A Review of Information on Fish Stocks and Harvests in the South Slave Area, Northwest Territories

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A REVIEW OF INFORMATION ON FISH STOCKS AND HARVESTS IN THE SOUTH SLAVE AREA, NORTHWEST TERRITORIES

by

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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 Larry de March of the Resource Management Division.

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ABSTRACT

Stewart, D.B. 1999. A review of information on fish stocks and harvests in the South Slave area, Northwest Territories. Can. Manuscr. Rep. Fish. Aquat. Sci. 2493: iv + 65 p.

This document was prepared to assist the Department of Fisheries and Oceans (DFO) and the Renewable Resources Board(s), which may be appointed in the future, to co-manage fisheries in the South Slave area. It reviews information on stocks of fishes that are harvested for subsistence, commerce and sport in the area south and east of Great Slave Lake. The information is current to February 1998. 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. 1999. A review of information on fish stocks and harvests in the South Slave area, Northwest Territories. Can. Manuscr. Rep. Fish. Aquat. Sci. 2493: iv + 65 p.

Ce document a pour objet d'aider le ministère des Pêches et des Océans (MPO) et les Conseil des ressources renouvelables, qu'il soit constitué dans l'avenir, à gérer conjointement la pêche dans la région du sud et de l'est du Grand lac des Esclaves (region South 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 donées sont valides jusqu'en février 1998. 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 delivrés 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 South Slave area, which lies south and east 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 South 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 Resources, Wildlife and Economic Development. 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(s) and Aboriginal First Nations government(s) with a summary of information on fish stocks and harvests in the South Slave area (Fig. 1). These stocks are harvested for subsistence, commerce and sport, mostly by Aboriginal residents of the Northwest Territories and Saskatchewan, and by visiting sport fishermen. Aboriginal residents of northern Alberta have good fish resources nearby and seldom fish in the Northwest Territories (B. Bergmann, G. Low, and D. Moshenko, pers. comm.). 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 and for the North Slave area (Stewart 1994, 1996a+b, 1997).

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 South Slave area is summarized in Table 1. Waterbodies that could not be assigned to a particular community are discussed first, under the heading "Inland waterbodies". The communities are then discussed in alphabetical order, as follows: Black Lake/Stony Rapids, Fond du Lac, Fort Resolution, Fort Smith, Hay River, Lutsel K'e, Pine Point, and Reliance. Waterbodies fished by their residents, or in the vicinity, are listed alphabetically for each community. 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 BLACK LAKE--Damant 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 hydroelectric or mining developments or of 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 and a latitude and longitude taken from the Canada Gazetteer. In some cases, a local name or geographical feature is also included in brackets. Map coordinates for waterbodies not listed in the Canada Gazetteer 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. An alphanumeric code that identifies the map on which the waterbody coordinates are located is provided in brackets (e.g. "(75C)") at the end of the section on each waterbody.

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 South 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 reviewed 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 1998 quota extends from 1 April 1998 to 31 March 1999). 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. FORT SMITH), whereas site-specific harvest data are discussed under the appropriate waterbody.

There are few data available on subsistence harvests in the South Slave area. Indeed, most of those described here were documented prior to 1985, and their present status and extent have not been documented. Descriptions of the subsistence fisheries can be found in Keleher and Haight 1965;

Sinclair et al. 1967, Radojicic 1968, Bone et al. 1973, Bodden 1980, RL&L/EMA Slave River Joint Venture 1985, and Roberge et al. 1985.

Sport fishing limits are listed in the annual Sport Fishing Guide for the Northwest Territories. Special limitations on sport fishing are in force for lake trout in Stark Lake and tributary streams of Great Slave Lake. These waters have a daily catch and possession limits of 2 and 3 lake trout, respectively, and only one trout can be over 70 cm in fork length.

Guest-bed capacities, which relate the estimated total sustainable 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 based on the rate of angler exploitation (kg $\cdot ha^{-1} \cdot y^{-1}$) 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 per year. 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 $\cdot ha^{-1} \cdot y^{-1}$, the lake should sustain a "medium quality" fishery for moderate-sized lake trout; at a high rate of exploitation, 0.16 to 0.25 kg $\cdot ha^{-1} \cdot y^{-1}$, 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 recommended exploitation rates.

At the request of some lodges and outfitters in the Northwest Territories, fishery managers are now recommending harvest quotas in terms of the number of fish that can be harvested annually by a lodge from a particular lake (A.C. Day, pers. comm.). This method of regulating the fishery has the advantage of not limiting the guest capacity of the lodge, which may offer other activities to its guests, while still limiting the harvest of fish by lodge guests to a sustainable level.

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:

reviews of the Mackenzie River system by: Mackenzie River Basin Committee 1981a; Brunskill 1986; McCart 1986; Bodaly et al. 1989;

aquatic resource surveys of: Nelson and Paetz 1972; Falk 1979; MacDonald and Fudge 1979; MacDonald and Stewart 1980;

studies of fish ecology in the Slave River by: Mackenzie River Basin Committee 1981b; Tripp et al. 1981; RL&L/EMA Slave River Joint Ventures 1985; Tallman 1996; Tallman et al. 1996 a-c; Howland 1997; Little 1997;

studies of fish ecology in the Taltson River by: Envirocon Limited et al. 1975; Envirocon Pacific Ltd. 1986; and,

species accounts of: Fuller 1955; Harris 1962; Buchwald 1968; McPhail and Lindsey 1970; and Johnson 1976.

Resource maps in the Northern Land Use Information Series (NLUIS), which were produced between 1972 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 75F) and have been 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 South 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 (S. Ransom, pers.

comm.; D. Gray, pers. comm.), the GNWT Explorers Guides 1988-98, 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 South 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 South 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

Four main fishery management issues stand out in the South Slave area: 1) the potential for overharvesting by subsistence and sport fisheries, 2) potential for overharvesting of migratory stocks by the Great Slave Lake commercial fishery, 3) the potential for adverse impacts from hydroelectric and industrial developments in the region and upstream, and 4) the quality of fishery information on which to base resource management decisions.

Major commercial export fisheries have not developed in the South 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 (Triaenophorus crassus) in their flesh (G. Low and D. Moshenko, pers. comm.). These cysts reduce the market value of the whitefish and can make them unacceptable for commercial export (if >40 cysts/45 kg rd wt) or continental markets (if > 80 cysts/45 kg rd wt). In consequence, only a few of the many large inland lakes (e.g. Kasba, Snowbird, Mosquito) have been studied in detail for the purpose of sport fishery management. Indeed, the aquatic resources of such large lakes as Firedrake, Whitefish, and Wholdaia remain virtually unknown.

The issue of overharvesting by subsistence and sport fishermen is particularly important for walleye in the Hay River, lake whitefish in the Little Buffalo River, and inconnu in the Buffalo River. To date, the Hay River walleye and Little Buffalo River whitefish do not appear to have been overharvested. Buffalo River inconnu have been overharvested, not by the subsistence or sport fisheries but by the Great Slave Lake commercial fishery. This inconnu stock remains depleted. There is an important traditional subsistence fishery for inconnu in the Slave River near Fort Smith. At present these fish are not heavily exploited for subsistence, but they are an important harvest of the commercial fishery for inconnu in Great Slave Lake. Burbot, inconnu and lake whitefish are harvested in quantity for subsistence from the lower Slave River and Slave River Delta by Aboriginal residents of Fort Resolution. The present extent of this harvest is unknown.

The Hay River walleye population is harvested mainly for sport and, to a lesser extent for subsistence. Because of the large sport fishery at Hay River, the stock has been monitored by DFO since 1972 (Gillman and Dahlke 1973; Falk and

Dahlke 1975; Bond et al. 1978; Moshenko and Low 1980; Falk 1981; Clarke et al. 1989). Despite strong harvest pressure it seems to sustain itself, perhaps due in part to the fact that in some years the river is high and murky throughout the fishing season so catches are poor and the stock gets a rest courtesy of Mother Nature (G. Low, pers. comm.). The stock definition is unknown, except that harvested fish are not part of a spawning run as they are either immature or unripe adults. A spawning run may occur in the river just after break-up but be missed due to the severe runoff conditions (G. Low, pers. comm.). There is a large domestic fishing area off the mouth of the Hay River that is closed to commercial harvest (Fig. 3), so few Hay River walleye are taken by the commercial fishery. The Aboriginal food fishery also takes few walleye as most nets are set in Great Slave Lake, in deep areas of the river, or in the late fall when feeding walleye have migrated out of the river and catch few walleye.

The Little Buffalo River lake whitefish are exploited mainly by the Aboriginal food fishery at Fort Resolution. DFO has monitored this fishery since 1975 (Roberge et al. 1985; A.C. Day and G. Low unpubl. data). The fish are harvested mainly during the post-spawning run in late September and October in the lower 2.5 km of the river. The subsistence harvest and rate of exploitation vary widely from year to year, but appear to be sustainable at present.

Inconnu congregate at the mouth of the Buffalo River in the spring and in summer migrate upstream to Buffalo Lake, where they spawn in its tributary streams in the fall before returning downstream (Day and Low 1993). The population is exploited by the Great Slave Lake commercial fishery and for subsistence. The stock definition is unknown. DFO considers inconnu stocks in the Buffalo River to have been severely overexploited, and has taken measures to reduce the impact of the Great Slave Lake commercial fishery on the stock. Despite these measures, recovery of the Buffalo River stock is expected to be slow (Day and Low 1993). The Slave River stock is being monitored and protected by DFO to prevent a similar occurrence there (G. Low, pers. comm.).

The harvests by tourist sport lodge operations are poorly known to DFO, as they have only been studied briefly in the late 1970's or early 1980's. In the absence of data on both the exploited stocks and harvests, fishery managers must rely on guest-bed capacities or harvest quotas to regulate these fisheries. Studies are required to measure the trend to catch and release fishing and its effects on harvests (G. Low, pers. comm.).

The effect of the Great Slave Lake commercial fishery on the Aboriginal food fishery is of particular concern to area residents (Stewart et al. 1999). In 1996, on the recommendation of the Great Slave Lake Advisory Committee, the Fort Resolution domestic fishing boundary was moved westward to expand the domestic fishing area and prevent commercial fishing near the mouth of the Little Buffalo River (Fig. 3). This measure will remain in effect until outstanding Dene and Metis land claims in the South Slave area are settled, after which time it may be reviewed by the Great Slave Lake Advisory Committee. Inshore zones along the south shore of Great Slave Lake and near the Slave River Delta have also been closed to commercial fishing in the spring to protect inconnu from the Slave River and from the threatened Buffalo River stock which migrate along the south shore and concentrate at the river mouth in the spring.

Where detailed information does exist on a particular waterbody, it has generally been gathered to assess the impacts of resource development. These initiatives include studies of existing or proposed hydroelectric developments, on the Taltson and Slave rivers; studies of mining properties such as the now abandoned Cominco Pine Point Mine; and studies of organic contaminants that may be carried down the Slave River from industrial developments upstream.

The existing knowledge of fisheries resources in the South Slave area is not sufficient to ensure effective long term 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, and to further improve the documentation of subsistence fisheries and their harvests.

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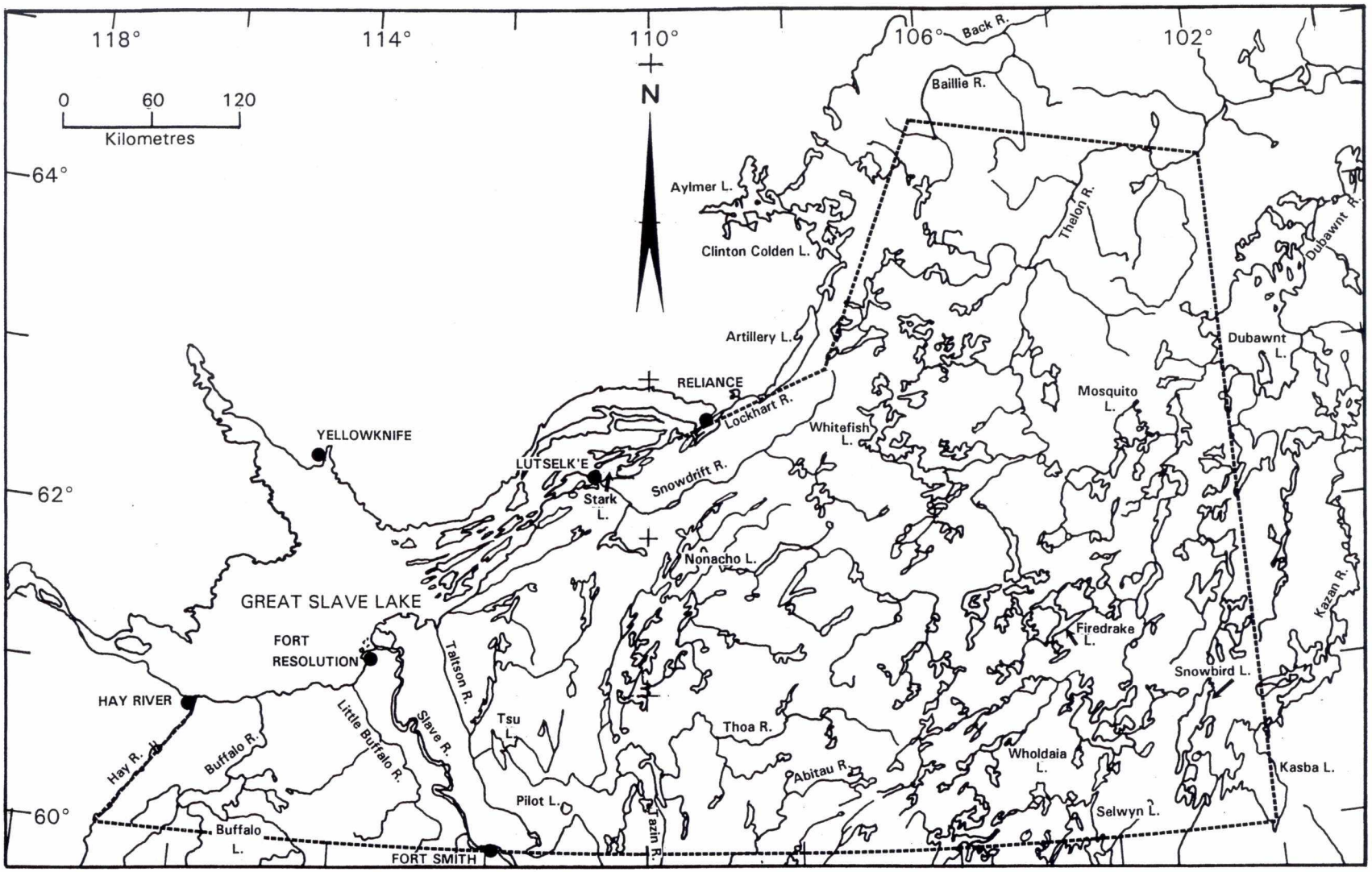

Figure 1. Map of the South Slave area of the N.W.T., showing communities and major rivers.

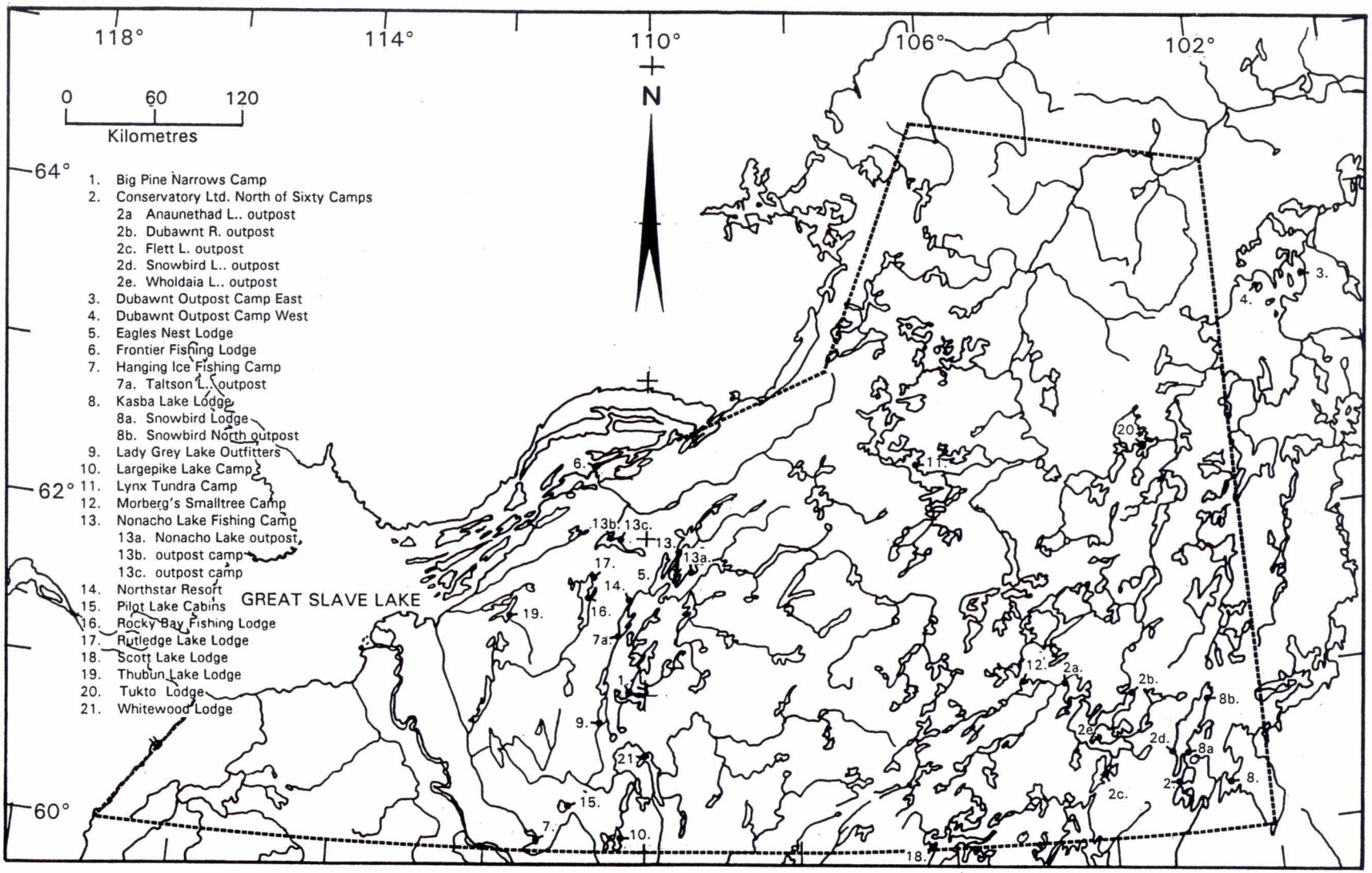

Figure 2. Sport fishing lodges and outposts in the South Slave area of the N.W.T.

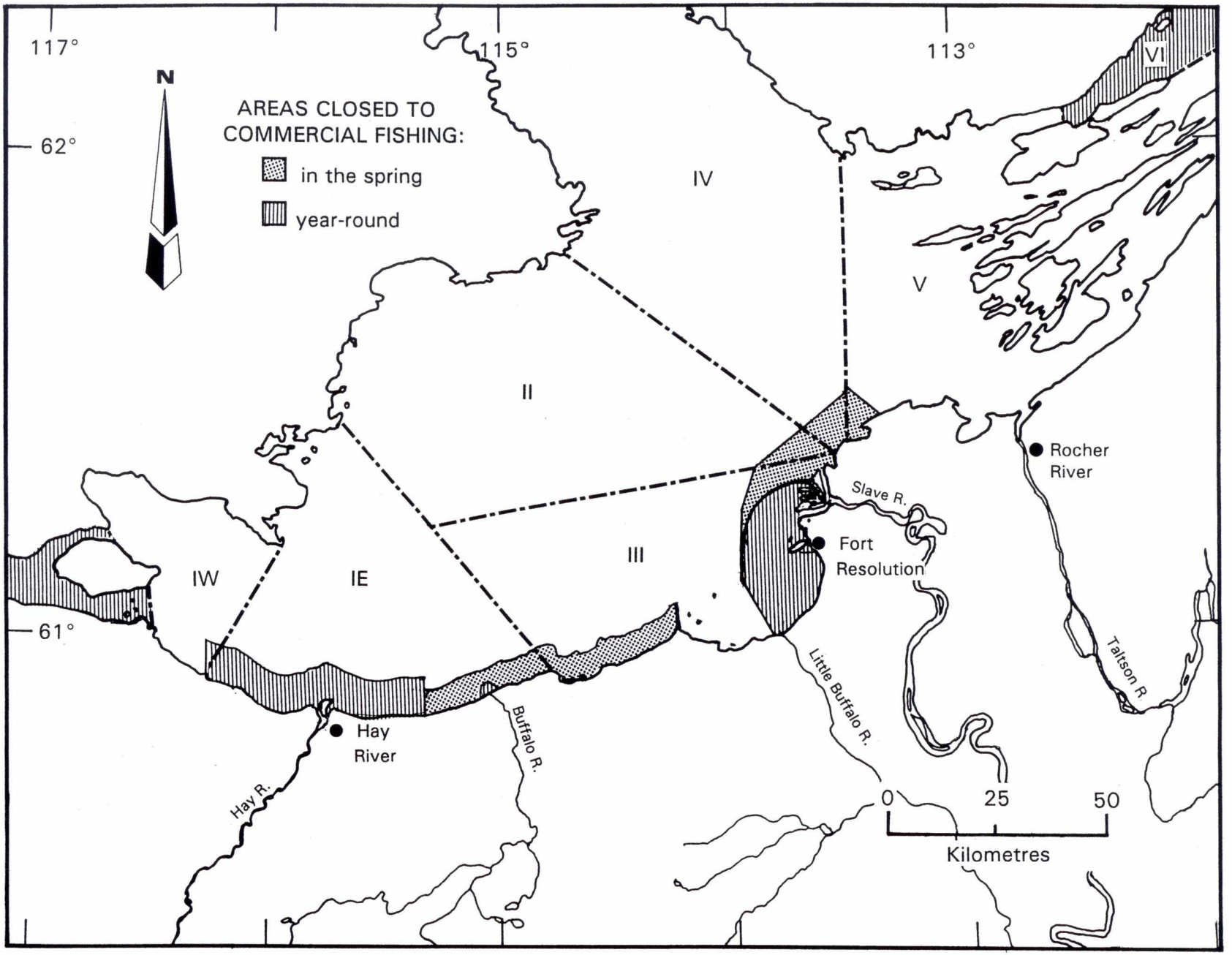

Figure 3. Map of southwestern Great Slave Lake, N.W.T., showing the administrative areas (IE to VI) and areas closed to commercial fishing.

Table 1. Harvests of fishes from the South 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 WATERBODIES			
Abitau River 60°00'N, 108°35'W			In 1978, an experimental gillnet fishery (60°28'N, 107°35'W) sampled lake chub, lake trout, lake and round whitefish, and northern pike from this tributary of the Taltson River. In 1991, DFO estimated the guest-bed capacity of Abitau Lake for a high quality lake trout sport fishery at 2 to 3 beds. (MacDonald and Fudge 1979; R.W. Moshenko, pers. comm.) (75C)
Alcantara Lake 60°57'N, 108°09'W	lake trout + lake whitefish 2,300		A DFO experimental fishery in 1975 caught lake whitefish, longnose sucker, northern pike, and round whitefish at this lake on the Thoa River, a tributary of the Taltson. In 1994, DFO recommended against the establishment of a sport fishing lodge on Alcantara Lake, as the sustainable harvest, estimated at 273 to 545 kg per year for a high quality lake trout fishery, would be insufficient to sustain a lodge. Alcantara Outfitting has offered self-guided fishing trips to a cabin on Alcantara Lake since 1995. Anglers visit from June through September to catch lake trout, northern pike, walleye and whitefish. (NWT Explorers Guide 1995-98; NLUIS 75C; A.C. Day and G. Low pers. comm.) (75C)
Atzinging Lake 60°13'N, 103°10'W	lake trout + lake whitefish 6,000		This lake on the Kazan River system has a commercial harvest quota but no record of commercial harvest. (65D)
Baillie River 65°07'N, 104°36'W (Figure 1)			In 1977, an experimental gillnet fishery sampled lake trout, lake and round whitefish, and longnose sucker from two sites (64°15'N, 105°17'W; 64°07'N, 104°47'W) on the Baillie River, a tributary of the Back River. Fish species reported from the Baillie River are listed in Appendix 1. (Stewart and MacDonald 1977) (76A)
Big Rocky Lake 62°17'N, 102°15'W	lake trout + lake whitefish 4,200		This lake on the Kamilukuak River system, a tributary of the Dubawnt, has a commercial harvest quota but no record of commercial harvest. (65L)
Brazen Lake 60°02'N, 108°05'W			In 1975, a DFO experimental fishery caught cisco, lake trout, lake whitefish, and sucker at this lake on the Abitau River system, a tributary of the Taltson. (NLUIS 75C) (75C)
Campbell Lake 63°14'N, 106°55'W			In 1978, an experimental gillnet fishery sampled lake trout from this lake on the Hanbury River, a tributary of the Thelon River. (MacDonald and Fudge 1979) (75O)
Carey Lake 62°12'N, 103°00'W			In 1978, an experimental gillnet fishery sampled lake cisco, lake trout, northern pike, and round whitefish from this lake on the Dubawnt River system. (MacDonald and Fudge 1979) (65L)
Casimir Lake 61°28'20"N, 102°38'20"W	lake trout + lake whitefish 14,500		A DFO experimental fishery sampled lake trout, lake whitefish, and northern pike from this lake on the Kamilukuak River, a tributary of the Dubawnt, in 1968. Of 100 lake whitefish examined, 90 had cysts of the parasite Triaenophorus crassus in their flesh. The infestation rate was 322 cysts per 45 kg of flesh. An experimental fishery was planned to sample lake trout and lake whitefish from this lake in 1974, but there is no record of fishing. In 1978, an experimental fishery sampled lake cisco, lake trout, and northern pike from Casimir Lake (listed as unnamed lake 61°34'N, 102°25'W) (Johnson 1976; MacDonald and Fudge 1979; Moshenko 1980; Yaremchuk et al. 1989; NLUIS 65E; DFO unpubl. data) (65E)
Clarke River 63°37'N, 104°27'W			In 1978, an experimental fishery sampled lake cisco, lake trout, lake whitefish, and longnose sucker from several locations (63°26'N, 103°45'W; 63°18'N, 103°06'W) on this tributary of the Thelon River. (MacDonald and Fudge 1979) (65M)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Dolby Lake 61°28'N, 103°48'W			In 1978, an experimental fishery sampled lake chub, lake trout, lake whitefish, longnose sucker, northern pike, and slimy sculpin from this lake on the Dubawnt River system. (MacDonald and Fudge 1979) (65E)
Doran Lake 61°13'N, 108°06'W	lake trout + lake whitefish 2,900		This headwater lake on the Taltson River system has a commercial harvest quota but no record of commercial harvest. In 1983, DFO estimated the guest-bed capacity of Doran Lake for a high quality lake trout sport fishery at 3 to 5 beds. (NLUIS 75F; M. Roberge, pers. comm.) (75F)
Dubawnt Lake 63°04'N, 101°42'W	lake trout + lake whitefish 214,000	1980 sport harvest: --lake trout 14,721 kg, --Arctic grayling 33 fish.	This lake on the Dubawnt River is located mainly in Nunavut. Experimental fisheries by DFO in 1958, 1978, and 1980 sampled Arctic grayling, burbot, lake cisco, lake trout, lake whitefish, longnose sucker, round whitefish, and slimy sculpin from Dubawnt Lake. The August 1980 experimental fishery used multi-mesh experimental gillnets to assess the lake's potential as a high quality lake trout fishery. Data were recorded on catch-effort, fish growth and maturity, and lake trout fecundity. Dubawnt Lake has a commercial harvest quota but no record of commercial harvest. (Johnson 1976; MacDonald and Fudge 1979; Moshenko 1980; Roberge 1984) Sport fishing outfitters have operated at Dubawnt Lake since 1968. In 1977, Henik Lake Lodge established its' Dubawnt Outpost Camp East (63°27'N, 100°40'W; 6 guest beds), and in 1979 its Dubawnt Outpost Camp West (63°26'N, 101°26'W; 8 guest beds)--both in Nunavut. The 1980 sport harvest of lake trout, estimated from a partial creel census of the Dubawnt Outpost Camp East, was 3,984 lake trout (14,741 kg) and 33 Arctic grayling (Table 3). In 1988, DFO estimated the guest-bed capacity of southern Dubawnt Lake for a high quality lake trout sport fishery at 12 beds for Eskimo Point Tours who planned to operate a tent camp on the lake that summer. At that time, there were two camps on the lake with a total of 14 guest beds. Lodge operations at Dubawnt Lake were last advertised by Dubawnt Lake Lodge (formerly Dubawnt Outpost Camp West) in 1992. (Moshenko 1980; Roberge 1984; M. Roberge, pers. comm.; DFO unpubl. data) In 1971, DFO measured total mercury in the flesh of lake trout (mean 0.41 $\mu g \cdot g^{-1}$ wet wt, n = 28, range 0.12 - 0.94) and whitefish (mean 0.03 $\mu g \cdot g^{-1}$ wet wt, n = 3, range 0.03 - 0.17) from Dubawnt Lake (M. Hendzel, unpubl. data). (65G)
Dubawnt River 64°33'N, 100°06'W (Figure 1)			Fish species reported from the Dubawnt River are listed in Appendix 1. (65D)
Ecklund Lake 62°27'N, 103°07'W	lake trout + lake whitefish 20,100		This lake on the Dubawnt River has a commercial harvest quota but no record of commercial harvest. (65L)
Edwards Lake 61°46'N, 103°48'W			In 1978, an experimental fishery sampled lake trout, lake whitefish, round whitefish, and slimy sculpin from this lake on the Dubawnt River system. (MacDonald and Fudge 1979) (65E)
Escort Lake 60°22'N, 108°50'W			In 1975, a DFO experimental fishery caught lake whitefish and northern pike at this headwater lake on the Abitau River system, a tributary of the Taltson. (NLUIS 75C) (75C)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Finnie River 64°09'15"N, 102°33'30"W			In 1978, an experimental fishery sampled lake chub, lake cisco, lake trout, lake whitefish, and longnose sucker at several locations (63°20'N, 102°36'W; 63°17'N, 102°49'W) on this tributary of the Thelon River. (MacDonald and Fudge 1979) (65M)
Gravel Hill Lake 62°10'N, 103°52'W			In 1978, an experimental gillnet fishery sampled burbot, lake chub, lake trout, and lake and round whitefish from this lake on the Dubawnt River system. (MacDonald and Fudge 1979) (75I)
Halliday Lake 61°21'N, 108°56'W	lake trout + lake whitefish 2,700		This lake on the Taltson River system has a commercial harvest quota but no record of commercial harvest. (75F)
Hanbury River 63°37'N, 104°34'W (Figure 1)			This tributary of the Thelon River supports Arctic grayling, lake trout, whitefish, and suckers. (Hornby 1934). (75P)
Healey Lake 64°20'N, 106°45'W			In 1977, an experimental gillnet fishery sampled lake trout from this lake on the Baillie River. (NLUIS 76B) (76B)
Hinde Lake 61°11'N, 103°38'W			In 1988, DFO estimated the guest-bed capacity of Hinde Lake for a high quality lake trout sport fishery at 1 to 2 beds. (M. Roberge, pers. comm.)
Hjalmar Lake 61°33'N, 109°25'W	lake trout + lake whitefish 8.800 northern pike--no quota	1964--lake trout and lake whitefish 4,002 kg; 1969--lake trout 12,057 kg, lake whitefish 36,404 kg; 1970--lake trout 11,407 kg, lake whitefish 33,116 kg; 1971--lake trout and lake whitefish 23,073 kg <u>By-catches:</u> 1970--northern pike 13 kg	A rockfill dam built in 1968 at the outlet of Nonacho Lake (see LUTSEL K'E--Nonacho Lake) has impounded the flow of the Taltson River (see FORT RESOLUTION--Taltson River), raising the lake level about a metre and creating a large reservoir that includes Hjalmar Lake. The shores of the lake have been flooded and the seasonal flow patterns altered. Envirocon Ltd. sampled lake cisco, lake trout, and lake whitefish from Hjalmar Lake in June-September 1973. Fish were captured using mixed-mesh gillnets and beach seines. Data were collected on catch effort; fish habitat, growth, reproduction, and diet; and on water chemistry, zoobenthos, and zooplankton. (Envirocon Limited et al. 1975; Envirocon Ltd. unpubl. data--See DFO Permit files). Commercial harvests of lake trout and lake whitefish were taken from Hjalmar Lake in 1964, 1969, 1970 and 1971, with a small by-catch of northern pike in 1970. In 1988, DFO estimated the guest bed capacity of Hjalmar Lake for a medium quality lake trout sport fishery, provided the resource is not shared with a commercial fishery, at 8 to 12 beds. (Envirocon Limited et al. 1975; Yaremchuk et al. 1989; M. Roberge, pers. comm.) Mercury levels in lake trout flesh, measured by DFO in 1970-71, exceeded the recommended safe limits for people who consume large quantities of fish (<0.2 $\mu g \cdot g^{-1}$ wet wt of fish flesh), and for fish sold in Canada (<0.5 $\mu g \cdot g^{-1}$ wet wt of fish flesh) (Department of National Health and Welfare 1984). When DFO analysed the flesh of lake whitefish, lake trout, and northern pike for total mercury ($\mu g \cdot g^{-1}$ wet wt) in 1986, the lake whitefish (mean 0.11, n = 15, range 0.03 - 0.17) were found to be suitable for subsistence and commercial sale but the lake trout (mean 0.76, n = 11, range 0.35 - 2.26) and northern pike (mean 0.72, n = 5, range 0.27 - 2.00) were not. (Tam and Armstrong 1972; M. Hendzel, unpubl. data) (75F)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Insula Lake 60°32'N, 106°46'W			In 1991, DFO estimated the guest-bed capacity of this headwater lake on the Dubawnt River system for a high quality lake trout sport fishery at 1 bed. (R.W. Moshenko, pers. comm.) (75B)
Ivanhoe Lake 60°30'N, 106°25'W			In 1978, an experimental gillnet fishery sampled lake chub, lake cisco, lake trout, lake whitefish, longnose sucker, and northern pike from this lake on the Dubawnt River system. In 1991, DFO estimated the guest-bed capacity of Ivanhoe Lake for a high quality lake trout sport fishery at 2 to 5 beds. (MacDonald and Fudge 1979; R.W. Moshenko, pers. comm.)
Jenne Lake 60°31'N, 103°35'W	lake trout + lake whitefish 1,000		This headwater lake on the Kazan River system has a commercial harvest quota but no record of commercial harvest. (65D)
Kamilukuak Lake 62°22'N, 101°40'W			In 1978, an experimental gillnet fishery sampled lake cisco, lake trout, and round whitefish from this lake on the Dubawnt River system. (MacDonald and Fudge 1979) (65K)
Kazan River (Figure 1) 64°02'30"N, 95°29'05"W			Fish species reported from the Kazan River are listed in Appendix 1. (56D)
Labyrinth Lake 60°44'N, 106°23'W			In 1978, an experimental gillnet fishery sampled lake chub, lake trout, lake whitefish, and northern pike from this lake on the Dubawnt River system. In 1991, DFO estimated the guest-bed capacity of Labyrinth Lake for a high quality lake trout sport fishery at 2 to 4 beds. (MacDonald and Fudge 1979; R.W. Moshenko, pers. comm.) (75B)
"Lac Brulé"			See below--unnamed lake [Lac Brulé]
Markham Lake 62°30'N, 102°37'W	lake trout + lake whitefish 6,500		In 1971, DFO conducted a limnological survey of this lake on the Dubawnt River system. Data were collected on the water chemistry, phytoplankton, zooplankton, and zoobenthos of the lake. Fish were captured using multi-mesh experimental gillnets, seines, and rod and reel. Data on the catch effort and on fish growth, reproduction and diet were reported. Lake cisco, lake trout, lake whitefish, and longnose sucker were sampled. Mercury levels were measured in the flesh of lake trout. In 1978, an experimental gillnet fishery sampled lake trout, lake and round whitefish, and slimy sculpin from Markham Lake. The lake has a commercial harvest quota but no record of commercial harvest. (Falk 1979; MacDonald and Fudge 1979; Hendzel, pers. comm.) (65L)
Moss Lake 60°23'N, 106°10'W			In 1991, DFO estimated the guest-bed capacity of this headwater lake on the Dubawnt River system for a high quality lake trout sport fishery at 1 bed. (R.W. Moshenko, pers. comm.) (75B)
Mosquito Lake 62°36'N, 103°22'W			This lake on the Dubawnt River system, was sampled using multi-mesh experimental gillnets by an experimental fishery in 1978, and by DFO in July and August 1983. The DFO study assessed the lake's potential as a high quality lake trout sport fishery. Data were recorded on catch-effort, fish growth and maturity, and lake trout fecundity. Fish species caught by the studies included Arctic grayling, burbot, cisco sp., lake trout, and lake and round whitefish. DFO also tagged 276 lake trout to follow their growth and movements, measured water temperature and dissolved oxygen profiles, and collected samples of the zooplankton and

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Mosquito Lake, continued.			zoobenthos. Tukto Lodge offers sport fishing at Mosquito Lake (Table 2). (MacDonald and Fudge 1979; Roberge and Dunn 1985) DFO measured mercury levels in the flesh of lake trout from Mosquito Lake in 1970. (M. Hendzel, pers. comm.) (65L)
Naskethey Lake 61°19'N, 109°26'W	lake trout + lake whitefish 1,700		This lake on the Taltson RIver system has a commercial harvest quota but nor record of commercial harvest. (75F)
Obre Lake 60°22'N, 103°03'W			Conservatory Ltd. North of Sixty Camps (Table 2) operates a sport fishing lodge on Obre Lake with outpost camps or mini-lodges on the Dubawnt River and on Anaunethad, Flett (see above), Snowbird, and Wholdaia (see below) lakes. In 1994, DFO estimated the guest-bed capacity of Obre Lake for a high quality lake trout sport fishery at 14 beds, but recommended that the fishery be managed instead using a quota on the lake trout harvest of 400 fish. The intent of this recommendation was to limit the annual lake trout harvest while allowing the lodge to optimize the size of its operation. It would be the lodge's responsibility to partition the available harvest among its guests. (A.C. Day, pers. comm.) (65D)
Odin Lake 60°38'N, 106°23'W			In 1991, DFO estimated the guest-bed capacity of this lake on the Dubawnt River for a high quality lake trout sport fishery at 1 to 2 beds. (A.C. Day, pers. comm.) (75B)
Porter Lake 61°41'N, 108°05'W			This lake on the Taltson River system was proposed as a reserve site by the International Biological Programme. In 1988, DFO estimated it's guest-bed capacity for a low to medium quality lake trout sport fishery at 10 to 15 beds. See also Table 4--K. Antoniak. (NLUIS 75F; M. Roberge, pers. comm.) (75F)
Powder Lake 61°05'N, 109°15'W			In 1983, DFO estimated the guest-bed capacity of this lake on the Taltson River system for a high quality lake trout sport fishery at 3 to 4 beds. (M. Roberge, pers. comm.) (75F)
"Reulling Lake"			See below--unnamed lake [Reulling Lake]
Salkeld Lake 61°25'N, 109°50'W	lake trout + lake whitefish 1,800 northern pike--no quota	1971--lake trout 431 kg, lake whitefish 9,917 kg. <u>By-catches:</u> 1971--northern pike 5 kg.	A commercial harvest of lake trout and lake whitefish was taken from this lake on the Taltson River system in 1971, with a small by-catch of northern pike. (Yaremchuk et al. 1989) DFO measured mercury levels in the flesh of lake trout from Salkeld Lake in 1971. (M. Hendzel, pers. comm.) (75F)
"Shack Lake"			See below--unnamed lake [Shack Lake]
Sparks Lake 61°12'N, 109°40'W	lake trout + lake whitefish 6,500	1965--lake trout 3,241 kg, lake whitefish 7,530 kg; 1972--lake trout 4,101 kg, lake whitefish 12,004 kg 1973--lake trout 4,178 kg, lake whitefish 11,069 kg; 1980--lake trout 967 kg, lake whitefish 2,880 kg;	Commercial harvests of lake trout and lake whitefish were taken from this lake on the Taltson River system periodically between 1965 and 1981, with small by-catches of northern pike in 1972 and 1980. Cysts of the parasite <u>Triaenophorus crassus</u> are found in the flesh of whitefish from Sparks Lake. (Yaremchuk et al. 1989; DFO unpubl. data) In 1988, DFO estimated the guest-bed capacity of Sparks Lake for a medium quality lake trout sport fishery, where the resource would be shared with the existing commercial fishery, at 7 to 11 beds. Alcantara Outfitting has offered self-guided fishing trips to a cabin on Sparks Lake

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Sparks Lake, continued.	northern pike --no quota	1981--lake trout and lake whitefish 4,371 kg. By-catches: 1972--northern pike 93 kg; 1980--northern pike 64 kg.	since 1995. Anglers visit from June through September to catch lake trout, northern pike, walleye and whitefish. (NWT Explorers Guide 1995-98; M. Roberge, pers. comm.) In 1981, DFO analysed the flesh of lake trout from Sparks Lake for total mercury (mean 0.29 $\mu g \cdot g^{-1}$ wet wt, n = 15, range 0.13 - 0.70 (M. Hendzel, unpubl. data) (75F)
Tent Lake 62°25'N, 107°54'W			In 1975, a DFO experimental gillnet fishery caught lake trout and lake whitefish at this lake on the Eileen River, a tributary of the Snowdrift. In 1988, DFO estimated the guest-bed capacity of Tent Lake for a medium quality lake trout sport fishery at 9 to 13 beds. (NLUIS 75K; M. Roberge, pers. comm.) (75J)
Thelon River (Figure 1) 64°10'30"N, 96°04'35"W			Experimental gillnet fisheries in 1978 and 1979 sampled Arctic grayling, lake cisco, lake trout, lake chub, lake whitefish, longnose sucker, northern pike, round whitefish, and slimy sculpin from sites along the Thelon River (e.g. 63°58'N, 103°53'W; 62°33'N, 104°35'W; 62°35'N, 104°30'W; 62°36'N, 104°44'W; 62°26'N, 105°07'W). In 1979, data were also collected on water chemistry and zooplankton. Fish species reported from the Thelon River are listed in Appendix 1. (MacDonald and Fudge 1979; MacDonald and Stewart 1980) (66A)
Thoa River 60°31'N, 109°47'W			In 1978, an experimental gillnet fishery (60°46'N, 106°48'W) sampled lake chub, lake cisco, lake whitefish, and northern pike from this tributary of the Taltson River. (MacDonald and Fudge 1979) (75C)
Tourgis Lake 64°41'N, 106°02'W			In 1977, an experimental gillnet fishery sampled longnose sucker and round whitefish from this lake on the Baillie River system. (Stewart and MacDonald 1978) (76B)
Tronka Chua Lake 61°30'N, 109°56'W	lake trout + lake whitefish 1,900	1970---lake trout 2,518 kg, lake whitefish 8,233 kg.	Water from the impoundment created by the rockfill dam at the outlet of Nonacho Lake (see LUTSEL K'E--Nonacho Lake) flows overland into Tronka Chua Lake when the reservoir water level exceeds an elevation of 344.5 m (1050 feet). A commercial harvest of lake trout and lake whitefish was taken from this lake on the Taltson River system in 1970. DFO measured mercury levels in the flesh of the lake trout. (Envirocon Limited et al. 1975; Yaremchuk et al. 1989; M. Hendzel, pers. comm.) (75F)
Turner Lake 64°05'N, 104°45'W	lake trout + lake whitefish--no quota	1967--lake trout 794 kg, lake whitefish 1,975 kg; 1973--lake trout 773 kg, lake whitefish 702 kg.	Commercial harvests of lake trout and lake whitefish were taken from this lake on the Thelon River system in 1967 and 1973. (Yaremchuk et al. 1989) (75A)
Tyrrell Lake 63°15'N, 105°28'W			In 1978, an experimental gillnet fishery sampled lake cisco, lake trout, and round whitefish from this lake on the Thelon River system. (MacDonald and Fudge 1979) (75P)
unnamed lake [Lac Brulé] 60°45'N, 106°07'W			In 1978, an experimental gillnet fishery sampled lake chub, lake trout, lake whitefish, longnose sucker, and northern pike from this lake on the Dubawnt River system. In 1991, DFO estimated the guest-bed capacity of Lac Brulé for a high quality lake trout sport fishery at 1 bed. (MacDonald and Fudge 1979; A.C. Day, pers. comm.) (75B)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
unnamed lake [Reulling Lake] 61°22'N, 109°33'W	lake trout + lake whitefish 1,900	1971--lake trout 5,321 kg, lake whitefish 2,843 kg.	A commercial harvest of lake trout and lake whitefish was taken from this lake on the Taltson River system in 1971. DFO measured mercury levels in the flesh of the lake trout. (Yaremchuk et al. 1989; M. Hendzel, pers. comm.) (75F)
unnamed lake [Shack Lake] 60°29'N, 109°32'W	lake trout + lake whitefish 600		This lake on the Taltson River system has a commercial harvest quota but no record of commercial harvest. (75C)
unnamed lake [West Hjalmar Lake] 61°28'N, 109°35'W	lake trout + lake whitefish 5,000	1970--lake trout 1,628 kg, lake whitefish 1,634 kg; 1971--lake trout 391 kg, lake whitefish 315 kg; 1977--lake trout and lake whitefish 9,917 kg.	Commercial harvests of lake trout and lake whitefish were taken from this lake on the Taltson River system in 1970, 1971, and 1977. (Yaremchuk et al. 1989) (75F)
unnamed lake 61°34'N, 102°12'W			In 1978, an experimental gillnet fishery sampled lake whitefish and longnose sucker from this lake on the Kamilukuak river, a tributary of Dubawnt Lake. (MacDonald and Fudge 1979) (65E)
unnamed lake 64°33'N, 104°23'W			In 1977, an experimental gillnet fishery sampled lake cisco and lake trout at this lake on the Baillie River. (Stewart and MacDonald 1978; NLUIS 76A) (76A)
Vandyck Lake 60°13'N, 109°28'N	lake trout + lake whitefish 1,200	1992--lake trout 590 kg, lake whitefish 363 kg, northern pike 91 kg; 1993--NF.	In 1992, an experimental fishery sampled lake trout, lake whitefish, and northern pike from this headwater lake on the Taltson River system. In 1984, DFO indicated that Vandyck Lake was too small to support a proposed sport fishing establishment. (DFO 1994, 1995; B. Wong, pers. comm.) (75C)
"West Hjalmar Lake"			See above--unnamed lake [West Hjalmar Lake]
Whirlwind Lake 60°15'N, 108°40'W			In 1975, a DFO experimental fishery caught lake whitefish and northern pike at this lake on the Abitau River, a tributary of the Taltson. (NLUIS 75C) (75C)
Wren Lake 60°20'N, 108°42'W			In 1975, a DFO experimental fishery caught lake whitefish and northern pike at this lake on the Abitau River, a tributary of the Taltson. (NLUIS 75C) (75C)
BLACK LAKE and STONY RAPIDS, SASKATCHEWAN			Chipewyan residents of these closely associated northern Saskatchewan communities have traditionally trapped, hunted, and fished in the southeastern portion of the South Slave area. (Bone et al. 1973; Smith 1981)
Anaunethad Lake 60°55'N, 104°25'W			In 1978, an experimental gillnet fishery sampled lake chub, lake trout, lake whitefish, and northern pike from this lake on the Dubawnt River system. Trappers from Black Lake Saskatchewan winter in the Anaunethad Lake area. Conservatory Ltd.'s North of Sixty Camps (Table 2) on Obre Lake operates an outpost camp on Anaunethad Lake (see INLAND WATERBODIES--Obre Lake). In 1994, DFO recommended that the fishery be managed using a quota on the lake trout harvest of 1,000 fish, rather than assigning guest beds. The intent of this recommendation was to limit the annual lake trout harvest while allowing the lodge to optimize the size of its operation. It would be the lodge's responsibility to partition the available harvest among its guests. (MacDonald and Fudge 1979; NLUIS 75H; A.C. Day, pers. comm.) (75A)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Boyd Lake 61°30'N, 103°23'W			In 1978, an experimental gillnet fishery sampled lake cisco, lake trout, northern pike, and round whitefish from this lake on the Dubawnt River system. Residents of Stony Rapids, Saskatchewan have fished for subsistence at Boyd Lake. The present extent of this fishery is unknown. In 1988, DFO estimated the guest-bed capacity of Boyd Lake for a high quality lake trout sport fishery at 5 to 10 beds. (MacDonald and Fudge 1979; NLUIS 65E; M. Roberge, pers. comm.) (65E) /SR
Damant Lake 61°45'N, 105°05'W			In 1978, an experimental gillnet fishery sampled lake cisco, lake trout, and lake whitefish from this lake on the Elk River, a tributary of the Thelon River. Trappers from Black Lake and Fond du Lac, Saskatchewan, have wintered in the Damant Lake area. The extent of any subsistence fishery is unknown. (MacDonald and Fudge 1979; NLUIS 75H) (75H)
Firedrake Lake 61°25'N, 104°30'W			In 1978, an experimental gillnet fishery sampled lake cisco, lake trout, lake whitefish, longnose sucker, northern pike, and slimy sculpin from this lake on the Dubawnt River system. Trappers from Black Lake and Fond du Lac, Saskatchewan, winter in the area. The extent of any subsistence fishery is unknown. In 1991, DFO estimated the guest-bed capacity of Firedrake Lake for a high quality lake trout sport fishery at 4 to 8 beds. (MacDonald and Fudge 1979; NLUIS 75H; D. Pike, pers. comm.) (75H)
Flett Lake 60°25'N, 104°08'W	lake trout + lake whitefish 13,000		In 1978, an experimental gillnet fishery sampled lake cisco, lake trout, lake whitefish, longnose sucker, and slimy sculpin from this lake on the Dubawnt River system. Trappers from Black Lake, Saskatchewan, have wintered in this area. The extent of any subsistence fishery is unknown. The lake has a commercial harvest quota but no record of commercial harvest. Conservatory Ltd.'s North of Sixty Camps (Table 2) on Obre Lake operates an outpost at Flett Lake (see INLAND WATERBODIES--Obre Lake). In 1994, DFO estimated the guest-bed capacity of Flett Lake for a high quality lake trout sport fishery at 6 beds, but recommended that the fishery be managed instead using a quota on the lake trout harvest of 500 fish. The intent of this recommendation was to limit the annual lake trout harvest while allowing the lodge to optimize the size of its operation. It would be the lodge's responsibility to partition the available harvest among its guests. (MacDonald and Fudge 1979; NLUIS 75A; A.C. Day, pers. comm.) (75H)
Ingalls Lake 60°15'N, 104°57'W	walleye 6,840		Families from Black Lake, Saskatchewan, have winter trapping camps at this headwater lake on the Dubawnt River system. The present extent of any subsistence fishery is unknown. Ingalls Lake has a commercial harvest quota but no record of commercial harvest. In 1990, DFO estimated the lake's guest-bed capacity for a high quality lake trout sport fishery at 8 to 15 beds. (Yaremchuk et al. 1989; NLUIS 75A; D. Pike, pers. comm.) (75A)
Kasba Lake 60°18'N, 102°07'W	lake trout + lake whitefish 75,900	1963--lake trout 19,700 kg, lake whitefish 9,388 kg; 1967--lake trout and lake whitefish 4,536; 1968--lake trout 19,257 kg, lake whitefish 10,414 kg; 1969--lake whitefish 1,505 kg.	Kasba Lake, on the Kazan River, extends into Nunavut. DFO sampled lake trout and lake whitefish fish from the lake in 1963 and 1967. An experimental gillnet fishery also sampled round whitefish there in 1978. DFO sampled the lake in July and August 1979, using multi-mesh experimental gillnets, to assess its' potential as a high quality lake trout fishery. Data were recorded on catch-effort, fish growth and maturity, and lake trout fecundity. Species caught included Arctic grayling, burbot, cisco sp., lake chub, lake trout, lake and round whitefish, longnose and white sucker, and northern pike. Some 523 lake trout were tagged so that their growth and movements could be followed. (MacDonald and Fudge 1979; Moshenko 1980; Falk et al. 1982)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Kasba Lake, continued.		Sport harvest: See Table 3--Kasba Lake Lodge	A family from Black Lake, Saskatchewan, has trapped and hunted in the winter at Kasba Lake. Large commercial harvests were taken from the lake in 1963 and 1968, with smaller harvests in 1967 and 1969. Commercial fishing was discontinued due to a high infestation rate of Triaenophorous crassus in the lake whitefish, and high transportation costs. (Bone et al. 1973; Yaremchuk et al. 1989; NLUIS 65D; DFO unpubl. data) Kasba Lake Lodge was established in 1971 on the southwestern shore of Kasba Lake (60°16'N, 102°30'W) and was still operating in 1998. A DFO creel census of anglers at the lodge, in 1979, estimated their sport harvest at 1,846 fish (3,692 kg), mostly lake trout but also some Arctic grayling and northern pike (See also Tables 2+3). A voluntary creel census was conducted with the assistance of the lodge in 1978, and from 1980-84. In 1980, DFO estimated the guest-bed capacity of Kasba Lake for a medium quality lake trout sport fishery, given its existing catch-release policy, at 45 beds. (Falk et al. 1982; DFO unppubl. data; M.R. Falk, pers. comm.) DFO sampled mercury levels in the flesh of lake trout and northern pike from Kasba Lake in 1971. (M. Hendzel, pers. comm.) (65D)
Rennie Lake 61°32'N, 105°35'W			Residents of Black Lake and Fond du Lac, Saskatchewan, have trapped in the Rennie Lake area in winter. The extent of any subsistence fishery is unknown. In 1978, an experimental gillnet fishery sampled burbot, lake chub, lake cisco, lake trout, lake and round whitefish, and longnose sucker from this lake on the Elk River, a tributary of the Thelon. (MacDonald and Fudge 1979; NLUIS 75H) (75H)
Selwyn Lake 60°05'N, 104°25'W	lake trout + lake whitefish 22,700	1975--lake trout and lake whitefish 1,089 kg. 1976--lake trout and lake whitefish 23,587 kg. 1977--lake trout and lake whitefish 5,897 kg. 1979--lake trout and lake whitefish 1,089 kg; 1988--NF.	In 1978, an experimental gillnet fishery sampled lake trout, lake whitefish, and longnose sucker from this transboundary, headwater lake on the Slave River system. A number of families from Saskatchewan community of Black Lake have spent the winter trapping in the Selwyn Lake area and some have lived there year-round. The extent of any subsistence fishery is unknown. Selwyn Lake has been fished commercially by residents of Black Lake. Commercial harvests of lake trout and lake whitefish were taken in 1975-77 and 1979. The lake was opened for commercial fishing in 1988 but not fished. There have been one or more sport fishing lodges located at the south end of Selwyn Lake, in Saskatchewan (Selwyn Lake Lodge 30 beds; outpost of Black Lake Lodge 8 beds) since at least the 1970's. At least one of these was in operation in 1997. In 1994, DFO estimated the guest bed capacity of the north end of Selwyn Lake, in the NWT, for a high quality lake trout sport fishery at 12 beds, provided the outpost proposed by Selwyn Lake Lodge voluntarily restricts its lake trout harvest to 16 kg per angler. (Bone et al. 1973; MacDonald and Fudge 1979; Yaremchuk et al. 1989; DFO 1991; Saskatchewan Vacation Guide 1997; NLUIS 75A; A.C. Day and G. Low, pers. comm.) (75A)
Smalltree Lake 61°00'W, 105°00'W			In 1978, an experimental fishery sampled lake trout, lake whitefish, and northern pike from this lake on the Dubawnt River system. Families from Black Lake, Saskatchewan, have trapped in this area in the winter. The extent of any subsistence fishery is unknown. Morberg's Smalltree Camp has offered sport fishing at Smalltree Lake (Table 2). (MacDonald and Fudge 1979; NLUIS 75H) (75H)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Snowbird Lake 60°41'N, 102°56'W		1982 Sport harvest: --83 Arctic grayling (75 kg), --289 lake trout (666 kg), --110 northern pike (319 kg).	Snowbird Lake lies within the treeline on the Kazan River system. DFO sampled lake trout, lake whitefish, and northern pike from Snowbird Lake in 1968. Of 300 lake whitefish examined, 50% had cysts of the parasite Triaenoophorus crassus in their flesh. The infestation rate was 82 cysts per 45 kg of flesh. In 1978, an experimental gillnet fishery sampled lake trout, lake whitefish, and slimy sculpin from Snowbird Lake. DFO also surveyed Snowbird Lake in 1982, using multi-mesh experimental gillnets, to assess the lake's potential as a high quality lake trout fishery. Data were collected on catch-effort; fish growth and maturity; and the sport harvest. Fish species caught included Arctic grayling, burbot, cisco sp., lake trout, lake and round whitefish, longnose and white sucker, and northern pike, Lake trout (n = 135) were tagged so that their movements and growth could be monitored. (Johnson 1976; MacDonald and Fudge 1979; Moshenko 1980; Roberge et al. 1984; DFO unpubl. data) Families from Black Lake, Saskatchewan, have fished for subsistence at Snowbird Lake in support of winter hunting and trapping activities. The extent of this fishery is unknown. (Bone et al. 1973; NLUIS 65D) Conservatory Ltd. North of Sixty Camps (Snowbird Lake Lodge) and Kasba Lake Lodge (Snowbird Lodge and Snowbird North) operate sport fishing outposts on Snowbird Lake (Table 2). In 1982, Snowbird Lake Lodge operated from 25 July to 3 September. During that period DFO conducted a complete creel survey of all 78 guests (Table 3). In 1994, DFO estimated the sustainable harvest for a high quality lake trout fishery at Snowbird Lake at 2,840 to 5,680 kg per year. This was translated to a guest-bed capacity 18 to 36 beds, provided lodges and outposts voluntarily restrict lake trout harvest to 16 kg per angler or 160 kg per guest bed per year. (Roberge et al. 1985; A.C. Day, pers. comm.) (65D) DFO sampled mercury levels in the flesh of lake trout and northern pike from Snowbird Lake in 1971. (M. Hendzel, pers. comm.) (65D)
Three Wives Lake 61°08'N, 102°44'W			Residents of Stony Rapids, Saskatchewan, have fished for subsistence at this lake on the Kamilkukuak River, a tributary of the Dubawnt. (NLUIS 65E) (65E)
Wholdaia Lake 60°43'N, 104°10'W			DFO sampled lake trout, lake whitefish, longnose sucker, northern pike, and white sucker from this lake on the Dubawnt River system in 1959. In 1978, an experimental gillnet fishery also sampled lake chub, lake trout, lake whitefish, longnose sucker, and northern pike from Wholdaia Lake. (Johnson 1976; MacDonald and Fudge 1979; Moshenko 1980) Families from Black Lake, Saskatchewan, have traditionally trapped and hunted in the winter at Wholdaia Lake. The extent of any subsistence fishing is unknown. (Bone et al. 1973; NLUIS 65D + 75A) Conservatory Ltd. North of Sixty Camps (Table 2) on Obre Lake operates an outpost camp on Wholdaia Lake and another on the Dubawnt River immediately downstream (see INLAND WATERBODIES--Obre Lake) . In 1994, DFO estimated the guest-bed capacity of Wholdaia Lake for a high quality lake trout sport fishery at 4 to 7 beds, but recommended that the fishery be managed instead using a quota on the lake trout harvest of 500 fish. The intent of this recommendation was to limit the annual lake trout harvest while allowing the lodge to optimize the size of its operation. It would be the lodge's responsibility to partition the available harvest among its guests. (A.C. Day, pers. comm.) (65D)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
FOND DU LAC, SASKATCHEWAN			Chipewyan residents of this northern Saskatchewan community have traditionally trapped, hunted, and fished in the south-central portion of the South Slave area. (Smith 1981)
Damant Lake			See BLACK LAKE--Damant Lake
Dunvegan Lake 60°08'N, 107°10'W	lake trout + lake whitefish [3,000]		In 1983, an experimental fishery was planned to sample lake trout and lake whitefish from this headwater lake on the Taltson River. There is no record of fishing. In 1991, DFO estimated the guest-bed capacity of Dunvegan Lake for a high quality lake trout sport fishery at 2 to 4 beds. (Yaremchuk et al. 1989; R.W. Moshenko, pers. comm.) (75B)
Dymond Lake 61°25'M, 106°14'W			In 1978, an experimental gillnet fishery sampled lake trout and longnose sucker from this headwater lake on the Taltson River. (MacDonald and Fudge 1979) (75G)
Firedrake Lake			See BLACK LAKE--Firedrake Lake
Rennie Lake			See BLACK LAKE--Rennie Lake
Scott Lake 60°00'N, 106°05'W	lake trout + lake whitefish 21,000		Families from Fond du Lac, Saskatchewan, have trapped in this area in the winter. The extent of any subsistence fishery is unknown. Scott Lake is a transboundary, headwater lake on the Slave River system. It has a commercial harvest quota but no record of harvest. A sport fishing lodge has been located at Scott Lake in Saskatchewan since the 1970's. It was in operation in 1997. (Table 2; Bone et al. 1973; Saskatchewan Vacation Guide 1997; NLUIS 75A + B) (75B)
Wignes Lake 60°10'N, 105°55'W			Families from Fond du Lac, Saskatchewan, have trapped in the Wignes Lake area from October through April. The extent of any subsistence fishery is unknown. In 1991, DFO estimated the guest-bed capacity of this headwater lake on the Slave River for a high quality lake trout sport fishery at 8 beds. Scott Lake Lodge operates a sport fishing lodge on Wignes Lake. Another sport fishing lodge is located on the southern part of the lake in Saskatchewan (Table 2) (NLUIS 75A + B; G. Low, pers. comm.) (75A)
FORT RESOLUTION, NORTHWEST TERRITORIES			Residents of Fort Resolution fish for subsistence in three main areas: Resolution Bay of Great Slave Lake, the Little Buffalo River, and the Slave River Delta (see below). They harvested an estimated 10,455 kg of fish for subsistence from October 1959 to March 1960, and 42,273 kg in 1961-62. (Sinclair et al. 1967; Bodden 1980; Tripp et al. 1981)
Deskenatlata Lake 60°55'N, 112°03'W	lake trout, lake whitefish, + walleye 3,600	1971--lake trout 4,432 kg, lake whitefish 7,972 kg, walleye 3,712 kg; 1977--lake trout 114 kg, lake whitefish 145 kg; 1978--lake trout and lake whitefish 272 kg; 1980--lake trout and lake whitefish 5,469 kg.	Envirocon Ltd. sampled lake cisco, lake whitefish, northern pike, and walleye from this lake on the Taltson River in June-September 1973. Fish were captured using mixed-mesh gillnets and beach seines. Data were collected on catch effort; on fish habitat, growth, reproduction, and diet; and on water chemistry, zoobenthos, and zooplankton. (Envirocon Limited et al. 1975; Envirocon Ltd. unpubl. data--See DFO Permit files). Commercial harvests of lake trout and lake whitefish were taken from Deskenatlata Lake in 1971, 1977, 1978, and 1980, with a by-catch of northern pike and walleye in 1971. Trappers from Fort Resolution have harvested fish from the lake for winter dogfood. The lake is fished on occasion for subsistence, and by itinerant anglers for sport. (Yaremchuk et al. 1989; NLUIS 85A + H; G. Low, pers. comm.)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Deskenatlata Lake, continued.	northern pike --no quota	By-catches: 1971--northern pike 294 kg.	In 1994, DFO recommended that the Des Kar Tu wilderness camp (60°55'N, 112°03'W), which is located at Deskenatlata Lake, be licensed for a medium quality sport fishery. Rather than recommending a guest bed capacity, fishery managers recommended annual lake quotas for the sport harvest of 500 lake trout, 1,950 northern pike, and 500 walleye. The intent of this recommendation was to limit the annual fish harvest while allowing the camp to optimize the size of its operation. It would be the camp's responsibility to partition the available harvest among its guests and to report their harvest by species to DFO on an annual basis. No record of operation as a sport fishery was found for the camp. (A.C. Day, pers. comm.) In 1980, DFO measured total mercury in the flesh of lake trout (mean 0.45 $\mu g \cdot g^{-1}$ wet wt, n = 5, range 0.29 - 0.78) and walleye (mean 0.67 $\mu g \cdot g^{-1}$ wet wt, n = 5, range 0.56 - 0.80) from Deskenatlata Lake (M. Hendzel, unpubl. data).(85A)
"Frank Lake"			See below--unnamed lake [Frank Lake]
King Lake			See FORT SMITH--King Lake
Klewi River 60°25'10"N, 112°54'45"W			Walleye are reported to spawn in the spring in this tributary of the Little Buffalo River. In 1970-71, researchers from the University of Alberta collected pearl dace and brook stickleback and analysed water samples where the river crosses the border of Wood Buffalo National Park (60°03'N, 112°47'W). (Nelson and Paetz 1972; NLUIS 85A) (85A)
Lady Grey Lake			See FORT SMITH--Lady Grey Lake
Little Buffalo River 61°00'N, 113°45'W		Aboriginal food fishery at the river mouth: 1975--1,000 lake whitefish [780 kg], 1976--2,000 lake whitefish [1,560 kg], 1977--18,800 lake whitefish [14,664 kg], 1978--4,000 lake whitefish [3,120 kg], 1979--3,600 lake whitefish [2,808 kg], 1980--12,500 lake whitefish [9,750 kg], 1981--5,000 lake whitefish [3,900 kg], 1983--16,722 lake whitefish [18,394 kg], 1994--9,034 lake whitefish [9,937 kg],	There is an important fall spawning migration of lake whitefish from Great Slave Lake into the Little Buffalo River. Little Buffalo Falls, located about 145 km upstream from the mouth (60°03'N, 112°42'W), is a natural barrier to fish movement. In 1970-71, researchers from the University of Alberta sampled fish and water from the river above the falls where it crosses the border of Wood Buffalo National Park (60°03'N, 112°47'W). DFO studied the growth, reproduction, movements, and mortality of migratory whitefish in the lower reaches of the river using a fish weir, gillnets, and seines in atumn of 1975 (20 August to 7 October), 1993 (Sept.-Oct), and 1994 (Sept.-Oct.). Studies of post-spawning dispersal patterns were also undertaken in 1977, and fish were sampled in 1979. The Little Buffalo River lake whitefish spawn in late September-October, and return to Great Slave Lake after spawning before the shallow river freezes. Growth and mortality rates in 1993-94 were similar to those from the 1975 and 1977 sampling. Tagged post-spawners range at least 70 km from the river mouth. Fish species reported from the Little Buffalo River are listed in Appendix 1. See also Table 4--M. Evans. (Nelson and Paetz 1972; Fuller 1955; Roberge et al. 1985; DFO unpubl. data; A.C. Day and G. Low, pers. comm.) The Little Buffalo River lake whitefish are exploited mainly by the Aboriginal food fishery, and lightly by the commercial fishery. DFO in cooperation with the Deninu Ku'e First Nation monitored the Aboriginal food fishery at the river mouth each fall from 1975-81 and 1995-98. The fishery is conducted by families from nearby Fort Resolution, some of whom live or camp at the river mouth. Lake whitefish are caught using gillnets (102-114 mm stretched measure), mainly during the post-spawning run in late September and October in the lower 2.5 km of the river. Domestic gillnets by regulation are not to span more than two-thirds of the river.

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Little Buffalo River, continued.		22 September-21 October 1995--10,327 lake whitefish [10,327 kg], --5 longnose + white sucker [5 kg], --1,054 northern pike [2,108 kg], --151 walleye [151 kg]. 21 September-20 October 1996--1 burbot [2 kg], --5,514 lake whitefish [5,514 kg], --5 longnose + white sucker [5 kg], --4,895 northern pike [9,790 kg], --5 walleye [5 kg]. 20 September-21 October 1997--96 burbot [192 kg], --7,700 lake whitefish [7,700 kg], --81 longnose + white sucker [81 kg], --449 northern pike [898 kg], --34 walleye [34 kg]. 21 September-19 October 1998--3 burbot [6 kg], --16 inconnu [64 kg], --24,814 lake whitefish [24,814 kg], --3 longnose + white sucker [3 kg], --573 northern pike [1,146 kg], --59 walleye [59 kg].	Fishing efforts rise and fall with the intensity of the run. Some of the catch is smoked or frozen for human consumption, but most is hung in the round as "stick fish", mainly for dog food. Harvest estimates are provided at the left. The 1995-98 harvest estimates are thought to represent about 90% of the total annual harvest. DFO estimated the basic needs level in 1997 at 15,000 kg. (Fuller 1955; Roberge et al. 1985; Bill et al. 1996; DFO 1997; NUIS 85A; DFO unpubl. data; A.C. Day and G. Low, pers. comm.) Three commercial fishermen fished offshore the mouth of the Little Buffalo River, outside the Fort Resolution domestic area in 1993-94, using 133 mm mesh gillnets (Figure 3). The level of commercial fishing effort in this area is relatively low. In October 1995, the Great Slave Lake Advisory Committee recommended that DFO increase the Fort Resolution domestic fishing area to include the mouth area of the Little Buffalo River. (A.C. Day and G. Low, pers. comm.) The Little Buffalo River is accessible by road where it is crossed by Highway 6 and Highway 5. A picnic site and 12 m waterfall provide a scenic attraction at the latter crossing. Most angling, however, takes place near the crossing of Highway 6. Angling effort is directed toward northern pike, walleye, and occasional inconnu in the spring and summer. DFO conducted a partial creel census of anglers at this site in May 1974. (Falk and Dahlke 1975; NLUIS 85A; G. Low, pers. comm.) (85H)
Nyarling River 60°41'25"N, 113°23'05"W			Walleye are reported to spawn in this tributary of the Little Buffalo River. A DFO experimental fishery captured burbot and lake chub in the Nyarling River in 1975. The river is dry at the Highway 5 crossing for most of the summer. (NLUIS 85A + B) (85A)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
O'Conner Lake 61°18'N, 111°52'W	lake trout + lake whitefish 2268	1972--lake trout 765 kg, lake whitefish 978 kg; 1973--lake trout 815 kg, lake whitefish 874 kg.	Commercial harvests of lake trout and lake whitefish were taken from this lake on the Rutledge River, a tributary of the Taltson, in 1972 and 1973. DFO measured mercury levels in the flesh of lake trout from O'Conner Lake in 1973. (NLUIS 75E; Yaremchuk et al. 1989; M. Hendzel, pers. comm.) (75E)
"Paulette Creek"			See below--unnamed creek [Paulette Creek]
Rutledge Lake			See LUTSEL K'E--Rutledge Lake
Slave River Delta 61°15'N, 113°30'W		Subsistence harvest: 1976--burbot 6,546 kg, inconnu 1,475 kg, lake whitefish 1,783 kg, northern pike 1,478 kg, longnose sucker 1,653 kg; 1977--burbot 8,624 kg, inconnu 3,085 kg, lake whitefish 2,175 kg, northern pike 1,874 kg, longnose sucker 1,522 kg. 21/9/83 to 8/11/83: --150 burbot (220 kg), --6 goldeye (2 kg), --30 inconnu (239 kg), --26 lake whitefish (29 kg), --44 northern pike (132 kg), --10 suckers (13 kg), --11 walleye (11 kg).	The Slave River Delta is one of three major river deltas in the Mackenzie River system. It is located on the south shore of Great Slave Lake immediately northeast of Fort Resolution, NT. Between 1978 and 1981, the Mackenzie River Basin Committee studied the formation, hydrology, water quality, and biota of the Slave River Delta. These studies were designed to provide information useful for evaluating the delta's sensitivity to potential developments upstream and its importance to domestic and commercial fisheries elsewhere. The delta consists of the Resdelta Channel--which carries 86-90% of the flow and sediment; the East, Middle and West channels; and a number of minor channels. Water level fluctuations of up to 3 m occur between spring high water and fall low water conditions, and the timing of break-up and the magnitude of flooding associated with ice jamming can vary considerably. The delta is actively advancing. Hydrology and sedimentation are key factors controlling the biological productivity of the delta. Twenty-three fish species were taken in the delta using multi mesh gillnets, beach seines, set lines, fish traps, and drift nets (see Appendix 1). Data were collected on catch effort and on fish growth, reproduction, diet, movements (2,639 fish tagged), and habitat preferences. Northern pike, lake chub, emerald shiners, flathead chub, and trout perch are abundant in the delta throughout the open water period. The delta is an important corridor for the passage of large numbers of fish to their preferred spawning habitats further upstream. Fish that migrate through the delta include inconnu, lake whitefish, and probably spoonhead sculpin (see FORT SMITH--Salt River; FORT SMITH--Slave River). As adults these fish do not feed or spawn in the delta but, instead, migrate through the delta to spawning and feeding areas located elsewhere. Goldeye, longnose suckers and walleye also spawn elsewhere but then return to the delta to feed for most of the open water period. A goldeye tagged at the Peace-Athabasca Delta in 1976 was recaptured in the Slave River Delta in 1979. Walleye tagged in the delta have been recaptured in the Simpson Islands area of Great Slave Lake, in the Slave River at Fort Smith, and in the Salt River. The Resdelta Channel provides critical spawning habitat for large numbers of burbot (November-December) and cisco (mid-October to mid-November), and rearing habitat for young-of-the-year goldeye, lake whitefish, and spoonhead sculpin. The East, Middle, Steamboat, and Nagel channels are important feeding and rearing areas for smaller forage fish species and young-of-the-year burbot, flathead chub, longnose sucker, and northern pike. Shallow, well-vegetated shorelines are the habitat preferred by the fishes during the open water period. Low catches in January to March suggest that fishes overwinter primarily outside the delta. Upstream reservoir development for hydro-electric projects could adversely affect the ecology of the delta See also Table 4--M. Evans. (Fuller 1955; Mackenzie River Basin Committee 1981a; Tripp et al. 1981; English et al. 1996)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Slave River Delta, continued.			Aboriginal residents of Fort Resolution have traditionally harvested fish from the Slave River delta. Fishing areas are distributed throughout the delta and often associated with family camps in the vicinity. Each one has a history of past use by a particular family that is respected by other harvesters. A survey of 102 of the 103 households in the community was conducted from July 1975 to June 1977. Estimates of the 1976 (July 1975-June 1976) and 1977 (July 1976-June 1977) harvests are shown here. Burbot were taken in large numbers in the delta channels from late October until mid-December. Fishing was conducted through the ice using set lines or short gillnets. The eggs. liver and flesh are prized for human consumption. In the past, the Aboriginal food fishery caught lake trout on lines set through the ice of the outer delta near the channel outlets. No trout were caught during the study and no effort to set lines was observed. Lake whitefish are the most prized fish in the Slave Delta. Some were harvested in shallow waters of the outer delta just after spring break-up, but the majority were harvested using gillnets as they migrated up the Slave River in September and October (see also FORT SMITH--Slave River). Longnose sucker were numerous in the outer delta shortly after break-up, in mid-May to mid-June, but production was short-lived as the numbers declined and fishing activities were moved out into Resolution Bay. They were also harvested for winter dog food during the fall run. Northern pike were caught year-round, but were more common in catches during the spring high water period. Those caught by angling were eaten fresh, while those caught in nets were used for dog food. Inconnu were harvested in the delta in conjunction with the whitefish run. Their oily flesh is highly prized for dogfood. Walleye are rarely taken in the Slave Delta, About 30% of the burbot, 40% of the inconnu, 50% of the lake whitefish, 10% of the longnose sucker, and 40% of the northern pike caught are used for human consumption. Depending upon the species, the fish are eaten fresh or are dried, smoked, or frozen for future meals. The rest are frozen or dried on sticks for dog food. (Bodden 1981; G. Low, pers. comm.) The fall 1983 harvest estimates are partial estimates based on daily counts kept by the three fishermen who fished regularly in the delta. (RL&L/EMA Slave River Joint Venture 1985) (85H)
Taltson Lake 61°30'N, 110°15'W	lake trout + lake whitefish 4,600 Inconnu + walleye --no quota.	1970--lake trout 10,360 kg, lake whitefish 21,806 kg; 1980--lake whitefish 15 kg. By-catches: 1970--inconnu 25 kg; walleye 15 kg; 1980--walleye 877 g.	Taltson Lake is downstream from the reservoir created for the Twin Gorges hydro-electric station by impounding the flow of the Taltson River at the outlet of Nonacho Lake (see LUTSEL K'E--Nonacho Lake). Flow in the river has been altered by the impoundment such that the lake level typically rises to about 0.3 m above its natural level in the spring and falls 0.5 m below its natural level in the summer and fall. Envirocon Ltd. sampled lake cisco, lake trout, and lake whitefish from Taltson Lake in June-September 1973. Fish were captured using mixed-mesh gillnets and beach seines. Data were collected on catch effort; on fish habitat, growth, reproduction, and diet; and on water chemistry, zoobenthos, and zooplankton. (Envirocon Limited et al. 1975; Envirocon Pacific Limited 1986; Envirocon Ltd. unpubl. data--See DFO Permit files). Commercial harvests of lake trout and lake whitefish were taken from Taltson Lake in 1970 and 1980, with small by-catches of inconnu in 1970, and walleye in both years. DFO measured mercury levels in the flesh of lake trout from Taltson Lake in 1970. Cysts of the parasite Triaenophorus crassus are common in the flesh of whitefish from the Lake. (Envirocon Pacific Limited 1986; Yaremchuk et al. 1989; DFO unpubl. data; M. Hendzel, pers. comm.)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Taltson Lake, continued.			Hanging Ice Fishing Camp operates a tent-frame outpost camp on Taltson Lake. In 1998, Eagle's Nest Lodge also began sport fishing operations at the lake (Table 2). In 1980, DFO analysed the flesh of walleye from Taltson Lake for total mercury (mean 0.32 $\mu g \cdot g^{-1}$ wet wt, n = 16, range 0.21 - 0.81) (M. Hendzel, unpubl. data) (75E)
Taltson River 61°24'W, 112°45W	walleye 11,400 [mouth to the confluence of the Rat River]	1967--walleye 1,658 kg; 1968--walleye 518 kg; 1969--walleye 918 kg; 1970--walleye 2,112 kg; 1975--walleye 64 kg; 1980--walleye 870 kg; 1982--northern pike 631 kg; 1983--walleye 843 kg; 1984--walleye 200 kg.	The Taltson River has been affected by hydroelectric development. This development consists of the 21 MW Twin Gorges hydroelectric generating station (60°25'N, 111°24'W) which has been operated by the Northern Canada Power Commission since 1964; a storage reservoir created in 1968 by the impoundment of Nonacho, Gray (see LUTSEL K'E), and Hjalmar (see INLAND WATERBODIES) lakes; and the diversion of most of the flow from the Tanzin River (see below), at Tanzin Lake, into the Charlotte River, a tributary of the Athabasca, where Eldorado Nuclear has two run-of-the-river generating stations. The Twin Gorges generating station was built to provide power to the Pine Point Mine but now provides power to Fort Smith, Fort Resolution, Hay River, and Enterprise. The level of water in the Twin Gorges Forebay is 8.2 to 8.6 m higher than it would be in the river under natural conditions. Below Twin Gorges Dam, water levels in the 16 km stretch of river from Elsie Falls to Nende Rapids just above Tsu Lake can fluctuate by 0.6 m in a few hours. This is one of the main ongoing effects of the hydro project on the system. These fluctuations and periods of low flow may adversely affect northern pike and walleye populations in that run of the river. Further hydro-electric developments have been proposed which would see additional generating stations built near the Twin Gorges facility, at Elsie Falls and Twin Gorges #2, and the creation of additional storage capacity at Nonacho Lake. Terms of reference were prepared in 1994 for studies to assess the impacts of the Taltson Hydro Development, but these studies have not yet been completed. (Envirocon Limited et. al. 1975; Envirocon Pacific Limited 1986; Taltson Impact Studies Sub-Committee 1994; P. Helwig, pers. comm.). In June 1972, DFO collected data on water chemistry, benthos, and fish in the Taltson River within 8 km of the mouth. Lake whitefish, longnose and white sucker, ninespine stickleback, northern pike, and walleye were sampled for data on growth and reproduction. In 1977, an experimental fishery sampled lake whitefish, longnose and white sucker, northern pike, and walleye from the reach of river between Nende and Natla rapids. In 1978, an experimental gillnet fishery sampled lake chub, lake cisco, lake trout, lake whitefish, and longnose sucker from Dymond Lake (see FOND DU LAC) and an unnamed headwater lake on the Taltson River system (61°18'N, 106°16'W). (Falk and Dahlke 1975; Bogdan 1977; MacDonald and Fudge 1979; K. Chang-Kue, unpubl. data) Envirocon Ltd. used mixed-mesh gillnets, beach seines and dip nets to capture lake trout, lake whitefish, longnose sucker, northern pike, white sucker, and walleye from the Taltson River in June, July and September 1973 and May, June and September 1985--lake cisco were also taken in 1973 and Arctic grayling in 1985. Data were collected on catch effort; on fish habitat, growth, reproduction, diet, and parasites (1986 only); and on water chemistry, zoobenthos, and zooplankton. Much of the 1973 sampling was conducted at lakes on the Taltson River system, including Deskenatlata, Taltson (see above), Tsu (see below), Benna Thy, King, Kozo, Lady Grey, Methleka (see FORT SMITH), Hjalmar (see INLAND WATERBODIES), Gray, and Nonacho (see LUTSEL K'E). The 1985 sampling was conducted in the river itself

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Taltson River, continued			along much of its length. There are at least 22 waterfalls and rapids on the Taltson River that impede or prevent upstream fish migration. These physical barriers effectively partition the river into separate reaches with discrete or semi-discrete stocks. Northern pike and walleye in spawning condition were caught in the Taltson River below Nonacho Lake in the spring of 1985. The first few kilometres of river below Elsie Falls provide spawning and rearing habitat for lake whitefish and walleye. Fish species reported from the Taltson River are listed in Appendix 1. See also Table 4--A. Mitchell. (Envirocon Limited et. al. 1975; Envirocon Pacific Limited 1986; Envirocon Ltd. unpubl. data--See DFO Permit files; K. Chang-Kue, pers. comm.) The flow regime of the Taltson River downstream from the Nonacho Lake-Gray Lake-Hjalmar Lake impoundment has been altered by hydro-electric development. The natural river discharge has been reduced in July through October, when the reservoir is filling, and increased in November through June to meet power generation requirements. The level of Deskenatlata Lake, downstream, typically rises slightly above its natural level in the spring and falls slightly below its natural level in the summer and fall. (Envirocon Pacific Limited 1986) Historical accounts describe inconnu as being very plentiful in this tributary ("Rocher River") of Great Slave Lake during their fall spawning migration into the Taltson RIver in late September to early October. (Melvill 1914; Dymond 1943; Fuller 1955) Sucker and possibly walleye spawn below Oracha Falls in the spring, as do lake whitefish in the fall. Arctic grayling, inconnu, and yellow perch have only been captured below Oracha Falls. Lake whitefish are reported to migrate via the Taltson River from overwintering areas in Great Slave Lake to Deskenatlata Lake in the spring. (NLUIS 85H) Residents of Rocher River harvest lake trout, lake whitefish, northern pike, sucker, and inconnu for subsistence from the Taltson River near the community. These harvests were much larger before the mid-1960's when most residents of the community moved to Fort Resolution. A trapper from Fort Resolution has harvested fish in the fall for dog food at the mouth of the Rat River (61°07'N, 112°36'W). Commercial harvests of walleye were taken from the Taltson River in 1967-70, 1983, and 1984. Taltson Bay Outfitters offer sport fishing excursions to Deskenatlata Lake (Table 2) (Envirocon Limited et al. 1975; Envirocon Pacific Limited 1986; Yaremchuk et al. 1989; NLUIS 85H) In 1982, DFO measured total mercury in the flesh of northern pike (mean 0.46 $\mu g \cdot g^{-1}$ wet wt, n = 5, range 0.32 - 0.65) from the Taltson River (M. Hendzel, unpubl. data). (85H)
Tazin River 60°26'N, 110°45'W			A dam at the outlet of Tazin Lake in Alberta diverts all but the peak summer flows from this tributary of the Taltson into the Charlotte River, part of the Athabasca River system, where Eldorado Nuclear has two run-of-the-river generating stations. (Envirocon Pacific Limited 1986) (75D)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Thubun Lakes 61°32'N, 111°55'W	lake trout + lake whitefish 9,300 walleye + northern pike --no quota	1960--lake trout 7,654 kg, lake whitefish 2,238 kg; 1961--lake trout 3,660 kg, lake whitefish 1,423 kg; 1962--lake trout 16,857 kg, lake whitefish 10,666 kg; 1963--lake trout 12,073 kg, lake whitefish 1,445 kg; 1969--lake trout 784 kg, lake whitefish 3,721 kg; 1970--lake trout 3,825 kg lake whitefish 6,710 kg; 1971--lake trout 12,904 kg, lake whitefish 12,155 kg; By-catches: 1969--walleye 78 kg; 1971--northern pike 101 kg, walleye 120 kg.	Commercial harvests of lake trout and lake whitefish were taken from this lake on the Thubun River, a tributary of Great Slave Lake, in 1960-63 and 1969-71, with small by-catches of walleye in 1969 and 1971 and northern pike in 1971. DFO measured mercury levels in the flesh of lake trout from Thubun Lake in 1971. (Sinclair et al. 1967; Yaremchuk et al. 1989; NLUIS 75E + 85H) In 1981, DFO estimated the guest-bed capacity of Thubun Lake for a medium quality lake trout sport fishery at 14 to 16 beds. Thubun Lake Lodge operates a 22 bed lodge on the lake from June through September. Lake trout, northern pike, and lake whitefish are the main target species (Table 2). (M.R. Falk, pers. comm.) (75E)
Tsu Lake			See FORT SMITH--Tsu Lake
unnamed creek [Paulette Creek] 60°57.5'N, 113°58'W			Paulette Creek flows into Great Slave Lake about 30 km east of Pine Point, near Paulette Island (60°58'40"N, 114°01'W). It is accessible by road where it is crossed by Highway 6. Longnose sucker and northern pike migrate from Great Slave Lake into Paulette Creek in the spring to spawn. In the spring of 1974, the culvert beneath Highway 6 was damaged, obstructing upstream fish movements. Anglers caught and snared both species where they concentrated downstream of the highway as they tried to complete their spawning migration. DFO conducted a partial creel census of anglers at the site in May 1974. The creek is no longer blocked but fish still concentrate in the deep pool downstream from the highway. Prior to its closure in 1987, Cominco's Pine Point Mine discharged water from pit W17 into the large area of muskeg east of the mine which is drained by Paulette Creek. In 1976, B.C. Research studied water quality in the creek. They found relatively high sulfate concentrations (830 mg/L) and conductance (2020 μmhos). This raised concerns among local residents that discharge from the mine might be affecting fish populations in the creek. B.C. Research studied fish in the creek in August 1977 and May 1978. Despite the high dissolved solid concentrations the creek supports brook stickleback, longnose and white sucker, and northern pike. In May, both species of sucker were spawning in the creek below Highway 6 in considerable numbers, few suckers were observed upstream. (Falk end Dahlke 1975; B.C. Research 1977, 1978 a+b; G. Low, pers. comm.) (85B)
unnamed lake 61°09'N, 111°40'W			Most lake trout and lake whitefish in this lake were harvested in 1964. The populations were still being slowly re-established in the mid-1970's. (NLUIS 75E) (75E)
unnamed lake 61°15'N, 111°59'W	lake trout + lake whitefish 700		This lake has a commercial harvest quota but no record of commercial harvest. (75E)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
unnamed lake [Frank Lake] 61°19'N, 112°00'W		1968--NA; 1978--lake trout 743 kg, lake whitefish 1,240 kg.	Small commercial harvests of lake trout and lake whitefish were taken from Frank Lake in 1968 and 1978. (Yaremchuk et al 1989; NLUIS 75E) (75E)
unnamed lake [Gullion Lake] 61°28'N, 112°08'W		1967--lake trout 127 kg, walleye 164 kg.	A small experimental commercial harvest of lake trout and walleye was taken from this lake on the Thuban River system, in 1967. Gukkion Lake does not have a commercial harvest quota. (NLUIS 85H; Yaremchuk et al. 1989) (85H)
FORT SMITH, NORTHWEST TERRITORIES			Residents of Fort Smith harvested an estimated 31,260 kg of fish for subsistence in 1961-62; 31,818 kg in 1963; and 86,364 kg in 1964. (Sinclair et al. 1967)
Beauvais Lake 60°27'N, 105°31'W	lake trout + lake whitefish [45]		In 1983, an experimental fishery was planned to sample lake trout and lake whitefish from this lake near Fort Smith. (Yaremchuk et al. 1989) (75A)
Bedareh Lake 60°19'N, 110°00'W	lake trout + lake whitefish 2,000		This lake has a commercial harvest quota but no record of commercial harvest. (75C)
Berens Lake 60°23'N, 110°50'W	lake trout + lake whitefish [200]	1989--lake trout 57 kg, lake whitefish 6 kg, northern pike 4 kg.	In March 1990, a DFO experimental fishery sampled lake trout and lake whitefish from this lake near Fort Smith. (McGowan et al. 1993) (75D)
Benna Thy Lake 60°38'N, 110°33'W	lake trout + lake whitefish 900		Benna Thy Lake is downstream from the reservoir created for the Twin Gorges hydro-electric station by impounding the flow of the Taltson River at the outlet of Nonacho Lake (see LUTSEL K'E--Nonacho Lake). Flow in the river has been altered by the impoundment such that the lake level typically rises about 0.1 m above its natural level in the spring and falls 0.1 m below its natural level in the summer and fall. Envirocon Ltd. sampled lake cisco, lake trout, lake whitefish, longnose sucker, and northern pike from Benna Thy Lake in June-September 1973. Fish were captured using mixed-mesh gillnets and beach seines. Data were collected on catch effort; on fish habitat, growth, reproduction, and diet; and on water chemistry, zoobenthos, and zooplankton. (Envirocon Limited et al. 1975; Envirocon Pacific Limited 1986; Envirocon Ltd. unpubl. data--See DFO Permit files). The lake has a commercial harvest quota but no record of commercial harvest. (Yaremchuk et al. 1989) (75D)
Blackman Lake [Pete's Lake] 60°12'N, 111°10'W	lake whitefish [200]	1988--NF; 1989--lake whitefish 250 kg, northern pike 5 kg, walleye 3 kg.	In March 1990, a DFO experimental fishery sampled lake whitefish from this lake near Fort Smith. (DFO 1991, 1992a; McGowan et al. 1993) (75D)
"Burnt Lake"			See below--unnamed lake [Burnt Lake]
Carleton Lake 60°17'N, 106°57'W			In 1983, an experimental fishery was planned to sample lake trout and lake whitefish from this lake near Fort Smith. There is no record of fishing. In 1991, DFO estimated the guest-bed capacity of Carleton Lake for a high quality lake trout sport fishery at 1 bed. (Yaremchuk et al. 1989; R.W. Moshenko, pers. comm.) (75B)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Champagne Lakes 60°38'N, 111°10'W	lake trout + lake whitefish 300		These small lakes on the Knoth River, a tributary of the Taltson, have a commercial harvest quota but no record of commercial harvest. (75D)
Disappointment Lake 60°05'N, 110°27'W	lake trout + lake whitefish 1,400		This headwater lake on the Taltson River system has a commercial harvest quota but no record of commercial harvest. DFO sampled lake trout and whitefish from Disappointment Lake in July 1995. (DFO unpubl. data) (75D)
Donovan Lake 60°02'N, 111°11'W			Donovan Lake Outfitters have operated a tent-frame sport fishing camp for northern pike and walleye at Donovan Lake (60°01'12"N, 111°09'13"W) since 1994. (NWT Explorers Guide 1994-98; S. Ransom, pers. comm.) (75D)
"Elbow Lake"			See below--unnamed lake [Elbow Lake]
Fork Lake 60°53'N, 111°05'W	lake trout + lake whitefish 900		This headwater lake on the Knoth River, a tributary of the Taltson, has a commercial harvest quota but no record of commercial harvest. DFO sampled lake trout and whitefish from Fork Lake in June 1965. (DFO unpubl. data) (75D)
Gertrude Lake 60°23'N, 111°21'W	lake trout + lake whitefish 200		This small lake on Trudel Creek, a tributary of the Taltson River, has a commercial harvest quota but no record of commercial harvest. (75D)
Hanging Ice Lake 60°13'N, 110°55'W	lake trout + lake whitefish 1,400		Residents of Fort Smith fish for subsistence at Hanging Ice Lake. This lake was opened for commercial harvest in 1973, 1981 and 1982, but no harvest was reported (Yaremchuk et al. 1989; Bill et al. 1996; D. McGowan, pers. comm.) (75D)
High Level Lake 60°50'N, 110°39'W	lake trout + lake whitefish 700		Residents of Fort Smith fish for subsistence at this lake on the Taltson River system. The lake has a commercial harvest quota but no record of commercial harvest. (Bill et al. 1996) (75D)
Hill Island Lake 60°29'N, 109°50'W			In June 1963, a DFO experimental fishery sampled lake trout, whitefish, northern pike, and suckers from Hill Island Lake. The identity of the whitefish is unclear. They were reported as lake whitefish (Moshenko 1980) but a note with the original data indicates that they were round whitefish (DFO unpubl. data). Many of the whitefish and trout had cysts of the parasite Triaenophorus crassus in their flesh. (Moshenko 1980; DFO unpubl. data) In 1983, DFO estimated the guest-bed capacity of Hill Island Lake for a high quality lake trout sport fishery at 6 to 8 beds. Whitewood Lodge offered sport fishing at Hill Island Lake in the mid-1980's (Table 2) (M. Roberge, pers. comm.) (75C)
Hotel Lake 60°25'N, 110°05'W	lake trout + lake whitefish 1,000		This lake on the Taltson River system has a commercial harvest quota but no record of commercial harvest. (75D)
Indian Shack Lake 60°40'N, 111°05'W	lake trout + lake whitefish 500		This lake on the Knoth River, a tributary of the Taltson, has a commercial harvest quota but no record of commercial harvest. (75D)
Jack Lake 60°46'N, 111°08'W	lake trout + lake whitefish 300		This lake on the Taltson River system has a commercial harvest quota but no record of commercial harvest. (75D)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
King Lake 61°05'N, 110°35'W	lake trout + lake whitefish 3,000		King Lake is downstream from the reservoir created for the Twin Gorges hydro-electric station by impounding the flow of the Taltson River at the outlet of Nonacho Lake (see LUTSEL K'E--Nonacho Lake). Flow in the river has been altered by the impoundment such that the lake level typically rises to about 0.15 m above its natural level in the spring and falls about 0.15 m below its natural level in the summer and fall. (Envirocon Pacific Limited 1986) Envirocon Ltd. sampled lake cisco, lake trout, lake whitefish, and northern pike from King Lake in June-September 1973. Fish were captured using mixed-mesh gillnets and beach seines. Data were collected on catch effort; on fish habitat, growth, reproduction, and diet; and on water chemistry, zoobenthos, and zooplankton. (Envirocon Limited et al. 1975; Envirocon Ltd. unpubl. data--See DFO Permit files). King Lake has a commercial harvest quota but no record of commercial harvest. In 1992, DFO estimated the lake's guest bed capacity for a low quality lake trout sport fishery at 5 to 8 beds, provided that any lodge established on the lake restricts harvests to 16 kg per guest per year. (NLUIS 75E; A.C. Day and G. Low, pers. comm.) (75E)
Kozo Lake 60°30'N, 110°58'W			Kozo Lake is downstream from the reservoir created for the Twin Gorges hydro-electric station by impounding the flow of the Taltson River at the outlet of Nonacho Lake (see LUTSEL K'E--Nonacho Lake). Flow in the river has been altered by the impoundment such that the lake level typically rises about 0.1 m above its natural level in the spring and falls 0.1 m below its natural level in the summer and fall. (Envirocon Pacific Limited 1986) Envirocon Ltd. sampled lake cisco, lake trout, lake whitefish, longnose sucker, northern pike and white sucker from this lake on the Taltson River in June-September 1973. Fish were captured using mixed-mesh gillnets and beach seines. Data were collected on catch effort; on fish habitat, growth, reproduction, and diet; and on water chemistry, zoobenthos, and zooplankton. (Envirocon Limited et al. 1975; Envirocon Ltd. unpubl. data--See DFO Permit files). (75D)
Lady Grey Lake 60°54'N, 110°32'W			Lady Grey Lake is downstream from the reservoir created for the Twin Gorges hydro-electric station by impounding the flow of the Taltson River at the outlet of Nonacho Lake (see LUTSEL K'E--Nonacho Lake). Flow in the river has been altered by the impoundment such that the lake level typically rises to about 0.2 m above its natural level in the spring and falls 0.3 m below its natural level in the summer and fall. (Envirocon Pacific Limited 1986) DFO experimental fisheries sampled lake whitefish from Lady Grey Lake in 1962 and 1965, and lake trout and northern pike in 1965. In 1972, DFO conducted a limnological survey of the lake. Data were collected on the water chemistry, phytoplankton, zooplankton, and zoobenthos of the lake. Fish were captured using multi-mesh experimental gillnets, seines, and rod and reel. Data on the catch effort and on fish growth, reproduction, diet, and parasites were reported. Lake trout, lake whitefish, longnose sucker, and northern pike were sampled. Spottail shiner and ninespine stickleback were captured in beach seines, and cisco and sculpin were identified from fish stomachs. Parasite cysts, likely Triaenophorus crassus, were common in the flesh of the lake whitefish. A sport fishing lodge was located on the lake in the 1960's. (Falk 1979; Moshenko 1980; DFO unpubl. data)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Lady Grey Lake, continued.			Envirocon Ltd. sampled lake cisco, lake trout, and lake whitefish from Lady Grey Lake in June-September 1973. Fish were captured using mixed-mesh gillnets and beach seines. Data were collected on catch effort; on fish habitat, growth, reproduction, and diet; and on water chemistry, zoobenthos, and zooplankton. (Envirocon Limited et al. 1975; Envirocon Ltd. unpubl. data--See DFO Permit files). Lady Grey Lake Outfitters operate a sport fishing cabin establishment at Lady Grey Lake (Table 2). Itinerant anglers sometimes fish for Arctic grayling below the rapids at the lake outlet. (NLUIS 75D) (75D)
Largepike Lake 60°05'N, 110°20'W	lake trout + lake whitefish 1900		This headwater lake on the Tethul Rivar, a tributary of the Taltson, has a commercial harvest quota but no record of commercial harvest. Largepike Lake Camp offers sport fishing, touring and ecoventures from thair lodge on Largepike Lake (Table 2). (Yaremchuk et al. 1989) (75D)
Leland Lakes 60°00'N, 110°59'W	lake trout + lake whitefish 600	1981--lake whitefish 136 kg.	A small commercial harvest of lake whitefish was taken from these headwater lakes on the Slave River system, in 1981. In 1984, a tourist establishment was proposed for this lake which DFO indicated was too small to support a sport fishing establishment. (Yaremchuk et al. 1989; B. Wong, pers. comm.) In 1989 and 1990, DFO analysed the flesh of whitefish, northern pike, and walleye from Leland Lake for total mercury ($\mu g \cdot g^{-1}$ wet wt). The 1989 results (whitefish: mean 0.11, n=10, range 0.05 - 0.16; northern pike: mean 0.34, n=22, range 0.16 - 0.59; walleye: mean 0.46, n=9, range 0.25 - 0.73) were closely similar to those in 1990 (whitefish: mean 0.12, n=10, range 0.06 - 0.23; northern pike: mean 0.35, n=10, range 0.26 - 0.43; walleye: mean 0.46, n=10, range 0.34 - 0.58). (M. Hendzel, unpubl. data) (75D)
Little Buffalo River			See FORT RESOLUTION--Little Buffalo Lake
MacInnis Lake 61°21'N, 110°12'W	lake trout + lake whitefish 2,300	1971--lake trout 5,654 kg, lake whitefish 9,507 kg.	A commercial harvest of lake trout and lake whitefish was taken from MacInnis Lake in 1971. DFO measured mercury levels in the flesh of lake trout from the lake in 1971. In 1986, DFO estimated the guest-bed capacity of MacInnis Lake for a medium quality lake trout sport fishery at 10 to 14 beds, given that the resource may be shared with the commercial fishery. (Yaremchuk et al. 1989; M. Hendzel, pers. comm.; D. Moshenko, pers. comm.) (75E)
Methleka Lake 60°28'N, 111°12'W			Envirocon Ltd. sampled lake cisco, lake trout, lake whitefish, and northern pike from this lake on the Taltson River in June-September 1973. Fish were captured using mixed-mesh gillnets and beach seines. Data were collected on catch effort; on fish habitat, growth, reproduction, and diet; and on water chemistry, zoobenthos, and zooplankton. (Envirocon Limited et al. 1975; Envirocon Ltd. unpubl. data--See DFO Permit files). (75D)
Mistigi Lake 60°26'N, 111°47'W	lake trout + lake whitefish 500		In June 1965, a DFO experimental fishery sampled lake trout and lake whitefish from Mistigi Lake. The lake has a commercial harvest quota but no record of commercial harvest. (Yaremchuk et al. 1989; DFO unpubl. data) (75D)
Naylor Lakes 60°34'N, 111°27'W	lake trout + lake whitefish 300		This lake has a commercial harvest quota but no record of commercial harvest. (Yaremchuk et al. 1989) (75D)
Nonacho Lake			See LUTSEL K'E--Nonacho Lake

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Oulton Lake 60°47'N, 111°20'W	lake trout + lake whitefish 1,000		Residents of Fort Smith fish for subsistence at this lake on the Taltson River system. Oulton Lake has a commercial harvest quota but no record of commercial harvest. (Bill et al. 1996) (75D)
Piers Lake 60°20'N, 111°09'W	lake trout + lake whitefish 1,000	1975--lake trout and lake whitefish 220 kg; 1988-93--NF.	A commercial harvest of lake trout and lake whitefish was taken from this lake on the Taltson River system in 1975. The quota was opened for fishing but not fished in 1988-93. (Yaremchuk et al. 1989; DFO 1991, 1992a+b, 1993, 1994, 1995) (75D)
Pilot Lake 60°17'N, 111°00'W			This isolated lake lies in the depression caused by a meteorite impact. It was identified for consideration as an ecological reserve by the International Biological Programme. Residents of Fort Smith fish for subsistence at Pilot Lake which was identified as a "good trout lake". Pilot Lake Cabins operates a sport fishing camp at Pilot Lake (Table 2). (Bill et al. 1996; NLUIS 75D) (75D)
Robinson Lake 60°48'N, 110°55'W	lake trout + lake whitefish 600		Residents of Fort Smith fish for subsistence at this lake on the Robinson River, a tributary of the Knoth River which flows into the Taltson. Robinson Lake has a commercial harvest quota but no record of commercial harvest. (Bill et al. 1996) (75D)
Salt River 60°06'30"N, 112°14'05"W		<u>Open water domestic fishery at Salt River mouth:</u> 1983--130 inconnu (923 kg), --1,000 lake whitefish (1,000 kg), --4 northern pike (5 kg); 1984--10 goldeye (5 kg), --150 inconnu (772 kg), --80 lake whitefish (74kg), --10 northern pike (18 kg), --15 suckers (20 kg), --15 walleye (18 kg).	In 1970-71, researchers from the University of Alberta sampled fish and water at 5 sites on the Salt River (NWT: 60°05'N, 112°15'W; 60°01'N, 112°21'W; 59°58'N, 112°24'W; ALBERTA: 59°57'N, 112°17'N, 59°49'N, 111°57'W). This tributary of the Slave River straddles the Northwest Territories-Alberta border and the border of Wood Buffalo National Park. The Salt River is exceptionally high in total dissolved solids, except in the extreme headwaters, with the major ions being sodium and chloride. Some of its tributaries are springs which have salinities about 9 times that of sea water. Fish species reported from the Salt River are listed in Appendix 1, under the heading of "Slave River" where they are identified by a footnote. Pine Lake (59°33'N, 112°15'W), at the head of the Salt River system was stocked with rainbow trout fry in 1958, 1959, and 1971. In 1959, rainbow trout were also planted in the Salt River. There was no evidence of reproduction by the rainbow trout when the system was sampled in 1970-71. (Nelson and Paetz 1972) Aquatic Environments Limited conducted a short-term fishery survey of the lower reaches of the Salt River in the spring of 1979 as part of the Mackenzie River Basins Committee studies of the Slave River. Fish were captured using multi-mesh gillnets and beach seines. Data were collected on catch effort and on fish growth, reproduction, diet, movements (769 fish tagged), and habitat preferences. Lake whitefish tagged in the lower reaches of the Salt River in June 1979 were recovered in August and September 1979 in the Simpson Islands area of Great Slave Lake. There is a post-spawning downstream migration of longnose sucker in the Salt River in mid-June. Fish tagged in June 1979 moved downstream into Great Slave Lake, where they were recaptured in August north of Hay River and near the Simpson Islands, and in October at Resolution Bay, north of Hay River, and in the Slave River Delta (see FORT RESOLUTION--Slave River Delta). Walleye tagged at the Salt River in June 1979 move downstream into the Slave River Delta and Great Slave Lake in the fall, dispersing at least as far as the Hay River. (Tripp et al. 1981) The Salt River was sampled in 1994 and 1995 as part of the Northern River Basins Study. Fish were collected during the open water period using multi-mesh experimental gillnets, single

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Salt River, continued.			mesh gillnets, beach seines, and set lines. Data were collected on catch effort and on fish growth, reproduction, diet, and habitat preferences. Species assemblages and trophic relationships were described. (Tallman 1996; Little 1997) Longnose sucker, walleye, and northern pike are reported to migrate into the Salt River in spring, presumably to spawn. (G. Low, pers. comm.) The mouth of the Salt River is reserved for Aboriginal fishing. In 1953, an area of 110 acres bordering the Salt River immediately upstream of its confluence with the Slave River was designated the Salt River Indian Fishing Reserve. (NLUIS 85A; D. Moshenko, pers. comm.) In the fall of 1983, only one resident of the Salt River settlement harvested fish for domestic use at the mouth of the Salt River on a regular basis. In the fall of 1984, four residents harvested fish periodically from the Salt River. The harvest figures shown at left are based on the harvester's estimates of their catches during the open water period. The 1984 estimates may be low for goldeye, northern pike, suckers, and walleye. Most of the fish caught in both years were used for dog food. In addition, the late fall-winter fishery harvested an estimated 700 burbot (1,064 kg) in 1984-85. In the past, suckers that ascend the river in May to spawn were taken in large numbers by subsistence fishermen. (RL&L/EMA Slave River Joint Venture 1985; Bill et al. 1996; NLUIS 85A). (85A)
Sass River 60°17'40"N, 113°53'40"W			In 1970-71, researchers from the University of Alberta sampled fish and water where this tributary of the Little Buffalo River crosses the border of Wood Buffalo National Park, and where Preble Creek, a tributary of the Sass River crosses the park border (60°04'N, 113°18'W). Fish species taken included brook stickleback, fathead minnow, longnose sucker, northern redbelly dace, pearl dace, and spottail shiner. Walleye are reported to spawn in this tributary of the Little Buffalo River in the spring. (Nelson and Paetz 1972; NLUIS 85A) (85A)
Schaefer Lakes [Fish Lakes] 60°05'N, 111°23'W			Hanging Ice Lodges Ltd. operates a sport fishing lodge for walleye and northern pike from May to September on the Schaefer Lakes with an outpost on Taltson Lake (Table 2). (75D)
"Seven Mile Lake"			See below--unnamed lake [Seven Mile Lake].
Slave River (Figure 1) 61°18'N, 113°40'W		<u>Domestic fishery at Fort Smith:</u> 1 September to 5 November 1983--1,051 goldeye [378 kg], --1,986 inconnu [14,103 kg], --12,938 lake whitefish [13,938 kg], --860 northern pike [1,101 kg], --1,727 suckers [1,193 kg], --603 walleye [470 kg];	Detailed studies of the aquatic ecology of the Slave River mainstem have been completed for the Mackenzie River Basins Committee, Slave River Hydro Project, and the Northern River Basins Study Program. See FORT RESOLUTION--Slave River Delta for information on the river delta. See also Table 4--R. Tallman, D. Frey, M. Rosen, D. Trotter. Aquatic Environments Limited conducted a short-term fishery survey below Rapids of the Drowned in October 1979 as part of the Mackenzie River Basins Committee studies of the Slave River. Fish were captured using multi-mesh gillnets and beach seines. Data were collected on catch effort and on fish growth, reproduction, diet, movements (634 fish tagged), and habitat preferences. Longnose sucker tagged in October 1979 was recovered in Resolution Bay, Great Slave Lake in September 1980. (Tripp et al. 1981) RL&L/EMA Slave River Joint Venture (1985) investigated the fall and winter spawning fish

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Slave River, continued.		1 September to 29 October 1984--2,233 goldeye [1,050 kg], --3,628 inconnu [8,686 kg], --14,032 lake whitefish [13,050 kg], --1,066 northern pike [1,972 kg], --1,578 suckers [2,051 kg], --1,086 walleye [1,271 kg]; <u>Aboriginal food fishery at Fort Smith:</u> 21 May-27 October 1995--857 goldeye [257 kg], --1,069 inconnu [4,276 kg], --4,210 lake whitefish [4,210 kg], --620 longnose + white sucker [930 kg], --437 northern pike [874 kg], --916 walleye [916 kg]. 10 May-23 October 1996--817 goldeye [245 kg], --653 inconnu [2,612 kg], --4,448 lake whitefish [4,448 kg], --1,268 longnose + white sucker [1,268 kg], --320 northern pike [640 kg], --981 walleye [981 kg].	species in the Slave River from Fort Smith to Great Slave Lake between late summer 1983 and winter 1985. This program was part of the environmental studies relating to potential hydroelectric development of the Slave River. Fish movements were studied, spawning habitats mapped, and resource use was quantified. Most fish were captured using gillnets or by electrofishing but traps, boat set seines, and set lines were also used. Echo sounding was used to locate concentrations of fish. Data were collected on fish growth, reproduction, and diet; a subsample of healthy fish were tagged with Floy tags or radio transmitters for movement studies; fish eggs were collected using an airlift pump, a roving suction sampler, drift nets, and dredges. The Slave River was sampled in 1994 and 1995 as part of the Northern River Basins Study . Fish were collected during the open water period using multi-mesh experimental gillnets, single mesh gillnets, beach seines, and set lines. Data were collected on catch effort and on fish growth, reproduction, diet, and habitat preferences. Radio tags were attached to a subsample of inconnu and burbot to follow their movements. Species assemblages and trophic relationships were described for the Slave River, Slave River Delta, and Salt River. (Tallman 1996; Little 1997; Howland 1997) Fish species reported from the Slave River and its tributary the Salt River are listed in Appendix 1. Northern pike, walleye and goldeye live in the river year round and are generally found at higher numbers than other species throughout the open water period. Flathead chub, longnose sucker, and burbot are also resident species but being aggregate spawners are found in highest abundance during the spring and early summer or, in the case of burbot, under the ice in December. Tagging studies have documented movements by individuals of each of these species, flathead chub excepted, between the upper Slave River near Fort Smith and Great Slave Lake. Sexually mature inconnu and lake whitefish are present in the system mainly during their spawning migrations from Great Slave Lake in the late summer and fall. Lamprey ammocoetes (young) are found in the Slave River from Fort Smith to Great Slave Lake. (Keleher 1963; Buchwald 1968; Nursall and Buchwald 1972; Tripp et al. 1981; RL&L/EMA Slave River Joint Venture 1985; Boag and Westworth 1993; Tallman 1996; Tallman et al. 1996c; Howland 1997) Inconnu begin migrating into the Slave River from Great Slave Lake in mid-August, with peak movements in late August or early September. The initial upstream movement is rapid, followed by a holding pattern near the final point of migration or fall back to downstream locations. Catches of pre-spawning inconnu peak in the upper Slave River (Buffalo Crossing to Fort Smith) in early September and again in mid-October. The species does not occur upstream of Rapids of the Drowned at Fort Smith. Inconnu spawning is suspected at the base of these rapids, in the Cunningham Landing area, and in the mid-river area (Point Ennuyeuse to below Grand Detour). Inconnu spawning may be limited in the area of Rapids of the Drowned by the intensity of the domestic fishery. Preferred spawning habitat ranges from cobble to clay to hard-packed sand. Spawning probably occurs in mid-October and thereafter there is a rapid post-spawning movement of inconnu downstream and into Great Slave Lake. It is not known whether juvenile inconnu overwinter in the Slave River. Inconnu in the Slave River remain in fresh water throughout their lives. In 1984, the population of the run was estimated at 19,530 fish (95% CI 15,856 -24,638). (Melvill 1914; Dymond 1943; Fuller 1955; Tripp et al. 1981;

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Slave River, continued.		16 May-17 October 1997--859 goldeye [258 kg], --1,035 inconnu [4,140 kg], --4,062 lake whitefish [4,062 kg], --1,068 longnose + white sucker [1,068 kg], --167 northern pike [334 kg], --625 walleye [625 kg]. 16 May-17 October 1998--686 goldeye [205 kg], --1,797 inconnu [7,188 kg], --1,270 lake whitefish [1,270 kg], --379 longnose + white sucker (379 kg), --216 northern pike (432 kg), --549 walleye (549 kg). <u>Domestic fishery at Cunningham Landing:</u> 14 September to 27 October 1984--94 goldeye [44 kg], --179 inconnu [921 kg], --1,067 lake whitefish [992 kg], --101 northern pike [187 kg], --217 suckers [282 kg], --515 walleye [603 kg].	RL&L/EMA Slave River Joint Venture 1985; Boag and Westworth 1993; Tallman 1996; Tallman et al. 1996a,b; Howland 1997) In 1995-98, DFO Floy tagged 1034 inconnu in the area of the Slave River between Salt River and Rapids of the Drowned. By March 1999, the Great Slave Lake commercial fishery had recaptured 99 of these fish which, were dispersed throughout the lake, and the Aboriginal food fisheries had recaptured 10 tagged inconnu in Resolution Bay of Great Slave Lake and 17 in the Slave River near Fort Smith (G. Low, unpubl. data) Lake whitefish abundance in the delta area increases in early September with upstream movements continuing into late October. Migrants from Great Slave Lake have been taken as far upstream as Rapids of the Drowned at Fort Smith, but tag recoveries suggest that there may also be a substantial resident population of lake whitefish in the river. Spawning occurs in October, mainly in the upper areas of the river. Rapids of the Drowned may be an important spawning area; eggs have been recovered from several sites between the rapids and Salt River (see above). Spawning was also documented as far downstream as mile 379 below Grand Detour. (Tripp et al. 1981; RL&L/EMA Slave River Joint Venture 1985; Tallman 1996) Cisco spawn in large numbers in the Slave River Delta, but there is also a migration of large-bodied cisco from Great Slave Lake to Rapids of the Drowned in October. Some spawning appears to occur in all reaches of the river. Spawning runs of small-bodied cisco begin in late September and peak in late October, with some fish migrating upstream as far as Fort Smith. Spawning areas for these ciscos appear to be situated from below Long Island downstream to the Slave River Delta. (RL&L/EMA Slave River Joint Venture 1985) Burbot run into the Slave River Delta after 1 November and prior to freeze-up. A movement of burbot into the Slave River may occur under the ice, as concentrations are present in the Fort Smith area in early to mid-December. These are thought to be pre-spawning movements. Spawning may occur in or near the Slave River Delta and in the Cunningham Landing/Salt River areas in late December to February. A burbot tagged in Great Slave Lake north of Hay River on 19 September 1953 was recaptured in the Slave River at Fort Smith 90 days and 400 km later, and another tagged at Rapids of the Drowned near Fort Smith was recovered by commercial fishermen in the north arm of Great Slave Lake. (Keleher 1963; RL&L/EMA Slave River Joint Venture 1985; Tallman 1996;Tallman et al. 1996a + b) The Slave River continues to be a major fishing site for traditional harvesters who fish to feed themselves and their dogs. Aboriginal residents of Fort Smith have traditionally harvested whitefish, northern pike, suckers, and goldeye in the spring after the ice goes out; inconnu and a few lake whitefish and northern pike from mid-August until freeze-up; and burbot in November. Gillnets are set in eddies offshore Fort Smith, amongst the islands and across the river from the town, and as far downstream as the mouth of the Salt River. (Bill et al. 1996; G. Low, pers. comm.). Elders reported in Bill et al. (1996) that whitefish used to be caught all summer long, but this is apparently no longer the case. Domestic fishermen were interviewed over the September to freeze-up periods in both 1983 and 1984. There was a substantial fall domestic fishery in the vicinity of Fort Smith at the base of Rapids of the Drowned. Most gillnets were set along the

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Slave River, continued.			south bank of the river near town. Lake whitefish were the most abundant species in the catch but inconnu contributed more by weight. Smaller fisheries were monitored at Cunningham Landing, Salt River, and the Slave River Delta. The principal domestic fishery for burbot was located in the Cunningham Landing area, where an estimated 2,200 fish (3,344 kg) were harvested in the winter of 1984-85. Walleye was the species preferred for human consumption, while inconnu and burbot were the preferred dog foods. Most of the fish harvested were used for dog food: inconnu 90%, lake whitefish 65%, northern pike 80%, walleye 30%, suckers 95%, goldeye 85%, and burbot 95%. The rate of exploitation of spawning inconnu is high, estimated at 0.20 in 1984. (RL&L/EMA Slave River Joint Venture 1985) DFO collected data on the Aboriginal food fishery at the Slave River by residents of Fort Smith from May to October 1995-98. The harvest estimates, shown to the left, are based on these data and represent the annual total harvest (±20% in 1995; 90% of the annual total harvest in 1996-98). (DFO 1997; G. Low, pers. comm.) The Slave River was closed to fishing by holders of non-Aboriginal domestic fishing licences from 15 August and 30 October during the 1995-98 fishing seasons. The intent of this measure was to reduce fishing pressure on the inconnu. This restriction has been removed for the 1999 fishing season, as the inconnu stock is capable of supporting the non-Aboriginal domestic fishery. In 1999, only two non-Aboriginal domestic fishing licences, each for a maximum of 500 kg of fish, were issued for the Slave River. (G. Low, pers. comm.) DFO measured organic contaminants in the livers of burbot from the Slave River in the mid 1980's (Whittle 1989; Muir et al. 1990). In 1995-96, Evans et al. (1997) studied the contribution of organic contaminants by the Slave River to Great Slave Lake. Monenco Consultants Limited analysed muscle tissues of goldeye and northern pike captured at Fort Smith in 1990 for chlorinated and non chlorinated organic contaminants. Low concentrations of chlorinated dioxins and furans were found, none of which presents a health risk to people consuming the fish. (Monenco Consultants Limited 1991) (85H)
Soulier Lake 60°41'N, 110°08'W	lake trout + lake whitefish 1,900		This lake on the Tanzin River, a tributary of the Taltson, has a commercial harvest quota but no record of commercial harvest. (75D)
Star Lake 60°18'N, 110°48'W	lake trout, lake whitefish + walleye [200]	1988-89--NF; 1990--lake trout 157 kg, lake whitefish 138 kg, northern pike 13 kg.	In 1990, a DFO experimental fishery sampled lake trout and lake whitefish from Star Lake. (DFO 1991, 1992a+b; McGowan et al. 1993) (75D)
"Stovepipe Lake"			See below--unnamed lake [Stovepipe Lake]
Taltson Lake			See FORT RESOLUTION--Taltson Lake
Taltson River			See FORT RESOLUTION--Taltson River
Telklini Lake 60°02'N, 111°15'W	lake trout + lake whitefish 400		This lake near Fort Smith has a commercial harvest quota but no record of commercial harvest. (75D)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Thekulthili Lake 61°00'N, 110°06'W	lake trout + lake whitefish 13,800	1961--lake trout 31,820 kg, lake whitefish 21,390 kg, walleye 107 kg; 1965--lake trout and lake whitefish 20,374 kg; 1966--lake trout and lake whitefish 7,878 kg; 1971-72--lake trout 27,678 kg, lake whitefish 47,522 kg, walleye 1,657 kg; 1979--lake trout and lake whitefish 12,051 kg; 1980--lake trout 1,275 kg; lake whitefish 2,708 kg.	Commercial harvests of lake trout and lake whitefish were taken from this lake on the Thekulthili River, a tributary of the Taltson, in the winters of 1961-62, 1965, 1966, 1971-72, 1979 and 1980. DFO sampled lake whitefish from Thekulthili Lake in 1965, and measured mercury levels in the flesh of northern pike from the lake in 1971. (Sinclair et al. 1967; Envirocon Limited et al. 1975; Moshenko 1980; Yaremchuk et al. 1989; NLUIS 75D; M. Hendzel, pers. comm.) In 1986, DFO estimated the guest-bed capacity of Thekulthili Lake for a medium quality lake trout sport fishery at 11 to 15 beds. Big Pine Narrows Camp and Northstar Resort have operated sport fishing lodges at Thekulthili Lake since at least 1988 (Table 2). (M. Roberge, pers. comm.) In 1981, DFO measured total mercury in the flesh of lake trout (mean 0.31 $\mu g \cdot g^{-1}$ wet wt, n=15, range 0.16 - 0.68) from Thekulthili Lake (M. Hendzel, unpubl. data). (75E)
Tourangeau lake 60°19'N, 110°32'W	lake trout + lake whitefish 1,400		This lake on the Tanzin River, a tributary of the Taltson, has a commercial harvest quota but no record of commercial harvest. (Yaremchuk et al. 1989) (75D)
Trudel Lake 60°21'N, 111°19'W	lake trout + lake whitefish 200		This lake has a commercial harvest quota but no record of commercial harvest. (75D)
Tsu Lake 60°40'N, 111°52'W		1959--lake trout 596 kg, lake whitefish 172 kg, northern pike 141 kg, walleye 151 kg.	Tsu Lake is downstream from the reservoir created for the Twin Gorges hydro-electric station by impounding the flow of the Taltson River at the outlet of Nonacho Lake (see LUTSEL K'E--Nonacho Lake). Flow in the river has been altered by the impoundment such that the lake level typically rises about 0.1 m above its natural level in the spring and falls 0.2 m below its natural level in the summer and fall. (Envirocon Pacific Limited 1986) Envirocon Ltd. sampled burbot, lake cisco, lake trout, lake whitefish, and northern pike from Tsu Lake in June-September 1973. Fish were captured using mixed-mesh gillnets and beach seines. Data were collected on catch effort; on fish habitat, growth, reproduction, and diet; and on water chemistry, zoobenthos, and zooplankton. (Envirocon Limited et al. 1975; Envirocon Ltd. unpubl. data--See DFO Permit files). Residents of Fort Smith fish for subsistence at Tsu Lake. A commercial harvest of lake trout, lake whitefish, northern pike, and walleye was taken from Tsu Lake in the winter of 1959-60. (Sinclair et al. 1967; Moshenko 1980; Yaremchuk et al. 1989; Bill et al. 1996) (75D) Students of the Renewable Resources Technology course at Thebacha College in Fort Smith sometimes sample fish at Tsu Lake as part of their course work. See Table 4--K. Antoniak, B. Bergmann, L. Gray, D. Langille, M. Rosen.
unnamed lake 60°10'N, 109°21'W	lake trout [500], lake whitefish [500]	1992--NF.	In 1992, an experimental fishery was planned to sample this lake near Fort Smith. The lake was not fished. (DFO 1994) (75C)
unnamed lake [Burnt Lake] 60°29'N, 110°45'W	lake whitefish [200]		In 1984, an experimental fishery was planned to sample lake whitefish from this lake near Fort Smith. There is no record of fishing. (Yaremchuk et al. 1989) (75D)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
unnamed lake [Elbow Lake] 60°36'N, 111°31'W	lake trout + lake whitefish [907]		In 1980, an experimental fishery was planned to sample lake trout and lake whitefish from this lake near Fort Smith. (Yeremchuk et al. 1989) (75D)
unnamed lake [Germain Lake] 60°12'N, 111°03'W	lake trout, lake whitefish + walleye [200]	1989--lake whitefish 270 kg, walleye 143 kg.	In March 1990, a DFO experimental fishery sampled lake whitefish and walleye from this unnamed lake (DFO 1992e; McGowan et al. 1993) (75D)
unnamed lake [Jean's Lake] 60°22'N, 110°54'W	lake trout, lake whitefish + northern pike [200]	1989--NF; 1990--lake trout 80 kg, lake whitefish 118 kg, northern pike 2 kg.	In 1990, a DFO experimental fishery sampled lake trout, lake whitefish, and northern pike from this lake on the Taltson River system. (DFO 1992a+b; McGowan et al. 1993) (75D)
unnamed lake [Mary Lake] 60°20'N, 110°46'W	lake trout, lake whitefish + walleye [200]	1988-89--NF.	In 1988-89, experimental fisheries were planned to sample this lake on the Taltson River system. The lake was not fished. (DFO 1991, 1992a) (75D)
unnamed lake [Mary's Lake] 60°14'N, 111°04'W	lake whitefish [200]	1990--NF.	In 1990, experimental fisheries were planned to sample this lake near Fort Smith. The lake was not fished. (DFO 1992b) (75D)
unnamed lake [Seven Mile Lake] 60°00'N, 112°38'W			This lake beside Highway 5 was stocked with rainbow trout fry in 1959. (Nelson and Paetz 1972) (85A)
unnamed lake [Stovepipe Lake] 60°46'N, 111°53'W			An experimental fishery planned in 1980 for lake trout and lake whitefish at this lake on the Taltson River system was not conducted. (Yeremchuk et al. 1989) (75D)
Yatsore Lake 60°46'N, 110°16'W	lake trout + lake whitefish 2,400	1967--lake trout 2,199 kg, lake whitefish 13,566 kg; 1972--lake trout 2,036 kg, lake whitefish 5,280 kg; 1973--lake trout 4,020 kg, lake whitefish 9,517 kg.	DFO sampled lake trout and lake whitefish from this lake on the Thekulthili River, a tributary of the Taltson, in 1959. Cysts of the parasite Triaenophorus crassus are found in the flesh of whitefish from the lake. Commercial harvests of lake trout and lake whitefish were taken from Yatsore Lake in 1967, 1972, and 1973. DFO measured mercury levels in lake trout from the lake in 1973. In 1988, DFO estimated the guest-bed capacity of Yatsore Lake for a high quality lake trout sport fishery at 4 to 5 beds. (Moshenko 1980; Yeremchuk et al. 1989; DFO unpubl. data; M. Hendzel, pers. comm.; M. Roberge, pers. comm.) (75D)
HAY RIVER, NORTHWEST TERRITORIES			DFO studied and described the domestic fishery in the vicinity of Hay River in the fall of 1958. Residents of Hay River harvested an estimated 12,273 kg of fish for subsistence from October 1959 to March 1960; and 46,680 kg in 1961-62. (Keleher and Height 1959; Sinclair et al. 1967)
Birch Creek 60°50'05"N, 115°21'45"W			This small creek flows into Great Slave Lake about 32 km east of Hay River. There is occasional subsistence and sport fishing near the river mouth in the spring. DFO sampled lake whitefish, northern pike, and walleye at the creek mouth in June 1974. (Falk and Dahlke 1975; NLUIS 85B; G. Low, pers. comm.) (85B)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Buffalo Lake 60°13'N, 115°30'W			In late September and early October of 1958, four trappers from Hay River harvested about 1,640 inconnu from Buffalo Lake. Most of the fish were dried and stored on stages for use as dog food during the winter trapping season. The subsistence harvest at Buffalo Lake has declined with the decline in use of working dogs in the trapping industry, and the move of permanent and seasonal residents to Hay River. Now, inconnu and lake whitefish are only harvested occasionally for subsistence near the lake outlet and near the mouth of the Yates River, with by-catches of northern pike, sucker and walleye. The inconnu, which migrate from Great Slave Lake into the tributaries of Buffalo Lake, are overexploited but the other species are not. The whitefish are typically small river fish which are apparently non-migrant residents of the individual tributaries. They are generally heavily infested with Triaenophorous sp. DFO estimated the basic needs level at 1,000 kg. (Keleher and Haight 1959; Sinclair et al. 1967; NLUIS 85B; DFO unpubl. data; G. Low, pers. comm.) In 1983, DFO captured 100 walleye from Buffalo Lake and released them into Sandy Lake (see below). (G. Low, pers. comm.) (85B)
Buffalo River 60°52'50"N, 115°02'30"W			The Buffalo River drains Buffalo Lake (see above) into Great Slave Lake about 60 km east of Hay River. DFO sampled fish at the river in 1945-48, 1955, 1956, and from 1976-95. Inconnu congregate at the river mouth in the spring, and tag recovery data indicates that at least some of these fish enter the Buffalo River in early summer and migrate slowly upstream to Buffalo Lake, where they congregate in fall at the mouths of tributary rivers (see below unnamed river [Upper Buffalo River], Whitesand River and Yates River). They then leave these river mouths, presumably to spawn upstream and appear in spent condition at the river mouths in early winter. Attempts to locate spawning areas in the lower 45 km of the tributaries of Buffalo Lake have been unsuccessful. Spawning may occur further upstream in the headwaters which are located in northern Alberta at the base of the Caribou Mountains. The number of resting fish in the Great Slave Lake samples suggest that these inconnu do not spawn every year. There is also a downstream, post-spawning migration of inconnu in the Buffalo River in late September and early October. The timing of freeze-up of the Buffalo River may determine the extent of overwintering in the tributaries of Buffalo Lake. It is not known whether these are discrete stocks of inconnu. (Fuller 1955; Day and Low 1993) The mean length and age of inconnu declined from 745 mm and 9 years in 1947 to 680 mm and 7 years by the mid-late 1970's and had not recovered by 1992. Over 1000 inconnu were tagged at the mouth of the Buffalo River between 1976 and 1978; only 9 tag recaptures were reported in the 1980 season. This suggests a high mortality rate in the interim for these inconnu. They ranged 140 km upstream to the Yates and Whitesand rivers, and along the southern shore of Great SLave Lake from Spruce Point (166 km east) to Deep Bay (81 km west). They showed moderate year-to-year site fidelity, with 73 fish recaptured at the river mouth in subsequent years. Of 33 inconnu examined in 1946, 94% had cysts of the parasite Triaenophorus crassus in their flesh. The rate of infestation was 70 cysts per 45.5 kg of flesh. The mouth of the Buffalo River is a nursery area for walleye. Fish species reported from the Buffalo River are listed in Appendix 1. (Melvill 1914; Fuller 1955; Day and Low 1993; NLUIS 85B)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Buffalo River, continued.			The area of Great Slave Lake within a radius of 2 km from the river mouth has been closed to commercial fishing since 1983 (Fig. 3). Subsistence fishermen have harvested fish for dog food from Buffalo Lake near its exit into the Buffalo River, and from its' tributaries. This fishery has declined with the decline in the use of working dogs in the trapping industry (Day and Low 1993; DFO unpubl. data) The Buffalo River is accessible by road where it is crossed by Highway 6. The crossing area, however, is not well suited to angling as the river becomes very silty once the ice melts on Buffalo Lake. The river mouth, which is accessible by boat during the open water season, is seldom fished for sport due to its heavy silt load. DFO sampled inconnu, lake whitefish, and walleye at the river mouth in June 1974. Seine hauls at the river mouth also produced good catches of walleye. (Falk and Dahlke 1975; G. Low, pers. comm.) DFO considers the stock(s) of inconnu in the Buffalo River to have been severely overexploited, and has recommended measures to reduce the harvest by the Great Slave Lake commercial fishery. Despite these measures recovery of the Buffalo River stock is expected to be slow. Research programs have also been recommended to delineate the stocks and examine the movements and life history of the Buffalo River inconnu. See also Table 4--G. Low. (Day and Low 1993) (85B)
Hay River 60°51'50"N, 115°44'W		<u>Sport harvest:</u> 1975--2,120 walleye (860 kg), 1.23 walleye/angler/hr. 1978--2,484 walleye, 1986--3,155 walleye <u>Aboriginal food fishery harvest during the whitefish run in September and October 1996:</u> --19 burbot (38 kg), --3 inconnu (12 kg), --1 lake trout (3 kg), --3,420 lake whitefish (3,420 kg), --84 longnose sucker (168 kg), --30 northern pike (60 kg), --19 walleye (19 kg).	The Hay River is a spring migration route for longnose sucker, walleye and occasionally inconnu, and a fall migration route for lake whitefish. The Louise and Alexandra falls form an impassable barrier upstream. The northern pike are likely resident in the river. Longnose suckers run into the Hay River following ice break-up in the spring to spawn, in May to mid-June, and then return to Great Slave Lake. Lamprey ammocoetes (young) are found in the lower 32 km of the Hay River. A number of ammocoete beds (spawning locations) have been documented in the river. Spawning occurs prior to July 8. Fish species reported from the Hay River are listed in Appendix 1. (Fuller 1955; Harris 1962; Buchwald 1968; Nursall and Buchwald 1972; Bond et al. 1978; Moshenko and Low 1980; Clarke et al. 1989; NLUIS 85B; G. Low, pers. comm.) Lake whitefish are harvested for subsistence in the east and west channel and occasionally upstream from Vale Island. Domestic gillnets are not to span more than two thirds of the river. In 1997, the basic needs level was estimated at 15,000 kg of lake whitefish. DFO collected data on the Aboriginal food fishery at the Hay River during September and October 1996. The total annual harvest is unknown. (NLUIS 85B+C; DFO unpubl. data; G. Low, pers. comm.) Residents of Hay River harvest mainly walleye but also burbot, inconnu, and northern pike for sport from the Hay River in June through October, mostly near the community in the vicinity of Vale Island, but some upstream at the crossing of Highway 6 and at the base of Louise Falls. DFO surveyed the walleye sport fishery in 1975, 1978, and 1986. Partial creel censuses were conducted in 1972 and 1974, a questionnaire survey in 1979, and there are also DFO data from 1983. Over this period, the fishing effort increased substantially while the catch per unit effort decreased by 30%, from 1.2 to 0.8 walleye per angler hour. However, the mean length of fish sampled increased from 338 to 365 mm, and the mean age from 5 to 7 years--suggesting that recruitment is adequate to met the need of stock replacement. The stock

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Hay River, continued.			definition is unknown, except that the fish are not part of a spawning run as most are either immature or unripe adults. The stock is not harvested by the Great Slave Lake commercial fishery, since the Hay River domestic zone protects stocks in an area 5 statute miles offshore between Point de Roche in the west and Fish Point to the east (Fig. 3). In 1989, DFO recommended that current regulations be maintained, a creel census with biological sampling be repeated every 3 years, and a tagging program be implemented to determine movement patterns of the walleye. See also Table 4--G. Low, M. Digel, H. Westers. (Gillman and Dahlke 1973; Falk and Dahlke 1975; Bond et al. 1978; Moshenko and Low 1980; Falk 1981; Clarke et al. 1989; DFO unpubl. data) In 1984, 1989, and 1990 DFO Fish Inspection sampled northern pike, walleye and whitefish from the Hay River commercial fishery for their concentrations of heavy metals and organic contaminants. (Wong 1986; M. Hendzel pers. comm.) (85B)
MacDonald Lake			See LUTSEL K'E--MacDonald Lake.
Sandy Lake 60°31'30"N, 114°35'W			In January 1979, DFO conducted a limnological survey to assess the potential of lakes in the Hay River area for commercial aquaculture. Sandy Lake and two unnamed lakes (Polar and #9) (see below) were the only lakes in the area suitable for stocking but together were not sufficiently productive to support an aquaculture industry. In August 1983, 100 live walleye were transferred from Buffalo Lake (see above) in Wood Buffalo National Park to Sandy Lake which is located off Highway 5 on the Park border. Twenty-five of the fish died immediately following transfer. A few walleye have been caught since then but the stock has not reproduced. Limnological surveys of the lake were conducted in 1979-82, prior to stocking. Depth, temperature and dissolved oxygen profiles were determined and the plankton, benthos, and fish were sampled. The lake supports brook stickleback and northern pike. (M. Papst, unpubl. data; G. Low, pers. comm.) (85B)
Sandy River [Sandy Creek] 60°50'N, 115°37'20"W			This stream, also called Sandy Creek, flows into Great Slave Lake about 10 km east of Hay River. In June 1958, DFO sampled northern pike from the lower reaches of Sandy River. Fish were caught by angling at a rate of 3.6 fish per rod-hour (5 kg). The catch per hectare of river surface was 6.44 kg (35 lbs per acre). DFO also sampled lake whitefish, northern pike, sucker, and walleye at the river mouth in June 1974. Where it is crossed by Highway 6, the river is small and shallow. Angling is confined to the mouth and lower reaches which are very scenic. Cottagers and itinerant anglers who visit the area by boat from Hay River catch northern pike and walleye at the river mouth from June through August. (Keleher and Haight 1959; Falk and Dahlke 1975; NLUIS 85B; G. Low, pers. comm.) (85B)
unnamed lake [Polar Lake] 60°51'N, 115°10'W			Polar Lake, which is situated just north of Highway 5, between Hay River and Pine Point, is accessible year-round by road. Camping, picnicking and boat launch facilities make it an attractive recreational area for anglers and non-anglers. DFO surveyed the lake in 1969 and 1971 to assess its stocking potential. The only fish caught were brook stickleback, and the lake was found to be suitable for stocking. In 1971, it was stocked with 40,000 brook trout by the Pine Point Wildlife and Wilderness Club. The stocking was considered successful and anglers enjoyed good success for several years. It was restocked with 12,000 rainbow trout in 1977 and 10,000 in 1978. DFO conducted spring and fall fish sampling from 1977 to 1979.

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
unnamed lake [Polar Lake], continued.			Brook trout were not caught, perhaps due to a winterkill. The re-stocking was also successful as the rainbow trout grew to catchable size after one year and a recreational fishery was created in an area where such opportunities are limited. The rainbow trout which weighed about 76 g when they were stocked in 1977, grew to 494 g after one year and 761 g after two years. Rainbow trout that weighed about 29 g when they were stocked in 1978 grew to 282 g in 1979. A taste testing panel found the fish to be of good quality. Continued monitoring was recommended in order to improve understanding of the growth and survival of fish introduced to waters of the Northwest Territories. In January 1979, DFO conducted a limnological survey to assess the potential of lakes in the Hay River area for commercial aquaculture. Polar Lake, Sandy Lake (see above), and unnamed lake (#9) (see below) were the only lakes in the area suitable for stocking but together they were not sufficiently productive to support an aquaculture industry. DFO also conducted a questionnaire survey in 1979, to gather information on sport fishing at Polar Lake. Anglers were harvesting rainbow trout from the lake in July. The lake was re-stocked with rainbow trout fingerlings in May 1980 (12,500), May 1981 (10,000), July 1983 (10-12,000), 1985 (12,000--50% transport mortality) and 1986 (12,000), and Arctic charr in May 1991 (3,000 surplus broodstock, 2.5 year old fish). DFO sampled rainbow trout from creels at the lake in June 1981, conducted an experimental gillnet fishery in November 1981, and took periodic water temperature and dissolved oxygen measurements from then until May 1982. A subsequent DFO experimental fishery October 1987 captured rainbow trout with a maximum age of 6 years. The lake appears to be too warm for Arctic charr since temperature-related summer kills have been observed. (Falk 1981; Falk and Low 1981; Papst, unpubl. data) While the outlet to Polar Lake is impassable to fish, rainbow trout--presumably from the lake, have been caught at the mouth of the Buffalo River. These fish are believed to have been introduced from Polar Lake into the Buffalo River by anglers hoping to establish the species. During periods of high water, rainbow trout have been observed to move into swampy areas to feed. Fish that are trapped there winterkill. (G. Low, pers. comm.) (85B)
unnamed lake [lake #9] 60°44'N , 114°57W			In January 1979, DFO conducted a limnological survey to assess the potential of lakes in the Hay River area for commercial aquaculture. Sandy Lake (see above), an unnamed lake (see above unnamed lake [Polar Lake]), and this small lake near Highway 5 were the only lakes in the area suitable for stocking but together they were not sufficiently productive to support an aquaculture industry. (M. Papst, unpubl. data) DFO surveyed the lake again in June 1984 and April 1985. It may winterkill as dissolved oxygen levels below 1 ppm were found just prior to break-up. The lake was stocked with 400 rainbow trout by the Hay River Fish and Game Association in June 1985. It was re-stocked with 8,707 rainbow trout in May 1988. Test netting in October yielded 27 fish (mean wt. 328 g) which were feeding on brook stickleback. A significant number of fish may have been eaten by loons and terns immediately following stocking or escaped the lake during high water. Several borrow pits in the Hay River area were also stocked with varying success. (G. Low, pers. comm.; DFO unpubl. data) (85B)
unnamed river [Upper Buffalo River] 60°05'N, 115°17'W			Inconnu congregate at the mouth of this tributary of Buffalo Lake (see above) in the fall and are believed to spawn upstream. Fry and fingerling inconnu have been observed 20 km upstream. (Day and Low 1993; D. Sonfrere, pers. comm.) (85B)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Whitesand River 60°10'30"N, 115°45'W			Inconnu migrate up this tributary of Buffalo Lake (see above) in the fall to spawn. Anglers from Hay River travel to the Whitesand River by snowmobile in winter to fish for walleye and northern pike. (G. Low and D. McGowan, pers. comm.) (85B)
Yates River [Big River] 60°09'50"N, 115°50'55"W			Inconnu congregate at the mouth of this tributary of Buffalo Lake (see above) in the fall. DFO sampling at the mouth of the Yates River in early December of 1976, 1977, and 1978 yielded 181 inconnu. A repeat of this sampling in 1991 and 1992 yielded only a few inconnu--suggesting that the stock was depleted in the 1980's . Inconnu tagged at the river mouth in 1976-78, ranged at least 180 km and showed a moderate degree of site fidelity. They were recaptured the following years in the river, in the Hay River (see above), at the mouth of the Buffalo River (see above), and in Great Slave Lake near Sulphur Point. Anglers from Hay River travel to the Yates River by snowmobile in winter to fish for walleye and northern pike. They reported poor fishing for walleye in the winter of 1994/95. (Day and Low 1993; D. McGowan, pers. comm.) (85B)
LUTSEL K'E (formerly Snowdrift), NORTHWEST TERRITORIES			DFO studied and described the October-November 1961, Aboriginal food fishery by residents of Snowdrift. (Keleher and Haight 1962, 1965)
Artillery Lake 63°09'N, 107°52'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. Lake trout from the lake were sampled by an experimental gillnet fishery in July 1978, and a DFO experimental fishery in July 1990. Cysts of the parasite Triaenophorus crassus were found in 2 of the 11 fish sampled by the latter study, with an average of 2 cysts per fish . The trout were skinnier (i.e. had low condition factors) than those found in Great Slave 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. (Tyrell 1902; Critchell-Bullock 1931; Hornby 1934; Clarke 1940; MacDonald and Fudge 1978; NLUIS 75KM; M. Roberge, pers. comm.; G. Low, unpubl. data) (75K)
Clinton-Colden Lake 63°55'N, 107°29'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.) (75O)
Eileen Lake 62°16'N, 107°37'W			In 1988, DFO estimated the guest-bed capacity of this lake on the Snowdrift River for a medium quality lake trout sport fishery at 9 to 14 beds. (M. Roberge, pers. comm.) (75J)
Gagnon Lake 61°58'N, 110°23'W	lake trout + lake whitefish 6300	1962--lake trout 11,168 kg, lake whitefish 8,629 kg; 1963--lake trout 5,095 kg, lake whitefish 2,433 kg; 1970--lake trout 5,924 kg, lake whitefish 7,409 kg; 1971--lake trout 9,956 kg, lake whitefish 13,909 kg.	DFO sampled burbot, lake trout, northern pike, suckers and whitefish from this lake on the Snowdrift River in August 1962. Commercial harvests of lake trout and lake whitefish were taken from Gagnon Lake in 1962, 1963, 1970 and 1971, with a small by-catch of inconnu in 1971. DFO measured mercury levels in the flesh of lake trout from Gagnon Lake in 1971. The lake was opened for commercial harvest in 1974 and 1983, but not fished. (Yaremchuk et al. 1989; DFO unpubl. data; M. Hendzel, pers. comm.) DFO sampled burbot, lake trout, northern pike, suckers and whitefish from this lake on the

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Gagnon Lake, continued.	inconnu--no quota	By-catches: 1971--inconnu 2 kg.	Snowdrift River in August 1962. Commercial harvests of lake trout and lake whitefish were taken from Gagnon Lake in 1962, 1963, 1970 and 1971, with a small by-catch of inconnu in 1971. The lake was opened for commercial harvest in 1974 and 1983, but not fished. (Yaremchuk et al. 1989; DFO unpubl. data) In 1987, DFO estimated the guest-bed capacity of Gagnon Lake for a medium to low quality lake trout sport fishery at 5 to 10 beds, given that the resource would be shared with the existing commercial fishery. (M. Roberge, pers. comm.) (75L)
Gray Lake 61°52'N, 108°15'W			A rockfill dam built in 1968 at the outlet of Nonacho Lake (see below) has impounded the flow of the Taltson River (see FORT RESOLUTION--Taltson River), raising the lake level about a metre and creating a large reservoir that includes Gray Lake. The shores of the lake have been flooded and the seasonal flow patterns altered. Envirocon Ltd. sampled lake trout, lake whitefish, and northern pike from Gray Lake in June-September 1973. Fish were captured using mixed-mesh gillnets and beach seines. Data were collected on catch effort; on fish habitat, growth, reproduction, and diet; and on water chemistry, zoobenthos, and zooplankton. (Envirocon Limited et al. 1975; Envirocon Ltd. unpubl. data--See DFO Permit files). DFO analysed the flesh of lake whitefish, lake trout, and northern pike from Gray Lake for total mercury in 1986. The lake whitefish (mean 0.18 $\mu g \cdot g^{-1}$ wet wt, n=15, range 0.09 - 0.48) were found to be suitable for commercial sale but the lake trout (mean 0.53, n=12, range 0.19 - 0.87) and northern pike (mean 0.77, n=3, range 0.38 - 1.04) were not. (M. Hendzel, unpubl. data) (75F)
Lac Duhamel 62°19'N, 110°45'W			Guests of Frontier Lodge on Great Slave Lake occasionally visit this lake to angle for northern pike. (NLUIS 75L) (75K)
La Loche Lakes 62°00'N, 110°53'W	lake trout + lake whitefish 5,200 northern pike --no quota	1968--lake trout 713 kg, lake whitefish 1,243 kg; 1969--lake trout 872 kg, lake whitefish 2,218 kg; 1970--lake trout 1,309 kg, lake whitefish 3,119 kg By-catches: 1968--northern pike 52 kg; 1969--northern pike 237 kg	Commercial harvests of lake trout and lake whitefish were taken from these lakes on the La Loche River, a tributary of Great Slave Lake, in 1968, 1969 and 1970, with small by-catches of northern pike in 1968 and 1969. DFO sampled lake trout and lake whitefish from the lake in 1968. Arctic grayling, suckers, and walleye are also present in the system. (Moshenko 1980; Yaremchuk et al. 1989; NLUIS 75E+L) (75E)
Lady Grey Lake			See FORT SMITH--Lady Grey Lake
Lockhart River 62°48'05"N, 108°54'W (Figure 1)			In 1977, an experimental gillnet fishery sampled fish at 11 sites on the Lockhart River system, in 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) (75K)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Lynx Lake 62°25'N, 106°15'W			In 1978, an experimental gillnet fishery sampled lake trout and lake and round whitefish from this headwater lake on the Thelon River system. In 1981, DFO estimated the guest-bed capacity of Lynx Lake for a medium quality lake trout fishery at 16 to 25 beds, provided the resource was not shared with the commercial fishery. Lynx Tundra Camp operated a sport fishing lodge at the lake until 1992 (Table 2). (MacDonald and Fudge 1979; M. Roberge, pers. comm.) (75J)
McDonald Lake 62°07'N, 111°30'W	lake trout + lake whitefish 4,600 northern pike + walleye--no quota	1960--lake trout 2,153 kg, lake whitefish 1,178 kg; 1961--lake trout 9,988 kg, lake whitefish 10,782 kg; 1966--lake trout 22,776 kg, lake whitefish 3,398 kg; 1972--lake trout 7,516 kg, lake whitefish 9,353 kg; 1973--lake trout 470 kg, lake whitefish 684 kg; 1974--lake trout 255 kg lake whitefish 332 kg; 1978--lake trout 683 kg, lake whitefish 1,049 kg; 1979--lake trout and lake whitefish 1,809 kg; 1980--lake trout 2,668 kg, lake whitefish 2,713 kg. By-catches: 1961--walleye 3 kg; 1966--northern pike 21 kg; 1978--northern pike 78 kg.	This lake which drains directly into Great Slave Lake was fished commercially for the first time in 1953 by fishermen based at Hay River. DFO sampled lake whitefish from the commercial catches in January and February 1953. Commercial harvests of lake trout and lake whitefish were also taken from McDonald Lake between 1960 and 1980, with small by-catches of walleye in 1961 and northern pike in 1966 and 1978. DFO measured mercury levels in the flesh of lake trout from McDonald Lake in 1980. (Kennedy 1963; Sinclair et al. 1967; Healey 1975; Yaremchuk et al. 1989; NLUIS 75L; M. Hendzel, pers. comm.) (75L)
Mary Lake 62°23'N, 103°31'W	lake trout + lake whitefish 9,200		In 1978, an experimental gillnet fishery sampled lake trout and lake whitefish from this lake on the Hanbury River, a tributary of the Thelon. Trappers from Lutsel K'e have trapped Arctic fox in this area. When they do, fish are harvested for subsistence. The extent of these fall harvests is unknown. Mary Lake has a commercial harvest quota but no record of commercial harvest. (MacDonald and Fudge 1979; NLUIS 65L) (65L)
Mary Frances Lake 63°19'N, 106°13'W			In 1978, an experimental gillnet fishery sampled lake trout and round whitefish from this lake on the Thelon River system. Trappers from Lutsel K'e have trapped Arctic fox at the southwestern end of the lake. When they do, fish may be harvested for subsistence. The extent of any fall harvest from Mary Frances Lake is unknown. (MacDonald and Fudge 1979; NLUIS 75O) (75O)
Meridian Lake 62°36'N, 109°25'W			Meridian Lake is separated from McLeod Bay of Great Slave Lake by a rock ridge and does not have an obvious outlet. In 1968, a DFO experimental fishery sampled lake trout and lake whitefish from the lake. Northern pike were seen but not caught. The fish were in good condition but flesh of the lake whitefish was infested with cysts of the parasite Triaenophorus crassus at a rate of 154 cysts per 45.5 kg of flesh. (Moshenko 1980; DFO unpubl. data) (75K)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Murky Lake 62°19'N, 110°54'W			Guests of Frontier Lodge on Great Slave Lake occasionally visit this lake to angle for northern pike (Table 2). (NLUIS 75L) (75L)
Nonacho Lake 61°59'N, 109°28'W	lake trout + lake whitefish 190512	1958--lake trout 6,243 kg, lake whitefish 2,202 kg; 1959--lake trout 13,073 kg, lake whitefish 11,503 kg; 1960--lake trout 13,046 kg, lake whitefish 12,357 kg; 1962--lake trout 873 kg, lake whitefish 311 kg; 1969--lake trout 42,080 kg, lake whitefish 122,125 kg; 1970--lake trout 98,255 kg, lake whitefish 161,735 kg; 1971--lake trout and lake whitefish 66,156 kg.	In 1968, the Northern Canada Power Commission completed a rockfill dam at the outlet to this lake on the Taltson River system in conjunction with the Taltson River Hydro Project. The lake became part of the reservoir for the 21 MW Twin Gorges hydroelectric generating station which provided power to Pine Point and now serves Fort Smith, Hay River, Enterprise, and Fort Resolution. Gray (see above) and Hjalmar (see INLAND WATERBODIES--Hjalmar Lake) lakes also became part of the reservoir. Impoundment of the water raised the lake level between 0.3 and 1.8 m above historical levels, with the highest water levels being in the fall and the lowest in early spring following winter draw-down. This is opposite to the natural sequence of water levels and results in summer flooding of the lowlands. There is also spillage of water from the lake overland to Tronka Chua Lake (see INLAND WATERBODIES--Tronka Chua Lake) when the lake level exceeds an elevation of 344.5 m (1050 feet). (Envirocon Limited et al. 1975) DFO sampled burbot, lake cisco, lake trout, lake and round whitefish, longnose and white sucker, and northern pike from the lake in 1967. Lake trout and lake whitefish from Nonacho Lake were also sampled in 1968, 1973 and 1986, and longnose sucker in 1968. In 1972, DFO conducted a limnological survey of the lake. Data were collected on the water chemistry, phytoplankton, zooplankton, and zoobenthos of the lake. Fish were captured using multi-mesh experimental gillnets, seines, and rod and reel. Data on the catch effort and on fish growth, reproduction, diet, and parasites were reported. Burbot, lake trout, lake whitefish, and northern pike were sampled. The lake whitefish flesh were infested with cysts of the parasite Triaenophorus crassus at a rate of >50 cysts per 45.5 kg of flesh. Subsequent sampling of lake trout and lake whitefish by a DFO experimental fishery in July 1990, found Triaenophorus crassus cysts in 54% of the whitefish sampled, with an average of 6 cysts per fish. Cysts were not found in the lake trout, but both species were skinny (i.e. had low condition factors) relative to those found in Great Slave Lake. Residents of Fort Smith caught trout, whitefish, and walleye that were skinny with large heads. This condition was apparently more prevalent in the 1980's than in recent years. (Sinclair et al. 1967; Johnson 1976; Falk 1979; Moshenko 1980; Bill et al. 1996; NLUIS 75F+K; A. Wilson unpubl data; DFO unpubl. data; G. Low, pers. comm.) Envirocon Ltd. sampled burbot, lake cisco, lake trout, lake whitefish, longnose sucker, and northern pike from Nonacho Lake in June-September 1973. The fish were captured using mixed-mesh gillnets and beach seines. Data were collected on catch effort; on fish habitat, growth, reproduction, and diet; and on water chemistry, zoobenthos, and zooplankton. In the 5 years following impoundment, there was a decrease in the diversity of the plant, planktonic, benthic, and fish communities in the reservoir lakes. The abundance and condition of the lake trout decreased, while the abundance and condition of the whitefish increased. (Envirocon Limited et al. 1975; Envirocon Ltd. unpubl. data--See DFO Permit files). Commercial harvests of lake trout and lake whitefish were taken from Nonacho Lake periodically between 1958 and 1971, with small by-catches of inconnu in 1959 and walleye in 1969. (Yaremchuk et al. 1989)
	inconnu and walleye--no quota	By-catches: 1959--inconnu 38 kg; 1969--walleye 899 kg.	

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Nonacho Lake, continued.			Nonacho Lake Fishing Camp operates a sport fishing lodge with a number of outpost camps at Nonacho Lake (Table 2). Total mercury levels in lake trout flesh, measured by DFO in 1970-71, three years after flooding, were 0.59 $\mu g \cdot g^{-1}$ wet wt (mean, n = 9). The recommended safe limits for people who consume large quantities of fish are <0.2 $\mu g \cdot g^{-1}$ wet wt of fish flesh, and for fish sold in Canada are <0.5 $\mu g \cdot g^{-1}$ wet wt of fish flesh (Department of National Health and Welfare 1984). Mercury levels in 1975, seven years after flooding, were 1.06 $\mu g \cdot g^{-1}$ wet wt for lake trout (mean, n =8, range =0.62-2.25) and 0.19 $\mu g \cdot g^{-1}$ wet wt for lake whitefish (mean, n=4, range=0.15-0.23) (M. Hendzel, pers. comm.). These elevated mercury levels are likely due to impoundment of the lake and the resultant mobilization of mercury from the sediments. When DFO analysed the flesh of lake whitefish, lake trout, and northern pike for mercury in 1986, 18 years after flooding, the lake whitefish (mean 0.16, n = 20, range 0.05-0.34) and northern pike (mean 0.39, n = 20, range 0.16-1.04) were found to be suitable for commercial sale but the lake trout (mean 0.53, n = 51, range 0.16-1.04) were not. (Tam and Armstrong 1972; DFO unpubl. data) (75F)
Ogilvie Lake 62°17'N, 110°52'W		Fall subsistence harvest: 1961--lake whitefish 3,070 kg, other species 403 kg.	Residents of Lutsel K'e have harvested lake whitefish, burbot and northern pike from Ogilvie Lake in the fall for subsistence. An estimate of the fall 1961 harvest is presented. The lake is apparently shallow. (Keleher and Haight 1962, 1965) (75L)
Ptarmigan Lake 63°36'N, 107°26'W			In 1978, an experimental gillnet fishery sampled lake cisco and lake trout from this lake on the Lockhart River. (MacDonald and Fudge 1978) (75O)
Rutledge Lake 61°33'N, 110°47'W	lake trout + lake whitefish 9,500 walleye--no quota	1969--lake trout 6,923 kg, lake whitefish 23,097 kg; 1970--lake trout 7,273 kg, lake whitefish 25,181 kg. By-catches: 1969--walleye 33 kg; 1970--walleye 33 kg.	Commercial harvests of lake trout and lake whitefish were taken from this lake which drains via the Rutledge River into the Taltson River, in 1969 and 1970, with small by-catches of walleye. DFO sampled lake trout, lake whitefish, and sucker from the lake in 1968. (Moshenko 1980; Yaremchuk et al. 1989; DFO unpubl. data) Rutledge Lake Lodge and Rocky Bay Fishing Lodge operate on the lake (Table 2). The lodges accommodate 10 and 12 guests respectively in light housekeeping cabins. They operate from June to September, and the main target species are lake trout and northern pike. (DFO unpubl. data) (75E)
Siltaza Lake 62°13'N, 109°38'W			In 1975, a DFO experimental gillnet fishery caught lake trout, lake whitefish, northern pike, and sucker at this lake on the Snowdrift River. (NLUIS 75K) (75K)
Smart Lake 63°30'N, 106°49'W			In 1978, an experimental gillnet fishery sampled lake cisco and lake trout from this lake on the Hanbury River, a tributary of the Thelon River. Trappers from Lutsel K'e have trapped Arctic fox at Smart Lake. When they do, fish may be harvested for subsistence. The extent of any fall harvest from the lake is unknown. (MacDonald and Fudge 1979; NLUIS 75O) (75O)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Snowdrift River 62°21'N, 110°37'W		Subsistence harvest: 1961--lake whitefish 7,567 kg, other species 1,299 kg.	DFO researchers observed lake whitefish migrating in the Snowdrift River on 11 October 1961. Arctic grayling spawn in the lower reaches of the Snowdrift River in the spring. Fish species reported from the Snowdrift River are listed in Appendix 1. In the past, residents of Lutsel K'e took about half their annual subsistence harvest of lake trout and lake whitefish from the Snowdrift River in the fall--the present status of this fishery is unknown. An estimate of the fall 1961 harvest is presented. Guests at Frontier Lodge on Great Slave Lake occasionally visit the Snowdrift River to angle for Arctic grayling (Table 2) (Keleher and Haight 1962, 1965; Sinclair et al. 1967; NLUIS 75K+L) (75K)
Stark Lake 62°28'N, 110°20'W		1959--lake trout 7,965 kg, lake whitefish 3,016 kg. northern pike 91 kg. Fall subsistence harvest: 1961--lake trout 1,150 kg, lake whitefish 850 kg, other species 448 kg.	In 1972, DFO conducted a limnological survey of Stark Lake which drains via the Stark River into the nearby East Arm of Great Slave Lake. Arctic grayling, lake cisco, lake trout, lake whitefish, longnose sucker, northern pike, round whitefish and white sucker were sampled. In July 1990, a DFO experimental fishery sampled lake trout, lake whitefish, and northern pike from Stark Lake. Cysts of the parasite Triaenophorus crassus were found in 50% of the whitefish sampled and in 53% of the lake trout, both with an average of 3 cysts per fish. The whitefish and pike had similar condition factors to those found in Great Slave Lake, while the trout were skinnier (i.e. had low condition factors). (Falk 1979; G. Low, pers. comm.) Residents of Snowdrift have harvested fish from Stark Lake in the fall for subsistence. An estimate of the fall 1961 harvest is presented. A commercial harvest of lake trout, lake whitefish, and northern pike was taken from Stark Lake in the summer of 1959. In 1988, DFO estimated the guest-bed capacity of Stark Lake for a high quality lake trout sport fishery, where the resource is not shared with other users, at 10 to 15 beds. Future usage of this lake should take into account its historical use by Lutsel K'e and by anglers from Frontier Lodge who fish for Arctic grayling, lake trout and northern pike (Table 2) (Keleher and Haight 1965; Sinclair et al. 1967; NLUIS 75K; M. Roberge, pers. comm.) (75K)
Stark River 62°25'N, 110°42'W		Fall subsistence harvest: 1961--lake trout 587 kg, lake whitefish 380 kg, other species 315 kg.	DFO researchers observed spawning lake whitefish at the Stark River on 17 October 1961. The rapids between Great Slave Lake and Stark Lake support a substantial population of Arctic grayling and serve as a nursery area for northern pike. Bishop studied the growth, reproduction and diet of Arctic grayling in the Stark River during August and September 1965 and June-July 1966. Sport anglers creel censused at the Stark River caught 283 grayling at a rate of 2.7 fish per rod hour in August-September 1965, and 2.9 grayling (n = 169) per rod hour in 1966. By comparison, experimental angling caught grayling (n = 817) at a rate of 4.5 fish per rod hour. In 1974, DFO studied the release mortality of Arctic grayling (10.1%) and northern pike (6.4%) caught by angling in the Great Slave Lake area. Arctic grayling caught at the Stark River were included in this study. Residents of Lutsel K'e have harvested fish from the Stark River in the fall for subsistence. An estimate of the fall 1961 harvest is presented. "Other species" harvested include Arctic grayling, burbot, cisco, inconnu, longnose sucker, northern pike, and round whitefish. Guests of Frontier Lodge on Great Slave Lake visit the river to angle for Arctic grayling (Table 2) (Keleher and Haight 1962, 1965; Bishop 1967; Sinclair et al. 1967; Falk and Gillman 1975; NLUIS 75L) (75L)
Walker Lake 61°52'N, 109°57'W	lake trout + lake whitefish 600	1971--lake trout 447 kg, lake whitefish 574 kg.	A commercial harvest of lake trout and lake whitefish was taken from this headwater lake on the Snowdrift River in 1971. (Yaremchuk et al. 1989) (75F)

Table 1. Continued.

LOCATION[1]	QUOTA (kg rd wt)[2]	HARVEST (kg rd wt)[3]	STOCK STATUS (references)[4]
Whitefish Lake 62°41'N, 106°48'W	lake trout + lake whitefish 300		DFO sampled Arctic grayling, lake cisco, lake trout, lake whitefish, longnose sucker, and round whitefish from this lake on the Thelon River in 1959. In 1978, an experimental gillnet fishery sampled lake cisco, lake trout, lake whitefish, and longnose sucker from Whitefish Lake. The lake has a commercial harvest quota but no record of commercial harvest. (Johnson 1976; MacDonald and Fudge 1979; Moshenko 1980; Yaremchuk et al. 1989) In 1981, DFO estimated the guest-bed capacity of Whitefish Lake for a medium quality lake trout fishery at 16 to 25 beds, provided the resource was not shared with a commercial fishery. (M. Roberge, pers. comm.) (75J)
PINE POINT, NORTHWEST TERRITORIES (see FORT RESOLUTION and HAY RIVER)			The community of Pine Point no longer exists. It developed in the 1960's to support the Cominco lead-zinc mine and was dismantled in the late 1980's after being severely impacted by closure, in 1987, of the once prosperous mine. Water bodies utilized by community residents are discussed under the nearby communities of Fort Resolution or Hay River (e.g. HAY RIVER--unnamed lake [Polar Lake]). The tailings pond at the Cominco Pine Point Mine discharged into muskeg and swampland about 5 km south of Great Slave Lake. It was not acutely toxic to fish but did contain cyanide, copper, zinc, and iron (Wallace et al. 1975). Stein and Miller (1972) in the early 1970's and B.C. Research (1978a) in 1977 observed increased metal concentrations in sediments and vegetation in the vicinity of the tailings pond. The tailings area is now covered with a layer of gravel to prevent tailings dust from being wind borne (G. Low, pers. comm.). Residents of Fort Resolution have expressed concern that metal contaminants had entered, or were entering, the environment as a result of past mining operations. In 1996, responding to these concerns, Evans et al. (1998) studied metals in the water, sediments and fish from the Resolution Bay area of Great Slave Lake in the vicinity of the decommissioned mine. They did not find evidence of mine-related metal contamination. See also Table 4--K. Steinecke.
RELIANCE, NORTHWEST TERRITORIES (see LUTSEL K'E)			Residents of Reliance (formerly Fort Reliance) harvested an estimated 4,090 kg of fish for subsistence from October 1959 to March 1960. Most of the people who lived at Reliance now live in Lutsel K'e and visit the Reliance area only seasonally. See LUTSEL K'E section above for a description of waterbodies in the vicinity of Reliance. (Sinclair et al. 1967;NLUIS 75K)
STONY RAPIDS, SASKATCHEWAN (see BLACK LAKE)			

[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 1998 quota extends from 1 April 1998 to 31 March 1999). "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 "Aboriginal food fisheries" and "subsistence harvests" were undertaken 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. The alphanumeric codes at the end of each "STOCK STATUS" description denote the 1:250,000 scale map sheet (e.g. 75C) where the waterbody coordinates are located.

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

LODGE - OUTPOST	COORDINATES	OPERATING SEASON	GUEST BED CAPACITY	SPECIES SOUGHT	COMMENTS (references)[2]
Big Pine Narrows Camp	60°58'N, 110°13'W	June to mid-September	6	lake trout, lake whitefish, northern pike	Located on Thekulthili Lake. Listed continuously from 1988-98.
Conservatory Ltd. North of Sixty Camps	60°19'N, 103°07'W	mid-June to mid-September	20	Arctic grayling, lake trout, northern pike	Lodge on Obre Lake, with outposts on Anaunethad Lake 60°57'N, 104°29'W--12 guest beds), Dubawnt River ; 60°54'N, 103°41'W--12 guest beds), Flett Lake (60°25'N, 104°07'W--6 guest beds), Snowbird Lake (60°32'12"N, 103°09'24W--16 guest beds, see below), and Wholdaia Lake (60°39'N, 104°08'W--7 guest beds). The outposts were established ca. 1988. In 1994, DFO recommended the use of annual harvest quotas rather than guest bed capacity as the best means of managing the lakes utilized by guests of this lodge. The recommended quotas for the four lakes were: Anaunethad 1000 trout, Flett 500, Wholdaia 500, and Obre 400. The intent of this recommendation was to limit the annual lake trout harvest while allowing the lodge to optimize the size of its operation. It would be the lodge's responsibility to partition the available harvest among its guests. (A.C. Day and G. Low, pers. comm.) Listed from 1989-91, as an outpost camp in 1993, and in 1994-98.
Dubawnt Outpost Camp East [Dubawnt Trophy Trout Outpost]	63°27'N, 100°40'W	mid-July through August	6	Arctic grayling, lake trout	This outpost camp of Henik Lake Lodge was established on Outlet Bay of Dubawnt Lake in 1977. In 1980, the outpost operated from 13 July to 30 August and served 44 guests. Lodge personnel conducted a voluntary creel census of guests at the outpost throughout the operational period (see Table 3). The outpost has not been listed since 1988. (Roberge 1984)
Dubawnt Outpost Camp West [Dubawnt West Sports Fishing Camp or Dubawnt Lake Lodge]	63°26'N, 101°26'W	mid-July to early September	8	Arctic grayling, lake trout	This outpost camp of Henik Lake Lodge was established in 1979. In 1980, the outpost operated from 15 July to 12 August and served 28 guests. Lodge personnel conducted a voluntary creel census of guests at the outpost throughout the operational period (see Table 3). It was last listed in 1992 as Dubawnt Lake Lodge. (Roberge 1984)
Eagle's Nest Lodge	62°30'N, 110°09'W (approximate)	June to September	10	lake trout, northern pike	Located on Taltson Lake. First listed in 1998. (R. Colon, pers. comm.)
Frontier Fishing Lodge	62°25'N, 110°42'W	June to September	24	Arctic grayling, lake trout, lake whitefish, northern pike	This lodge was established in 1962 on Christie Bay of Great Slave Lake, near Snowdrift. Guests fish in Great Slave Lake, at Stark and Murkey lakes, and at the Snowdrift and Stark rivers. Creel censuses were conducted there in 1972-75 and 1980. The lodge was not listed from 1989-92, but was listed in 1993-98. (Yaremchuk 1986; Hubert 1989)
Gangler's Fly-in Lodges					see below Scott Lake Lodge

Table 2. Continued.

LODGE - OUTPOST	COORDINATES	OPERATING SEASON	GUEST BED CAPACITY	SPECIES SOUGHT	COMMENTS (references)[2]
Hanging Ice Fishing Camp	60°03'49"N, 111°19'34"W	May to September	12	lake trout, northern pike, walleye	Located on the Schaefer Lakes. Tent frame outpost camp on Taltson Lake in 1990 and 1997 (61°22'14"N, 110°19'36"W; 12 guest beds). Listed continuously from 1988-98.
Kasba Lake Lodge	60°16'58"N, 102°30'25"W	late June through August	44	lake trout, Arctic grayling, northern pike	Kasba Lake extends into Nunavut but the lodge lies just west of Nunavut. Kasba Lake lodge was established in 1971. It operates outposts on Snowbird Lake (Snowbird Lodge, 60°29'36"N, 103°03'37"W, 18 guest beds; Snowbird North 60°51'32"N, 102°38'17"W, 6 guest beds), and Tubane Lake (in Nunavut at 60°37'44"N, 101°45'28"W, 6 guest beds). A DFO creel census of guests at Kasba Lake Lodge in 1979, estimated the take trout harvest at 1,845 fish (3,692 kg). The lodge was listed annually from 1988-96, and in 1998.
Lady Grey Lake Outfitters	60°46'N, 110°35'W	June to mid-September	6	lake trout, lake whitefish, northern pike	Located on Lady Grey Lake, this cabin establishment offers side trips to Big Pine Narrows Camp on Thekulthili Lake (see above). Listed continuously from 1988-98.
Largepike Lake Camp	60°07'N, 110°17'W		15	lake trout, northern pike	This lodge offers fishing, touring, and ecoventures in the Slave River area. It was listed from 1990-93 and in 1997-98.
Lynx Tundra Camp	62°27'N, 106°17'W		12	Arctic grayling, lake trout, northern pike	Located on Lynx Lake. Last listed in 1992.
Morberg's Smalltree Camp	61°01'N, 105°02'W	late-June to mid-September	4	Arctic grayling, lake trout, northern pike	Located at Smalltree Lake on the Dubawnt River. An outpost of Morberg's Lodge at Black Lake, Saskatchewan. Last listed in 1992. (NLUIS 75F)
Nonacho Lake Fishing Camp	61°44'31"N, 109°37'15"W	June to mid-September	32	lake trout, lake whitefish, northern pike	This lodge, established on Nonacho Lake ca. 1974, operates outpost camps on Nonacho Lake (61°47'N, 109°17'W, 8 guest beds) and Gagnon Lake (61°58'N, 110°33'36"W--4 guest beds; 61°58'N, 110°27'55"W --3 beds). It offered ice fishing in April 1982 and 1990, and was listed continuously from 1988-98.
Northstar Resort	61°40'N, 110°07'W	June to September	12	lake trout, lake whitefish, northern pike	Located on Thekulthili Lake. Listed continuously from 1988-98.
Pilot Lake Cabins	60°17'N, 110°57'W	June to September	15	lake trout, lake whitefish, northern pike, walleye	Located in the Pilot Lake/Taltson River area. Listed in 1988-93, 1995, and 1997-98.
Rocky Bay Fishing Lodge	61°36'N, 110°45'W	mid-June to mid-September	10	lake trout, northern pike	Located on Rutledge Lake. Established ca. 1974 (DFO unpubl. data). Listed continuously from 1988-98.

Table 2. Continued.

LODGE - OUTPOST	COORDINATES	OPERATING SEASON	GUEST BED CAPACITY	SPECIES SOUGHT	COMMENTS (references)[2]
Rutledge Lake Lodge	61°42'N, 110°40'W	June to mid-September	12	lake trout, lake whitefish, northern pike	Located on Rutledge Lake. Established ca. 1974 (DFO unpubl. data). Listed continuously from 1988-98.
Scott Lake Lodge	60°11'11"N, 106°00'29'W	mid-June to mid-September	12	Arctic grayling, lake trout, northern pike	Located on Wignes Lake. Listed in 1988, 1995 (as Gangler's Fly-in Lodges), and 1996.
Snowbird Lake Lodge	60°32'12"N, 102°09'24"W	mid-June to mid-September	16	Arctic grayling, lake trout, northern pike	Originally an outpost of Morberg's Lodge at Black Lake, Saskatchewan, this lodge is now one of the Conservatory Ltd. North of Sixty Camps (see above). DFO conducted a complete creel census of Snowbird Lake Lodge guests between 25 July and 3 September 1982. (See Table 3) (Bone et al. 1973; Roberge et al. 1984).
Thubun Lake Lodge	61°31'N, 111°46'W	June to September	22	lake trout, lake whitefish, northern pike	Located on Thubun Lake. Listed continuously from 1988-98.
Tukto Lodge	62°29'N, 103°17'W	July and August	12	Arctic grayling, lake trout	Located at Mosquito Lake. Listed in 1988-93, 1995-96, and in 1998.
Whitewood Lodge	60°37'N, 109°58'W		8		Established ca. 1984. Located on Hill Island Lake. Not licensed in 1986.

[1] The main sources of information for this table were the GNWT Economic Development and Tourism (S. Ranson, pers. comm.; D. Gray, pers. comm.), the GNWT Explorers Guides 1988-98, 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 South 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]
DUBAWNT OUTPOST CAMP/EAST 63°27'N, 100°40'W				This outpost camp of Henik Lake Lodge was established on an island in Outlet Bay of Dubawnt Lake in 1977. In 1980, the outpost operated from 13 July to 30 August and served 44 guests who fished mainly in the Outlet Bay area of the lake. Lodge personnel conducted a voluntary creel census of guests at the outpost for DFO. A total of 198 angler-interviews were conducted during the fishing season. Arctic grayling and lake trout were the main species taken. These data are presented here. The outpost was last listed in 1988. (Roberge 1984; NLUIS 65N)
Arctic grayling	1980--21	<0.1	198	
lake trout	1980--305	1.6		
DUBAWNT OUTPOST CAMP/WEST 63°26'N, 101°26'W				This outpost camp of Henik Lake Lodge was established in 1979 . In 1980, the outpost operated from 15 July to 12 August and served 28 guests, who fished mainly at the north end of the lake west of Outlet Bay. Lodge personnel conducted a voluntary creel census of guests at the outpost for DFO. A total of 131 angler-interviews were conducted during the fishing season. Lake trout were the main fish taken. Harvest data are presented here. The outpost was last listed as Dubawnt Lake Lodge in 1992. (Roberge 1984; NLUIS 65N)
lake trout	1980--269	2.3	116	
KASBA LAKE LODGE 60°16'N, 102°30'W				Kasba Lake extends into Nunavut but the lodge lies just west of Nunavut. The lodge was established in 1971 and operates outposts on Snowbird Lake (Snowbird Lodge, 60°29'36"N, 103°03'37"W, 18 guest beds; Snowbird North 60°51'32"N, 102°38'17"W, 8 guest beds), and in Nunavut at Tubane Lake (60°37'44"N, 101°45'28"W, 6 guest beds). DFO conducted a creel census of lodge guests between 16 June and 31 August 1979. During the operating season the lodge served an estimated 279 guests, who angled for lake trout near islands and bays in the main part of the lake, for northern pike near the lodge and at the mouth of the Snowbird River, and for Arctic grayling in the Snowbird River. A total of 1,165 angler-interviews were conducted. Harvest data from the study are presented here (Falk et al. 1982, Roberge et al. 1984). The lodge was listed in 1988-96, and in 1998.
Arctic grayling	1979--346	0.3	1,542	
lake trout	1979--1,846	1.5		
northern pike	1979--69	0.1		
SNOWBIRD LAKE LODGE 60°32'12"N, 103°09'24"W				DFO conducted a complete creel census of guests at Snowbird Lake Lodge between 25 July and 3 September 1982. During the operating season the lodge, served 78 guests, who fished throughout the lake. A total of 511 angler-interviews were conducted during the fishing season. Lake trout, northern pike, and Arctic grayling were the main species taken. Harvest data are presented here (Roberge et al. 1984). In 1982, the Kazan River Lodge, located across the lake was not operating. Snowbird Lake Lodge was last listed in 1988. It is now operates as one of Conservatory Ltd. North of Sixty Camps (Table 2). (Roberge et al. 1984; B. Dunn, pers. comm.)
Arctic grayling	1982--60	0.2	511	
lake trout	1982--255	0.5		
northern pike	1982--71	0.3		

[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 South Slave area for scientific purposes issued by the Department of Fisheries and Oceans (DFO), Central and Arctic Region, to DFO (1990-97) and non-DFO (1984-97) researchers. Note: DFO did not begin issuing licences to their own fisheries programs until 1990.

LICENCE HOLDER	AREA	PURPOSE	PERIOD
DFO RESEARCHERS			
B. Hunt DFO, Yellowknife, NT	South Central Arctic	General sampling program permit for the collection of various species of fin fish from any waterbody in the area. (See below G. Low).	1993, 1994
G. Low DFO, Hay River, NT	Hay River area	Investigation of the growth and survival rates of stocked Arctic charr and rainbow trout in the Hay River and Yellowknife areas in conjunction with the GNWT Dept. of Renewable Resources.	1990, 1991
	Buffalo and Yates rivers	Experimental fisheries to monitor the recovery of the Buffalo River inconnu stock.	1990, 1991
	Hay River and Great Slave Lake	Collection of harvest and biological data on lake trout, lake whitefish, and walleye from the commercial fishery.	1990
	Hay River	Monitoring of the walleye sport fishery to assess stock status.	1990
	Mackenzie River drainage	General sampling program permit for the collection of fish from any waterbody in the Great Slave Lake/Mackenzie River watershed northward to the northern boundary of the Sahtu Settlement area.	1995
	NWT west area	General sampling program permit for the collection of fish from any waterbody in the South Slave area for the purposes of stock assessment and/or stock identification, and for community surveys to gather traditional knowledge of stocks and fishing patterns. (See below D. McKenna)	1990, 1996, 1997
D. McKenna DFO, Yellowknife, NT	NWT west area	General sampling program permit for the collection of fish from any waterbody in the South Slave area for the purposes of stock assessment and/or stock identification, and for community surveys to gather traditional knowledge of stocks and fishing patterns. (See above G. Low)	1995
R.F. Tallman, DFO, Winnipeg, MB	Slave River	Life history and developmental studies of inconnu from the Slave River near Fort Smith for comparison with data from similar studies of inconnu in the lower Mackenzie River area. (Tallman 1996; Tallman et al. 1996a-c; Howland 1997; Little 1997)	1994, 1995, 1996

Table 4. Continued.

LICENCE HOLDER	AREA	PURPOSE	PERIOD
NON-DFO RESEARCHERS			
K. Antoniak Thebacha College, Fort Smith, NT	Porter Lake area	Winter collection of fish from the Porter Lake area (61°41'N, 108°05'W) for educational purposes by students of Arctic Colleges' Renewable Resources Technology program.	1984
	Tsu Lake	Summer collection of fish for educational purposes by students of Arctic Colleges' Renewable Resources Technology program. (See below D. Bergmann, L. Gray, D. Langille, M. Rosen)	1984, 1987
B. Bergmann GNWT, Dept. of Renewable Resources, Fort Smith, NT	Tsu Lake	Summer collection of fish for educational purposes by students of Arctic Colleges' Renewable Resources Technology program. (See above K. Antoniak and below L. Gray, D. Langille and M. Rosen)	1989
M.R. Digel Golder Associates Ltd.	Hay River	Environmental baseline sampling of aquatic biota in the vicinity of Hay River (and north of Great Slave Lake in the vicinity of Thor Lake 62°06'N, 112°37'W) in preparation for development of the Highwood Resources Thor Lake Beryllium Project.	1997
M. Evans National Hydrological Research Institute, Saskatoon, SK	Slave River delta, Lutsel'ke	Collection of fish for the determination of organochlorine and metal residues in predatory fish in the Fort Resolution and Lutsel'ke areas.	1994, 1995
	Little Buffalo River delta, Slave River delta	Collection of burbot, inconnu, northern pike, and walleye for the determination of organochlorine and metal residues in predatory fish within the Fort Resolution domestic fishing zone.	1996
D. Frey Alberta Power Ltd., Edmonton, AB	Slave River	An investigation of fall and winter-spawning fish species in the Slave River between Fort Smith and Great Slave Lake. This project was a component of the environmental studies relating to potential hydroelectric development of the Slave River. Its purposes were to study fish movements, identify spawning areas, quantify late summer and fall fishery resource use, and to examine the movements and domestic utilization of burbot. (RL&L/EMA Slave River Joint Venture 1985)	1984
L. Gray Thebacha College, Fort Smith, NT	Tsu Lake	Summer collection of fish for educational purposes by students of Arctic Colleges' Renewable Resources Technology program. (See above K. Antoniak and D. Bergmann, and below D. Langille and M. Rosen)	1992
D. Langille Thebacha College, Fort Smith, NT	Tsu Lake	Summer collection of fish for educational purposes by students of Arctic Colleges' Renewable Resources Technology program. (See above K. Antoniak and D. Bergmann, and below M. Rosen)	1985, 1986
A.C. Mitchell Envirocon Ltd., Vancouver, BC	Taltson River area	Study to assess the impacts on fish populations of predicted effects associated with the existing hydroelectric facility and possible future facilities on the mainstem of the Taltson River. (Envirocon Pacific Limited 1986)	1985

Table 4. Continued.

LICENCE HOLDER	AREA	PURPOSE	PERIOD
M. Rosen Thebacha College, Fort Smith, NT	Slave River	Collection of fish for educational purposes by students of Arctic Colleges' Renewable Resources Technology program. (See above K. Antoniak, D. Bergmann, L. Gray, and D. Langille)	1991
	east of Slave River	Collection of fish for educational purposes by students of Arctic Colleges' Renewable Resources Technology program. (See above K. Antoniak, D. Bergmann, L. Gray, and D. Langille)	1992
	Tsu Lake	Summer collection of fish for educational purposes by students of Arctic Colleges' Renewable Resources Technology program. (See above K. Antoniak, D. Bergmann, L. Gray, and D. Langille)	1991
K. Steinecke Dept. of Geography University of Bremen, Germany	Pine Point	Collection of aquatic invertebrates from waters in the vicinity Pine Point as part of a study to examine the reactions of northern boreal forest ecosystems in the Great Slave Lake region to the man-made stress of mining and related activities.	1997
D.M. Trotter Monenco Consultants Ltd., Calgary, AB	Sawmill Bay area of the Slave River	Environmental monitoring of the Sawmill Bay area of the Slave River, NT. (Monenco 1991)	1990
H. Westers Dept. of Natural Resources, Lansing, Michigan	Hay River area	Collection of Arctic grayling eggs and sperm for rearing and re-introduction of the species into Michigan waters.	1988

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

FISH SPECIES	ARCTIC OCEAN									HUDSON BAY		
	MACKENZIE RIVER via GREAT SLAVE LAKE								BACK RIVER	CHESTERFIELD INLET via BAKER LAKE		
	Great Slave Lake (A)	Hay River (1)	Buffalo River (2)	Little Buffalo River (3)	Slave River (4)	Taltson River (5)	Snowdrift River (6)	Lockhart River (7)	Baillie River (8)	Kazan River (9)	Dubawnt River (10)	Thelon River (11)
Arctic charr (Salvelinus alpinus)	-	-	S[3]	-	-	-	-	-	-(Back R.)	-	p	-
Arctic grayling (Thymallus arcticus)	P[1]	P	-	-	P	P	P	P	P	P	P	P
Arctic lamprey (Lampetra japonica)	P	P	-	-	P[2]	-	-	P	-	-	-	-
brook stickleback Culea inconstans	-	P	P	P	P[2]	-	-	-	-	-	-	-
brook trout Salvelinus fontinalis	-	-	S[3]	-	-	-	-	-	-	-	-	-
burbot (Lota lota)	P	P	P	P	P[2]	P	P	P	-	P	P	P
chinook salmon (Onchorhynchus tshawytsha)	-	-	-	-	P	-	-	-	-	-	-	-
chum salmon (Onchorhynchus keta)	P	P	-	-	P	-	-	-	-	-	-	-
deepwater sculpin (Myoxocephalus quadricornis thompsoni)	P	-	-	-	-	-	-	-	-	-	-	-
emerald shiner (Notropis atherinoides)	P	-	-	-	P[2]	-	-	-	-	-	-	-
fathead minnow Pimephales promelas	-	-	-	P	-	-	-	-	-	-	-	-
finescale dace Chrosomus neogaeus	-	P	-	P	-	-	-	-	-	-	-	-
flathead chub (Platygobio gracilis)	P	-	-	-	P[2]	-	-	-	-	-	-	-
goldeye (Hiodon alosoides)	P	-	-	-	P[2]	P	-	-	-	-	-	-
inconnu (Stenodus leucichthys)	P	P	P	P	P[2]	P	-	-	-	-	-	-

Appendix 1. Continued.

FISH SPECIES	ARCTIC OCEAN									HUDSON BAY		
	MACKENZIE RIVER via GREAT SLAVE LAKE								BACK RIVER	CHESTERFIELD INLET via BAKER LAKE		
	Great Slave Lake (A)	Hay River (1)	Buffalo River (2)	Little Buffalo River (3)	Slave River (4)	Taltson River (5)	Snowdrift River (6)	Lockhart River (7)	Baillie River (8)	Kazan River (9)	Dubawnt River (10)	Thelon River (11)
lake chub (Couesius plumbeus)	P	P	P	P	P	P	-	-	-	P	P	P
lake cisco (Coregonus artedii)	P	-	-	-	P	P	-	P	P	?	P	P
lake trout (Salvelinus namaycush)	P	P	-	-	P	P	P	P	P	P	P	P
lake whitefish (Coregonus clupeaformis)	P	P	P	P	P[2]	P	P	P	P	P	P	P
least cisco (Coregonus sardinella)	-	-	-	-	P	-	-	-	-	?	P	P
longnose dace Rhynichthys cataractae	-	P	P	P	P	-	-	-	-	-	-	-
longnose sucker (Catostomus catostomus)	P	P	P	P	P[2]	P	P	P	P	P	P	P
ninespine stickleback (Pungitius pungitius)	P	P	-	-	P[2]	P	-	P	-	-	P	P
northern pike (Esox lucius)	P	P	P	P	P[2]	P	P	P	P	P	P	P
northern redbelly dace Chrosomus eos	-	-	-	P	-	-	-	-	-	-	-	-
pearl dace Semotilus margarita	-	-	-	P	P	-	-	-	-	-	-	-
rainbow trout (Salmo gairdneri)	S[4]	-	S[3,4]	-	S[2]	-	-	-	-	-	-	-
round whitefish (Prosopium cylindraceum)	P	-	-	-	P	P	P	P	P	P	P	P
slimy sculpin (Cottus cognatus)	P	-	P	-	P	P	-	P	P	P	P	P
sockeye salmon (Onchorhynchus nerka)	P[6]	-	-	-	P	-	-	-	-	-	-	-
spoonhead sculpin (Cottus ricei)	P	-	-	-	P[2]	-	-	-	-	-	P	-

Appendix 1. Continued.

FISH SPECIES	ARCTIC OCEAN									HUDSON BAY		
	MACKENZIE RIVER via GREAT SLAVE LAKE								BACK RIVER	CHESTERFIELD INLET via BAKER LAKE		
	Great Slave Lake (A)	Hay River (1)	Buffalo River (2)	Little Buffalo River (3)	Slave River (4)	Taltson River (5)	Snowdrift River (6)	Lockhart River (7)	Baillie River (8)	Kazan River (9)	Dubawnt River (10)	Thelon River (11)
spottail shiner (Notropis hudsonius)	P	P	-	P	P[2]	P	-	-	-	-	-	-
trout perch (Percopsis omiscomaycus)	P	P	P	-	P[2]	P	-	-	-	-	-	-
walleye (Stizostedion vitreum vitreum)	P	P	P	P	P[2]	P	P	-	-	-	-	-
white sucker (Catastomus commersoni)	P	P	-	P	P[2]	P	-	P	-	P	P	-
yellow perch (Perca flavescens)	P	-	-	-	P	P	-	-	-	-	-	-

[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 South Slave area in a particular drainage basin. "S" indicates that the species has been stocked in lakes within the drainage basin.

[2] These fish species are present in the Salt River tributary of the Slave River.

[3] Brook trout, rainbow trout, and Arctic charr were introduced to Polar Lake (see Table 1)--the latter may in fact be Dolly Varden (Salvelinus malma).

[4] These rainbow trout may have been introduced by anglers from isolated, stocked lakes such as "Polar Lake" near Pine Point (see Table 1: HAY RIVER--unnamed lake [Polar Lake]), or have come down the Slave River (G. Low, pers. comm.).

[5] Two non-anadromous sockeye were taken in the Hardisty area and may have originated in the Slave River drainage (G. Low, pers. comm.).

REFERENCES:

A) GREAT SLAVE LAKE McPhail and Lindsey 1970; Scott and Crossman 1973; Lee et al. 1980; G. Low, pers. comm.

1) Hay River Harris 1962; McPhail and Lindsey 1970; Nursall and Buchwald 1972; Scott and Crossman 1973; Lee et al. 1980; McLeod and O'Neil 1983; G. Low, pers. comm.

2) Buffalo River Melvill 1914; McPhail and Lindsey 1970; Nelson and Paetz 1972; Lee et al. 1980; G. Low, pers. comm.

3) Little Buffalo River Nelson and Paetz 1972; Roberge et al. 1985.

4) Slave River Melvill 1914; McPhail and Lindsey 1970; Nelson and Paetz 1972; Nursall and Buchwald 1972; Scott and Crossman 1973; Lee et al. 1980; Tripp et al 1981; McLeod and O'Neil 1983;RL&L/EMA Slave River Joint Venture 1985; McCart 1986; Tallman et al. 1996; Little 1997; G. Low, pers. comm.

5) Taltson River Critchell-Bullock 1931; McPhail and Lindsey 1970; Johnson 1976; Envirocon Limited et al. 1975; MacDonald and Fudge 1979; Envirocon Pacific Limited 1986.

6) Snowdrift River Keleher and Haight 1962; Kennedy 1963; NLUIS 75K.

7) Lockhart River Critchell-Bullock 1931; Clarke 1940; McPhail and Lindsey 1970; Nursall and Buchwald 1972; Scott and Crossman 1973; Stewart and MacDonald 1978; MacDonald and Fudge 1979; Lee et al. 1980.

8) Baillie River Stewart and MacDonald 1978.

9) Kazan River McPhail 1963; McPhail and Lindsey 1970; Khan and Quadri 1971; McCart and Pepper 1971; Johnson 1976; MacDonald and Fudge 1979; Falk et al. 1982.

10) Dubawnt River Tyrell 1896; Laird 1961; McPhail 1963; McPhail and Lindsey 1970; Khan and Quadri 1971; McCart and Pepper 1971; Scott and Crossman 1973; Johnson 1976; MacDonald and Fudge 1979; Roberge 1984; Roberge et al. 1984; Roberge and Dunn 1985.

11) Thelon River Critchell-Bullock 1931; McPhail 1963; McPhail and Linsdsey 1970; Khan and Quadri 1971; Johnson 1976; MacDonald and Fudge 1979; MacDonald and Stewart 1980.