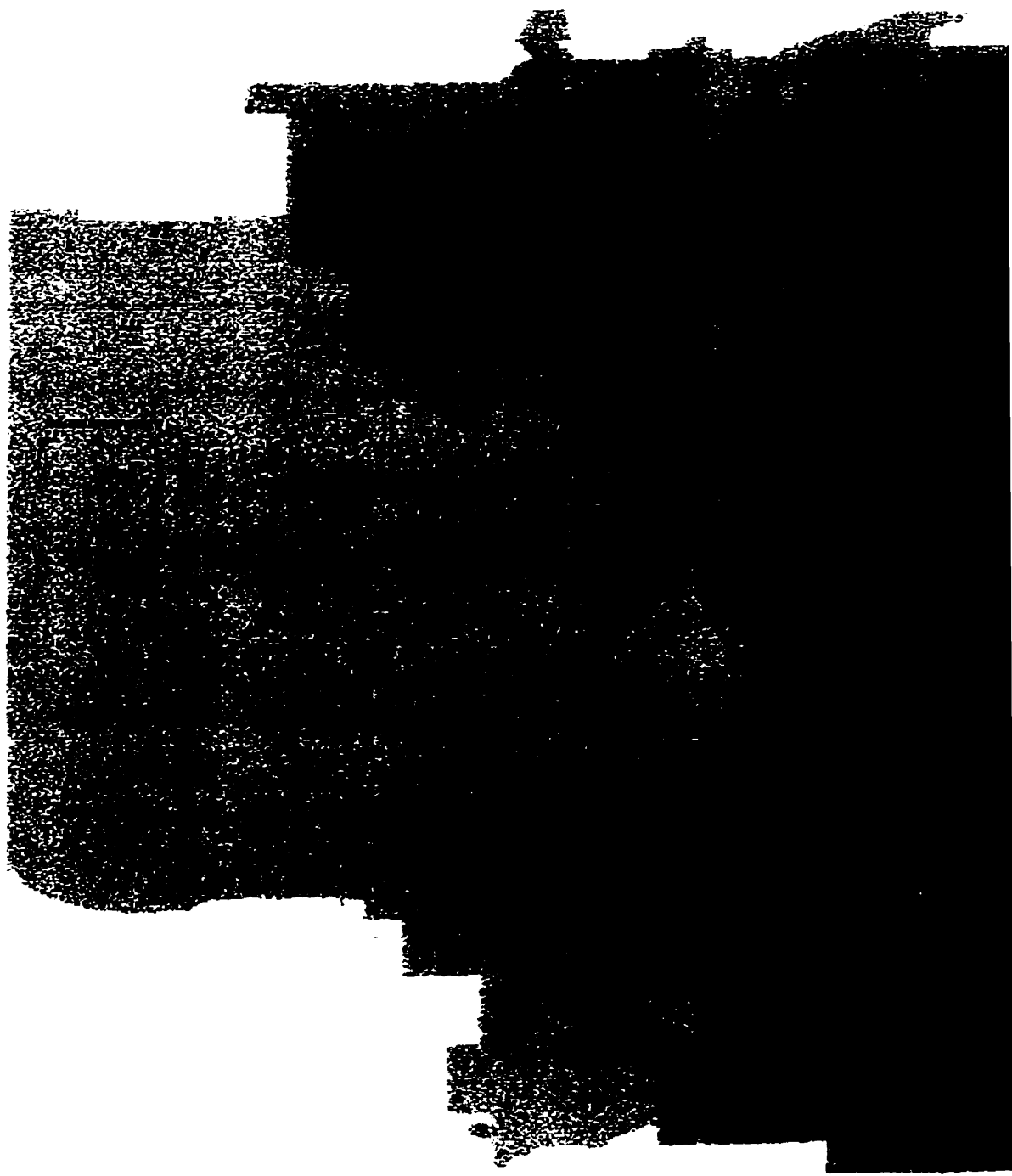
In addition to the various national and provincial parks, there are also 540 private tourism destination facilities in Northern Ontario (Northern Ontario Vacation Guide, 1998). Of

these 540, only seven cater principally to adventure and nature tourists. These facilities include:

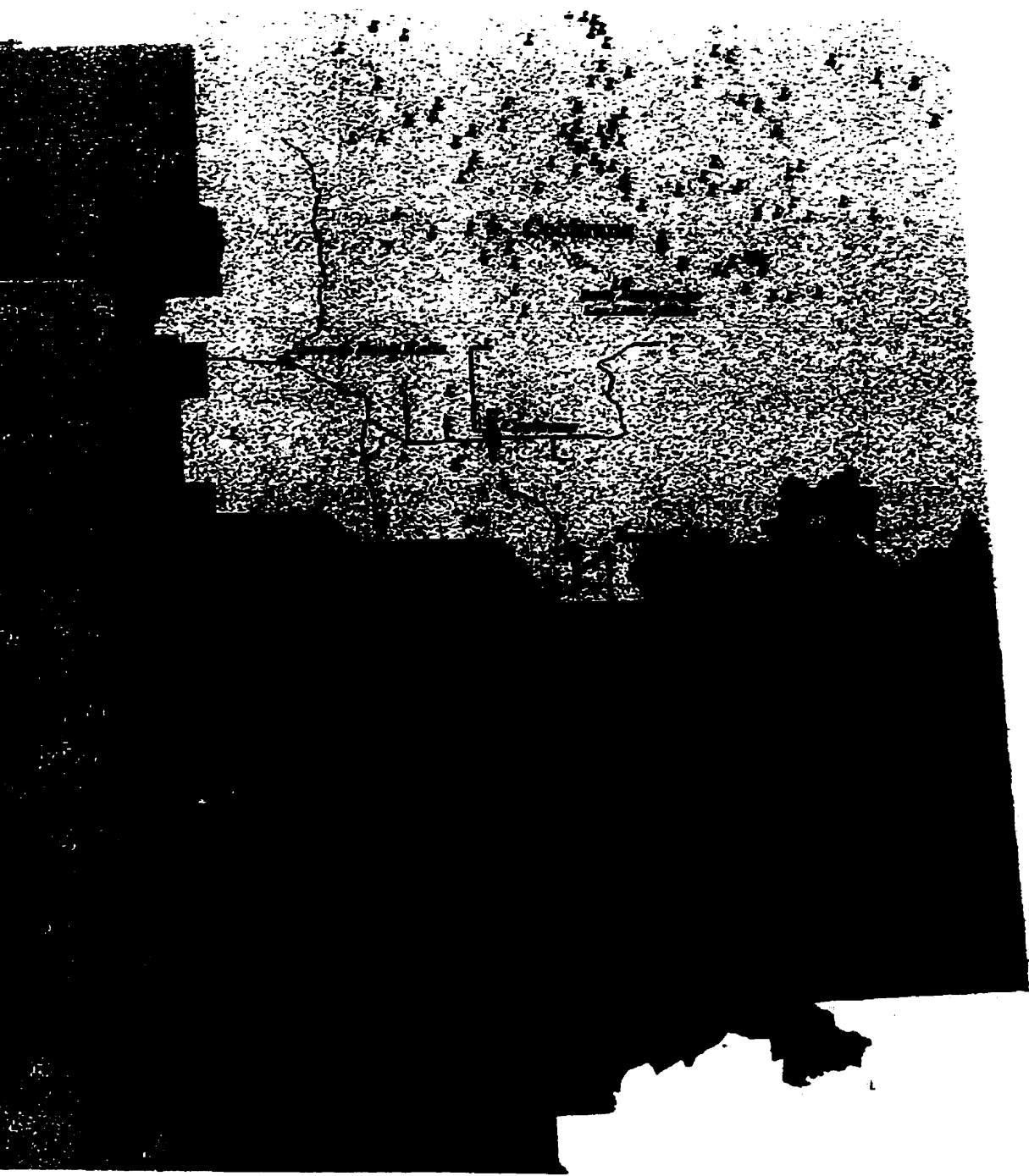
1. Camp Wanapitei Co-Ed Camps Ltd. – a canoe trip specialist of the Temagami region.
2. Lady Evelyn Outfitting Inc. – a canoe and dog sled expedition specialist of the Temagami region.
3. Smoothwater Outfitters & Wilderness Lodge – a four season adventure and nature outfitter of the Temagami region.
4. Errington's Wilderness Islands Ltd. – a wildlife observation station of the Algoma region.
5. Wildwater Wabakimi Canoe Outfitter – a canoe and kayak trip specialist of the Wabakimi Wilderness Park and Albany River.
6. Northern Comfort Wilderness Adventures - a four season adventure and nature outfitter of the Sioux Lookout region.
7. Tiptop Resort (unlisted) – a canoe expedition specialist of the Quetico Provincial Park region (Northern Ontario Vacation Guide, 1998).

Of the remaining 533 facilities, 465 rely on consumptive hunting and fishing as their primary tourism activities. The other sixty-eight also rely on hunting and fishing but offer some adventure and nature tourism activities. In most cases these adventure and nature tourism activities consist of one or more of the following: canoeing, hiking, wildlife observation, cross-country skiing or catch and release fishing.

The 533 principal hunting and fishing facilities also operate hundreds of rustic outpost camps in their respective vicinities. Such outpost camps offer very simple accommodation and appeal to hunters and fishers seeking a truly solitary experience (Northern Ontario Vacation Guide, 1998). As an example of their distribution in the north, both the principal lodges and the outpost camps of the Boreal East Planning Area are shown in Map 6. Even though the map displays hundreds of facilities, it must be remembered that most are extremely simple accommodations and that they are scattered over an area larger than the province of New Brunswick. It is important to consider all of these facilities because they all offer the potential to launch further adventure and nature



Map 6: Tourism Facilities of the Boreal East Planning Area, Northern Ontario. Source: Lands For Life Resource Series



tourism activities in the future.

Ethics of Adventure and Nature Tourism Expansion

Based on the importance of the tourism process worldwide, the growing sub-sector of the international ecotourism market, the tremendous potential that Canada has shown, and the relative absence of adventure and nature tourism facilities in Ontario, it seems that the argument for the promotion of adventure and nature tourism in this province is strong. But prior to a full recommendation, the ethics of further tourism development must be considered. This step is especially important when considering expansion into some of Canada's remaining wilderness environment.

Expansion of adventure and nature tourism in Ontario will require that permanent human populations be brought to the borders of the wilderness. Moreover, it will also require that the interiors of the wilderness be opened to visitors, possibly on a year round basis. While it is true that tourism can be used to promote the conservation of environments that might otherwise befall some worse fate, it is also true that wilderness with no alternative value can be conserved best by being left alone. The ethical dilemma therefore is that the development of Canada's few remaining accessible wild places seems hypocritical when the importance of conservation has already been observed.

The matter is complicated when the type of wilderness environment most readily available in Ontario is considered. This is true because the most abundant wilderness is forest and losses to the global wilderness have disproportionately affected this type of biome. In fact, only 21.5 million square kilometres of forested wilderness remain (Lean, Hinrichsen, & Marham, 1990). This is down from seventy five million square kilometres 1,000 years ago. The greatest implications of this loss are for terrestrial life, fifty to eighty percent of which rely on forest as primary habitat.

Given this information about our wilderness and given the need to conserve what remains for future generations, the only thing that may justify expansion into Ontario's remaining spaces is the concept of higher order ethics (Jaakson, 1997). Higher order ethics is the

notion of one ethic superseding another when the two cannot be achieved simultaneously. In this instance education serves as a higher order ethic over conservation, for it is felt that learning about our wilderness environments and using that information to restore land that has already been degraded is more valuable than conserving land that will ultimately be developed if not for tourism than for some more destructive purpose in the future.

Conclusions

This chapter has indicated that Canada as a whole and Ontario in particular have great potential in regards to the promotion of adventure and nature tourism. Already, this potential has been explored through both the public and private sectors and has resulted in the creation of parks, resorts, and lodges amongst other forms of accommodation. While these facilities do offer opportunity to explore some aspects of adventure and nature tourism, the vast majority is apt to promote consumptive activities rather than those that conserve. This is true particularly in Ontario's north. When one considers this fact in light of the vast natural resources that exist, and in context of ethical considerations, it is argued that the construction of a new tourism facility that strictly promotes conservation is long overdue.

This chapter has therefore set the stage for later chapters which will discuss the land development process for the construction of an adventure and nature tourism facility in the Boreal East Planning Area of Northern Ontario. This development process consists of three components including: land planning, adventure and nature tourism resource inventories, and land development regulation.

Chapter Four: Land Planning and the Promotion of Adventure and Nature Tourism in the Boreal East Planning Area of Northern Ontario

Introduction

With the knowledge that Ontario holds great potential for the development of adventure and nature tourism, it is now necessary to review the land development process. This process begins with land planning. Specifically, the question to be answered is, to what extent do current provincial procedures promote various forms of tourism, both through land allocation and directed financial resources?

The Land Planning Process in Northern Ontario

As with any venture in Ontario, tourism development can only take place with the approval of the governing planning agency. The purpose of the planning agency is to develop and implement societal management strategies and in this instance is represented by the Ontario government and its various ministries. The ministry that deals specifically with resource allocation for tourism in Northern Ontario is the Ministry of Natural Resources or MNR. In addition to tourism, the MNR also allocates land and resources for such industries as logging, mining, and hydro electricity generation, and for conservation through the previously discussed provincial parks system. Resource allocation however, is but one sub-set of the MNR's responsibilities which are to administer, protect, and conserve the public lands and waters, and all the resources contained therein. The sum of the public lands and their resources is commonly known as Crown Land, and their administration is vast as they constitute eighty-seven percent of the total surface area of the province (Lands For Life, 1997).

Over the past few decades there have been several planning documents produced that address the issue of tourism in Ontario's north. The Strategic Land Use Plan for both Northeastern and Northwestern Ontario were the first of these documents. They were published in the early 1980s by the MNR. Briefly, they specify that land requirements for additional commercial tourism facilities were to be evaluated on an individual basis using local land use plans as guidelines. An example of such a local land use plan was obtained for the Wawa District and served to confirm this statement.

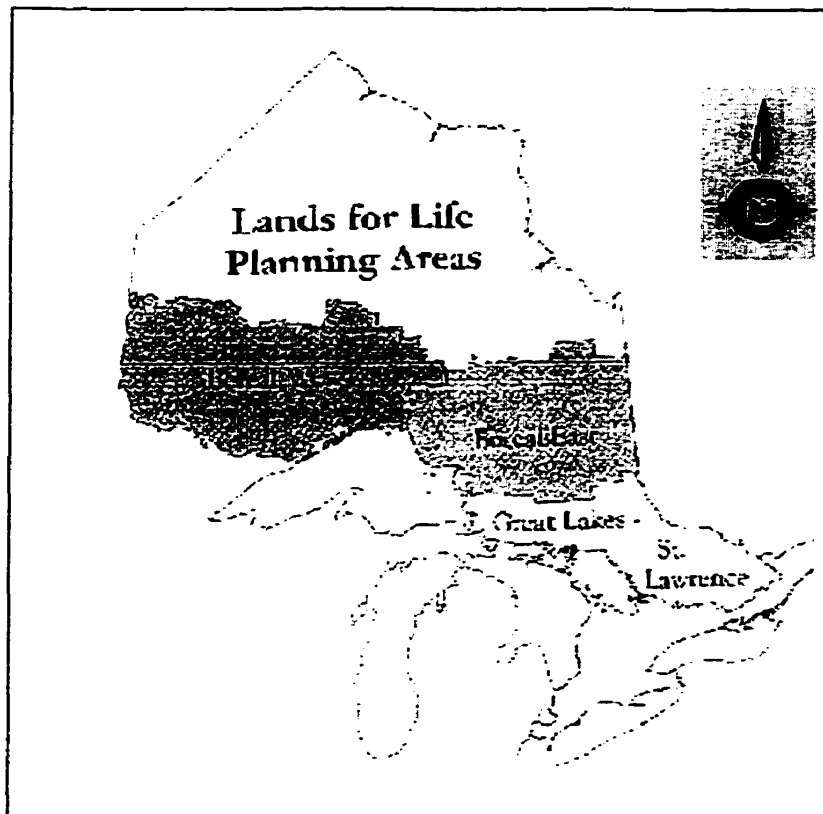
Towards the middle of the 1980s another report was published. This report, carried out on behalf of the Royal Commission on the Northern Environment, examined the strategic planning process for all land and resources north of 50° latitude. In regards to tourism and planning, this report revealed that no study “dealt with Ontario North of 50° in an effective manner” (Fahlgren, 1985: 79). Despite this fact, tourism development apparently continued at a steady rate and was mostly conducted amongst the native peoples of the far north.

It would not be until the 1990s that Northern Ontario would develop a comprehensive strategic process that included tourism interests. As it happens, this process, put forward by the provincial government and the Ministry of Natural Resources is currently in progress and may not be completed until the year 2000. Its purpose is to review the land allocation system with the intention of ensuring the long term use and protection of Ontario’s natural resources. This review is widely known as the *Lands For Life* planning process and it has been specifically designed to replace all previous strategic land use plans employed by the MNR (Lands for Life, 1997). Given this stature and given that the Lands For Life planning area contains the best available resources in the province, it will most certainly have implications for future adventure and nature tourism development.

In all, the Lands For Life planning process will apply to approximately half of all Crown Land in Ontario, or 460 000 km². This area is the same size as that of the Yukon Territory. Given the massive size of the planning area it has been divided to facilitate decision making. The resulting division (which again excludes most of Ontario north of 50° latitude) is three smaller planning units including: the Boreal West, the Boreal East, and the Great Lakes-St. Lawrence. While all three planning areas are represented in Map 7 it is Boreal East that will be concentrated upon for the remainder of the project. Of the three it was selected because it is the most likely to contain true wilderness areas suitable for adventure and nature tourism while still maintaining some degree of proximity to the tourism market of Southern Ontario. Specifically, such wilderness areas should meet the criteria outlined in Chapter two including:

- A history absent of post industrial human development.

- An absence of permanent human activity.
- Size (approximately 4,000 km²).



Map 7: The Lands For Life Planning Areas
Source: Boreal East Tabloid #3, 1998. Map not to scale.

In the Boreal East, the Lands For Life planning process is following a consensus building approach founded on the use of regional round table discussion groups. These groups, comprised of environmentalists, Aboriginal peoples, tourism operators, recreational users, anglers, hunters, and resource industry representatives for logging, mining, and hydro

electricity are all working in conjunction with the MNR towards the achievement of four primary objectives. These objectives are to:

- Complete Ontario's system of parks and protected areas.
- Provide new opportunities for outdoor tourism.
- Provide greater certainty for resource users including logging, mining, and tourism industries.
- Offer expanded opportunities for outdoor recreation. (Boreal East Tabloid #3, 1998).

In this instance the second objective is obviously the most important as it explicitly recognizes the value of outdoor tourism in the northern environment. The Lands For Life process has even gone so far as to commit to "maintaining or enhancing the current

supply of Crown Land available for remote and semi-remote tourism” (Boreal East Tabloid #3, 1998: 6). To ensure that this objective will be implemented, the Lands For Life process will designate some lands specifically for tourism, designate others for multiple use, including tourism, and will not zone existing facilities into incompatible uses (Boreal East Tabloid #3, 1998). The summary of these allocations has been delineated in the draft land use strategy entitled *Consolidated Recommendations of the Boreal West, Boreal East and Great Lakes-St. Lawrence Round Tables* released prior to 1999.

Unfortunately, upon reading this land use strategy, a significant problem with the tourism allocations was made apparent. The problem is that the allocations were principally defined in terms of hunting and fishing potential with little if any recognition going to adventure and nature tourism activities (Consolidated Recommendations, 1998). Of the three planning areas only the Great Lakes-St. Lawrence planning area even acknowledged adventure and nature tourism and this acknowledgement was directed towards the need for future study and not its immediate application (Consolidated Recommendations, 1998). The risk therefore exists that resources needed for such adventure and nature tourism activities as rock climbing or mountain biking may not be reserved if allocations are made only for hunting and fishing interests.

Adventure and Nature Tourism Resource Inventories

At present it appears as if the potential for adventure and nature tourism has not been realized in Ontario’s north. This is true because the MNR has not conducted any explicit studies into this domain and neither has the Ministry of Economic Development, Trade and Tourism. In fact, only two government sponsored studies have been undertaken that even remotely touch upon the subject. The first was the federally operated Agricultural and Rehabilitation Development Act (ARDA). It was conducted in the 1960s with the purpose of measuring land capability for agricultural and recreational purposes.

Published as a series of maps, the ARDA classification had many shortcomings as it:

- Only classified the southern portion of the provinces.
- Provided a confusing gradient scheme of recreational capability.

- Did not consider market availability, access, or distance from origin to destination.
- Focused on land carrying capacity and not on the type of experience offered.
- Did not take into consideration change over time, nor of recreational patterns, preferences or activities. (Boyd, Butler, Haider, & Perera, 1994: 46; Violi, 1994).

The second study, while more recent, had several shortcomings of its own. It was entitled *Strategic Directions for the 1990s: a Study of the Specialty Outdoors Sector in Ontario*, and was published in 1992 on behalf of the Canada-Ontario Tourism Development Agreement. Unfortunately, this study dealt primarily with the identification of tourism activities, the profiling of clients, and the conduct of business. This information was not relevant without reference to a specific region or natural resource on which to test the forwarded theories. In the end, neither this study nor the ARDA classification study succeeded in taking a useful inventory of Ontario's adventure and nature resources.

This absence of a study is something that was explicitly addressed by both the Canadian Tourism Commission and the Canadian Environmental Advisory Council in regards to Canada. Their reports have clearly stated that an inventory of applicable land, water, and wildlife resources must be undertaken to achieve adventure and nature tourism (Canadian Tourism Commission, 1995; Scace, Griffone, & Usher, 1992). Ontario is one province that could certainly benefit from such a detailed inventory.

Conflict of Interest Between Competing Industries

In addition to the uncertainty surrounding the allocation of lands for tourism there is also the problem of conflict of interest. This problem stems from the fact that several industries are competing for the use of the same land and resources. In the Boreal East Planning Area it is logical that forestry will place the greatest physical restraints on tourism development. This is because eighty percent of the land within the Boreal East will be made available for timber management or logging (Boreal East Tabloid #3, 1998). While it is true that some portion of this eighty percent will be designated *mixed use* and will therefore provide for adventure and nature tourism opportunity, it is also true that the

removal of trees as a form of wilderness degradation makes these two industries largely incompatible.

Mining and hydro electricity generation are other activities that place constraints on where tourism development can and cannot take place. In all, there are twenty active mines, thirty four hydro electricity stations, and thirty one dams in the Boreal East Planning Area (Boreal East Tabloid #3, 1998). While more localized than logging, their presence implies a scarring of the landscape and extensive human activity, and as such are a deterrent to the placement of adventure and nature tourism facilities.

Already then, much of the land that may hold value for adventure and nature tourism has been or will be allocated to competing industries. This is understandable to an extent as half of the Boreal East's population of 131,000 consists of younger and middle aged families with incomes derived from these three primary industries (Boreal East Tabloid #3, 1998). At the same time, land that is ideally suited for adventure and nature tourism development could be overlooked and incorrectly allocated. It seems inevitable that such an event will happen and was even recognized in an indirect manner by W.N. Cafferata, chief forester for industry giant MacMillan Bloedel when he wrote that, "society today values forests for many other attributes than maximum fibre production" (Cafferata, 1998: A18).

Unfortunately, the conflict surrounding land allocation will not be easy to resolve. Mel Crystal, a lawyer specializing in dispute resolution, has been a key player in past round table discussions. During these discussions he identified four obstacles that must be overcome to ensure progress towards equitable access to resources:

- Alternative points of view regarding resource use must be recognized by the various players and stakeholders.
- Legal rights can be unclear, specifically in terms of Crown Land allocation.
- Facts, including scientific information, may be incomplete and contradictory.
- All parties must trust one another. (Crystal, 1998).

Despite their identification, these obstacles have not been overcome in regards to the Lands For Life planning process. This is true because the consolidated recommendations have been unrelentingly criticized by Ontario residents, First Nations people, and scientists alike in both the *Globe and Mail* and the *Toronto Star*. The criticism takes the position that the conservative provincial government has ignored the wishes of the majority of Ontario residents by demonstrating extreme bias in favour of logging, mining, and hydro electricity development. In response to this perceived bias, two legal actions have been recently initiated against the government with the intention of bringing Lands For Life to a halt.

Conclusions

Through the Lands For Life planning process, the Ministry of Natural Resources among other interested stakeholders is advocating the promotion of tourism in Ontario's north. This promotion will include the allocation of land for tourism. It is believed, however, that the allocations for tourism purposes will be strongly influenced by hunting and fishing interests and less so by those of other adventure and nature tourism activities. In addition, the majority of land is already being allocated to more traditional industries such as logging, mining, and hydro electricity generation. Compounded by the limited time factor of the planning process and the absence of directed studies by the Ministry of Economic Development, Trade and Tourism, these circumstances strongly point to the need for a contemporary inventory of adventure and nature tourism attractions in Northern Ontario. Such an inventory should be conducted as soon as possible, driven by the intention to reserve the best possible lands. Out of necessity, the focus of this project will therefore shift to identifying a suitable location for adventure and nature tourism in the Boreal East Planning Area prior to investigating the land development process.

Chapter Five: Constraints on the Development of Adventure and Nature Tourism

Introduction

As was established in the previous chapter, the extraction of resources and the generation of electricity act as the primary constraints on the positioning of adventure and nature tourism facilities in the Boreal East Planning Area. In simpler terms, wherever there is a clear-cut forest, an open pit mine, or a hydro electricity dam, there cannot be a tourism destination facility. The reason for this is that the enjoyment of nature and the process of resource extraction clash with one another both functionally and aesthetically. This conflict of interest will exist as long as the land planning processes favour the resource extraction industries and their short term spur of the economy.

Unfortunately, in addition to receiving a disproportionate amount of resources, these industries also generate vast quantities of by-products that often work to degrade remaining lands that may be suitable for adventure and nature tourism development. The potential for such consequences has been noted in the past and was even the subject of an entire Masters Degree Project in the Faculty of Environmental Design entitled *The Impact of Past Waste Management Practices on Future Tourist Development* (Hill, 1993). Prior to establishing where tourism facilities will be located, it is therefore very important to determine the historical uses of the land. This will help to avoid areas that have suffered some degree of environmental contamination.

Industrial Pollution

In addition to restraining the development potential of adventure and nature tourism, logging, mining, and hydro electricity generation also create environmental pollution that threaten the proper functioning of new industries. Environmental pollution is defined as “an undesirable change in the physical, chemical, or biological characteristics of air, water, soil, or food that can adversely effect the health, survival, or activities of humans or other living organisms” (Miller, 1994: glossary). Pollution can affect tourism facilities through prolonged exposure or by way of sudden catastrophe. Regardless of method the threat is the same, degradation of the environment beyond use as a pristine tourism destination.

Mining and Mineral Processing

The influence of mining and more specifically mineral processing is significant throughout Northern Ontario. This is because the pollution generated by mineral processing is two fold, including air pollutants and a part liquid part solid waste called tailings. While the damage caused by the air pollutants has been observed in Ontario for decades, the damage and potential damage of mine tailings has never come to pass in a catastrophic manner.

The air pollution created from mineral processing consists of sulfur dioxide, soot, and small particles of toxic elements such as arsenic, cadmium, and lead. Once released into the atmosphere these chemical pollutants, particularly sulfur dioxide, often undergo a chemical transformation that converts them into corrosive substances commonly known as acids. The corrosive properties of the acid depend upon its hydrogen ion concentration; the lower the concentration, the greater the acidity. In the atmosphere these acids are relatively harmless but ultimately the environment purges itself through the precipitation process, returning the now acidified contaminants to earth and water. This contamination was recorded at its worst during the 1970s when precipitation in Southern Ontario reached the acidity of tomato juice, a substance that is one thousand times more corrosive than distilled water (Kemp, 1990).

Some of the greatest emitters of air pollutants the world has ever seen were the Inco and Falconbridge mineral smelting superstacks of Sudbury, Ontario. During the 1960s, 70s, and 80s, these stacks emitted enough pollutants and subsequently created enough acid deposition to create a dead zone inside the city limits where vegetation and other forms of life could not survive (Miller, 1994). They also had the effect of acidifying an area more than twice the size of Algonquin Provincial Park including some 7,000 lakes and aquatic environments (Ford, 1998). While acidification had detrimental effects on all forms of life, it was the fish and other aquatic species that suffered most dramatically.

The Aurora Trout was one species of fish that was particularly vulnerable to the acidified conditions north of Sudbury. Having evolved from a Brook Trout population that became

trapped inside Whirligig and Whitepine Lakes 10,000 years ago, this fish was attuned to a specific micro-environment and could not tolerate even mild modifications in its living conditions. Brought to the brink of extinction, only a significant recovery effort involving hatchery populations provided the Aurora Trout with a second chance at survival.

Currently, the fish survives in alternative lakes but efforts to reintroduce the species into its original homes have been unsuccessful and will continue to be unsuccessful until the acidity has abated (Ford, 1998). This is disappointing news as the Aurora Trout is revered for its iridescent silver, purple, orange, and red hues and for its reputation as a fighter. In short, a beautiful and rare fish that was difficult to catch would logically serve as a great attraction for nature tourists.

The aquatic environment of Killarney Provincial Park, 100 km southwest of Sudbury is another region that was severely affected. In fact, it was while studying the park's lakes during the late 1960s that biologists from the University of Toronto first identified the phenomenon of acid deposition. Ed Snucins, a lake restoration biologist with the Ministry of Natural Resources, stated that at its worst dozens of lakes were critically acidified within the park, and that hundreds of fish populations were lost as a result (Cundiff, 1998). In this instance, more than just the fish were affected, as the acid killed phytoplankton and other plant life leading to the subsequent effect of unnaturally clear and blue waters. This discolouration, often mistaken as a sign of health, still exists in Killarney's lakes today (Violi, 1998, pers. obs.).

Fortunately, it appears that the degradation caused by acid deposition in Sudbury has reached its zenith. This is because new technology has reduced emissions from the Sudbury superstacks by ninety four percent and because emissions "imported" from the United States were cut in a similar manner (Cundiff, 1998; Hall-Beyer, 1999). These emission reductions have in turn allowed the recovery of the dead zone that characterized the Sudbury basin twenty years ago (Violi, 1998, pers. obs.) and more importantly the ecology of Killarney Provincial Park. Unfortunately, similar recoveries have not been recorded anywhere else in the world, placing an international significance on Killarney's lakes as monitors of the impacts of pollution abatement (Cundiff, 1998).

Despite the relative success in reducing the pollutants that lead to acid deposition there remain more by-products of the mineral separation process with which to contend. These by-products, or tailings as they are known, consist of the same acids and toxic substances that were previously discussed, but in solid and liquid form as opposed to gas. These tailings can be impounded, yet the question remains as to how they should be stored. Thirty years ago the answer was obvious; they were wastes to be dumped at the most convenient location, typically valleys and water basins (Gallon, 1998). It is assumed that permission to do so was granted by the provincial government and by the inhabitants of Ontario in the interest of saving time and financial resources.

Eventually, with the coming of provincial and federal legislation, tailing ponds were developed to contain the processed waste. But because the proper construction and maintenance of a tailings pond was so expensive, and because this expense was not part of the actual extraction of the minerals, some mining companies failed to allocate adequate financial resources. In other instances there was simply a lack of applied engineering knowledge. The result according to Steven Vick, a geotechnical engineer and expert on mine waste impoundment, is that some containment devices are susceptible to slope instability, foundation seepage, seasonal rainwater overflows, structural collapse, erosion, and earthquake related failures (Gallon, 1998).

While there have been no significant failures of a mine tailings pit in Ontario, structural collapses do occur regularly throughout the world. The most recent example of a mine tailings breach occurred at the Los Frailes mine of southern Spain in April, 1998. The mine, owned and operated by the Canadian-Swedish company Boliden Ltd. produced zinc, copper, lead, and silver and stored the wastes of the ore smelting process in a mine tailings pit adjacent to the Agrio River (Mahood, 1998). The cause of the breach, while unknown, released more than five million cubic metres of acidic water and heavy metals into the river and onto nearby farming property. This flow of sludge, equivalent to a five square kilometre lake that is one metre deep contained toxic metals including zinc, copper, cadmium, and mercury (Freeman, 1998).

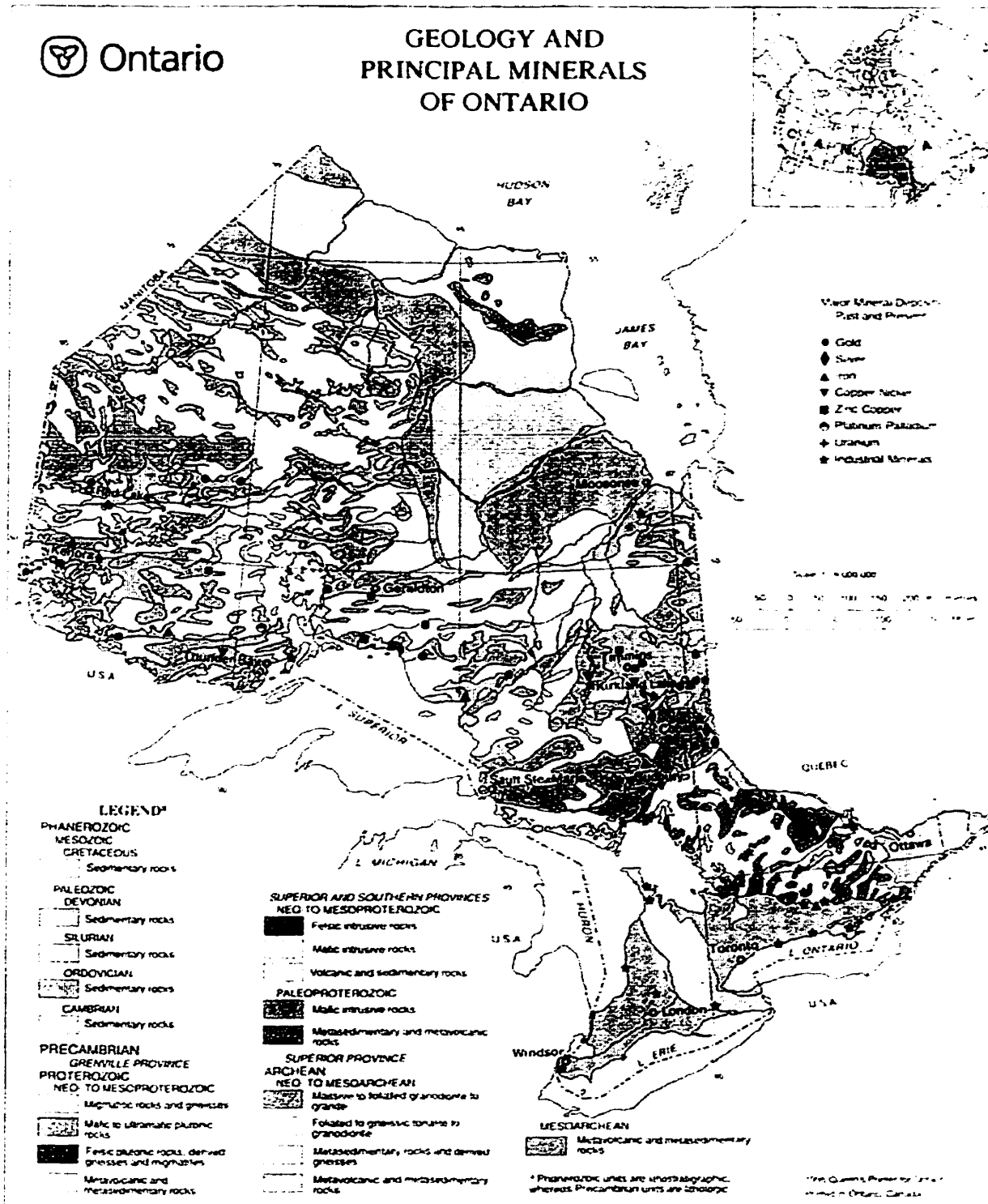
Most disconcerting about this tailings breach is that the pit had been inspected regularly by an outside firm and had even been checked as recently as two weeks prior to the catastrophe. Logically then, if such an accident could happen to one of the world's leading mining industries, it could happen anywhere on the planet, including Canada. Fortunately, the vast majority of modern containment areas in Ontario have received great care in their construction and maintenance and are considered by representatives of the Ontario Ministry of Northern Mines and Development to be completely safe (VanHuyssteen, 1998, pers. comm.). Map 8 gives an indication of where these mining facilities are located and where pollution may have occurred in the past. Such information can prove valuable when decisions regarding the location of future tourism facilities in Northern Ontario are considered.

Pulp and Paper Making

Alongside mining, another longstanding industry in Ontario's north is the pulp and paper industry, which turns trees into pulp to be used in a number of manufactured goods. As a result of this process and in similar fashion to mining, a great deal of pollution is generated. In fact, historically speaking, the pulp and paper industry has been one of the worst polluters in Canada (Pulp and Paper Point Sources Task Force, 1981).

Pulp and paper pollution exists most commonly as an effluent by-product that is discharged into neighbouring water bodies and the air. The effluent is one of the most complex mixtures of organic and inorganic chemical compounds found in any industrial category. While steady improvements have been made every decade since 1970 with the introduction of new pollution abatement technology, the pulping process still contributes a great amount and a great diversity of pollutants into the environment (Pulp and Paper Point Sources Task Force, 1981).

GEOLOGY AND PRINCIPAL MINERALS OF ONTARIO



Map 8: Locations of Significant Mining Towns in Ontario

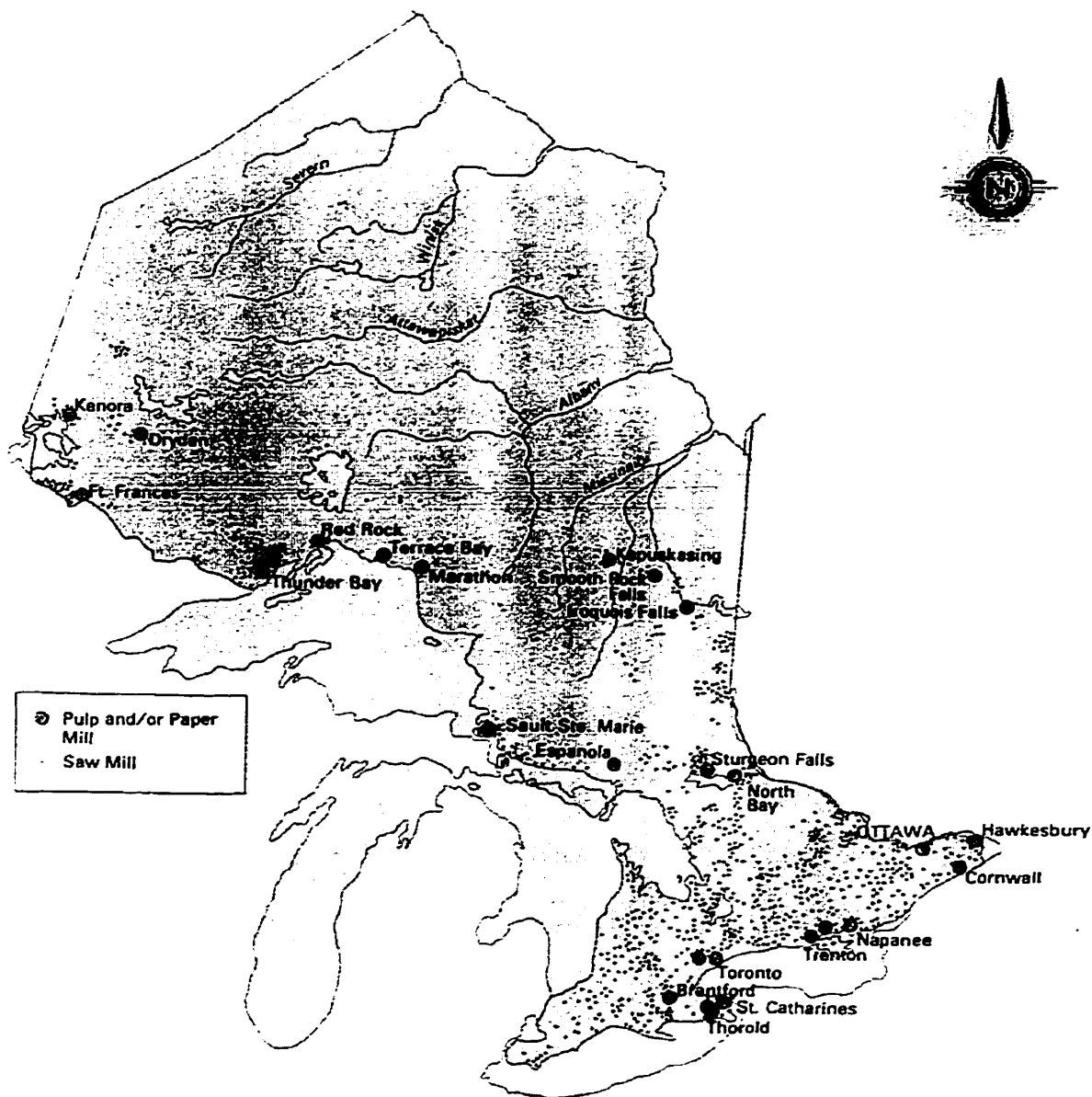
Source: Ontario Ministry of Northern Development, Mines and Minerals, 1998.

In all there are twenty-seven pulp and paper mills in Ontario. Map 9 indicates that fifteen of these mills are located in the north. In the 1980s, these mills produced two million cubic metres of effluent for every day they were in operation (Bonsor, McCubbin. & Sprague, 1988). Despite the fact that this amount may have decreased since that time, the composition of the effluent has changed little. At any time as many as 150 pollutants may be present in pulp effluent. While most of the effects of these pollutants are concentrated in the Great Lakes basin, it is yet one more significant source of pollution that threatens wildlife and therefore a significant source of revenue for potential tourism operators.

Hydro Electricity Generation

Hydro electricity generation, another significant industry in the north, is not typically regarded as a source of pollution but has been consistently linked to the release of mercury into the food chain. Mercury, a metal present in trace amounts as constituents of rocks, minerals, soils, sediments, and even the atmosphere, is toxic if consumed in large enough quantity. In the past it has been known to cause chronic problems in humans including genetic mutation, fetal poisoning, chromosome breakage, and neurological disorders (Barton & Ruggles, 1982).

The release of toxic mercury into the aquatic environment is related to the development of reservoirs needed to store large amounts of water for electricity generation. This process often causes the flooding of land that was previously dry. Erosion of reservoir banks and the decomposition of organic soils and vegetation typically follows. This decomposition of organic matter is what causes mercury to be released. Once in the water it is often incorporated into fish and other aquatic life ultimately interfering with their health (Threader & McCormick, 1991). It is the consumption of these poisoned fish that transmits the mercury to humans.



Map 9: Pulp, Paper, and Sawmill Operations in Ontario
Source: Thinking About Ontario, 1981. Map not to scale.

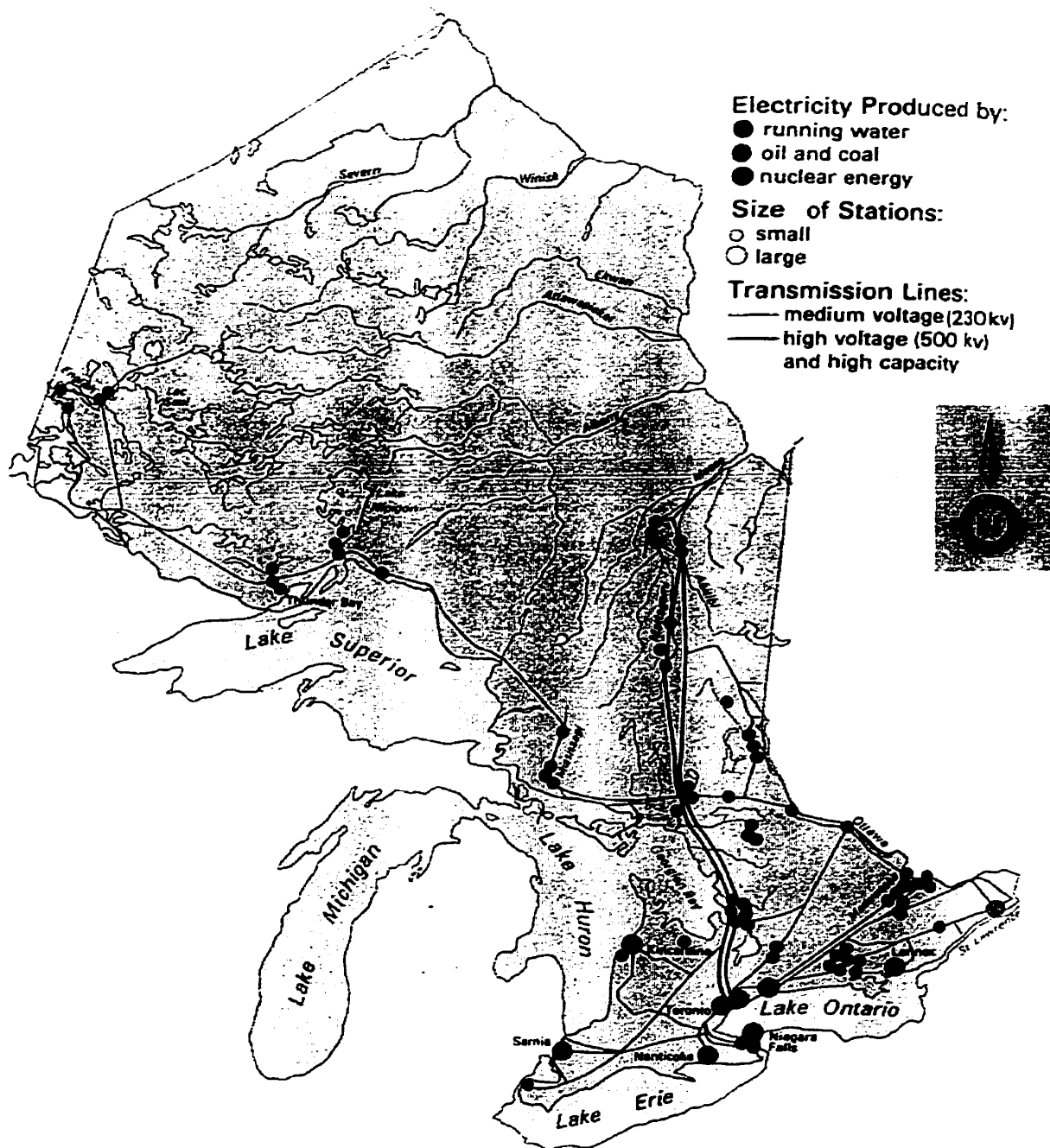
The Moose River system that leads into James Bay provides a good example of mercury contamination. During the 1980s, fish from the Moose River were regularly tested by the Ontario Ministry of the Environment. It was found that sixty eight percent of the tested fish exceeded the Canadian guideline of 0.5 ug mercury per gram of total weight. Moreover, nine percent of the tested fish were above the 1.5 ug/g mercury limit at which

point consumption is considered dangerous (Headon & Pope, 1990). These numbers definitely suggest a correlation between mercury contamination and extensive hydro electricity development along the Moose and two of its tributaries. The strength of this correlation however, remains to be determined (Headon & Pope, 1990). Regardless of the findings, it is contamination such as this that can limit potential adventure and nature excursions in Northern Ontario as the sheer presence of pollution is enough to deter tourists who are seeking pristine wilderness. Map 10 indicates the current positioning of hydro electricity development in the north. In regards to Boreal East the most significant development is along the Mattagami and Abitibi River systems.

Ontario: Pollution in Perspective

The threat of these semi-localized environmental hazards seem all the more real in light of some startling facts about the environmental state of Ontario as a whole. Most startling is that Ontario was the third worst polluting state or province in North America for 1995. Moreover, this was the second year in a row that it had maintained the dubious honour of the third place ranking. In all, Ontario produced 74,279 tons of pollutants, just behind Louisiana at 74,495 tons, but well back of Texas at 151,082 tons. To help visualize Ontario's annual industrial pollution production, it is equivalent in weight to 10,611 large African elephants. The bulk of these pollutants came from just three industries, at least two of which are represented in Northern Ontario: chemical, primary metal, and paper products (Comeau, 1998).

This information, produced in accordance with the North American Free Trade Agreement and published as the annual *Taking Stock* report was followed several months later by another scathing report. This second report, delivered by the independent, not-for-profit Canadian Institute for Environmental Law and Policy criticized the Ontario government's almost complete failure to protect the environment. Evidence to support this claim included these facts:



Map 10: Hydro Electricity Development in Ontario

Source: Thinking About Ontario, 1981. Map not to scale.

- Only two significant regulatory actions were taken to improve environmental protection in Ontario for 1998, despite the fact that dozens of pollution problems were recorded.

- Fines against polluters declined to the lowest total in more than a decade and less than one third the amount issued in 1995.
- The number of provincial pollution investigators fell twenty-eight percent between 1995 and 1998.
- The Ontario Medical Association released a report stating that smog was responsible for 1,800 premature deaths in the province each year.
- Budgets at both the Ministry of the Environment and the Ministry of Natural Resources fell by thirty two percent and nineteen percent respectively since 1995. (Mittelstaedt, 1998).

These facts paint an ugly picture of Ontario and of a government that refuses to take action on behalf of the environment. What is most disconcerting about these reports is that they have not even taken into account the vast quantities of commercial and household waste that are also being generated throughout the province.

Conclusions

In Northern Ontario there is a variety of pollution point sources that succeed not only in degrading local environments but distant environments as well. While progress in the abatement and containment of this pollution has been made since the middle of this century, the fact remains that it continues to pose a very real threat to the environment. Moreover, the rest of the province is also producing an abundance of pollution and doing very little to resolve the problem. It is logical that as this pollution accumulates, it will eventually surpass an environmental threshold.

For the time being then, because pollution degrades the quality of flora and fauna and because it detracts from the purity of the wilderness environment in general, point sources of pollution and areas known to be contaminated should be researched and avoided as locations for adventure and nature development. The series of maps displayed throughout this chapter help in this respect. Of particular concern in the Boreal East Planning Area are such places as the Sudbury surroundings for acid precipitation damage, Kapuskasing, Smooth Rock Falls, and Iroquois Falls for pulp and paper effluent, and the

Abitibi and Mattagami Rivers for mercury contamination. Some lands in close proximity to mining towns and thus mine tailings pits including Timmins, Kirkland Lake, and the Town of Cobalt should also be marked as areas of concern.

In the end, there is only one way of considering this situation; adventure and nature tourism development requires clean and healthy environments. The availability of such environments in the Boreal East will therefore play a direct role in the placement of future tourism facilities. This idea will come into play as a location for an adventure and nature tourism facility is researched in the following chapter.

Chapter Six: Locating Wilderness Environment in the Boreal East Planning Area of Northern Ontario

Introduction

It has now been established from an international and national perspective that Ontario has great potential in regards to the further development of adventure and nature tourism. It has also been established in theory that the provincial government wishes to expand tourism operations. However, neither the Ministry of Natural Resources nor the Ministry of Economic Development, Trade and Tourism have ever completed a modern inventory of resources available to adventure and nature tourism on Crown Land outside of the park system. Given that the land in Northern Ontario is currently being allocated to various industries through the Lands For Life planning process, it is very important that this objective be accomplished as quickly as possible with the intention of recognizing the most appropriate resources. This objective will therefore be the purpose of the proceeding two chapters. Specifically, Chapter six will find the highest quality wilderness environment in the Boreal East Planning Area and Chapter seven will evaluate its potential for the construction of an adventure and nature tourism destination facility.

Site Selection Methodology

It is widely known that the most important determining factor of any tourism development project is location as this is the one variable that will determine function, amenity, and aesthetics. Finding the most appropriate piece of land for a project therefore requires careful consideration. For this project, wanted is a lake and forested area that is linked upstream of a major watershed, all in proximity to an unpolluted Crown Land wilderness environment inside the Boreal East Planning Area of Northern Ontario. Such a location will have great appeal for those tourists wishing to experience a pure wilderness environment and should also provide an exceptional launching point for a variety of the adventure and nature activities listed in Chapter three.

A final list of search criteria was developed by the researcher to ensure that the land in question meets the previously specified requirements. For the purposes of this project, this site:

1. Will be inside Ontario, and more specifically, inside the Boreal East Planning Area.

2. Will be located on unpolluted Crown Land.
3. Will be represented by a lake and forested area with the lake being located at the headwaters of a significant watershed.
4. Will not have road access.
5. Will be a component of a larger wilderness environment, ideally approaching 4,000 km² in size.

The search process was carried out using map interpretation. The analysis it provided was divided into phases with each phase representing a different scale of map. The scales moved from small to large (from provincial to regional), progressively refining the level of detail. In all there were three phases:

- phase 1: 1: 1 500 000 (published 1992)
- phase 2: 1: 100 000 (published 1985)
- phase 3: 1: 50 000 (published 1979)

Conclusions were drawn at the end of each scale analysis. The objective was to produce a case study in the form of a lake and land sector for further analysis.

Limitations

There were four factors that limited the scope or nature of the search process. The first was the definition used for the term “unpolluted” in criteria #2 as it is simply defined by the absence of roads and by the presence of a watershed headwater. It is felt that this definition is reasonable because the absence of roads largely precludes permanent human activity and pollution, particularly that which is associated with logging, mining, and hydro electricity development. The presence of a headwater also means that any pollution that does arrive is flushed away from the source.

The second limiting factor is the general knowledge that true wilderness environments are rare outside of the park system in Ontario. What makes them so rare is the extended logging road networks that divide otherwise reasonable tracts of near wilderness. This suggests that an area of land that best approximates a wilderness environment may have to be used as a substitute.

The third limiting factor is that the search process relied on maps that are as many as twenty years old. The potential therefore exists that some information is outdated. Of particular concern is the potential extension and construction of new road systems.

The fourth factor is related to the size of the search area. It has been made slightly smaller than the entirety of the Boreal East Planning Area because it is unnecessary to inventory the urban centres to the south and the largely inhospitable muskeg swamp to the north. The new search area is defined by the 47° and 50° parallels north latitude, and by the 80° and 85° meridians west longitude. At 123,750 km² in size it constitutes 12.4% of Ontario's total surface area. It is outlined on Map 11.

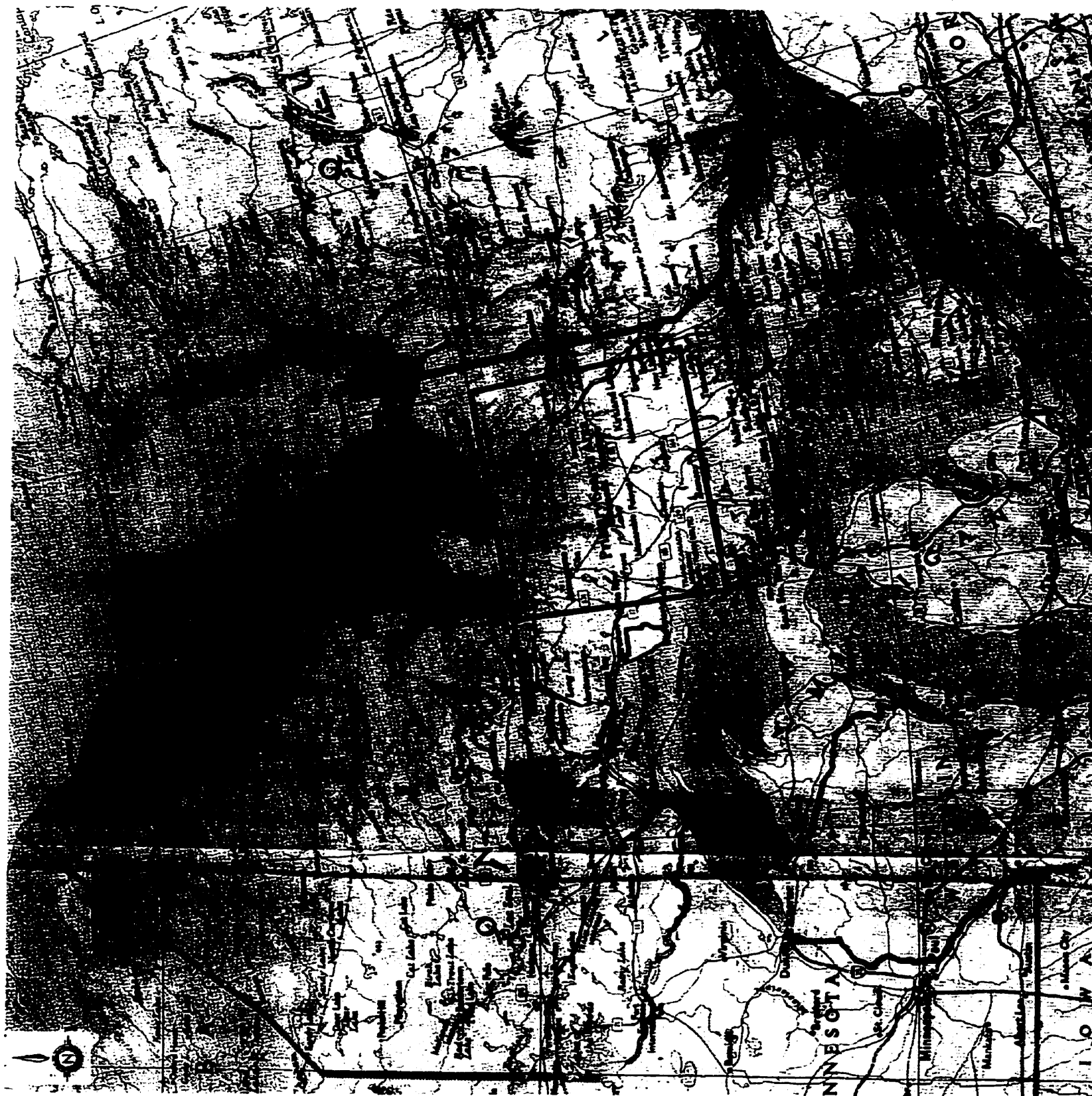
Map Analysis - Phase One 1:1 500 000 Circa 1992

The analysis began with an examination of an Ontario base map at the 1:1 500 000 scale. Attention was focused on the region north of Sudbury, for north of this city above the 47th parallel human development is less intense and certainly more dispersed. Such land use patterns logically indicate a greater likelihood for the presence of wilderness environment.

Transportation Alternatives

There are a number of transportation options available in Northern Ontario. In addition to the standard highways there are as many as five rail lines. This combination of roads and rails creates an unusual criss-crossing land based network. There are also many private airplane services available, many of which are float planes and can land and take off from water.

All three modes of transportation meet at various junctions. This creates an interesting assortment of transportation options to some of the more remote sectors of the province. Given the difficulties of driving at night, the inflexibility of a fixed train schedule, and the daylight hours of airplane service, the feasibility of travel is both a function of good timing, careful advance planning, and cost. A segment of the transportation system in the Boreal East Planning Area is represented in Map 12.

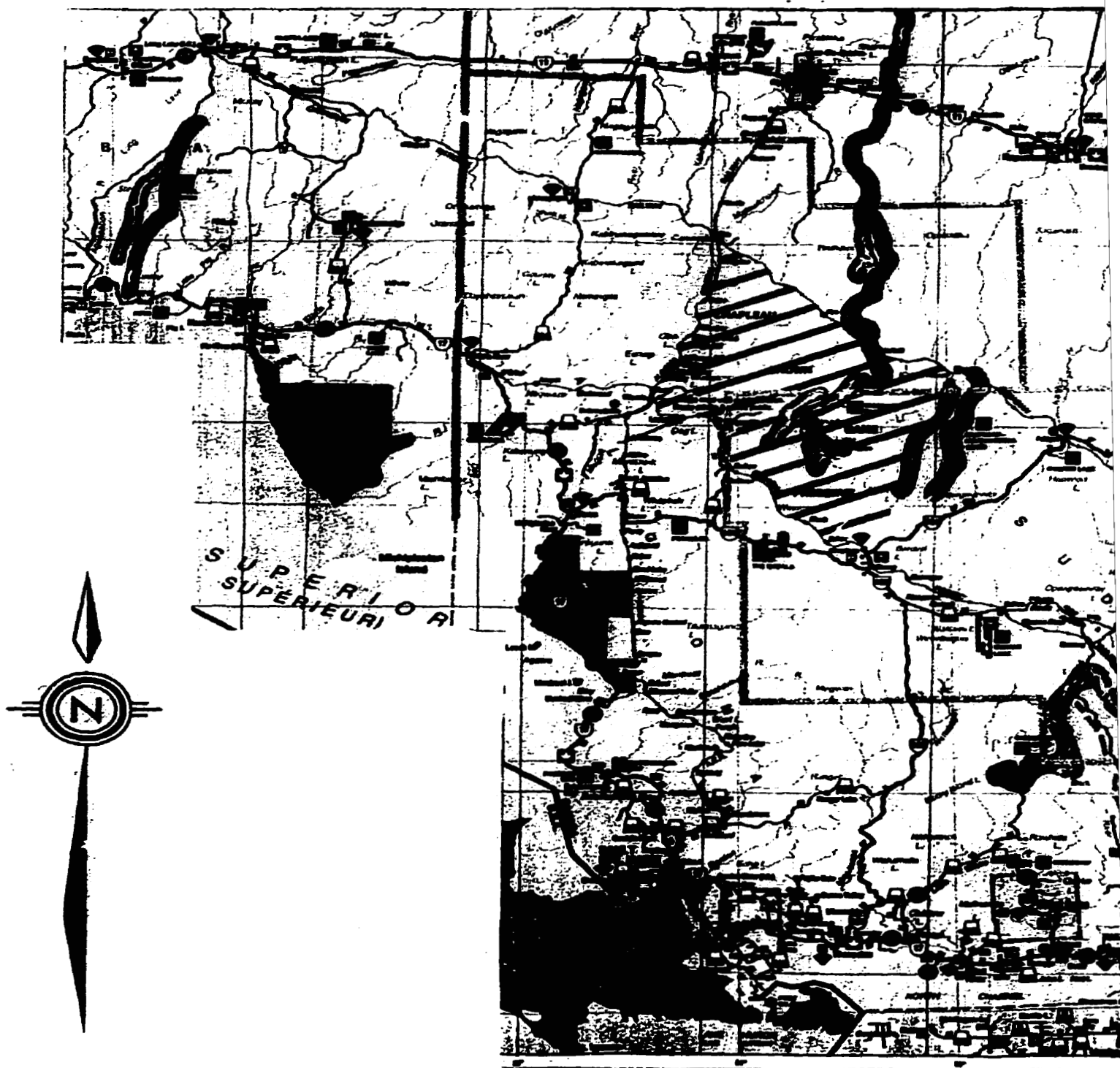




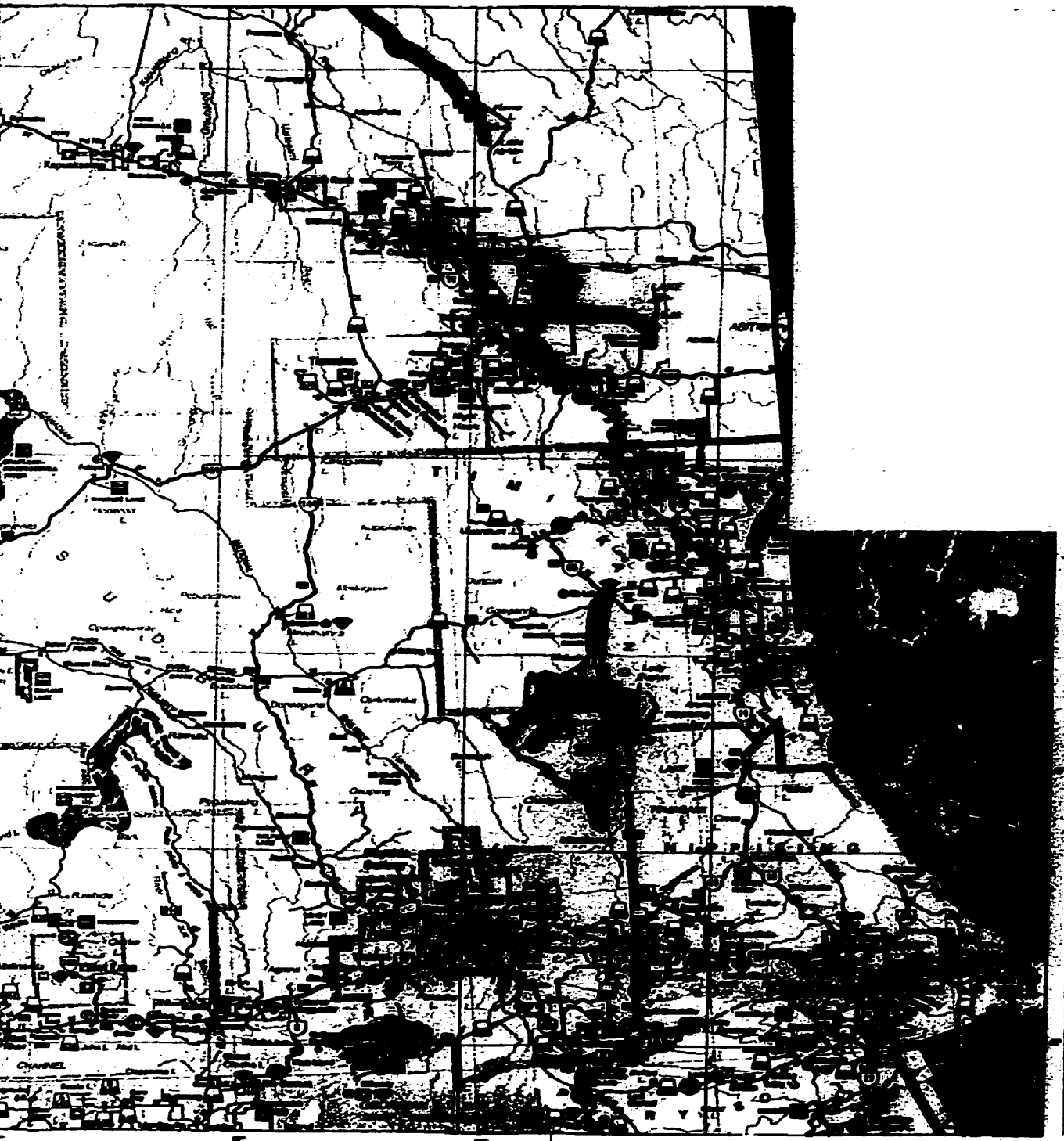
Map 11: The Primary Search Area

Source: National Geographic, 1985.

Scale – 1: 7 936 855



Map 12: Boreal East Transportation Network. Source: Ontario, 1998. Scale - 1:2 161 848



Highways

In the Boreal East the majority of development follows the two major auto routes, Highway 17 and Highway 11. Highway 17 splits from Highway 11 at North Bay. From North Bay it closely follows the shorelines of Georgian Bay and Lake Superior, linking major northern towns and cities, such as Sudbury, Sault St. Marie, Wawa, Thunder Bay, and Kenora. As a segment of the TransCanada Highway, Highway 17 continues into Manitoba and across the country.

Highway 11 is another major highway. It begins in Toronto and drives due north linking cities and towns such as Orillia, North Bay, and Kirkland Lake before veering west at the 49° parallel. At this point it becomes the most northerly reaching non-terminus highway in the province. It links many of the small towns in this sector such as Cochrane, Kapuskasing, and Hearst. Ultimately, it curves south and rejoins Highway 17 winding past Nipigon Lake into Thunder Bay.

The two major highways are linked several times by smaller roads. Highways 144, 129, 101, and 631 all travel north or east from Highway 17, often following indirect routes to Highway 11. These highways serve to dissect the larger region defined by highways 17 and 11. This creates a patchwork landscape denoted by vast expanses of minimally inhabited property.

Rail Lines

Five rail lines add an alternative dimension to the transportation network in Northern Ontario. The Canadian National Railway (CN Rail) enters Ontario from the east and closely follows Highway 11 until its terminus at Kapuskasing. The usefulness of this rail line is limited to Quebec bound expeditions.

Also in the east is the Ontario Northland Railway or ONR. It runs north-south, following Highway 11 from Toronto through to Cochrane. From Cochrane, freight and passenger service continues to Moosonee on the *Polar Bear Express*. This extension of the ONR is the only public land based transportation available to the James Bay region.

The TransCanada extension of CN Rail begins in Toronto and constitutes the third rail line in the province. Running north, the line passes through Sudbury and then begins a gentle arc towards the northwest. As it continues north of Lake Nipigon and west towards Manitoba, it links many small towns, some of which are dependent upon its service for the delivery of supplies (Violi, 1998, pers. obs.)

Another significant rail line in Ontario is the Canadian Pacific Railway (CP Rail). Its route takes it from Ottawa to North Bay to Sudbury. From Sudbury it too begins an arc towards the northwest. Like CN Rail, it also connects many small towns en route to Manitoba.

The fifth and final rail line in Ontario is the Algoma Central Railway or ACR. It is a considerably smaller rail service. Beginning at Sault Ste. Marie near the Michigan State border, it runs a north-south route that crosses first the Canadian Pacific and then the Canadian National Railway, terminating at the Town of Hearst.

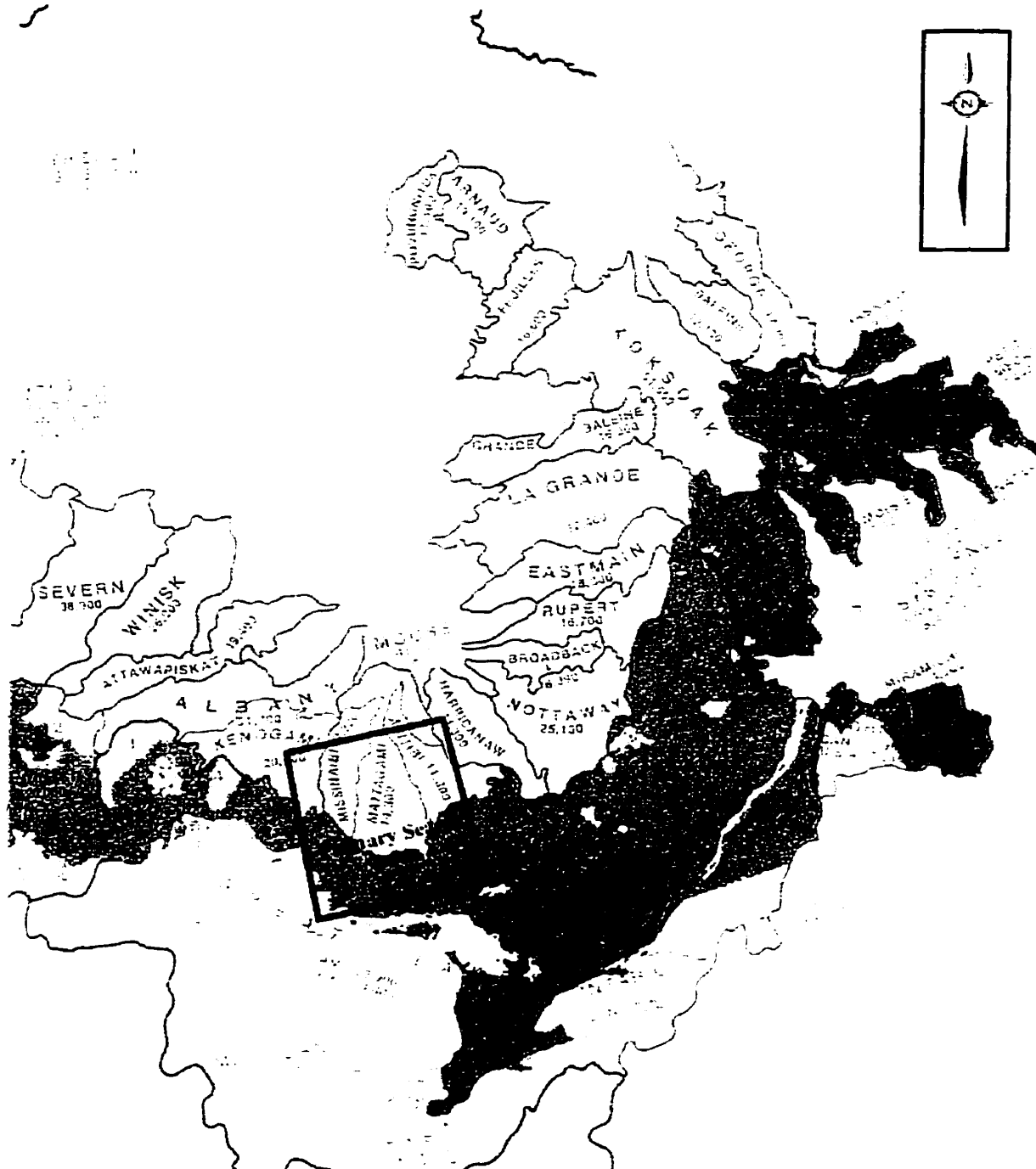
Airlines

A third but more expensive form of transportation throughout the primary search area is the airplane. In addition to regular service between towns and cities, planes can also be chartered. Many of the planes have the additional benefit of being able to land and take off in water.

Drainage Basins

There are eight significant drainage basins enclosed within the primary search area. These basins include: the Superior, the Kenogami/Albany, the Missinaibi/Moose, the Mattagami/Moose, the Abitibi/Moose, the Ottawa, the French, and the Huron. They are presented as Map 13.

This natural occurrence is owed to the presence of five massive water bodies drawing water in close proximity to one another including three Great Lakes, James Bay, and the St. Lawrence River (National Atlas of Canada 5th edition, 1985). Aside from this location, only in Central Quebec can such a high concentration of headwaters be found in



Map 13: Drainage Basins of the Primary Search Area
Source: National Atlas of Canada, 1985. Scale - 1: 15 665 565

such a small area on Canadian soil. The presence of these basins will maximize choice of location for adventure and nature tourism development, as proximity to a significant watershed headwater is one of the defining search criteria.

Phase One Findings

The first phase of the map analysis at the 1:1 500 000 scale served to introduce the geography of Northern Ontario. It did so by making familiar the names and locations of various towns and transportation networks. Most importantly, it provided a picture of the province's waterways.

This first phase also narrowed the search for appropriate wilderness land through enforcement of the search criteria. Immediately excluded from the process were several large lakes that were readily accessible by road including: Night Hawk Lake near Timmins; Remi Lake near Kapuskasing; Biscotasi Lake near Biscotasing; and Dog and Wabatongushi Lakes near Missanabie. Brunswick Lake, located 50 kilometres east of the Town of Oba was eliminated because of its inclusion within the Missinaibi Provincial Park. Table 1 summarizes the findings of the first phase of the map analysis.

Lake	Relative Location	Watershed	Highway Access	Other Information	Status
Night Hawk Lake	East of Timmins	Abitibi/Moose	Yes		Excluded
Remi Lake	East of Kapuskasing	Mattagami/Moose	Yes		Excluded
Biscotasi Lake	Northeast of Biscotasing	Huron	Yes		Excluded
Wabatongushi Lake	Northwest of Missanabie	Missinaibi/Moose	Yes		Excluded
Dog Lake	West of Missanabie	Missinaibi/Moose	Yes		Excluded
Brunswick Lake	East of Oba	Missinaibi/Moose	No	Located Inside Missinaibi Provincial Park	Excluded
Horwood Lake	Southeast of Foleyet	Mattagami/Moose	Unknown at this scale		Included
Cameron Lake	Southwest of Oba	Missinaibi/Moose	Unknown at this scale		Included
Kabinakagami Lake	Southwest of Oba	Kenogami/Albany	Unknown at this scale		Included
Esnagi Lake	North of Dubreuilville	Superior	Unknown at this scale		Included

Table 1: Summary of Map Interpretation Phase 1 Findings

Map Analysis - Phase Two 1:100 000 Circa 1985

The 1:100 000 scale map was used for the second phase of the map analysis. It provided a greater level of detail to assist in the analysis of the four lakes which had succeeded phase one. Only one of these four lakes would go on to advance past the second phase.

Horwood Lake

The first lake to pass the first phase of the map analysis was Horwood Lake. This lake is located along the Canadian National rail line near the Town of Foleyet. It is approximately forty square kilometres in area and feeds the Groundhog and Mattagami Rivers. These rivers flow north into James Bay. Unfortunately, the greater detail provided by the larger scale map indicated that this lake is accessible by road, thus disqualifying it

from the search process. Other detrimental factors in proximity to the lake included extensive open pit mining and boat launches.

Cameron Lake

Cameron Lake was the second lake to pass the initial search process. It is also located along the CN rail line, approximately ten kilometres southwest of the Township of Oba. It is smaller than Horwood Lake, standing at twenty-two square kilometres and feeds the Mattawichewun and Missanaibi Rivers. These rivers follow the Moose basin drainage system into James Bay. Unfortunately, the larger scale map revealed an intense series of logging roads in the vicinity of this lake. Following the original search criteria, this lake was therefore excluded from further analysis.

Kabinakagami Lake

The third lake, Kabinakagami Lake, is quite likely the largest in the entire primary search area standing at approximately 115 km² in size. Its northern tip is located two kilometres south of Cameron Lake and its waters flow into the Kabinakagami and Kenogami Rivers. These lesser rivers form one of the many headwaters to the mighty Albany which, like the Mattagami and Missinaibi, empties into James Bay.

The road network around the north end of this lake suggests that at several points there is likely to be vehicle access and logging activity. Although there are no indicated roads extending southwards, there are three small settlements in the middle and lower reaches of the lake. These settlements are probably hunting and fishing outpost camps of some variety. These factors, considered in combination, suggest that this lake and its surrounding area have probably undergone some modification. This fact precluded it from further study.

Esnagi Lake

The fourth and final lake to pass the first phase of the map analysis was Esnagi Lake. This lake is situated just south of the *height of land* that separates the Arctic and Great Lakes watersheds and is in the immediate vicinity of the Kenogami/Albany, Missinaibi/Moose, and Superior headwaters. It is located eight kilometres south of

Kabinakagami Lake, just north of the Township of Dubreuilville. It is approximately forty-six square kilometres in size but when considered in context of its forested surroundings, is in the order of 800 km². It is the only lake of the four to flow south into Lake Superior and does so by way of the Magpie River.

At the 1:100 000 scale, Esnagi Lake did not explicitly show any signs of vehicle access but there is a road, off at some distance to the west, that seems both to begin and end without connecting to any other roads. The likelihood that this road was actually unconnected at the time of map production in 1985 is unlikely. This road, like the logging roads off at some distance to the east of Esnagi, is probably connected to a series of smaller roads and perhaps to a larger highway. Regardless of this fact, Esnagi showed the least amount of road activity of any of the lakes surveyed thus far. It is therefore most easily accessible by air but can be attained from the Canadian Pacific rail line which meets Esnagi at its southernmost tip.

Despite the fact that there are no roads in the immediate vicinity of Esnagi Lake, there are indications of human settlement in its southern and middle sectors. Based on information provided by the maps, it can only be speculated that Esnagi, like Kabinakagami, is home to hunting and fishing lodges. No other human development is listed at the 1:100 000 scale.

As was previously mentioned, the closest urban settlement is the Township of Dubreuilville which is only fifteen kilometres south of Esnagi. Esnagi Lake and this Township are believed to be linked by a series of extensive logging roads. From Dubreuilville, the next closest town is Wawa eighty-three kilometres away. Wawa is a larger town on the northeast shore of Lake Superior. In between these two towns are vast lands, in the order of 1,350 km². They were characterized by extensive forestry and mining operations. Many of these relationships can be reviewed using Map 2.

Study of the Esnagi Lake area also revealed the presence of many additional lakes. Most notable of these are Nameigos Lake, Anahareo Lake, Mosambik Lake, and Oba Lake.

These lakes, while in proximity to Esnagi, are more remote due to the near complete absence of both roads and rail. Along with Kabinakagami Lake to the north these lakes form a contiguous semi-wilderness zone of approximately 3,250 km². This Greater Esnagi Lake Area is displayed on Map 14 with Oba Lake in the southeast, Esnagi and Mosambik south-central, Anahareo in the southwest, Nameigos in the west, and Kabinakagami in the north.

Map 14: The Greater Esnagi Lake Area

(Semi-Wilderness Zone)

Source: Kabinakagami Lake, 1979

Scale – 1: 276 316



Phase 2 Findings

Of all the lakes studied thus far inside the primary search area, Esnagi and its surroundings showed the least amount of road activity. This fact is in part attributable to the large number of large lakes in the immediate surrounding, which contribute to the semi-wilderness area outlined in Map 14. In addition, Esnagi Lake is also positioned at the height of land. This means it is watershed headwater that constantly flushes the local environment of pollutants. Given these characteristics, Esnagi Lake will be studied in greater detail during phase three. Table 2 summarizes the findings of this second phase of the map analysis.

Lake	Relative Location	Watershed	Highway Access	Other Information	Status
Horwood Lake	Southeast of Foleyet	Mattagami/Moose	Yes	Mining Activity	Excluded
Cameron Lake	Southwest of Oba	Missinaibi/Moose	Unknown at this scale	Logging Activity	Excluded
Kabinakagami Lake	Southwest of Oba	Kenogami/Albany	Unknown at this scale	Logging Activity	Excluded
Esnagi Lake	North of Dubreuilville	Superior	Unlikely	Access to 3 Watersheds	Included

Table 2: Summary of Map Interpretation Phase 2 Findings

Map Analysis - Phase Three 1:50 000 Circa 1979

Topographic maps of the Esnagi Lake area were obtained at the 1:50 000 scale. Not only did they assist in the interpretation of elevations but also in the identification of geomorphological features and in the confirmation of facts learned in phase 2. The following are some key findings of this map analysis.

Roads

The unconnected road located during phase 2 of the map analysis is also present at the 1:50 000 scale. Just as before this road appears not to be linked to any other major road, but on this map it is oddly, much longer. It now extends an additional twenty-eight kilometres past Esnagi Lake almost as far as Kabinakagami. As suspected, there are also

several branches known as car tracks that extend in various directions. Some of these tracks approach Esnagi at various junctures. Fortunately, there do not appear to be any roads that reach as far as Mosambik.

Topography and Geomorphological Features

Contour lines indicate that this sector of the province has an irregular surface characterized by many ridges, hills, and valleys. Hills range in elevation from 325 m to 460 m above mean sea level. For purposes of comparison, Ishpatina Ridge, the highest point in the province is 693 m above mean sea level. This type of topography, coupled with the plentiful forests, lakes, marshes, and streams in the area, suggests that strenuous navigation and roundabout routes are required to move from one location to another.

The additional level of detail available at the 1:50 000 scale permits identification of more elusive geomorphological features that contribute to the dynamic topography of the area. In this instance five eskers were identified. Eskers are the product of glacial retreat and are described as narrow, sinuous embankments of sand, coarse gravel, and boulders (Strahler and Strahler, 1992). Two of these eskers are located south of Anahareo Lake. A third lies just off the northwest shore of Mosambik Lake. The fourth closely follows the narrows of Nameigos Lake, and the fifth is found east of the northern reaches of Esnagi. Not only do these eskers provide educational material for tourists but so too do they provide a dry and elevated position from which to enjoy the surroundings. Other geomorphological features that are often left as a result of glacial retreat include kames, drumlins, deltas, kettles, and terminal moraine (Strahler and Strahler, 1992). Because these features are often found in proximity to one another some or all may be present in the area.

Another feature of interest in the Esnagi Lake area is a waterfall. It is located at a straight-line distance of nine kilometres from Mosambik Lake. These falls, named *Honeymoon* are the only falls listed at this scale, indicating that they are probably the largest in the area.

Phase Three Findings

Phase 3 of the map analysis has confirmed that even the most remote sectors of this province have been infiltrated by road networks. Unfortunately, because of the outdated information provided by the maps, only a site visit could determine the extent of this infiltration. On a more positive note, this scale of map has also confirmed a dynamic topography formed by the scarring movement of 12,000 year old glacial retreat.

Conclusions

The map interpretation proved highly effective in relaying an abundance of spatially referenced information and resulted in the finding of the Esnagi Lake Area. Given Esnagi's central positioning within the semi-wilderness area delineated in Map 14, its function as a watershed headwater, and the more controlled road development in its vicinity, it, unlike many of the other lake areas studied, partially meets all of the search criteria listed at the beginning of the chapter. It has therefore been chosen as the case study for this project. In addition to finding the Esnagi Lake Area, this search also confirms the absence of true wilderness in the Boreal East Planning Area of Northern Ontario outside of the park system. Chapter seven will go on to investigate the adventure and nature tourism activities it is capable of offering and the locations within its boundaries that may be suitable for the construction of a destination facility.

Chapter Seven: Evaluating the Esnagi Lake Area for Adventure and Nature Tourism Potential

Introduction

Despite its imperfections as a pristine wilderness environment, it has now been determined that the Esnagi Lake area will serve as the case study for the remainder of the project. Using relevant literature, air photo interpretation, and site observations this area will now be inventoried in greater detail. The purpose of this inventory is to clarify issues of urban settlement, climate, geomorphology, industry, wildlife, history, culture, pollution, and recreation and therefore to evaluate its suitability for adventure and nature tourism and the development of a destination facility.

The air photo interpretation was conducted in two phases and highlighted physical traits of the lake and its surroundings. Phase 1 was conducted at the 1:50 000 scale and used air photographs from 1963. The objectives of this phase were to:

- Identify micro-environments suitable for the construction of a tourism facility around Esnagi Lake.
- Identify potential human movement corridors on land and in water.
- Identify ecological, historical, geomorphological, and cultural points of interest near the lake.
- Identify logging sites and/or other resource extraction activities and evaluate the degree of forest health.

Phase 2 was conducted at the 1:60 000 scale and used air photographs from 1976. Its primary purpose was to:

- Measure change in the environment over time.

The computer software packages Adobe Photoshop and Adobe Illustrator were used to display the results of this interpretation in map form.

A set of preliminary conclusions considering the suitability for adventure and nature tourism development were drawn at the end of the air photo analysis. The purpose of these preliminary conclusions was to compare the value of the office work versus the value of the field work to follow. Upon the completion of the site visit, the land sector was reevaluated and final conclusions were drawn.

Literature Review and Internet Search of the Esnagi Lake Area

A literature review and internet search were conducted to supplement information gleaned on the Esnagi Lake Area. This research concentrated on the area's history, culture, industry, climate, physical geography, ecology, recreational potential, and environmental history. Information about the closest town, Dubreuilville, and its parent Algoma County was also obtained.

The Dubreuil Brothers

In the 1940s and 50s, Algoma County was relatively untouched by large scale softwood milling. The one exception was the four Dubreuil brothers and their company, Dubreuil Brothers Ltd., who brought their small mill and French speaking community to the Magpie Valley. Here they lumbered and sawed for a decade, "as pioneers in the serious use of jackpine and in the chipping of refuse for the pulp industry" (Wightman & Wightman, 1997: 326).

In 1962 they moved to their present site, creating the Corporation of the Township of Dubreuilville, and constructed a modern mill with kiln facilities. By the mid 70s, it was one of the largest sawmill complexes in Northern Ontario with a capacity of 60 million board feet a year (Wightman & Wightman, 1997).

Currently, the population of Dubreuilville stands at 1,020. It is an extraordinarily young population with twenty five percent under the age of fourteen years and only five percent over the age of fifty-five. The predominant language is French with over ninety-five percent of the town claiming it as their mother tongue (Dubreuilville, 1997).

Industry

Not surprisingly, forestry accounts for seventy-two percent of full time employment and 65.5% of the total labour force in Dubreuilville. The remainder of the work force is part of the service and administration sectors. Mining may well have been another industry of this town in the past as many sites between Dubreuilville and Wawa are known to have been excavated (Dubreuilville, 1997).

Esnagi and Mar Mac Lodges

As suspected, a small component of the Dubreuilville economy is accounted for in the tourism sector. Specifically, the presence of hunting and fishing lodges on Esnagi Lake was confirmed. In all there are two lodges, Esnagi and Mar Mac, and several of their outpost camps. All facilities are accessible by boat (via the CP rail line) and plane only. Map 6 of Chapter four provides a general picture of where these facilities are located. Both lodges strictly promote their hunting and fishing activities as their primary tourism resources although Mar Mac Lodge does offer some opportunity for wilderness camping and canoeing. Both lodges have also been in place for over fifty years but neither are operational during the winter months (Lee, 1998; Northern Ontario Vacation Guide, 1998).

Climate

At these northern latitudes the changes in climate are distinct with every season; summer is warm, autumn crisp, winter cold, and spring wet. This climate is also characterized by sudden daily fluctuations in both temperature and precipitation at any time of year. Such fluctuations are often caused by the modifying effect of Lake Superior and James Bay. An average of 700 mm of precipitation falls annually. This is an equivalent amount to that which falls on the Toronto area. The difference is that in Esnagi, more than half falls as snow.

For the purposes of comparison, Table 3 provides seasonal temperature averages of the Esnagi Lake area side by side with those for Toronto.

Month	Mean Daily Temperature for the City of Wawa (latitude 48° N)	Mean Daily Temperature for the City of Toronto (latitude 44° N)
January	-15° C	-5° C
April	0° C	6° C
July	17.5° C	20° C
October	6° C	10° C

Table 3: A Comparison of Seasonal Temperatures Between The Esnagi Lake Area (Wawa District) and Toronto

Source: National Atlas of Canada 5th edition, 1985.

These temperature differences are especially important for Esnagi as they have direct implications for the freeze-thaw cycle of nearby water bodies which act as transportation routes for boats and snowmobiles. The implications are equally important for the transition from summer to winter adventure and nature tourism activities.

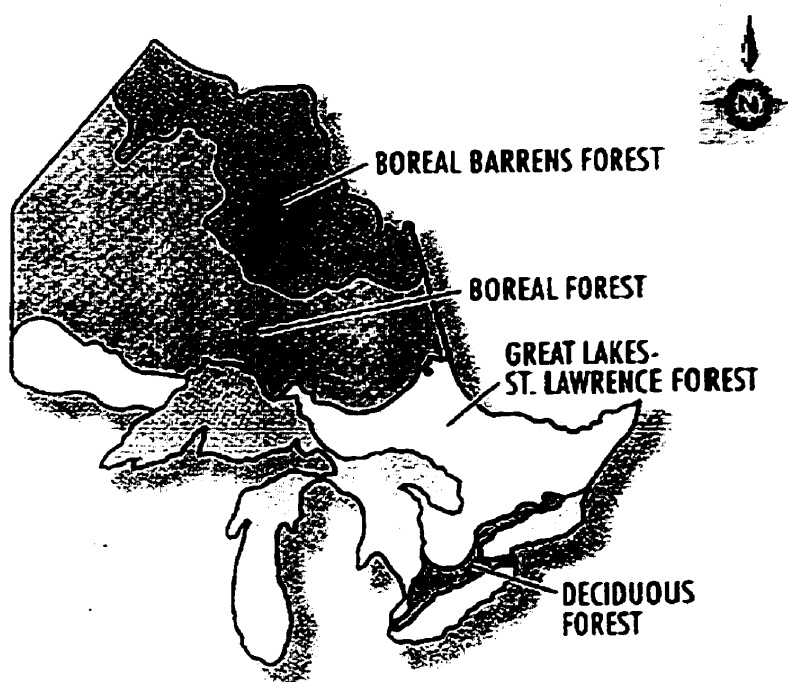
Lake Ecology

As reported, there are hundreds of lakes within a twenty kilometre radius of Esnagi. These lakes are typically large natural bodies of standing fresh water formed when precipitation, land runoff, or groundwater flowing from underground springs fills depressions in the earth. The cause of these depressions can entirely be attributed to glaciation. They normally consist of four horizontally layered zones, providing habitats and niches for an amazing diversity of life (Miller, 1994). In addition to supporting water based adventure activities, lakes also help to meet many of the demands of nature tourists through wildlife observation and catch and release fishing.

Marsh Ecology

There are five significant marshes of one or more square kilometres on Esnagi Lake. Freshwater marshes develop along the shallow margins of lakes and slow moving rivers, forming when ponds and lakes become filled with sediment. They are treeless land in which the water table is at, above, or just below the surface of the ground. Dominated by grasses, reeds, sedges, and cattails, these plants typify emergent vegetation, with roots and stalk in water covered soil, and with leaves held above the surface. The strength of a marsh is measured by the diversity of life it supports and this in turn is strongly influenced by relationships with surrounding forests and waterways (Miller, 1994). Marshes and their wildlife (particularly bird and waterfowl) hold strong interest for nature tourists.

Forest Ecology



Esnagi Lake and the surrounding region are located in the heart of Ontario's boreal forest, identified on Map 15. This forest is part of a worldwide network of conifer dominated forests occurring across Scandinavia, Russia, Alaska, and Northern Canada. Its terrain varies from lowland peat bogs, to deep fertile upland

Map 15: Ontario's Boreal Forest

Source: Ontario's Forests: Management for Today and Tomorrow, 1998. Map not to scale.

soils, to bedrock covered by thin layers of soil and moss, and consists principally of coniferous trees such as white and black spruce, tamarack, balsam fir, and jack pine. Their tiny, needle shaped wax coated leaves help them to withstand the intense cold and drought of winter. With several notable exceptions including the deciduous Aspen and Birch trees, plant diversity is relatively low in these forests as few species can survive the winters when soil moisture is frozen (Ontario's Forests, 1998).

Despite the sometimes harsh climate, forest fires are the single greatest ecological force acting on these forests. Through their intense heat they create favourable tree seedling establishment and growth for many of the species. Overall, forests are the foundation for many adventure and nature tourism activities, and their health will determine the success or failure of such ventures.

Insects

Insects are another integral component of the northern environment. Regrettably, humans are often the target of their boring and biting vexations. Late May and early June is Black fly season. Black flies possess rapier jaws that seek blood. Mosquitoes peak in July but are typically present during every summer month. Like Black flies some also seek mammalian blood for reproduction purposes. Deer and Horse flies are others that can be found at any given time and tend to concentrate along the shores of larger water bodies. August is considered the insect free month but September often sees a resurgence in Black flies (Wilson, 1994). It should be recognized that the presence of such insects could affect the success of some adventure and nature tourism activities.

Mammals and Other Living Things

Available knowledge of the boreal forest wildlife is focused primarily on fish and fur bearing mammals. This focus is primarily the result of their commercial value as product and sport. Native to this biome are the beaver, marten, mink, otter, and fox. In the water, species such as pickerel, lake trout, pike, walleye, and sturgeon exist. Larger roaming mammals include moose, wolf, and black bear (Hutton & Black, 1975).

Unfortunately, other wildlife of tremendous ecological significance is often overlooked in favour of economically valuable species. Marshes, for example, present an amazing array of species attuned to a number of survival strategies. Amphibians such as frogs live in both aquatic and terrestrial environments, leeches live as aquatic parasites, and water lilies grow metres in depth to reach the water's surface where they blossom. All contribute to the complexity and health of the ecosystem. What is interesting to note is that in Ontario, as in the rest of Canada, there is a distinct absence of creatures that are dangerous to humans (Violi, 1998, pers. obs.).

Heritage and Culture

In Northern Ontario as in the rest of the province, heritage is inextricably linked to the First Nations and New World explorers. The Northern Algonquians, including the Cree and Ojibwa bands live here and their collective history extends hundreds if not thousands

of years. Prior to the twentieth century these were hunter-gatherer societies following a semi-migratory subsistence lifestyle (Rogers & Smith, 1994).

In the sixteenth, seventeenth, and eighteenth centuries the Esnagi Lake Area was contained within a transition zone populated by both the Cree and Ojibwa. Within this transition zone these people were collectively referred to by the French explorers as the “Nations des Bois” or “Gens de Terre”. Upon meeting these explorers, many of the First Nations people became involved in their fur trade, working alternately with both the French and English (Rogers & Smith, 1994).

Today, many of the native communities still exist. Through treaties signed with the Canadian Government specific lands have been designated as “reserves” with resources often controlled and operated by the First Nations. The closest reserve to Esnagi Lake is the Missanabie Cree, located less than one hundred kilometres to the southeast (Rogers & Smith, 1994).

In addition to the native heritage imparted upon Northern Ontario, much of the northern culture has also been captured on canvas by the modern artists known as the Group of Seven. Founded in 1920, the Group of Seven was an organization that rebelled against the constraints of nineteenth century naturalism and tried to establish a more independent



relationship between art and nature. Following this declaration and the lead of friend Tom Thomson, an interest in painting the rugged Northern Ontario landscape was awakened within the entire group. The focus of many of their

Photo 1: Isles of Spruce

paintings became none other than the Algoma County in which Esnagi Lake is situated. The following is a list of some of their work in this region including *Isles of Spruce* shown inset:

Title	Artist	Title	Artist
Autumn	L.S. Harris	Isles of Spruce	A. Lismer
Fire-swept	F. Johnston	Maple Woods	A.Y. Jackson
Algoma Hill	L.S. Harris	Beaver Swamp	L.S. Harris
First Snow	A.Y. Jackson		

Canadian Encyclopedia, 1985.

Environmental History

As was discussed in previous chapters, the importance of the environmental history in the adventure and nature tourism development process cannot be overstated. Despite this importance, the scope of this project only allows for a brief synopsis of potentially damaging activities. Fortunately, there is no mining or hydro electricity generation in the immediate vicinity of Esnagi Lake, leaving only logging and wood processing as matters of concern.

There has and will continue to be timber harvesting inside the Magpie Valley where Esnagi Lake is situated. At present, according to Walter Lee of Esnagi Lodge and Peter Jennings of Dubreuil Forest Products Limited, both industries are able to co-exist. This situation is maintained by modified cutting practices around Esnagi Lake. In addition to leaving a 400 m no-harvest radius about the established property boundaries of the lodge, Dubreuil Forest Products also uses the following criteria as guidelines while cutting:

Zone 1: There will be a 120 m no-harvest reserve along the lakeshore. There will also be a skyline (visible hills) area-of-concern, extending two kilometres from the lake which will contain zones 2, 3, and 4.

Zone 2: There will be no harvesting visible within 500 m of the lake but normal harvest operations are permitted in areas that are not visible.

NOTE TO USERS

Oversize maps and charts are microfilmed in sections in the following manner:

**LEFT TO RIGHT, TOP TO BOTTOM, WITH
SMALL OVERLAPS**

UMI

Map 16:

The Esnagi
Lake Area

TRANSPOR

Roads (1963)

Roads (post 19

Trail (existing)

Trail (proposed

GEOMORPH

Esker

Legend

TRANSPORTATION ROUTES:

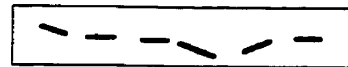
Roads (1963)



Roads (post 1963)



Trail (existing)



Trail (proposed)



GEOMORPHOLOGY & ECOLOGY:

Esker



Waterfall

W

Rapids

!

Marsh

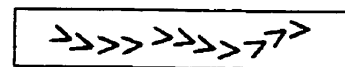


LOGGING (Dubreuil Forest Products):

Logging Demarcation (1963)



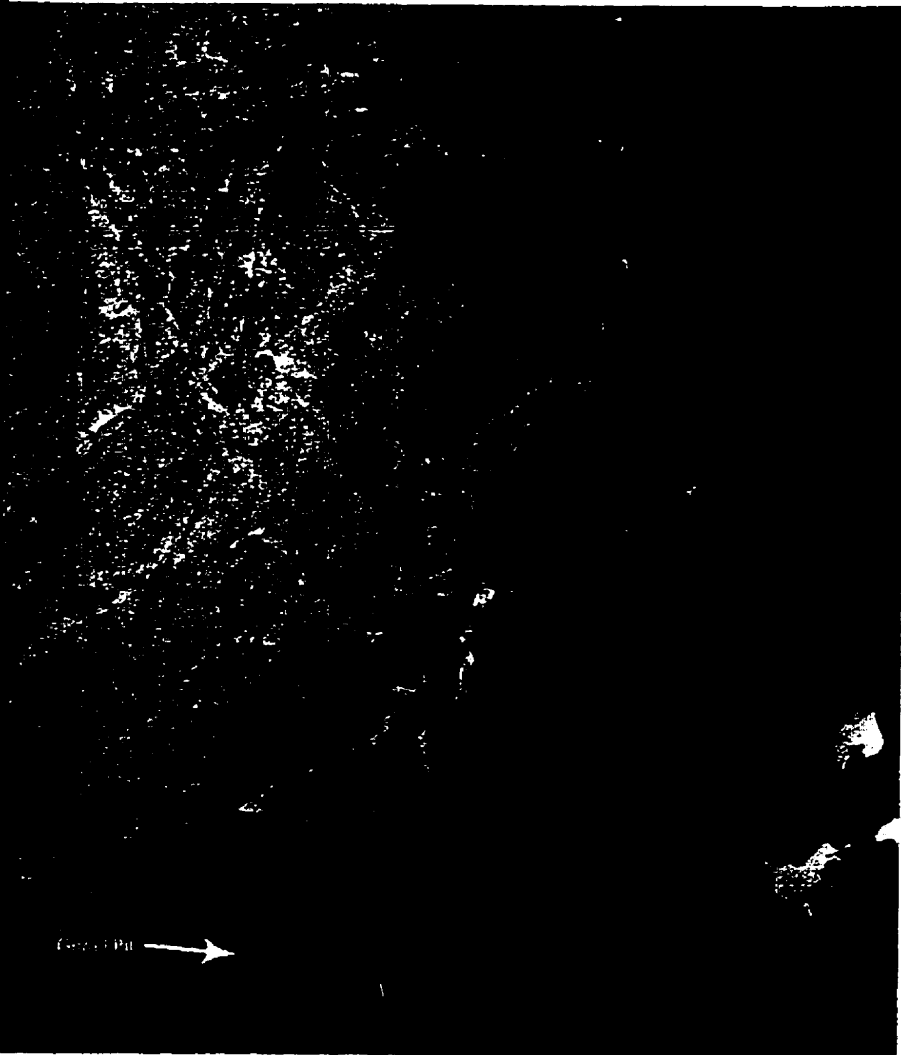
Logging Demarcation (post 1963)



POTENTIAL SITE LOCATIONS FOR ADVENTURE AND NATURE TOURISM FACILITIES:



77 A 18018



Arrow Point

POTENTIAL AND NAT

Delta/Valley

Island

Ridge/Hilltop

Lakeshore

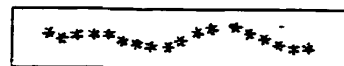
Map not to scale

Map Base Source
(Air Photograph)

Map produced

POTENTIAL SITE LOCATIONS FOR ADVENTURE AND NATURE TOURISM FACILITIES:

Delta/Valley (Kabinakagami)



Island

I

Ridge/Hilltop

H

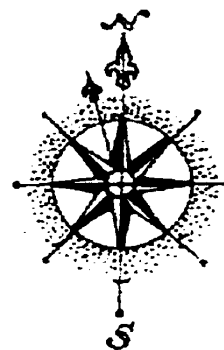
Lakeshore

LS

Map not to scale.

Map Base Source: Ontario Forest Resources Inventory
(Air Photography 1963).

Map produced by: Jeff Violi, January 1999.



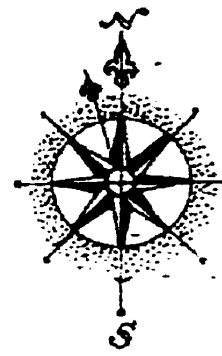
Compass rose

11

Map not to scale.

Map Base Source: Ontario Forest Resources Inventory
(Air Photography 1963).

Map produced by: Jeff Violi. January 1999.



Compass rose

Zone 3: Partial cutting will be permitted in the zone extending from 500 m to 1,000 m from the lake, but the residual cover must provide a forested appearance (fifty percent crown closure).

Zone 4: Visible clear cutting in blocks up to one square kilometre in size will be permitted in a zone that extends from one kilometre to two kilometres from the lake provided that no more than twenty-five percent of the total visible area around the lake is cut during any five year Timber Management Plan. (Dubreuil Forest Products Ltd., 1998).

Once harvested, much of the wood is taken to Dubreuilville for processing. This processing consists only of sawmill operations and as such does not produce pollution on the scale of pulp and paper mills. In any case, because the Magpie River flows south, any pollution that is generated flows away from Esnagi Lake. The immediate assessment is therefore that Esnagi is a reasonably clean and protected lake but that logging may interfere with extensive journeys into the forest.

Air Photo Interpretation

The National Air Photograph Library in Ottawa, Ontario was able to provide two sets of air photographs that cover Esnagi Lake. The first set was taken in 1963 and therefore pre-dates the two sets of maps used in phases 2 and 3 of the map analysis by twenty-two and sixteen years respectively. The scale, 1:50 000, is nonetheless consistent with the level of analysis conducted in phase 3. These photographs, viewed in three dimensions using a stereoscope, helped to provide a visual context in which to consider suitability for adventure and nature tourism activities and for the development of a destination facility. Using the computer software packages Adobe Photoshop, the more complete set of air photographs from 1963 were scanned, cut, and pasted to form:

Map 16: The Esnagi Lake Area

This map is included inside the back cover of this document. It has also been provided on a CD rom found inside the front cover and can be viewed using software programs such as Adobe Photoshop, Adobe Illustrator, and Microsoft Paint.

The map was then interpreted and its features were classified using Adobe Illustrator. It has been designed to stand alone but salient features are discussed within this report. There were limitations to the procedure, most notable of which is the north-south area overlap.

Air Photo Interpretation - Phase One 1:50 000 Circa 1963

Topographic maps cannot match the visually rich level of information taken from stereoscopic photographs. From the photographs, the land surrounding Esnagi Lake can be described as a hard fractured crust. This description is logical as it is a portion of the Canadian Shield and is composed of ancient crystalline rocks formed one billion years ago (Hutton and Black, 1975). The fractured nature of the land is also characterized by many steep sided peaks and valleys all differing in height and depth.

Geomorphological Features

The topographical analysis revealed that the land is rugged and irregular. The exceptions to this rule are two low, flat deltas through which the Kabinakagami River runs west of Anahareo Lake. Deltas are formed when streams flow into bodies of standing water and deposit sediments of clay, silt, and sand often in a horseshoe shaped pattern (Strahler & Strahler, 1992). These deltas were probably created during glacial retreat and possess a forest ecology different from that of the surrounding area.

The photographs also provide another view of Honeymoon Falls. This view reveals evidence of widening at its base and therefore the potential of a lagoon. The falls are quite remote and if undisturbed could prove to be the most intriguing site in the Esnagi region.

Tree Species Identification

Given the scale of the photographs (1: 50 000), and the fact that they are in black and white, tree species identification around Esnagi Lake is very difficult. Fortunately, the first tool available to the air photo interpreter in tree species identification is elimination (Lillesand & Kiefer, 1994). Only those species whose presence is possible should be

considered and already a number of boreal forest trees have been identified in the previous section of this chapter.

The extent of forest damage can also be interpreted from air photographs. Forest damage includes logged areas and those sectors of forest that have experienced disease, fire, or drought (Murtha, 1972). Overall, the Esnagi Lake Area looks very healthy as distinguished by its dense foliage and its absence of natural damage. Some of its more southern forests have, not surprisingly, been logged. While this logging appeared to be limited to the south, it is practices such as these that constitute the greatest threat to the viability of adventure and nature tourism development in this region.

It should be noted however, that if the logging is not widespread, it may in reverse fashion act as a drawing card for nature tourists. The logic behind this argument is that a visit to a logged area could provide an opportunity to better understand the association between the logging industry, trees, material items, and the economy. In short, it could have value as an educational tourism experience. A regenerating forest also creates a different habitat that will attract different bird and mammal species.

Recreational Potential

Initial indications from the air photographs are that any and all of the adventure and nature activities listed in Chapter three (with the exception of whale watching) may be suitable in the Esnagi Lake Area. This statement is pending complete knowledge of the insect situation during the spring, summer, and autumn months. Most promising are the winter activities, many of which have not been explored because current facilities are not designed for four seasons.

Land Activities

Land activities may be the least suitable of all activities in this environment simply because of the insect populations during the summer months. Having said this, if insects do not pose an excessive nuisance, activities such as rock climbing at Canadian Shield outcrops may prove entirely feasible. Developing hiking routes to link various points of interest such as Mosambik Lake, Anahareo Lake, the Kabinakagami Delta, and

Honeymoon Falls is also a possibility. Existing and proposed trails have been indicated on Map 16.

Water Activities

While some canoeing is already being offered by Mar Mac Lodge, canoe expeditions are not explicitly being launched on Esnagi Lake (Lee, 1998). Given the one hundred kilometres of available shoreline, even an excursion around Esnagi itself could prove very challenging and combine many flora and fauna observation activities. With development of the *Five Mile Portage* to the north of Esnagi, the massive Kabinakagami Lake would also be open to exploration.

The occasional use of a float plane would also open up potential for launching long distance canoe trips. The most famous and readily accessible waterway in the vicinity is the Missinaibi River. It is less than seventy-five kilometres away and is described as one of the few rivers systems still unspoiled along its entire 550 km length. In all, a canoeist will pass more than seventy-five sets of rapids and falls, the remains of five historic fur trading posts, remnants of pre-European native culture, and dozens of tributaries flowing from cedar clad shores. Spectacular natural features include Thunderhouse Falls known for its deafening volume and the windblown expansiveness of an estuary three kilometres wide. The Missinaibi is currently protected as a provincial park (Reid & Grand, 1985).

Scuba diving may be an equally appropriate activity for the area as deep waters located against steep cliffs may present unique circumstances in which to dive. Under such conditions various types and sizes of sediment tend to accumulate. This accumulation sometimes creates unusual living and non-living environments on the lake floor (Hall-Beyer, 1997). Success will in large part be determined by the clarity of the Esnagi waters.

Flora and Fauna Observation Activities

The establishment of hunting and fishing lodges on Esnagi Lake for the last fifty years is a strong indication that there is a variety of wildlife in the area. Although observation may be uncomfortable on land, many of the species present can be viewed from the water, particularly throughout the many marshes of Esnagi. With rebounding populations

in Ontario, wolf tracking may also be feasible, particularly during the winter months when footprints are easily discernible.

Winter Activities

Winter activities in and around Esnagi Lake seem very promising because they provide the opportunity to explore the land without the nuisance of biting insects. During the winter the same trails that are presented on Map 16 may prove accessible for dog sleds, cross country skiing, and snowshoeing. Skating on certain sectors of the lake may also prove feasible. It is important to note that no winter activities are currently being explored in the Esnagi Lake Area.

Air Activities

Although limited to a smaller tourist base, air activities such as hang gliding may also be possible. Undoubtedly there is much to see with a bird's eye view and insects would not be a problem. Required would be suitable landing and take-off stations.

Aerial courses which require tall stiff trees on which to attach ropes would not be suitable in this conifer dominated forest.

Sporting Activities

For decades hunters and fishers have come to Esnagi Lake in pursuit of trophy fish and wildlife. While numbers of the prime species do not appear to have diminished as a result, catch and release fishing and photography hunting provide a similar experience for people who are unwilling to kill. When hunting, identical techniques are employed except a camera designed like a rifle substitutes for the real rifle. The objective is to photograph the target inside the cross hairs of the sighting. When fishing, photography techniques can also be employed but a more effective manner in which to capture the trophy is to take a clay imprint of the living fish. Rare and beautiful species such as the Aurora Trout may therefore prove more enticing than those which are fished solely for their size.

Site Selection for Facility Development

Aside from addressing recreational potential, the other primary purpose of the air photo interpretation was to identify micro-environments within the Esnagi Lake Area that are suitable for the construction of a tourism facility such as a lodge. In all, five types of micro-environment within the general area were identified. They include lake front property, valley property, wetland property, island property, and hill or ridge top property.

Lake Front Property

Lake front property is the land that immediately abuts a water body. Offering prompt access and views of both land and water, this type of micro-environment is considered prestigious amongst developers and consumers alike. Esnagi Lake offers more than 100 km of this type of real estate along its shores.

Despite its appeal, it should be noted that this type of property constitutes the thin strips of vegetation along water bodies known as the riparian zone. This is important because studies have shown that seventy-five to eighty percent of forest wildlife depend on riparian areas during some or all of their life cycles (Miller, 1994). Development may not only degrade these valuable lands but may also erode banks creating sedimentation within the adjacent water body. This in turn causes the depletion of dissolved oxygen needed for aquatic life. In light of these heavy ecological costs, it is argued that it should be avoided in place of a less damaging alternative.

Valley Property

Valley property is another micro-environment that lends itself to development. Valleys typically consist of dense forested area surrounded by elevated ridges on either side. Both valleys in proximity to Esnagi Lake are found along the Kabinakagami Delta highlighted on Map 16. These valleys appear to have a slightly different forest cover than their surroundings. They are excessively far from large water bodies but appear otherwise suitable for development.

Wetland Property

While seemingly unsuited for human development at first glance, wetland property is actually commercially valuable. Made valuable upon being drained, between twenty-five and fifty percent of the world's wetlands have already been developed for urban and agricultural purposes (Miller, 1994). While Esnagi Lake technically offers many opportunities to engage in such a practice, there would be serious consequences. Most significant of these consequences would be the destruction of a great number and diversity of life through the transformation of the environment. Given the subsequent consequences on nature tourism that would be sure to follow, the development of wetlands seems illogical in face of less damaging alternatives.

Island Property

Island property is very much like exclusive shoreline property. Of added benefit are the facts that it affords a greater degree of privacy, that it does not interfere with migrating animals, and that it is protected to a greater extent from fire. On the downside, this type of development may destroy any special island ecology that exists. Map 16 displays a large island in the middle upper reaches of Esnagi Lake that warrants closer inspection with a site visit.

Ridge & Hilltop Property

Ridge and hilltop property is probably the least explored property type of the five. Undoubtedly, this can be attributed to the complexity and higher costs of development. Despite this complexity there are many benefits to exploit. Included amongst the list are: protection from fire (as there are typically fewer trees in such locations), avoidance of wildlife corridors, avoidance of riparian habitat, a breeze to keep the bugs down, and a distinguished view. Esnagi Lake offers an exceptionally rounded hill that may prove suitable for such development. It sits between Esnagi and Mosambik Lakes and is identified on Map 16.

Air Photo Interpretation - Phase Two 1:60 000 Circa 1976

Given that the 1963 set of photographs was more complete than the set taken in 1976, this second set was not used in the construction of the primary base map. Instead, they

were used for the purpose of comparison, as a measure of change that can occur over an extended period of time. In this instance, the only significant changes that occurred were in relation to the degree of logging activity. By 1976 there was some expansion. It is displayed on Map 16.

In order to make such time elapsed photography interpretation techniques more valuable, scale consistent photographs taken at consistent time intervals would be required. For instance, with photographs at the 1:20 000 scale taken every ten years over a fifty year period:

- The rate of logging expansion could be accurately calculated and extrapolated into the future.
- The quality of vegetation regrowth could be analyzed.
- Changes in species composition could be observed.

Preliminary Conclusions

In addition to being a component of an apparently unpolluted semi-wilderness environment, Esnagi Lake also possesses complimentary attributes in and of itself. These attributes can lend themselves to the development of a destination facility and more importantly to adventure and nature tourism activities that are not currently being explored. The potential for the development of adventure and nature tourism in the Esnagi Lake Area can be summarized as a series of advantages and disadvantages.

Advantages:

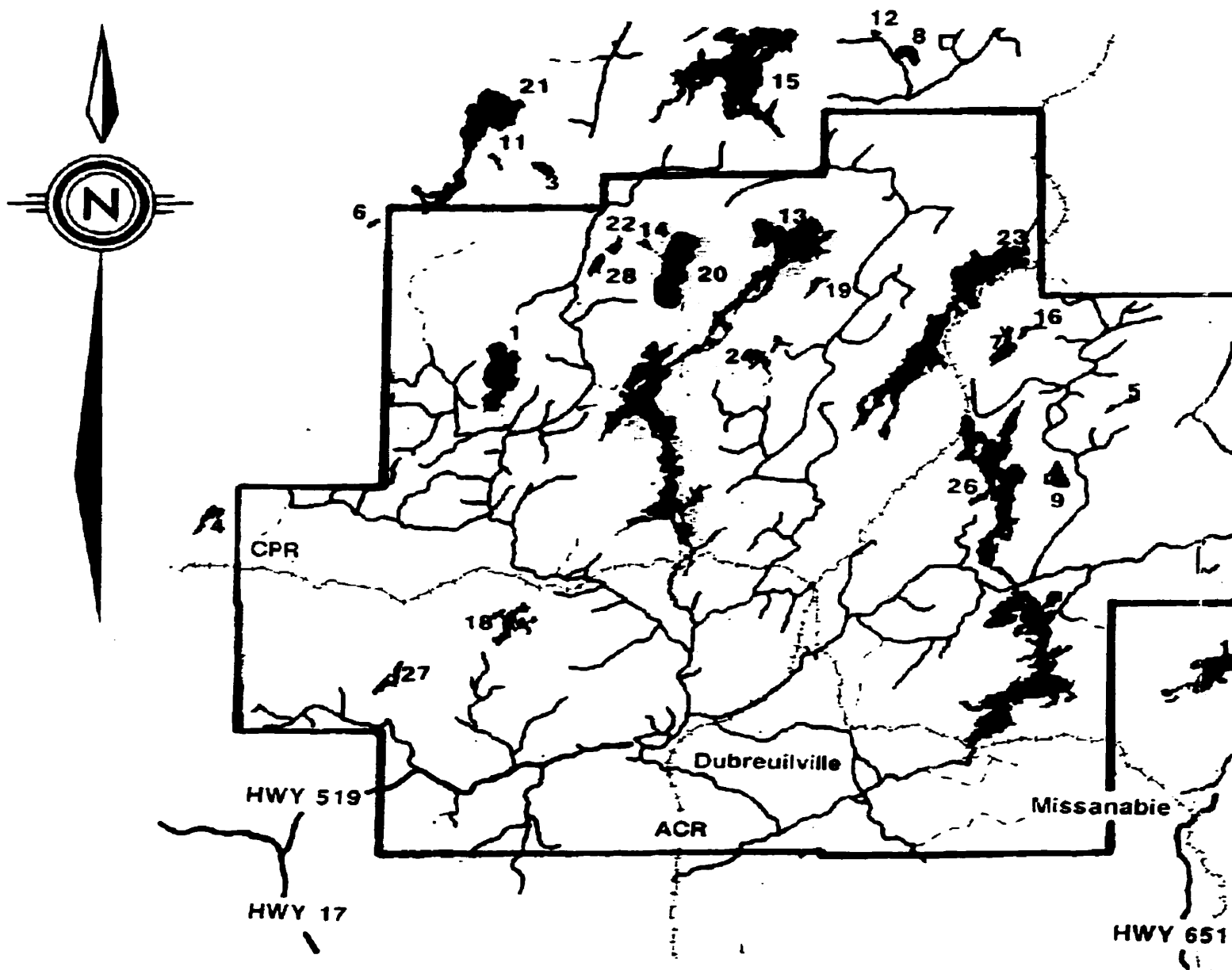
- Is located in close proximity to a large number of very secluded lakes, marshes, and forests that could act as the foundation for an assortment of adventure and nature tourism activities.
- Experiences four distinct seasons which also creates opportunity for a diversity of adventure and nature activities.
- Maintains a fascinating landscape of hills, ridges, shorelines, islands, and deltas suitable for the development of a destination facility.
- Exhibits geomorphological remains of glaciation such as waterfalls.

Disadvantages:

- Has a cold winter climate.
- Possesses populations of many biting insects.
- Is within an area subject to logging.
- Is considerably distant from the adventure and nature tourism market of Southern Ontario (1,000 km).
- Is periodically threatened by forest fires.








Site Visit To Esnagi Lake

Having spent a considerable amount of effort finding and researching the Esnagi Lake area it eventually came time to visit and verify all that had been learned to date. The site visit, undertaken in early July of 1998, began with a stop in the Town of Wawa on Lake Superior's northeast coast. Ministry of Natural Resource officials confirmed that Esnagi Lake does indeed approximate a wilderness environment and is characterized by dense vegetation, stable bear and moose populations, biting insects, cold turbid waters, and quickly changing weather patterns. In regards to access, it was learned that the road system was more complex than originally thought but that the lake was only breached at one location. Fortunately, the one access road was for MNR personnel only. This road network is presented as Map 17.

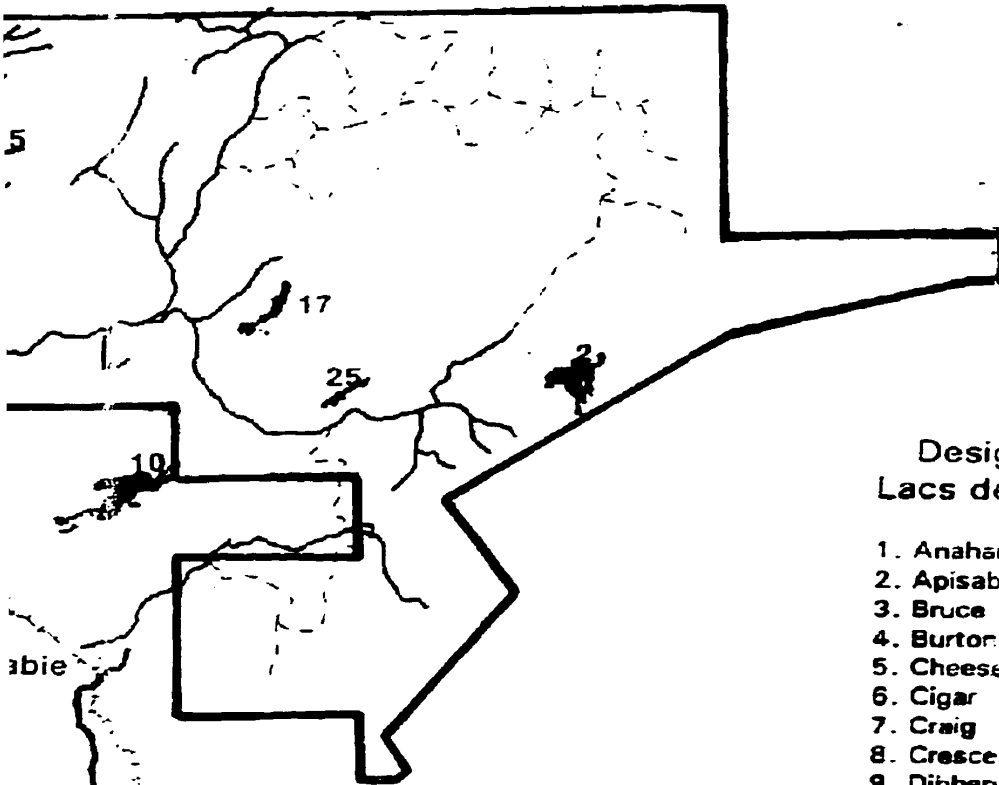


Map 17: The Greater Esnagi Lake Area Road Network. Source: Access Management Strategy in the Magpie Forest: Dubreuilville Area

Légende

-  Lac désigné pour le tourisme commercial*
-  Chemins existants - ligne continue
-  Chemins proposés - ligne pointillée
-  Chemins à accès non restreint
-  Chemins avec panneaux de restrictions pour l'accès aux lacs désignés pour le tourisme commercial
-  Chemins avec panneaux de restrictions pour l'accès aux lacs désignés pour le tourisme commercial et fermés pour les deux premières semaines de la saison de chasse à l'orignal
-  Chemins avec panneaux fermés aux transports véhiculaires publics








*Designés selon les Directives sur l'aménagement du territoire du district de Wawa



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Legend

-  Designated Commercial Tourism Lake*
-  Existing roads - solid line
-  Proposed roads - dashed line
-  Road with unrestricted access
-  Signed roads restricting access to Designated Commercial Tourism Lake
-  Signed roads restricting access to Designated Commercial Tourism Lake and closed to public vehicular travel for the first two weeks of the moose hunting season
-  Signed road closed to public vehicular travel

*Designated as defined by the Wawa District Land Use Guidelines

Designated Commercial Tourism Lakes Lacs désignés pour le tourisme commercial

- | | |
|-------------------|-----------------------|
| 1. Anaharea | 15. Kabinakagami |
| 2. Apisabigo | 16. Little Craig |
| 3. Bruce | 17. Lobo |
| 4. Burton | 18. Medhurst |
| 5. Cheesehead | 19. Merekeme |
| 6. Cigar | 20. Mosambik |
| 7. Craig | 21. Nameigos |
| 8. Crescent | 22. North Wejinabikum |
| 9. Dikken | 23. Oba |
| 10. Easey | 24. Pozzo |
| 11. East Nameigos | 25. South Greenhill |
| 12. Ermine | 26. Wabatongushi |
| 13. Esnagi | 27. Wabenung |
| 14. Fred | 28. Wejinabikum |

The information provided by the MNR officials left the impression that Esnagi Lake was a harsh environment, too harsh for some of the adventure and nature tourism activities that were previously listed. Despite these warnings, the decision was made to proceed to Dubreuilville by automobile and then to portage up the Magpie River with canoe. An



alternative plan was to drive to the Algoma Central - Canadian Pacific railway interchange at Franz and await the train for transport to Esnagi Lakes's southern tip at the Swanson Dam.

Photo 2: The Swanson Dam

Logging roads winding past the Township of Dubreuilville led to the Magpie River. An inspection of the river showed that it was very shallow. The low water levels were probably due to the large number of beaver dams. In order to avoid a complicated portaging procedure that would be hampered by the presence of a variety of biting insects, it was decided to await the train at the Franz rail yard.

Upon arriving at Franz, it was determined that a variety of biting insects had a strong positioning in the ecology of this region. Present were Black flies, Horse flies, Deer flies, Mosquitoes, and No-see-ums in significant numbers. It was at this point that the assumption was made that I represent the target clientele in terms of comfort and convenience and that to make the transition to Esnagi Lake in reasonable fashion would require a float plane and access to a lodge facility. Without the financial resources to accomplish this task, it was decided that a fly-over of the area would have to suffice. A plane and pilot were therefore chartered back in Wawa.

Upon speaking with the pilot, a flight path over Dubreuilville and the Magpie River was



chosen. This route helped to verify the large number of beaver dams and thus to support the decision to avoid the portage route to Esnagi Lake. The aerial view also made perfectly apparent the dense vegetation on the ground

Photo 3: Southern Esnagi Bay

and the swampy wetlands that filled the small bays off to the sides. Esnagi most certainly had the appearance of being a healthy section of boreal forest and waterway.



In terms of locating a semi-wilderness environment, the map analysis appears to have been very successful but the more extreme conditions of this environment had not been completely envisaged

Photo 4: An Esnagi Marsh

including the dense surroundings at the northern end of Esnagi Lake shown in Photograph 5.

The result of this circumstance was a shift in opinion regarding the suitability of some adventure and nature activities. Hiking for instance certainly seemed out of the question in this environment simply because



Photo 5: The Northern End of Esnagi Lake

the insect populations are too large. Table 5 provides an indication of the activities that were considered suitable in this area based on this first examination.

Activity	Suitable	Unsuitable	Unknown
Land Activities:			
hiking/backpacking		X	
rock climbing			X
horseback riding		X	
mountain biking		X	
cave exploration			X
camping			X
Water Activities:			
canoeing/kayaking	X		
rafting			X
Sailing/windsurfing	X		
scuba diving			X
snorkeling			X
Flora and Fauna Observation Activities:			
bird watching	X		
wildlife tracking	X		
wetland wildlife watching	X		
tree & plant identification	X		
Winter Activities:			
dog sledding	X		
cross country skiing	X		
snowshoeing	X		
skating	X		
ice climbing			X
Air Activities:			
hang gliding			X
aerial courses		X	
Sporting Activities:			
catch & release fishing	X		
photography hunting	X		
Totals:	12	4	8

Table 4: Adventure and Nature Activities Suitable to the Esnagi Lake Area

As the table indicates, there is still a sizable number of activities that are suitable for the area. Logically, most are oriented towards water and winter as they largely avoid vegetation and insects. To guarantee the potential of these activities would of course require strict observation on a year round basis. Promising is that Wilderness Island Resorts, referred to in Chapter 3, is located within a one hundred kilometre radius of Esnagi and carries out many of these activities.

Final Conclusions

The four pronged methodology developed to evaluate the adventure and nature tourism potential in the Esnagi Lake Area including the literature review, the air photo interpretation, the ground based site visit, and the aerial reconnaissance was logical if not entirely successful. This is true because it followed a progression that allowed office time and materials to provide focus prior to engaging in the more expensive field observations. It did not, however, preclude surprise findings during the site visit, specifically the strong populations of biting insects in the area.

In regards to the insects, it is not known whether or not they are this numerous at all times during the spring, summer, and autumn months. Based on personal experience it is believed that they are not, as insect populations have been observed to change dramatically from place to place for an assortment of reasons. For this reason, this one experience should not prejudice the entire area (Violi, 1998, pers. obs.). Furthermore, it must be remembered that these wild and undisturbed qualities are the exact reasons that the area is held in such high regard.

Based on this experience, it follows that Esnagi Lake is not an environment conducive to human play but is a wonderful staging ground for the observation of wildlife. Such observation can take place on the water during the summer months or on land during the winter. With float plane access, lodge facilities, and supervised conditions, it should be possible for tourists of all varieties to visit and partake.

In addition to wildlife observation, Esnagi Lake can also be considered as a launching point for a number of canoe expeditions. At first, such expeditions should be focused on the nearby water bodies, including Esnagi and Kabinakagami Lakes. Given the elaborate nature of the water systems in this area, more advanced and extended river trips may be possible in the future. It must be noted, however, that such excursions would be demanding and would require significant guiding and camping skills. This leads into the idea of Esnagi Lake offering a survival camping experience.

Survival camping is a concept that builds upon the numerous survival guides available at many bookstores. Skills that are often discussed within such guides include: orienteering, building shelters, and signaling for help. These guides make for interesting reading but are not a substitution for practical experience. Survival camping is therefore one manner of attracting those who want more than a literature based knowledge. The intention would be to offer an enjoyable and educational boreal forest wilderness experience under supervised conditions. Such an experience would be an ideal example of ecotourism.

In conclusion, it can be said that because Esnagi Lake most definitely offers a range of adventure and nature activities that are not currently being explored, it stands to benefit from the construction of a new destination facility. Such a facility would certainly benefit from a four-season design in order to allow for winter tourism activities. Regulations pertaining to this type of development will be the focus of Chapter eight.

Chapter Eight: The Crown Land Development Process for Tourism Destination Facilities in the Esnagi Lake Area

Introduction

It has now been established that the Greater Esnagi Lake Area is a reasonable approximation to a wilderness environment. At the same time, it has also been established that the contained Esnagi Lake Area has potential for more adventure and nature tourism activities than are currently being offered. It is believed that such circumstances justify the construction of a new tourism destination facility. This chapter will outline the land development process for such construction including an examination of the building requirements and approvals.

The Crown Land Development Process

The management of the land development process in Northern Ontario, in similar fashion to the land planning process, is primarily the responsibility of the Ministry of Natural Resources. Given the location of Esnagi Lake, all requests regarding development are specifically directed to the MNR district office of Wawa, Ontario. It is this office that distributes and processes all applications for new development.

The first step in Crown Land development is to ensure proper land designation. At present, the Esnagi Lake Area is designated *integrated multiple resource management* (Campbell, 1998). Primary activities allowed under this designation include: logging, mining, hydro electricity generation, tourism, and recreation. As it happens, of these five potential uses, commercial tourism has already been deemed most appropriate by the MNR (Access Management Strategy in the Magpie Forest, 1994). This land designation has the added benefit of controlling road access and thus the remote quality of the lakes.

The second stage in development is to acquire the desired land. Acquisition in the order of one or two hectares can be accomplished through lease or purchase at market value from the MNR (Campbell, 1998, pers. comm.). In the case of remote outpost camps, land use permits are usually acquired on an annual basis (Haider & Hunt, 1997). Regardless of acquisition method, the trees, minerals, and other resources of the land remain reserved to the MNR (Public Lands Act, section 15.6. 1990).

Following acquisition, a formal development proposal must be submitted to the MNR district office. This proposal must address a list of basic requirements known formally as: *Requirements For A Project Proposal Submission*. They include the following:

1. A key map and site plan, drawn to scale, delineating the location and footprint of the development, and the amount of land required for the project. This plan should include the location of: all natural features such as lakes, streams, and wet lands; all permanent and non permanent structures such as hydro lines and fuel storage facilities; proposed docking facilities; shoreline improvements; roads; greenbelt areas; fencing; any other site improvements.
2. A plan for the disposal of solid and liquid waste (approval required from the Algoma Health Unit).
3. A plan for the acquisition of potable water (approval required from the Algoma Health Unit).
4. A plan to identify and mitigate environmental impacts including: impacts on the local community and impacts on the natural environment such as aesthetics, wildlife, noise, and soil compaction.
5. An outline of benefits to: local businesses, Native communities, the public, and the provincial government.
6. A detailed plan regarding the use of land and resources.
7. Public consultation for proposals that may have a significant environmental impact. Specifically this means: the method, timing, and general content of proposed public consultation must be detailed; and proposed contact with special interest groups (e.g. Chamber of Commerce, local citizens committees) must be included.

8. A time frame and budget including: the development start-up and completion dates, a financial analysis; a schedule of contact with various ministries, agencies, and boards; a schedule for public consultation, and a plan to acquire relevant permits and licenses.
9. A feasibility study including: a list of qualified personnel, liability insurance, details of facility operation, and a contingency plan.
10. A list of contacts with other government ministries to ensure the dissemination of information. Such ministries include: the Ministry of Environment and Energy; the Ministry of Culture, Tourism, and Recreation; the district health unit; the Department of Fisheries and Oceans; the Ministry of Municipal Affairs; the Ministry of Northern Mines and Development; Ontario Hydro; the local services board; the local roads board.
11. A list of studies to-be completed including: land surveys, public opinion polls, land market values, water lot leases, archeological studies, and hydrological studies (Requirements For A Project Proposal Submission, no year).

In the event that the application for development is rejected, the MNR typically provides sound reasoning for the decision. In regards to Esnagi Lake, the most likely grounds for rejection is that the area has already been developed to its maximum for tourism purposes (Liddle, 1998, pers. comm.). The possibility of this happening is higher at the present moment because the MNR does not currently distinguish between consumptive and non-consumptive facilities and limits are set according to the sustainability of hunting and fishing. This leaves two options for the prospective developer: adjust the application to highlight the non-consumptive nature of adventure and nature tourism facilities or reapply for a different location.

If approved, a permit for the construction and operation of the facility is required from the Ministry of Economic Development, Trade and Tourism. Upon the acquisition of this permit, development can begin. Important to note is that there have been no development

proposals submitted for the Esnagi Lake Area within the last ten years (Campbell. 1998. pers. comm.).

Improvements Needed in the Crown Land Development Process

While the development requirements of the MNR demand information relevant to environmental impacts (Requirements For A Project Proposal Submission, no year). they do not go so far as to ask for a formal environmental assessment in accordance with the provincial Environmental Assessment Act. This is because MNR decisions are exempt from the Environmental Assessment Act through order 26/7. This means that the MNR has full jurisdiction on Crown Land development and formal environmental assessment is typically not required (Griffin, 1999, pers. comm.).

There are implications regarding the absence of formal environmental assessment. This is true because a formal assessment allows any Ontario resident to:

inspect an environmental assessment, ... make written submissions to the Minister [of Environment and Energy] with respect to the undertaking ... [and] require a hearing by the [Environmental Assessment] Board with respect to the undertaking (Environmental Assessment Act, sec 7(2), 1990)

which makes the development process one that is driven by concerned citizens. The public consultation process outlined in the MNR's *Requirements For A Project Proposal Submission*, on the other hand, is much more of a developer directed process that requires only local as opposed to provincial scrutiny (see point #7 Requirements For A Project Proposal Submission). Subsequently, the inclusion of people in the planning process (something that was previously identified as a primary component of any ecotourism development), will not necessarily be as prominent where Crown Land development is concerned. The following section will outline the benefits of a more involved public consultation process for the Esnagi Lake Area or otherwise.

Public Consultation and Participation

A formal public consultation process is necessary for Crown Land tourism development because the affected public maintains the right to know about local business affairs. Moreover, their ideas can help to incorporate the project into the community and to create a broader sense of project ownership. It is this expansion of public involvement, from

being informed to being active participants that will address the issue of respectfully including local people in the tourism planning process. In regards to Esnagi Lake the public would consist of local residents of the Wawa District and perhaps regional committee groups.

While an objective of any development project should be to include as many local people as possible, it must be recognized that not everyone can, nor would everyone want to participate to the full extent. It is for this reason that experts in community economic development have identified four levels of public involvement during the tourism development process. These four levels are: information sharing, consultation, decision making, and action initiation. Logically, these levels follow a progression towards being more and more involved. They move from simply being informed, to offering opinions, to making decisions, to initiating components of the project. Many discernible advantages of this progressive system to participation become apparent when in full motion. Some of the more common advantages include:

- Helping managers to avoid decisions that create conflict.
- Providing the opportunity for the local community to become educated about the purpose and benefits of the project.
- Facilitating the dissemination of information.
- Legitimizing the decision making process (Drake, 1991).

In closing, it should be remembered that involvement and participation will also create benefits for local communities. Such benefits include the economic spin off or multiplier effect that follows most major industries and the opportunity to enjoy backyard resources that were previously inaccessible. In short, new industry typically means new opportunity through a diversification of the economy.

Further Considerations: The Resource Based Tourism Policy

In addition to addressing tourism as a component of the Lands For Life planning process, the MNR is also producing a document for tourism operators called the Resource Based Tourism Policy. The framework of this document will address the uncertainties that

affect investment in tourism with the hopes of improving the business climate for operators in Northern Ontario. It will accomplish this task by offering individual tourist operators “the potential to improve their business opportunities in terms of tenure, allocation of resources, and the responsibilities they undertake for the use and stewardship of the resources” (Resource Based Tourism Policy, 1998: 1). Essentially, greater tenure will be offered provided that operators take greater responsibility for the resources. This implies that the resources must in some way be evaluated both economically and ecologically prior to allocation. Ultimately, this type of policy could have profound effects on the way developers approach the industry as the outcome could be higher costs offset by greater management control. As this policy is in process of being developed, only time will tell as to how it will actually be implemented.

Further Considerations: Development of Land Allocated to Forest Management

As was discussed in Chapter four, some land that is currently zoned for logging purposes may still hold potential for adventure and nature tourism development. Fortunately, if such land were to be found outside Esnagi Lake’s two kilometre modified cut area, its development could be arranged following legislation of the Crown Forest Sustainability Act (1994). Specifically, Sections 36 and 37 of this Act state that a forest resource license does not confer exclusive possession of land and that the Minister, subject to the Public Lands Act, may sell, lease, grant or otherwise dispose of such land.

Conclusions

The land development process appears to be clear and accessible to anyone wishing to build and operate a tourism destination facility in the Wawa district of Northern Ontario. Of all the potential government ministries involved in this process, it is the Ministry of Natural Resources that wields the most influence and that can therefore determine a development’s final outcome. Of benefit to all Ontario’s residents would be the formal inclusion of an environmental impact assessment. The inclusion of such an assessment would reorient the public consultation process (which is currently directed by the developer or proponent), and would simultaneously involve the Ministry of the

Environment and Energy, thus redistributing the approval power currently concentrated in the MNR. Its formal inclusion would also help satisfy the current definition of ecotourism which mandates the involvement of local people in the planning process to the greatest extent possible.

Chapter Nine: Conclusions, Issues and Recommendations

Conclusions

Over the last fifty years tourism has gone from being a virtually non-existent industry to the single greatest revenue generator on the planet. Sharing in this success is a newly evolved form of tourism known as ecotourism that espouses conservation values above all else. At present, ecotourism and its derivatives, adventure and nature tourism, have not yet been implemented to their full extent in Canada or Ontario and they are in good position to take advantage of further growth. In advantage are their:

- Political stability
- Variety in transportation
- Modern medical facilities
- Large tracts of semi-wilderness lands
- Absence of dangerous creatures

Northern Ontario of course shares in these benefits and further expansion of adventure and nature tourism inside this sector of the province seems very promising. Its future in this type of tourism is hinged on three factors: land planning, inventories of applicable resources, and land development regulation. Taking each in turn, it has been demonstrated that the land planning authorities recognize tourism as a local industry but that their allocations have been overly focused on a narrow range of activities, specifically hunting and fishing. Furthermore, it has been made perfectly clear that tourism has not been attributed the same status and resources as more traditional industries of the north including logging, mining, and hydro electricity development. Planning authorities have also been extremely lenient with the amount of pollution that these industries have been allowed to release into the common environment, creating constraints on the placement of future tourism facilities.

In regards to applicable adventure and nature resource inventories in Northern Ontario, little has been accomplished outside of the park systems. In fact, with very rare exceptions, private tourism operators have entirely focused on hunting and fishing activities, both of which are highly consumptive in nature. As the study of the Esnagi

Lake Area has confirmed, hunting and fishing are but a few of the relevant activities to the Northern Ontario environment. Moreover, many of the activities deemed feasible for Esnagi Lake such as canoeing, wildlife observation, and cross country skiing, are non-consumptive, suggesting that a tourism industry can be built around resources without danger of their depletion.

In regards to land development for the purposes of building tourism facilities, the process appears straightforward and accessible. There is however, cause for concern in that this process does not require a formal environmental assessment. The greatest implication of this absence is for the public, which loses some ability to influence the planning and development strategy. Approvals for further adventure and nature tourism development are also in question as many lakes may have reached their maximum level of development according to limits set for hunting and fishing.

The conclusions drawn throughout this project have raised a number of issues. These issues in turn have prompted a number of recommendations. They are listed in the following section.

Issues and Recommendations

Issue: There is an absence of qualitative and quantitative data on adventure and nature tourism in Northern Ontario. This situation can be improved dramatically through study of existing public and private sector facilities.

Recommendation (1): The Ministry of Natural Resources should take a modern inventory of the provincial and national parks, and of the private tourism facilities in Northern Ontario. The intention should be to determine where adventure and nature tourism is currently being practiced and where increases can occur, through the introduction of new facilities or as add-ons to those already in existence.

Issue: A significant obstacle to be overcome in the promotion of adventure and nature tourism is its explicit recognition by the provincial government and its various ministries

including the Ministry of Natural Resources and the Ministry of Economic Development, Trade and Tourism. Recognition at this level would encourage its study and growth, its potential as an alternative to resource extraction, and its potential as a tool for conservation.

Recommendation (2): The provincial government should recognize Ontario as a location for adventure and nature tourism in their policy documents and initiatives. Particular emphasis should be placed on Northern Ontario which offers vast semi-wilderness lands that are well suited to the purposes of such tourism.

Issue: Pollution is a vast topic that infiltrates every aspect of society. In every instance it is destructive. This statement is especially true when considering nature oriented tourism.

Recommendation (3): The Ontario provincial government should mandate significant reductions in pollution and further research into pollution containment technology, especially in context of Northern Ontario.

Issue: The development of tourism destinations has traditionally concentrated on those environments that are most hospitable for humans. Therefore, with its alternating climate, Northern Ontario has not been the focus of significant tourism attention over the last fifty years. However, with the introduction of adventure and nature tourism this situation is likely to change as Northern Ontario offers several environments suited to its purpose. All of these environments should be explored, inventoried, and evaluated for their adventure and nature tourism potential. If conducted, a search process similar to the one outlined in this document should be employed. All five components including map interpretation, literature review, air photo interpretation, ground site visit, and aerial reconnaissance are vitally important and follow a natural progression that makes efficient use of both office time and the field work to follow. The use of search criteria, while helpful in providing focus, should not necessarily be followed with strict discipline as this *may preclude* surprise findings. In similar fashion, it may be logical to conduct field work prior to the other forms of analysis as this *may provide* a surprise finding.

Recommendation (4): Conduct a search process similar to the one delineated in this project throughout the various forest biomes of Northern Ontario (see Map 15), modifying the search criteria and the order of analysis where necessary.

Issue: Based on relevant literature, air photo interpretation, and a site visit, a number of adventure and nature activities were deemed as being suitable or unsuitable for the Esnagi Lake Area. Only their attempted practice however, can make the final determination in regards to their suitability.

Recommendation (5): All adventure and nature tourism activities should be attempted in the Esnagi Lake Area in order to verify feasibility. If such a pilot study is conducted, the facilities offered by Esnagi or Mar Mac Lodge located on Esnagi Lake could be used as launching points.

Issue: The Wawa District Ministry of Natural Resources has detailed the land development process for tourism facilities in their document entitled *Requirements For A Project Proposal Submission*. In this document there is a distinct need for a more rigorous environmental impact assessment. The intention of more rigorous standards should be to improve the capacity of the public to influence the tourism planning and development process and to ensure the protection of the environment upon which the industry depends.

Recommendation (6): The Ministry of Natural Resources should demand a full environmental impact assessment for tourism facility development.

Issue: Hunting and fishing facilities of various sizes are distributed throughout the lakes and forests of Northern Ontario to even the most remote of sectors. Many of the lakes and forested areas in which they are located may have reached their capacity for such consumptive uses. When an application is made for a non-consumptive tourism facility on these same lakes and forested areas, the application may be rejected on the grounds that capacity for tourism facilities has already been reached.

Recommendation (7): The MNR should distinguish between consumptive and non-consumptive tourism facilities and recognize that lakes and forested areas can support more adventure and nature tourism development because of its minimal use of resources.

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