Fort McKay Environment Services Ltd.

The Community of Fort McKay Traditional Uses of the Renewable Resources On the Proposed Suncor Steepbank Mine Site

nuary 1996

THE COMMUNITY OF FT. MCKAY
TRADITIONAL USES OF THE RENEWABLE RESOURCES
ON THE PROPOSED SUNCOR INC. STEEPBANK MINE LOCAL STUDY AREA

Prepared for:

SUNCOR INC., OIL SANDS GROUP

Prepared by:

FT. MCKAY ENVIRONMENT SERVICES LTD.

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EXECUTIVE SUMMARY

The area in which the proposed Suncor Inc. Steepbank Mine Local Study Area (Suncor L.S.A.) is located has a long history of traditional land use. It is believed that human inhabitants moved into the region as the continental glaciers retreated at the end of the last Ice Age. At that time also, the catastrophic emptying of glacial Lake Agassiz re-routed the Athabasca River channel to its present direction, from that of a more east-west direction.

The proposed mine site lies within the boreal forest eco-region, and is characterized by short, hot summers and long, cold winters. The plant and animal species that inhabit the area have adapted to the rigours of the climate. Similarly, human populations have adapted to sustain both themselves and the area's resources throughout their centuries of traditional land use.

Increasing pressure on the land and its resources is being seen as commercial interests and activities exploit both renewable and non-renewable resources. The region's resources play an important role in the lives of the people from the Ft. McKay community, as well as those closer to Ft. McMurray. They hunt, trap, and fish; they use the berries, herbs and other plants. These resource uses are a significant factor in the daily lives of community residents, and in their economic and physical health, and spiritual well-being.

Significant also, however, is the economic necessity for employment and business opportunity. The people of Ft. McKay are becoming increasingly dependent on the resource-harvesting corporations, as the activities of those organizations continue to negatively impact traditional lifestyles.

The people of the community are, therefore, seeking an appropriate balance between traditional and current lifestyles. Each of these living modes has value, validity, and benefit. This report documents the traditional uses of the proposed Steepbank Mine site, and makes recommendations to support continued, sustained, and viable choices for the area's resources and its inhabitants.

TABLE OF CONTENTS

TABLE OF FIGURES

THE COMMUNITY OF FT. MCKAY
TRADITIONAL USES OF THE RENEWABLE RESOURCES
ON THE SUNCOR INC. STEEPBANK MINE LOCAL STUDY AREA

1.0 INTRODUCTION

The area encompassing the proposed Suncor Steepbank Mine Local Study Area (Suncor L.S.A.) has been inhabited at least since the close of the last Ice Age, which ended approximately 10,000 years ago. The people who lived in the area learned to use the natural resources in a manner that ensured sustainability both of their own lives and of the resources.

The people who now inhabit the area belong to the First Nations or to the Metis Nation. Each of these peoples has a long and honourable history. They have successfully adapted to changing conditions, both environmental and social, in their centuries-long habitation of this region. That they were able to do so is no mean feat; while the area is resource-rich, the climatic conditions have and do cause significant hardship to those who live a traditional lifestyle. The very rigorousness of that way of life, however, may well be responsible for the past good health and longevity experienced by the area's residents.

The boreal forest that covers most of Alberta north of Edmonton sustains a balanced resource base that includes coniferous and deciduous vegetation, large and small animals, resident and migratory birds. The land surface is intersected by rivers and streams, and numerous lakes dot the area; much of the land surface is covered by muskeg, and discontinuous permafrost underlies parts of the area. The climate is typical of a northern continental area, with clear skies and relatively low incidence of either fog or precipitation.

This type of environment can and does support small groups of people who sustain themselves through traditional living practices.

The substance that underlies much of the region is a unique and unusually useful material. With the coming of the fur traders in the late 1790's, the bitumen seeping from the deposits along the riverbanks was "discovered". The traders learned about the existence of the bitumen, and the ways in which it had historically been used, from the Aboriginal peoples who inhabited the area. The traders' fascination with, and use of, the bitumen as a canoe-repair substance was recorded in their journals. In the nineteenth century, surveyors from the Geological Survey of Canada described the visible deposits in detail. By the early 1900's, larger commercial exploitation of the resource had begun; extensive mining operations were initiated in 1968. The mines that have been operating since that time have almost reached the conclusion of their viability; both Suncor Inc., Oil Sands Group and Syncrude Canada Ltd. are currently applying for licenses to open new bitumen-mining areas east of the Athabasca River.

The people of the area recognize that exploitation of the bitumen deposits has the potential to provide immediate financial benefit to themselves and their community. They also recognize, however, that the more traditional use of resources, which has been their practice for thousands of years, has also contributed to the viability of their local economy and quality of life.

Furthermore, extensive and concentrated resource exploitation is seriously and negatively impacting the older and more traditional resource use.

This document provides a basis for the traditional use of lands and resources in the area. It is intended to enhance the overall understanding of such use, and to provide a basis for further discussion and implementation of mutually acceptable future resource planning and use.

2.0 STUDY OBJECTIVES

The main objectives of this study are:

- to determine the extent of traditional renewable resource use activities within the area identified as the Suncor L.S.A.
- to determine the extent to which these activities are still carried out on the area
- to identify the significance of such use to the members of the Community of Ft. McKay
- to initiate discussion regarding acceptable and mutually satisfactory resource use
- to make recommendations relative to traditional and non-traditional use of the water, land and resources

3.0 PROJECT METHODOLOGY

The methodology used in developing this project and working toward meeting its objectives included the following activities:

- literature review
- review of maps and airphotos
- interviews with residents
- community development of questionnaire
- interviews with elders
- interviews with trappers and hunters
- interviews with school-age children
- analysis of interview data
- enrichment of interview data with ground survey data
- report preparation

3.1 LITERATURE REVIEW

Activities associated with this project began with the review of a variety of studies and papers prepared for, or compiled by, the Ft. McKay Community, Suncor Inc., and a number of other sources. The literature reviewed is listed in the appended bibliography.

3.2 REVIEW OF MAPS AND AIRPHOTOS

Available topographic maps, and a variety of airphotos, were used during the interview process to assist in identifying the specific regions of traditional land use.

Wherever possible, new materials were added to the maps of the study area. Updates of information, including changes in available resources traditionally utilized in the study area were noted.

3.3 COMMUNITY-BASED QUESTIONNAIRE

The history of the people is based on oral tradition. The people of the Ft. McKay area were and are anxious to pass their knowledge on to those who now live upon, or use, the land and its resources. To facilitate that process, a series of interviews was held with Ft. McKay residents. Those interviewed included the elders who have spent many years living in a traditional manner. The school children were interviewed, to determine the extent to which they and their families continue to use the area's resources in a traditional manner. Trappers were interviewed, and their

knowledge of the land provided in-depth information during the trappers' employment as technical assistants for the aquatic mammals field study[1].

To ensure that those interviewed were provided with an appropriate, and standardized, set of inquiries, a questionnaire was developed for use during the interview process. It is and was essential that the information provided by the people belongs with the people. Development of the questionnaire was undertaken by the people of Ft. McKay, with assistance from Syncrude Canada Ltd., Suncor Inc. Oil Sands Group, BOVAR Environmental Inc., and Golder Associates Ltd. A draft questionnaire was produced, and was then reviewed, edited and approved by the Ft. McKay First Nations Council.

Community members then organized and conducted a series of interviews. The interview responses were documented for subsequent computerization. Following completion of the data entry, the data were subjected to a preliminary analysis, and used in the preparation of this Traditional Land Use report.

3.4 GROUND SURVEY DATA

Simultaneous with the interview process, an aquatic mammals study[1] was being completed for Suncor Inc. Oil Sands Group and Syncrude Canada Ltd., as part of the Traditional Land Use definition. The consultants worked with Ft. McKay area trappers during that study, and gained a wealth of knowledge from these experienced and skilled traditional land users. The aquatic mammal study included the Suncor L.S.A. The aquatic mammal study of the Syncrude Canada Ltd. Aurora Mine Environmental Impact Assessment Local Study Area (Syncrude L.S.A.) was confined to that portion of the site which is located north and west of the Muskeg River.

3.5 DATA ANALYSIS

Data obtained from the interviews, the literature search, the map review, and the ground survey were gathered and carefully analyzed. Personnel from government and industry and those whose work in the area have enabled them to develop intimate knowledge of traditional land uses were also contacted. Information provided by these people was useful in identifying habitat and harvest areas for a variety of species, including fish, wildlife, and vegetation.

3.6 STUDY LIMITATIONS

Limitations to the study outcome were present from the outset; the amount of available time was the greatest limiting factor. Furthermore, although the traditional land use area of the community

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[1]CIRC: Crozier Information Resources Consulting Ltd. "Survey of Wildlife, Including Aquatic Mammals, Associated with Riparian Habitat on the Suncor Steepbank Mine Study Area." Edmonton, Alberta. January 1996.

of Ft. McKay extends throughout a large region of northeastern Alberta, budgetary limitations necessitated that this study focus on the Suncor L.S.A.

3.7 COMPARISON OF DATA

Material and information acquired in the interview process from the Elders is anecdotal, or empirical, in nature. The degree of unanimity among the opinions and perceptions expressed by the residents indicates the overall uniformity of view regarding traditional use of the land and resources.

4.0 STUDY AREA DESCRIPTION

The study area is defined as the Suncor L.S.A., and is shown on Figure 2: Suncor Inc. Traditional Knowledge Survey; Figure 1 is an overlay which shows the active and inactive beaver lodges in the Suncor L.S.A. The area in total initially encompassed 343.1 square kilometres, but ultimately was confined to the area located on the east side of the Athabasca River. The north-eastern portion of the study area is drained in a westerly direction by Legget Creek, while the southern portion of the study area drains into the Athabasca River via Wood and McLean Creeks. Shipyard Lake can be found along the ancient flood plain on the east side of the Athabasca River between the mouth of the Steepbank River and Legget Creek. The study area includes the east bank, and the flood plain of the Athabasca River.

The study area is underlain by bitumen and is currently the focal point of Suncor's attention for a new mine site.

4.1 REGIONAL GEOGRAPHY

The study area lies within the northern Alberta boreal ecoregion (Strong and Leggat, 1981). The Boreal Mixedwood section, which includes the study area, is covered by clay-rich soils produced by the glaciation of the underlying Cretaceous shales.[2] The topography is that of a rolling, morainal surface. Extensive flatlands exist, caused by erosion and re-disposition in postglacial lakes, which later drained. The upland areas are covered with grey-wooded soils, and are moderately productive.

The primary vegetative cover in the uplands areas consists of aspen (*Populus tremuloides*), paper birch (*Betula papyrifera*), balsam poplar (*Populus balsamifera*), white spruce (*Picea glauca*) and jack pine (*Pinus banksiana*). The lowland vegetative cover consists predominantly of black spruce (*Picea mariana*) and tamarack (*Larix larcinia*), plants which are capable of growth in the low-lying, moisture-filled muskeg areas. Shrub habitat along drainage courses are in early seral bog/fen successional stages, and have extensive willow (*Salix spp.*) and alder (*Alnus spp.*) growth.

Wildlife and fish species found permanently or seasonally in the study area are typical of those found in a boreal forest region, and include a variety of mammals,

The climate of the area is that of typical northern temperate zone, with long cold winters and short warm summers. Prevailing winds in the area are from the north and west-northwest.[3]

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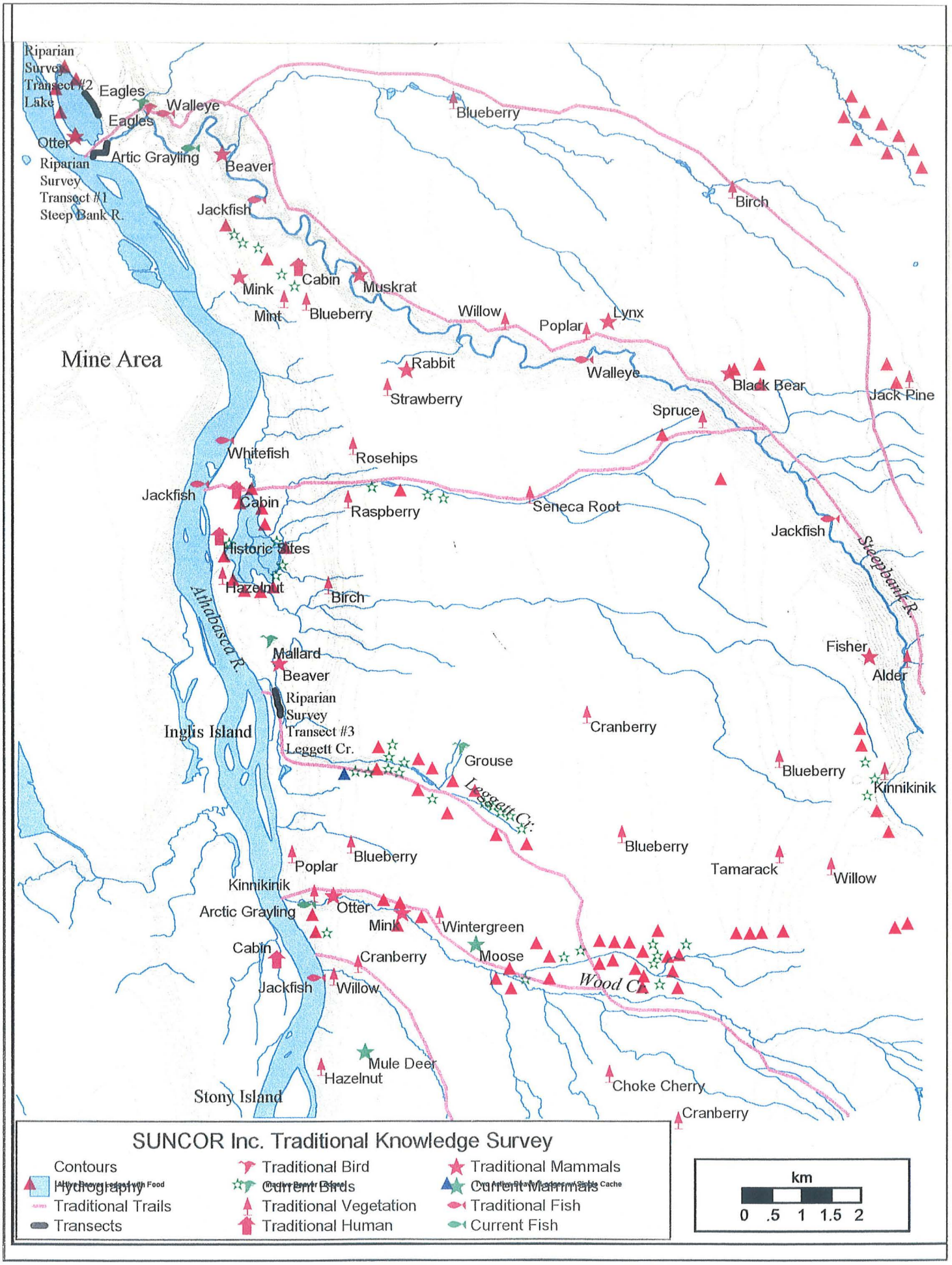
[2]Hardy, W.G. (editor in chief). Alberta, A Natural History. Chapter 8: "The Boreal Forest". Edmonton, Alberta: Hurtig Publishers Ltd. 1967.

[3]Rudolph, R.C.; M. M. Oleskiw and R. A. Stuart. "Climatological Analysis of Recent Data from the Athabasca Oil Sands Area." AOSERP Report 130. Prepared for the Alberta Oil Sands Environmental Research Program, Research Management Division by Intera Environmental Consultants Ltd. Edmonton, Alberta. 1984. (199p.)


Riparian Survey Transect #2
Lake
Eagles
Walleye
Eagles
Otter
Artic Grayling
Beaver
Riparian Survey Transect #1 Steep Bank R.
Jackfish
Blueberry
Birch
Mink
Cabin
Muskrat
Mint
Blueberry
Willow
Poplar
Lynx
Mine Area
Rabbit
Walleye
Black Bear
Jack Pine
Strawberry
Spruce
Whitefish
Rosehips
Jackfish
Cabin
Raspberry
Seneca Root
Jackfish
Steepbank R.
Historic Sites
Hazelnut
Birch
Athabasca R.
Mallard
Beaver
Fisher
Alder
Riparian Survey Transect #3 Leggett Cr.
Inglis Island
Cranberry
Grouse
Leggett Cr.
Blueberry
Kinnikinik
Blueberry
Poplar
Blueberry
Tamarack
Willow
Kinnikinik
Arctic Grayling
Otter
Mink
Wintergreen
Cabin
Cranberry
Moose
Jackfish
Willow
Wood Cr.
Mule Deer
Hazelnut
Choke Cherry
Stony Island
Cranberry
SUNCOR Inc. Traditional Knowledge Survey
Contours
Hydrography
Traditional Trails
Transects
Traditional Bird
Current Birds
Traditional Vegetation
Traditional Human
Traditional Mammals
Current Mammals
Traditional Fish
Current Fish
km
0 .5 1 1.5 2

The area is drained by the Athabasca River and its tributaries. That river is one of the three (the two other rivers are the Peace and the Slave) which drain most of northern Alberta. The Athabasca River rises in the Rocky Mountains, drains from the Athabasca Glacier, traverses much of central and northern Alberta, and empties into Lake Athabasca. Tributaries to the Athabasca include the Clearwater, Steepbank, MacKay, Muskeg, Ells, Tar, Pierre, and Firebag Rivers. Lakes within the drainage system include Kearl, McClelland, and Gregoire.

4.2 HUMAN GEOGRAPHY

The area has likely been inhabited since shortly after the end of the last ice age (about 10,000 years ago). The land was able to consistently support the previous population, which lived in small groups and travelled in accordance with the seasons and the local abundance of food.[4]

The market economy was introduced to the area's inhabitants close to two hundred years ago; Peter Fidler established the first fur trading post north of the present town a few years prior to 1800. The area became well-known to the traders, who travelled from Hudson Bay via the lakes and rivers, traversed the Methy Portage, and re-entered the waterway system where the portage meets the Clearwater River. The area remained significant throughout the fur-trade era, because of the waterways which provided the critical transportation route between Lake Athabasca and the eastern markets.

At the present time, the primary communities in the area are Ft. McKay, with a population of 332; and Ft. McMurray with a population of approximately 35,000, where people live within the city and the surrounding area.

4.3 ECONOMIC GEOGRAPHY

There are two primary resources being exploited in the study area: bitumen and marketable timber.

A vast area in the northern half of Alberta is underlain by huge deposits of an oil bearing bitumen known locally as "oil sand". These deposits are bordered on the east, south and west by both conventional petroleum (oil and gas) deposits, and deposits of heavy oil in areas that include both the Cold Lake in the east, and Peace River in the north-west.

The oil sands deposits are now known to contain an estimated 720 billion barrels of crude oil, constituting a very large percentage of the worlds' known petroleum supply[5].

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[4]Reeves, B., Ph.D. Personal communication. Professor of Archeology, University of Calgary. Calgary, Alberta. February 1996.

[5]Alberta Environment Protection. "Draft Fort McMurray-Athabasca Oil Sands Sub-Regional Integrated Resource Plan." Edmonton, Alberta. October 1995. (88 pp)

This bitumen is the current focal point of Suncor's attention, in the development of a new mine site.

Research and exploration on the bitumen deposits has been underway since the turn of the century. It has, however, been only during the past seventy years that the extent of the bitumen deposits have been identified. Also during that time, progress has been made in the separation and extraction processes, which have resulted in the development of economically viable synthetic crude oil production.

Bitumen exploration and extraction research increased dramatically in the late 1940's and 1950's; by the late 1960's, the first commercially successful effort to extract oil from this bitumen was implemented. Great Canadian Oil Sands Ltd., or "G.C.O.S.", was the predecessor to the Suncor Inc. Oil Sands Group; the official name change took place in 1979. G.C.O.S. developed the first commercially successful oil sands mining and extraction operation. This effort created genuine international interest in the Ft. McMurray oil sands, and since that period, exploration, mining, extraction and upgrading of oil from these sands has been the focus of a massive industrial effort. Two large corporations now actively mine and extract bitumen from the area: Suncor Inc. Oil Sands Group and Syncrude Canada Ltd.

In addition to containing vast amounts of oil, the oil sands also contain a variety of other commercially recoverable minerals and elements such as sulphur, vanadium, and gypsum. More recently, gold and aluminum have emerged as being economically recoverable on a commercial scale.

At the present time, Suncor Inc. Oil Sands Group and Syncrude Canada Ltd. actively operate oil sands mines. The proposes Suncor Steepbank Mine and the Syncrude Canada Ltd. Aurora Mine focus on bitumen extraction. Two other mining operations will focus on the extraction of non-bituminous minerals. The new Solv-Ex Ltd. mine, for example, will primarily extract aluminum from the bitumen sands, with oil as a secondary profit base. Birch Mountain Resources Ltd. is focused on the extraction of gold from the oil sands.

In addition to the increasing exploitation of the sub-surface resources, forest resources are subject to significantly increased exploitation and use. Major forest industry corporations, such as Alberta Pacific Forest Industries Inc. and Northland Forest Products Ltd., are active in the area. To the west, Daishowa, Miller Western, Northland Forest Products, Weyerhaueser and Slave Lake Pulp, are all removing ground cover and creating access into the previously inaccessible areas in northern Alberta in general and the study area in particular.

4.4 RESOURCE-USE CONCLUSIONS

The study area, as well as the larger ecological community of which the study area is a part, abounds with both renewable and non-renewable resources.

The people of the extended community of Ft. McKay believe that the area's resources are there for the use and enjoyment of all, and that appropriate harvesting of the resources will ensure sustained yields for the benefit of both current and future generations. In particular, the resources

of the Suncor L.S.A. currently support a closely interconnected community of plant, animal, and human lives. Appropriate use of those resources will assure the environmental integrity of the area, and will guarantee the availability of resources for future use of community residents and visitors to the area, as well as commercial interests.

Based on the recent history of resource use by commercial interests, it is apparent that:

1. Exploration for and exploitation of subsurface non-renewable resources will not only continue in the regional study area, but will likely increase in the future.

2. The cut lines which are produced every year throughout the general study area may be singularly inconsequential, but the cumulative effect of the cut lines is significant. The cut lines increase access to otherwise inaccessible areas, while removing cover; plant (and subsequently animal) inhabitants along the cut lines are significantly different than are those of the surrounding area. Increased access also reduces the security level of this area for large mammals such as moose, deer, and caribou. These effects are most commonly viewed negatively by the local users of such areas.

3. The removal of cover from the mining site will have a marked effect on the production of renewable natural resources in the mined area. From the perspective of geologic time, this period may be relatively brief, but from the perspective of the human population that traditionally utilizes and depends on the resources in these areas, it may be several generations before the environment is again able to support a viable resource base.

4. The mining, extraction and upgrading processes, and the waste products resulting from these processes, will add to the current effects on the water, soil and air quality in and beyond the regional study area.

5. The non-renewable resource use evidenced by current mining operations, is believed responsible for the imposed cessation in use of the fish resources from the Athabasca River due to health concerns regarding water contamination, and the unpleasant taste and smell of the fish. Increased non-renewable resource use is expected to further reduce the short and long term usability of the area's natural riverine resources.

6. Islands in the Athabasca River are still used by Ft. McKay resident for moose hunting, but outside of the occasional "catch and release" angler, subsistence fishing no longer occurs in the Athabasca River.

7. The pressure for ecotourism is likely to increase, but the conditions that promote it (ie. clean air, clean water, fish and wildlife, and aesthetically pleasing scenery) will decrease unless the negative impacts of the proposed projects are recognized, reduced to minimal levels, and managed in a way that assures genuine environmental recovery.

8. The commercial interests responsible for harvesting renewable and non-renewable resources in the region must make some effort to ensure that the negative environmental results of their activities are mitigated.

It is clear that those companies involved in the exploitation of oil sands, timber and minerals will require significant community and professional assistance in their efforts to mitigate the negative effects of their collective actions on the land and water resources, and the people in the study area.

Efforts will therefore be made to provide suggestions and advice on mining and reclamation methods that will mitigate or reduce the negative impacts of the proposed new mine. It must be remembered that the end land users are the members of the Aboriginal community and the local non-Aboriginal residents from Ft. McMurray, not those people who are from other areas of Canada or elsewhere, who are in the area exclusively to exploit its resources for commercial gain.

5.0 TRADITIONAL REGIONAL RESOURCE USE

The traditional use of the area's resources were identified primarily through discussions with those who have been using the resources, as well as through the ground and air surveys completed during the aquatic mammals study[6]. The aquatic mammal study results have been documented in separate reports. The information in the following sections is a synthesis of the detailed, hands-on knowledge acquired by the trappers over many generations, and which we now term "traditional" information. This documentation provides an opportunity to blend both the traditional and the scientific perspectives resulting in a realistic and environmentally-holistic knowledge base.

5.1 TRAPPER INTERVIEW, OVERALL WILDLIFE SURVEY

On October 26, 1995, discussions were held with the operator of a trapline that is situated on the southern portion of the proposed Suncor L.S.A. The trapper is an Elder of the community of Ft. McKay, and is an exceptionally knowledgeable individual. He has lived for over seventy years, and has supported himself and his family by traditional means throughout that time. He shared the trapline licence with another person until her recent death.

The trapper has actively trapped for fifty years, and has personally trapped on his current trapline for the past fifteen years. He spends a minimum of three months per year on his trapline and is most active during the winter months, and in early spring. He is now the sole holder of this trapline.

This trapper has indicated that fluctuation in animal populations is normal, and that currently the cycle is at a low point.

5.2 TRAPPER INTERVIEW, NON-AQUATIC FUR-BEARERS

5.2.1 Lynx

The trapper stated that the high in lynx populations in the study area most recently occurred in 1982/83, and was coincident with high snowshoe hare populations.

5.2.2 Fisher

Populations of fisher in the study area are now low, probably due to the removal of timber by Northland Forest Products from other parts of his trap line and on the study area. It may be noted, however, that ground surveys held in late November show that fisher populations in the

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[6]CIRC: Crozier Information Resources Consulting Ltd. "Survey of Wildlife, Including Aquatic Mammals, Associated with Riparian Habitat on the Suncor Steepbank Mine Study Area." Edmonton, Alberta. December 1995.

former ALSANDS site located north of the Suncor L.S.A. appear to be numerous, as are populations of snowshoe hares, weasels, grouse and ptarmigan.

5.2.3 Marten

Populations of marten are low in the Elder's trapping area. He believes that the low numbers of marten are a result of low squirrel populations, which he in turn attributes to the logging of the spruce and pine forests in the area and the subsequent lack of cones (which hold the seeds that the squirrels eat).

On a trapline operated by another trapper, further to the east in a yet-unlogged area, 135 marten were caught and sold last winter. This trapline is so isolated that its owner must be flown in and out of the area.

5.2.4 Weasels

Three species of weasels exist in the area covered by this trapline. Populations are good, a fact that was also confirmed during the November ground survey.

5.3 TRAPPER INTERVIEW, AQUATIC FUR-BEARERS

5.3.1 Beaver

On the west side of the Steepbank River, there are few, if any, beaver because none of their preferred food (tree) species (poplar, aspen willow) exist there. According to the Elder, some people still eat beaver and muskrat, but most are concerned that the water and vegetation used by these animals are contaminated and hence so is their flesh. That concern has forced the people to cease or significantly reduce their intake of these food resources.

5.3.2 Otter

Otter numbers appear to be increasing along the Elder's trapline.

5.3.3 Muskrat

Almost all muskrats in the area inhabit the river system. It should be noted that ground and air surveys located no muskrat sign in the study area, however.

5.3.4 Mink

Few mink are to be found in the river system, according to the trappers. The ground surveys held in November 1995, and in which this trapper participated, showed greater incidence of mink in the area than was anticipated.

5.4 TRAPPER INTERVIEW, NON-AQUATIC MAMMALS

5.4.1 Moose and Deer

The trapper indicates that moose and whitetailed deer are numerous in his trapping area. In 1991, he also recorded the presence of eighteen mule deer on his trapping area on the east side of the Clearwater River at its confluence with the Athabasca River. This statement coincides with observations made the district Fish and Wildlife officer[7], who further elaborated that this situation is affected by its inaccessibility for most of the year, including the hunting season. The area is therefore relatively secure big game habitat.

5.4.2 Caribou

The trapper stated that caribou [barren ground caribou] were viewed at Ft. McMurray in 1955 as they migrated past Ft. McMurray in herds of thousands. To reach the area in which they were seen, the caribou had to have passed through the study area.

5.4.3 Bears

There were a lot of black bears in the earlier times when the trapper first moved onto the trapline. There was grizzly sign in the Saline Lake area in 1990.

5.5 BIRDS

5.5.1 Upland Game Birds

Upland game birds are present in fairly large numbers on the study area, according to the trapper and confirmed by ground survey in November, 1995. Sharptailed and ruffed grouse populations are high. In the winter, ptarmigan migrate into the area, and were present during the ground survey of November 1995. The trapper's experience is that the colder the winter, the more ptarmigan are to be found.

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[7]Schmidt, Ken. Personal communication. Alberta Fish and Wildlife Officer, October 1995.

5.5.2 Songbirds

In the study area, the bush is much quieter today than it was fifteen years ago. There are not as many songbirds as previously inhabited the area.

5.5.3 Owls, Crows, Magpies, Ravens, and Jays

Magpies have moved into Ft. McKay, whereas none had been present until just a few years ago.

Owls are scarce, but the large ones are occasionally killed and eaten.

Canada jays (also known as whiskey jacks), ravens, and magpies are present in relatively large numbers, all year around. Crows are numerous in the summer and fall seasons.

5.5.4 Waterfowl and Large Waders

Waterfowl are still plentiful, particularly during spring migrations, but a lot of water which used to support breeding ducks during the summer, no longer does so. Saline Lake is an area traditionally used to harvest coot and duck eggs, which have been used as a food source in the springtime[8].

Cranes migrate through the trapline (study) area during spring and fall. Blue herons moved into the area in 1970. Snow, Ross, and Canada geese cross the area during migration in both spring and fall. Spring geese and ducks are preferred for food over early autumn birds because the taste and quality of the spring birds is better than that of the autumn migrants.

5.6 FISH

Fish in the Athabasca River are regarded as unfit to eat. In the Steepbank River there are still grayling caught. In Johnson Lake, "there used to be pike" but this was no longer the case as of five years ago.

The trapper believes that the Athabasca River is polluted.

5.7 TRAPPER INTERVIEW, OTHER ISSUES

The trapper observed that the land had been much drier until five years ago, than it is now. At that time, changes began that have resulted in an overall increase in surface water. These changes appear, in part, to be caused by alteration to drainage patterns by industrial activity.

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[8]GrandeJamb, M. Personal communication. Chief, Ft. McKay First Nation. November 1995.

Seismic and mineral exploration, as well as associated road-building activities, have increased considerably in recent years. Surface alteration impacts are undoubtedly cumulative.

The Elder believes that the climate is warmer overall and is also windier than in the past. Furthermore, he feels that the weather is generally more unstable than it was in past years.

This trapper, who has spent most of his life in the forest, observes signs that indicate increased numbers of trees that are under stress or suffering from disease. He believes that the deaths of trees in certain areas are related to localized lack of water, which may be the result of local drainage changes caused by industrial activity.

This respected trapper and Elder made it abundantly clear that this trapline is central to his style and quality of life. It is the most important item affecting and directing his entire existence. He has trapped throughout his entire adult life, and has come to know and respect the environment and each of its elements. His knowledge of his surroundings is thorough.

6.0 LAND USE ON THE SUNCOR L.S.A.

The Suncor L.S.A. has supported life since the last period of glaciation. The primary non-renewable commercially-exploited resource of the area, the oil sands, were deposited approximately 120 million years ago during the Albian stage of the Lower Cretaceous Period, according to Dr. George Pemberton.[9]

The quality and quantity of key environmental components such as soil, air and water are fundamental to the continued productivity and viability of the renewable resources in the region. These three fundamental components determine the quality, quantity, and diversity of all of the other resources, as well as their locations, abundance and availability. This set of ecological conditions in turn are responsible for the manner, season, location and uses to which humans put the renewable resources. Those uses evolved over a period of several centuries and became an integral part of the cultural traditions and practices of the Aboriginal people who inhabited the area. Those practices are now termed "Traditional Land Use."

During the Traditional Knowledge Data Base interviews, those interviewed were asked to identify the ways in which they used the land and its resources, and to also identify the anticipated effects of the new Suncor Steepbank Mine. The people had difficulty in separating the traditional use of resources on the current Suncor Mine and Plant site, from the probable effects of the new mine on, and within the Suncor L.S.A. Traditional renewable resource uses in or around the current mine site have been severely curtailed or almost eliminated, as indicated by the interviewees.

The unique environment created within the former ALSANDS Ltd. lease was assessed during a separate study.[10] Activities completed on that site during the late 1970's included the construction of ditches to drain the muskeg (prior to the intended stripping of the overburden to gain access to the oil sands). The site was abandoned in the early 1980's, and had no further work done on it. The result is that a highly productive micro-area has developed, with a variety and concentration of vegetation and animal life that is significantly greater than that which exists in the surrounding area. The impact and potential of this site is both unique and significant, and bears further investigation in the development of future reclamation strategies.

There will be cumulative effects of industrial activity and resource exploitation in the study area. The following sections concentrate on traditional resource use in the region, as well as current use of traditional renewable resources on the proposed new mine site.

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[9]Pemberton, George, Ph.D. Personal communication. Professor of Geology, University of Alberta. Edmonton, Alberta. February 1996.

[10]CIRC: Crozier Information Resources Consulting Ltd. "Survey of Wildlife, including Aquatic Mammals, Associated with Riparian Habitat on the Syncrude Canada Ltd. Aurora Mine Environmental Impact Assessment Local Study Area." Edmonton, Alberta. January 1996.

6.1 PLANTS

The plants found in the area are typical of those found within the boreal forest, and include the following plant groups:

- timber types
- pulp types
- currently non-marketable trees
- vegetables
- food (roots)
- fruits, berries and
- other useable plants

6.1.1 Traditional Use of Trees

Forest resource use has always played a role in the Ft. McKay region and, specifically, the proposed Suncor L.S.A. Historically, this role was relatively minor in terms of quantity used, but the resource was important to the people for their medicinal use (for example, balsam fir), as was expressed during the Elders' interviews. The interviews with Annie L'Hommecourt, recorded in "There Is Still Survival Out There"[11], documented the tree resource uses for firewood, for smoking and curing fish and game, and as a building material.

Coniferous trees that were used by the people in a traditional fashion over the years include:

Lodgepole pine	(*Pinus contorta*)
White spruce	(*Picea glauca*)
Jack pine	(*Pinus banksiana*)
Tamarack	(*Larix larcinia*)
Balsam fir	(*Abies balsamia*)
Black Spruce	(*Picea mariana*)

Deciduous trees that were used by the people in a traditional fashion over the years include:

Balsam (Black) poplar	(*Populus balsamifera*)
Aspen poplar	(*Populus tremuloides*)
Paper birch	(*Betula papyrifera*)
Willows	(*Salix sp.*)
Alder	(*Alnus rugosa*)

Both types of trees have played a role in the traditional lifestyle of the people of Ft. McKay. Information from the interviews, along with material from the literature[8], and from the November 1995 Traditional Knowledge Data Base interviews of Elders in the community, indicates that sap

[11]Fort McKay First Nations. "There is Still Survival Out There". Fort McKay, Alberta. October 1994 (130 pp.)

from balsam fir and the pines was (and still is) used for a variety of purposes including medicine for colds.

The Elders indicated that birch sap has been used to make a syrup similar to maple syrup. Willow bark was boiled and consumed as a tea. This tea was (and still is) used as a cure for headaches, colds, and stomach problems.

Willow and alder were, and continue to be used extensively in the smoking or drying of fish and meat.

Log shelters are built and used by trappers throughout the traditional resource use area, including the Suncor L.S.A. At present there are several cabins in use on the area. These cabins are the result of major investments of both time and money, and are used year round. Coniferous trees were predominantly used for construction of the cabins. Furnishings were made from birch, willow, and poplar, for use in the cabins. Community houses were also made from deciduous trees.

Deciduous trees also provided much of the firewood for campsites, and are still used extensively for this purpose.

6.1.2 Traditional Use of Berries and Shrubs

Berries and shrubs have been traditionally used for food, medicine and ceremonial or spiritual purposes. The following berries and shrubs used are included in those found in the Suncor L.S.A.:

Huckleberry	(*Vaccinium sp.*)
Blueberry	(*Vaccinium spp.*)
Cranberry	(*Viburnum spp.*)
Saskatoon	(*Amelalchier alnifolia*)
Chokecherry	(*Prunus virginiana*)
Pincherry	(*Prunus pennsylvanica*)
Raspberry	(*Rubus strigosus* and *R. pubescens*)
Currant (black & red)	(*Ribes spp.*)
Gooseberry	(*Ribes oxacanthoides*)
Strawberry	(*Frageria virginiana*)
Twisted Stalk	(*Streptotus amplexifolius*)
Rosehips	(*Rosa asciularis*)

Plants in this list are regarded as "sweet" by those who traditionally make use of them. The fruits are eaten raw, and are occasionally used as preserves and in pastries or sauces. Other berries and fruits, such as rosehips, are used to make drinks for health purposes.

Other plants commonly used by community residents include:

*Bearberry or Kinnikinnick	(*Arctostaphylos uva-ursi*)
Dogwood or bunchberry	(*Cornus stolonifera* and *C. canadensis*)
Juniper berry	(*Juniperus horizontalis*)
Hazelnut	(*Corylus cornuta*)

* The name "kinnikinnick" is also used by area residents to describe the shaved inner bark of "Red Willow" (actually Red Osier Dog Wood) which is used as tobacco, or to mix with tobacco. Bunchberry (Dog wood) and juniper were (and occasionally still are) used for flavouring food, as well as for medicinal purposes.

Hazelnuts are a relatively uncommon plant this far north. When found, they may be eaten raw, or roasted and served as a high energy food source.

6.1.3 Traditional Use of Herbs

A variety of other plants, mostly of the herbaceous type, have been traditionally used by community members. Some of these are listed below:

Common yarrow	(*Achillea millefolium*)
Common tansy	(*Tannesetum vulgare*)
Common plantain	(*Plantago major*)
Mint (a variety of species)	(*Mentha sp.*)
Common (Stinging) nettle	(*Urtica gracilis*)
Muskeg plant (moss)	(*Selaginella sp.*)

All of the above shrubby and herbaceous plants were and are eaten. Some of them are used to make teas or infusions for health reasons. Among those are the mints, chamomile and yarrow. The common nettle was (and still is) eaten when young, and used to make dyes. Blueberry roots are used to make an infusion which was (and still is) used to treat diabetes.[12] The tansy was formerly used as a spice, but is used less frequently today. Mosses or "muskeg plant" were, and occasionally still are, dried and used in moss bags as diaper material.

All of these plants are currently found in varying amounts throughout the Suncor L.S.A. The clearing of this site will significantly reduce or eliminate their availability.

The specific locations of these plants, especially those used for medicinal purposes, is a sensitive issue. Researchers have been known, previously and with other peoples, to exploit the knowledge shared with them by the Aboriginal people. Due to these past experiences, the Elders are no longer willing to publicly share or reveal this essential and culturally sensitive knowledge.

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[12]Bourque, Fred. Personal communication. Trapper from Anzac, Alberta. October 1993.

6.1.4 Traditional Use of Water Tolerant (Emergent) Plants

Sloughs, small lakes, bogs and fens are populated by their own unique plant communities. Many of the water tolerant species found in the Suncor L.S.A. have historically been used for food and medicines, including those listed below:

Cattail (roots and leaves)	(*Typha latifolia*)
Bulrush (roots and stems)	(*Scirpus sp.*)
Rat root (Sweet flag) (roots)	(*Acorus calamus*)
Labrador tea (muskeg tea)	(*Ledum groenlandicum*)
Horsetail	(*Equisetum sp.*)

The roots of cattails and bulrush have been consumed by people for centuries and are a nutritious source of starches and sugars.

Rat root is used as an all purpose medicine, as has been the tradition for generations. It is a standard treatment for headaches, toothaches, and a variety of other pain-inducing ailments.

Labrador tea is used by the people in this area as an infusion, and is then used for health or medicinal drink and as a social beverage.

6.1.5 Current Use of Plants

6.1.5.1 Trees. The quantity and extent of direct forest utilization (rather than the indirect but environmentally-sensitive traditional forms of forest use), has increased dramatically in this area in the last quarter century. Timber harvesting for pulp and for saw logs has become a major use of area resources, including the area within the Suncor L.S.A. This dramatic change started in the late 1970s, with a further sharp upswing in about 1988 following approval of the Alberta Pacific (AlPac) Pulp Mill. The Forest Management Area for this mill covers an area about the size of New Brunswick and includes all of the Ft. McKay Traditional Land Use Area, as well as the Suncor L.S.A.

Some logging has already taken place on the Suncor L.S.A. Timber license A5L19 logging took place during 1995. Currently, the logged over area is being cleaned up, and logs are being hauled out. There is likely to be logging under this license in the same general area over the coming two years. AlPac and Northlands Forest Products will both be operating on the east side of the Athabasca River during the next two to three years. Some of this logging activity will occur on the Suncor L.S.A.

The impact of logging activities throughout the regional study area will add to the cumulative effects of industry on the resource base regarded by the community of Ft. McKay as its traditional land use area. Ft. McKay community members have practised sustainable resource management; their knowledge in ensuring the continued sustainability of forest resources may well prove financially, as well as socially, beneficial to all stakeholders.

6.1.5.2 Shrubs, Herbs, and Berries. Plants, particularly rat root, mint, red willow (dog wood), and a variety of berries are still being picked on the Suncor L.S.A. Concerns have been expressed, however, that the plants which have traditionally been picked from this area now exhibit a deposition of grey and black material on the leaves and stems.[13] This deposition is believed to be particulate matter from the stack emissions of the two existing oil sands plants. The people are concerned that consumption of these berries and plants will adversely affect their health. For this reason, many of the Ft. McKay community members have been forced to reject this area as a viable source of traditionally-used plants.

6.2 WILDLIFE AND FISH RESOURCES

The following mammals, birds, and fish inhabit the study area:

Mammals:

Caribou	(*Rangifer spp.*)
Mule Deer	(*Odocoileus hemionus*)
Whitetailed Deer	(*Odocoileus virginianus*)

Fur Bearers: (Predatory)

Wolf	(*Canis lupus*)
Coyote	(*Canis latrans*)
Fox	(*Vulpes fulva*)
Lynx	(*Lynx canadensis*)
Fisher	(*Martes pennanti*)
Wolverine	(*Gulo luscus*)
Marten	(*Martes americanus*)
Weasel	(*Mustela spp*)
Black Bear	(*Ursus americanus*)

Fur-bearers: (Aquatic)

Muskrat	(*Ondatra zibethicus*)
Beaver	(*Castor canadensis*)
Otter	(*Lutra canadensis*)
Mink	(*Mustela vison*)

Birds:

Migratory Waterfowl:

Ducks	(*F. Anatidae*)
Geese	
Canada geese	(*Branta canadensis*)
Snow geese	(*Chen hyperborea*)

[13]Margaret McDonald, Elder. Personal communication, Traditional Knowledge Data Base Interview, Nov 25, 1995. Corroborated by several other interviewees.

Swans	(*Olor spp.*)
Shore birds	(*F. Scolopacidae*)
Gulls	(*Larus spp.*)
Cranes	
Sand hill	(*Grus canadensis*)
Whooping	(*Grus americanus*)
Herons	(*Ardea herodias*)
Grebes	(*Podiceps spp.*)
Western Grebes	(*Aechmophorus occidentalis*)
Loons	(*Gavia spp.*)
Pelicans	(*Pelecanus erythrorynos*)

Migratory Predators:

Hawks	
broad-winged	(*F. Buteonidae*)
accipiter	(*F. Accipiteridae*)
Eagles (bald eagle)	(*Haliaeetus leucocephalus)*

Resident Predators:

Owls	
Great horned owl	(*Bubo virginiana*)
Great grey owl	(*Strix nebulosa*)
Ravens	(*Corvus corax*)
Crows	(*Corvus brachyrhyncos*)
Magpies	(*Pica pica*)

Resident Upland game birds:

Sharptailed grouse	(*Pediocetes phasianellus*)
Ruffed grouse	(*Bonasa umbellus*)
Spruce grouse	(*Canachites canadensis*)
Ptarmigan (Willow)	(*Laqopus spp.*)

Fish:

Salmonids	(*Salmonidae*)
Trout	(*Salmo spp.*)
Whitefish	(*Corregoneus clupiiformes*)
Grayling	(*Thymallus arcticus*)
Pike	(*Esox Lucius*)
Yellow perch	(*Perca flavescens*)
Walleye	(*Stizostedion vitreum*)
Ling	(*Lota lota*)
Goldeye	(*Hiodon alosoides*)
Suckers	(*Catosomus sp.*)
Chubs	(*Hybopsis sp.*)
Minnows	(*F. Cyprindae*)

6.2.1 Traditional Use of Big Game Animals

Traditional use of the fauna in the Suncor L.S.A. was limited, by a general lack of access, to hunting along the Athabasca River and on islands within the study area. The current trapline holder in the area has stated that moose and whitetailed deer are numerous on his trapping area. This statement coincides with the observations by Fish and Wildlife Officer K. Schmidt, who also commented that the area is almost inaccessible most of the year, including during the legal hunting season, and is therefore relatively secure as big game habitat.

As recently as 1955, "thousands of barren ground caribou" passed through the area and appeared near Ft. McMurray, according to the Elders. The existence of caribou has also been identified by community residents, who are quoted as saying that: "there are some caribou (probably woodland caribou) on the east side of the (Athabasca) river."

It is known that caribou occasionally migrated through the study area. It is reasonable to believe, therefore, that the people in the area took advantage of this resource, and harvested the caribou for food and clothing.

The area also at one time supported a "lot of black bears." Grizzly bears were not unknown in the area, but were apparently seen only rarely. Grizzly sign was last seen in the vicinity of Saline Creek in 1990. It is probable that historically, grizzly were found in the Suncor L.S.A.

The location of the Suncor L.S.A. is directly across the river from what was once a major traditional gathering site (Tar Island). That area was used for summer/fall hunting, fishing and gathering activities by people from the community of Ft. McKay. This location had been used for centuries, up until about thirty years ago when G.C.O.S. (now Suncor Inc.) was established. Until that time hunting, fishing, trapping and gathering were carried on from this location and covered a wide area including the current study area. Much of this traditional activity was curtailed when the Suncor Inc. tailings pond was constructed upon this historically-used site, eliminating it as a traditional gathering site.

Hunting was carried on across the river from this campsite, and moose were taken regularly on the islands and on the east bank of the river in the Suncor L.S.A.

Traditional use of faunal resources has continued in more recent historical and current time periods. Hunting and trapping occur within the study area, and along the Athabasca River on the east side of the study area. Hunting and trapping have also occurred on islands within river. Moose, and caribou were traditionally hunted throughout the area.

6.2.2 Traditional Use of Fur-Bearers

The Suncor L.S.A. is part of a vast land base which has been trapped for centuries. The people trapped and utilized the animal hides and meat within the community itself, as well as used the hides as barter for goods from neighbouring communities. With the introduction of the Europeans into the area, the market for various kinds of fur was enhanced, and trapping became a much more important part of the community's traditional cycle of activities.

Beaver and muskrat have traditionally been taken as much for their meat as for their hides. These animals are still regarded as a staple in the diet of trappers and their families. The only exceptions are the beaver and muskrat that inhabit the Athabasca River; those animals are no longer taken for either fur or food because of the poor condition of both the meat and the fur.

Rabbits (snowshoe hares) made up a significant part of the daily food intake when they were numerous. The hides were used to make inner garments for winter, as well as blankets.

The Steepbank River and the riparian areas in close proximity to this watercourse are used by otter, mink and weasels. Coyotes, lynx, and snowshoe hares were trapped in this area, along with wolves, foxes, and fisher. Beaver and muskrat were trapped here, as well as in the streams and the muskeg sloughs and lakes created by the beavers themselves.

6.2.3 Traditional Use of Migratory and Predatory Birds

The Athabasca River valley has traditionally been used as a migration corridor by ducks, geese, and cranes, as well as shore birds, loons, grebes, and gulls. Waterfowl were hunted in the spring and fall. During early nesting periods, duck eggs were used for food. Spring was the preferred time for hunting the migrants, because the birds returning from the south were in excellent physical condition. They tasted better in spring than at other times of the year, and their feathers, which were used for winter clothing and bedding, were always in much better condition in spring than in the fall.

Riparian areas along the creek and river systems within the study area, and lakes such as Shipyard Lake, have historically provided staging areas for a variety of waterfowl during spring and fall migrations. Breeding and rearing also occurred in these areas during the summer, and provided eggs and birds in the spring, and to a lesser extent, during the summer.

People in the community hunted a wide variety of birds, including sand hill cranes, swans, herons, and the geese and duck species which passed through in spring and fall. The large owls, including the great horned and great grey owls, were also hunted for food.

6.2.4 Traditional Use of Upland Game Birds

Upland game birds found in the study area include ptarmigan and three species of grouse. These species have a normal population cycle of seven to ten years. Grouse, all of which are colloquially known as "chicken," are traditionally taken on an opportunistic basis. During previous times, when families travelled from summer to winter camps, these birds provided an important and easily accessible source of food, and are taken with little effort. Populations of grouse and ptarmigan appear to be on the rise throughout the whole area, including the Suncor L.S.A.

6.2.5 Traditional Use of Fish Resources

Up until about thirty years ago, the people of Ft. McKay used fish to feed themselves and their dogs for a major portion of the year. The bulk of these fish were caught in the Athabasca River both upstream and downstream from what was then known as Tar Island. It was from this location that Ft. McKay community members caught and processed thousands of fish for their winter food supplies. This activity, which had been carried on for centuries, ended when G.C.O.S. commenced mining and extraction operations.

There are currently no lake fisheries on the Suncor L.S.A. River fisheries for grayling were present in the Steepbank River and in Leggett Creek, on a much smaller scale.

Fish which made up the bulk of the traditional catch from the rivers included whitefish, walleye, northern pike, ling, goldeye, suckers, and grayling. These fish were caught in nets and dried. The process took weeks and while it took place, the people not directly involved in the fishery operations hunted for moose or waterfowl. Moose were dried and smoked. Birds that were taken were generally eaten as camp meat. Other younger members of the families, accompanied by one or more adults, picked herbs or berries. The berries were either eaten at the camp, or were preserved for use as tea or jams later during the winter. Herbs were dried for later use as food or for medicinal purposes. These activities have all but ceased in the Suncor L.S.A., as the Tar Island meeting place no longer exists.

These activities continue to be practised, but on a smaller scale than was previously commonplace. There are many reasons for these changes. Not only does the Tar Island summer meeting place no longer exist, but life styles and economic processes within the community itself are different than were those of thirty or more years ago. People now work at jobs where they are needed during the summer and fall when hunting, fishing and gathering normally occur. This imposed change prevents many of the people from participating in the traditional activities which previously had been the basis of their lifestyle.

6.2.6 Current Use of Wildlife and Fish Resources

6.2.6.1 Big Game. Year-round access to most of the Suncor L.S.A. is difficult because of the muskeg and peat bogs which are interspersed throughout the area. Hunting, therefore, is relatively restricted and game is more secure. As a result, game numbers are higher in this area. There is a winter only access road starting from a point across the Clearwater River from the community of Waterways but access anywhere off this road is limited even during the winter because the muskegs do not always freeze.

The district Fish and Wildlife Officer[14] indicated that "an occasional moose is taken off this road, and off the Athabasca River in the Suncor Inc. Steepbank Mine site", but he feels that these are incidental, and do not constitute a major amount of pressure on local big game populations.

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[14]Schmidt, K. Personal Communication. Alberta Fish and Wildlife Officer, Ft. McKay area. November 1995.

He also feels that once the mining operation begins, this population of game will be displaced.

Access to the east of the proposed new Suncor L.S.A. is, for the present, minimal at best because there has not yet been the influx of exploration activity that follows the incursion of cut lines and roads. In fact, at least one trapper in this area can only get to his trapline by air. At this time and for the foreseeable future, this access situation does not appear to be destined to change.

6.2.6.2 Fur Bearers. Trappers from the community of Ft. McKay are still active on the traplines in the study area. Beaver and occasionally muskrat are taken in the fall just before, and during, freeze-up and in the spring at break-up. Muskrat numbers have dropped dramatically in the last two years. The causes of this drop have not been identified, but in other areas (notably Ruth Lake) during the past winter, many muskrats were found dead in their pushups.

Fisher are numerous throughout the area, along with weasels. Rabbits (snowshoe hares) are spotty in the area, but north of the study area, in the ALSAND lease cleared in the winter of 1981, the numbers of rabbits (hares), fisher, weasel and grouse are significantly higher than are those on this study area. This information was obtained during the survey of aquatic mammals, conducted for Suncor Inc. and Syncrude Canada Ltd. in November 1995.[15]

Wolf numbers appear to be relatively high on the Suncor L.S.A., as well as throughout the general traditional land use area. Foxes and otters are present along the drainages and are trapped by those trappers in the area. To the east, the trappers appear to be able to capitalize on the presence of marten. This species is not evenly distributed throughout the area, being highest on the far eastern edge of the study area, and declining steadily toward the Athabasca River. The reasons for this are obscure, but probably reflect a shortage of prey species such as squirrels, that are dependent on mature coniferous forests, according to the Elders interviewed as part of this study.

6.2.6.3 Fish. Some angling still takes place in both the Steepbank and the Athabasca Rivers. Grayling caught in the Steepbank River are still eaten, despite warnings from Alberta Fish and Wildlife to eat fish from these rivers only sparingly. Most fishing in the rivers is "catch and release." Subsistence fishing activity near the Suncor L.S.A. is now non-existent.

6.2.6.4 Waterfowl. While waterfowl were traditionally hunted on the Athabasca River in the area of the Suncor L.S.A., most of this hunting has now ceased because "the birds in the fall are skinny and taste bad", according to the Elders and community residents. Many ducks and geese still come through this area in the spring, but not as many breed here as was true before the oil sands plants became operational. A lot of water that supported breeding waterfowl during the

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[15]CIRC: Crozier Information Resources Consulting Ltd. "Survey of Wildlife, Including Aquatic Mammals, Associated with Riparian Habitat on the Suncor Steepbank Mine Study Area." Edmonton, Alberta. December 1995.

summer, no longer support ducks, as was identified during the interviews conducted to establish traditional land uses.

6.2.6.5 Upland Game Birds. Upland game birds such as grouse are still taken incidentally by local community members. The number of birds harvested depends on the available populations. At the time of this study, the populations inhabiting the Suncor L.S.A. include large numbers of both ptarmigan and grouse. The district Fish and Wildlife Officer indicated that these birds are heavily harvested both by Ft. McKay community members and others who live outside the extended community area.

6.3 DISCUSSION, REGIONAL LAND USE

The people of the extended community of Ft. McKay use the renewable resources in the region of the proposed Steepbank mine. Traplines are operated for money and, for personal use, furs, large animals and birds are hunted for food. Berries are picked, trees are harvested for firewood and construction, and medicinal herbs are sought and harvested. In addition to these sustenance uses, the area is used for recreational purposes such as snowmobiling. The Elders were hesitant to discuss culturally-sensitive traditional practices that occur and which reflect spiritual connectedness with the land's resources.

Comments provided from the interview process, particularly those with the Elders, indicated that the people are at least as concerned with the rapid removal of the cover from their lands as they are about a new oil sands plant and mine across the river. These concerns are in large part due to the impact of rapid removal of the tree cover, and the subsequent inability of the wildlife (and the trappers and hunters) to immediately adjust to this traumatic change.

Prior to construction of the original G.C.O.S plant, the people of the Ft. McKay community hunted, fished, trapped and gathered food within and adjacent to the Suncor L.S.A. These activities were most commonly carried out close to the Athabasca river and its tributaries, upstream from the proposed new mining site.

Some people from Ft. McKay and others from the general Ft. McMurray area still hunt, trap, and gather from the Suncor L.S.A. It is also clear that, whether or not the area is ultimately mined, changes will continue to occur, because this and other locations within the McMurray oil sands area are the focal points for a variety of resource-exploitation initiatives. As a result of these initiatives, more cutlines will appear, roads (already in the planning stages) will be built, and logging will take place.

The people of Ft. McKay still make use of the area's resources, which are integral components of their daily lives. The people are not adamantly opposed to commercial resource use; rather, they welcome the benefits that those uses can bring to the community. Increased employment will have a positive impact on the community, will enable residents to increase their ability to operate within current economic and educational realities, and will enable the community to undertake longer-term planning and development for the benefit of future generations.

It is essential, however, that the negative impact of development, including the related practices of government and industry, be both mitigated and managed. Community members' lifestyles, needs, and rights must be recognized and appropriately addressed.

For example, every trapper interviewed including those with traplines located on the Suncor L.S.A., are concerned about compensation. Most of them have had cabins broken into and vandalized several times. Some of them will lose parts or all of their traplines due to both logging, mining, increased exploration, or all of these actions within the near future. One trapper's comments on his treatment at the hands of the Trappers Compensation Board, and the amount of his compensation for the vandalism was that even though there was an estimated several thousand dollars worth of damage and theft, the compensation did not cover the cost of even one gun.

Given the past actions of government and industry, it is not surprising that a great number of people in this general area are confused, perplexed and intimidated. The Elders spoke of several authoritarian actions, such as those of the Trappers' Compensation Board identified above, which appear inconsistent with the government's Fish and Wildlife Policy. After several years of consultation, the government of Alberta delivered the new policy, which states that:

> Fisheries is a replenishable Crown resource; it is incumbent upon the government, as the resource steward, to ensure that appropriate use is made of the fisheries resource and that it is passed on to succeeding generations as it was received. (Page 16, item 1).[16]

in contradiction to this policy, the people of Ft. McKay observe that fish, wildlife and water, assets provided to them throughout their history from the Athabasca River, are not being appropriately recognized. The evidence of this disregard is the current state of the river, which is so polluted that its resources can no longer be used.

The Elders believe that the area's valuable renewable natural resources are being wasted, after having provided a traditional livelihood to the people for centuries. The study area is a small part of a large tract of land which is entering a period of rapid and intense transition.

It is clear that times and lifestyles are in the midst of change. It is also clear that this rate of change is rapidly increasing, and that the study area is experiencing a major shift in ecological character. That change must be recognized, quantified, and managed so that all stakeholders may benefit from the new environment, and that future generations will not be deprived of healthy and satisfying lives.

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[16]Alberta Fish and Wildlife. "A Fish and Wildlife Policy for Alberta". Edmonton, Alberta. October 1982.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 LIFESTYLE CONTROL

The people in the smaller communities including the community of Ft. McKay have had to face serious changes in life style within the make-up and operation of their community. They have perhaps been exposed to just a taste of the massive amount of change which is about to impose itself upon them. Many of them have resigned themselves to the coming change. Most of the older people in the community have expressed helplessness when asked if they feel they still have some say in the decisions which influence the resources on their traditional resource use areas. The lack of control felt by the residents of this community, coupled with their growing dependence on commercial development as a replacement for the traditional practices that previously provided sustenance and support, leads to an unsatisfactory and unhealthy situation on all measurable criteria.

> **IT IS RECOMMENDED THAT** all present and future development be planned and implemented using a partnership approach between those who are responsible for resource development, and those who have traditionally used the land and resources in the region.

7.2 EDUCATION

During the Traditional Knowledge Data base interviews, it was revealing to learn that young school children from the community had almost all been trapping, berry picking, fishing (in the lakes), or hunting with their parents or grandparents, and that these activities played a regular and important role in their lives. This process of traditional land use has many benefits:

- family activities develop and build healthy, long-lasting relationships
- children learn survival skills, essential for those who live in non-urban areas
- traditional, healthy values and skills are incorporated into the process of teaching survival and sustenance skills
- spirituality and healing values and methods are a significant component of the traditional lifestyle, and are learned by the children from the Elders during traditional activities
- the values and knowledge gained by the children during these traditional activities is viewed as having at least as much importance in their lives as does the information which is taught in more formal educational environments

To ensure the continuation of traditional education, cooperation within and between communities, government and industry must intensify. Agreement must be reached among these three stakeholder groups regarding the intrinsic and financial value to be gained by supporting traditional values and ecological knowledge.

Inherent in the continuation of traditional knowledge and skills is the continued existence and availability of renewable resources.

> **IT IS RECOMMENDED THAT** a process of liaison and knowledge transfer be established that will ensure the continuation of traditional forms of knowledge. The stakeholders involved in this process include community members, educators, government agencies, and industrial organizations.

7.3 TRADITIONAL KNOWLEDGE RECORDING

The interview process created a strong interest in the community. Participation was very high, as was community enthusiasm. Much of the knowledge that was obtained from this traditional knowledge interview process was recorded for the first time. It is essential that this knowledge be retained for future generations to use. It is also essential that the exceptional knowledge and wisdom of the Elders be recognized and valued today; such knowledge is unique in its depth and practicality. The need to retain this knowledge, to preserve it for present and future use, and to share that knowledge with the young people, is essential. The overall benefit of doing so will be evident in overall life skills, cultural and personal identity, health and social development, and survival in times of crisis.

> **IT IS RECOMMENDED THAT** an in-depth traditional knowledge study be designed, incorporating the information that has already been gathered, and that the project be implemented immediately.
>
> Funding by the industries that have displaced the traditional practices with commercial development, as well as the governments that have encouraged that process, is appropriate.
>
> **IT IS FURTHER RECOMMENDED THAT** the traditional knowledge be recorded both on paper and in audio-visual form.
>
> **IT IS FURTHER RECOMMENDED THAT** traditional knowledge be integrated in the design, implementation and interpretation of future conventional research projects in the region.
>
> Finally, **IT IS RECOMMENDED THAT** the traditional knowledge be used as a sharing and teaching tool for the children, and in adult cross-cultural settings.

7.4 RESOURCE USE

The people of the community value both the environment in which they live and the employment opportunities available to them through resource development.

To encourage and harmonize these diverse and potentially conflicting interests, the following requirements are identified:

IT IS RECOMMENDED THAT the end land use be identified prior to initiation of any resource exploitation, and that the reclamation requirements needed to accomodate that end use, be recognized and implemented.

An end land use plan must be generated for each area when being considered for potential development. The plan must be prepared cooperatively, and mutually approved by, both community members and developers. Furthermore, reclamation activities must incorporate employment opportunities for community residents.

IT IS FURTHER RECOMMENDED THAT the appropriate processes for harmonizing the interests of community residents, industry, and future ecotourism activities be developed and supported by all stakeholders.

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