

A REVIEW OF THE STATUS AND HARVESTS OF FISH STOCKS IN THE NORTH SLAVE AREA, NORTHWEST TERRITORIES

D.B. Stewart

Central and Arctic Region
Department of Fisheries and Oceans
Winnipeg, Manitoba R3T 2N6

1997

**Canadian Manuscript Report of
Fisheries and Aquatic Sciences 2393**

Canadian Manuscript Report of
Fisheries and Aquatic Sciences 2393

1997

**A REVIEW OF THE STATUS AND HARVESTS OF FISH STOCKS
IN THE NORTH SLAVE AREA, NORTHWEST TERRITORIES**

by

D.B. Stewart¹

Central and Arctic Region
Department of Fisheries and Oceans
Winnipeg, Manitoba R3T 2N6

This is the 41st Manuscript Report
from the Central and Arctic Region, Winnipeg

¹ Arctic Biological Consultants, Box 68, St. Norbert Postal Station, 95 Turnbull Drive, Winnipeg, MB, R3V 1L5.

PREFACE

This report was prepared under contract for the Department of Fisheries and Oceans, Central and Arctic Region, 501 University Crescent, Winnipeg, Manitoba, R3T 2N6. The Scientific Authority for this contract was Robert W. Moshenko of the Resource Management Division.

© Minister of Supply and Services Canada 1997

Cat. no. Fs 97-4/2393E ISSN 0706-6473

Correct citation for this report is:

Stewart, D.B. 1997. A review of the status and harvests of fish stocks in the North Slave area, Northwest Territories. Can. Manuscr. Rep. Fish. Aquat. Sci. 2393: iv + 69 p.

TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT/RÉSUMÉ	iv
INTRODUCTION	1
FORMAT	1
Fish harvests	1
Sport fishing lodges	3
Fisheries research licences	4
DISCUSSION	4
ACKNOWLEDGMENTS	5
REFERENCES	5
PERSONAL COMMUNICATIONS	12

LIST OF APPENDICES

<u>Appendix</u>	<u>Page</u>
1 Fish species reported from selected river drainages in the North Slave area of the N.W.T., and from Great Bear and Great Slave lakes	67

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1 Map of the North Slave area of the N.W.T., showing communities and major rivers	14
2 Sport fishing lodges and outposts in the North Slave area of the N.W.T.	15

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1 Harvests of fishes from the North Slave area of the N.W.T., by community and waterbody	16
2 Sport fishing lodges and their outpost camps in the North Slave area of the N.W.T.	59
3 A summary of harvest and creel census data for sport fishing lodges in the North Slave area of the N.W.T.	62
4 Licences to take fish from the North Slave area of the N.W.T. for scientific purposes issued by the Department of Fisheries and Oceans (DFO), Central and Arctic Region, to DFO (1990-95) and non-DFO (1984-95) researchers	63

ABSTRACT

Stewart, D.B. 1997. A review of the status and harvests of fish stocks in the North Slave area, Northwest Territories. Can. Manuscr. Rep. Fish. Aquat. Sci. 2393: iv + 69 p.

This document was prepared to assist the Department of Fisheries and Oceans (DFO) and the Renewable Resources Board, which may be appointed in the future, to co-manage fisheries in the North Slave area. It reviews information on stocks of fishes that are harvested for subsistence, commerce and sport in the area north and west of Great Slave Lake. The information is current to February 1996. It is summarized in tables that are organized hierarchically by community, waterbody, and then species. Recent recommendations by DFO concerning management of the fisheries or stocks are summarized, with a list of pertinent references. Information is also provided on sport fishing lodges operating in the area, and on Scientific Licences issued by DFO since 1984 for research in the area.

Key words: Subarctic zone; fishery management; subsistence fishing; commercial fishing; sport fishing; catch statistics; stocking.

RÉSUMÉ

Stewart, D.B. 1997. A review of the status and harvests of fish stocks in the North Slave area, Northwest Territories. Can. Manuscr. Rep. Fish. Aquat. Sci. 2393: iv + 69 p.

Ce document a pour objet d'aider le ministère des Pêches et des Océans (MPO) et le Conseil des ressources renouvelables, qu'il soit constitué dans l'avenir, à gérer conjointement la pêche dans la région du nord et de l'ouest du Grand lac des Esclaves (region North Slave). Il contient des renseignements sur l'état des stocks de poissons capturés à des fins sportives, commerciales et de subsistance dans cette region. Ces données sont valides jusqu'en février 1996. Au moyen de tableaux, on en fait la synthèse de manière hiérarchique, selon la localité, le cours d'eau ou le lac, puis l'espèce visée. De plus, on présente un résumé des dernières recommandations du MPO concernant la gestion de la pêche et des stocks, accompagné d'une liste de références. Enfin, on donne des renseignements sur les pourvoiries de pêche sportive et sur les permis délivrés depuis 1984 par le MPO à des fins de recherche scientifiques dans la région.

Mots clés: Subarctique; gestion de la pêche; pêche de subsistance; pêche commerciale; pêche sportive; statistiques sur les prise; ensemencement.

INTRODUCTION

Land claims negotiations are ongoing between the Aboriginal peoples who have traditionally lived in the North Slave area, which lies north and west of Great Slave Lake, and the Government of Canada. One of the provisions of each recent Land Claim Agreement in the Northwest Territories has been the establishment of a Renewable Resources Board. A similar body is likely to be established upon settlement of the North Slave negotiations.

These Renewable Resource Boards typically have equal representation of the Aboriginal peoples of the Settlement Area and Government, plus a chairperson. They are charged with making all decisions about wildlife management in the Settlement Area, including those on many matters now controlled by the federal Department of Fisheries and Oceans (DFO), the Canadian Wildlife Service, and the territorial Department of Renewable Resources. Their decisions remain subject to review by the appropriate Minister of the Government of Canada or Minister of the Government of the Northwest Territories.

The purpose of this report is to provide DFO and any future Renewable Resources Board with a summary of the status of fish stocks harvested in the North Slave area (Fig. 1). These stocks are harvested for subsistence, commerce and sport, mostly by aboriginal residents of the area and sport fishermen. As the bounds of the settlement area have yet to be established, this study may include some waterbodies that are outside the eventual land settlement or that straddle settlement boundaries. The study area does not include Great Slave Lake. Similar studies have been prepared for the Nunavut, Sahtu, and Gwich'in settlement areas (Stewart 1994, 1996a,b).

The published and unpublished sources of information in this summary were identified by searches of bibliographic databases and published bibliographies (e.g. Nicholson and Moore 1982a-c), and by discussions with fishery managers and scientists knowledgeable of fisheries resources in the region. The bibliographic databases searched were those of B.W. Fallis (DFO, Winnipeg) and the author. DFO files were also searched for unpublished information.

FORMAT

The summary is presented in tabular form, with the fishery data organized hierarchically first by community and then by waterbody and taxa. The objective of this is to enable fishery managers to quickly review the data on a community or species basis.

FISH HARVESTS (TABLE 1)

Information on the harvests of freshwater fishes from waterbodies in the North Slave area is summarized in Table 1. Waterbodies that could not be assigned to a particular community are discussed first, under the heading "Inland Lakes". The communities are then discussed in alphabetical order, as follows: Rae Lakes (Gameti), Rae-Edzo, Reliance, Snare Lake (Wekweti), Wha Ti (formerly Lac la Martre), and Yellowknife-Detah. Waterbodies fished by their residents, or in the vicinity, are listed alphabetically for each community. There is a great deal of overlap in these fishing areas due to the seasonal travel patterns of hunters and trappers between the communities. Until recently, Snare Lake was an outpost of Rae, so that some of its fisheries may be incorrectly attributed to Rae-Edzo. Where several species are harvested at a waterbody, they are listed alphabetically by common name. The Latin scientific name for each species is given in Appendix 1.

Where a waterbody is fished by more than one community, cross references have been included to avoid repetition. Cross references to waterbodies within the same community section are indicated by "see above" or "see below"; those to waterbodies within another community section are indicated by the community name and waterbody (e.g. see WHA TI--Bartlett Lake).

Included in Table 1 are those waterbodies that have a record of commercial, subsistence or sport harvest, or are listed in Schedule V of the Northwest Territories Fishery Regulations. A number of waterbodies for which no harvest data were found have also been included. They provide critical spawning and nursery habitats for fishes, and support important subsistence and sport harvests. Studies to predict the potential impacts of mining developments or commercial harvesting have documented the biota of a number of these waterbodies. Where such information exists, the waterbody has been included together with a brief summary of the study results.

Each fishing location is identified by its proper geographical name (Canada 1980; NLUIS), and a latitude and longitude. In some cases, a local name or geographical feature is also included in brackets. The map coordinates were taken from Schedule V of the Northwest Territories Fishery Regulations, from the source of the data, or determined from 1:250,000 scale topographical maps.

For each waterbody with harvest data, the table identifies the species harvested and provides the harvest quota(s), the most recent harvest data, a summary of stock status if available, and a list of pertinent references. Species are treated separately if they have separate quotas. For each waterbody without harvest data, the table summarizes and references the results of pertinent fisheries research. The number of species reported by these studies precludes listing them individually for each waterbody. Species reported by the studies examined are listed in Appendix 1 for selected waterbodies. This listing is intended to support the comments in Tables 1. It is not the result of an exhaustive review of the literature on species' occurrences.

All site specific harvest data located during this work for the North Slave area are summarized in Table 1. Non-site specific community harvest data have also been included, where available, for comparison.

The harvest quotas are from various sources, and some more closely reflect the stock status than others. The quotas of active commercial and sport fisheries are reassessed annually by DFO. If information from the harvesters or from sampling suggests that the fishery is not sustainable then the quota is adjusted downward. If that information suggests under-utilization then it may be adjusted upward, in the case of a commercial fishery, or be kept as is to improve the quality of the fishery, in the case of a trophy sport fishery. The experimental quotas, in square brackets, are interim quotas assigned for the purpose of obtaining samples from a fishery. In the past, experimental fisheries were known as exploratory or test fisheries. Abbreviations are used to indicate years when a harvest may have taken place but that no data are available "(NA)", and when a waterbody was opened for fishing by Variation Order but not fished "(NF)". "No quota", or a blank quota cell in the table, indicates that DFO has not assigned a commercial quota to the waterbody, either as a whole or for a particular species. This does not necessarily mean that there

are no commercial fishing opportunities in the waterbody or for the species.

The quota and harvest years are the same as the federal government fiscal year (e.g. the 1996 quota extends from 1 April 1996 to 31 March 1997). They are not the normal calendar years.

Unless otherwise indicated, the harvest statistics are for commercial fisheries and in kilograms round weight. A "round" weight is that of a whole fish, while a "dressed" weight is that of a fish with the viscera and gills removed. It was not always possible to separate the harvests by species for mixed species fisheries, or to determine how the data were collected. The commercial harvest data are from export or local sales records, and tend to be conservative as they do not estimate culls and personal use. Care, then, must be taken when interpreting these data.

The general comments column of the tables provides a brief summary of the information available for each waterbody. It tells whether there is an established or experimental fishery, active or inactive or in conflict with other fisheries; when it was last sampled for, or by, DFO; what is known of the stock status; whether spawning or nursery habitats have been identified in the system; whether the waterbody has been stocked with fish; and recent recommendations by DFO concerning management of the fishery. Comments on habitat use and subsistence harvests are summaries of site-specific aquatic resource assessment research. Reference material pertinent to each fishery is listed in brackets and cited in full in the bibliography.

General information for communities is discussed beside the community headings (e.g. WHA TI), whereas site-specific harvest data are discussed under the appropriate waterbody.

There are few data available on subsistence harvests in the North Slave area. Indeed, most of those described here were documented in the early 1960's, and their present status and extent have not been documented. Descriptions of the The latter are prone to survey biases that can subsistence fisheries can be found in Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; Lutra Associates Ltd. 1989; and Rawson Academy of Aquatic Sciences 1990.

Sport fishing limits are listed in the annual Sport Fishing Guide for the Northwest Territories. Special limitations on sport fishing are in force for

Mosquito Creek walleye, lake trout in the lower 1 km reach of tributary streams of Great Slave Lake, and for the Yellowknife River between Prosperous and Bluefish lakes. These limitations are detailed in Table 1.

Guest-bed capacities, which relate the estimated total yield of fish from a lake to the estimated harvest per sport angler (Roberge 1982), are included in Table 1. Only DFO's most recent guest-bed capacity estimate is included for each lake. This estimate may not correspond to the licensed guest-bed capacity of a lodge, since the Government of the Northwest Territories ultimately assigns the guest-bed capacity and licences the operation. Outfitters are now being assigned "guest-beds" for the lakes they frequent (A.C. Day, pers. comm.).

DFO guest-bed estimates are qualified, based on the rate of angler exploitation (kg per ha) and other factors such as the presence of competing fisheries (Roberge 1982; A.C. Day, pers. comm.). A "high quality" or "trophy" lake trout fishery, for example, has an exploitation rate of 0.05 to 0.10 kg of lake trout per hectare of lake surface area. At this low rate of harvest the lake should sustain a fishery for large lake trout. At a moderate rate of exploitation, 0.11 to 0.15 kg per ha, the lake should sustain a "medium quality" fishery for moderate-sized lake trout; at a high rate, 0.16 to 0.25, it should sustain a "low quality" fishery for small lake trout. Prior to 1982, a fishery now described as a "medium quality" was described as a "high quality", and "low" as "medium". These earlier designations have been standardized to reflect the new, more conservative exploitation rates.

Table 1 summarizes information from studies directed towards the assessment and management of commercial, subsistence, and sport fisheries. It does not summarize other scientific research directed towards a more general understanding of the aquatic environment. Useful in this regard are the:

aquatic resource surveys of: Wong and Whillans 1973; Stewart and MacDonald 1978; Falk 1979a,b; MacDonald and Fudge 1979; Roberge and Gillman 1984, 1986;

species accounts of: McPhail and Lindsey 1970; Johnson 1973, 1976; Healey 1975, 1977, 1978a-c, 1980; Healey and Nichol 1975; and,

limnological studies of: Healey 1973, 1978d;

Healey and Woodall 1973a,b; Healey and Kling 1975; Moore 1978c,d, 1979a,b, 1980; and Fee et al. 1985.

Resource maps in the Northern Land Use Information Series (NLUIS), which were produced between 1975 and 1979 by the Lands Directorate of the Department of Fisheries and Environment, are also useful general references. They are referred to in text by number (e.g. NLUIS 96M) and are available from the Surveys and Mapping Branch of the Department of Energy, Mines, and Resources in Ottawa.

SPORT FISHING LODGES (TABLES 2 and 3)

Table 2 summarizes information on the sport fishing lodges of the North Slave area (Fig. 2). The lodges are listed alphabetically. The latitude and longitude, operating season, guest-bed capacity, and species sought are listed for each lodge. Outpost camp locations, recent operating history, and the most recent DFO creel censuses are listed in the comments section, as are any pertinent references. The main sources of information for this table were the GNWT Economic Development and Tourism (B. Stoneman, pers. comm.), the GNWT Explorers Guides 1988-95, and DFO (C. Craig, pers. comm.). Lodges located in communities or on the shores of Great Slave Lake, and outfitters operating from communities or with moveable camps, are not included in this summary. The outfitting operations are discussed in Table 1, with the other information on the lakes that they frequent.

Harvest and creel census data from sport fishing lodges in the North Slave area are summarized in Table 3. In a general comment for each lodge are listed its latitude and longitude, operating season, guest-bed capacity, targeted fish species, outpost camp locations, recent operating history, participation in fishery management studies, and pertinent references. Beneath this comment the fish species harvested are listed alphabetically. Harvest data for each species are listed by year. They include an estimate of the number of fish killed by the sport fishery, the average number of fish caught per angler hour, and an estimate of the total number of angler days. The sources of these data are described and referenced in a comments section.

FISHERIES RESEARCH LICENCES (TABLE 4)

Table 4 summarizes information on the Scientific Licences that DFO has issued to its personnel or to non-DFO personnel since 1984, for work in the North Slave area (J.T. Strong and D.Wright, pers. comm.). These licences permit them to take fish for scientific purposes. This information is organized alphabetically by licence holder. The area where the research was to take place, its purpose, and the year for which the licence was issued are shown for each licence holder. The years refer to the federal government fiscal year (see above). The outcome of the research is not discussed, but documents located are referenced.

In 1994, DFO began to distinguish between studies that take fish for scientific, educational, and public display purposes (J.T. Strong, pers. comm.) Since then, separate licences have been issued for each type of study, and studies that do not take fish (e.g. behavioural observations) no longer require a Scientific Licence. These licences are now issued under Section 52 of the Fishery (General) Regulations.

DISCUSSION

Three main fishery management issues stand out in the North Slave area: 1) the potential for overharvesting by sport fisheries, 2) the potential for adverse impacts from resource developments, and 3) the quality of fishery information on which to base resource management decisions.

Major commercial export fisheries have not developed in the North Slave area due to the poor economics of remote fisheries for whitefish and lake trout, and to the better economics of tourist sport fisheries. In many of the larger lakes, the whitefish also have high parasite cyst counts (Trienophorus crassus) in their flesh (G. Low and D. Moshenko, pers. comm.). These cysts reduce the market value of the whitefish and make them unacceptable for commercial export. In consequence, only a few of the many large inland lakes (e.g. Hottah and Lac la Martre) have been studied in detail for the purpose of fishery management. Indeed, the aquatic resources of such large lakes as Aylmer, Faber, McKay, and Point remain virtually unknown.

The issue of overharvesting by sport fishermen is most important in the vicinities of Yellowknife and Rae-Edzo. These communities are

relatively large centres of population by northern standards. They are accessible by road from the south, and their local road networks offer easy access to many small lakes and rivers. Winter roads built to support non-renewable resource developments are also opening winter access to many poorly known and previously inaccessible lakes (S. Harbicht, pers. comm.). The walleye populations of Mosquito Creek and other streams draining into Marion Lake and Great Slave Lake, and fish populations in lakes along the Ingraham Trail Highway are particularly vulnerable to overharvesting by anglers.

Walleye spawn in Mosquito Creek in the spring. At that time they are readily accessible from the Mackenzie Highway, which crosses the stream. The spawning run has been a major attraction for area anglers. Since they began collecting data on the walleye population and angler harvests at Mosquito Creek in the early 1970's, DFO researchers have observed a marked decline in the spawning population (Falk et al. 1980a,b; Clarke et al. 1989; A.C. Day, pers. comm.). Since 1988, the creek has been closed to sport fishing (P.C. 1988-775), between 1 May and 30 June, to enable the population to recover. In 1991, the daily catch and possession limits were reduced from 5 and 10, respectively, to 3 and 5 (P.C. 1991-1147). In 1995, at DFO's recommendation, culverts at the highway crossing were replaced by a bridge designed to permit fish access upstream and thereby increase potential spawning habitat. Continued monitoring of the walleye population and fishery has also been recommended.

To prevent similar overharvesting of other walleye spawning stocks, DFO reduced the catch and possession limits for walleye elsewhere in the Northwest Territories starting in the 1993 season (G. Low, pers. comm.). These limits were reduced by Variation Order to 1 and 1 between 1 May and 6 June, and to 4 and 7 for the rest of the year.

Lakes on the Ingraham Trail Highway are accessible year-round. They are an important recreational area for residents of Yellowknife, and for tourists. A number of the lakes have cottage developments; one supports a sport fishing lodge; and others are used by outfitters. DFO has monitored the water quality, fish populations, and exploitation of these lakes periodically since the 1960's, and has implemented a number of measures to foster the area's game fish populations. Periodic monitoring will be essential if the quality of these

recreational fisheries is to be maintained or improved.

With the notable exception of Blachford Lake Lodge, the harvests by tourist sport lodge operations are poorly known to DFO. In the absence of data on both the exploited stocks and harvests, fishery managers must rely on guest-bed capacities to regulate these fisheries.

Where detailed information does exist on a particular waterbody, it has generally been gathered to assess the impacts of a resource development. These initiatives include studies of existing or proposed hydroelectric developments, on the Snare and la Martre rivers, and studies of the gold or diamond mining properties that are scattered across the North Slave area. Because many of the early gold mining operations were essentially unregulated, the area also has a legacy of arsenic and mercury pollution to be cleaned-up or monitored.

The existing knowledge of fisheries resources in the North Slave area is not sufficient to ensure effective longterm fishery management. Faced with increasing pressure from anglers and developers, it will be important to improve knowledge of the area's aquatic resources, especially those of the most frequented inland lakes.

The magnitude of subsistence harvests in the North Slave area has also not been documented in recent years. This information gap is perhaps the greatest unknown to fishery managers in the area. The documentation of these fisheries and their harvests offers managers perhaps their greatest challenge.

ACKNOWLEDGMENTS

Laura Anderson, Colette Craig, Chris Day, Earl Jessop, Mary Layton, Dave Moshenko, and Robert Moshenko, of DFO, Winnipeg; George Low and Fred Taptuna of DFO, Hay River; Grant Pryzyk of DFO, Yellowknife; Margaret Treble of the University of Manitoba; Steve Harbicht of Environment Canada in Yellowknife; and Cécile Stewart of Arctic Biological Consultants gave freely of their time and expertise. They provided much of the information in this report and undertook careful reviews of the manuscript at various stages. Bruce Fallis, Fred Hnytka, and Dennis Wright, of DFO, Winnipeg; Barry Stoneman of GNWT Economic Development, Yellowknife; and many others also

provided welcome information and advice. Your participation has greatly strengthened this project and I thank you.

REFERENCES

- ANDERS, G. 1969. Rae-Lac la Martre: an area economic survey. Canada Department of Indian Affairs and Northern Development, Area Economic Survey Report 66-2: vii + 113 p.
- ASH, G. R. 1989. Fish tissue metal analyses, Echo Bay Mines Ltd., Lupin Gold Mine, Contwoyto lake, N.W.T.--1988 studies. Unpublished report prepared for Echo Bay Mines Ltd., Edmonton, AB. 13 p. + Appendices.
- ASH, G. R., S. HARBICHT, and F. HNYTKA. 1991. Fisheries investigations at the Lupin Gold Mine, Contwoyto Lake, N.W.T. 1990. Unpublished report prepared by R.L. & L. Environmental Services Ltd. and Department of Fisheries and Oceans for Echo Bay Mines Ltd., Edmonton, AB. iv + 59 p.
- BAKER, R. F. 1987. Feasibility of the intensive culture of Arctic char (*Salvelinus alpinus*) at Jackfish Lake, N.W.T. Unpublished report prepared by North/South Consultants Inc., Winnipeg, MB. 99 p.
- BAWEJA, A. S., S. R. JOSHI, D. J. SUTHERLAND, and B. OLDING. 1987. Radiological monitoring activities in the Northwest Territories, Canada. Water Pollut. Res. J. Can. 22(4): 596-603.
- BEAK CONSULTANTS LTD. 1987. Baseline environmental monitoring at the Colomac Project site, 1987. Unpublished report prepared by Beak Consultants Limited, Mississauga, ON, for Neptune Resources Corporation, Mississauga, ON. variously paginated.
- BODALY, R. A., S. E. COSENS, T. A. SHORTT, and R. E. A. STEWART. 1992. Report of the Arctic Fisheries Science Advisory Committee for 1989/90 and 1990/91. Can. Manuscr. Rep. Fish. Aquat. Sci. 2139: iv + 91 p.

- BOND, W. A. 1973. An investigation of the commercial fishery at Lac la Martre, N.W.T., 1972. Can. Fish. Mar. Serv. Tech. Rep. Ser. CEN/T-73-5: vi + 50 p.
- CANADA. 1980. Gazetteer of Canada. Northwest Territories. Department of Energy, Mines, and Resources, Ottawa, ON. xiv + 184 p. + map.
- CANADA DEPARTMENT OF INDIAN AND NORTHERN AFFAIRS. 1992. Kam Lake water quality study: report on the 1989 pilot project. Unpublished report prepared by the Water Management and Planning Section, Water Resources Division, Indian and Northern Affairs Canada, Yellowknife, NT. 67 p.
- CANADA DEPARTMENT OF INDIAN AND NORTHERN AFFAIRS. 1993. Kam Lake study - year 1: 1990/91 Unpublished report prepared by the Water Management and Planning Section, Water Resources Division, Indian and Northern Affairs Canada, Yellowknife, NT. variously paginated.
- CHANG-KUE, K. T. J., G. MacDONALD, and E. F. JESSOP. 1987. Biological data on fish in the upper and lower Rivière la Martre, Northwest Territories. Can. Data Rep. Fish. Aquat. Sci. 660: iv + 58 p.
- CLARKE, C. H. D. 1940. A biological investigation of the Thelon Game Sanctuary. Natl Mus. Can. Bull. 96: iv + 135 p.
- CLARKE, R. M., L. JOHNSON, G. D. KOSHINSKY, A. W. MANSFIELD, R. W. MOSHENKO, and T. A. SHORTT. 1989. Report of the Arctic Fisheries Science Advisory Committee for 1986/87 and 1987/88. Can. Manuscr. Rep. Fish. Aquat. Sci. 2015: iv + 68 p.
- CRITCHELL-BULLOCK, J. C. 1931. Fish, p. 33-34. In An expedition to sub-arctic Canada. Can. Field-Nat. 45.
- DAVIES, S., K. KROEKER, and D. MacDONELL. 1987. Commercial fisheries of the Northwest Territories: an historical perspective. Unpublished report prepared by North/South Consultants Inc. for Department of Economic Development and Tourism, Government of the Northwest Territories, Yellowknife, N.W.T. vi + 139 p.
- DEPARTMENT OF FISHERIES AND OCEANS. 1991. Annual summary of fish and marine mammal harvest data for the Northwest Territories, Volume 1, 1988-1989: v + 59 p.
- DEPARTMENT OF FISHERIES AND OCEANS. 1992a. Annual summary of fish and marine mammal harvest data for the Northwest Territories, Volume 2, 1989-1990: xiv + 61 p.
- DEPARTMENT OF FISHERIES AND OCEANS. 1992b. Annual summary of fish and marine mammal harvest data for the Northwest Territories, Volume 3, 1990-1991: xiv + 67 p.
- DEPARTMENT OF FISHERIES AND OCEANS. 1993. Annual summary of fish and marine mammal harvest data for the Northwest Territories, Volume 4, 1991-1992: xiv + 69 p.
- DEPARTMENT OF FISHERIES AND OCEANS. 1994. Annual summary of fish and marine mammal harvest data for the Northwest Territories, Volume 5, 1992-1993: xvii + 104 p.
- DEPARTMENT OF FISHERIES AND OCEANS. 1995. Annual summary of fish and marine mammal harvest data for the Northwest Territories, Volume 6, 1993-1994: xv + 80 p.
- DEPARTMENT OF FISHERIES AND OCEANS. 1996. Annual summary of fish and marine mammal harvest data for the Northwest Territories, Volume 7, 1994-1995: xiii + 85 p.
- DESAI-GREENWAY, P., and I. M. PRICE. 1976. Mercury in Canadian fish and wildlife used in the diets of native peoples. Can. Wildl. Serv. Toxic Chem. Div. Manuscr. Rep. 35: 61 p.
- DUNCAN, W. F. A., M. J. S. TEVESZ, and R. L. R. TOWNS. 1987. Use of fingernail clams (Pisidiidae) and x-ray fluorescence spectrometry for monitoring metal pollution in Contwoyto Lake, N.W.T. Water Pollut. Res. J. Can. 22(2): 270-279.

- FALK, M. R. 1979a. Biological and limnological data on lakes along the Ingraham Trail, Northwest Territories, 1973-74. Can. Fish. Mar. Serv. Data Rep. 125(2): iv + 36 p.
- FALK, M. R. 1979b. Biological and limnological data on ten lakes surveyed in the Northwest Territories, 1971-72. Can. Fish. Mar. Serv. Data. Rep. 129: v + 41 p.
- FALK, M. R. 1981. A questionnaire survey of sport fishing in the Yellowknife and Hay River areas, Northwest Territories. Can. Manuscr. Rep. Fish. Aquat. Sci. 1584: iv + 19 p.
- FALK, M. R., D. V. GILLMAN, and L. W. DAHLKE. 1974. Comparison of mortality between barbed and barbless hooked lake trout. Can. Fish. Mar. Serv. Tech. Rep. Ser. CEN/T-74-1: 28 p.
- FALK, M. R., D. V. GILLMAN, and C. J. READ. 1980a. The walleye, Stizostedion vitreum (Mitchill), sport fishery on Mosquito Creek, Northwest Territories, 1973-78. Can. Manuscr. Rep. Fish. Aquat. Sci. 1559: v + 29 p.
- FALK, M. R., D. V. GILLMAN, and C. J. READ. 1980b. Data on the walleye and other fish species from Mosquito Creek, Northwest Territories, 1973-78. Can. Data Rep. Fish. Aquat. Sci. 186: v + 44 p.
- FALK, M. R., M. D. MILLER, and S. J. M. KOSTIUK. 1973a. Biological effects of mining wastes in the Northwest Territories. Can. Fish. Mar. Serv. Tech. Rep. Ser. CEN/T-73-10: vii + 89 p.
- FALK, M. R., M. D. MILLER, and S. J. M. KOSTIUK. 1973b. Data Supplement to: biological effects of mining wastes in the Northwest Territories. Can. Fish. Mar. Serv. Tech. Rep. Ser. CEND/D-73-1: iii + 54 p.
- FEE, E. J., M. P. STANTON, and H. J. KLING. 1985. Primary production and related limnological data for some lakes of the Yellowknife, NWT area. Can. Tech. Rep. Fish. Aquat. Sci. 1409: v + 55 p.
- FRANZIN, W. G., and J. W. CLAYTON. 1977. A biochemical genetic study of zoogeography of lake whitefish (Coregonus clupeaformis) in western Canada. J. Fish. Res. Board Can. 34: 617-625.
- HATFIELD CONSULTANTS LTD. 1982. Initial environmental evaluation for Giant Yellowknife Mines Ltd. Salmita Project. Unpublished report prepared for Giant Yellowknife Mines Ltd., Yellowknife, NT. variously paginated [Copy in DFO Library, Yellowknife, NT. #R0927].
- HATFIELD CONSULTANTS LTD. 1985. An evaluation of environmental conditions associated with the abandoned uranium mines at Rayrock and Echo Bay. Unpublished report prepared for Science Institute of the Northwest Territories, Yellowknife, NT. variously paginated.
- HATFIELD CONSULTANTS LTD. 1988. An aquatic environmental assessment of the Sandy Lake system following closure of the Salmita Mine. Unpublished report prepared for Giant Yellowknife Mines Ltd., Yellowknife, NT. 24 p.
- HEALEY, M. C. 1973. Experimental cropping of lakes: 1. outline of the experiment and simulation results. Fish. Res. Board Can. Tech. Rep. 383: 25 p.
- HEALEY, M. C. 1975. Dynamics of exploited whitefish populations and their management with special reference to the Northwest Territories. J. Fish. Res. Board Can. 32(3): 427-448.
- HEALEY, M. C. 1977. Characteristics of northern trout and lake whitefish populations, p. III-91 to III-100. In, Proceedings of the Circumpolar Conference on Northern Ecology, September 15-18, 1975. National Research Council, Ottawa.
- HEALEY, M. C. 1978. The dynamics of exploited lake trout populations and implications for management. J. Wildl. Manage. 42(2): 307-328.

- HEALEY, M. C. 1978b. Fecundity changes in exploited populations of lake whitefish (Coregonus clupeaformis) and lake trout (Salvelinus namaycush). J. Fish. Res. Board Can. 35: 945-950.
- HEALEY, M. C. 1978c. Response of a lake whitefish (Coregonus clupeaformis) population to exploitation. Verh. Internat. Verein. Limnol. 20: 2019-2024.
- HEALEY, M. C. 1978d. Sphaeriid mollusc populations of eight lakes near Yellowknife, Northwest Territories. Can. Field-Nat. 92(3): 242-251.
- HEALEY, M. C. 1980. Growth and recruitment in experimentally exploited lake whitefish (Coregonus clupeaformis) populations. Can. J. Fish. Aquat. Sci. 37: 255-267.
- HEALEY, M. C., and H. J. KLING. 1975. Experimental cropping of lakes: 3. Phytoplankton and zooplankton. Fish. Res. Board Can. Tech. Rep. 533: 27 p.
- HEALEY, M. C., and C. W. NICHOL. 1975. Fecundity comparisons for various stocks of lake whitefish, Coregonus clupeaformis. J. Fish. Res. Board Can. 32(3): 2404-407.
- HEALEY, M. C., and W. L. WOODALL. 1973a. Experimental cropping of lakes: II. physical and chemical features of the lakes. Fish. Res. Board Can. Tech. Rep. 384: 19 p.
- HEALEY, M. C., and W. L. WOODALL. 1973b. Limnological surveys of seven lakes near Yellowknife, Northwest Territories. Fish. Res. Board Can. Tech. Rep. 407: 34 p.
- HORNBY, J. 1934. Wildlife in the Thelon River area, Northwest Territories, Canada. Can. Field-Nat. 48(7): 105-111.
- JACKSON, F. J., C. N. LAFONTAINE, and J. KLAVERKAMP. 1995. Yellowknife-Back Bay study on metal and trace element contamination of water, sediment and fish. Unpublished report prepared for Canada Department of Indian and Northern Affairs, Water Resource Division, Yellowknife, NT. 97 p.
- JESSOP, E. F., K. T. J. CHANG-KUE, and G. MacDONALD. 1993. Fish resource data from Indin Lake, Northwest Territories. Can. Data Rep. Fish. Aquat. Sci. 907: v + 52 p.
- JESSOP, E. F., K. T. J. CHANG-KUE, and G. MacDONALD. 1994. Fish resource data from the Snare River, Northwest Territories. Can. Data Rep. Fish. Aquat. Sci. 930: v + 48 p.
- JOHNSON, L. 1973. Stock and recruitment in some unexploited Canadian Arctic lakes. Rapp. P. V. Reun. Cons. Int. Explor. Mer 164: 219-227.
- JOHNSON, L. 1975c. Distribution of fish species in Great Bear Lake, Northwest Territories, with reference to zooplankton, benthic invertebrates, and environmental conditions. J. Fish. Res. Board Can. 32(11): 1989-2004.
- JOHNSON, L. 1976. Ecology of Arctic populations of lake trout, Salvelinus namaycush, lake whitefish Coregonus clupeaformis, Arctic char, S. alpinus, and associated species in unexploited lakes of the Canadian Northwest Territories. J. Fish. Res. Board Can. 33(11): 2459-2488.
- KALIN, M. 1984. Rayrock, Northwest Territories, uranium tailings and environment. Unpublished report prepared by University of Toronto, Institute for Environmental Studies for Environment Canada, Environmental Protection Service and Indian and Northern Affairs Canada, Northern Affairs Program, NT Region. 32 p. + Appendices.
- KANIK, B., and J. VILLAMERE. 1984. Giant Yellowknife Mines Ltd. Salmita Mine Project environmental baseline data report. Unpublished report by Hatfield Consultants Ltd. for Giant Yellowknife Mines Ltd., Yellowknife, NT. 40 p. + Appendix.
- KELEHER, J. J., and C. G. HAIGHT. 1964. Durvey of Great Slave Lake domestic fishery in 1959 and 1962, 1. 1962 census and fish supply in North Arm. Fish. Res. Board Can. Manuscr. Rep. 800: 71 p.

- LAIRD, M. 1961. Parasites from northern Canada, II. Hematazoa of fishes. *Can. J. Zool.* 39: 541-548.
- LEE, D. S., C. R. GILBERT, C. H. HOCUTT, R. E. JENKINS, D. E. McALLISTER, and J. R. STAUFFER. 1980-et seq. Atlas of North American freshwater fishes. North Carolina State Museum of Natural History, Raleigh.
- LIBOSVARSKY, J. 1970. Survey carried out at Lac La Martre, Northwest Territories, in summer 1969, and the entangling capacity of gill nets of different twine, color, and age when fishing for whitefish and lake trout. *Fish. Res. Board Can. Tech. Rep.* 180: 35 p.
- LOCKHART, W. L., R. WAGEMANN, B. TRACEY, D. SUTHERLAND, and D. J. THOMAS. 1992. Presence and implications of chemical contaminants in the freshwaters of the Canadian Arctic. *Sci. Total Environ.* 122: 165-243.
- LOW, G. 1992. NWT sports fishery joint management projects. *Outdoor Life* 1(6): 44-45.
- LUTRA ASSOCIATES LTD. 1989. Survey of fish users in Dene and Metis communities in and near the Mackenzie River watershed. Unpublished report prepared By Lutra Associates Ltd., Yellowknife, for the Department of Indian Affairs and Northern Development. 2 Vols. [Copy in DFO Library, Winnipeg],
- MacDONALD, G., and R. FUDGE. 1979. Arctic Land Use Research Program 1978: a survey of the fisheries resources of the Kazan Upland (southeastern District of Mackenzie, southern District of Keewatin, NWT). Canada Department of Indian and Northern Affairs, Environmental Studies No. 11: iii + 161 p.
- McGOWAN, D. K. 1989. Data from test fisheries conducted in the Northwest Territories, 1985-88. *Can. Data Rep. Fish. Aquat. Sci.* 756: vi + 121 p.
- McKEE, P. M. 1989. Baseline aquatic environmental studies, 1987-88, Colomac Project, N.W.T. Unpublished report prepared by Beak Consultants Limited, Brampton, ON, for Neptune Resources Corporation, Mississauga, ON. variously paginated.
- McPHAIL, J. D., and C. C. LINDSEY. 1970. Freshwater fishes of northwestern Canada and Alaska. *Fish. Res. Board Can. Bull.* 173: 381 p.
- MELVILLE, G., B. GODWIN, D. RUSSELL, and J. POLSON. 1989. Thor Lake area (NWT) environmental baseline survey. Unpublished report prepared by Saskatchewan Research Council, Saskatoon, SK. ix + 109 p. + appendices.
- MILLER, R. B. 1947. Great Bear Lake. *Fish. Res. Board Can. Bull.* 72: 31-44.
- MOORE, J. W. 1978a. Biological and water quality surveys at potential mines in the Northwest Territories. II. Inco Gold Property, Contwoyto Lake. Environment Canada, Environmental Protection Service, Manuscr. Rep. NW-78-6: 36 p. + Appendices.
- MOORE, J. W. 1978b. Biological and water quality surveys at potential mines in the Northwest Territories. IV. the Texasgulf copper-zinc property, Itchen Lake. Environment Canada, Environmental Protection Service, Manuscr. Rep. NW-78-8
- MOORE, J. W. 1978c. Composition and structure of zooplankton communities in eighteen Arctic and Subarctic lakes. *Int. Rev. gesamten Hydrobiol.* 63(4): 545-565.
- MOORE, J. W. 1978d. Some factors influencing the diversity and species composition of benthic invertebrate communities in twenty Arctic and subarctic lakes. *Int. Rev. gesamten Hydrobiol.* 63(6): 757-771.
- MOORE, J. W. 1978e. Biological and water quality surveys at potential mines in the Northwest Territories. III. Salmita Gold Property, Mathews Lake. Environment Canada, Environmental Protection Service, Manuscr. Rep. NW-78-7: 24 p. + Appendices. [copy in DFO Library, Yellowknife, NT. #MR06]
- MOORE, J. W. 1979a. Seasonal succession of phytoplankton in a large subarctic river. *Hydrobiologia* 67(2): 107-112.

- MOORE, J. W. 1979b. Distribution and abundance of attached, littoral algae in 21 lakes and streams in the Northwest Territories. *Can. J. Bot.* 57: 568-577.
- MOORE, J. W. 1980. Composition of benthic invertebrate communities in relation to phytoplankton populations in five Subarctic lakes. *Int. Rev. gesamten Hydrobiol.* 65(5): 657-674.
- MOORE, J. W. 1981. Epipelagic algal communities in a eutrophic northern lake contaminated with mine wastes. *Water Res.* 15: 97-105.
- MOORE, J. W., M. J. HARDIN, and J. E. MCCOMISKEY. 1978c. Biological and water quality surveys at potential mines in the Northwest Territories. I. Camlaren Gold Property, Gordon Lake. Environment Canada, Environmental Protection Service, Manuscr. Rep. NW-78-5: 85 p. [copy in DFO Library, Yellowknife, NT. #MR04]
- MOORE, J. W., D. J. SUTHERLAND, S. J. WHEELER, and V. A. BEAUBIEN. 1978a. The effects of abandoned metal mines on aquatic ecosystems in the Northwest Territories. I. Discovery Mine. Fisheries and Environment Canada, Environmental Protection Service, Report EPS 5-NW-78-7: vi + 78 p.
- MOORE, J. W., D. J. SUTHERLAND, and V. A. BEAUBIEN. 1979b. Algal and invertebrate communities in three subarctic lakes receiving mine wastes. *Water Res.* 13: 1193-1202.
- MOORE, J. W., and D. J. SUTHERLAND. 1980a. Mercury concentrations in fish inhabiting two polluted lakes in northern Canada. *Water Res.* 14: 903-907.
- MOORE, J. W., S. J. WHEELER, and D. J. SUTHERLAND. 1978b. The effects of abandoned metal mines on aquatic ecosystems in the Northwest Territories. II. Giant Yellowknife Mines Limited. Fisheries and Environment Canada, Environmental Protection Service, Report EPS 5-NW-78-9: viii + 58 p.
- MOSHENKO, R. W. 1980. Biological data on the major fish species from fifty-nine inland lakes in the Northwest Territories, 1959-68. *Can. Data Rep. Fish. Aquat. Sci.* 175: viii + 81 p.
- MUIR, D., B. GRIFT, D. METNER, B. BILLECK, L. LOCKHART, B. ROSENBERG, S. MOHAMMED, and R. HUNT. 1994. Contaminants trends in freshwater and marine fish, p. 264-271. In J.L. Murray and R.G. Shearer (ed.) *Synopsis of research conducted under the 1993/94 Northern Contaminants Program.* Canada Department of Indian and Northern Affairs, Environmental Studies No. 72.
- NICHOLSON, H. F., and J. E. MOORE. 1988a. Bibliography on the limnology and fisheries of Canadian freshwaters. No. 10 (Final cumulative edition), Volume 1 (of 3). Author index. *Can. Tech. Rep. Fish. Aquat. Sci.* 1600(Vol. 1): v + 315 p.
- NICHOLSON, H. F., and J. E. MOORE. 1988b. Bibliography on the limnology and fisheries of Canadian freshwaters. No. 10 (Final cumulative edition), Volume 2 (of 3). Numerical index. *Can. Tech. Rep. Fish. Aquat. Sci.* 1600(Vol. 2): v + 260 p.
- NICHOLSON, H. F., and J. E. MOORE. 1988c. Bibliography on the limnology and fisheries of Canadian freshwaters. No. 10 (Final cumulative edition), Volume 3 (of 3). Canadian freshwater features. *Can. Tech. Rep. Fish. Aquat. Sci.* 1600(Vol. 3): vi + 301 p.
- NORECOL ENVIRONMENTAL CONSULTANTS LTD. 1987. Tundra Gold Project environmental studies. Unpublished report prepared for Noranda Exploration Company Ltd., Winnipeg, MB. 24 p. + Appendices [Copy in DFO Library, Yellowknife, NT. #R0943].
- PROSPEROUS-WALSH LAKES WORKING GROUP. 1979. A report on the input of recreational developments on the water quality of Walsh and Prosperous lakes. Unpublished report, Yellowknife, NT. 47 p. [copy on file in Resource Management Section "Lakes Files", DFO, Winnipeg].

- RAWSON ACADEMY OF AQUATIC SCIENCES. 1990. Patterns and trends in the domestic fishery in and near the Mackenzie River watershed: a synthesis of a survey of fish users in Dene and Métis communities. Canada Department of Indian and Northern Affairs, Environmental Studies No. 66: xiii + 81 p.
- REID CROWTHER AND PARTNERS LIMITED, and R.L. & L. ENVIRONMENTAL SERVICES LTD. 1985. Aquatic studies program, Lupin Gold Mine, Contwoyto Lake, N.W.T. Unpublished report prepared for Echo Bay Mines Ltd., Edmonton, AB. variously paginated.
- REINKE, J., J. F. UTHE, and D. JAMIESON. 1972. Organochlorine pesticide residues in commercially caught fish in Canada--1970. *Pestic. Monit. J.* 6(1): 43-49.
- REIST, J. D., J. D. JOHNSON, and T. J. CARMICHEAL. 1996. Variation and specific identity of char from northwestern arctic Canada and Alaska. *Am. Fish. Soc. Spec. Vol.* 19 (in press.)
- ROBERGE, M. M. 1982. Draft guidelines for the calculation of guest-bed capacities for sport fishing lodges on inland lakes in the Northwest Territories (excluding Great Bear and Great Slave lakes). Presentation to the Aquatic Resources Utilization Review Committee, Department of Fisheries and Oceans, Winnipeg, MB. 3 p.
- ROBERGE, M. M., L. DAHLKE, and J. B. DUNN. 1986. Biological investigation of Contwoyto Lake, Northwest Territories, 1981-82. *Can. Data Rep. Fish. Aquat. Sci.* 605: iv + 29 p.
- ROBERGE, M. M., J. B. DUNN, and M. R. FALK. 1990. Catch, effort and biological data of fish, in particular lake trout (Salvelinus namaycush), from Prelude and Prosperous lakes, Northwest Territories, 1973 and 1979. *Can. Data Rep. Fish. Aquat. Sci.* 817: v + 52 p.
- ROBERGE, M. M., and D. V. GILLMAN. 1984. Limnological and biological data from 41 lakes along the Ingraham Trail, Northwest Territories, 1979-80. *Can. Data Rep. Fish. Aquat. Sci.* 473: iv + 56 p.
- ROBERGE, M. M., and D. V. GILLMAN. 1986. A catalogue of selected waterbodies adjacent to the Northwest Territories highway systems, 1979-80. *Can. Data Rep. Fish. Aquat. Sci.* 613: v + 40 p.
- ROBERGE, M. M., and C. J. READ. 1986. Creel census and biological investigation of Gordon Lake, Northwest Territories, 1981. *Can. Data Rep. Fish. Aquat. Sci.* 569: v + 43 p.
- SCOTT, W. B., and E. J. CROSSMAN. 1973. Freshwater fishes of Canada. *Fish. Res. Board Can. Bull.* 184: xi + 966 p.
- SINCLAIR, S., S. TRACHTENBERG, and M. L. BECKFORD. 1967. Appendix A. Commercial fishing in the District of Keewatin, p. 65-67. In *Physical and economic organization of the fisheries of the District of Mackenzie, Northwest Territories.* *Fish. Res. Board Can. Bull.* 158.
- SPENCER ENVIRONMENTAL MANAGEMENT SERVICES LTD. 1987. Fisheries investigations, Bullmoose Lake gold project, 1986. Unpublished report prepared for Terra Mines Ltd., Edmonton, AB.
- STEPHENS, G. R., and W. S. PUZNICKI. 1994. Kam Lake water quality study: report on the 1991-92 field work. Unpublished report prepared by the Water Resources Division, Indian and Northern Affairs Canada, Yellowknife, NT. variously paginated.
- STEWART, D. B. 1994. A review of the status and harvests of fish, invertebrate, and marine mammal stocks in the Nunavut Settlement Area. *Can. Manuscr. Rep. Fish. Aquat. Sci.* 2262: iv + 98 p.
- STEWART, D. B. 1996a. A review of the status and harvests of fish stocks in the Gwich'in Settlement Area. *Can. Manuscr. Rep. Fish. Aquat. Sci.* 2336: iv + 41 p.
- STEWART, D. B. 1996b. A review of the status and harvests of fish stocks in the Sahtu Dene and Metis Settlement Area, including Great Bear Lake. *Can. Manuscr. Rep. Fish. Aquat. Sci.* 2337: iv + 64 p.

- STEWART, D. B., and G. MacDONALD. 1978. Arctic Land Use Research Program 1977: a survey of the fisheries resources of the central Northwest Territories. Canada Department of Indian and Northern Affairs, Environmental Studies No. 8: ii + 123 p.
- TAM, K. C., and F. A. J. ARMSTRONG. 1972. Mercury contamination in fish from Canadian waters, p. 4-21. In J.F. Uthe [ed.] Mercury in the aquatic environment: a summary of research carried out by the Freshwater Institute 1970-1971. Fish. Res. Board Can. Manuscr. Rep. 1167.
- TYRELL, J. W. 1902. Exploratory survey between Great Slave Lake and Hudson Bay, Districts of Mackenzie and Keewatin. Annu. Rep. Dept. Interior, Ottawa, 1-2 Edward VII, Sessional Pap. 25(Appendix 26 to the report of the Surveyor General): 98-155, 207-329.
- VESKA, E., and R. S. EATON. 1991. Abandoned Rayrock uranium mill tailings in the Northwest Territories: environmental conditions and radiological impact. Health Physics 60(3): 399-409.
- WAGEMANN, R., N. B. SNOW, D. M. ROSENBERG, and A. LUTZ. 1978. Arsenic in sediments, water and aquatic biota from lakes in the vicinity of Yellowknife, Northwest Territories, Canada. Arch. Environ. Contam. Toxicol. 7: 169-191.
- WALLACE, R. R., and M. J. HARDIN. 1975. Chemical and biological characteristics of seepages from tailings areas at Cominco Con Mine into Kam Lake, Northwest Territories, in 1974. Environment Canada, Environmental Protection Service, Surveillance Rep. EPS 5-NW-75-3: vii + 23 p.
- WALLACE, R. R., M. J. HARDIN, and R. H. WEIR. 1975. Toxic properties and chemical characteristics of mining effluents in the Northwest Territories. Environment Canada, Environmental Protection Service, Surveillance Rep. EPS 5-NW-75-4: viii + 37 p.
- WEAGLE, K. V., and R. A. CAMERON. 1974. The impact of the Strutt Lake Hydro Project on the Snare River, N.W.T. Can. Fish. Mar. Serv. Tech. Rep. Ser. CEN T-74-6: vi + 32 p.
- WONG, B., and T. WHILLANS. 1973. Limnological and biological survey of Hottah Lake, Northwest Territories. Can. Fish. Mar. Serv. Tech. Rep. Ser. CEN T-73-6: iv + 69 p.
- YAREMCHUK, G. C. B., M. M. ROBERGE, D. K. MCGOWAN, G. W. CARDER, B. WONG, and C. J. READ. 1989. Commercial harvests of major fish species from the Northwest Territories, 1945 to 1987. Can. Data Rep. Fish. Aquat. Sci. 751: iv + 129 p.

PERSONAL COMMUNICATIONS

- ANDERSON, L. Department of Fisheries and Oceans (DFO), 501 University Crescent, Winnipeg, MB, R3T 2N6.
- COEDY, W. Arctic Environmental Laboratory, Box 1500, Yellowknife, NT, X1A 2R3.
- CRAIG, C. DFO, 501 University Crescent, Winnipeg, MB, R3T 2N6.
- DAY, A.C. DFO, 501 University Crescent, Winnipeg, MB, R3T 2N6.
- DOWLER, D. formerly of DFO, Box 2310, Yellowknife, NT, X1A 2P7.
- FALK, M. formerly of DFO, 501 University Crescent, Winnipeg, MB, R3T 2N6.
- FALLIS, B. DFO, 501 University Crescent, Winnipeg, MB, R3T 2N6.
- HARBICHT, S. Environment Canada, 9th Floor, Bellanca Building, Box 370, Yellowknife, NT, X1A 2N3.
- JACKSON, F. Indian and Northern Affairs Canada, Box 1500, Yellowknife, NT, X1A 2R3.
- LOW, G. DFO, 42043 Mackenzie Highway, Hay River, NT, XOE OR9.

MOSHENKO, D. DFO, 501 University Crescent,
Winnipeg, MB, R3T 2N6.

PRYZNYK, G. DFO, Box 2310, Yellowknife, NT,
X1A 2P7.

ROBERGE, M. formerly of DFO, 501 University
Crescent, Winnipeg, MB, R3T 2N6.

REIST, J. DFO, 501 University Crescent, Winnipeg,
MB, R3T 2N6.

STONEMAN, B. Economic Development and
Tourism, Government of the Northwest
Territories, Yellowknife, NT, X1A 2L9.

STRONG, J.T. formerly of DFO, 501 University
Crescent, Winnipeg, MB, R3T 2N6.

WRIGHT, D. DFO, 501 University Crescent,
Winnipeg, MB, R3T 2N6.

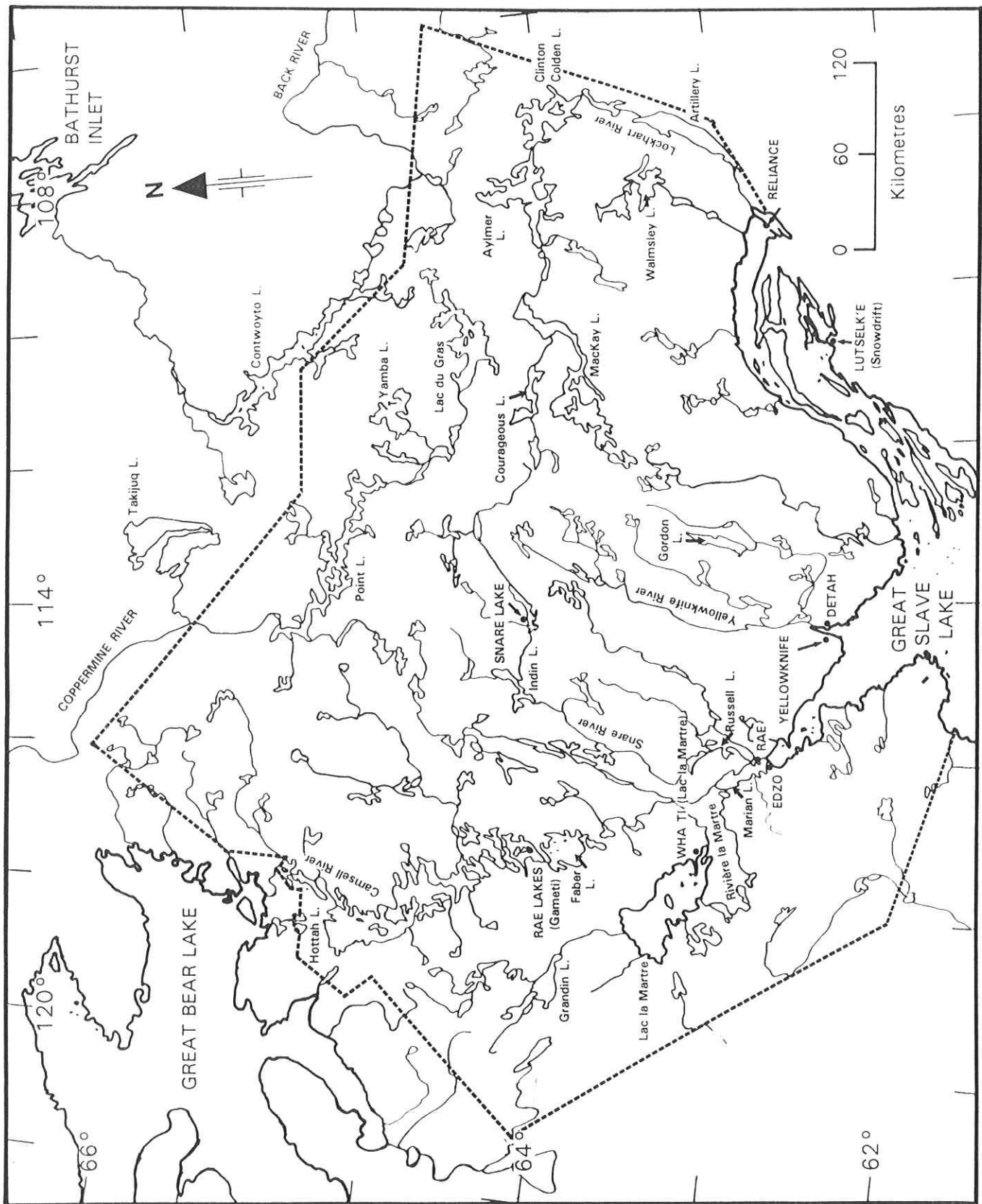


Figure 1. Map of the North Slave area of the N.W.T., showing communities and major rivers.

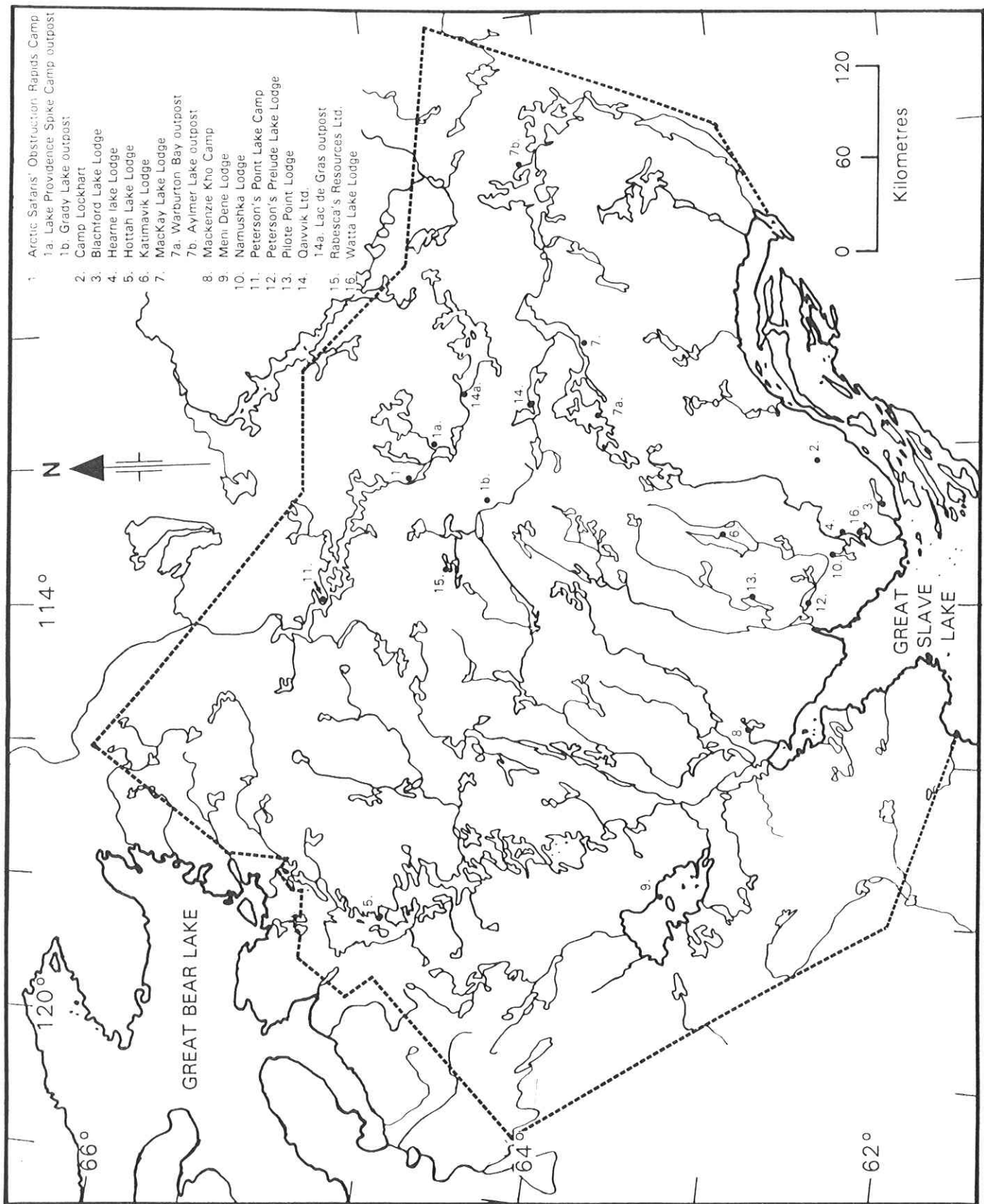


Figure 2. Sport fishing lodges and outposts in the North Slave area of the N.W.T.

Table 1. Harvests of fishes and molluscs from the North Slave area, not including Great Slave Lake, by community area and waterbody.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
INLAND LAKES			
Back River			Fish species reported from the Back River drainage basin within the study area are listed in Appendix 1.
Concession Lake 65°43'N, 111°33'W			See below Contwoyto Lake and unnamed creek. See also Table 4: S. Harbicht.
Contwoyto Lake 65°00'N, 110°39'W	lake trout [1,000]	1986--lake trout 450 kg; 1988-89--NF; 1992-95--NF. <u>Sport harvest:</u> reported by anglers at Lupin Mine in 1983--46 Arctic charr, 2 Arctic grayling, 323 lake trout.	Contwoyto Lake drains northward via the Burnside River and eastward via the Back River, and lies largely within the Nunavut Land Settlement Area. In 1958, the Department of Northern Affairs and National Resources (now Department of Indian and Northern Affairs) conducted a test fishery at Contwoyto Lake to try to reduce the dependence of area Inuit on migratory caribou. In 1977, a baseline fisheries survey of the lake was conducted, as part of the Arctic Land Use Research mapping program. Echo Bay Mine Ltd. began construction of the Lupin gold mine at Contwoyto Lake in 1980, and began production in 1982. A number of baseline and monitoring studies have been conducted on the aquatic environments of Contwoyto Lake and small lakes and streams in the vicinity of the mine. Consultants conducted studies for the company, from 1981-84, to identify the potential fish use of the Concession Lake drainage basin (see above) and to identify the possible effects of the tailings pond drainage into this basin (see below unnamed creek) and Contwoyto Lake. Liver and muscle tissues of fish from Contwoyto and Concession lakes were analyzed for heavy metal concentrations in 1985, 1989, 1990, and 1992. Environmental Canada also conducted studies of the sediment quality and benthic communities of Contwoyto Lake near Lupin Mine in 1990 and 1991. The results of these studies have yet to be published. DFO conducted an experimental gillnet survey of the lake in 1981-82. Lake trout, lake cisco, round whitefish, Arctic charr, Arctic grayling and burbot, listed in order of frequency of capture, were taken. Catch-effort data were recorded, fish were sampled for data on growth and reproduction, and a few Arctic charr (n = 6) and lake trout (n= 160) were tagged. A small experimental harvest of lake trout was taken from Contwoyto Lake in 1986, and sampled by DFO. There is a small subsistence fishery at Contwoyto Lake by area Inuit, and sport fishery by mining personnel. In 1988, DFO estimated the guest-bed capacity of Contwoyto Lake for a high quality lake trout sport fishery at 20 to 22 beds. (Moore 1978a; Stewart and MacDonald 1978; Reid Crowther and Partners Inc. and R.L. and L. Environmental Services Ltd. 1982, 1984; Roberge et al. 1986; Duncan et al. 1987; McGowan 1989; Ash 1989; Yaremchuk et al. 1989; Ash et al. 1991; DFO 1991, 1992a, 1994, 1995, 1996; S. Harbicht and M. Roberge, pers. comm.) (see also Table 4: S. Harbicht, G. Ash, T. Clayton, R. Couture, M. Gordon, E. Neil, and R. Patterson)
Coppermine River			In 1977, a baseline fisheries survey obtained small samples of fish at 25 sites on the Coppermine River system within the North Slave study area. Species reported from the Coppermine River system within the study area are listed in Appendix 1. (Stewart and MacDonald 1978)
Junius Lake 66°27'N, 116°38'W			In 1977, an experimental gillnet fishery sampled lake trout and longnose sucker from this lake on the Sloan River system which empties into the McTavish Arm of Great Bear Lake. (Stewart and MacDonald 1978)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Pellat Lake 65°01'N, 109°41'W			Inuit families lived at Pellat lake narrows until the early 1970's. They now live in Coppermine (Kugluktuk) but occasionally return to the area where they may fish for subsistence in conjunction with hunting and trapping activities. In 1977, an experimental gillnet fishery sampled lake trout from this lake on the Back River system. (Stewart and MacDonald 1978; NLUIS 76C)
unnamed creek (Seep Creek) 65°44'N, 111°25'W			"Seep Creek" has carried the tailings pond decant from the Lupin Gold Mine into Contwoyto Lake (see above) since 1985. Prior to its receiving the decant, the creek provided spawning habitat for Arctic grayling and feeding and rearing habitat for Arctic grayling, round whitefish, and lake trout. A follow up study in 1990 failed to locate lake trout, lake cisco, and slimy sculpin that had previously been reported from the stream, and did not observe spawning grayling. Fish were not caught upstream of the two small lakes near the creek mouth. (Reid Crowther and Partners Inc. and R.L. and L. Environmental Services Ltd. 1982, 1984; Ash et al. 1991)
RAE-EDZO			DFO collected partial subsistence harvest data from the community in 1995 (see below Marian Lake). (See also Table 4: R. Butterworth)
Bartlett Lake			See WHA TI--Bartlett Lake.
Basler Lake 63°55'N, 116°00'W	lake trout + whitefish 6,000	1963--lake trout 2,621 kg, lake whitefish 236 kg; 1964--lake trout 7,761 kg, lake whitefish 640 kg; 1965--lake trout 2,423 kg, lake whitefish 792 kg; 1966--lake trout 572 kg, lake whitefish 34 kg; 1980--lake trout 7,930 kg, lake whitefish 11,867 kg; 1982--lake trout + lake whitefish 10,824 kg; 1983--lake trout 35 kg, lake whitefish 245 kg. <u>Subsistence harvest:</u> 1962--1,300 fish.	Basler Lake, on the Emile River, has been fished for subsistence by hunters and trappers from Rae-Edzo, Rae Lakes, and Wha Ti. In 1962, families from the Rae Trading Area harvested an estimated 1,300 fish from the lake for subsistence. Commercial harvests of lake trout and lake whitefish were reported from Basler Lake in the 1960's and early 1980's. In 1987, DFO estimated the guest-bed capacity of Basler Lake for a high quality lake trout sport at 4 to 8 beds, and cautioned that user resource conflicts might arise if a lodge were to be established on the lake. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; Yaremchuk et al. 1989; NLUIS 85N+O; M. Roberge, pers. comm.)
Bigspruce Lake 63°32'N, 115°56'W			Bigspruce Lake, on the Snare River (see below) is the storage reservoir for the Snare Rapids hydroelectric generating station. Between 17 June and 28 July 1977, DFO sampled and tagged fish in the lake to collect baseline data on fish populations in sections of the Snare River altered by hydroelectric development. Data were collected on water chemistry, catch-effort, and fish growth, reproduction and diet. Lake whitefish, lake trout, lake cisco and northern pike, in order of capture frequency, were the main species taken. In 1988, DFO estimated the combined guest-bed capacity of Bigspruce and Kwejinne (see below) lakes, for a high quality lake trout sport fishery, at 10 to 15 beds. (Jessop et al. 1994; M. Roberge, pers. comm.)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Birch Lake			See below Horn River.
Camsell River			See RAE LAKES--Camsell River.
Chedabucto Lake 62°24'N, 115°30'W	lake trout + whitefish 2,600 northern pike --no quota	1961--lake trout 2,583 kg; 1966--lake trout 1,935 kg, lake whitefish 1,345 kg; 1967--lake trout 1,937 kg, lake whitefish 2,756 kg. <u>By-catch:</u> 1961--northern pike 7 kg; 1966--northern pike 181 kg; 1967--northern pike 16 kg.	This lake drains into the North Arm of Great Slave Lake near Old Fort Island. Commercial harvests of lake trout, lake whitefish, and northern pike were taken from the lake in 1961, 1966, and 1967. In 1987, DFO estimated the guest-bed capacity of Chedabucto Lake for a low to medium quality sport fishery at 3 to 5 beds, and cautioned that user resource conflicts might arise. (Sinclair et al. 1967; Yaremchuk et al. 1989; M. Roberge, pers. comm.)
Doré Creek			See below Duport River and Marian Lake.
Drumlin Lake 64°50'N, 114°23'W			In 1977, an experimental gillnet fishery sampled lake trout and longnose sucker from this lake on the Coppermine River system. (Stewart and MacDonald 1978)
Duport River [Doré Creek] 62°50'N, 116°12'W			Walleye run up this stream, which drains into Marian Lake, in the spring to spawn. This run has a history of sport fishing by NWT residents. DFO tagged walleye during the spring spawning runs in 1991 (n = 81), 1992 (n = 393), and 1995 (n = 522) in order to follow their post-spawning movements. Growth data were also taken from the tagged fish. (G. Low, unpubl. data). [See below Marian Lake.]
Etna Lake			See RAE LAKES--Etna Lake.
Fawn Lake			See below Horn River.
Fishtrap Lake			See RAE LAKES--Fishtrap Lake.
Frank Lake 62°48'N, 115°56'W	lake trout, lake whitefish, northern pike--no quota	1973--lake trout 693 kg, lake whitefish 1,353 kg, northern pike 93 kg; 1974--lake trout 540 kg, lake whitefish 1,152 kg, northern pike 103 kg.	Experimental harvests of lake trout, lake whitefish, and northern pike were taken from this small lake near Edzo in 1973 and 1974. (Yaremchuk et al. 1989)
Germaine Lake 63°13'N, 114°35'W	lake trout + whitefish 1,000		This lake on the Wecho River system has been fished for subsistence by hunters and trappers from Rae-Edzo and/or Rae lakes. It has no record of commercial harvest. (NLUIS 850)
Ghost Lake 63°51'N, 115°10'W		<u>Subsistence harvest:</u> 1962--1,800 fish.	This headwater lake of the Snare River has been fished for subsistence by hunters and trappers from Rae-Edzo and Rae Lakes. In 1962, families from the Rae Trading Area harvested an estimated 1,800 fish from Ghost Lake for subsistence. In 1979, DFO estimated the guest-bed capacity of Ghost Lake, for a low quality lake trout sport fishery, at 10 to 12 beds. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; NLUIS 850; M. Falk, pers. comm.)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Grandin Lake			See WHA TI--Lac Grandin.
Hardisty Lake			See RAE LAKES--Hardisty Lake.
Hislop Lake			See WHA TI--Hislop Lake.
Horn River 62°00'N, 117°27'W			Walleye spawn in this tributary of the Mackenzie River in the spring, and lake whitefish in the fall. The latter migrate upstream from Mills Lake. Many lakes on the Horn River system (e.g. Birch 62°04'N, 116°35'W; Fawn 63°10'N, 117°33'W; Lac Levis 62°39'N, 118°00'W; Racoon 62°53'N, 117°40'W; Wildflower 62°52'N, 116°30'W) have been fished for subsistence by hunters and trappers from Rae-Edzo, Wha Ti, and/or Fort Providence. (NLUIS 85K)
Inglis Lake 63°11'N, 115°09'W			This lake on the Wecho River has been fished for subsistence by hunters and trappers from Rae-Edzo and/or Rae Lakes. (NLUIS 85O)
Isabella Lake			See RAE LAKES--Isabella Lake.
James Lake 63°00'N, 116°26'W			Residents of Rae-Edzo fish for subsistence at James Lake. In 1962, families from the Rae Trading Area harvested an estimated 2,000 fish from the lake for subsistence. In 1981, DFO estimated the guest-bed capacity of the lake for a medium quality lake trout sport fishery at 1 to 2 beds. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; NLUIS 85K; M. Roberge, pers. comm.)
Judd Lake 63°23'N, 116°15'W			Judd Lake, on the Snare River (see below), was incorporated into the storage reservoir created in 1974-75 for the Snare Forks hydroelectric generating station. In 1973 and 1977, DFO sampled and tagged fish in the lake to collect baseline data on fish populations in sections of the Snare River altered by hydroelectric development. Data were collected on water chemistry and catch-effort, and on fish growth, reproduction and diet. Lake whitefish, northern pike, lake trout and longnose sucker, listed in order of capture frequency, were the main species taken. (Weagle and Cameron 1974; Jessop et al. 1994)
Kwejinne Lake 63°44'N, 115°53'W			This lake on the Snare River has been fished for subsistence by hunters and trappers from Rae-Edzo and Rae Lakes. In 1988, DFO estimated the combined guest-bed capacity of Kwejinne and Bigspruce lake (see above) for a high quality lake trout sport fishery at 10 to 15 beds. (NLUIS 85O; M. Roberge, pers. comm.)
Labrish Lake 63°40'N, 116°15'W	lake trout + lake whitefish 800 walleye--no quota	1966--lake trout 1,539 kg, lake whitefish 5,278 kg. <u>By-catch:</u> 1966--walleye 627 kg.	Labrish Lake, on the Emile River, has been fished for subsistence by hunters and trappers from Wha Ti and Rae-Edzo. A commercial harvest of lake trout and lake whitefish was taken from the lake in 1966. (Yaremchuk et al. 1989; NLUIS 85N)
Lac de Gras			See YELLOWKNIFE-DETAH--Lac de Gras.
Lac Grandin			See WHA TI--Lac Grandin.

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Lake Providence			See SNARE LAKE--Lake Providence.
Marian Lake 63°00'N, 116°17'W		<u>Subsistence harvest:</u> 1962--28,520 fish; 1994--44 burbot, 82 inconnu, 1,683 lake whitefish, 140 longnose and white sucker, 291 northern pike, and 232 walleye; 1995--69 burbot, 184 inconnu, 3368 lake whitefish, 281 longnose and white sucker, 557 northern pike, and 513 walleye.	Residents of Rae-Edzo fish for subsistence at Marian Lake. In 1962, families from the Rae Trading Area harvested an estimated 24,520 fish from the Fort Rae (62°50'N, 116°03'W), Marian Lake Village (63°03'N, 116°19'W) and Island Village (63°00'N, 116°17'W) areas of Marian Lake for subsistence. DFO collected data on the subsistence harvest of fish by residents of Rae-Edzo during in 1994 and 1995. These data represent a small but unknown percentage of the total annual harvest. They are presented here to illustrate the relative numbers of each species taken by the summer and fall fisheries. Most of these fish were taken from Marian Lake, but some were taken from Great Slave or Russell lakes. Walleye spawn in the spring in the Duport River (also known as Doré Creek, see above), which flows into Marian Lake. Tagged walleye from the spawning run at Mosquito Creek (see below) have been re-captured in Marian Lake. Lake whitefish are reported to migrate between the North Arm of Great Slave Lake and Marian Lake, via Frank Channel after freeze-up. In 1981, DFO estimated the guest-bed capacity of Marian Lake for a medium quality lake trout sport fishery at 18 to 27 beds. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; Falk et al. 1980a; NLUIS 85K+N; M. Roberge, pers. comm.; G. Low, unpubl. data)
Mazenod Lake 63°42'N, 117°02'W	lake trout + whitefish 2,200	1992--NF	Mazenod Lake, on the Marian River, has been fished for subsistence by hunters and trappers from Wha Ti and Rae-Edzo. It has no record of commercial harvest, and an experimental fishery planned for the lake in 1992 was not conducted. (DFO 1994; NLUIS 85N)
Mosher Lake 63°06'N, 115°26'W	walleye 1,100 lake trout--no quota	1963--walleye 193 kg; 1964--walleye 844 kg. <u>By-catch:</u> 1963--lake trout 129 kg; 1964--lake trout 391 kg.	In 1962, a DFO experimental fishery sampled lake trout, northern pike, sucker sp., walleye, and whitefish sp. from this lake on the Wecho River. Commercial harvests of lake trout and walleye were taken from Mosher Lake, in 1963 and 1964. (Sinclair et al. 1967; Yaremchuk et al. 1989)
Mosquito Creek 62°42'N, 116°05'W		<u>Sport harvest of walleye:</u> 1973--572 fish caught (541 kept); 1974--365 fish caught (339 kept); 1975--282 fish caught (255 kept); 1976--522 fish caught (514 kept); 1977--385 fish caught (385 kept); 1983--1,298 fish caught (1,190 kept); 1986--2,928 fish caught (2,049 kept);	Walleye from Great Slave Lake spawn in Mosquito Creek each spring. The creek is accessible from the Mackenzie Highway which crosses it about 5 km upstream from the mouth. Most walleye spawning takes place in the lower kilometre of the creek, immediately upstream from Great Slave Lake. This spawning run has been a major attraction for area anglers, who follow a trail from the highway to the creek mouth. DFO has collected data on the walleye population and angler harvests at Mosquito Creek since the early 1970's. DFO conducted creel censuses of anglers at the creek in 1973-77, 1983 and 1986-87; and installed weirs to count the up and/or down stream runs in 1974, 1975, 1986, 1987, 1991, and 1992. The spawning population was estimated at 5,600 in 1975, 2,800 in 1986, and 800 in 1987. Estimates were not possible from the partial weir counts in 1991-92. Over the past two decades there has been a decrease in the proportion of female spawners and in fish <8 y and an increase in fish >13 y and in the annual mortality rate. The harvest per angler hour remained relatively constant (0.5-0.6) except in 1986 (1.0), but the number of anglers and fish caught increased considerably. Tagging studies have shown that the Mosquito Creek walleye range widely in Marian Lake and Great Slave Lake. The harvests of these fish by commercial and subsistence

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Mosquito Creek, Continued.		<u>Sport harvest of walleye:</u> 1987--732 fish caught (700 kept);	fisheries are unknown. In 1986, DFO recommended that the recreational fishery be closed from April to June for three to five years, and that a passage for migratory walleye past the highway culverts be provided to increase the available spawning habitat. Annual monitoring of the stock recovery was also recommended. Mosquito Creek and waters of Great Slave Lake within 1 km of the creek mouth (62°42'N, 116°04'W) are closed to sport fishing from 1 May to 30 June (P.C. 1988-775). For the rest of the year, the daily catch and possession limits for walleye at the creek are 3 and 5, respectively. In 1995, the highway culverts were replaced by a bridge designed to permit fish passage. This improvement may afford the walleye, and northern pike and sucker sp. which also spawn in Mosquito Creek in the spring, access to more spawning habitat. This change is not likely to immediately benefit the walleye population, which is not limited at present by the availability of spawning habitat, but it may have long-term benefits for the population. (Falk et al. 1980a+b; Clarke et al. 1989; Low 1992; NLUIS 85K; A.C. Day and G. Low, pers. comm.)
Naga Lake			See RAE LAKES--Naga Lake.
Nardin Lake 63°30'N, 113°50'W			Hunters and trappers from Rae-Edzo and/or Rae Lakes have fished for subsistence at this lake on the Yellowknife River system. (NLUIS 85P)
Racoon Lake			See above Horn River.
Rivière Grandin			See RAE LAKES--Rivière Grandin.
Russell Lake 63°02'N, 115°44'W		<u>Subsistence harvest:</u> 1962--21,900 fish.	In 1962, families from the Rae Trading Area harvested an estimated 21,900 fish from Lajeunesse Bay of Russell Lake. Residents of Rae-Edzo continue to fish for subsistence at Russell Lake. In spring, walleye move upstream from Russell Lake into an unnamed tributary stream (63°13'N, 115°52'W) to spawn. In 1981, DFO estimated the guest-bed capacity of Russell Lake for a medium quality lake trout sport fishery at 13 to 20 beds. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; NLUIS 85I+J; M. Roberge, pers. comm.)
Saddle Lake 63°54'N, 116°31'W	lake trout + whitefish 5,100 walleye--no quota	1966--lake trout 6,552 kg, lake whitefish 6,819 kg. <u>By-catch:</u> 1966--walleye 9 kg.	Saddle Lake has been fished for subsistence by hunters and trappers from Wha Ti and Rae-Edzo. A commercial harvest of lake trout, lake whitefish, and walleye was taken from the lake in 1966. (Yaremchuk et al. 1989; NLUIS 1985N)
Sarah Lake 63°45'N, 117°10'W	lake trout, lake whitefish + walleye [1,000]	1992--lake trout 6 kg; lake whitefish 3 kg.	Residents of Wha Ti and Rae-Edzo have fished for subsistence at this lake on the Marian River. DFO sampled sucker sp. and whitefish sp. from Sarah Lake in 1961. A small experimental harvest of lake trout and lake whitefish was taken from Sarah Lake in March 1993. In 1988, DFO estimated the guest-bed capacity of Sarah Lake for a high quality lake trout sport fishery at 3 to 6 beds. (DFO 1994; NLUIS 85N; M. Roberge, pers. comm.; DFO unpubl. data)
Sharples Lake 63°54'N, 112°54'W			Hunters and trappers from Rae-Edzo and/or Rae Lakes have fished for subsistence at this lake on the Yellowknife River system. (NLUIS 85P)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Sherman Lake 63°27.5'N, 116°30'W			Rayrock Mines Ltd. operated a uranium mine and mill adjacent to Sherman Lake from 1957-59. When the mine closed it left some 70,000 tons of tailings in two piles. Runoff from the North Tailings Pile flows into Sherman Lake, while groundwater discharge from the South Tailings Pile flows into the unnamed lake immediately downstream on the Marian River system. In 1984, the Dene Nation expressed concern that radioactive and heavy metal contaminants in runoff from the tailings might pose a health risk to area residents. Subsequent sampling under limited hydrological conditions found the water quality of Sherman Lake and the lake downstream to be within Canadian drinking water quality guidelines. Cisco, northern pike and whitefish in Sherman Lake were found to have radionuclides (lead 210, radium 226) levels slightly elevated above background (Kalin 1984; Hatfield Consultants Ltd. 1985; Baweja et al. 1987; Veska and Eaton 1991; Lockhart et al. 1992)
Shoti Lake 63°08'N, 116°28'W		<u>Subsistence harvest:</u> 1962--5,600 fish.	Residents of Rae-Edzo have fished for subsistence at this lake on the Marian River system. In 1962, families from the Rae Trading Area harvested an estimated 5,600 fish from Shoti Lake for subsistence. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; NLUIS 85N)
Slemon Lake 63°13'N, 116°01'W	lake trout + whitefish 2,700 northern pike, walleye--no quota	1963--lake trout 48 kg, lake whitefish 42 kg; 1966--lake trout 2,313 kg, lake whitefish 4,433 kg; 1973--lake trout 1,228 kg, lake whitefish 5,628 kg; 1983--lake trout 1,347 kg, lake whitefish 383 kg. <u>By-catch:</u> 1963--northern pike 54 kg, walleye 63 kg; 1966--walleye 80 kg; 1973--walleye 68 kg; 1983--northern pike 40 kg. <u>Subsistence harvest:</u> 1962--3,700 fish.	Residents of Rae-Edzo fish for subsistence at this lake on the Snare River system. In 1962, families from the Rae Trading Area harvested an estimated 3,700 fish from Slemon Lake for subsistence. Commercial harvests of lake trout, lake whitefish, northern pike, and walleye have been taken sporadically from the lake since in 1963. DFO sampled lake trout, lake whitefish, northern pike, sucker sp. and walleye from Slemon Lake in 1963. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; Moshenko 1980; Yaremchuk et al. 1989; NLUIS 85N+O; DFO unpubl. data)
Snare River 63°07'N, 115°53'W			Hydroelectric generating stations on the Snare River provide the Yellowknife Region with electricity. The first station was built in 1948 at Snare Rapids, 1.6 km downstream from Big Spruce Lake (see above), the second 12.8 km downstream at Snare Falls, and the third was built in 1974-75, at Snare Forks 14.5 km further downstream. All three stations were built and operated by the Northern Canada Power Commission (NCPC). Initially, the latter development was to create a reservoir at Judd Lake (see above) from which water was to be diverted to a powerhouse on Strutt Lake (see below). This plan was referred to as the Strutt Lake Hydro Project. DFO surveyed fishery resources in Strutt Lake, Judd Lake, and Snare Falls Reservoir between 6 and 16 September 1973 to collect data for an initial impact assessment of the proposed project. In the event, the Strutt Lake site was abandoned and the dam and powerhouse were built at Snare Forks. In 1977, DFO conducted a more extensive fish

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Snare River, Continued.			<p>sampling and tagging program (n = 530) to collect baseline data on fish populations in sections of the Snare River altered by hydroelectric development. Data were collected on catch-effort, growth, reproduction, and diet. Species caught are listed in Appendix 1. The Upper Snare River, between Snare Cascades and Snare Forks dam, is the storage reservoir for the Snare Forks Project. It was sampled between 6 May and 28 July. Walleye, northern pike, lake whitefish and white sucker, listed in order of capture frequency, were the main species taken. The Lower Snare River, between Snare Forks and Slemon Rapids was sampled between 6 May and 28 July. Northern pike, lake whitefish and longnose sucker, listed in order of capture frequency, were the main species taken. Walleye were not captured at sampling sites upstream of the Strutt Lake, but were common in Strutt Lake and the Lower Snare River. Tagging studies and the presence of walleye in spawning condition suggest that the species spawns at a site (63°17.5'N, 116°14'W) on the Lower Snare River in May. Fish species taken from the Snare River drainage are listed in Appendix 1. (Weagle and Cameron 1974; Jessop et al. 1994) (See also Table 4: S. Reed)</p>
Stagg Lake 62°52'N, 115°29'W		<u>Subsistence harvest:</u> 1962--6,400 fish.	<p>This lake on the Stagg River is fished for subsistence by residents of Rae-Edzo. In 1962, families from the Rae Trading Area harvested an estimated 6,400 fish from the lake. Mackenzie Kho Camp, on Stagg Lake, offers its' guests a variety of outdoor activities including sport fishing (Table 2). DFO sampled burbot, lake trout, lake whitefish, sucker sp., and walleye from Stagg Lake in 1963, and described the lake morphometry and sampled the water chemistry, plankton, benthos, and fish between 9 and 12 July 1971. Data were collected on the growth and diet of the burbot, lake trout, lake whitefish, northern pike, and walleye captured from the lake. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; Falk 1979b; Moshenko 1980; NLUIS 86J; DFO unpubl. data)</p>
Stagg River 62°48'N, 115°45'W			<p>In spring this tributary of Great Slave Lake is a migration route and spawning area for northern pike and walleye. (NLUIS 85J)</p>
Strutt Lake 63°20'N, 116°13'W			<p>Water levels in this lake on the Snare River may be influenced by hydroelectric developments on the Snare River (see above). In 1973 and 1977, DFO sampled and tagged fish in the lake to collect baseline data on fish populations in sections of the Snare River altered by hydroelectric development. Data were collected on catch-effort, growth, reproduction, and diet. Lake whitefish, walleye, northern pike and lake cisco, listed in order of abundance, were the main species taken. Aggregations of spottail shiner suggest that the species may spawn in a tributary of Strutt Lake. (Weagle and Cameron 1974; Jessop et al. 1994)</p>
Tuchay Lake			<p>See RAE LAKES--Tuchay Lake.</p>
unnamed creek 62°19'N, 115°24'W			<p>In spring, walleye spawn in this small tributary of Great Slave Lake. (NLUIS 85J)</p>
unnamed creek (Farside Creek) 62°40'N, 116°01'W			<p>In spring, walleye spawn in this small tributary of Great Slave Lake. (G. Low, pers. comm.)</p>

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
unnamed creek 62°48'N, 115°54'W			In spring, walleye spawn in this small tributary of Great Slave Lake. (NLUIS 85J)
unnamed lake 63°16'N, 116°15'W	lake trout + whitefish 500		No record of commercial harvest.
unnamed lake 64°40'N, 114°28'W			In 1977, an experimental gillnet fishery sampled lake trout and longnose sucker from this headwater lake of the Snare River system. (Stewart and MacDonald 1978)
unnamed lake 64°43'N, 114°28'W			In 1977, an experimental gillnet fishery sampled lake trout, longnose sucker, northern pike and round whitefish from this headwater lake of the Snare River system. (Stewart and MacDonald 1978)
Wheeler Lake 63°20'N, 114°52'W			This lake on the Wecho River system has been fished for subsistence by hunters and trappers from Rae-Edzo and/or Rae Lakes. DFO sampled lake trout, lake whitefish, and sucker sp. from Wheeler Lake in 1963. In 1987, DFO estimated the guest-bed capacity of Wheeler Lake, for a medium to high quality lake trout sport fishery, at 3 to 5 beds. (Moshenko 1980; NLUIS 85O; DFO unpubl. data; M. Roberge, pers. comm.)
Wildflower Lake			See above Horn River.
Winter Lake 64°28'N, 112°55'W			In 1977, an experimental gillnet fishery sampled Arctic grayling, lake trout, lake whitefish, northern pike, and longnose sucker from this lake on the Snare River system. (Stewart and MacDonald 1978)
Yamba Lake 65°00'N, 111°20'W			In 1977, an experimental gillnet fishery sampled lake trout and longnose sucker from this lake on the Coppermine River system. In 1988, DFO estimated the guest-bed capacity of Yamba Lake for a high quality lake trout sport fishery at 15 to 20 beds. (Stewart and MacDonald 1978; M. Roberge, pers. comm.)
RAE LAKES			
Acasta Lake 65°32'N, 115°34'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Acasta River, a tributary of the Camsell River. (NLUIS 86G)
Akaticho Lake 66°32'N, 115°53'W			In 1977, an experimental gillnet fishery sampled Arctic grayling, burbot, lake trout, longnose sucker, and round whitefish from this lake on the Sloan River system. (Stewart and MacDonald 1978).
Ardent Lake 65°39'N, 115°44'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Wopmay River, a tributary of the Camsell River. A number of smaller unnamed lakes in this vicinity have also been fished for subsistence. (NLUIS 86G)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Arseno Lake 64°34'N, 115°39'W	lake trout + whitefish 2,300 northern pike and walleye--no quota	1966--lake trout 998 kg, lake whitefish 2,176 kg; 1969--lake trout 8,711 kg, lake whitefish 51,707 kg; <u>By-catches:</u> 1969--northern pike 203 kg, walleye 13 kg.	This lake on the Emile River system drains into the North Arm of Great Slave Lake. It was fished commercially in 1966 and 1969. In 1977, an experimental gillnet fishery sampled lake cisco, lake trout, and lake whitefish from Arseno Lake. (Stewart and MacDonald 1978; Yaremchuk et al. 1989)
Basler Lake			See RAE-EDZO--Basler Lake.
Beaverlodge Lake 64°42'N, 118°12'W	lake trout + whitefish 2,300	1965--lake trout 8 kg, lake whitefish 68 kg; 1970--lake trout 73 kg, lake whitefish 2,322 kg; 1971--lake trout 345 kg, lake whitefish 11,057 kg.	Beaverlodge Lake drains via Hottah Lake into the McTavish Arm of Great Bear Lake. DFO sampled lake cisco, lake trout, lake whitefish, northern pike and round whitefish from Beaverlodge Lake in 1959, during the Barren Grounds survey. Commercial harvest of lake trout and lake whitefish were taken from the lake in 1965, 1970, and 1971. Mercury levels in lake trout and lake whitefish flesh, measured by DFO in 1971-73, were within the recommended safe limits for human consumption (i.e. <0.5 mg per kg wet wt). In 1981, DFO estimated the guest-bed capacity of Beaverlodge Lake for a medium quality lake trout sport fishery at 3 to 5 beds. (Tam and Armstrong 1972; Johnson 1973, 1976; Desai-Greenway and Price 1976; Moshenko 1980; Yaremchuk et al. 1989; M. Roberge, pers. comm.)
Bélanger Lake 66°08'N, 114°57'W	lake trout + whitefish 600		This headwater lake on the Coppermine River system has no record of commercial harvest. In 1977, an experimental gillnet fishery sampled lake trout and northern pike from Belanger Lake. (Stewart and MacDonald 1978)
Bishop Lake 65°31'N, 116°07'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Wopmay River, a tributary of the Camsell River (see below). In 1974, an experimental fishery sampled Arctic grayling, lake trout, and northern pike from Bishop Lake. (NLUIS 86F; DFO unpubl. data)
Black Lichen Lake 64°25'N, 116°17'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake. (NLUIS 86C)
Breadner Lake 65°52'N, 116°45'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Calder River. In 1974, an experimental fishery at Breadner Lake caught Arctic grayling, burbot, lake trout, lake and round whitefish, and sucker sp. (NLUIS 86F; DFO unpublished data)
Calder River			Hunters and trappers from Rae Lakes have fished for subsistence at many of the larger lakes on this tributary of the Camsell River (e.g. Breadner Lake--see above). (NLUIS 86F)
Camsell River 64°17', 117°22'W			Many lakes on the Camsell River system, which drains into McTavish Arm of Great Bear lake, have been fished for subsistence by hunters and trappers from Rae Lakes, Rae-Edzo, and/or Wha Ti (e.g. Bishop, Clut--see above; Faber, Fishtrap, Grouard, Hardisty, Hottah, Isabella, Kway Cha, Lac Malfait, Lac Ste. Croix, Margaret, Naga, Rae, Taka, and Tuchay lakes--see below). In 1962, families from the Rae Trading Area harvested an estimated 1,200 fish from the Camsell River for subsistence. Species reported from the Camsell River system within the study area are listed in Appendix 1. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; NLUIS 86C+E)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Castor Lake 64°27'N, 116°03'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake. (NLUIS 86C)
Clut Lake 65°33'N, 117°40'W			Hunters and trappers from Rae Lake and/or Déline have fished for subsistence at this lake on the Camsell River. White Eagle Falls (65°37'N, 117°49'W), which is 16 m in height and located just downstream from Clut Lake, forms a natural barrier to upstream fish migration in the Camsell River. The area below the falls has been fished for subsistence, and for sport by guests of Branson's Lodge on McTavish Arm of Great Bear Lake. (Stewart 1995b; NLUIS 86F)
Cruickshanks Lake 65°57'N, 117°23'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Tilchuse River which flows into McTavish Arm of Great Bear Lake. (NLUIS 86F)
Etna Lake 64°27'N, 119°30'W			Hunters and trappers from Rae Lakes and Rae-Edzo have fished for subsistence at this lake on Rivière Grandin (see below).
Eyston Lake 65°09'N, 116°28'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Wopmay River, a tributary of the Camsell River. (NLUIS 86F)
Faber Lake 63°57'N, 117°15'W	lake trout, lake whitefish + walleye [1,000]	1962--lake trout 2,844 kg, lake whitefish 1,088 kg; 1992--lake trout 184 kg; lake whitefish 10 kg.	This lake near the community of Rae Lakes, drains via the Camsell River into the McTavish Arm of Great Bear Lake. It has been fished for subsistence by residents of Rae Lakes and Wha Ti. In 1962, families from the Rae Trading Area harvested an estimated 7,600 fish from Faber Lake for subsistence. Small experimental harvests of lake trout and lake whitefish were taken from the lake in May 1961, and March 1993. DFO sampled the latter harvest. In 1992, Lutra and Associates studied the feasibility of a small sports fishery camp on this lake. At that time, DFO estimated the guest-bed capacity of Faber Lake for a high quality lake trout sport fishery at 13 to 26 beds, provided the operator restricts the lake trout harvest to 16 kg per angler. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; Yaremchuk et al. 1989; DFO 1994; NLUIS 85N; A.C. Day and G. Low, pers. comm.)
Fishtrap Lake 65°27'N, 118°25'W			Hunters and trappers from Rae Lakes, Rae-Edzo, and/or Déline have fished for subsistence at this lake which flows northward into the McTavish Arm of Great Bear Lake. (NLUIS 86E)
Germaine Lake			See RAE-EDZO--Germaine Lake.
Ghost Lake			See RAE-EDZO--Ghost Lake.
Grandin Lake			See WHA TI--Lac Grandin.
Grant Lake 64°54'N, 116°35'W	lake trout + whitefish 3,100	1966--lake trout 6,251 kg, lake whitefish 14,261 kg; 1973--lake trout + lake whitefish 18,667 kg.	Grant Lake drains into the Great Bear Lake via the Camsell River. Commercial harvests of lake trout and lake whitefish were taken from the lake in 1966 and 1973. In 1981, DFO estimated the guest-bed capacity of Grant Lake for a medium quality lake trout sport fishery at 4 to 6 beds. (Yaremchuk et al. 1989; M. Roberge, pers. comm.)
Grenville Lake 64°57'N, 114°34'W			In 1977, an experimental gillnet fishery sampled burbot, lake trout, longnose sucker, and northern pike from this lake on the Coppermine River system. (Stewart and MacDonald 1978)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Hardisty Lake 64°30'N, 117°45'W	lake trout + whitefish 18,500		Hunters and trappers from Rae Lakes and/or Rae-Edzo fish for subsistence at this lake on the Camsell River which drains into the McTavish Arm of Great Bear Lake. There is no record of commercial harvest from the lake. In 1961, a DFO experimental fishery sampled lake trout and lake whitefish from Hardisty Lake. 1981, DFO estimated the guest-bed capacity of the lake, for a medium quality lake trout sport fishery, at 17 to 26 beds. (NLUIS 96C; M. Roberge, pers. comm.; DFO unpubl. data)
Hepburn Lake 66°21'N, 115°21'W			In 1977, an experimental gillnet fishery sampled Arctic grayling, lake trout, and longnose sucker from this headwater lake on the Coppermine River system. (Stewart and MacDonald 1978)
Hooker Lake 65°51'N, 117°25'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Camsell River system. (NLUIS 86F)
Hottah Lake 65°00'N, 118°30'W	lake trout + whitefish 49,200	1963--lake trout 4,043 kg, lake whitefish 5,077 kg; 1964--lake trout 103,125 kg, lake whitefish 243,304 kg; 1965--lake trout 71,498 kg, lake whitefish 94,076 kg; 1966--lake trout 2,686 kg, lake whitefish 3,821 kg; 1971--lake trout 3,447 kg, lake whitefish 21,873 kg; 1973--lake trout 2,265 kg, lake whitefish 6,221 kg.	Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Camsell River. Several families from Rae Lakes have fished for subsistence in spring and fall at the southeast end of Hottah Lake, in the vicinity of traditional campsites. Large commercial harvests of lake trout and lake whitefish were taken from the lake in the 1960's and early 1970's. DFO sampled fish from Hottah Lake in 1961-63, and conducted a limnological and biological survey of the lake in 1972. Data were collected on the water chemistry, plankton, zoobenthos, and fish. Nine fish species were collected (Appendix 1), with lake whitefish and lake trout being most abundant in the catch. Data were recorded on catch-effort and fish growth, diet and parasites. Low level (5.5 cysts per 100 kg) infections of <i>Triaenophorus</i> sp. were present in the lake whitefish. Uranium oxide was mined commercially at Hottah Lake from 1950-56. Mercury levels in the flesh of a lake trout were within the recommended safe limits for human consumption (i.e. <0.5 mg per kg wet wt). Hottah Lake Lodge operates a trophy sport fishery at Hottah Lake (Table 2). In 1986, DFO estimated the guest-bed capacity of Hottah Lake for a high quality lake trout sport fishery at 25 to 30 beds. (Sinclair et al. 1967; Wong and Whillans 1973; Desai-Greenway and Price 1976; Healey 1975, 1977, 1978a; Yaremchuk et al. 1989; NLUIS 86D; D. Moshenko, pers. comm.; DFO unpubl. data)
Inglis Lake			See RAE-EDZO--Inglis Lake.
Ingray Lake 64°20'N, 116°10'W	lake trout + whitefish 8,600	1964--lake trout 4,822 kg, lake whitefish 1,382 kg; 1965--lake trout 13,982 kg, lake whitefish 8,854 kg; 1966--lake trout 12,706 kg, lake whitefish 5,373 kg; 1970--lake trout 1,727 kg, lake whitefish 1,265 kg; 1971--lake trout 1,732 kg, lake whitefish 1,340 kg; 1980--lake trout + lake whitefish 3,270 kg;	Hunters and trappers from Rae Lakes have fished for subsistence at this lake which drains into the North Arm of Great Slave Lake. Commercial harvests of lake trout and lake whitefish were taken from Ingray Lake in 1964-66, 1970-71, and 1980. In 1988, DFO estimated the guest-bed capacity of Ingray Lake for a high quality lake trout sport fishery at 8 to 12 beds. (Sinclair et al. 1967; Davies et al. 1987; Yaremchuk et al. 1989; NLUIS 86C; M. Roberge, pers. comm.)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Isabella Lake 64°50'N, 117°37'W			Hunters and trappers from Rae Lakes and Rae-Edzo have fished for subsistence at this lake on the Camsell River. (NLUIS 86C)
Itchen Lake 65°30'N, 112°47'W			Hunters and Trappers from Coppermine have fished for subsistence at this lake on the Coppermine River. In 1976, a biological and water quality survey was conducted on Itchen Lake and some small lakes and streams at the Texasgulf copper-zinc property. Arctic grayling, lake trout, and other fish species were taken in the immediate vicinity of the property. In 1977, an experimental fishery sampled Itchen Lake. (Moore 1978b; Stewart and MacDonald 1978) (See also Table 4: G. Ash)
Judd Lake			See RAE-EDZO--Judd Lake.
Keskarrah Lake 66°03'N, 115°15'W			Hunters and trappers from Rae Lakes and/or Coppermine have fished for subsistence at this lake on the Hepburn River, a tributary of the Coppermine River. (NLUIS 86J)
Kway Cha Lake 65°26'N, 118°33'W			Hunters and trappers from Rae Lakes, Rae-Edzo, and/or Déline have fished for subsistence at this lake which flows northward into the McTavish Arm of Great Bear Lake. (NLUIS 86E)
Kwejinne Lake			See RAE-EDZO--Kwejinne Lake.
Labrish Lake			See RAE-EDZO--Labrish Lake.
Lac Grandin			See WHA TI--Lac Grandin.
Lac Malfait 64°37'N, 118°00'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Camsell River system. (NLUIS 86C)
Lac Ste. Croix 64°18'N, 117°15'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Camsell River system. (NLUIS 86C)
Lac Tache 64°00'N, 120°00'W			This lake drains northward into the McVicar Arm of Great Bear Lake via the Johnny Hoe River. It has been fished for subsistence by hunters and trappers from Rae Lakes, Wha Ti, and/or Rae-Edzo. In 1961, a DFO experimental fishery sampled burbot, lake trout, lake whitefish, northern pike, and sucker from Lac Tache. (NLUIS 85M, 86D; DFO unpubl. data)
Lever Lake 65°24'N, 117°17'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Nadin River, a tributary of the Camsell River system. (NLUIS 86F)
Little Crapeau lake 64°50'N, 116°27'W	lake trout + whitefish 2,300	1966--lake trout 968 kg, lake whitefish 1,734 kg; 1967--lake trout 638 kg, lake whitefish 1,596 kg.	Commercial harvests of lake trout and lake whitefish were taken from Little Crapeau Lake in 1966 and 1967. In 1981, DFO estimated the guest-bed capacity of Little Carpeau Lake for a medium quality lake trout sport fishery at 5 to 7 beds. (Yaremchuk et al. 1989; M. Roberge, pers. comm.)
Longtom Lake 65°09'N, 117°50'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Camsell River system. (NLUIS 86F)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Margaret Lake 63°40'N, 109°47'W	lake trout + lake whitefish 5,600	1966--lake trout 4,764 kg, lake whitefish 5,057 kg; 1967--lake trout 9,357 kg, lake whitefish 9,144 kg; 1992--NF.	Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Camsell River system. Experimental harvests of lake trout and lake whitefish were taken from Margaret Lake, on the Lockhart River system, in 1966-67. In 1981, DFO estimated the guest-bed capacity of Margaret Lake, for a medium quality lake trout sport fishery, at 7 to 11 beds. An experimental fishery planned for the lake in 1992, was not conducted. (Yaremchuk et al. 1989; DFO 1994; NLUIS 86C; M. Roberge, pers. comm.)
Nadin Lake 65°29'N, 116°59'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Nadin River, a tributary of the Camsell River system. (NLUIS 86F)
Naga Lake 65°13'N, 119°12'W			Hunters and trappers from Rae Lakes, Rae-Edzo, and/or Déline have fished for subsistence at this lake which flows northward into the McVicar Arm of Great Bear Lake. (NLUIS 86E)
Nardin Lake			See RAE-EDZO--Nardin Lake.
Point Lake 65°30'N, 113°27'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Coppermine River. In 1977, an experimental gillnet fishery sampled lake cisco, lake trout, longnose sucker, and round whitefish from Point Lake. Peterson's Point Lake Camp operates a trophy sport fishery on Point Lake (Table 2). In 1987, DFO estimated the guest-bed capacity of Point Lake, for a high quality lake trout sport fishery, at 8 to 15 beds. (Stewart and MacDonald 1978; NLUIS 86H; M. Roberge, pers. comm.)
Rae Lake 64°05'N, 117°25'W			Rae Lake, on the Camsell River, is fished for subsistence and sport by residents of the community of Rae Lakes which is situated near the southern end of the lake. In 1981, DFO estimated the guest-bed capacity of Rae Lake, for a medium quality lake trout sport fishery, at 14 to 21 beds. In spring, Arctic grayling are reported to spawn in a number of the lakes' tributary streams (60°04'N, 117°42'W; 64°02'N, 117°27'W; 64°11'N, 117°07'W; 64°12.5'N, 117°06'W; 64°16'N, 117°15'W). Other species reported from the lake include burbot, lake trout, lake and round whitefish, and northern pike. (NLUIS 86C; M. Roberge, pers. comm.)
Rawalpindi Lake 65°02'N, 114°32'W			Hunters and trappers from Rae Lakes and Rae-Edzo have fished for subsistence at this lake on the Coppermine River system. In 1977, an experimental gillnet fishery sampled lake cisco, lake trout, longnose sucker and round whitefish from Rawalpindi Lake. (Stewart and MacDonald 1978; NLUIS 86G)
Rebesca Lake 64°32'N, 116°22'W	lake trout + whitefish 3,700	1979--lake trout 1,520 kg, lake whitefish 3,364 kg.	A commercial harvest of lake trout and lake whitefish was taken from Rebesca Lake, which drains into Great Bear Lake, in 1970. DFO measured the mercury levels in lake trout flesh (<0.5 mg per kg wet wt) in 1970-71. In 1981, DFO estimated the guest-bed capacity of Rebesca Lake for a medium quality lake trout sport fishery at 5 to 7 beds. (Tam and Armstrong 1972; Yaremchuk et al. 1989; M. Roberge, pers. comm.)
Redrock Lake 65°28'N, 114°10'W			Experimental gillnet fisheries sampled lake trout, lake whitefish and six other fish species from Redrock Lake during the 1959 Barren Grounds survey, and in 1977. Max Ward has operated a private lodge on the lake since at least 1976. In 1989, DFO estimated the combined guest-bed capacity of Redrock and Rocknest lakes (see below), for a high quality lake trout sport fishery, at 5 to 9 beds. (Johnson 1973, 1976; Stewart and MacDonald 1978; Moshenko 1980; A.C. Day and B. Stoneman, pers. comm.)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Rivière Grandin			Rivière Grandin drains the area southwest of Hottah Lake into Lac la Martre. Hunters and trappers from Rae Lakes, Wha Ti, and/or Rae-Edzo have fished for subsistence at many of the larger lakes on this river system--particularly in the area between Etna Lake and Lac Grandin (see above).
Robb Lake 65°22'N, 116°02'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Robb River, a tributary of the Wopmay River. (NLUIS 86F)
Rocknest Lake 65°42'N, 114°26'W			In 1977, an experimental gillnet fishery sampled lake trout, longnose sucker, northern pike, and ninespine stickleback from this lake on the Coppermine River. In 1989, DFO estimated the combined guest-bed capacity of Redrock (see above) and Rocknest lakes, for a high quality lake trout sport fishery, at 5 to 9 beds. (Stewart and MacDonald 1978; A.C. Day, pers. comm.)
Salmandrè Lake 65°58'N, 115°15'W			Hunters and trappers from Rae Lakes and/or Coppermine have fished for subsistence at this lake on the Calder River, a tributary of the Camsell. (NLUIS 86G)
Scotstoun Lake 65°38'N, 115°03'W			In 1977, an experimental gillnet fishery sampled Arctic grayling, lake trout, and longnose sucker from this lake on the Coppermine River system. (Stewart and MacDonald 1978)
Self Lake 65°18'N, 117°14'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Camsell River system. (NLUIS 86F)
Sharples Lake			See RAE-EDZO--Sharples Lake.
Taka Lake 64°13'N, 117°32'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Camsell River system. (NLUIS 86C)
Tuchay Lake 65°16'N, 119°12'W			Hunters and trappers from Rae Lakes, Rae-Edzo, and/or Déline have fished for subsistence at this lake which flows northward into the McVicar Arm of Great Bear Lake. (NLUIS 86E)
unnamed lake 65°53'N, 115°05'W			In 1977, an experimental gillnet fishery sampled longnose sucker and northern pike from this lake on the Hepburn River, a tributary of the Coppermine River. (Stewart and MacDonald 1978)
Wentzel Lake 66°09'N, 115°51'W			In 1977, an experimental gillnet fishery sampled Arctic grayling, lake trout, and longnose sucker from this lake on the Sloan River system which empties into McTavish Arm of Great Bear Lake. (Stewart and MacDonald 1978)
Wheeler Lake			See RAE-EDZO--Wheeler Lake.
Zebulon Lake 65°03'N, 117°47'W			Hunters and trappers from Rae Lakes have fished for subsistence at this lake on the Zebulon River, at tributary of the Camsell River. (NLUIS 86F)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
RELIANCE			
Artillery Lake 63°10'N, 107°50'W			Despite its large size, the fishery resources of Artillery Lake, on the Lockhart River, remain virtually unknown. Tyrell, Critchell-Bullock, Hornby, and Clarke provided brief descriptions of their success gillnetting fish at the lake early in the century. In 1978, an experimental gillnet fishery sampled lake trout from Artillery Lake. The lake has been fished for subsistence, and is occasionally visited by anglers from lodges on Great Slave Lake. In 1988, DFO estimated the guest-bed capacity of Artillery Lake for a high quality lake trout sport fishery at 20 to 25 beds. In 1990, DFO sampled 11 lake trout from Artillery Lake. (Tyrell 1902; Critchell-Bullock 1931; Hornby 1934; Clarke 1940; MacDonald and Fudge 1978; NLUIS 75KM; M. Roberge, pers. comm.; G. Low, unpubl. data)
Clinton-Colden Lake 64°58'N, 107°27'W			DFO sampled Arctic grayling, lake cisco, lake trout, and round whitefish from Clinton-Colden Lake in 1959, during the Barren Grounds Survey. In 1988, DFO estimated the guest-bed capacity of Clinton-Colden Lake for a high quality lake trout sport fishery at 20 to 25 beds. (Johnson 1976; Moshenko 1980; M. Roberge, pers. comm.)
Lockhart River (Fig. 1)			In 1977, a baseline fisheries survey obtained small samples of fish at 11 sites on the Lockhart River system, within the North Slave study area. Species reported are listed in Appendix 1. In fall, lake trout spawn in the sand and gravel sections near the mouth of the Lockhart River. This area is also fished for sport by anglers from a nearby lodge. Arctic grayling spawn in the section of the river (63°44'N, 111°58'N) immediately upstream from Warburton Lake in the spring. (Stewart and MacDonald 1978; NLUIS 75K+M)
Ptarmigan Lake 63°35'N, 107°47'W			In 1978, an experimental gillnet fishery sampled lake cisco and lake trout from this lake on the Lockhart River. (MacDonald and Fudge 1978)
SNARE LAKE			
Baton Lake 64°22'N, 115°06'W			Baseline data on the aquatic environment of Baton Lake and some 20 other lakes in the area of Neptune Resources Corporations' Colomac Project, a proposed gold mining and milling operation, were collected between October 1987 and September 1988. (see also Steeves Lake below) (Beak Consultants Ltd. 1987; McKee 1989) (See also Table 4: P. McKee)
Grady Lake 64°27'N, 112°33'W			Arctic Safaris Obstruction Rapids Camp, which offers its' guest trophy sport fishing, has an outpost camp at Grady Lake (Table 2). In 1987, DFO estimated the guest-bed capacity of Grady Lake for a high quality lake trout sport fishery at 6 to 8 beds, provided guests are not there primarily to fish. (M. Roberge, pers. comm.)
Humpy Lake 64°40'N, 113°31'W			Guests of Camp Ekwo, Rabesca's Resources Ltd.' sport hunting camp, occasionally angle at Humpy Lake. In 1994, the camp operators requested that their camp be licenced as a Tourist Establishment, to permit broader usage of the camp facilities (Table 2). (B. Stoneman, pers. comm.)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Indin Lake 64°15'N, 113°58'W	lake trout, lake whitefish + northern pike --no quota	1963--northern pike 47 kg; 1967--lake trout 925 kg, lake whitefish 406 kg, northern pike 11 kg; 1970--lake trout 2,892 kg, lake whitefish 1,248 kg; 1971--lake trout 2,305 kg, lake whitefish 982 kg, northern pike 5 kg;	Indin Lake is situated on the Snare River immediately upstream of the community of Snare Lake. Experimental harvests of lake trout, lake whitefish, and northern pike were taken from Indin Lake in 1960's and early 1970's. DFO described the lake morphometry and sampled the water chemistry, plankton, benthos, and fish of Indin Lake between 3 and 9 July 1972. Data were collected on the growth and diet of the Arctic grayling, lake trout, and lake whitefish captured from the lake. DFO sampled fish populations in Indin Lake from June to September 1976, with experimental gillnets and stream sampling gear. Data were collected on catch effort and on the growth, reproduction, and diet of Arctic grayling, lake cisco, lake trout, lake whitefish, longnose sucker, northern pike, and round whitefish. A tagging program released 701 fish, mostly lake trout (68%) and grayling (21%). Maps of the lake bathymetry were also prepared. Two small tributaries (64°24'N, 114°51'W; 64°17'N, 115°14'W) of Indin Lake are important summer rearing, and likely spring spawning, areas for Arctic grayling. In September, a pre-spawning aggregation of lake trout was sampled near the Indin River inflow (64°19'N, 115°03'W). In 1988, DFO estimated the guest-bed capacity of Indin Lake for a high quality lake trout sport fishery at 12 to 15 beds. (Sinclair et al. 1967; Falk 1979b; Yaremchuk et al. 1989; Jessop et al. 1993; NLUIS 86B; M. Roberge, pers. comm.)
Lake Providence 64°50'N, 112°14'W			In 1977, an experimental gillnet fishery sampled burbot, lake trout, ninespine stickleback, and northern pike from this lake on the Coppermine River system. Arctic Safaris' Obstruction Rapids Camp, located at Lake Providence, offers its' guests trophy sport fishing for lake trout and Arctic grayling (Table 2). In 1987, DFO estimated the guest-bed capacity of Lake Providence for a high quality lake trout sport fishery at 5 to 10 beds. (Stewart and MacDonald 1978; M. Roberge, pers. comm.)
Mattberry Lake 64°05'N, 115°54'W	lake trout + whitefish 5,400	1966--lake trout 11,240 kg, lake whitefish 4,890 kg; 1980--lake trout + lake whitefish 8,123 kg; 1981--lake trout + lake whitefish 964 kg. <u>Subsistence harvest:</u> 1962--1,800 fish.	In 1962, families from the Rae Trading Area harvested an estimated 1,800 fish from Mattberry Lake for subsistence. Commercial harvests of lake trout and lake whitefish were taken from the lake, which drains into the North Arm of Great Slave Lake, in 1966 and the early 1980's. In 1987, DFO estimated the guest-bed capacity of Mattberry Lake for a low to medium quality lake trout sport fishery at 5 to 10 beds, and cautioned that resource user conflicts might arise. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; Yaremchuk et al. 1989; M. Roberge, pers. comm.)
Snare Lake 64°12'N, 114°00'W			Fish are harvested from Snare Lake for subsistence and sport by residents of Snare Lake and visitors to the community. (D. Moshenko, pers. comm.)
Steeves Lake 64°24'N, 115°06'W			Baseline data on the aquatic environment of Steeves Lake and some 20 other lakes in the area of Neptune Resources Corporations' Colomac Project, a proposed gold mining and milling operation, were collected between October 1987 and September 1988. (see also Baton Lake above) (Beak Consultants Ltd. 1987; McKee 1989) (See also Table 4: P. McKee)
Wecho Lake 63°58'N, 113°50'W	lake trout + whitefish 6,000	1964--lake trout 28 kg, lake whitefish 311 kg.	A small commercial harvest of lake trout and lake whitefish was taken from Wecho Lake in 1964. DFO sampled lake whitefish from the lake in 1965. (Moshenko 1980; Yaremchuk et al. 1989)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
WHA TI (LAC LA MARTRE)			In 1988, Lutra Associates Ltd. surveyed residents of Wha Ti for information on their subsistence harvests. They did not estimate the annual harvest. The community depends upon fishing for the local tourism industry, which is built around the sport fishery, and for subsistence. Almost every household in the community is involved in the subsistence fishery which begins with spring break-up in June and continues into November or December depending upon ice conditions. Little change was reported in the supply of fish available, fishing patterns, or use of fish over the period from 1980-88. Most subsistence fishing takes place in the southeastern half of Lac la Martre. Lake whitefish and lake trout are the main species harvested. Fishermen did not indicate any concerns with regard to the condition or quality of the fish. (Lutra Associates Ltd. 1989; Rawson Academy of Aquatic Science 1990)
Bartlett Lake 63°05'N, 118°20'W	lake trout + whitefish 11,200		Bartlett Lake drains into Lac la Martre. The lake has been fished for subsistence by hunters and trappers from Wha Ti and Rae-Edzo. It has no record of commercial harvest. (NLUIS 85M)
Basler Lake			See RAE-EDZO--Basler Lake.
Boyer Lake 63°07'N, 117°11'W			DFO sampled fish from Boyer Lake, between 19 May and 10 August 1975, as part of a study of a baseline study of fishes in Rivière la Martre (see below). Longnose sucker, northern pike, and round whitefish were the main species caught. The fish were sampled for biological data on growth, reproduction, and diet. (Chang-Kue et al. 1987)
Camsell River			See RAE LAKES--Camsell River.
Clive Lake			See below Lac la Martre.
Faber Lake			See RAE LAKES--Faber Lake.
Fawn Lake			See RAE-EDZO--Horn River.
Grandin Lake			See below.
Hislop Lake 63°31'N, 116°55'W		<u>Subsistence harvest:</u> 1962--4,100 fish.	Residents of Wha Ti and Rae-Edzo have fished for subsistence at this lake on the Marian River. In 1962, families from the Rae Trading Area harvested an estimated 4,100 fish from Hislop Lake for subsistence. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; NLUIS 85N)
Horn River			See RAE-EDZO--Horn River.
Judd Lake			See RAE-EDZO--Judd Lake.
Labrish Lake			See RAE-EDZO--Labrish Lake.
Lac Grandin (Grandin Lake) 63°59'N, 119°00'W	lake trout + lake whitefish 13,000	1963--lake trout 44,684 kg, lake whitefish 66,177 kg; walleye 386 kg; 1968--lake trout + lake whitefish 50,803 kg;	Lac Grandin drains via Rivière Grandin into Lac la Martre and thence into the North Arm of Great Slave Lake. It has been fished for subsistence by hunters and trappers from Wha Ti, Rae-Edzo, and Rae Lakes. Large commercial harvests of lake trout and lake whitefish were taken from the lake in 1963 and 1968-71. DFO sampled lake trout and lake whitefish from Lac Grandin in 1963. Mercury levels in lake trout and lake whitefish flesh, measured in 1971-73,

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Lac Grandin (Grandin Lake)-- continued.		1969--lake whitefish 48,042 kg; 1970--lake trout 38,380 kg, lake whitefish 50,517 kg; 1971--lake trout + lake whitefish 6,859 kg;	were within the recommended safe limits for human consumption (i.e. <0.5 mg per kg wet wt). In 1988, DFO estimated the guest-bed capacity of Lac Grandin for a medium quality lake trout sport fishery at 18 to 20 beds. (Tam and Armstrong 1972; Desai-Greenway and Price 1976; Moshenko 1980; Yaremchuk et al. 1989; M. Roberge, pers. comm.).
Lac la Martre 63°20'N, 118°00'W	lake trout + whitefish 45,000 inconnu, northern pike, walleye --no quota	1969--lake trout 22,160 kg, lake whitefish 89,071 kg; 1970--lake trout 23,825 kg, lake whitefish 100,513 kg; 1971--lake trout 13,244 kg, lake whitefish 96,154 kg; 1972--lake trout 18,238 kg, lake whitefish 280,442 kg; 1984--lake trout 462 kg, lake whitefish 1,400 kg. <u>By-catch:</u> 1969--northern pike 159 kg, walleye 42 kg; 1971--northern pike 10 kg, walleye 13 kg; 1972--inconnu 991 kg, northern pike 6,156 kg, walleye 3,989 kg. <u>Subsistence harvest:</u> 1962--43,000 fish.	<p>Residents of Wha Ti expressed interest in commercially fishing Lac la Martre, which drains into the North Arm of Great Slave Lake, in the early 1960's. In 1966, a fishing education program followed by a successful winter fishery generated strong community interest in development of the fishery. The commercial fishery began in earnest with completion of a fish packing plant in the spring of 1969. Commercial fishermen from Wha Ti took large harvests of lake trout and lake whitefish, and smaller quantities of northern pike, from Lac la Martre in 1969-72. Fish from Lac La Martre were flown to the Freshwater Fish Marketing Corporation's plant at Wool Bay on Great Slave Lake, and then taken by boat to Hay River. The catch was culled on the lake, at the dock, and in the fish plant. The high cost of air transport made it uneconomical to ship other than jumbo whitefish, so whitefish of less than 1.36 kg (3 lbs) were culled. In 1972, the cullage rates were estimated at 16.0% of the total catch for lake whitefish and 33.4% for lake trout--these amounts are not included in the harvest estimates. The commercial export fishery closed in 1973, due to the unfavourable economics of flying fish out for processing and marketing and cost of managing an isolated fishery, and to concern that it might damage the important subsistence fishery. Since then, the fishery has been restricted to local use. (Bond 1973; Davies et al. 1987; Yaremchuk et al. 1989)</p> <p>DFO conducted experimental gillnet surveys of Lac la Martre in 1959, 1969, 1971, and 1972, and sampled the commercial catch from 1969-72. Lake whitefish, lake trout, longnose suckers, and northern pike were the main species caught. No differences were observed in the species composition of the catches between the 1969 and 1972 samples, but concern was expressed that the catch-effort might be falling--direct comparisons were impossible due to differences in mesh size of the gillnets. Whitefish in the lake were observed to grow faster than those in Great Bear or Great Slave lakes. In 1972, DFO recommended that a decision be made on whether to continue the commercial fishery or to exploit the lake as a sport fishery. If the commercial fishery was to continue, they recommended that: the quota and number of fishermen be reduced, 158 mm stretched mesh gillnets (6.5") be used exclusively, cullage be directed to meet subsistence requirements, fishing zones be established for the lake to more evenly distribute fishing effort, rotational fishing be considered, and that there be continued monitoring of the fishery by DFO. DFO also sampled fish from near the outflow to Lac la Martre, between 19 May and 21 September 1975, as part of a study of a baseline study of fishes in Rivière la Martre (see below). Northern pike, lake whitefish, and longnose sucker were the main species caught. The fish were sampled for biological data on growth, reproduction, and diet. (Laird 1961; Libosvasky 1970; Bond 1973; Johnson 1973, 1976; Healey 1975; Moshenko 1980; Chang-Kue et al. 1987)</p> <p>An Indian Affairs Branch survey estimated that families from the Rae Trading Area harvested 43,000 fish from Lac la Martre for subsistence, in 1962. DFO surveyed twenty-one Wha Ti families for information on their subsistence use of fish, between 5 July and 25 August 1972.</p>

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Lac la Martre--continued.			<p>Based on these summer data they estimated that community residents ate a total of 45,018 kg of fish annually, and fed another 54,736 kg annually to their dogs. Whitefish, followed by lake trout, were the main species consumed. Many of the smaller lakes (e.g. Clive 63°12'N, 118°55'W; Lac Tempier 63°34'W, 118°29'W) around Lac la Martre have been fished for subsistence by hunters and trappers from Wha Ti, Rae-Edzo, and/or Rae lakes. (Keleher and Haight 1964; Sinclair et al. 1967; Anders 1969; Bond 1973; NLUIS 85M)</p> <p>Meni Deni Lodge operates a trophy sport fishery on Lac la Martre (Table 2). In 1995, the lodge requested an increase in guest-bed capacity from 20 to 25 beds. DFO estimated the guest-bed capacity of Lac La Martre for a high quality lake trout sport fishery at 53 beds, and supported the lodges' request. (A.C. Day and G. Low, pers. comm.)</p> <p>Mercury levels in lake trout and lake whitefish flesh, measured in 1970-73, were within the recommended safe limits for commercial sale (i.e. <0.5 mg per kg wet wt). (Tam and Armstrong 1972; Desai-Greenway and Price 1976).</p>
Lac Levis			See above Horn River.
Lac Tache			See RAE LAKES--Lac Tache.
Lac Tempier			See above Lac la Martre.
Mazenod Lake			See RAE-EDZO--Mazenod Lake.
Rivière Grandin			See RAE LAKES--Rivière Grandin.
Rivière la Martre			<p>Rivière la Martre drains Lac la Martre and Boyer Lake (see above) into the Marian River system which flows into the North Arm of Great Slave Lake. In 1975, Northern Canada Power Corporation (NCPC) identified la Martre Falls as a potential hydroelectric generating site. In response, DFO surveyed fish populations in the river, above and below Boyer Lake, between May and September 1975. Fifteen species of fishes were captured (see Appendix 1) and sampled for biological data on growth, reproduction, and diet. Floy tags were also placed on fish of a variety of species in the upper and lower reaches of the river. Only walleye in the lower reaches of the river were found to make significant up or down stream movements during the course of the study. To date the hydroelectric development has not proceeded. DFO researchers are now investigating whether inconnu migrate up the system from Great Slave Lake, via Marian Lake, to spawn. (Chang-Kue et al. 1987; G. Low, pers. comm.)</p>
Sarah Lake			See RAE-EDZO--Sarah Lake.
YELLOWKNIFE-DETAH			In 1988, Lutra Associates Ltd. surveyed a few residents of Detah for information on their subsistence harvests. They did not estimate the annual harvest. (Lutra Associates Ltd. 1989; Rawson Academy of Aquatic Science 1990)
Akaitcho River 62°49'N, 111°11'W			Arctic grayling spawn in the lower reaches of the Akaitcho River in spring. The river mouth is fished by anglers from nearby lodges on Great Slave Lake. (NLUIS 75L)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Alexie Lake			See below Chitty Lakes.
Angus Lake 63°27', 111°57'W	lake trout + whitefish 1,400		This headwater lake in the Great Slave Lake drainage basin has no record of commercial harvest.
Awry Lake 62°56'N, 114°57'W			In 1979, DFO estimated the guest-bed capacity of Awry Lake for a low quality lake trout sport fishery at 4 to 6 beds. (M. Falk, pers. comm.)
Aylmer Lake 64°05'N, 108°30'W			In 1977, an experimental gillnet fishery sampled lake trout from this lake on the Lockhart River system. Rapids on the Earl Grey River, which flows into Aylmer Lake, provide excellent summer habitat for Arctic grayling. MacKay lake Lodge operates an outpost camp on Aylmer Lake (Table 2). In 1992, DFO estimated the guest-bed capacity of Aylmer Lake for a high quality lake trout sport fishery at 25 to 50 beds, provided the lodge restricts the lake trout harvest to 16 kg per angler and fishing effort is spread evenly over the lake. (Stewart and MacDonald 1978; NLUIS 76C; A.C. Day and G. Low, pers. comm.)
Back Lake 63°51'N, 109°18'W			This lake on the Lockhart River system has been fished for subsistence by residents of Yellowknife-Detah in conjunction with winter hunting and trapping activities. Mercury levels in the flesh of a lake trout, lake whitefish, and cisco sp. sampled by DFO in 1971-73, were within the recommended safe guidelines for human consumption. (Desai-Greenway and Price 1976; NLUIS 75N)
Baker Creek 62°30'N, 114°22'W			In 1972, DFO found the discharge from Baker Creek, into Yellowknife Bay, to be acutely toxic to fish. Water quality analyses showed that the Giant Mine was discharging high levels of arsenic, copper, and zinc via the creek into Yellowknife Bay of Great Slave Lake. A biological, sediment, and water quality survey was conducted by Environment Canada between 1974 and 1977 to determine the impact of the operations of Giant Yellowknife Mines Ltd. on Baker Creek and Yellowknife Bay near the creek mouth. The discharge of effluents from the tailings ponds of the mine had caused a marked elevation in the concentration of toxicants in Baker Creek water (e.g. arsenic and cyanide) and in the sediments of Yellowknife Bay up to 3 km from the creek mouth. They recommended that tailings pond effluent be improved so that water in Baker Creek is not deleterious to fish or fish habitat and, following that, creek restoration. A 1995 study of the quality of water, sediment, and fish in Yellowknife Bay found elevated levels of contaminants in bottom sediment near the mine and in water at the outlet of Baker Creek. Elsewhere in Yellowknife Bay the water quality was within the Canadian Water Quality Guidelines for raw drinking water, although boiling was recommended to kill bacteria. Detailed results from the fish tissue analyses have yet to be reported. (Falk et al. 1973a+b; Moore et al. 1978b; Jackson et al. 1995; F. Jackson, pers. comm.)
Banting Lake 62°39'N, 114°18'W			Banting Lake is situated about 25 km north of Yellowknife, and accessible from the Crestaurum Road. DFO described the lake morphometry and sampled the water chemistry and fish of Banting Lake in the summers of 1973 and 1974. Data were collected on catch-effort and growth of gillnetted lake cisco, lake trout, lake whitefish and northern pike. Ninespine stickleback and spottail shiner were also captured by seine haul. In 1979, DFO conducted a questionnaire survey of anglers at Banting Lake. (Falk 1979a, 1981)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Baptiste Lake			See below Chitty Lakes.
Bartson River 62°57'N, 110°09'W			Arctic grayling spawn in the lower reaches of the Bartson River in spring. The river mouth is fished by anglers from nearby lodges on Great Slave Lake. (NLUIS 75L)
Beaulieu River 62°08'N, 113°09'W			This tributary of Great Slave Lake is a migration route and spawning area for Arctic grayling and walleye. (NLUIS 85I)
Bedford Lake 62°58'N, 109°31'W			Bedford Lake have been fished for subsistence and sport. (NLUIS 75K+N)
Beniah Lake 63°24'N, 112°17'W	lake trout + whitefish 5,700	1969--lake trout + lake whitefish 512 kg; 1991-93--NF.	Hunters and trappers from Yellowknife-Detah have fished for subsistence at this lake on the Beaulieu River. A commercial harvest of lake trout and lake whitefish was taken from Beniah Lake in 1969. The lake was opened for commercial harvest in 1991-93, but not fished. DFO sampled lake trout and lake whitefish from Beniah Lake in 1963. (Moshenko 1980; Yaremchuk et al. 1989; DFO 1993, 1994, 1995; NLUIS 85P)
Benjamin Lake 63°11'N, 110°39'W			This lake on the Waldron River has been fished for subsistence and sport. (NLUIS 75M)
Bighill Lake 62°30.5'N, 114°02'W			Residents of Yellowknife-Detah fish for subsistence at Bighill Lake, which also supports a moderate sport fishery. Lake trout, northern pike, and whitefish are the main species harvested. (S. Harbicht and G. Pryznyk, pers. comm.)
Blaisdelle Lake 62°47'N, 113°34'W	lake trout + whitefish 800	1964--lake trout 65 kg, lake whitefish 592 kg; 1981--lake trout + lake whitefish 905 kg; 1983--lake trout 90 kg, lake whitefish 90 kg.	This lake near the Ingraham Trail drains into Great Slave Lake. Small commercial harvests of lake trout and lake whitefish were taken from the lake in 1964, 1981, and 1983. (Sinclair et al. 1967; Yaremchuk et al. 1989)
Blachford Lake (Blatchford Lake) 62°11'N, 112°35'W	lake trout + whitefish 1,500 northern pike --no quota There is a voluntary quota of 212 lake trout on the sport harvest of fish from Blachford Lake by guests of Blachford Lake Lodge.	1971--lake trout 6,118 kg, lake whitefish 4,893 kg. <u>By-catch:</u> 1971--northern pike 32 kg. <u>Sport harvest:</u> see Table 3. Blachford Lake Lodge.	Blachford Lake drains into the Hearne Channel of Great Slave Lake. In 1963, DFO sampled lake trout and lake whitefish from Blachford Lake. In 1971, a commercial fishery harvested lake trout, lake whitefish, and northern pike from the lake. Blachford Lake Lodge operates a sport fishery on Blachford and Grace lakes (see below and Tables 2 + 3). Lake trout, northern pike, walleye and whitefish spp. are the main species sought. The lodge offers both summer and winter fishing. The lodge owners conducted angler diary surveys of their guests for DFO from 1983-95. In 1992, the lodges' guest-bed capacity was increased from 10 to 25 beds. In order to maintain the medium quality sport fishery, DFO recommended a lodge quota of 212 lake trout for Blachford Lake and a reduction of the daily catch and possession limits to 2 and 3, respectively, for lake trout, northern pike and walleye. (Moshenko 1980; Yaremchuk et al. 1989; DFO 1991, 1992a+b, 1993, 1994, 1995; A.C. Day and G. Low, pers. comm.; DFO unpubl. data) (See also Table 4: G. Melville)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Bluefish Lake 62°41.5'N, 114°16'W			Residents of Yellowknife fish for sport at Bluefish Lake, which is accessible via Prosperous Lake in the summer or via winter road. There is a dam and powerhouse on the Yellowknife River at the lake outlet. The Yellowknife River (see below), between Prosperous Lake (see below) and Bluefish Lake is closed to sport fishing from 1-30 September (P.C. 1987-1677) to protect spawning lake trout from Prosperous Lake. (NLUIS 85J; S. Harbicht, pers. comm.)
Buckham Lake 62°18'N, 112°37'W	lake trout + whitefish 1,900		Hunters and trappers from Yellowknife-Detah have fished for subsistence at Buckham Lake. No record of commercial harvest. DFO sampled lake trout and lake whitefish from Buckham Lake in 1963. In 1988, DFO estimated the guest-bed capacity of Buckham Lake for a high quality sport fishery at 3 to 6 beds. (Moshenko 1980; NLUIS 85I; M. Roberge, pers. comm.)
Bullmoose Lake 62°20'N, 112°45'°			In 1985, aquatic studies were conducted to identify the potential impacts from the Terra Mines operation on fish in Bullmoose Lake and Bullmoose Creek and Skeeter Lake (see below). (Spencer Environmental Management Services Ltd. 1987) (see also Table 4: R. Spencer)
Cameron River 62°35'N, 114°09'W	freshwater molluscs [1,000]		Arctic grayling spawn in the Cameron River and use it as a migration route and summering area. An experimental SCUBA fishery collected a small sample of freshwater molluscs from the Cameron River in the summer of 1992 for quality testing. (DFO 1994; NLUIS 85I) (see also Table 4: J. Foltyn)
Campbell Lake 62°20'N, 112°57'W			This lake on the Beaulieu River system supports lake trout, lake whitefish, northern pike, and sucker sp. Hunters and trappers from Yellowknife-Detah have fished for subsistence at Campbell Lake. (NLUIS 85I)
Camsell Lake 63°35'N, 111°15'W	lake trout + whitefish 9,100		This headwater lake of the Lockhart River system, which drains into the East Arm of Great Slave Lake, has no record of commercial harvest. In 1995, Caribou Pass Outfitters of Yellowknife, which conducts caribou hunts from a temporary camp on Jolly Lake (see below Jolly Lake), expressed interest in obtaining an outfitters licence for sport fishing at Camsell Lake. Lake trout were to be the main species sought. DFO estimated the guest-bed capacity of Camsell Lake for a high quality lake trout sport fishery at 5 to 10 beds. (A.C. Day, pers. comm.)
Camsell River			See RAE LAKES--Camsell River.
Chedabucto Lake			See RAE-EDZO--Chedabucto Lake.
Chipp Lake 62°28'N, 112°38'W	lake trout + whitefish 4,500 walleye--no quota	1970--lake trout 2 kg, lake whitefish 7,496 kg. <u>By-catch:</u> 1970--walleye 182 kg.	A commercial fishery for lake trout, lake whitefish, and walleye was conducted at this lake, which drains into Great Slave Lake, in 1970. (Yaremchuk et al. 1989)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Chitty Lakes			These four small lakes north of Yellowknife, Alexie (62°41'N, 114°05'W), Baptiste (62°42'N, 114°13'W), Chitty (62°55'N, 114°07'W) and Drygeese (62°44'N, 114°10'W), have been used from 1971-91 to study the effects of exploitation on the dynamics of lake trout and lake whitefish populations. Major croppings of lake whitefish took place in 1973-74 (9,724 kg) and 1985-89 (7,191 kg). Lakes harvested at rates greater than 0.56 kg per ha showed evidence of overexploitation, including dramatic declines in the catch per unit effort. Left undisturbed, the exploited stocks recovered in 10-12 years. DFO studied the genetics of lake whitefish in the lakes in the early 1970's, and sampled slimy sculpin from Chitty Lake for arsenic in 1975, and burbot from Alexie Lake for organochlorines in 1993-94. Baptiste Lake is a popular sport fishery, while the other Chitty Lakes are subject only to light sport-fishing pressure. (Healey 1973, 1975, 1978a-c, 1980; Healey and Woodall 1973a; Healey and Kling 1975; Healey and Nichol 1975; Franzin and Clayton 1977; Wagemann et al. 1978; Bodaly et al. 1992; Muir et al. 1994; G. Pryznuk, pers. comm.) (see also Table 4: E. Gyselman and B. Hunt)
Cleft Lake 62°29'N, 112°45'W			In 1981, DFO recommended against establishing a sport fishing lodge on this small lake. (M. Roberge, pers. comm.)
Cook Lake 63°13'N, 108°46'W			Cook Lake on the Hoarfrost River has been fished for subsistence and sport. (NLUIS 75N)
Courageous Lake 64°10'N, 111°15'W			Norecol Environmental Consulting Ltd. sampled fish from this lake on the Lockhart River in 1987, as part of the environmental studies for the Noranda/Getty Tundra Gold Project. Qaivvik Ltd. operates a sport fishing lodge on Courageous Lake (Table 2). In 1988, DFO estimated the guest-bed of Courageous Lake, for a high quality lake trout sport fishery, at 10 to 15 beds. (Norecol Environmental Consulting Ltd. 1987; M. Roberge, pers. comm.) (see also Table 4: B. Ott)
Crapaud Lake 62°56'N, 114°01'W	lake trout + whitefish 400	1973--lake trout + lake whitefish 693 kg.	A small commercial harvest of lake trout and lake whitefish was taken, in 1973, from this lake which drains into the North Arm of Great Slave Lake via the Yellowknife River. (Yaremchuk et al. 1989)
David Lake 62°32'N, 114°22'W	lake whitefish --no quota	1967--lake whitefish 1,364 kg.	A small experimental harvest of lake whitefish was taken from this lake near Yellowknife in 1973. (Yaremchuk et al. 1989)
Defeat Lake 62°20'N, 113°38'W	lake trout + lake whitefish--no quota	1964--lake trout 2,739 kg, lake whitefish 7,288 kg; 1972--lake trout + lake whitefish 6,804 kg; 1973--lake trout 3,005 kg, lake whitefish 5,214 kg.	Anglers from Yellowknife fish for sport at Defeat Lake. While the extent of this fishery is unknown, it is expected to increase in the future given the lakes' proximity to the city. In Increasing fishing pressure and the lakes' small size led DFO, in 1992, to recommended against the establishment of a sport fishing lodge in the area. Experimental harvests of lake trout and lake whitefish were taken from this lake near Yellowknife in 1964, 1972, and 1973. Hunters and trappers from Yellowknife-Detah have fished for subsistence at Defeat Lake. (Yaremchuk et al. 1989; NLUIS 85I; A.C. Day and G. Low, pers. comm.)
Desperation Lake 62°35'N, 112°45'W	lake trout + whitefish 1,500	1963--lake trout 2,134 kg, lake whitefish 2,404 kg.	Lake trout and lake whitefish were harvested commercially from this lake, which drains into Great Slave Lake, in 1963. DFO sampled both species. Hunters and trappers from Yellowknife-Detah have fished for subsistence at Desperation Lake. (Sinclair et al. 1967; Moshenko 1980; Yaremchuk et al. 1989; NLUIS 85I)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Desteffany Lake 64°37'N, 111°40'W			In 1991, interest was expressed in developing a fishing lodge at Desteffany Lake. DFO estimated the guest-bed capacity of Desteffany Lake for a high quality lake trout sport fishery at 2 to 3 beds, too few to support a viable lodge. (A.C. Day and G. Low, pers. comm.)
Dome Lake 62°46'N, 113°16'W			See below Pensive Lakes.
Drybones Lake 63°31'N, 112°24'W			Hunters and trappers from Yellowknife-Detah have fished for subsistence at this lake on the Beaulieu River. (NLUIS 85P)
Drygeese Lake 62°44'N, 114°10'W	lake trout + lake whitefish--no quota	1973--lake trout 286 kg, lake whitefish 737 kg.	A small experimental harvest of lake trout and lake whitefish was taken from this lake north of Yellowknife in 1973. (Yaremchuk et al. 1989)
Duchess Lake 64°42'N, 110°07'W			In 1991, interest was expressed in developing a fishing lodge at Duchess Lake, a small lake which drains into Lac du Gras. DFO estimated the guest-bed capacity of Duchess Lake for even a low quality lake trout fishery at 2 to 3 beds, too few to support a viable lodge. (A.C. Day and G. Low, pers. comm.)
Duck Lake 62°26'N, 114°14'W			This lake near Detah is fished for subsistence and sport by residents of Detah. (S. Harbicht, pers. comm.)
Duncan Lake 62°51'N, 113°58'W	lake trout + lake whitefish--no quota	1971--lake trout 211 kg, lake whitefish 102 kg, northern pike 3 kg;	Small commercial harvests were taken from Duncan Lake in the late 1960's and early 1970's. DFO described the lake morphometry and sampled the water chemistry, plankton, benthos, and fish of Duncan Lake between 27 June and 2 July 1972. Data were collected on the growth and diet of the Arctic grayling, lake trout, lake whitefish, and northern pike captured from the lake. The trout had eaten sculpin sp. and cisco sp. Hunters and trappers from Yellowknife-Detah have fished for subsistence at Duncan Lake. Anglers catch Arctic grayling, lake trout, and northern pike for sport at the lake. A sport fishing lodge, Yellowknife Lodge, has operated at Duncan Lake (Table 2). In 1981, DFO estimated the guest-bed capacity of the lake, for a medium quality lake trout sport fishery, at 3 to 5 beds. (Falk 1979b; Davies et al. 1987; NLUIS 85I; M. Roberge, pers. comm.)
Dunnet Lake 62°42'N, 114°05'N			DFO conducted a limnological survey of this lake on the Yellowknife River system in 1971. Fish species captured included lake cisco, lake whitefish, longnose sucker, ninespine stickleback, and northern pike. (Healey and Woodall 1973b)
Egg Lake 62°30.5'N, 114°01'W			Residents of Yellowknife visit this small lake south of the Ingraham Trail by snowmobile via Bighill Lake, in late winter to fish for sport. The lake is subject to moderate to heavy sport fishing pressure. Northern pike and walleye are the main species taken. (G. Pryzyk, pers. comm.)
Fiddlers Lake 62°28'N, 114°30'W			DFO sampled lake whitefish and northern pike from Fiddlers Lake, which is accessible from Highway 3, in 1979-80. The lake has been part of the Yellowknife sewage treatment facility since about 1982. Because of this, it becomes anoxic in winter and no longer supports fish year-round. Some fish may move into the lake in summer, but they do not survive through the year. (Roberge and Gillman 1986; S. Harbicht, pers. comm.)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Fishing Lake 63°13'N, 114°15'W			Fishing Lake is heavily used in summer by itinerant anglers who fly in from Yellowknife (estimated 6-10 per weekend). In 1986, DFO recommended against the establishment of a lodge on the lake. In 1995, Yellowknife Outdoor Adventures Ltd. requested an outfitters licence to operate a sport fishery for Arctic grayling and lake trout at Fishing Lake. At that time, DFO estimated the guest-bed capacity of Fishing Lake for a medium quality lake trout sport fishery at 1 bed. (A.C. Day, G. Low, and D. Moshenko, pers. comm.)
Frame Lake 62°27'N, 114°24'W			DFO conducted a limnological survey of this lake, which lies within the residential area of Yellowknife, in 1971. No fish were caught during limited test netting. The lake becomes anoxic in winter. (Healey and Woodall 1973b; S. Harbicht, pers. comm.)
Francois Lake 62°27'W, 112°22'N			Hunters and trappers from Yellowknife-Detah have fished for subsistence at Francois Lake. (NLUIS 85I)
Giauque Lake 63°11'N, 113°50'W			The milling operations of Discovery Mine deposited tailings containing mercury and other heavy metals directly into Giauque Lake, on the McCrear River, between 1965 and 1968. Some tailings from earlier operations, 1944-64, also drained into the lake. In 1976-77, an Environment Canada survey of the biological, sediment, and water quality found that the total mercury levels in the flesh of lake trout (1.38-12.3 mg per kg wet weight), longnose sucker (0.72-3.15), northern pike (0.55-4.80), and round whitefish (0.44-2.64) in Giauque Lake far exceeded the maximum safe limit for human consumption (i.e. 0.2 subsistence; 0.5 commercial) recommended by National Health and Welfare. About 75% of the bottom of Giauque Lake was contaminated with mercury and other heavy metals. This had resulted in a marked reduction in the density of bottom invertebrates, but the water of the lake contained very low concentrations of all metals. While the sediments and water of lakes upstream and downstream of Giauque Lake were not contaminated by mercury, the largest lake trout from these lakes had 0.9 to 2.9 mg per kg mercury in their flesh. Environment Canada recommended that: 1) fish from Giauque Lake not be used for human consumption; 2) mercury levels in fish from the adjacent lakes be monitored if fisheries develop on them; 3) the erosion of tailings into Giauque Lake be stopped; 4) mercury contamination in Giauque, Thistlethwaite, and Wagenitz lakes be monitored at least every five years; and 5) that the tailings in Giauque Lake not be disturbed. At writing, the Department of Indian and Northern Affairs was preparing to publish a follow-up study of mercury and other metals in water, sediment and fish from Giauque Lake. The study found that deposition of mercury to the lake sediment is still occurring. Based upon tissue mercury analyses of fish from the lake, the Health Protection Branch has recommended consumption guidelines for 5 species of sport fish from Giauque Lake. New mining operations are expected in the area during the next few years. (Moore et al. 1978a; Moore and Sutherland 1980; W. Coedy and G. Pryznky, pers. comm.)
Glowworm Lake 64°45'N, 109°18'W			In 1977, an experimental gillnet fishery sampled lake trout from this lake on the Back River system. (Stewart and MacDonald 1978)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Gordon Lake 63°03'N, 113°12'W	lake trout + whitefish 6,300 northern pike --no quota	1963--lake trout 25,071 kg, lake whitefish 35,889 kg; 1964--lake trout 8,846 kg, lake whitefish 11,902 kg; 1969--lake trout 21,209 kg, lake whitefish 42,036 kg; 1970--lake trout 22,209 kg, lake whitefish 47,465 kg; 1971--lake trout + lake whitefish 15,263 kg. <u>By-catch:</u> 1970--northern pike 49 kg. <u>Sport Harvest:</u> 1981--520 lake trout (874 kg) 0.6 fish per angler hour, 10 northern pike.	<p>Gordon Lake has been exploited by subsistence, commercial, and sport fisheries. Hunters and trappers from Yellowknife-Detah have fished for subsistence at Gordon Lake. No data are available on the annual subsistence harvest which DFO has estimated at between 1,300 and 2,700 kg. Large commercial harvests of lake trout and lake whitefish were taken from Gordon Lake in 1963-64 and 1969-71. Katimavik Lodge began operating a sport fishery on the lake in 1978 (Table 2). DFO conducted a creel census, experimental gillnet fishery, and tagging studies at Gordon Lake in 1981. Data were collected on catch-effort, growth, and reproduction. Lake whitefish, lake trout, longnose sucker and northern pike, listed in order of catch frequency, were the main species caught. A creel census of lodge guests was conducted between 25 June and 14 July (Table 3). The winter road to the Lupin Mine runs the length of Gordon Lake. The amount of winter sport fishing at the lake is unknown. (Keleher and Haight 1964; Sinclair et al. 1967; Roberge and Read 1986; Yaremchuk et al. 1989; NLUIS 85I+P; G. Low and G. Pryznky, pers. comm.)</p> <p>Camlaren Mine and two mining exploration sites are located on Gordon Lake. The mine operated in 1937-38, 1962-63, and 1980-81. The Cadillac exploration site on the east shore was licenced in 1980 but has not been worked. Exploratory work was carried out at the other site on Burnt Island in 1939 and in the 1940's. (Roberge and Read 1986)</p> <p>In 1970, lake trout and lake whitefish from Gordon Lake were sampled for organochlorine contaminants. Low levels of DDT and dieldrin were detected. Mercury levels measured in the flesh of a lake trout, lake whitefish, and walleye from the lake, in 1970-73, were within the safe limit recommended for human consumption. Environment Canada sampled fish in the lake in 1980, and studied the effects of a cyanide leak from the tailings pond in 1981. (Reinke et al. 1972; Desai-Greenway and Price 1976; Moore et al. 1978c; Lockhart et al. 1992; DFO unpubl. data)</p>
Grace Lake (near Yellowknife) 62°25'N, 114°27'W			DFO conducted a limnological survey of this lake, which lies within the Yellowknife city limits, in 1971. Fish species captured included burbot, lake cisco, lake whitefish, ninespine stickleback, northern pike, and walleye. In 1975, DFO sampled water, sediment, and biota--including slimy sculpin, from Grace Lake for arsenic. In 1979, DFO conducted a questionnaire survey of anglers at the lake. Local anglers harvest northern pike from Grace Lake. (Healey and Woodall 1973b; Wagemann et al. 1978; Falk 1981; NLUIS 85J; S. Harbicht, pers. comm.)
Grace Lake (near Blachford Lake) 62°10'N, 112°33'W			Blachford Lake Lodge has operated a sport fishery on this nearby lake since at least 1983 (Tables 2 + 3). Walleye and northern pike are the main species sought. The lodge, situated on Blachford Lake (see above), offers both summer and winter fishing. In 1992, its guest-bed capacity was increased from 10 to 25 beds. In order to maintain the medium quality fishery, DFO recommended a lodge quota of 121 walleye for Grace Lake and a reduction of the daily catch and possession limits to 2 and 3, respectively, for lake trout, northern pike and walleye. (A.C. Day and G. Low, pers. comm.)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Graham Lake 62°54'W, 113°48'W	lake trout, lake whitefish, northern pike + walleye --no quota	1970--lake trout 1,316 kg, lake whitefish 2,294 kg, northern pike 3,199 kg, walleye 258 kg; 1971--lake trout 516 kg, lake whitefish 8,273 kg.	Anglers catch Arctic grayling, lake trout, and northern pike for sport at this lake north of Yellowknife. Most sport use of the lake is by anglers from Yellowknife Lodge Limited's fishing lodge which is situated at a small river between Duncan and Graham lakes (Table 2; see also Graham Lake below). Experimental harvests of lake trout, lake whitefish, northern pike, and walleye were taken from Graham Lake in 1970 and 1971. In 1981, DFO estimated the guest-bed capacity of the Lake, for a medium quality lake trout sport fishery, at 1 to 2 beds and recommended against the establishment of a lodge at the lake. (Yaremchuk et al. 1989; NLUIS 85I; D. Moshenko and M. Roberge, pers. comm.)
Greenstockings Lake 64°27.5'N, 113°12'W			In 1977, an experimental gillnet fishery sampled lake trout and lake whitefish from this headwater lake of the Yellowknife River system. (Stewart and MacDonald 1978)
Grizzle Bear Lake 64°12'N, 112°55'W			In 1977, an experimental gillnet fishery sampled lake trout from this headwater lake of the Snare River system. (Stewart and MacDonald 1978)
Harding Lake 62°22'N, 113°22'W	lake trout, lake whitefish, northern pike--no quota	1966--lake trout 633 kg, lake whitefish 1,324 kg; 1967--lake trout 3,248 kg, lake whitefish 4,324 kg, northern pike 470 kg; 1972--lake trout + lake whitefish 8,618 kg.	Experimental harvests of lake trout, lake whitefish, and northern pike were taken from this lake, which drains into Great Slave Lake, in the late 1960's and early 1970's. More recently, the lake has been fished for sport and subsistence. DFO described the lake morphometry and sampled the water chemistry, plankton, benthos, and fish of Harding Lake between 14 and 25 July 1971. Data were collected on the growth and diet of the lake trout, lake whitefish, and northern pike captured from the lake. Namushka Lodge (1982) Ltd. operates a sport fishing lodge on Harding Lake (Table 2). In 1987, DFO reviewed the guest-bed capacity of Harding Lake and recommended that it not be increased from 12 beds. The lake is also fished by itinerant sport fishermen. (Falk 1979b; Yaremchuk et al. 1989; NLUIS 85I; D. Dowler and M. Roberge, pers. comm.)
Hearne Lake 62°18'N, 113°08'W			Hunters and trappers from Yellowknife-Detah have fished for subsistence at this lake on the Beaulieu River. It supports populations of Arctic grayling, burbot, lake trout, lake whitefish, northern pike, and walleye. DFO sampled lake trout and lake whitefish from Hearne Lake in 1963 and 1975. Hearne Lake Lodge operates a sport fishery at Hearne Lake (Table 2) (Moshenko 1980; NLUIS 85I; DFO unpubl. data)
Helmer Lake 62°50'N, 114°03'W	lake trout + whitefish 700 northern pike --no quota	1964--lake trout 1,347 kg, lake whitefish 2,648 kg; 1969--lake trout 916 kg, lake whitefish 6,109 kg; 1973--lake trout 764 kg, lake whitefish 2,363 kg. <u>By-catch:</u> 1969--northern pike 8 kg.	Commercial harvest of lake trout and lake whitefish were taken from Helmer Lake, northeast of Yellowknife, in 1964, 1969, and 1973. (Yaremchuk et al. 1989)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Hidden Lake 62°33'N, 113°35'W	lake trout + lake whitefish--no quota	1963--lake trout 711 kg, lake whitefish 1,172 kg; 1967--lake trout 136 kg, lake whitefish 2,586 kg; 1968--lake whitefish 578 kg.	Hidden Lake is situated about 45 km east of Yellowknife along the Ingraham Trail Highway. It is a popular canoeing and weekend excursion site, accessible by canoe from the north side of the highway via the Cameron River. Hunters and trappers from Yellowknife-Detah have fished for subsistence at Hidden Lake. Experimental harvests of lake trout and lake whitefish were taken from Hidden Lake in 1963, 1967, and 1968. In 1961, DFO sampled burbot, lake cisco, lake trout, lake and round whitefish, longnose sucker, and northern pike from the lake. DFO described the lake morphometry and sampled the fish in the summers of 1973 and 1974. Data were collected on catch-effort and growth of gillnetted burbot, lake trout, lake whitefish and northern pike. Ninespine stickleback and spottail shiner were also captured by seine haul. In 1978, Environment Canada measured mercury levels in the flesh of lake trout and lake whitefish from Hidden Lake, both species were within the recommended safe levels for human consumption. In 1979, DFO conducted a questionnaire survey of anglers at Hidden Lake and, in 1980, sampled fish from the lake. A territorial park may be established at the lake. (Sinclair et al. 1967; Falk 1979a, 1981; Moore and Sutherland 1980; Moshenko 1980; Yaremchuk et al. 1989; NLUIS 851; D. Moshenko and G. Pryznyk, pers. comm.)
Hoarfrost River 62°54'N, 109°14'W			Arctic grayling spawn near the mouth of the Hoarfrost River in spring. (NLUIS 75K)
Icy River 64°33'N, 108°35'W			In 1977, an experimental gillnet fishery sampled Arctic grayling and lake trout from this tributary of the Back River. Arctic grayling and longnose sucker migrate up the river in spring to spawn. (Stewart and MacDonald 1978; NLUIS 76C)
Ingraham Trail Lakes			<p>Lakes near the Ingraham Trail Highway, east of Yellowknife, are readily accessible from the city either directly from the highway or via connecting lakes or winter roads. Many of them are popular year-round fishing spots with a history of harvest that includes subsistence, sport and/or commercial fishing; some support cottage developments, sport fishing lodges, and/or campgrounds. The larger lakes are discussed individually either above (e.g. Blaisdelle, Egg, Hidden) or below (e.g. Madeline, Pickerel, Pontoon, Prelude, Prosperous, Reid, Ross, Upper Terry, Lower Terry, Thompson, Tibbit, Victory).</p> <p>DFO collected baseline limnological and biological data from forty-one (41) small lakes along the Ingraham Trail Highway in 1979-80. The purpose of this study was to investigate whether fishing pressure on the larger lakes accessible from the highway might be reduced by creating new fishing opportunities at these smaller lakes. Of these lakes, only "Mist" (62°32.5'N, 113°53'W), Peninsula (see below), "Stewart" (62°31'N, 113°48'W), "Stirling" (62°31'N, 113°45'W), and "Tasha" (62°33'N, 114°03'W) were found to support game fish. (Roberge and Gillman 1984)</p> <p>From 1984 through 1988, many tiny, headwater lakes near the Ingraham Trail Highway were assessed to determine whether they were suitable for stocking with rainbow trout and/or Arctic charr. Since then, 13 of the lakes have been stocked (see below Jackfish Lake, unnamed lakes, Upper Cabin Lake). Other unnamed lakes which were sampled using gillnets and found</p>

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Ingraham Trail lakes-- Continued.			to support fish included: <u>burbot</u> --"Lake M" (62°35'36"N, 113°18'15"W); <u>cisco sp.</u> --"IT-51" (62°33'30"N, 113°58'30"W); <u>longnose sucker</u> , <u>northern pike</u> , <u>white sucker</u> , <u>walleye</u> --"Lake L" (62°26'32"N, 113°20'30"W); <u>northern pike</u> --"IT-7" (62°30'45"N, 113°54'40"W), "IT-8" (62°31'15"N, 113°52'42"W), "IT-26" (62°30'50"N, 113°28'15"W), "IT-35" (62°32'05", 113°35'05"W), "IT-39" (62°31'45", 113°38'35"W), "IT-41" (62°35'N, 113°51'10"W); "IT-55" (62°31'50"N, 113°33'35"W); <u>northern pike and whitefish</u> --"Lake K" (62°28'50"N, 113°36'15"W), "IT-3" (62°30'20", 113°58'30"W), "IT-22" (62°27'15"N, 113°24'45"W), "IT-37" (62°32'20"N, 113°36'55"W), "IT-40" (62°31'30"N, 113°42'40"W), "IT-50" (62°33'25"N, 113°58'50"); <u>walleye and whitefish</u> --"Lake A" (113°23'N, 62°32'45"W); <u>whitefish sp. and cisco sp.</u> --"Lake O" (62°19'46"N, 112°46"W). Lakes supporting northern pike were deemed to be unsuitable for stocking. (G. Low, pers. comm.; DFO/GNWT, unpubl. data)
"Jackfish Lake"			See below Stock Lake.
Jackson Lake 62°35'N, 114°18'W			In 1970, whitefish from Jackson Lake were sampled for organochlorine contaminants. Trace amounts of DDT and Dieldrin were measured. In 1985, a DFO experimental fishery sampled burbot, northern pike, and whitefish from the lake. (Reinke et al. 1972; G. Low, pers. comm.)
Jenniejohn Lake 62°25'N, 113°45'W			Hunters and trappers from Yellowknife-Detah have fished for subsistence at Jenniejohn Lake. An annual sport fishing derby has been conducted at the lake since 1993. (NLUIS 85I; G. Pryzynek, pers. comm.)
Johnson Lake 62°59'W, 114°12'W	lake trout, lake whitefish, northern pike, walleye --no quota	1960--lake trout 17 kg, walleye 1,327 kg; 1964--walleye 667 kg; 1970--walleye 139 kg; 1971--walleye 138 kg; 1972--lake whitefish 6,529 kg, northern pike 436 kg, walleye 2,346 kg; 1976--walleye 327 kg.	Johnson Lake is a popular site for walleye sport fishing by Yellowknife residents in March and April, and from immediately after spring breakup through the summer. Experimental harvests of lake trout, lake whitefish, northern pike and walleye were taken from this lake north of Yellowknife in the 1960's and 1970's. Burbot and cisco sp. are also present in the lake. Mercury levels in the flesh of a lake whitefish sampled by DFO in 1971-73, were within the recommended safe guidelines for human consumption. (Sinclair et al. 1967; Desai Greenway and Price 1976; Yaremchuk et al. 1989; NLUIS 85J; D. Moshenko and G. Pryzynek, pers. comm.)
Jolly Lake 64°08'N, 111°55'W			In 1995, Caribou Pass Outfitters of Yellowknife, which conducts caribou hunts from a temporary camp on Jolly Lake, expressed interest in obtaining an outfitters licence for sport fishing at Jolly and Camsell lakes (see above Camsell Lake). Lake trout were to be the main species sought. DFO estimated the guest-bed capacity of Jolly Lake for a high quality lake trout sport fishery at 3 to 5 beds. (A.C. Day, pers. comm.)
Jolly River 64°08'N, 111°40'W			In 1977, an experimental fishery sampled Arctic grayling, lake trout, lake whitefish, and longnose sucker from this tributary of the Lockhart River. (Stewart and MacDonald 1978)
Jones Lake 63°05'W, 113°43'W	lake trout + lake whitefish--no quota	1968--lake trout 609 kg, lake whitefish 1,956 kg; 1970--lake trout 170 kg, lake whitefish 172 kg.	Experimental harvests of lake trout and lake whitefish were taken from this lake north of Yellowknife in 1968 and 1970. (Yaremchuk et al. 1989)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Kam Lake 62°25'N, 114°24'W	lake trout + lake whitefish [6,804]		DFO conducted a limnological survey of this lake, which lies within the Yellowknife city limits, in 1971. Fish species captured included Arctic grayling, lake cisco, lake whitefish, and northern pike. Kam Lake was opened for commercial harvest in 1974, but has no record of commercial harvest. In 1973-74, effluent from the tailings pond of Cominco Ltds.' Con Mine, "Pud Lake", were found flowing into Kam Lake. These wastes contained elevated concentrations of arsenic, cyanide, and several heavy metals. Overflow from "Pud Lake" was intended instead to flow via a series of small lakes into Great Slave Lake. In 1975, DFO sampled water, sediment, and biota—including slimy sculpin, from Kam Lake for arsenic. In 1989-92, the Department of Indian and Northern Affairs studied the environmental condition of Kam Lake and its recovery from historic inputs of mine tailings and sewage. The final report from this study is soon to be published. (Falk et al. 1973a+b; Healey and Woodall 1973b; Wallace and Hardin 1975; Wallace et al. 1975; Moore et al. 1979b; Wagemann et al. 1978; Yaremchuk et al. 1989; Canada Department of Indian and Northern Affairs 1992, 1993; Stephens and Puznicki 1994; F. Jackson, pers. comm.) (see also Table 4: S. Harbicht)
Lac Capot Blanc 63°36'N, 110°37'W			In 1974, a brief experimental fishery captured burbot, lake trout, longnose sucker, and round whitefish from Lac Capot Blanc. (NLUIS 75M)
Lac de Gras 64°28'N, 110°30'W			In 1977, an experimental gillnet fishery sampled lake trout from this lake on the Coppermine River. Qaivvik Ltd. operates a sport fishing camp at Lac de Gras (Table 2). In 1988, DFO estimated the guest-bed capacity of Lac de Gras, for a high quality lake trout sport fishery, at 25 to 35 beds. (Stewart and MacDonald 1978; M. Roberge, pers. comm.) (see also Table 4: S. Harbicht, H. Welch, W. Bryant, and S. Reed)
Lac du Mort 63°02'N, 111°13'W			Hunters and trappers from Yellowknife-Detah and Snowdrift have fished for subsistence at Lac du Mort. (NLUIS 75M)
Lac du Savage 64°37'N, 110°05'W			In 1977, an experimental gillnet fishery sampled Arctic grayling, lake trout, and round whitefish from this lake on the Coppermine River. (Stewart and MacDonald 1978)
Lac Tête d'Ours 63°21'N, 110°35'W			This headwater lake of the Waldron River has been fished for subsistence and sport. (NLUIS 75M)
Lake of the Enemy 63°46'N, 110°15'W			Hunters and trappers from Yellowknife-Detah have fished for subsistence at Lake of the Enemy, on the Lockhart River system. (NLUIS 75M)
Landing Lake 62°34'N, 114°24'W			There is a spring spawning migration of walleye from Martin Lake (see below) into Landing Lake. Fish populations in the lake remain depleted from heavy sport fishing during the 1970's. Anglers visit the lake on foot in the summer and by snowmobile in winter. Current sport fishing pressure on the lake is light. (NLUIS 85J; D. Moshenko and G. Pryzyk, pers. comm.)
Languish Lake 62°49'N, 112°55'W			Residents of Yellowknife fish angle at Languish Lake. Fish species present include lake trout, lake whitefish, northern pike and sucker sp. (NLUIS 85I)
Lauder Lake 62°22'50"N, 112°58'42"W			A DFO experimental gillnet fishery caught walleye and whitefish at this lake in 1985. (G. Low, unpubl. data)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Little Marten Lake 64°40'N, 113°00'W			In 1977, an experimental gillnet fishery sampled lake trout and longnose sucker from this lake on the Winter River, a tributary of the Snare River. Adventure Northwest Ltd. outfits sport caribou hunt from their camp on Little Marten Lake. In 1993, they applied for a licence to outfit guests for sport fishing. DFO estimated the guest-bed capacity of Little Marten Lake for a high quality lake trout sport fishery at 3 to 5 beds. However, a limit of 10 guest-beds was recommended on the assumption that fishing would not be the primary activity of most lodge guests. (Stewart and MacDonald 1978; A.C. Day, pers. comm.)
Lockhart Lake 63°40'N, 112°00'W			DFO sampled lake trout, sucker and whitefish from Lockhart Lake in 1963. The winter road to Echo Bay's Lupin Mine at Contwoyto Lake crosses Lockhart Lake. The mine has a winter road camp on the lake, Camp Lockhart, which offers a mix of sport fishing and other outdoor activities--mainly to the mines' employees (Table 2). In 1987, DFO estimated the guest-bed capacity of Lockhart Lake for a high quality lake trout sport fishery at 14 to 16 beds. (Moshenko 1980; M. Roberge, pers. comm.)
Long Lake 62°28.5'N, 114°25'W			DFO conducted a limnological survey of this lake on Highway 3, near Yellowknife, in 1971. Fish species captured included lake cisco, lake whitefish, ninespine stickleback, northern pike, sculpin sp., and trout perch. Long Lake lies within the Yellowknife city limits and is the site of a large tourist camp site and popular beach. (Healey and Woodall 1973b; NLUIS 85J; D. Moshenko, pers. comm.)
Lower Pensive Lake 62°40'N, 113°22'W			See below Pensive Lakes.
Mackay Lake 63°55'W, 110°25'W	lake trout + whitefish 67,400	1965--lake trout 1,719 kg, lake whitefish 116 kg; 1966--lake trout 10,069 kg, lake whitefish 4,038 kg; 1967--lake trout 14 kg, lake whitefish 25,966 kg.	MacKay Lake, on the Lockhart River, is accessible from Yellowknife by a winter road which follows the length of the lake. Hunters and trappers from Yellowknife-Detah have fished for subsistence at MacKay Lake. Commercial harvests of lake trout and lake whitefish were taken from the lake in 1965-67. In 1970, lake whitefish from MacKay Lake were sampled for organochlorine contaminants. Low levels of DDT and dieldrin were detected. Mercury levels in the flesh of an Arctic grayling, lake trout and lake whitefish, sampled by DFO in 1971-73, were within the recommended safe guidelines for commercial sale (i.e. <0.5 mg per kg wet weight). MacKay Lake Lodge is situated on MacKay Lake. The lodge operates outpost camps on Aylmer Lake (see above) and on MacKay Lake at Warburton Bay, Snake River, and other locations (Table 2). In 1992, DFO estimated the guest-bed capacity of Mackay Lake proper for a high quality lake trout sport fishery at 23 to 45 beds, and that of Warburton Bay at 11 to 21 beds. (Reinke et al. 1972; Desai-Greenway and Price 1976; Yaremchuk et al. 1989; Lockhart et al. 1992; NLUIS 75M; A.C. Day and G. Low, pers. comm.)
Madeline Lake 62°32'N, 114°55'W	lake trout + lake whitefish--no quota	1970--lake trout + lake whitefish 544 kg.	Madeline Lake is situated on the Ingraham Trail Highway 25 km east of Yellowknife. It is situated north of the highway and is accessible directly by road. An experimental harvest of lake trout and lake whitefish was taken from Madeline Lake in 1970. DFO described the lake morphometry and sampled the water chemistry and fish of Madeline Lake in the summers of 1973 and 1974. Data were collected on the catch-effort and growth of gillnetted lake cisco, lake whitefish, northern pike, and walleye. Ninespine stickleback, spottail shiner, and yellow perch were also captured by seine haul. In 1979, DFO conducted a questionnaire survey of anglers at Madeline Lake. (Falk 1979a, 1981; Yaremchuk et al. 1989)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Maguire Lake 63°13'N, 113°54'W			This lake on the McCrea River is located upstream of Giauque Lake (see above), which was contaminated with mercury and other heavy metals by tailings from the Discovery Mine. Mercury levels in the flesh of lake trout, lake whitefish, and northern pike from Maguire Lake were measured in 1976-77. In 1978, Environment Canada recommended monitoring of fish from Maguire Lake for mercury contamination in the event of fishery development. (Moore et al. 1978a; Moore and Sutherland 1980)
Martin Lake 62°32'N, 114°26'W			DFO sampled lake whitefish, northern pike, walleye and white sucker from Martin Lake in May 1973. There is a spring spawning migration of walleye from Martin Lake into Landing Lake (see above). In 1979, DFO conducted a questionnaire survey of anglers at Martin Lake. (Falk 1981; NLUIS 85J)
Mason Lake 62°24'N, 114°04'W			This lake near Yellowknife has been fished for subsistence and sport by residents of Yellowknife-Detah. It supports walleye. (NLUIS 85J; D. Moshenko and G. Pryznky, pers. comm.)
Matthews Lake 64°04' 111°14'W			Environment Canada conducted biological and water quality studies of the Giant Mines' Salmita gold property at Matthews Lake in 1977. Hatfield Consulting Ltd. conducted an aquatic environmental evaluation of lakes in the mine area in 1981 (IEE), and following mine closure in 1987. (Moore 1978e; Kanik and Villamere 1984; Hatfield Consulting Ltd. 1982, 1988;) (see also Table 4: G. Smith)
McCrea River 63°13'N, 113°42'W			This widening of the McCrea River is located upstream of Giauque Lake (see above) which was contaminated with mercury and other heavy metals by tailings from the Discovery Mine. Mercury levels in the flesh of lake trout, lake whitefish, and northern pike from the river were measured in 1976-77. In 1978, Environment Canada recommended monitoring of fish from this stretch of river for mercury contamination in the event of fishery development. See also Maguire Lake (above), and Thistlethwaite and Wagenitz lakes (below). (Moore et al. 1978a; Moore and Sutherland 1980).
McKinlay River 62°44'N, 111°25'W			Arctic grayling spawn in the lower reaches of the McKinlay River in spring. The river mouth is fished by anglers from nearby lodges on Great Slave Lake. (NLUIS 75L)
Michel Lake 62°53'N, 114°07'W			DFO conducted a limnological survey of this lake on the Yellowknife River system in 1971. Fish species caught included burbot, lake cisco, lake trout, lake whitefish, longnose sucker, ninespine stickleback, and northern pike. (Healey and Woodall 1973b)
Middle Ross Lake 62°42'N, 13°10'W			DFO sampled lake trout, northern pike, sucker sp., and whitefish sp. from this lake in 1967. See also Ross Lake, below. (DFO unpubl. data)
Montours Lake 63°59'N, 109°08'W			This lake on the Lockhart River system has been fished for subsistence by residents of Yellowknife-Detah in conjunction with winter hunting and trapping activities. (NLUIS 75N)
Moose Lake 62°13'N, 113°53'W			Anglers from Yellowknife fish for sport at Moose Lake. While the extent of this fishery is unknown, it is expected to increase in the future given the lakes' proximity to the city. Increasing fishing pressure and the lakes' small size led DFO, in 1992, to recommended against the establishment of a sport fishing lodge in the area. (A.C. Day and G. Low, pers. comm.)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Mountain River 62°54'N, 110°59'W			Arctic grayling spawn in the lower reaches of the Mountain River in spring. The river mouth is fished by anglers from nearby lodges on Great Slave Lake. (NLUIS 75L)
Murdock Lake 63°37'N, 109°29'W			This lake on the Lockhart River system has been fished for subsistence by residents of Yellowknife-Detah in conjunction with winter hunting and trapping activities. (NLUIS 75N)
Muskox Lake 64°39'N, 108°14'W			In the past, Inuit who lived at Pellat or Contwoyto lakes would sometimes establish a winter camp at muskox lake. Hunters and trappers from Yellowknife-Detah have fished for subsistence at Muskox Lake. In 1977, an experimental gillnet fishery sampled Arctic grayling, lake trout, and longnose sucker from this lake on the Back River system. Burbot, lake cisco and slimy sculpin also occur in the lake. In May and June, longnose sucker migrate up Muskox Rapids at the head of Muskox Lake to spawn in an unnamed lake (64°43'N, 108°14'W) nearby. Lake cisco also move up the rapids in August and September, on their way to spawn in the same lake. (Stewart and MacDonald 1978 and unpubl. data; NLUIS 76C)
Mystery Lake 62°15'N, 112°32'W			Hunters and trappers from Yellowknife-Detah have fished for subsistence at Mystery Lake. In 1980, DFO estimated the guest-bed capacity of Mystery Lake for a low quality lake trout sport fishery at 5 to 7 beds. (NLUIS 85I; M. Falk, pers. comm.)
Neck Lake 62°47'N, 114°10'W			Residents of Yellowknife fish for sport at this lake on the Yellowknife River system. (S. Harbicht, pers. comm.)
Nicholas Lake 63°15'N, 113°45'W			Fish were collected from this lake and several of its tributary streams in 1990, during environmental studies related to the proposed Athabasca Gold Resources Ltd. development (J.T. Strong, pers. comm.). (see Table 4: A. Sekerak)
Outram Lake 64°02'N, 109°27'W			In 1977, an experimental gillnet fishery sampled lake trout and round whitefish from this lake on the Lockhart River. (Stewart and MacDonald 1977)
Pauline Lake 62°03'N, 113°12'W	lake trout + whitefish 700 northern pike, walleye--no quota	1964--lake whitefish 777 kg; 1966--lake whitefish 728 kg. <u>By-catch:</u> 1964--walleye 290 kg; 1966--northern pike 454 kg, walleye 500 kg.	Commercial harvests of lake whitefish, northern pike, and walleye were taken from this lake on the Beaulieu River in 1964 and 1966. Hunters and trappers from Yellowknife-Detah have fished for subsistence at Pauline Lake. (Yaremchuk et al. 1989; NLUIS 85I)
Peninsula Lake 62°31.5'N, 113°21'W			In 1979, DFO conducted a questionnaire survey of anglers at Peninsula Lake. (Falk 1981)
Pensive Lakes			Pensive (62°43'N, 113°20'W), Upper Pensive (62°43'N, 113°24'W), Lower Pensive (62°40'N, 113°22'W), and Dome (62°46'N, 113°16'W) lakes are fished in winter by subsistence and sport fishermen from Yellowknife-Detah who access the area from the winter road which crosses Lower Pensive Lake. In 1995, DFO recommended against the establishment of a lodge on the lakes because of their small size and limited fishery resource which is already being harvested. The total guest-bed capacity for the four lakes was estimated at 2 to 4 beds, for a low quality fishery with a voluntary limit of 16 kg of trout per angler. (NLUIS 85I; A.C. Day and G. Low, pers. comm.)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Pickereel Lake 62°29.7'N, 113°30'W			Pickereel Lake is situated on the Ingraham Trail Highway about 55 km east of Yellowknife. It is accessible directly from the highway. DFO described the lake morphometry and sampled the water chemistry, benthos and fish of Pickereel Lake in the summers of 1973 and 1974. Data were collected on the catch-effort and growth of gillnetted lake cisco, lake whitefish, northern pike, walleye, and white sucker. Ninespine stickleback, spottail shiner, and trout perch were also caught by seine haul. (Falk 1979a)
Plante Lake 62°31'N, 113°34'W	lake trout + whitefish 500 walleye--no quota	1963--lake trout 862 kg, lake whitefish 1,237 kg; 1971--lake trout 662 kg, lake whitefish 2,399 kg. <u>By-catch:</u> 1963--walleye 73 kg.	Commercial harvests of lake trout, lake whitefish, and walleye were taken from Plante Lake, east of Yellowknife, in 1963 and 1971. (Sinclair et al. 1967; Yaremchuk et al. 1989)
Pontoon Lake 62°32.5'N, 114°00'W			Pontoon Lake is situated on the Ingraham Trail Highway 30 km east of Yellowknife. It is accessible directly from the highway. DFO described the lake morphometry and sampled the water chemistry, benthos and fish of Pontoon Lake in the summers of 1973 and 1974. Data were collected on the catch-effort and growth of gillnetted lake cisco, lake whitefish, northern pike, and white sucker. In 1979, DFO conducted a questionnaire survey of anglers at Pontoon Lake. The lake also supports a popular winter sport fishery for whitefish. Partial winterkill of fish in the lake was observed in the late 1980's and early 1990's. (Falk 1979a, 1981; D. Moshenko and G. Pryznyk, pers. comm.)
Prelude Lake 62°34'N, 113°55'W			<p>Prelude Lake is situated about 30 km east of Yellowknife and north of the Ingraham Trail Highway. It is accessible directly by road and receives moderate sport fishing pressure from cottage owners, visitors to the Prelude Lake Territorial Park camp ground, guests of Peterson's Prelude Lake Lodge, and guests of outfitters (Yellowknife Outdoor Adventures Ltd. and Frank Messes) which operate day fishing cruises on the lake (Table 2). The lake was fished commercially in the 1950's, and is fished for subsistence by residents of Yellowknife-Detah, but no harvest records are available for either fishery. (Roberge et al. 1990; 1995 Explorers' Guide; B. Stoneman, pers. comm.)</p> <p>DFO described the lake morphometry and sampled the water chemistry, benthos and fish of Prelude Lake in the summers of 1973 and 1974. Data were collected on the catch-effort and growth of gillnetted burbot, lake cisco, lake trout, lake whitefish, and northern pike. Ninespine stickleback were caught by seine haul. A few anglers' creels were also censused between 13 June and 1 July 1973. Mercury levels measured in the flesh of a lake trout (0.60 mg per kg wet weight) and northern pike (0.69) exceeded the recommended safe limits for human consumption (0.5). During the mid-1970's, concerns were raised locally that Prelude Lake was being over-fished, resulting in a decline in the availability of game fish. In response, DFO undertook to investigate the status of lake trout in the lake. An experimental gillnetting program was conducted in 1979, to collect data on catch-effort, growth, and reproduction. A few fish were tagged, and a creel census and questionnaire survey of anglers was conducted from June to August. Comparisons with the 1973 study were inconclusive, but DFO did recommend the voluntary closure of Prelude Lake to angling for a three week period in September of 1980, to protect spawning lake trout. (Desai-Greenway and Price 1976; Falk 1979a, 1981; Roberge et al. 1990; DFO unpubl. data)</p>

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Prestige Lake 62°57'N, 113°39'W	lake trout + whitefish 500		No record of commercial harvest.
Prosperous Lake 62°36'N, 114°12'W			<p>Prosperous Lake is situated 15 km northeast of Yellowknife and north of the Ingraham Trail Highway. It is accessible directly by road and receives moderate sport fishing pressure from cottage owners and guests of Yellowknife Outdoor Adventures Ltd. which operates day fishing cruises on the lake in summer and ice fishing excursions in winter. The lake was fished commercially in the 1950's, and is fished for subsistence by residents of Yellowknife-Detah, but no harvest records are available for either fishery. (Roberge et al. 1990; NLUIS 85J)</p> <p>DFO described the lake morphometry and sampled the water chemistry and fish of Prosperous Lake in the summers of 1973 and 1974. Data were collected on the catch-effort and growth of gillnetted lake cisco, lake trout, lake whitefish, longnose sucker, northern pike, and white sucker. Deepwater sculpin, emerald and spottail shiners, ninespine stickleback, and trout perch were caught by seine haul, and Arctic grayling by angling. A few anglers' creels were also censused between 14 June and 5 July 1973. During the mid-1970's, concerns were raised locally that Prosperous Lake was being over-fished, resulting in a decline in the availability of game fish. In response, DFO undertook to investigate the status of lake trout in the lake. An experimental gillnetting program was conducted in 1979, to collect data on catch-effort, growth, and reproduction. A few fish were tagged, and a creel census and questionnaire survey of anglers was conducted from June to September. Comparisons with the 1973 study were inconclusive. The Yellowknife River (see below), between Prosperous Lake and Bluefish Lake (see above), is closed to sport fishing from 1-30 September (P.C. 1987-1677) to protect spawning lake trout from Prosperous Lake. Area residents prepared a study of the effects of recreational development on the water quality of the lake in 1979. (Falk 1979a, 1981; Prosperous-Walsh Lakes Working Group 1979; Roberge et al. 1990; D. Moshenko, pers. comm.)</p>
"Pud Lake"			See above Kam Lake.
Racoon Lake			See above Horn River.
Redout Lake 62°45'N, 113°00'W			In 1967, a DFO experimental fishery sampled lake trout, northern pike, whitefish sp., and sucker sp. from this lake northeast of Yellowknife. (DFO unpubl. data)
Reid Lake 62°28'N, 113°23'W	lake trout, lake whitefish, walleye --no quota	1964--lake trout 113 kg, walleye 65 kg; 1967--lake trout 71 kg, lake whitefish 49 kg; 1969--lake trout 65 kg, lake whitefish 1,646 kg, walleye 114 kg.	<p>Reid Lake is situated on the Ingraham Trail Highway about 60 km east of Yellowknife. It is accessible directly from the highway. Small experimental harvests of lake trout, lake whitefish, and walleye were taken from Reid Lake, east of Yellowknife, in the 1960's. DFO sampled lake trout, lake whitefish and sucker sp. from the lake in 1967, and described the lake morphometry and sampled the water chemistry and fish in the summer of 1973. Data were collected on the catch-effort and growth of gillnetted burbot, lake trout, lake whitefish, longnose sucker, northern pike, and white sucker. Ninespine stickleback were caught by seine haul. Mercury levels in the flesh of a northern pike sampled were within the recommended safe guidelines for human consumption. In 1979, DFO conducted a questionnaire survey of anglers at Reid Lake. (Sinclair et al. 1967; Desai-Greenway and Price 1976; Falk 1979a, 1981; Moshenko 1980; Yaremchuk et al. 1989)</p>

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Reindeer Lake 62°47'N, 113°37'W			In 1974, an experimental fishery caught lake trout, lake whitefish, northern pike, and sucker sp. at this lake on the Yellowknife River. (NLUIS 85P)
River Lake 62°35.5'N, 114°05'W			In 1979, DFO conducted a questionnaire survey of anglers at River Lake. (Falk 1981)
Rivett Lake 63°18'N, 111°48'W	lake trout + whitefish 1,800		No record of commercial harvest. DFO sampled lake trout and northern pike from the lake in 1968. Hunters and trappers from Yellowknife-Detah have fished for subsistence at Rivett Lake. (Moshenko 1980; NLUIS 75M; DFO unpubl. data)
Ross Lake 62°41'N, 113°16'W	lake trout + whitefish 1,800 northern pike --no quota	1963--lake trout 3,097 kg, lake whitefish 6,912 kg; 1972--lake trout 665 kg, lake whitefish 1,195 kg; 1973--lake trout 2,459 kg, lake whitefish 5,337 kg; 1983--lake trout 50 kg, lake whitefish 20 kg; 1988--NF; 1989--lake whitefish 91 kg; 1990-94--NF. <u>By-catch:</u> 1973--northern pike 34 kg.	Ross Lake is accessible by winter road from the Ingraham Trail Highway. It is a popular sport fishery for residents of Yellowknife from December through April. Commercial harvests of lake trout and lake whitefish, with small by-catches of northern pike and sucker sp., have been taken from Ross Lake sporadically since 1963. The lake has been opened for commercial fishing in recent years but seldom fished. It is subject to substantial winter fishing pressure (12-24 anglers per weekend) by itinerant ice fishermen. DFO sampled lake trout and lake whitefish from Ross Lake in 1967. See also Middle Ross Lake, above. (Sinclair et al. 1967; Moshenko 1980; Yaremchuk et al. 1989; DFO 1991, 1992a+b, 1993, 1994, 1995; G. Low and D. Moshenko, pers. comm.)
Ryan Lake 62°35'N, 114°22'W			Ryan Lake is accessible by road from Yellowknife. It has cottages on its shoreline and supports a sport fishery for lake trout. (S. Harbicht, pers. comm.)
Saunders Lake 62°37'N, 113°12'W			DFO sampled lake trout, lake whitefish, northern pike, and sucker sp. from Saunders Lake in 1967. (Moshenko 1980; DFO unpubl. data)
Skeeter Lake 62°21'N, 112°44'W			In 1985, aquatic studies were conducted to identify the potential impacts from the Terra Mines operation on fish in Skeeter Lake and Skeeter Creek and Bullmoose Lake (see above). (Spencer Environmental Management Services Ltd. 1987) (see also Table 4: R. Spencer)
Snake River 64°01'N, 110°30'W			In 1977, an experimental gillnet fishery sampled Arctic grayling, cisco sp., lake trout, and longnose sucker from this tributary of the Lockhart River. (Stewart and MacDonald 1978)
Sparrow Lake 62°37'N, 113°40'W	lake trout + whitefish 900 northern pike --no quota	1964--lake trout 1,605 kg, lake whitefish 3,968 kg; 1983--lake trout 1,131 kg, lake whitefish 3,503 kg. <u>By-catch:</u> 1983--northern pike 117 kg.	Anglers from Yellowknife fish for sport at Sparrow Lake. While the extent of this fishery is unknown, it is expected to increase in the future given the lakes' proximity to the city. Increasing fishing pressure and the lakes' small size led DFO, in 1992, to recommend against the establishment of a sport fishing lodge in the area. Commercial harvests of lake trout, lake whitefish, and northern pike were taken from Sparrow Lake in 1964 and 1983. (Yaremchuk et al. 1989; A.C. Day and G. Low, pers. comm.)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Stock Lake (Jackfish Lake) 62°28'N, 114°23'W			DFO collected limnological data and sampled lake whitefish and northern pike from this lake, which is accessible by road from Yellowknife, in 1980-81. Further limnological and biological studies were conducted in 1987 to assess the lakes' suitability for the culture of penned Arctic charr. Lake whitefish and northern pike were sampled for hydrocarbon and heavy metal contaminants, and disease pathogens. No pathogens were found. The lake water had elevated levels of arsenic. A power generating station located at Stock Lake uses lake water to cool its generators. (Roberge and Gillman 1986; Baker 1987; D. Moshenko, pers. comm.)
Tarantula Lake 64°32'N, 107°55'W			In 1977, an experimental gillnet survey sampled lake trout and slimy sculpin from this lake on the Lockhart River system. (Stewart and MacDonald 1978)
Terry Lakes 62°30'N, 113°20'W			The Terry Lakes are situated on the Ingraham Trail Highway about 65 km east of Yellowknife. DFO sampled lake whitefish from the Terry Lakes (upper and lower) in 1967, and described the lake morphometry and sampled the water chemistry, benthos, and fish in the summers of 1973 and 1974. Data were collected on the catch-effort and growth of gillnetted lake trout, lake whitefish, and northern pike. Spottail shiner were caught by seine haul. (Falk 1979a; Moshenko 1980)
Thistlethwaite Lake 63°10'N, 113°37'W	lake trout + whitefish 1,900	1970--lake trout 911 kg, lake whitefish 1,378 kg; 1979--lake trout + lake whitefish 274 kg; 1983--lake trout 91 kg, lake whitefish 11 kg; 1984--lake trout 226 kg, lake whitefish 72 kg; 1985--lake trout + lake whitefish 265 kg; 1988-93--NF.	Thistlethwaite Lake is immediately downstream from Giauque Lake (see above) which was contaminated with mercury from the tailings of Discovery Mine. Mercury levels in the flesh of lake trout, lake and round whitefish, northern pike, and longnose sucker were measured in 1976-77, and averaged less than 0.5 mg per kg in the flesh. In 1978, Environment Canada recommended that water, sediments, and fish from Thistlethwaite Lake be monitored for mercury every five years to determine any changes in mercury contamination. At writing, the Department of Indian and Northern Affairs was preparing to publish a follow-up study, conducted in the 1990's, of mercury and other metals in water, sediment and fish from Giauque Lake. Based upon tissue mercury analyses of fish from the lake, the Health Protection Branch has recommended consumption guidelines for northern pike and lake trout from Thistlethwaite Lake. New mining operations are expected in the area during the next few years. (Moore et al. 1978a; Moore and Sutherland 1980; W. Coedy and G. Low, pers. comm.) Hunters and trappers from Yellowknife-Detah have fished for subsistence at this lake on the McCrea River. Commercial harvests of lake trout and lake whitefish were taken from Thistlethwaite Lake in the 1970's and 1980's. The lake has been opened annually for commercial fishing in recent years, but has not been fished. (Yaremchuk et al. 1989; DFO 1991, 1992a+b, 1993, 1994, 1995; NLUIS 85P; G. Low, pers. comm.)
Thompson Lake 62°37'N, 113°30'W			The Thompson-Lundmark Mine which operated between 1941-49 discharged tailings around and into this lake. In 1978, Environment Canada measured mercury levels in the flesh of lake trout and lake whitefish from Thompson Lake. Levels in the trout (1.02-3.11 mg per kg wet weight) exceeded the recommended maximum safe level for human consumption (0.5); those in lake whitefish did not. Thompson Lake is accessible by winter road from the Ingraham Trail. It may occasionally be fished for sport by residents of Yellowknife. (Moore and Sutherland 1980; S. Harbicht, pers. comm.) (see also Moore 1981)
Thonokied River 64°10'N, 108°57'W			In 1977, an experimental gillnet fishery sampled Arctic grayling and lake trout from this tributary of the Lockhart River. (Stewart and MacDonald 1978)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Tibbit Lake 62°32'N, 113°21'W	lake trout, lake whitefish, northern pike--no quota	1965--lake trout 318 kg, lake whitefish 1,833 kg, northern pike 94 kg.	Tibbit Lake lies at the end of the Ingraham Highway, 65 km east of Yellowknife. Cottage owners fish for sport in the lake. An experimental harvest of lake trout, lake whitefish, and northern pike was taken from Tibbit Lake in 1965. DFO sampled lake whitefish from the lake in 1967, and described the lake morphometry and sampled the water chemistry and fish in the summers of 1973 and 1974. Data were collected on the catch-effort and growth of gillnetted lake whitefish, longnose sucker, northern pike, and white sucker. Spottail shiner were caught by seine haul. (Falk 1979a; Moshenko 1980; Yaremchuk et al. 1989; D. Moshenko, pers. comm.)
Trout Lake 62°48'N, 114°22'W			DFO conducted a limnological survey of this lake on the Yellowknife River system in 1971. Fish species captured included lake cisco, lake trout, lake whitefish, longnose sucker, ninespine stickleback, northern pike, and sculpin sp. (Healey and Woodall 1973b)
unnamed creek 62°06'N, 115°10'W			In spring, walleye spawn in this small tributary of Great Slave Lake. (NLUIS 85J)
unnamed creek 62°29'N, 114°52'W			There is a spring spawning migration of northern pike and walleye into this small tributary of Great Slave Lake. (NLUIS 85JK)
unnamed lake (Cityboy Lake) 62°18'N, 113°56'W			Anglers from Yellowknife fish for sport at Cityboy Lake. While the extent of this fishery is unknown, it is expected to increase in the future given the lakes' proximity to the city. Increasing fishing pressure and the lakes' small size led DFO, in 1992, to recommended against the establishment of a sport fishing lodge in the area. (A.C. Day and G. Low, pers. comm.)
unnamed lake (IT-47) 62°30'10"N, 114°23'20"W			This small lake (8.8 ha) north of Yellowknife was stocked (date unknown) with 4,400 Arctic charr fry from the first batch produced by the broodstock at the Rockwood Hatchery. (DFO/GNWT, pers. comm.)
unnamed lake (IT-1) 62°30.2'N, 114°05'W			This small lake (13.3 ha) near the Ingraham Trail Highway was stocked with 2,500 rainbow trout fingerlings in June 1988. Harvesting in October 1988, yielded only northern pike. An outflow was also discovered to Bighill Lake (see above). The lake is not suitable for further stocking. (DFO/GNWT, unpubl. data)
unnamed lake (IT-45) 62°30'N, 114°03'W			This small lake (7.8 ha) near the Ingraham Trail Highway was stocked with rainbow trout fingerlings in June of 1988 (500) and 1989 (2,340), and with Arctic charr fry in May of 1991 (500) and 1995 (3,900). Sampling in the fall of 1988 and 1990 found good growth but poor survival of the stocked rainbow trout. Sampling in the fall of 1991 found the stocking of charr from the Rockwood Hatchery to be moderately successful. (DFO/GNWT, unpubl. data)
unnamed lake (IT-31) 62°30.5'N, 113°37'W			This small lake (14.8 ha) near the Ingraham Trail Highway was stocked with 1,480 Arctic charr in June 1989. The lake water was unseasonably warm at the time of stocking. This led to a very high mortality rate among the stocked fish (96%) immediately following their introduction to the lake. Oxygen profiles taken the following spring suggest that the lake is subject to winterkill. The lake is not suitable for future stocking. (DFO/GNWT, unpubl. data)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
unnamed lake (IT-53) 62°30.5'N, 114°10.3'W			This small lake (9.3 ha) near the Ingraham Trail Highway was stocked with 2,790 rainbow trout in June 1989. Sampling of this lake in the fall of 1991, found excellent growth and survival of the stocked trout. To date this has been the most successful stocking of rainbow trout in the area. (DFO/GNWT, unpubl. data)
unnamed lake (IT-32) 62°31'N, 113°38'W			This small lake (5.9 ha) near the Ingraham Trail Highway was stocked with 1,770 Arctic charr in September 1989. Intensive harvesting of this lake in October 1990 yielded only a few small charr. The lake was re-stocked with 1,800 rainbow trout in May 1991. Intensive harvesting in October 1991 yielded 13 small charr and 45 small trout, indicating poor growth and survival rates (~2.5%) for both species. (DFO/GNWT, unpubl. data)
unnamed lake (IT-33) 62°31'N, 113°38.5'W			This small lake (5.0 ha) near the Ingraham Trail Highway was stocked with 2,500 Arctic charr in September 1989. Intensive harvesting of this lake in October 1990 yielded only 5 small charr. The lake was re-stocked with 2,500 rainbow trout in May 1991. Intensive harvesting in October 1991 yielded only 1 small charr and 19 small trout, indicating poor growth and survival rates (charr 0.2%, trout 0.8%) for both species. (DFO/GNWT, unpubl. data)
unnamed lake (IT-46) 62°31'N, 113°33.5'W			This small lake (7.1 ha) near the Ingraham Trail Highway was stocked with 2,130 Arctic charr in September 1989. Sampling of this lake in the fall of 1991, found excellent growth and survival of the stocked charr. To date this has been the most successful stocking of Arctic charr in the area. (DFO/GNWT, unpubl. data)
unnamed lake (IT-56) 62°32'N, 113°37'W			This small lake (4.2 ha) near the Ingraham Trail Highway was stocked with 2,100 rainbow trout in September 1989. Sampling of this lake in the fall of 1991, found poor growth and survival of the stocked trout. (DFO/GNWT, unpubl. data)
unnamed lake (IT-43) 62°34'N, 114°01'W			This small lake (12.2 ha) near the Ingraham Trail Highway was stocked with 3,600 rainbow trout fingerlings in June 1989, May 1990 and again in and June 1991, and with 5,500 Arctic charr fry from the Rockwood Hatchery in 1995. Intensive harvesting of this lake in the fall of 1990 and 1991, found good growth but poor survival of the stocked trout. (DFO/GNWT, unpubl. data)
unnamed lake (Rainbow Lake, IT-42) 62°34'N, 114°00'W			This small lake (18.3 ha) near the Ingraham Trail Highway was stocked with 3,660 rainbow trout fingerlings in June 1989 and 1990 and 3,000 in April 1992. It was also stocked with 900 Arctic charr from the Rockwood Hatchery in April 1992, and 9,150 in May 1995. Intensive harvesting of this lake in the fall of 1989, found good growth rate and a survival rate of about 6% for the stocked trout. This lake was opened for public fishing in the spring of 1991. A questionnaire survey of fishermen using the lake found their fishing success to be variable. (DFO/GNWT, unpubl. data)
unnamed lake 62°32'N, 113°48'W	lake trout + whitefish 1,000		No record of commercial harvest.
unnamed lake 62°45'N, 114°05'W	lake trout + whitefish 800		No record of commercial harvest.
unnamed lake 62°45'N, 114°07'W	lake trout + whitefish 1,400		No record of commercial harvest.

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
unnamed lake 63°09'N, 109°35'W			This lake has been fished for subsistence by residents of Yellowknife-Detah in conjunction with winter hunting and trapping activities. (NLUIS 75N)
Upper Cabin Lake 62°32'N, 113°45'W			This small lake (7.6 ha) beside the Ingraham Trail Highway was stocked with rainbow trout fingerlings in the summers of 1982 (3,000), 1985 (2,000), and 1990 (3,040). The lake was sampled to determine the success of the stocking program in the winters of 1982, 1985, and 1986. Dissolved oxygen and temperature profiles were taken concurrent with the 1982 sampling and again in 1990 and 1991. The stocking program was found to be marginally successful. (DFO/GNWT, unpubl. data)
Upper Carp Lake 63°46'N, 113°42'N			In 1974, an experimental fishery caught Arctic grayling, lake trout, lake whitefish, northern pike, and sucker at this lake on the Yellowknife River. (NLUIS 85P)
Upper Pensive Lake 62°43'N, 113°22'W			See above Pensive Lakes.
Upper Ross Lake 62°43'N, 113°08'W	lake trout + whitefish 600		No record of commercial harvest.
Vee Lake 62°33.5'N, 114°21'W			In 1979, DFO conducted a questionnaire survey of anglers at Vee Lake. (Falk 1981)
Victory Lake 62°40'N, 113°05'W	lake trout + whitefish 800 northern pike --no quota	1963--lake trout 159 kg, lake whitefish 322 kg; 1964--lake trout 710 kg, lake whitefish 2,819 kg; 1973--lake trout 336 kg, lake whitefish 771 kg; 1974--lake trout + lake whitefish 1,560 kg. <u>By-catch:</u> 1973--northern pike 227 kg.	Commercial harvests of lake trout and lake whitefish were taken from Victory Lake, on the Ingraham Trail, in 1963-64 and 1973-74. (Yaremchuk et al. 1989)
Wagenitz Lake 63°01'N, 113°54'W			This lake on the McCrear River is downstream from Giauque Lake (see above) which was contaminated with mercury from the tailings of Discovery Mine. Mercury levels in the flesh of lake trout, lake and round whitefish, northern pike, and longnose sucker were measured in 1976-77. In 1978, Environment Canada recommended that water, sediments, and fish from Wagenitz Lake be monitored for mercury every five years to determine any changes in mercury contamination. (Moore et al. 1978a; Moore and Sutherland 1980)
Waldron River 62°57'N, 110°35'W			Arctic grayling spawn near the rapids in the lower reaches of the Waldron River in spring. The river mouth is fished by anglers from nearby lodges on Great Slave Lake. (NLUIS 75L+M)
Walmsley Lake 63°25'N, 108°32'W			Walmsley Lake drains via the Hoarfrost River into the head of McLeod Bay of Great Slave Lake. In 1988, DFO estimated the guest-bed capacity of Walmsley Lake for a high quality lake trout sport fishery at 12 to 15 beds. (M. Roberge, pers. comm.)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Walsh Lake 62°35'N, 114°16'W			Walsh Lake is situated 10 km north of Yellowknife. DFO described the lake morphometry and sampled the water chemistry and fish of Walsh Lake in the summers of 1973 and 1974. Data were collected on the catch-effort and growth of gillnetted burbot, lake trout, lake whitefish, and northern pike. Spottail shiner were caught by seine haul. Mercury levels in the flesh of a lake trout and northern pike, sampled by DFO in 1971-73, were within the recommended safe guidelines for human consumption. A few anglers' creels were censused between 17 June and 1 July 1973. In 1979, DFO conducted a questionnaire survey of anglers at Walsh Lake. Yellowknife Outdoor Adventures Ltd. conducts guided fishing and sightseeing boat tours of Walsh Lake. Area residents prepared a study of the effects of recreational development on the water quality of the lake in 1979. (Desai-Greenway and Price 1976; Falk 1979a, 1981; Prosperous-Walsh Lakes Working Group 1979; B. Stoneman, pers. comm.)
Watta Lake 61°16'N, 113°05'W			Hunters and trappers from Yellowknife-Detah have fished for subsistence at this lake on the Beaulieu River. It supports populations of lake trout, northern pike, and walleye. DFO sampled lake trout and lake whitefish from Watta Lake in 1963. There is a sport fishing lodge, Watta Lake Lodge, at Watta Lake (Table 2). It has 12 guest-beds and offers a mix of sport fishing and other recreational activities. (Moshenko 1980; NLUIS 851)
Wedge Lake 62°51'N, 113°41'W	lake trout + whitefish 600 inconnu, northern pike, walleye --no quota	1969--lake trout 583 kg, lake whitefish 3,956 kg; 1974--lake whitefish 169 kg; 1980--lake trout + lake whitefish 907 kg; 1983--lake trout 180 kg, lake whitefish 180 kg; 1984--lake trout 113 kg, lake whitefish 113 kg. <u>By-catch:</u> 1974--inconnu 27 kg, northern pike 336 kg, walleye 16 kg.	Small commercial harvests, mainly of lake trout and lake whitefish, were taken from Wedge Lake in 1969, 1974, 1980, 1983, and 1984. (Yaremchuk et al. 1989)
Wolverine Lake 63°12'N, 111°22'W			Hunters and trappers from Yellowknife-Detah have fished for subsistence at Wolverine Lake. (NLUIS 75M)

Table 1. Continued.

LOCATION ¹	QUOTA (kg rd wt) ²	HARVEST (kg rd wt) ³	STOCK STATUS (references) ⁴
Yellowknife River 62°32'N, 114°19'W	freshwater molluscs [1,000]		Arctic grayling and walleye migrate up this tributary of Great Slave Lake in spring, as do cisco sp. and lake whitefish in the fall. Many headwater lakes on the Yellowknife River system (e.g. Nardin, Sharples--see above) have been fished for subsistence by hunters and trappers from Rae-Edzo and/or Rae Lakes. The river mouth is also fished for subsistence and by itinerant anglers and sport outfitter fisheries. Species reported from the Yellowknife River system are listed in Appendix 1. In 1979, DFO conducted a questionnaire survey of anglers at the Yellowknife River. An experimental SCUBA fishery collected a small sample of freshwater molluscs from the Yellowknife River in the summer of 1992, for quality testing. The Yellowknife River, between Prosperous Lake (see above) and Bluefish Lake (see above), is closed to sport fishing from 1-30 September (P.C. 1987-1677) to protect spawning trout from Prosperous Lake. A dam and powerhouse are located on this run of the river near the outlet to Bluefish Lake. (Falk 1981; DFO 1994; NLUIS 85J+P; A.C. Day and D. Moshenko, pers. comm.) (see also Table 4: G. Low)

¹ Old or alternate names for the fisheries are shown in brackets.

² A round weight (kg rd wt) is that for a whole fish, while a dressed weight is that of a fish with the viscera and gills removed. Square brackets indicate provisional test quotas. The quota years are the same as the federal government fiscal year (e.g. the 1996 quota extends from 1 April 1996 to 31 March 1997). "NA" indicates that a harvest may have taken place but that no data are available; "NF" indicates that a waterbody was opened for fishing by Variation Order but was not fished. "No quota", or a blank quota cell, indicates that DFO has not assigned a commercial quota to a waterbody, either as a whole or for a particular species. This does not necessarily mean that there are no commercial fishing opportunities in the waterbody or for that species.

³ Unless otherwise noted the harvests were taken by commercial fisheries. The "subsistence harvests" were taken by residents for their own use, "experimental harvests" (formerly known as exploratory or test fisheries) were taken for scientific purposes, and the "sport harvests" were taken by anglers.

⁴ References to "DFO unpubl. data" denote information from the "Lake Files" held by Resource Management Section of DFO Central and Arctic Region. References to "Table 4" are followed by the name of the pertinent researcher as listed in Table 4.

Table 2. Sport fishing lodges and their outpost camps in the North Slave area (Figure 2)¹.

LODGE - OUTPOST	COORDINATES	OPERATING SEASON	GUEST BED CAPACITY	SPECIES SOUGHT	COMMENTS (references) ²
Arctic Safaris' Obstruction Rapids Camp	64°53'N, 112°18'W	June through September	34	lake trout, Arctic grayling	Located on Lake Providence, this "mostly tentframe" operation offers caribou sport hunting, sport fishing, and naturalist activities. It has an outpost on the lake, Lake Providence Spike Camp (64°42'N, 111°51'N), and another at Grady Lake (64°27'N, 112°33'W)--both of which receive occasional use. The lodge was licensed in 1995. Its operating area includes Lake Providence, Grady Lake, and perhaps other areas.
Camp Lockhart	62°36'N, 112°07'W	?	16	lake trout, Arctic grayling	Located on Lockhart Lake, this lodge is the winter road camp of the Lupin Mine. It offers a mix of fishing and outdoor recreational activities, mainly to employees of Echo Bay Mines. The lodge is not listed in the NWT Explorers Guide and sees limited commercial use by tourists. It has operated since 1987, and was licenced in 1995. The lodges' operating area includes Lockhart Lake and unspecified tributary streams.
Blachford Lake Lodge	62°09'N, 112°40'W	mid-June to early October; December to end of March	25	lake trout, northern pike, walleye, whitefish sp.	Located on Blachford Lake, east of Yellowknife. The lodge is a multi-use facility that offers summer and winter fishing. It has operated since at least 1974, and was licensed in 1995. The operating area includes Blachford and Grace lakes and unspecified tributary streams. See Table 3 for details of angler surveys and management recommendations.
Hearne Lake Lodge	62°20'N, 113°06'W	mid-June to September	8	lake trout, northern pike, Arctic grayling, walleye, whitefish spp.	This sport fishing lodge is located on Hearne Lake east of Yellowknife. It was licensed in 1995. The operating area includes Hearne Lake and unspecified tributary streams. It was not listed in 1988-94.
Hottah Lake Lodge	65°02'N, 118°23'W	July and August	6	lake trout, Arctic grayling, northern pike	Located on Hottah Lake, this trophy sport fishing lodge is owned by the Rae Lakes Band Development Corporation. It was not licensed in 1995, or listed after 1990.
Katimavik Lodge	63°05'N, 113°08'W	mid-June to late September	12	lake trout, northern pike, whitefish spp.	This sport fishing lodge is located on Gordon Lake northeast of Yellowknife. It has operated since 1978, and was licensed in 1995. The operating area includes Gordon Lake and unspecified tributary streams. See Table 3 for details of the 1986 creel census. (Roberge and Read 1986)
MacKay Lake Lodge	63°51'N, 110°35'W	July to mid-September	20, 16, 4	lake trout, Arctic grayling	MacKay Lake Lodge, situated on MacKay Lake (20 beds), operates outposts at Warburton Bay on MacKay Lake (63°45'N, 111°27'W; 16 beds) and at Rocknest Bay on Aylmer Lake (64°10'N, 108°00'W; 4 beds). It offers sport fishing and caribou hunting. The lodge was licensed in 1995. Its' operating area includes MacKay Lake and unspecified neighbouring lakes and tributary streams, and Aylmer Lake and unspecified tributary streams. The Warburton Bay outpost camp began operation in 1983.

Table 2. Continued.

LODGE - OUTPOST	COORDINATES	OPERATING SEASON	GUEST BED CAPACITY	SPECIES SOUGHT	COMMENTS (references) ²
Mackenzie Kho Camp (Stagg Lake Lodge)	62°53'N, 115°31'W	June to mid-September; mid-December to end of April	15	northern pike, lake trout, walleye, whitefish spp.	Located near Rae-Edzo on Stagg Lake, this lodge began operation in 1966. It offers guests a variety of outdoor activities, including fishing, and was licensed in 1995. The lodge's operating area includes Stagg Lake and unspecified tributary streams. It has received limited use in recent years, mainly by friends and family, and was listed for sale in the spring of 1995. (G. Pryznyk, pers. comm.)
Meni Dene Lodge	63°23'N, 117°47'W	mid-June to end of September	20	lake trout, northern pike, Arctic grayling	Operated by the Meni Dene Co-op of Lac la Martre, this tent-frame operation is located on Clum-Eh Island in Lac la Martre. In 1995, DFO reviewed the lodges' guest bed capacity and indicated that an increase to 25 beds is within the total recommended guest bed capacity for Lac La Martre (A.C. Day and G. Low, pers comm.). The lodge was licensed in 1995. Its' operating area includes Lac la Martre, Lac la Martre River, and unspecified tributary streams.
Namushka Lodge (1982) Ltd.	62°25'N, 113°21'W	mid-June to mid-September	12	lake trout, northern pike, walleye, whitefish spp.	Located on Harding Lake east of Yellowknife, this lodge offers guests a variety of outdoor activities, including fishing. The lodge began operation in 1968, and was licensed in 1995. Its operating area includes Harding Lake and unspecified tributary streams.
Peterson's Point Lake Camp	65°23'N, 114°03'W	mid-July to mid-August	16	lake trout, Arctic grayling	Located on Point Lake, this tent-frame camp offers sport fishing and sport caribou hunting. It was licensed in 1995. The operating area includes Point Lake and unspecified tributary streams. Not listed in 1988.
Peterson's Prelude Lake Lodge	62°34'N, 113°58'W	mid-June to end of September	15	lake trout, northern pike	Located on highway 4 (Ingraham Trail) in Prelude Lake Territorial Park, 32 km east of Yellowknife, this lodge also offers general accomodation in summer, and ice fishing in winter. It has operated for many years and was licensed in 1995. The operating area is Prelude Lake.
Pilote Point Lodge	62°53.5'N, 113°52'W	mid-June to mid-September	12	lake trout, northern pike, whitefish spp.	Located on Duncan Lakes, near the inlet from Graham Lake, this lodge (formerly known as Yellowknife Lodge) began operation prior to 1975. Its operating area includes Duncan and Graham lakes. The lodge was last licensed in 1989. It was sold by Yellowknife Lodge Ltd. in late 1995 and will renew operations under the name Pilote Point Lodge. (NLUIS 85I; D. Moshenko, pers. comm.)
Qaivvik Ltd. (Webb Outfitting [NWT] Ltd.)	64°08'N, 111°17'W	?	24, 8	lake trout, Arctic grayling	Located north of Yellowknife, on Courageous Lake, this quonset hut and tent frame camp offers sport caribou hunting and sport fishing. The lodge was licensed in 1995. It has an outpost on Lac de Gras (Lac de Gras West Camp 64°34'N, 111°12'W; 8 guest beds) which is operated in conjunction with Qaivvik's class B outfitting licence. The operating area includes Courageous Lake, Lac de Gras, and their unspecified tributary streams.

Table 2. Continued.

LODGE - OUTPOST	COORDINATES	OPERATING SEASON	GUEST BED CAPACITY	SPECIES SOUGHT	COMMENTS (references) ²
Rabesca's Resources Ltd.	64°40'N, 113°31'W	mid-August to end of September	12	lake trout	Camp "Ekwo", located on Humpy Lake, is primarily a hunting camp. It was licensed in 1995 for sport fishing.
Watta Lake Lodge (Arctic Fishing Lodges and Outfitters)	62°17'N, 113°06'W	June to September	12	lake trout, Arctic grayling, northern pike, whitefish spp.	Located on Watta Lake east of Yellowknife, this lodge offers mixed fishing and recreational activities. It was licensed in 1995. The operating area is Watta Lake and unspecified tributary streams.
Yellowknife Lodge Ltd.					see above--Pilote Point Lodge.

¹ The main sources of information for this table were the GNWT Economic Development and Tourism (B. Stoneman, pers. comm.), the GNWT Explorers Guides 1988-95, and DFO (C. Craig, pers. comm.). Other sources of information are referenced with the lodge to which they refer. Lodges located in communities or on the shores of Great Slave Lake, and outfitters operating from communities or with moveable camps, are not listed. The outfitting operations are discussed in Table 1 with other information on the lakes that they frequent.

² Lodges "not listed" in a particular year were not advertised in the Explorers Guide in that year, and presumably were not in operation.

Table 3. A summary of harvest and creel census data from sport fishing lodges in the North Slave area, NWT.

SPECIES	ESTIMATED TOTAL HARVEST (# of fish killed) ¹	AVERAGE NUMBER OF FISH CAUGHT PER ANGLER HOUR	ESTIMATED TOTAL NUMBER OF ANGLER DAYS	COMMENTS (references) ²
BLACHFORD LAKE LODGE (62°09'N, 112°40'W)				<p>Established prior to 1983, this lodge is situated on Blachford Lake (Figure 2; see also Table 1: YELLOWKNIFE--Blachford Lake). It operates from mid-June to early October and from December to the end of March, with a guest bed capacity of 25. Lake trout, northern pike, walleye, and whitefish spp. are the main species sought. Lodge guests fish mainly on Blachford and Grace lakes. In 1992, the lodges' guest bed capacity was increased from 10 to 25 beds. DFO approved the increase because the lodge is a multi-use facility and only a fraction of the guests are serious fishermen. However, because the lakes are relatively small, a number of conditions were included with the licence. They included, a lodge quota of 212 lake trout for Blachford Lake and 121 walleye for Grace Lake; harvest reporting provisions; and a reduction of the daily catch and possession limits to 2 and 3, respectively, for lake trout, northern pike and walleye in order to maintain the quality of the sport fishery. The reduction in catch limit was a recommendation and not a regulatory requirement, although it could become a regulatory requirement in future if DFO deems it necessary. (A.C. Day and G. Low, pers. comm.)</p> <p>The lodge participated in DFO's angler diary program from 1983-95. Data from this program are provided for lake trout, northern pike, and other species--including Arctic grayling, lake whitefish, and walleye. Prior to 1988, and in 1994, the angler response rate to the surveys was below 40%, and was not considered sufficient to generate reliable harvest estimates. (DFO 1991, 1992a+b, 1993, 1994, 1995; L. Anderson, pers. comm.; G. Low and C. Craig, unpubl. data)</p>
lake trout	1988--282; 1989--206; 1990--281; 1991--223; 1992--245; 1993--321; 1995--257;	0.74 0.84 0.52 0.74 1.14 0.79 2.05	425 331 505 489 427 350 421	
northern pike	1988--71; 1989--55; 1990--207; 1991--207; 1992--125; 1993--153; 1995--163;	0.97 1.55 1.45 1.14 1.33 2.19 1.75		
other	1988--2; 1989--71; 1990--89; 1991--122; 1992--28; 1993--34; 1995--11;	0.77 1.00 1.01 0.84 1.30 1.20 1.90		
KATIMAVIK LODGE (63°05'N, 113°08'W)				<p>Established in 1978, this lodge is situated on Gordon Lake, northeast of Yellowknife (Figure 2; see also Table 1: YELLOWKNIFE--Gordon Lake). It operates from mid-June to late September, with a guest bed capacity of 12. Lake trout, northern pike, and whitefish spp. are the main species sought. Lodge guests fish in Gordon Lake and its tributaries.</p> <p>In 1981, DFO conducted a partial creel census at Katimavik Lodge, from 25 June to 14 July. During that period, 146 angler-interviews were conducted. The fishery operated from 11 June to 21 July and from 7 to 24 August, accomodating an estimated total of 137 guests. The total estimated harvest of lake trout was 520 fish (874 kg round weight). Historical records indicate that the total harvest of lake trout was significantly greater during the 1970's, when the total annual harvest may have been >2,500 kg. (Roberge and Read 1986)</p>
lake trout	1981--520 (874 kg)	0.6	344	
northern pike	1981--2	<0.1		

¹ Estimates of the total number of fish killed include fish retained ("kept") as trophies, eaten for shore lunches, and that died after being released (estimated at 7% by Falk et al. 1974). These data are based only on the lodge guests. They do not consider lodge employees or other who may have been fishing in the vicinity of a lodge.

² Sources of information are referenced with the lodge to which they refer. Outfitters operating from communities or with moveable camps are not listed.

Table 4. Licences to take fish from the North Slave area for scientific purposes issued by the Department of Fisheries and Oceans (DFO), Central and Arctic Region, to DFO (1990-95) and non-DFO (1984-95) researchers. Note: DFO did not begin issuing licences to their own fisheries programs until 1990.

LICENCE HOLDER	AREA	PURPOSE	PERIOD
DFO RESEARCHERS			
E. Gyselman DFO, Winnipeg, MB	Chitty, Alexie, Baptiste and Dry Geese lakes	Experimental fisheries to examine the response of lake whitefish and lake trout populations to simulated commercial fishing.	1990, 1991
S. Harbicht DFO, Yellowknife, NT	Kam Lake	Sampling to determine baseline levels of heavy metal contaminants in fishes from Kam Lake (62°25'N, 114°24'W).	1990,
	Contwoyto Lake, Concession Lake	Sampling to evaluate bioaccumulation of heavy metals by lake trout from Contwoyto (65°36'N, 110°39'W) and Concession (65°43'N, 111°33'W) lakes.	1990
B. Hunt DFO, Yellowknife, NT	South Central Arctic	Collection of various finfish species from Alexie Lake and Lac de Gras.	1993
G. Low DFO, Hay River, NT	Yellowknife area	Investigation, in conjunction with the GNWT Department of Renewable Resources, of the growth and survival rates of Arctic charr and rainbow trout stocked in several NWT lakes.	1990, 1991
	Great Slave Lake, Mackenzie River	Fish collections from Great Slave lake and the Mackenzie river and its tributaries from Great Slave Lake northward to the north boundary of the Sahtu Settlement Area.	1995
D. McKenna DFO, Yellowknife, NT	western NWT	Collection of fishes from various locations across the western Northwest Territories.	1995
H. Welch DFO, Winnipeg, MB	Lac de Gras area	Determination of limnological conditions and fish production at two small lakes, "Ron" and "Cam", on the BHP/Diamet diamond exploration property at the northeast end of Lac de Gras (65°30'N, 110°15'W). These studies are designed to permit comparisons with other lakes in the Canadian Arctic, and to help DFO evaluate the environmental impact statements of diamond mining companies.	1995
NON-DFO RESEARCHERS			
G.R. Ash R.L. and L. Environmental Services Ltd., Edmonton, AB.	Contwoyto Lake	Sampled and tagged fish captured near Echo Bay Mines' Lupin Gold Mine at Contwoyto Lake. Lake trout liver and muscle were sampled for heavy metals. (Reid Crowther and Partners Ltd. and R.L. + L. Environmental Services Ltd. 1985; Ash 1989; Ash et al. 1991)	1984, 1988, 1992
	Izok and Itchen lakes area	Sampling of finfish in the Izok-Itchen lakes area (65°40'N, 113°00'W).	1993

Table 4. Continued.

LICENCE HOLDER	AREA	PURPOSE	PERIOD
R.F. Baker North/South Consultants Inc., Winnipeg, MB	Jackfish Lake	Feasibility study of the intensive culture of Arctic charr (<i>Salvelinus alpinus</i>) at Jackfish Lake, NT. (Baker 1987)	1987
W. Bryant Bryant Environmental Consultants Ltd. Yellowknife, NT	Lac de Gras	Baseline fisheries and aquatic ecology studies to characterize waterbodies that may be affected by future activities of the Aber Resources Ltd. and Kennecott Canada Inc. joint venture to explore and evaluate diamoniferous kimberlite pipes near the east end of Lac de Gras (centred around 64°30'N, 110°15'W).	1994, 1995
R. Butterworth Hamlet of Rae-Edzo, Rae, NT	Rae	Sampling of fishes taken downstream from the Rae-Edzo sewage lagoon (64°09'N, 117°20'W), between the lagoon and Frank Channel, to evaluate the potential effects of the effluent on fishery resources and any associated risks to human health.	1995
T. Clayton R.L. and L. Environmental Services Ltd., Edmonton, AB	Contwoyto Lake	Collection and tagging of fish as part of a monitoring study related to the Lupin Mine Project--continued in 1995 by R. Pattenden (see below).	1993, 1994
	Contwoyto Lake	Collection of Arctic grayling, coregonids, and lake trout from small lakes and streams in the Willingham Hills area (66°02'N, 111°20'W) of Contwoyto Lake to assess their aquatic resources on behalf of Canamera Geological Ltd.	1995
R. Couture Rescan Environmental Services Ltd., Vancouver, BC	Lac de Gras and Thonokied Lake	Baseline environmental studies of aquatic resources in the area of BHP Minerals Canada Ltd.'s Boston Project area, north of Thonokied Lake (64°20'N, 109°50'W), and Point Lake Project area, north of Lac de Gras (64°43'N, 110°40'W). The occurrence, habitat utilization, biological parameters, diet, and tissue heavy metal levels of fish species were studied. The study was continued in the Lac de Gras area, in 1995 (see below S. Reed).	1993, 1994
J.J. Foltyn Yellowknife, NT	Cameron River area	Determination of potential commercial harvest of molluscs in the Cameron River area (62°35'N, 114°09'W).	1989
M. Gordon EPS Yellowknife, NT	Contwoyto Lake	Environmental monitoring, including sampling of fish for metal contaminants--the latter was not conducted in 1985. (Duncan et al. 1987)	1985
M. Holenstein Inland Waters Directorate, DOE Yellowknife, NT	Yellowknife area	No information available.	1987
P. McKee Beak Consultants Limited Brampton, ON	Indin Lake area	Baseline studies to characterize the aquatic environment and fisheries resources of lakes near the Neptune Resources Corporations' Colomac project site in the Indin Lake area at Steeves Lake (64°24'N, 115°06'W) and Baton Lake (64°22'N, 115°06'W), north of Yellowknife. (Beak Consultants Ltd. 1987; McKee 1989)	1987, 1988

Table 4. Continued.

LICENCE HOLDER	AREA	PURPOSE	PERIOD
G.E. Melville Environmental and Resources Branch, Saskatchewan Research Council, Saskatoon, SK	Blatchford Lake area	Environmental baseline studies to describe the water quality and biota, particularly large fish populations, of watersheds associated with the Thor Lake mine project. (Melville et al. 1989)	1988, 1989
E. Neil Reid Crowther and Partners Ltd., N. Vancouver, BC	Contwoyto Lake	Aquatic studies program for Lupin Mine. (see also G.R. Ash above)	1985
B. Ott Norecol Environmental Consultants Ltd., Vancouver, BC	Courageous Lake area	Collected and sampled fish from sites in the Courageous Lake area during August 25-28, 1987 as part of environmental studies for the Noranda/Getty Tundra Gold Project. (Norecol Environmental Consultants Ltd. 1987)	1987
M. Palmer Northwater Consultants, Yellowknife, NT	Yellowknife area	No information available.	1987
R. Pattenden R.L. + L. Environmental Services Ltd. Edmonton, AB	Contwoyto Lake area	Collection of fish from Sun and Shallow bays of Contwoyto Lake (110°45'to 111°55'W; 65°25' to 65°55'N) and from a tributary stream between Norma and Long lakes (65°42'N, 111°16'W) as part of the ongoing monitoring studies related to the Lupin Mine Project. Lake trout from Contwoyto Lake were to be tagged for movement studies. Arctic grayling and other species encountered in the stream were to be released live into Long Lake as part of a project to rehabilitate Long Lake following a 1992 tailings spill which extirpated most or all of the fish. (D. Wright, pers. comm.)	1995
S. Reed Rescan Environmental Services Ltd. Vancouver, BC	Snare River	To conduct fisheries studies in the Snare River (63°07'N, 115°53'W), between the Snare Falls headpond and Snare Forks, just below the dam. Baseline data collected on habitat utilization, community structure, and tissue heavy metal concentrations will form part of an environmental impact assessment to be submitted by Dogrib Power Corporation for the Snare River Cascades Hydro Project.	1994
	Lac de Gras area	Environmental assessment/monitoring studies of the aquatic resources in the Lac de Gras area for existing and proposed developments (e.g. Misery Lake road) related to the BHP Diamonds Inc. project site.	1995
A.Sekerak Applied Environmental Services Yellowknife, NT	Nicholas Lake area	Environmental monitoring related to the Athabasca Gold Resources Limited' development proposal in the Nicholas Lake (63°15'N, 113°45'W) area. Fish were collected from Nicholas Lake, Nicholas Creek, Eclipse Lake, and an unnamed lake. Catch records are available but further data analyses may not have been undertaken.	1990
G.M. Smith Hatfield Consultants, W. Vancouver, BC	Matthews Lake area (64°04'N, 111°14'W)	An aquatic environmental assessment of the "Sandy Lake" system following closure of the Salmita Mine. (Hatfield Consulting Ltd. 1988)	1987

Table 4. Continued.

LICENCE HOLDER	AREA	PURPOSE	PERIOD
R.B. Spencer Spencer Environmental Management Services Ltd., Edmonton, AB	Yellowknife Area	Aquatic studies to identify potential impacts from the Terra Mines Ltd. operation on fish in Bullmoose Lake (62°20'N, 112°45'W), Bullmoose Creek, Skeeter Lake (62°21'N, 112°44'W) and Skeeter Creek (Spencer Environmental Management Services Ltd. 1987).	1986

Appendix 1. Fish species reported from selected river drainages in the North Slave area of the N.W.T., and from Great Slave and Great Bear lakes (Fig. 1). See below for footnotes and references.

[illegible]

Appendix 1. Continued.

	MACKENZIE RIVER							COPPERMINE RIVER (C)	BACK RIVER (D)
	Great Slave Lake (A)					Great Bear Lake (B)			
	Great Slave Lake (A)	Rivière la Martre (1)	Snare River (2)	Yellowknife River (3)	Lockhart River (4)	Great Bear Lake (B)	Camsell River (5)		
least cisco (<u>Coregonus sardinella</u>)	-	-	-	-	-	-	-	P	-
longnose sucker (<u>Catostomus catostomus</u>)	P	P	P	P	P	P	P	P	P
ninespine stickleback (<u>Pungitius pungitius</u>)	P	P	P	P	P	P	P	P	P
northern pike (<u>Esox lucius</u>)	P	P	P	P	P	P	P	P	-
pond smelt (<u>Hypomesus olidus</u>)	-	-	-	-	-	P	-	-	-
rainbow trout (<u>Salvelinus gairdneri</u>)	-	-	-	S	-	-	-	-	-
round whitefish (<u>Prosopium cylindraceum</u>)	P	P	P	P	P	P	P	P	P
slimy sculpin (<u>Cottus cognatus</u>)	P	P	P	P	P	P	P	P	P
spoonhead sculpin (<u>Cottus ricei</u>)	P	-	-	-	-	-	-	-	-
spottail shiner (<u>Notropis hudsonius</u>)	P	P	P	P	-	-	-	-	-
trout perch (<u>Percopsis omiscomaycus</u>)	P	P	P	P	-	P	P	-	-
walleye (<u>Stizostedion vitreum vitreum</u>)	P	P	P	P	-	P	-	-	-
white sucker (<u>Catostomus commersoni</u>)	P	P	P	P	P	-	-	-	-
yellow perch (<u>Perca fluviatilis</u>)	P	-	-	P	-	-	-	-	-

Appendix 1. Continued.

¹ "P" indicates that a fish species has been reported to occur in a particular river drainage or lake. "-" indicates that we did not find a report of the species occurring within the North Slave area in a particular drainage basin. "S" indicates that the species has been stocked in lakes within the drainage basin. Arctic charr (Salvelinus alpinus) have been stocked in small isolated lakes in the Yellowknife River drainage basin. These fish are not able to enter other waters of the basin. Some of the charr that were stocked in the Yellowknife River drainage basin as Arctic charr (Salvelinus alpinus) may in fact have been Dolly Varden (Salvelinus malma).

² The Back River and introductions excepted, fish identified as Arctic charr (Salvelinus alpinus) are included here as Dolly Varden (Salvelinus malma). There is confusion in the literature with respect to the separation of these species and many of the identifications have been tentative. Recent genetic studies by Reist et al. (1996) suggest that, with few exceptions, fish in the Mackenzie drainage basin are Dolly Varden.

³ Individual male Arctic charr (Salvelinus alpinus) and sockeye salmon (Onchorhynchus nerka) in spawning condition were sent to DFO from Great Bear Lake, but no further catch data are available (J. Reist, pers. comm.)

REFERENCES:

- A) GREAT SLAVE LAKE:** McPhail and Lindsey 1970; Scott and Crossman 1973; Lee et al. 1980.
1) Rivière la Martre: Libosvsky 1970; McPhail and Lindsey 1970; Bond 1973; Scott and Crossman 1973; Chang-Kue et al. 1987.
2) Snare River: Weagle and Cameron 1974; Jessop et al. 1993, 1994.
3) Yellowknife River: Healey and Woodall 1973b; Falk 1979a; Lee et al. 1980; Roberge and Gillman 1984; Roberge et al. 1990.
4) Lockhart River: Critchell-Bullock 1931; Clarke 1940; McPhail and Lindsey 1970; Scott and Crossman 1973; Stewart and MacDonald 1978; MacDonald and Fudge 1979; Lee et al. 1980.
B) GREAT BEAR LAKE: Miller 1947; McPhail and Lindsey 1970; Scott and Crossman 1973; Johnson 1975; Lee et al. 1980; J. Reist, pers. comm..
5) Camsell River: McPhail and Lindsey 1970; Wong and Whillans 1973; Lee et al. 1980.
C) COPPERMINE RIVER: McPhail and Lindsey 1970; Johnson 1976; Stewart and MacDonald 1978; Lee et al. 1980.
D) BACK RIVER: McPhail and Lindsey 1970; Scott and Crossman 1973; Johnson 1976; Stewart and MacDonald 1978; Lee et al. 1980; Reid Crowther and Partners Ltd. and R.L. + L. Environmental Services Ltd. 1985; Roberge et al. 1986.