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THE WASWANUPI COMMERCIAL FISHERY

An Evaluation of Past Experiences and  
Conditions for Future Viability

Volume 1



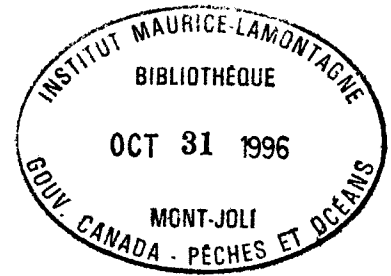
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## THE WASWANIFI COMMERCIAL FISHERY

An Evaluation of Past Experiences and  
Conditions for Future Viability

Volume 1

submitted to the Department of Fisheries and Oceans under the  
*Québec Federal Fisheries Development Program*

Prepared for the Cree Regional Authority  
and the Cree First Nation of Waswanipi

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June 1996

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**ANNEX 1**

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## PROJECT PERSONNEL

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Anna Fiocco, consultant on financial matters

Lorraine Brooke, coordinator

The project was funded by the Department of Fisheries and Oceans, Québec Federal Fisheries Development Program

INTRODUCTION

**1.1 Purpose**

The purpose of this review is to examine the experience gained since 1989 with a pilot commercial fishing, processing and marketing operation in Waswanipi, a community in the southern part of the Cree territory. The information developed, and issues raised in the review will then be used as a basis for an assessment to be conducted by all partners in the fishery to determine the conditions necessary for future viability. In this review, the term 'viability' refers not only to the economics of production and or marketing, but also to the broader social and economic context in which a commercial fishery will have to survive in a modern-day Cree community. It is critical, therefore, that the participants in the assessment understand the context of the fishery and the issues underlying it.

This fishery was originally planned on the assumption that the primary commercial species would be lake whitefish, supported by lake sturgeon and walleye, and to a lesser extent by other species such as pike and burbot. The operation was also designed to draw on the fish production potential of the larger lakes near Waswanipi, but with the possibility of acting as a processing facility for production from other communities and the more remote waterbodies in the Waswanipi region. In reality, the fishery is operating at a much lower level of production than originally planned and its consistent deficits are of concern to the community.

It is also important to remind ourselves that the community of Waswanipi was particularly motivated to engage itself in this operation as a means to generate and develop employment opportunities for a variety of job sectors (fishing, plant work, administration, management, sales). Pure financial profit was not a primary objective. If employment was maximized, then breaking even may be an acceptable state of affairs for community officials.

If, after completion of the assessment the Cree authorities and government partners decide to continue support for the fishery, then the next step would be the preparation of a 5-year development strategy around a common objective of "making the fishery work". The plant could then begin full operation based on a solid technical, institutional and regulatory program agreed to by all agencies and individuals involved. This type of consensus seeking and

coordinated approach could eliminate many of the problems which the fishery has experienced in its first six years of operation.

## 1.2 Methods

A coordinator was hired by the Cree Regional Authority and the Cree First Nation of Waswanipi who then each identified members for a core group charged with directing the review.

All existing and pertinent information concerning the Fishery was gathered. After discussion within the core group, decisions were taken to seek the advice of experts in various aspects of commercial fisheries. Proposals were developed and submitted to the Department of Fisheries and Oceans. Funds were received in early 1995 to engage the services of consultants to undertake additional work in marketing, operational issues and financial aspects. In addition, a program to work with knowledgeable individuals in the community of Waswanipi was developed. The plant manager, assistant manager, band administration, fishermen and tallymen were all involved at various stages of the review. In addition, the population of Waswanipi, at large, was consulted during a General Assembly. A directed set of meetings were also held with key tallymen. Consultants' reports and materials used in the community consultations form part of this report. Government officials involved in the planning and subsequent operation of the fishery were also consulted.

Basic assumptions concerning the fishery were developed as a result of this work by the core group during several working sessions. These ranged from technical aspects, institutional support, biological capacity, socio-economic context and administrative requirements. These assumptions were used to develop models around which financial forecasts were produced in an attempt to design a viable operation. Each assumption was thoroughly discussed by the core group, consultants and the financial advisor.

The resulting financial forecasts were once again reviewed by the core group, the band administration, the plant manager and members of the community. Adjustments were again made to conform to practical realities of production, processing and marketing limitations. The final financial forecasts, which form part of this report, were then produced.

### 1.3 Study Area

The Waswanipi Commercial Fishery receives most of its fish from the Nottaway River Drainage basin (about 66,000 km. sq.). Within this area, ten lakes with a combined area of 1,000 km. sq. have provided most of the fish harvest and will probably continue to do so. Access by roads built for forestry and mineral exploration is the main determinant of whether or not a lake can easily provide fish to, or be serviced by the fishery. This review and all financial forecasting, therefore, concentrated on waterbodies which are accessible by road. (see Table 3)

### 1.4 Targeted Fish Species

The fish community structure of the study area is typical of Canadian Shield lakes. The species composition of the Cree subsistence fishery in this region is composed mainly of cisco, lake whitefish, lake sturgeon, walleye, pike, burbot and long nosed and common sucker. Altogether, some 22 species have been recorded in the region of which only lake and brook trout, yellow perch, sauger and the occasional hiodon have any significance for human consumption.

The Waswanipi Commercial Fishery has targeted lake whitefish, sturgeon and walleye as its main species with sucker and pike as secondary species. Provisional quotas have been established for each of the lakes considered as potential sources of fish for commercial production and were agreed upon with le Ministère du Loisier de la Chasse et de la Peche (MLCP now MEF). It was understood, however, that these quotas would be subject to periodic review in light of biological and other data acquired in the course of the fishery. These quotas are presented on Table 3. Together, they represent a total of 511,022 lb. round weight potentially available for catch, processing and sale by the fishery.

COMMUNITY AND REGIONAL PROFILE

2.1 The Community

Waswanipi is situated in the southern part of the Cree territory. It is located on the Waswanipi River and surrounded by lakes and river systems rich in freshwater fish species. It is connected by road to Val d'Or and Chibougamau and ultimately Québec City and Montréal. There is no air service, however, it is provided with daily bus connections to Val d'Or.

The resident population in 1995 was approximately 1220. As is the case in most northern Native communities in Canada, almost 55% of the population is under the age of 25. The rate of unemployment is high and the community is facing the challenge of developing employment opportunities for the current work force and for the large numbers of individuals who will enter the work force during the next decade. There are few non-natives living in the community at the present time.

Hunting, fishing and trapping continue to be important for the community culturally and economically. Approximately 29%, or 354 people currently participate in the Income Security Program. Many families spend most of the winter in the bush engaged in subsistence activities.

2.2 The Subsistence Fishery

The primary source of information about the subsistence fishery in Waswanipi is the Native Harvesting Research Project (NHRP) (see "The Wealth of the Land: Wildlife Harvests by the James Bay Cree 1972-73 to 1978-79"). This was a joint study, initiated in 1975, involving the Cree and the Federal and Provincial governments, and development corporations in an assessment of levels of harvesting for subsistence purposes. The general objective of this study was to establish 'present levels of harvesting' for the purposes of establishing 'guaranteed levels of harvesting' in order implement the 'priority of Native harvesting' vis à vis other users. All species of fish harvested by the Cree, in all communities, were included in this research program.

As a result of this harvest survey, we have a rough idea of the composition and size of the subsistence harvest from 1972-1979 for the community of Waswanipi for those species which are now the object of commercial exploitation. There are several complicating factors, however. The first is that production is not defined by waterbody or trapline. Recording of harvests was divided between 'near' and 'away'. 'Near' roughly corresponds to the area currently fished commercially, but comparisons should be made with caution. The second difficulty is that for the years 1972 to 1975, fishermen provided data based on recall and may lack some of the precision necessary for management purposes.

The third difficulty is particularly serious. While the project was in the advanced planing stage, late in 1975, Cree community leaders were asked by Federal health authorities to close the subsistence fishery because of elevated levels of exposure in the Cree population to mercury. Evidence that the warnings were taken seriously is to be found in the human exposure data for 1975 and 1976 which document community wide drops in the order of 75-90%. Corresponding drops are report in Waswanipi subsistence fish production between these two years. The NHRP adjusted for the impact of mercury contamination on the level of fishing when determining the 'guaranteed levels of harvesting'.

The average annual 'adjusted' harvests over the seven-year period, for species of interest to the fishery were:

Walleye	9,608 (23,492 lb.)
Whitefish	16,764 (48,481 lb.)
Pike	4,970 (24,323 lb.)
Sturgeon	1,469 (10,129 lb.)

At the time, the population of Waswanipi was roughly half what it is today (600-700 people), and was scattered among the mining towns in the region. Sucker dominated the harvest, a species little used now for human consumption. Conditions have changed dramatically and subsistence fishing effort is more geographically concentrated. It is also known the subsistence fishing for certain species has declined substantially as reflected in the levels of exposure of the Cree population of the region to mercury. On the other hand, the Cree themselves have expressed concern about increased fishing pressure on sturgeon. With the exception of a survey begun in 1996 to evaluate the level of subsistence fishing for sturgeon in Waswanipi, there is no contemporary data on the subsistence fishery. Preliminary results from the sturgeon survey indicate subsistence harvesting is still important - in the range of 7,500 lb.

## 2.3 Past Commercial Efforts

A commercial fishery was operated in the Waswanipi region by the Department of Indian and Northern Affairs over a 12-year period from 1959 to 1971. The data which exists for this experience, have been summarize by Berkes (1980) and Lejeune (1984). The records of this fishery are incomplete and it is difficult to assess this fishery in retrospect, whether from a biological or socio-economic perspective. The incomplete record of fish production, however, suggests that harvest levels of sturgeon, and possibly of walleye, were high enough to have had some impact on the stocks being exploited. The immediate reason for closing this fishery, however, was the discovery of elevated levels of mercury in the fish and in the Cree population.

## 2.4 The James Bay and Northern Québec Agreement

The James Bay and Northern Québec Agreement (the Agreement) provides both the legal and administrative framework within which commercial fisheries development must develop. While certain government agencies retain a level of management and regulatory authority over fisheries resources, the rights of the Cree to exploit these resources are elaborated by the Agreement.

Commercial fishing is included in the definition of harvesting rights in Section 24 of the Agreement. The Agreement also provides that Native harvesting activities take priority over other forms of renewable resource use i.e., sport hunting and sport fishing and commercial activities conducted by non-Natives. These rights and activities can only be constrained by the principle of conservation and the Agreement provides for a mechanism which can ultimately limit Native harvesting in the event of a conservation problem, but only after all other uses have been curtailed. In addition, certain species used in the commercial fishery appear on a list of species reserved for the exclusive use of the Cree, notably whitefish, cisco and sturgeon. The Agreement, therefore, indicates that commercial fisheries, being included in the definition of the right to harvest, are exempt from the authorization procedures used by the Québec government for commercial operations elsewhere in the province.

There was disagreement on this point at the outset, and Québec insisted that the procedures of general application for licensing commercial fisheries would be applied to the Waswanipi fishery. In effect, this means that the fishery has been operating with an annual

system of experimental permits. Quotas, permissible gear and number of fishermen, and authorized periods of fishing were determined annually, through a process of negotiation involving MLCP (MEF), MAPAQ and the Cree Regional Authority. In this process, controls were exercised, in practice, mainly through restrictions on season and species. These restrictions have important implications for long term viability and are discussed further in the text. Quotas were allocated for a larger number of lakes than are actually used in the fishery (due to access limitations). This creates a somewhat distorted impression of the amount of fish realistically available for the commercial fishery.

## **2.5 Recreational Fishing and Outfitting**

The geographical factors which open up possibilities for commercial fishing, namely road access to lakes and a local regional population, also result in increased recreational fishing pressure. Recreational fishing is common in more accessible lakes in the Waswanipi region, but how important this activity is as a factor in fisheries management is unclear. An attempt has been made by Hydro-Québec and MEF to assess recreational fishing pressure in the region of the La Grande Complex (Roy et al., 1991). The results of this survey could be used to derive an initial estimate of fishing pressure in the Waswanipi region, but there is no doubt that further work is needed. This assessment does confirm, however, that recreational fishing should be taken into account, along with subsistence fishing, in assessing the commercial potential for walleye.

Actual or perceived conflicts between outfitters and commercial fishermen have periodically emerged as an issue in the regulation of commercial fishing. There are currently four licensed outfitters who are using lakes which are being fished commercially. Outfitters are required by law to maintain catch records for their clients and to submit those annually to MEF. The level of harvest from all recreational and sport fishing is not known with any accuracy at the present time, but managers agree that it is considerable and must be better understood and taken into account when assessing the commercial potential for walleye

It is clear that the conciliation of commercial fishing with subsistence, recreational and sport fishing is an essential element in planning an economically viable operation. Determining appropriate allocation mechanisms to deal with these potentially competing interests and the intelligent accommodation of the legitimate needs of all users is the challenge.

**HISTORICAL RECAP  
OF THE WASWANIFI COMMERCIAL FISHERY**

**3.1 Background**

The present commercial fishery at Waswanipi originates with the 1987-1990 Canada-Québec Subsidiary Agreement on Fisheries Development, a component of the most recent Economic and Regional Development Agreement (ERDA). This program provided the Cree with an opportunity to re-assess the potential for establishing a commercial fishery in the James Bay territory. An initial feasibility study, consisting of a literature survey, supported the development of a commercial fishery based on lake whitefish (Curtis, Penn, 1988). The presence of lake sturgeon and the commercial popularity of walleye in the Québec restaurant trade suggested that the overall viability of the project could be improved by incorporating these two species into the business plan for the fishery.

At the time, a commercial sturgeon fishery was already being considered by the Waswanipi Cree Nation, providing a basis for the development of a multi-species fishery. An initial investment of approximately \$350,000 was obtained from the compensation funds established as a result of the James Bay and Northern Québec Agreement to construct a fish processing plant. The plant was designed to handle a weekly production of fresh and frozen fish in the order to 6-7 tons. The plant became operational in 1989.

The Waswanipi fishery, then, was launched as a pilot project equipped with a modest facility for processing fish. It was understood at the time, that useful results from an exploratory fishery could not be obtained without the use of a processing facility. The construction was, therefore, seen as an unavoidable element of risk. It should be added that it was also understood that the plant might serve as a regional facility for other Cree communities embarking into commercial fish production.

The ERDA agreement also provided funds for conducting biological and technical studies to provide data required to support and assess the feasibility of a commercial fishery (see Annex 3) On the termination of the ERDA agreement, the Cree Nation of Waswanipi took

the decision to continue the fishery with the technical support of the Cree Regional Authority. This resulted in a situation where the fishery was still in its initial assessment stage, but supported by a fully equipped processing facility.

Support for the Waswanipi commercial fishery continued throughout 1991 under the Fisheries and Aquaculture Testing and Experimental Program (FATEP). A fisheries development officer was engaged to develop and establish quality control procedures and to experiment with the production of new products.

In April 1992, an agreement was reached between the Cree Regional Authority and the Department of Fisheries and Oceans to provide professional support to fisheries development in the James Bay Territory. This support was provided for a three-year period ending in 1995 under the Québec Federal Fisheries Development Program (QFFDP). Work over the three years of the agreement focused on supporting and developing of the Waswanipi Commercial Fishery. This operation is the centerpiece of the commercial fisheries development effort in the James Bay territory.

Specific projects, developed and proposed by the fisheries development officer were also supported by financing from FATEP. In addition, funding assistance was received for training and manpower development from Employment and Immigration Canada. Other government agencies, namely le Ministère du Loisier, de la Chasse et de la Pêche (MLCP), le Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec (MAPAQ), le Secrétariat des Affaires Autochtones (SAA) and the Federal Secretary of State contributed to individual projects (see Table 2)

### **3.2 Harvest Records**

The plant has maintained records of fish purchased (round weight, except in the case of lake sturgeon, where dressed weight is recorded) by fisherman and by waterbody. This is the data which is used to monitor total catch in relation to the assigned quota for a given waterbody. Table 1 presents the total commercial catch, by species from 1990 to 1994. Commercial catches have been consistently far below the available quotas for all species. It is important to note, however, that quotas have been established by calculating biomass for the region as a whole, irrespective of issues of physical accessibility to lakes and practicalities of getting fish, on a timely basis, to the plant for processing. In fact, when broken down by

lake/waterbody, sturgeon harvests, for example, are often fully exploited. (see L. Pépin, 1995. Annex 1 and Volume 2). All other species are, however, under exploited.

**Table 1**

**Overall Commercial Catches - Waswanipi Commercial Fishery  
(expressed in lb.)**

Species (quota)	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>
Sturgeon (85,112)	25,651	19,780	26,526	32,551	22,137
Whitefish (317,096)	28,231	14,225	16,984	9,107	4,318
Sucker (317,096 )	0	7,347	14,421	5,739	2,000
Walleye (33,339 )	6,000	8,140	4,566	2,075	2,682
Pike (132,910 )	0	7,308	5,978	2,998	3,275

Note: All species, with the exception of sturgeon, are brought to the plant whole and recorded as such. A conversion factor of 1.53 (provided by MEF) is applied to sturgeon for recording purposes.

### **3.3. Financial Information**

A total of \$540,197 has been invested in infrastructure related to the Waswanipi Commercial Fishery. This includes the initial capital investment made by the Cree of \$351,999. In addition, a total of \$1,580,000 was received from various government agencies since 1988 to support research, development and training efforts related to commercial fisheries in the Cree territory. An additional \$106,250 was paid by the Cree Regional Authority directly in support of research and development (see Table 2 for details). None of these figures include a calculation for time spent by government, Cree Regional Authority or Cree First Nation of Waswanipi personnel on the fishery and related activities. It should also be noted, that the criteria for obtaining these funds, did not permit their direct use for capital investments.

Table 2

**Financial Contributions in Support of the  
Waswanipi Commercial Fishery - 1988-1994**

1988-89	ERDA	\$110,000	Biological assessment
	ERDA	\$ 50,000	Refrigerated truck
1989-90	ERDA	\$220,000	Waswanipi fishery
	CRA	\$ 59,750	Contribution to research
	ERDA	\$ 24,100	Winter fishery
1990-91	ERDA	\$172,000	Waswanipi fishery
	CRA	\$ 46,500	Contribution to research
	FATEP	\$ 28,000	Support - plant manager
	FATEP	\$ 6,105	Training
	Québec ?	\$ 50,000	Direct to Band Council
	DIAND	\$121,424	Direct to Band Council
1991-92	FATEP	\$ 20,500	Plant equipment
	FATEP	\$ 75,000	Equipment and biological
	MAPAQ	\$ 30,000	Biological analysis
	QFFDP/DFO	\$ 12,425	Val d'Or workshop
1992-93	QFFDP/DFO	\$ 32,037	Val d'Or workshop
	MLCP	\$ 2,500	Val d'Or workshop
	SAA	\$ 5,000	Val d'Or workshop
	MAPAQ	\$ 2,500	Val d'Or workshop
	Sec/State	\$ 1,723	Val d'Or workshop
	QFFDP/DFO	\$ 34,000	Community workshops
	QFFDP	\$ 49,000	Professional assistance
	QFFDP	\$ 34,000	Supporting research
	EIC	\$106,400	Training
	QFFDP	\$ 64,000	Gear development
	QFFDP	\$ 28,000	Market research
	DFO	\$ 60,493	Direct to Band Council
	1993-94	QFFDP	\$ 49,000
QFFDP		\$ 39,800	Promotional materials
QFFDP		\$ 30,000	Promotional materials
QFFDP		\$ 15,000	Chisasibi
DFO		\$ 26,028	Direct to Band Council
1994-95	QFFDP	\$ 30,000	Professional assistance
	QFFDP	\$ 37,000	Market research
	QFFDP	\$ 12,000 *	Meeting support

\* This money was returned unused.

The Fishery has been consistently operating at a loss for the period 1989 to 1995. Figure 1 provides details of the situation. The Cree First Nation of Waswanipi has been covering these deficits on an annual basis for an accumulated total of \$315,000 or an average of \$52,500 per year.

Over this same period (1989-1995), a total of \$175,018 was paid out to Cree fishermen. In addition a total of \$359,118 was paid in salaries to plant personnel representing seasonal employment ranging from 2 to 6 months for a total of \$534,136 or an average of \$89,022 per year in total salaries. It must be noted that in earlier years, some of those salaries were paid to non-Cree personnel. Basically all other operating expenses represent money spent outside the community of Waswanipi.

Summary

	Average/year 1989-1995
Depreciated Assets	\$ 37,183
Research/Development Support	\$ 240,892
Annual Deficit	\$ <u>52,500</u>
	\$ 330,575
 Vs. Return in Salaries	 \$ 89,022

**WASWANUPI COMMERCIAL FISHERIES**  
**SCHEDULE 1: HISTORIC FINANCIAL REVIEW**

REVENUES	(Unaudited)							Total	
	1989	1990	1991	1992	1993	1994	1995	1989 to 1995	
<b>Funding</b>									
- James Bay Eeyou	\$90,000				35,000		100,000		
- Waswanipi Community Fund		230,575							
- CRA: Board Of Compensation	90,000		\$32,500	45,000	11,336				
- CRA			51,157						
less/plus deferred	(90,010)	\$72,555	17,455	0	0	0	315,022		
<b>Total Cree Funding</b>								<b>\$1,000,590</b>	
Provincial Government		50,000						50,000	
D.I.A.N.D		121,424						121,424	
Federal Government of Fisheries	0	0	0	0	60,493	26,028	0	86,521	
subtotal funding	\$89,990	\$474,554	\$101,112	\$45,000	\$106,829	\$26,028	\$415,022	\$1,258,535	85%
<b>Operating Income</b>									
Sales		657	44,056	42,655	45,274	27,190	46,246	206,078	14%
Interest & Other	1,467	4,428	185	773	1,000	500	0	8,353	1%
<b>TOTAL REVENUES</b>	<b>\$91,457</b>	<b>\$479,639</b>	<b>\$145,353</b>	<b>\$88,428</b>	<b>\$153,103</b>	<b>\$53,718</b>	<b>\$461,268</b>	<b>\$1,472,966</b>	<b>100%</b>
<b>EXPENSES : Operating &amp; Capital</b>									
Purchases		\$2,412	\$47,394	\$28,631	\$41,567	\$27,735	27,279	\$175,018	12%
Salaries & benefits		29,498	62,269	76,163	74,872	63,586	52,730	\$359,118	25%
Equipment & Freight	82,530	63,899	30,159	18,576	4,033	3,427	1,076	\$203,700	14%
Land		10,000						\$10,000	1%
Professional services	7,600	2,750		1,300		1,200	7,153	\$20,003	1%
Materials & Supplies	1,233	664	36,335	22,444	9,070	1,532	9,260	\$80,538	6%
Permits & Licenses & Other	88	800	1,296	143	3,763		1,617	\$7,707	1%
Travel, Room & Board		5,178	3,645	3,353	15,084	7,382	4,492	\$39,134	3%
Fuel & Oil		3,201	9,622	7,265	7,929	5,951	4,146	\$38,114	3%
Electricity		1,113	9,632	10,169	8,792	6,266	9,596	\$45,568	3%
Maintenance & Repairs		3,457	2,483	13,546	14,487	8,781	7,713	\$50,467	3%
Rental of machinery		3,862	33	287				\$4,182	0%
Communications		727	3,267	3,782	3,501	2,839	2,560	\$16,676	1%
Interest & Bank Charges	6	79	120	27,971	23,923	0	0	\$52,099	4%
<b>Total Expenses before</b>	<b>\$91,457</b>	<b>\$127,640</b>	<b>\$206,255</b>	<b>\$213,630</b>	<b>\$207,021</b>	<b>\$128,699</b>	<b>\$127,622</b>	<b>\$1,102,324</b>	<b>76%</b>
<b>Capital Investment in</b>									
- Commercial Fishing Plant	0	\$351,999	0	0	0	0	0	\$351,999	24%
<b>NET GAIN (DEFICIT)</b>	<b>0</b>	<b>0</b>	<b>(60,902)</b>	<b>(125,202)</b>	<b>(53,918)</b>	<b>(74,981)</b>	<b>333,646</b>	<b>18,643</b>	<b>1%</b>

Source: Financial Statements of the Waswanipi Band Corporation for the years ended March 31, 1989 to 1994: Special Projects & Capital Additions Funds

### 3.4 Limits to Production

The main problem confronting the fishery in the past has been, simply, the low volume of marketable fish arriving at the plant on a consistent basis. There are a variety of reasons for this situation. They include:

*Land Tenure Issues:* Within Cree society, access to land and control of resource use is exercised through a system of hunting territories, commonly known as traplines. In Waswanipi, there are 50 such hunting territories with a combined area of 35,000 km sq. Of these territories, about 18 include or are adjacent to lakes which might be included in the commercial fishery. Nine cover the most important areas for the fishery.

Each trapline has a tallyman who is usually regarded as responsible for determining and allocating rights of access. These tallymen, therefore, effectively control access for the purposes of commercial fishing and therefore control the lakes which play a key role in determining potential levels of production and thus the viability of the fishery.

The acceptance by these tallymen of commercial fishing is critical. Many of the tallymen are older men, no longer active as hunters themselves and therefore not necessarily interested in fishing commercially. Those who are still active are usually participating in the Income Security Program which presents its own set of obstacles. In certain cases, tallymen may not be hunters at all and may be essentially absent from their traplines. Even in these cases, however, as tallymen, they are in control of their individual traplines.

As custodians of their traplines and the resources, they may be reluctant to see commercial fishing take place without any obvious benefit to themselves. They are also concerned about control and the potential for over-exploitation of the fisheries resources. On the other hand, assured access to the five or six largest lakes within the Waswanipi territory is a necessary precondition for economic viability. If the main waterbodies cannot be accessed and integrated into the fishery, this may be reason enough to consider closing the operation.

*The Income Security Program:* Perceived and real conflicts between payments received through the Income Security Program (ISP) and revenues generated from commercial fishing have influenced the fishery since its beginnings. This issue has been the subject of several

separate studies and many meetings and discussions. See Annex 3 for a separate discussion on the topic.

Those beneficiaries of the James Bay and Northern Québec Agreement who, with their families, consider themselves to be full-time hunters have access to the Income Security Program. This is a form of guaranteed annual income, set up through the James Bay and Northern Québec Agreement, which provides a minimum revenue based on family size and supplementary income based on the number of days spent hunting or "in the bush", up to a maximum of 240 days. Within defined limits, revenue from other sources (wage employment, commercial fishing) results in deductions applied to the minimum revenue calculation, meaning that commercial fishing generally results in situations where fishermen experience some deduction for their ISP earnings.

As a result, the recruitment of ISP beneficiaries into the fishery is affected. This is especially unfortunate in view of the initial assumption that commercial fishing would be compatible with other subsistence harvesting activities and the ISP beneficiaries would be active participants in commercial fish production. It is important to remember that commercial fishing is considered as "harvesting" under the James Bay and Northern Québec Agreement.

The rules of the ISP apply to net income, i.e. earned income after the deduction of costs of production. Discussions are only now underway with the administrators of the Program to adopt rules for the determination of net income as it relates to commercial fishing. This will reduce, but probably not eliminate, the deductions from ISP payments to individuals.

Discussions are also taking place at the community level to determine how commercial fishing should be handled in an eventual re-designed program. At the moment, participants lose 100% of their daily income from the ISP if they fishing commercially at the same time. Ideally, commercial fishing might be included in the definition of harvesting activities for which the program was designed.

It has become obvious over the years that the resolution of these conflicts is fundamental to the eventual success of commercial fishing operations in Waswanipi or elsewhere in the Cree territory.

*Mercury* : The principal contaminant of concern in the Waswanipi Fishery is mercury. Organochlorines and trace metals have been investigated but do not appear to pose a problem

for commercial or subsistence production. Mercury, however, was a factor in the decision to close the earlier commercial fishery in 1971, and must be considered in any future policy for commercial fisheries development in the James Bay territory.

Data collected over the years for a variety of purposes confirm that non-predatory species (whitefish, cisco, catostomids, sturgeon) have mercury concentrations generally below the Federal commercial standard of 0.5 mg/kg Hg. Mercury is not an issue in the commercial production of these species.

Such is not the case for walleye and pike which, as expected, have concentrations of mercury substantially higher and generally reflect the age and therefore the size of the fish. Older, larger fish exhibit concentrations well above Federal government standards.

A measure of control of mercury concentrations in marketed products can be accomplished by screening for size, using regression techniques developed for this purpose. As mercury concentrations in fish populations reflect the age structure of the population, a sustained fishery for walleye or pike could have the effect of decreasing mercury levels by removing the older fish and stimulating more rapid growth in younger fish.

Data bases on mercury levels in fish are available for most of the large lakes used in the Fishery and for a number of smaller lakes. Information on organochlorines and other trace metals is available from studies carried out by Hydro-Québec for the proposed Nottaway-Broadback-Rupert project.

**Parasites:** Lake whitefish and cisco of the region have been sampled for the parasite *Triaenophorus crassus*. In large numbers, the cysts of this parasite affect the appearance of fillets, although there is no reason for concern on the grounds of health. It is desirable to screen fillets to eliminate those with high cyst counts for marketing purposes. This has been done at the plant using a light table.

**Regulatory System:** The licensing and management of the commercial fishery has been developed in function of both the known biological characteristics of each species (from a scientific perspective) and the existing recreational and sport fishery. This has created a situation whereby ideal seasons and conditions for commercial fishing have been constrained by the other priorities.

As noted above, the CRA, MAPAQ and MEF have collaborated in the setting of quotas and determining the type of gear to be used. These criteria have been incorporated into annual experimental permits. Had the fishery operated on the scale originally intended, it would be possible now to assess the biological implications of the strategies followed so far and re-assess the quotas in consequence. This is not possible at this time with the exception of lake sturgeon which is being fully exploited for several waterbodies. This is a species well known to be vulnerable to over harvesting. Work is currently underway to establish a data base for the subsistence use of this species.

Agreement on the dates of opening and closure of the fishery has been more difficult to reach. In general, MEF has pursued a policy of limiting potential or perceived conflict with recreational fishing and outfitting by limiting the commercial fishery to periods outside the sports fishing season.

Commercial fishing of walleye is also constrained generally by the high recreational value of this species. Commercial production is limited to areas in which the waterbodies are classified as Cree Category II lands (parts of Waswanipi Lake and the northern arm of Gull Lake). In addition, it has been a policy of MEF to set a by-catch limit for walleye. Commercial production of whitefish is supposed to cease when the by-catch of walleye reaches a given level. Because walleye can be caught before whitefish in the fall, this acts as a further potential constraint on whitefish production.

What this means in practice is that the Waswanipi fishery, through most of its history, has been limited to the period after Labor Day and the end of the sports fishing season (i.e. from mid-September to late October). This period includes the fall spawning migration of lake whitefish, but the whitefish harvest is limited by the walleye by-catch limit (0.1 kg/ha). Since walleye are taken readily in the gill net fishery in September, this is an important issue. There has also been a limited fishery for whitefish in spring (mid-May to mid-June), prior to the opening of the sports fishery. Sturgeon (a species reserved for the exclusive use of the Cree), taken with larger nets, can be caught at any time, but in practice the harvest is concentrated in the period from mid-June to mid-July. It should be understood that these are major practical constraints on production, although it should also be kept in mind that a gill-net fishery is problematic in any case in July and August because of water temperature.

*Equipment and Fishing Techniques:* The fishery was originally planned on the assumption that the Cree fishermen could operate from their own canoes and other small craft

used in their subsistence fisheries and using the fishing gear and techniques familiar to them. This assumption was naive and it is increasingly evident that the techniques of subsistence fish production are generally inappropriate for commercial operations in this region. In addition serious consideration must be given to issues of safety. This involves access larger, safer craft and working in teams. Overall, fishermen are under-equipped and the cost of production per fisherman is high.

Water temperature is also an issue from mid-July through August and sometimes into early September. Sustained production during this period may require switching from gill nets to some form of trap nets in order to maintain production and product quality.

### 3.5 Marketing Constraints

Initially, arrangements were made to sell fish using brokers in the Montréal market, but these arrangements were unsatisfactory, including non-payment of several shipments, a situation which contributed to operating losses. Subsequently, more emphasis has been placed on serving a regional market. There is, it has been found, ample opportunity for selling fish to retail and hotel/restaurant outlets in the towns of Abitibi-Témiscamingue and in Chapais-Chibougamau. Other Cree communities are also potential markets. It should also be noted that fish are sold from the plant itself. Walleye are very much in demand by non-native residents of the community and nearby towns and are sold as soon as they arrive. Smoked sturgeon also has a ready market at the plant and in the region. Lake whitefish, on the other hand, is not well known in the retail fish market in Québec except in parts of Montréal. Generally, whitefish is not marketed as a high-value fish. The fishery needs to develop reputation for whitefish as a regional product based on quality and geographical origin if it is to compete with whitefish from the Great Lakes or the Freshwater Fish Marketing Corporation.

In summary much effort has been on marketing over the past years. Market investigations and market tests have been conducted and promotional materials produced (see Annex 4). Generally speaking, the existing markets are able to absorb all the production of sturgeon and walleye. Whitefish has had limited success and concentrated effort will be required to develop regional and then export markets outside of the region. Sucker and pike have, produced as a de-boned meat product have met with little market success, however, it would be premature to discount the products produced from deboned meat. Further work is warranted. A Market Study was conducted as part of this evaluation and is attached as Annex 2.

FINANCIAL FORECASTS

**4.1 Background**

For the purposes of this evaluation, we carried out a financial analysis which attempted to "design" a socially and economically viable fishery and then simulate the operation of the commercial fishery based on identified conditions. These conditions were selected after thorough discussion with representatives of Waswanipi and the Cree Regional Authority. They were intended to reflect what were believed to be optimum conditions for a viable fishery, but took into account a number of obvious constraints and rest on several assumptions.

1. The fishery will operate for an 18 week season from mid-June through to the end of October;
2. Regulatory obstacles can be overcome so that we are dealing with a multi-species fishery operating through most of the ice-free season;
3. The fishermen would adopt fishing techniques and have available to them fishing technology appropriate to commercial production;
4. That twenty fisherman (salaried or independent) work essentially full time during the 18-week season to supply the fish plant;
5. That each fisherman can consistently produce an average of 600 lb. (285 kg) of round fish per week and that all identified quotas from waterbodies considered accessible by road are taken (see Table 3);
6. That all of the product can be sold;
7. That there will be no new investment in new plant equipment or major repairs of existing equipment. The capacity of the present truck sets a limit on the possible production; and
8. That plant personnel is stable throughout the operating season.

Table 3

**1994 Quotas (in lb.)  
for Waterbodies Considered Accessible by Road  
(walleye adjusted as per 1995 MEF proposal)**

	Sturgeon	Whitefish	Sucker	Walleye	Pike
Zone 7					
Father/Doda					
Francoise	3190	15644	15644	3130	6257
Des Vents	622	3112	3112	622	1243
Coapatina	1023	5109	5109	1023	2043
Dickson	-	<u>1527</u>	<u>1527</u>	<u>304</u>	<u>611</u>
	4835	25392	25392	5079	10154
Zone 6					
Inconnu	-	3229	3229	646	1292
Mechamego	84	423	423	84	445
Lamark/ Two Moose, etc.	441	2204	2204	441	882
Presqu'île	262	1316	1316	262	527
David	330	1650	1650	660	660
Opemisca	-	<u>8461</u>	<u>8461</u>	<u>1692</u>	-
	1117	17283	17283	3785	3806
Zone 5					
Waswanipi III	4512	16955	16955	3392	6782
Waswanipi II	1026	5651	5651	1130	-
Lichen/Lessard	588	2938	2938	588	1174
Opawaca/etc.	591	5896	5896	1179	2358
Nicobi	668	3339	3339	668	1336
Bachelor	-	1069	1069	220	440
Renault	<u>121</u>	<u>606</u>	<u>606</u>	<u>121</u>	<u>242</u>
	7506	36454	36454	7298	12332
Zone 4					
Au Goéland	5526	27687	27687	5536	11073
Maicasagi/Chen.	2165	10905	10905	2181	4362
Olga	<u>2327</u>	<u>11644</u>	<u>11644</u>	<u>2327</u>	<u>4655</u>
	10018	50236	50236	10044	20090

Zone 3					
Matagami/Bell	<u>5200</u>	<u>25003</u>	<u>25003</u>	<u>5200</u>	<u>10400</u>
	5200	25003	25003	5200	10400
Zone 2	2865	14328	14328	2865	<u>5730</u>
Zone 1					
Théodat	1884	9418	9418	1884	3767
Quenonisco	<u>1353</u>	<u>6764</u>	<u>6764</u>	<u>1353</u>	<u>2704</u>
	3237	16182	16182	3237	6471
Totals	34778	184878	184878	37508	68980

511,022 lb. round weight potentially available for processing at the plant

## 4.2 Financial Scenarios

The following four scenarios were considered. All of the conversion factors used in these scenarios have been drawn from Lucie Pépin's technical report (Annex 1)

It is important to remind the reader at this point, that the Cree identified two main objectives prior to committing to the fishery in 1989: Maximizing local employment and operating at a break even point. Profit was not a primary objective.

In the first (1A), the fishermen are recruited and paid a salary for an 18-week period. This would permit them access to unemployment insurance at the end of the period. There is no bonus incentive. See Table of Forecast Notes and Assumptions for economic analysis factors.

In the second (1B), the fish are supplied by independent fishermen and paid at a fixed price for each species. Fishermen provide their own equipment. See Table of Forecast Notes and Assumptions for economic analysis factors.

In the third (1C), there is a combination of salaried and independent fishermen. See Table of Forecast Notes and Assumptions for economic analysis factors.

The fourth scenario (1D) was an attempt to take a look at a fishery solely directed to high value product, namely sturgeon and walleye, understanding that this would not meet community objectives of maximizing employment. It was felt important to see, if at a minimum, a directed fishery could justify keeping the plant open for during specific times of the year.

Scenarios 1A, 1B and 1C are all "attainable" if constraints, particularly those related to fish production are overcome.

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TO: Ms. Lorraine Brooke  
Co-ordinator

FROM: Anna Maria Fiocco

SUBJECT: Waswanipi Commercial Fisheries 1995  
Historic Review 1989-1995 & Financial Forecasts 1995/96.

DATE: June 28, 1995.

Following our meeting on June 21, 1995, I am pleased to submit the attached financial schedules regarding the above operation as summarized below.

**Waswanipi Commercial Fisheries**  
**Schedule 1: Historic Financial Review 1989-1995**

The purpose of this schedule is to provide a revenue and expenditure summary of the above project as reflected in the audited financial statements of the Waswanipi Band Corporation from April 1, 1989 to March 31, 1994, more specifically, in the Special Projects Fund and the Capital Additions Fund. The financial data for the last fiscal year, that is, April 1, 1994 to March 31, 1995 was provided by Nick Whitbread from the internal statements of the band. These costs are not audited and therefore, this schedule is subject to change and/or revision once the audit is completed. The summary demonstrates that Cree funding to the fisheries operation over the past 7 years has accumulated to around \$1 million.

**Income and Expense Statements Forecasts:**  
**April 1, 1995 to March 31, 1996 under various scenarios as described below.**

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The purpose of these schedules is to provide information on the viability of the fishery given different operating scenarios and for decision making regarding the parameters of a business plan for the commercial fishery. The scenarios are all critically based on factors and hypotheses obtained from members of the study team as well as industry standards. It is imperative that these assumptions and hypotheses are closely monitored and controlled over time for future planning and decision making as well as for the review of the financial scenarios herein described.

.../2

These scenarios form the basis upon which specific decisions and assumptions will be determined for the development of the business plan.

**Scenario 1A:** 20 fishers are assumed as employees and fish suppliers are not used to provide a stock of whitefish, sturgeon and walleye. It is assumed that each fisher can produce 600 pounds fish per week for the 18 week season. Sucker and pike are excluded. Further notes and assumptions are described in the Scenario 1A table of notes and assumptions. Net Income Result: \$41,092.

**Scenario 1B:** All fish sold (quantity and mix as above) is provided by independent suppliers. Further notes and assumptions are described in the Scenario 1B table of notes and assumptions. Net Income Result: \$18,513.

**Scenario 1C:** All fish sold is provided by a combination of 4 fishers and fish suppliers (16 are assumed to provide the required amount). Further notes and assumptions are described in the Scenario 1C table of notes and assumptions. Net Income Result: \$21,829.

**Scenario 1D:** Only sturgeon and walleye species are sold and are provided by suppliers. The fishing season is reduced from 18 weeks to 8 weeks as explained herein. Further notes and assumptions are described in the Scenario 1D table of notes and assumptions. Net Loss Result: (\$18,662). This scenario was developed "at the last minute" and, as such, the cost assumptions are weak. If this avenue is pursued, further scrutiny and input from other study team members would be required.

**Annex of Fish Sales & Supplier Costs 1994/95 (unaudited)**

The annex of fish income and cost data for the 1994/95 operating year is provided separately. This annex documents the analysis carried out by Nick Whitbread and the undersigned from the records of the fishery project on realized cost and price per pound per fish species.

In order to proceed with the development of a business plan for the commercial fishery, in the financial sense, the following information and/or decisions would be required.

**Balance Sheet questions:**

1. How will the operation be organized and run: continuing as a special project under the band corporation or as a separate entity wholly owned by the band. If separated from the special projects fund of the band, at what cost?
2. Once the fixed assets of the fishery are confirmed, at what price will they be transferred, if required?
3. If the timeframe of the business plan is 5 years, what investments (fish processing, refrigeration, rolling stock, and leasehold improvements) will be required from 1995 to 2001 and at what cost?
4. What is the consequent income tax status of the entity?
5. How much of the past contributions will be capitalized as contributed surplus and what ongoing contribution, as it is evident that this is required, will be made by the band and/or other Cree participant?
6. The ownership structure question will provide guidance on a number of related issues, such as, line of credit, operating loan requirements, C.S.S.T. assessment rate, insurance, etc.

**Income & Expense Questions:**

1. What is the expected timing of the fish catch, processing and sales by species as well as the defined species mix?
2. On the basis of the schedules provided, what are the confirmed operating assumptions for the financial model regarding fish quotas, species mix, fish supply method, fish processing and plant operating costs, sales and administration expenses as well as staffing and salary levels?

I trust that the above is to the satisfaction of your requirements in this feasibility stage of the study. I will be pleased to provide further information and/or clarification as required.

Encl.

**WASWANUPI COMMERCIAL FISHERIES  
INCOME AND EXPENSE STATEMENT FORECASTS  
For period ending 31-March-1996**

	<b>Scenario 1A (20 Fishers on staff)</b>	<b>Scenario 1B (Fish Suppliers only)</b>	<b>Scenario 1C (Combination of: Suppliers &amp; 4 fishers)</b>	<b>Scenario 1D (Directed Sturgeon &amp; Walleye)</b>
<b>Revenues:</b>				
Whitefish	\$193,150	\$193,150	\$193,150	\$0
Sturgeon	83,401	83,401	83,401	83,401
Walleye	119,767	119,767	119,767	119,767
Sucker & Pike	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	\$396,318	\$396,318	\$396,318	\$203,168
<b>Cost of goods sold</b>	n/a	<u>173,778</u>	<u>140,223</u>	<u>88,269</u>
<b>Operating Profit</b>	\$396,318	\$222,540	\$256,095	\$114,899
<b>Schedule of Expenses:</b>				
<b>Staffing</b>				
- Salary	\$206,288	\$80,288	\$105,488	\$53,928
- Bonus	\$0	n/a	n/a	n/a
- Fringe	<u>\$41,258</u>	<u>16,058</u>	<u>21,098</u>	<u>10,786</u>
	247,545	96,345	126,585	64,714
<b>Plant Operating</b>	43,410	43,410	43,410	20,384
<b>Truck O &amp; M</b>	6,000	6,000	6,000	4,320
<b>(1) Depreciation</b>	37,182	37,182	37,182	37,182
<b>Sales &amp; Admin</b>	<u>21,090</u>	<u>21,090</u>	<u>21,090</u>	<u>6,960</u>
	<u>107,681</u>	<u>107,681</u>	<u>107,681</u>	<u>68,847</u>
<b>Total Expenses:</b>	<u>355,227</u>	<u>204,027</u>	<u>234,267</u>	<u>133,560</u>
<b>Net Income from Operations before:</b>	\$41,092	\$18,513	\$21,829	(\$18,662)
<b>Income Tax (2)</b>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<b>Net Income (3)</b>	\$41,092	\$18,513	\$21,829	(\$18,662)

**Notes to statement:**

(1) Straight Line Depreciation on assets (per L. Pepin report) calculated as follows:

	<u>Cost</u>	<u>Year</u>	<u>Life</u>	<u>Depreciation/year</u>
- Building	\$351,999	1990	20	\$17,600
- Equipment	157,698	1990	10	\$15,770
- Rolling Stock	30,500	1990	8	\$3,813
				\$37,182

(2) Income tax assumed at nil as entity assumed to be band-owned and therefore exempt under section 149 (1a); to be verified with legal counsel.

Federal and provincial goods and services taxes excluded ; to be taken into account in the business plan (cash flow schedule & balance sheet item)

(3) Each scenario is supported by a detailed table of notes and assumptions which are provided herein.

**WASWANAPI COMMERCIAL FISHERIES  
TABLE OF FORECAST NOTES & ASSUMPTIONS**

**SCENARIO 1A ( 20 Fishers on salary)**

**ASSUMPTIONS:**

1. FISH PROCESSING SEASON 18 weeks at 40 hours/week  
From/to 15-Jun 19-Oct

**2 SCHEDULE OF REVENUES:**

Profile	Species	Gross Wt (lbs)	Process Factor	Lbs Sold	Selling Price	Revenues
68%	WHITEFISH	143,713	0.42	60,359	\$3.20	\$193,150
(1)	STURGEON	34,778	0.700	14,329		\$83,401
2%	ROUND SMALL			2,045	\$2.00	4,090
5%	ROUND MEDIUM			4,285	\$2.75	11,783
4%	ROUND LARGE			3,408	\$3.65	12,440
5%	STURGEON SMOKED		0.22	4,591	\$12.00	55,088
16%	WALLEYE	37,508	0.37	13,878	\$8.63	119,767
0%	SUCKER	0	0.72	0	\$1.40	0
0%	PIKE	0	0.72	0	\$2.00	0
100%		216,000		88,566		\$396,318

**3.0 SCHEDULE OF EXPENSES:**

						Costs	
<b>3.1 Salaries:</b>							
		#	Rate	hours/wk	Weeks		
	Fishers	20	\$8.75	40.0	18	\$126,000	
	Manager/Trainee	1	\$375.00		24	\$9,000	
	Fish Cleaners/Preparers	4.0	\$8.10	40.0	18	\$23,328	
	Truck Driver	1	\$420.00		18	\$7,560	
	Technician/Sales Rep (See #7)	1	\$9,583	40.0	24	\$9,200	
	Plant Director	1	\$600.00		52	\$31,200	
	<b>Staffing:</b>	28				\$206,288	
<b>3.2 Fishers' Bonus</b>							
		Max Quota	Factor	Truck Capacity	Gut Factor	Bonus Participation	
	67%	WHITEFISH	184,878	0.423	143,713	0.85	0%
	16%	STURGEON	34,778		34,778		\$0
	17%	WALLEYE	37,508		37,508		0
	0%	SUCKER	184,878		0		0
	0%	PIKE	68,980		0		0
100%	FROM	511,022	TO	216,000	183,599	Bonus	\$0
<b>3.3 Fringe Benefits</b>						20.0% (including CSST assumed at 5%)	\$41,258
<b>3.4 Plant Operating Costs (based on status quo)</b>							
	3.4.1	Hydro Quebec	(efficiencies offset by increased demand)			\$13,400	
	3.4.2	Telephone				3,000	
	3.4.3	Insurance				800	
	3.4.4	Building Maintenance				550	
	3.4.5	Refrigeration Equipment Mtnc				3,000	
	3.4.6	Depreciation	(no further purchases assumed)			0	
	3.4.7	Freight	\$0.10	x lbs sold	88,566	8,857	
	3.4.8	Plant Supplies				1,000	
	3.4.9	Processing Supplies	\$0.10	x lbs sold	88,566	8,857	
	3.4.10	Contingency				10.0%	3,946
						\$43,410	
<b>3.5 Truck O &amp; M Costs</b>							
	3.5.1	Gas and Oil				\$2,000	
	3.5.2	Repairs & Maintenance				4,000	
	3.5.3	Depreciation	(no further purchases assumed)			0	
						6,000	
<b>3.6 Sales &amp; Administration</b>							
	3.6.1	Accounting Service				\$1,200	
	3.6.2	Travel				8,000	
	3.6.3	Bad Debt				0	
	3.6.4	Product Research & Development	3.0%		\$396,318	11,890	
	3.6.5	Bank Interest & Charges				0	
	3.6.6	Sales Commission	0.0% of sales		\$396,318	0	
						21,090	

<b>Implication:</b>	<b>ATTAINABLE</b>	<b>Total Costs as presented here:</b>	<b>(\$318,044)</b>
<b>Lbs Fish Bought:</b>	183,599	<b>Revenues as presented here:</b>	<b>396,318</b>
	Cost/lb \$1.73	<b>Gain(loss) before interest &amp; depreciation:</b>	<b>\$78,274</b>
<b>versus 94/95:</b>	33,205 lbs	<b>Return on sales:</b>	<b>20%</b>
	Rev /lb \$2.16		

**WASWANAPI COMMERCIAL FISHERIES  
TABLE OF FORECAST NOTES & ASSUMPTIONS**

**SCENARIO 1A ( 20 Fishers on salary)**

- 4. Fish supply defined to match truck capacity with reasonable statistic of 10,800 lbs per fisher per season  
The capacity of the truck @ 216,000 lbs based on 6 tons/week i.e. 12,000 lbs/week x 18 weeks
- 5. Sales of all fish stock is assumed at the prices suggested by M.Laberge and with reference to 1994 sales records.
- 6. Services to fisherman not assumed e.g. nets, boats, gas, etc. (Refer to Footnote #2)
- 7. Staffing includes 10 teams of 2 fishers in addition to fishery staff as indicated above. Salary of Technician/Sales Representative is net of \$10,000 government grant for same; actual pay rate is \$20/hour.

**FOOTNOTES**

**1) FISH SPECIES MIX**

Maximum quota of 511,022 based on all species from selected lakes; constrained by truck capacity of 6 tons/week x 18 weeks = 216,000 lbs gross weight. Sturgeon & walleye maximized. Sturgeon sold round or smoked filet; assume that smoker capacity permits % sold smoked @ 60%  
Balance of quota is sold round at prices indicated in proportion to 1994 sales. = of 34,778  
= 20,867 lbs processed

Smoker Capacity:	200 lbs/day @	126 days =	
Total Weight before:	Factor	=	Total Max Input
68,108	0.37	=	25,200

**2) COST TO COMMERCIAL FISHERS:**

Item	Yrs. Life	Outlay	Annualized	
Food		\$4,500	\$4,500	
Truck Rental		N/a		
Fuel		5,000	5,000	
Transportation		2,500	2,500	
Boat & motor	10	7,450	745	
Freight		1,000	1,000	40 hrs per week
Camping equipment	5	1,500	300	18 weeks per season
Nets	5	2,290	458	720 hours per season
Contingency	10%	2,424	1,450	10 fisher teams
		\$26,664	\$15,953	\$22.16 cost/hr/team

**3) BREAKEVEN ANALYSIS:**

	\$	Sold	\$/lb
Revenues	\$396,318	88,566	\$4.47
Variable Costs	\$29,603	88,566	\$0.33
Fixed Costs	\$288,442		\$4.14 oper prof/lb
Total Costs	\$318,044		
Gain(loss)	\$78,274		

<b>BREAKEVEN REQUIRED:</b>	\$288,442	69,662	\$4.14
(lbs = lbs sold)	FIXED COST	LBS	MARGINAL REQD REVENUE/LB

<b>Variable Costs</b>	3.2	Bonus
	3.4.7	Freight
	3.4.9	Processing Supplies
	3.6.4	Product Research & Development
	3.6.6	Sales Commission

**Fixed Costs** All Other Expenses

**PROFILE 1A**

ERR = not applicable

	VARIABLE COSTS per lb bought	REVENUE PER LB		MARG REV PER LB	
		/bought	/sold	/bought	/sold
WHITEFISH	\$0.30	\$1.34	\$3.20	\$1.04	\$2.90
STURGEON	\$0.37	\$2.23	\$5.82	\$1.86	\$5.45
WALLEYE	\$0.46	\$3.19	\$8.63	\$2.73	\$8.17
SUCKER	ERR	\$1.94	\$1.40	ERR	ERR
PIKE	ERR	\$1.44	\$2.00	ERR	ERR

**WASWANAPI COMMERCIAL FISHERIES**  
**TABLE OF FORECAST NOTES & ASSUMPTIONS**

**SCENARIO 1B (Fish Suppliers)**

**ASSUMPTIONS:**

**1. FISH PROCESSING SEASON**

18 weeks	at
15-Jun	19-Oct

40 hours/week

**2. SCHEDULE OF REVENUES:**

Profile	Species	Gross Weight (lbs)	Process Factor	Lbs Sold	Selling Price	Revenues
68%	WHITEFISH	143,713	0.42	60,359	\$3.20	\$193,150
(1)	STURGEON:	34,778	0.70	14,329		83,401
2%	- ROUND SMALL			2,045	\$2.00	4,090
5%	- ROUND MEDIUM			4,285	\$2.75	11,783
4%	- ROUND LARGE			3,408	\$3.65	12,440
5%	SMOKED		0.22	4,591	\$12.00	55,088
16%	WALLEYE	37,508	0.37	13,878	\$8.63	119,767
0%	SUCKER	0	0.72	0	\$1.40	0
0%	PIKE	0	0.72	0	\$2.00	0
100%		216,000		88,566		\$396,318

**3.0 SCHEDULE OF EXPENSES:**

3.1 Salaries	#	Rate	hours/wk	Weeks	Costs
Fishers	0	\$8.75	40.0	18	\$0
Manager/Trainee	1	\$375.00		24	\$9,000
Fish Cleaners/Preparers	4.0	\$8.10	40.0	18	\$23,328
Truck Driver	1	\$420.00		18	\$7,560
Technician/Sales Rep (See # 7)	1	\$9.58	40.0	24	\$9,200
Plant Director	1	\$600.00		52	\$31,200
<b>Staffing:</b>	<b>8.0</b>				<b>\$80,288</b>

3.2 Fish Suppliers	Max Quota	Factor	Truck Capacity	Gut Factor	Unit Cost	Total Cost by Species
36% WHITEFISH*	184,878	0.423	143,713	0.85	\$0.70	\$85,509
7% STURGEON*	34,778		34,778		\$1.53	\$45,229
7% WALLEYE*	37,508		37,508		\$1.35	\$43,040
36% SUCKER*	184,878		0	0	\$0.30	\$0
13% PIKE*	68,980		0	0	\$0.40	\$0
100% FROM	511,022	TO	216,000	183,599		\$173,778

3.3 Fringe Benefits	20.0% (including CSST assumed at 5%)	\$16,058
<b>3.4 Plant Operating Costs (based on status quo)</b>		
3.4.1 Hydro Quebec (efficiencies offset by increased demand)		\$13,400
3.4.2 Telephone		3,000
3.4.3 Insurance		800
3.4.4 Building Maintenance		550
3.4.5 Refrigeration Equipment Mtnce		3,000
3.4.6 Depreciation (no further purchases assumed)		0
3.4.7 Freight \$0.10 x lbs		88,566
3.4.8 Plant Supplies		1,000
3.4.9 Processing Supplies \$0.10 x lbs		8,857
3.4.10 Contingency 10.0%		3,946
		<b>\$43,410</b>

3.5 Truck O & M Costs		
3.5.1 Gas and Oil		\$2,000
3.5.2 Repairs & Maintenance		4,000
3.5.3 Depreciation (no further purchases assumed)		0
		<b>6,000</b>

3.6 Sales & Administration		
3.6.1 Accounting Service		\$1,200
3.6.2 Travel		8,000
3.6.3 Bad Debt		0
3.6.4 Product Research & Development 3%	\$396,318	11,890
3.6.5 Bank Interest & Charges		0
3.6.6 Sales Commissions 0% on sales of	\$396,318	0
		<b>21,090</b>

<b>&gt;&gt;&gt;&gt; Implication:</b>	<b>ATTAINABLE</b>	<b>Total Costs as presented here:</b>	<b>(\$340,623)</b>
Lbs Fish Bought:	183,599	Cost/lb	\$1.86
		Rev /lb	\$2.16
versus 94/95:	33,205 lbs	<b>Revenues as presented here:</b>	<b>396,318</b>
		<b>Gain (loss) before interest &amp; depreciation</b>	<b>\$55,695</b>
		<b>Return on sales:</b>	<b>14%</b>

**WASWANUPI COMMERCIAL FISHERIES  
TABLE OF FORECAST NOTES & ASSUMPTIONS**

**SCENARIO 1B (Fish Suppliers)**

- 4. Fish supply determined by capture of 50% all quotas all lakes or the lesser of 23% represented by 183,599 lbs from suppliers  
\*Supplier costs herein based on 1994 purchase records and fish plant cost sheet. To be reviewed & onfirmed. The gut factor assumes that fish are purchased gutted and deboned. When purchased at gross weight, the purchase price would be adjusted downward by 15%.
- 5. Sales of all fish stock is assumed at the prices suggested by M.Laberge and with reference to 1994 sales records. Processing discount factors were provided by L. Pepin.
- 6. Services to fisherman not assumed e.g. nets, boats, gas, etc. (Refer to Footnote #2)
- 7. Staffing excludes fishers as employees; fishery staff as indicated above. Salary of Technician/Sales Representative is net of \$10,000 government grant for same; actual pay rate is \$20/hour.

**FOOTNOTES**

**1) FISH SPECIES MIX**

Maximum quota of 511,022 based on all species from selected lakes; constrained by truck capacity of 6 tons/week x 18 weeks = 216,000 lbs gross weight. Sturgeon & walleye maximized. Sturgeon sold round or smoked filet; assume that smoker capacity permits % sold smoked @ 60%  
Balance of quota is sold round at prices indicated in proportion to 1994 sales. of 34,778

Smoker Capacity:	200 lbs/day @	126 days =	=	20,867 lbs processed
Total Weight before:	Factor	=	Total Max Input	=
68,108	0.37	=	25,200	=
				x 0.22 = 4,591 lbs smoked filet

**2) COST TO COMMERCIAL FISHERS:**

Item	Years Life	Outlay	Annualized
Food		\$4,500	\$4,500
Truck Rental		N/a	
Fuel		5,000	5,000
Transportation		2,500	2,500
Boat & motor	10	7,450	745
Freight		1,000	1,000
Camping equipmer	5	1,500	300
Nets	5	2,290	458
Contingency	10%	2,424	1,450
		\$26,664	\$15,953 per team

**3) BREAKEVEN ANALYSIS:**

	\$	Sold	\$/lb
Revenues	\$396,318	88,566	\$4.47
Variable Costs	\$203,381	88,566	\$2.30
Fixed Costs	\$137,242		\$2.18 oper profit/lb
Total Costs	\$340,623		
Gain (Loss)	\$55,695		

<b>BREAKEVEN REQUIRED:</b> (lbs = lbs sold)	\$137,242	62,999	\$2.18
	FIXED COST	LBS	MARGINAL
		REQD	REVENUE PER LB

Variable Costs	3.2	Fish Suppliers	*as indicated; to be confirmed
	3.4.7	Freight	\$0.10 per lb sold
	3.4.9	Processing Supplies	\$0.10 per lb sold
	3.6.4	Product Research & Developmer	3% of sales.
	3.6.6	Sales Commissions	0% of sales.
Fixed Costs		All Other Expenses	

**PROFILE 1B:**

ERR = not applicable

	VARIABLE COSTS	REVENUE PER LB		MARG REVENUE PER LB	
		/bought	/sold	/bought	/sold
WHITEFISH	\$1.00	\$1.58	\$3.20	\$0.59	\$2.20
STURGEON:	\$1.90	\$2.62	\$5.82	\$0.72	\$3.92
WALLEYE	\$1.81	\$3.76	\$8.63	\$1.95	\$6.82
SUCKER	ERR	\$1.19	ERR	ERR	ERR
PIKE	ERR	\$1.69	ERR	ERR	ERR

**WASWANPI COMMERCIAL FISHERIES  
TABLE OF FORECAST NOTES & ASSUMPTIONS**

**SCENARIO 1C (Combination: Fishers & Suppliers)**

**ASSUMPTIONS:**

1. FISH PROCESSING SEASON

18 weeks	at
15-Jun	to 19-Oct

40 hours/week

2. SCHEDULE OF REVENUES:

Profile	Species	Gross Weight (lbs)	Process Factor	Lbs Sold	Selling Price	Revenues
68%	WHITEFISH	143,713	0.42	60,359	\$3.20	\$193,150
(1)	STURGEON:	34,778	0.70	14,329		83,401
2%	- ROUND SMALL			2,045	\$2.00	4,090
5%	- ROUND MEDIUM			4,285	\$2.75	11,783
4%	- ROUND LARGE			3,408	\$3.65	12,440
5%	SMOKED		0.22	4,591	\$12.00	55,088
16%	WALLEYE	37,508	0.37	13,878	\$8.63	119,767
0%	SUCKER	0	0.72	0	\$1.40	0
0%	PIKE	0	0.72	0	\$2.00	0
100%		216,000		88,566		\$396,318

3.0 SCHEDULE OF EXPENSES:

<b>3.1 Salaries</b>							<b>#</b>	<b>Rate</b>	<b>hours/wk</b>	<b>Weeks</b>	<b>Costs</b>	
Fishers							4	\$8.75	40.0	18	\$25,200	
Manager/Trainee							1	\$375.00		24	\$9,000	
Fish Cleaners/Preparers							4.0	\$8.10	40.0	18	\$23,328	
Truck Driver							1	\$420.00		18	\$7,560	
Technician/Sales Rep (See # 7)							1	\$9.58	40.0	24	\$9,200	
Plant Director							1	\$600.00		52	\$31,200	
<b>Staffing:</b>							12.0				\$105,488	
<b>3.2 Fish Suppliers</b>							<b>Max Quota</b>	<b>Factor</b>	<b>Truck Capacity</b>	<b>less Gut Factor</b>	<b>Unit Cost</b>	<b>Total Cost</b>
							0.423		0.85		<b>by Species</b>	
36%	WHITEFISH*	184,878		143,713	Catch	97,725	\$0.70	\$68,407				
7%	STURGEON*	34,778		34,778	at	23,649	\$1.53	36,183				
7%	WALLEYE*	37,508		37,508	4 / 20	25,505	\$1.35	34,432				
36%	SUCKER*	184,878		0	or	0	\$0.30	0				
13%	PIKE*	68,980		0	0.8	0	\$0.40	0				
100%	FROM	511,022	TO	216,000	TO	146,879 lbs						
<b>Gas Contribution</b>									\$1,200	\$140,223		
<b>3.3 Fringe Benefits</b>							20.0% (including CSST assumed at 5%)			\$21,098	\$266,808	
<b>3.4 Plant Operating Costs (based on status quo)</b>												
3.4.1 Hydro Quebec (efficiencies offset by increased demand)									\$13,400			
3.4.2 Telephone									3,000			
3.4.3 Insurance									800			
3.4.4 Building Maintenance									550			
3.4.5 Refrigeration Equipment Mtnc									3,000			
3.4.6 Depreciation (no further purchases assumed)									0			
3.4.7 Freight \$0.10 x lbs									88,566	8,857		
3.4.8 Plant Supplies										1,000		
3.4.9 Processing Supplies \$0.10 x lbs									88,566	8,857		
3.4.10 Contingency 10.0%									3,946	\$43,410		
<b>3.5 Truck O &amp; M Costs</b>												
3.5.1 Gas and Oil									\$2,000			
3.5.2 Repairs & Maintenance									4,000			
3.5.3 Depreciation (no further purchases assumed)									0	6,000		
<b>3.6 Sales &amp; Administration</b>												
3.6.1 Accounting Service									\$1,200			
3.6.2 Travel									8,000			
3.6.3 Bad Debt									0			
3.6.4 Product Research & Development 3%									\$396,318	11,890		
3.6.5 Bank Interest & Charges									0			
3.6.6 Sales Commissions 0% on sales of									\$396,318	0	21,090	

>>>>	<b>Implication:</b>	<b>ATTAINABLE</b>		<b>Total Costs as presented here:</b>	<b>(\$337,307)</b>
	Lbs Fish Bought:	146,879	Cost/lb \$2.30	<b>Revenues as presented here:</b>	<b>396,318</b>
	versus 94/95:	33,205 lbs	Rev /lb \$2.70	<b>Gain (loss) before interest &amp; depreciation:</b>	<b>\$59,011</b>
				<b>Return on sales:</b>	<b>15%</b>

**WASWANUPI COMMERCIAL FISHERIES  
TABLE OF FORECAST NOTES & ASSUMPTIONS**

**SCENARIO 1C (Combination: Fishers & Suppliers)**

- 4. Fish supply determined by capture of 50% all quotas all lakes or the lesser of 23% represented by 146,879 lbs from suppliers  
\*Supplier costs herein based on 1994 purchase records and fish plant cost sheet. To be reviewed & onfirmed.  
The gut factor assumes that fish are purchased gutted and deboned. When purchased at gross weight, the purchase price would be adjusted downward by 15%. Suppliers provide 80% of catch and are given a gas contribution.
- 5. Sales of all fish stock is assumed at the prices suggested by M.Laberge and with reference to 1994 sales records. Processing discount factors were provided by L. Pepin.
- 6. Services to fisherman not assumed e.g. nets, boats, etc except for gas contribution. (Refer to Footnote #2)
- 7. Staffing includes 4 fishers as employees that provide 20% of the catch; fishery staff as indicated above. Salary of Technician/Sales Representative is net of \$10,000 government grant for same; actual pay rate is \$20/hour.

**FOOTNOTES**

**1) FISH SPECIES MIX**

Maximum quota of 511,022 based on all species from selected lakes; constrained by truck capacity of 6 tons/week x 18 weeks = 216,000 lbs gross weight. Sturgeon & walleye maximized. Sturgeon sold round or smoked filet; assume that smoker capacity permits % sold smoked @ 60%  
Balance of quota is sold round at prices indicated in proportion to 1994 sales. of 34,778

Smoker Capacity:	200 lbs/day @	126 days =	x	0.22	=	20,867 lbs processed
Total Weight before:	Factor	=	Total Max Input	=		4,591 lbs smoked filet
68,108	0.37	=	25,200			

**2) COST TO COMMERCIAL FISHERS: Scenario 1C gives gas contribution at \$1,200/season.**

Item	Years Life	Outlay	Annualized
Food		\$4,500	\$4,500
Truck Rental		N/a	
Fuel		5,000	5,000
Transportation		2,500	2,500
Boat & motor	10	7,450	745
Freight		1,000	1,000
Camping equipmer	5	1,500	300
Nets	5	2,290	458
Contingency	10%	2,424	1,450
		\$26,664	\$15,953 per team

**3) BREAKEVEN ANALYSIS:**

	\$	Lbs Sold	\$/lb
Revenues	\$396,318	88,566	\$4.47
Variable Costs	\$169,826	88,566	\$1.92
Fixed Costs	\$167,482		\$2.56 oper profit/lb
Total Costs	\$337,307		
Gain (Loss)	\$59,011		

<b>BREAKEVEN REQUIRED:</b>	<b>\$167,482</b>	<b>65,491</b>	<b>\$2.56</b>
(lbs = lbs sold)	FIXED COST	LBS	MARGINAL
		REQD	REVENUE PER LB

Variable Costs	3.2	Fish Suppliers	*as indicated; to be confirmed
	3.4.7	Freight	\$0.10 per lb sold
	3.4.9	Processing Supplies	\$0.10 per lb sold
	3.6.4	Product Research & Developmei	3% of sales.
	3.6.6	Sales Commissions	0% of sales.
Fixed Costs		All Other Expenses	

**PROFILE 1C:**

ERR = not applicable

	VARIABLE COSTS	REVENUE PER LB		MARG REVENUE PER LB	
		/bought	/sold	/bought	/sold
WHITEFISH	\$1.00	\$1.58	\$3.20	\$0.59	\$2.20
STURGEON:	\$1.90	\$2.62	\$5.82	\$0.72	\$3.92
WALLEYE	\$1.81	\$3.76	\$8.63	\$1.95	\$6.82
SUCKER	ERR	\$1.19	ERR	ERR	ERR
PIKE	ERR	\$1.69	ERR	ERR	ERR

**WASWANUPI COMMERCIAL FISHERIES  
TABLE OF FORECAST NOTES & ASSUMPTIONS**

**SCENARIO 1D (Directed Sturgeon/Walleye)**

**ASSUMPTIONS:**

**1. FISH PROCESSING SEASON**

8.0 weeks	at	40 hours/week
Prorata adjustment for costs:	72%	15-Jun / to / 21-Sep 13-Jul 19-Oct

**2. SCHEDULE OF REVENUES:**

Profile	Species	Gross Weight (lbs)	Process Factor	Lbs Sold	Selling Price	Revenues
0%	WHITEFISH	0	0.42	0	\$3.20	\$0
(1)	STURGEON:	34,778	0.70	14,329		83,401
7%	- ROUND SMALL			2,045	\$2.00	4,090
15%	- ROUND MEDIUM			4,285	\$2.75	11,783
12%	- ROUND LARGE			3,408	\$3.65	12,440
16%	SMOKE		0.22	4,591	\$12.00	55,088
49%	WALLEYE	37,508	0.37	13,878	\$8.63	119,767
0%	SUCKER	0	0.72	0	\$1.40	0
0%	PIKE	0	0.72	0	\$2.00	0
100%		96,000		28,206		\$203,168

**3.0 SCHEDULE OF EXPENSES:**

3.1 Salaries	#	Rate	hours/wk	Weeks	Costs
Fishers	0	\$8.75	40.0	8	\$0
Manager/trainee	1	\$375.00		24	\$9,000
Fish Cleaners/Preparers	4.0	\$8.10	40.0	8	\$10,368
Truck Driver	1	\$420.00		8	\$3,360
Technician/Sales Rep (See # 7)	1	\$9.58	40.0	0	\$0
Plant Director	1	\$600.00		52	\$31,200
<b>Staffing:</b>	<b>8.0</b>				<b>\$53,928</b>

**3.2 Fish Suppliers**

	Max Quota	Factor	Truck Capacity	Gut Factor	Unit Cost	Total Cost by Species
36% WHITEFISH*	184,878	0.188		0.85	\$0.70	\$0
7% STURGEON*	34,778		34,778	29,561	\$1.53	\$45,229
7% WALLEYE*	37,508		37,508	31,882	\$1.35	\$43,040
36% SUCKER*	184,878		0	0	\$0.30	\$0
13% PIKE*	68,980		0	0	\$0.40	\$0
100% FROM	511,022	TO	72,287	61,443		\$88,269

**3.3 Fringe Benefits**

20.0% (including CSST assumed at 5%) \$10,786

\$152,983

**3.4 Plant Operating Costs (based on status quo)**

3.4.1 Hydro Quebec	(average \$542 per month)	\$6,500
3.4.2 Telephone	(prorata adjustment)	2,160
3.4.3 Insurance		800
3.4.4 Building Maintenance		550
3.4.5 Refrigeration Equipment Mtnc	(pro-rata adjustment)	2,160
3.4.6 Depreciation	(no further purchases assumed)	0
3.4.7 Freight	\$0.10 x lbs	28,206
3.4.8 Plant Supplies	(pro-rata adjustment)	720
3.4.9 Processing Supplies	\$0.10 x lbs	28,206
3.4.10 Contingency	10.0%	1,853
		<b>\$20,384</b>

**3.5 Truck O & M Costs**

3.5.1 Gas and Oil	(prorata adjustment)	\$1,440
3.5.2 Repairs & Maintenance	(prorata adjustment)	2,880
3.5.3 Depreciation	(no further purchases assumed)	0
		<b>4,320</b>

**3.6 Sales & Administration**

3.6.1 Accounting Service		\$1,200
3.6.2 Travel	(prorata adjustment)	5,760
3.6.3 Bad Debt		0
3.6.4 Product Research & Development	0%	\$203,168
3.6.5 Bank Interest & Charges		0
3.6.6 Sales Commissions	0% on sales of	\$203,168
		<b>0</b>
		<b>6,960</b>

>>>>

<b>Implication:</b>	<b>INFEASIBLE</b>			<b>Total Costs as presented here:</b>	<b>(\$184,647)</b>
Lbs Fish Bought:	61,443	Cost/lb	\$3.01	<b>Revenues as presented here:</b>	<b>203,168</b>
		Rev /lb	\$3.31	<b>Gain (loss) before interest &amp; depreciation:</b>	<b>\$18,521</b>
versus 94/95:	33,205 lbs			<b>Return on sales:</b>	<b>9%</b>

**WASWANUPI COMMERCIAL FISHERIES  
TABLE OF FORECAST NOTES & ASSUMPTIONS**

**SCENARIO 1D (Directed Sturgeon/Walleye)**

- 4. Fish supply determined by capture of 50% all quotas all lakes or the lesser of 23% represented by 61,443 lbs from suppliers  
\*Supplier costs herein based on 1994 purchase records and fish plant cost sheet. To be reviewed & onfirmed. The gut factor assumes that fish are purchased gutted and deboned. When purchased at gross weight, the purchase price would be adjusted downward by 15%.
- 5. Sales of all fish stock is assumed at the prices suggested by M.Laberge and with reference to 1994 sales records. Processing discount factors were provided by L. Pepin. Sturgeon and walleye species only.
- 6. Services to fisherman not assumed e.g. nets, boats, gas, etc. (Refer to Footnote #2)
- 7. Staffing excludes fishers as employees; fishery staff as indicated above. Salary of Technician/Sales Representative is NOT required. All fixed costs are adjusted downward by 72% assuming 50% of costs vary with number of weeks in the season.

**FOOTNOTES**

**1) FISH SPECIES MIX**

Maximum quota of 511,022 based on all species from selected lakes; constrained by truck capacity of 6 tons/week x 8 weeks = 96,000 lbs gross weight. Sturgeon & walleye maximized. Sturgeon sold round or smoked filet; assume that smoker capacity permits % sold smoked @ 60%  
Balance of sturgeon is sold round at prices indicated in proportion to 1994 sales. of 34,778

Smoker Capacity:	200 lbs/day @	56 days =	=	20,867 lbs processed
Total Weight before:	Factor	=	Total Max Input	x 0.22
30,270	0.37	=	11,200	= 4,591 lbs smoked filet

**2) COST TO COMMERCIAL FISHERS:**

Item	Years Life	Outlay	Annualized
Food		\$4,500	\$4,500
Truck Rental		N/a	
Fuel		5,000	5,000
Transportation		2,500	2,500
Boat & motor	10	7,450	745
Freight		1,000	1,000
Camping equipmer	5	1,500	300
Nets	5	2,290	458
Contingency	10%	2,424	1,450
		\$26,664	\$15,953 per team

**3) BREAKEVEN ANALYSIS:**

	\$	Lbs Sold	\$/lb
Revenues	\$203,168	28,206	\$7.20
Variable Costs	\$93,911	28,206	\$3.33
Fixed Costs	\$90,737		\$3.87 oper profit/lb
Total Costs	\$184,647		
Gain (Loss)	\$18,521		

<b>BREAKEVEN REQUIRED:</b>	<b>\$90,737</b>	<b>23,425</b>	<b>\$3.87</b>
(lbs = lbs sold)	FIXED COST	LBS REQD	MARGINAL REVENUE PER LB

Variable Costs	3.2	Fish Suppliers	*as indicated; to be confirmed
	3.4.7	Freight	\$0.10 per lb sold
	3.4.9	Processing Supplies	\$0.10 per lb sold
	3.6.4	Product Research & Developme	0% of sales.
	3.6.6	Sales Commissions	0% of sales.

Fixed Costs All Other Expenses

**PROFILE 1D:**

ERR = not applicable

	VARIABLE COSTS	REVENUE PER LB		MARG REVENUE PER LB	
		/bought	/sold	/bought	/sold
WHITEFISH	ERR	\$1.58	\$3.20	ERR	ERR
STURGEON:	\$1.73	\$2.62	\$5.82	\$0.89	\$4.09
WALLEYE	\$1.55	\$3.76	\$8.63	\$2.21	\$7.08
SUCKER	ERR	\$1.19	ERR	ERR	ERR
PIKE	ERR	\$1.69	ERR	ERR	ERR

ISSUES FOR FURTHER DISCUSSION  
AND RECOMMENDATIONS

5.1 Introduction

Any discussion of the Waswanipi Commercial Fishery has to take into account both social and economic concerns. This requires an adequate understanding of both economic and human factors including the economic structures and dynamics of the fishery system on the one hand, and the role of social, cultural, institutional and political aspects on the other. Linkages between these two elements should form the essence of any review. Identification and indication of the importance of issues such as development goals, income distribution, social accountability, resource ownership and distribution, and the nature of decision-making are required.

The first few years of operating this fishery have exposed a number of issues which will need to be resolved. Many of these have been specifically identified in various reports produced during the past six years. (see Annex 4) Many have also been the subject of informal and formal discussions among the partners over the years. The following discussion is an attempt to examine these issues in a comprehensive manner, in order to facilitate discussions by Waswanipi and its partners on the future of this fishery.

Economic viability requires that the fishery would have to be operated throughout the summer and fall; that it access the entire available species mix; and that it significantly increase production. This cannot be achieved without certain constraints and obstacles being overcome, and certain fundamental decisions and commitments being made.

These are presented in a manner which will facilitate discussion and decision-making. All are equally important and all are interconnected. What is clear is that the fishery cannot operate independently of its socio-economic context (locally and regionally) and that typical industry standards cannot be the only measures applied in assessing the future viability of this operation.

The reader should keep in mind that this report does not deal with the implications for the economic analysis of secondary processing of fish to increase their value, with the exception of maintaining a limited production of smoked sturgeon. The production of these types of products (caviar, for example) can increase the income of the fish plant, however, would involve a separate analysis of production costs and revenues, as well as consideration of quality control. We took the view that it would be necessary to ensure the basic viability of fresh and frozen fish production before investing in more refined production objectives.

## 5.2 Community Support

One of the most important observations drawn from this review and from the work carried out is the need for clearly demonstrated community support for the fishery. It seems that the viability of this essentially community-owned fishery has not emerged as a matter of community concern. The community must view this operation as theirs. Without this sense of proprietorship, it will not likely succeed.

On the other hand, the community must also be properly informed about the potential of the fishery in order to make an informed decision whether or not they want to support it, to what extent financially and politically, and under what conditions.

Some of the principle reasons for the lack of a sense of proprietorship are:

- Inadequate publicly-available information about the commercial fishery, its organization and economic foundations.
- Confused communication channels. Information vital to the success of the fishery and for local decision-making is not always transmitted to the community or to the fishery personnel on a timely basis.
- Technical support studies are often inconclusive or contradictory.
- Generalized concern among ISP beneficiaries about the implications of revenue generated from commercial fishing for beneficiary incomes.
- Conflicts within the community concerning access to fishing sites and concerns commercial fishing.
- Some members of the community may view the fishery as conflicting with other economic activities such as outfitting

- Lack of year round employment, even for the plant manager. Under the best possible conditions, commercial fishing remains a seasonal economic activity.
- The fishery relies essentially on subsistence fish harvesting strategies which are now seen as generally inappropriate for commercial production.
- Physically, the plant seems to be "set apart" from the rest of the community. It is rarely visited and has not yet become a focus of community concern.

Decisions concerning the future of the fishery and directions for its development must be made in the community. Key members of the community, i.e. the Band Council, The Cree Trappers' Association, the Income Security representative, tallymen, commercial fishermen and the plant manager must be made commonly responsible for the fishery. It is not reasonable to place all the responsibility for community input on one or two people. It must be shared among all those community interests with a role to play in the fishery. Otherwise a vicious circle ensues - the plant continues to lose money - the longer it loses money the more it becomes the object of comments about its vulnerability, making all those associated with it lose confidence and enthusiasm.

Other institutional partners need to be clearly identified once and for all, and representatives named to a single group with a specific mandate to work with whatever structure the community decides to create to direct the fishery.

**Recommendation No. 1: Ways and means should be developed to ensure that the community develops a sense of proprietorship for the fishery.**

### **5.3 Institutional Support**

The Cree Regional Authority, MAPAQ and MLCP (MEF) have all provided institutional support for the fishery in the areas for which they have responsibility. Also over the years an impressive number of projects connected with this fishery have been financed by the Department of Fisheries and Oceans. This has resulted in what appears, at first sight at least, to be a disproportionately large number of external consultants and advisors in relation to the size of the project. It should be kept in mind, however, that the programs of government support, while they facilitated and even encouraged the hiring of consultants, could not be used

to support the fishery directly, either with infrastructure development or manpower. This sometimes resulted in duplication and confusion for the plant manager and the community.

Institutional support is still required, however, it must be designed to respond to direction from the community, provide careful advice and services, but not direct activities. Within government, those agencies with authority and interest in the fishery should be defined and be prepared to continue dedicating the human resources necessary to work with those persons identified by the community as responsible for the fishery.

The fishery will also continue to require the support of the Cree Regional Authority (CRA). The CRA has human and financial resources available for a variety of important functions. In addition, it is the CRA which is mandated by the James Bay and Northern Québec Agreement to represent the Cree at the Hunting, Fishing and Trapping Coordinating Committee where discussions and decisions concerning the fishery will continue to take place. The CRA also has an important role to play in re-establishing the fishery's regional focus. This support should be provided within the framework established at the community level and in coordination with all government support.

One reaction to the difficulties reported here might be simply to say that the operation should be privatized either by an individual or group of individuals, or to an existing Cree entity. This has been discussed in the past, but Waswanipi officials have generally thought it unwise to set up a private venture until the institutional problems discussed here have been satisfactorily addressed. Community officials and the Cree Regional Authority, however, could examine alternative scenarios for placing the operation of the fishery on a more secure business footing.

**Recommendation No. 2: Coordinated and efficient institutional support should be provided to the Fishery.**

#### **5.4 Regulatory Changes**

The policy framework within which the fishery currently operates involves a number of constraints which, on close examination, prove to be incompatible with a viable commercial fishery, or which operate to impose severe limits on eventual revenues.

a) Concentration on commercially important species. The fishery should be permitted to concentrate on, and maximize economically important species. Granted, the fishery was originally based on the assumption that lake whitefish would be the mainstay of the fishery. This was an unrealistic assumption, at least in the short term. In the foreseeable future, the viability of the fishery depends on being able to market species of known and predictable value. Specifically this means sturgeon and walleye. Sturgeon is a species reserved for the exclusive use of the Cree, therefore allocation between users is not a problem. Allocation between Cree subsistence use and commercial use is an issue and monitoring is required. Walleye is an important recreational and sports fish and allocation formulas would be required.

At the present time, the commercial production of walleye is severely restricted. A viable fishery, at least in the short term, depends on the lifting many of the restrictions on commercial fishing for walleye and reserving a portion of the biologically available quota for commercial production. It is clearly understood that this is a sensitive matter for regulatory agencies.

**Recommendation No. 3: Reducing the level of restriction on fishing walleye commercially, including the establishment of commercial quotas should be examined. Monitoring of the sturgeon subsistence fishery should be maintained and, when necessary, extended to other species.**

b) Mercury Contamination. The current federal limit on mercury concentrations in fish intended for commercial sale (0.5 mg/kg Hg) is an important practical constraint on the marketing of both walleye and pike. Commercial fishing in this region requires a better understanding of mercury levels in predatory species of fish, and in particular the management practices which have the effect of depressing mercury concentrations in the commercial harvest.

**Recommendation No. 4: The possibility of modifying the standards for mercury should be examined. In parallel, further research on factors which influence mercury levels, including population management strategies, should be an objective in the planning of freshwater fisheries development the in the James Bay territory.**

c) Seasonal restrictions. Seasonal restrictions on commercial fishing are an important issue in any northern fishery. Climate, in any case, handicaps the commercial fishery. Even in

the absence of restrictions designed to avoid contact with other users, fishing in the ice-free season in the Waswanipi region is roughly a 17-20 week period. A winter fishery might add another 4-6 weeks. Nevertheless, a year-round fishery is not possible.

In practice, the commercial fishery (for species other than sturgeon) has been limited to the period between Labor Day and freeze up (i.e., mid-September to late October). This restriction has been guided mainly by government concerns about potential conflict with sports fishermen, as well as the protection of walleye during spring spawning. There have been some limited exceptions, but the practical effect has been to limit the authorized period for a mixed species fishery to about six weeks. This is clearly a major economic constraint. The sturgeon fishery, employing larger nets, is open throughout the summer, except during the period of spring spawning (mid-May to mid-June).

**Recommendation No. 5: Discussions with MEF, with a view to maximizing the period in which the fishery remains open during the ice-free period, should be considered a priority.**

d) Fishing gear and techniques. The commercial fishery so far has been operated using subsistence fishing strategies and fishing gear types that subsistence fishermen are comfortable with. The basic fishing techniques used in the fishery (i.e. the gill net operation) were developed to supply fish to households in the context of a subsistence fishery.

The subsistence fishery, it should be noted, went into a sharp decline in the mid-1970's as a result of restrictions imposed in consequence of the discovery of mercury contamination. One of the possible consequences of this decline is a loss of knowledge and skills among a generation of hunters/fishermen further limiting the pool of younger skilled fishermen.

The evidence gathered in the course of this review suggests that the survival of the fishery depends on yield per unit of effort by fishermen increasing substantially. There is also a suggestion that the earlier assumption of subsistence fishing and commercial fishing techniques being compatible (socially and technically) may have been naive. Clearly some basic changes will be required in this sector in order to increase fish production. Subsistence gear is not suitable for directed and intensive commercial fishing. Larger and more stable craft are needed for reasons of safety as well as productivity. To use these craft, fishermen would have to work in teams with some division of labor and organizational responsibility, activities not necessarily common to subsistence fishing. Trap nets are probably needed for summer and fall

fishing. On site facilities, particularly ice production are required. Regarding fishing techniques, systematically fishing each identified lake, in teams is an option. Another option is pulse fishing where a lake is fished intensively for a year, and then allowed to rest for a number of years, depending on the characteristics of the harvest. Training in these new techniques, methods and scheduling of work will be a necessary component in all cases.

**Recommendation No. 6: New technology will have to be introduced, training provided and the development of a fishing strategy which responds to commercial requirements while at the same time respecting social and cultural norms.**

e) The zoning of fishing operations. If the fishery is to operate through the summer period (and it must in order to be viable), it will be necessary to re-examine the issue of allocation between recreational fishing and outfitting, and commercial fishing. One possible approach is to zone certain lakes (for example Waswanipi or Gull Lake) during period of active recreational fishing and physically separate it from commercial fishing. Another strategy would be to reserve certain lakes for either commercial fishing or recreational fishing and outfitting.

Any such strategy would depend on the availability of realistic data on subsistence and recreational fishing. The absence of such data at the moment is an important planning constraint. Steps are now being taken to document the subsistence sturgeon fishery, but further work on the utilization of other species is required if these problems of allocation and use are to be addressed. Biological monitoring would also be necessary.

**Recommendation No. 7: The possibility of zoning the territory to separate recreational fishing and outfitting from commercial fishing should be examined.**

## 5.5 Socio-economic Issues

As stated in a report by Symbion Consultants (1990): "The harvesting sector is the foundation upon which a commercial fishery is developed and operated. The successful development of all other sectors of the fishery is dependent upon establishing a core group of fishermen capable of consistently harvesting a quantity and quality of fish required by the

market'. Developing cooperation with tallymen (and other fishermen), is not only matter of making technical decisions; it is a matter of being sensitive to the social realities of the community and the local management of lands and resources.

Without the approval and active support of tallymen, commercial fishing is simply not viable. In order to ensure the cooperation and, when possible, participation of tallymen in the development of the fishery several steps must be taken:

- A commercial fishing strategy, carefully balancing the needs for subsistence, commercial fishing, recreational fishing and outfitting is required. Such a plan must be developed by a formal group consisting of tallymen, the local Cree Trappers Association, the CRA, the plant manager and government agencies.

This strategy should establish mechanisms for managing all levels of fishing including; subsistence fishing, sport fishing through outfitters, open recreational fishing, informal commercial fishing and formal commercial fishing. Such mechanisms should include programs for collecting various types of data needed to monitor the impacts of the strategy on the resources and the community (biological, social, economic). The strategy should be reviewed annually and, when necessary modified, drawing on information and experiences of the previous year's activities.

- A way must be found to resolve the conflicts between the Income Security Program and revenue generated from commercial fishing. Until this is done, recruitment of fishermen and fish supply will remain serious problems.

As a first step, a explanation of how the program currently works, and how individual fishermen could continue to benefit from ISP and participate in the fishery should be prepared. One immediate improvement would be to set in place a system whereby fishermen were given assistance in order to calculate net income to be applied in their income declarations. A second step involves the Cree authorities taking a decisions to initiate active measures to amend the Program so that commercial fishing becomes an eligible activity.

- A better system for monitoring and gaining a better understanding of the scale of recreational fishing and associated impacts is needed. Tallymen could be engaged as auxiliary conservation officers and as one of their duties, provide on-site information about the number of fishermen on the territory which could be used as a basis for a general estimate of the number of fish taken annually.
- The Cree (tallymen, local authorities and the CRA) should establish a program and protocol for collecting information on subsistence activities for sturgeon and walleye. A model is currently being developed for the subsistence sturgeon harvest in Waswanipi. If successful, this could later be expanded to other species. In this way, the concerns that commercial fishing is impacting subsistence fishing could be addressed.

**Recommendation No. 8: Every effort should be made to resolve these issues and for a representative core group to develop a commercial fishing strategy that is acceptable to all but with particular attention to the expertise, needs and concerns of the tallymen.**

## **5.6 Administration and Personnel**

One of the important objectives of the fishery was to create interesting employment for as many people as possible in the community. Job types include fishing, processing, management, servicing the plant and sales. To date, limited participation in the fishery has minimized the number of jobs available to the local population. In addition, at the management level, the complexities of administration and coordination of both the fishing and plant activities have required hiring, training and assistance from outside of the community.

Further, the hourly rates paid to the plant manager and to part time plant workers and general conditions of employment compare unfavorably with wage rates and conditions of employment available elsewhere. The commercial fishery cannot compete directly with most other part time employment or full time employment. Coupled with the high cost to fishermen, there is little financial incentive to fish commercially.

The plant has seen a variety of managers and assistant managers over the years. Lack of stability in management has been a key factor in how the plant has performed and how it is

viewed inside the community. Staffing has been "ad hoc" in certain situations, resulting in confusion and lack of leadership at the plant. No one and everyone has been in charge. The fishery has benefited from the assistance of individuals from outside the region. These individuals have, in practice, functioned as interim managers until a permanent, local manager was hired. The challenge facing the plant manager should not be under-estimated. Clearly defined areas of authority are required, along with access to technical and administrative resources when necessary. The plant manager cannot be expected to function in isolation.

In order to improve this situation, positions must be clearly defined and staffed according to very specific job descriptions. Training programs, where required, must be pursued.

The increased production required for economic viability will have a direct impact on the personnel and administration of the plan. Care must be taken not to overestimate the capabilities of the existing staff to handle a dramatically increased volume. The equipment at the plant can handle increased production, but there would have to be a very carefully planned step up on production to maintain quality and ensure the safety of plant personnel. In addition, the plant must be prepared to take on the task of providing administrative services to the fishermen in the form of providing year-end statements on income and expenses for those fishermen who are participants of the Income Security Program. .

A strict system of cost control and information gathering should be implemented at the plant. In this way, it will be possible to have ready access to financial, technical and biological information for the purposes of management and evaluation needs.

The local plant manager will likely require assistance in these matters, at least for a few years. This support cannot take the form of individual contractors with specific mandates. It has to be core support that is costed out in the operational budget.

It is also important to note that the fishery faces administrative and institutional issues which are very different from those facing other producers in the 1990s. Most Native commercial inland fisheries in Canada fall under the jurisdiction of the Freshwater Fish Marketing Corporation which, during the last thirty years, has provided highly centralized collection and processing services for producers located in the Prairie provinces and the Northwest Territories. The Corporation has taken care of most, if not all, of the organizational and marketing issues which currently face the Waswanipi fishery. From this perspective, the

fishery has had to deal with a huge range of organization and marketing issues in a very short period of time.

**Recommendation No. 9: A plan of action should be developed to create stable, attractive employment including the necessary training, technical and administrative support. (Note that the forecasts included in Section 4 attempt to cover these elements.)**

## **5.7 Technical Matters**

The plant is in reasonably good condition and could continue to function without major improvements. A number of suggestions have been made, however, in the course of inspections (ventilation, maintenance of freezers, floor drains, ice production, upgrading of the smoking unit, etc.) and they should be considered as part of future planning. Physical capacity of the plant is not considered a constraint, therefore, no specific recommendations are put forward at this time.

As the economic analysis indicates, operations are presently limited by truck capacity to move fish from fishing sites to the plant and from the plant to market. Transportation should be reassessed. Production is also limited by the absence of facilities at the fishing sites for preparing and holding fish.

As of June 1995, the plant generally met inspection standards. Quality control is good, however, with increased production, problems may be encountered. Particularly, with increased volume of fish, it may be difficult to maintain quality at the fishing sites. The plant is periodically inspected by the Department of Fisheries and Oceans Canada and licensing depends of meeting the requirements of this department. The department withdrew it licensee in 1995 for reasons of consistently late or poor reporting. The plant cannot now sell its product outside of Quebec.

For a full technical and operational description of the plant, see Annex 1 and Volume 2.

**Recommendation No. 10: General plant upgrading should be considered in a development plan for the fishery. Transportation requirements, particularly require further assessment. Any development plan should also include provisions for facilities at key fishing sites. The manager will require administrative support in order to re-acquire a license from DFO. (Relates to Recommendation No. 9)**

## **5.8 Marketing**

The scenario described in Section 4 implies at least a four fold increase in the level of production of the Fishery. Sturgeon harvests remain stable, however, as this species is currently being fully utilized from waterbodies in close proximity to the community. In addition, in light of subsistence data, these levels may have to be re-evaluated. Production could be increased by expanding the geographical range of the fishery, along with the necessary infrastructure support (transportation and on-site facilities). There is an existing regional market for this resource and no further development is necessary. Increased emphasis on the production of smoked sturgeon fillets, and the production of processed sturgeon caviar could both improve the revenue prospects for this species.

Within the proposed scenarios, walleye becomes a more important feature of the fishery. It is projected that the walleye harvest will increase six fold. According to the survey conducted by Marc Laberge for this review, this species has an established reputation in the regional cuisine and the demand for this product is high. One of the tasks of a marketing agent will be to secure a regional market for the product. It will be necessary, however, to carefully consider the issue of mercury in walleye and commercial standards as well as resolving issues of competition with the sport fishery.

The balance of the fishery rests with whitefish. It accounts for 72% of the proposed production. There is no existing, stable market for whitefish. In Laberge's survey, some interest was shown in the product by regional institutions, restaurants and one bulk buyer. The experience with the marketing of whitefish, both locally and regionally, has been disappointing. The species is not well known among the non-Native population of the region and this creates a significant entry barrier. The value of this species on the southern, urban

market is not high enough to warrant trying to access this market and it may be preferable to aim at the development of a regional specialty.

Development of this market has been limited severely by the amount of fish available and the unpredictability of deliveries. The Fishery would first have to resolve the problem of production levels and the recruitment of fishermen who would remain in the fishery and who can be relied upon to assure production at particular times of the year.

**Recommendation No. 11: If the problems of production can be systematically addressed, an effort should be placed on developing a regional market for whitefish and whitefish products.**

## **Annexes**

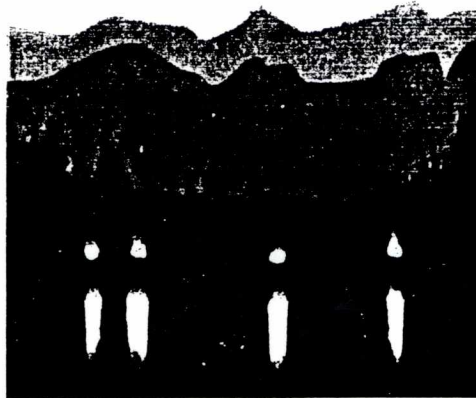
**Annex 1**

**Executive Summary:  
Status Report and Overview  
of Waswanipi Fisheries Operations 1989-94  
Lucie Pépin  
April 1995**

**(for the full technical report see Volume 2)**



Waswanipi  
Fisheries



**BILAN DES OPÉRATIONS  
1989-94  
ET PERSPECTIVES**

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RAPPORT SYNTHÈSE

par  
Lucie Pépin, consultante

AVRIL 1995

**WASWANUPI COMMERCIAL FISHERY**

**Review of Operations  
1989-1994  
and Outlook**

**Summary Report**

by Lucie Pépin, consultant  
April 1995

[translation]

## CONTEXT AND MANDATE

Built in 1989, the Waswanipi Commercial Fishery now has the experience of five seasons of operation. This pilot project for fisheries development on Cree territory was generously funded under the Canada-Québec Subsidiary Agreement on Fisheries Development (Phase II, 1989-1990, Northern Québec). Evaluated in 1991, support was renewed during the period 1991-1994. The time has now come to take stock of the situation.

This document synthesizes a range of information concerning the evolution of the operation of the plant, be it on the subject of its supply, its installations (equipment and set up, quality control management, production management) or of marketing. Its aim is to provide a survey of the five years of operation in order to underline the strengths the plant has acquired over this period, as well as obvious weaknesses apparent in its daily operations and their implications for its future development.

The document's conclusions and recommendations are formulated with an immediate view to establishing the facts and to suggesting priorities for action. Beyond the areas covered, we are assuming *a priori* that a period of additional research will be undertaken in order to set concrete solutions into motion.

This document is based on the numerous studies undertaken in the past as well as on several additional interviews, on annual purchase and sales reports, and on accounting data. Compilation of the primary documentation required for the preparation of this document involved many days (and in some cases weeks) of research. This undertaking was especially lengthy since some very important documentation was difficult to obtain. The net result of this process -- during which Ronald Bossy, the plant manager, was of great help -- is that some of the observations contained in this study are only partially documented, or are based on incomplete data.

## SUMMARY

This document is a summary of information from various sources concerning the evolution of plant operations, from the standpoints of supply, processing conditions, (equipment and installations, management of quality control and production control), development and product. It reviews five years of operation (1989-1994) in order to highlight acquired strengths, as well as the most obvious weaknesses in daily plant operations or for future business development.

It is now very clear that with a cumulative investment of over half a million dollars, the Waswanipi Commercial Fishery (WCF) has acquired, the necessary **technical** skills to operate well and even to excel in the market. Its aboriginal origins as well as its northern location are additional advantages from a marketing perspective, in that concepts of authenticity and product purity are easily associated with the business. For a public already highly sensitized to environmental quality and the richness of Native cultural heritage, the introduction of a bias towards Cree products is only a step away.

Nevertheless, since 1990 the fishing potential of the Cree territory (885,000,553 lbs for all species) -- covering the area between Chibougamou, the northern limit of the Gouin Reservoir, Miquelon and Matagami, as well as the region immediately around Nemiscau (Rupert River/Lake Evans) -- has only been exploited at 2 to 38% per year, depending on the species and the year. The number of fishermen currently active, or the level and duration of their activity, should perhaps be revisited.

The plant only operates at 3%-7% capacity (-1,000,000lbs/season). The seasonal capacity for smoking sturgeon is double the total quota (85,112 lbs); that of whitefish is more or less equivalent to the available quota (317,000 lbs).

Even within the context of this relatively modest production, the plant already boasts seven (7) star products: whole and smoked sturgeon, de-boned sucker,

whitefish and/or pike, and whole and filleted walleye. Whitefish fillet could likely join these ranks if it was better marketed and classified as kosher. Sturgeon and whitefish caviar, more difficult to process but extremely lucrative, are two products that would be to the plant's advantage to introduce soon ... following the maximization of these others.

During these five operating years, the business has shown that is able to manage the production of 22 different products according to some thirty specifications. It has the means at its disposal to manage both production and quality. In fact, a few accidents along the way notwithstanding, the raw material and the finished products are generally of good quality and apparently meet customer expectation.

The technical base of the WCF is adequate, but there is much to be done. A cursory look at the operation's most obvious shortcomings easily reveals its disturbingly shaky footings, especially in terms of product quality (mercury levels, bacterial contamination) and of operational viability. These are difficult issues.

For the moment, the goodwill of several project members -- the plant manager, some excellent fishermen, fisherwomen and plant workers -- is a guarantee of continuity, but the key factor in the project's development and longevity resides in a core resource of permanent professionals. The work is heavy for some and the goal of a viable commercial fishery in Waswanipi is far from a reality.

The terms "consolidation" and "proprietorship" best sum up the priorities recommended for the coming two years. The consolidation of operations and the proprietorship of the project by the Cree community *are first and foremost human resource issues*.

Consolidation is basically a question of the integration of a food industry culture into all plant operations, from harvesting to marketplace. It requires the development of a stable and knowledgeable labour force. It also requires the introduction of new work habits, where the concepts of standardization and

regularity are understood as the keys to success.

Proprietorship of the project means developing a sense of ownership and pride in seeing the enterprise prosper, in seeing the project enter the modern world while preserving its uniqueness and its special position in the marketplace. It means wanting to act upon the collective will of the community, up to now seemingly not prepared to face the challenge. Is the Waswanipi community determined to commit itself fully to this venture?

\* \* \*

1.0      **REVIEW OF SUPPLY**

## NUMBER OF FISHERMEN AND PERIOD OF ACTIVITY

Since 1990, the total number of fishermen contributing to the supply of the plant has never been less than 20 (in 1992). The maximum number of fishermen -- 27 -- participated in the first operating year (1990).

The fishermen are generally active during 2 or 3 months. However, in 1994, two-thirds of the fishermen were active no more than 1 or 2 weeks. In five years, only one (1) fisherman was active during a full season (5 months, in 1994).

## PRICES TO FISHERMEN

It appears that all prices currently offered to fishermen are below market (this information should be further investigated). Establishment of prices seems erratic, as shown in the extraordinary rise in prices for certain species:

whitefish: \$0.45 to 0.70/lb  
 sucker/pike: \$0.15 to 0.70/lb  
 walleye: \$0.45 to 1.35/lb

## HARVEST BY SPECIES

1992 was the best fishing season: 68,474 lbs  
 1994 was the worst season: 34,403 lbs

By species, the harvest varied as follows:

sturgeon:	33% (1991)	to	64% (1994)
whitefish:	13% (1994)	to	48% (1990)
sucker:	6% (1994)	to	21% (1992)
walleye:	4% (1993)	to	14% (1991)
pike:	6% (1993)	to	12% (1991)

## MOST EXPLOITED AREAS

On the basis of the cumulative volume over five years, the areas most fished were:

- sturgeon: Rupert River and Matagami/Bell River  
15 May-30 November
- whitefish: Waswanipi  
III: 7 June/15 July+ II: 30 May/30 November
- sucker: Two Moose, Waswanipi and Father/Doda  
III: 7 June/15 July + II: 30 May/30 November
- walleye: Waswanipi, Maicasagi and La Trève  
30 May--30 November
- pike: Maicasagi, Waswanipi and Olga  
30 May-30 November

## AREAS WITH HIGHEST QUOTAS

- sturgeon: 1)Rupert River/Evans  
2)Father/Doda/des Vents/Mégiscane  
3) Goéland/Maicasagi/Olga  
4) Waswanipi/Pusticamica/Nicobi  
5) Matagami/Bell River
- whitefish: 1) Chisasibi?  
2) Evans/Doda  
3)Goéland/Maicasagi/Olga  
4) Waswanipi/Pusticamica/Nicobi

## 5) Matagami/Bell River

- sucker:
- 1) Evans
  - 2) Goéland
  - 3) Matagami/Bell River/Soscuma
  - 4) Waswanipi
  - 5) Father/Doda
- walleye:
- 1) Rupert River
  - 2) unknown/David/Gwillim
- other sites show accidental harvests
- pike:
- 1) Evans/Rupert River
  - 2) Goéland
  - 3) Matagami/Bell River
  - 4) Waswanipi/Pusticamica/Opawica
  - 5) Father/Doda/Surprise/Caopatina

## COMMENTS

The regions farthest away (Evans/Rupert River) seem to offer the best fishing potential for all species. Historically, these regions are also the most fished for sturgeon.

For the other species (whitefish, sucker, walleye, pike), the most intensive fishing zone is located in a 2 to 4 hour radius from Waswanipi.

## A COMMERCIAL FISHERY FOR CHISASIBI ?

At Chisasibi, commercial fishing would essentially be limited to autumn (October) with deep nets or traps, for whitefish (estimated potential: 98,600 lbs per year).

N.B. There are no sturgeon.

Mercury levels in walleye are too high.

The potential volume for sucker (4733 lbs per season) is insufficient to merit consideration.

The potential volume for pike (22,678 lbs per season) represents only half the quota available in the Rupert River/Dana/Evans Lakes zone (currently fished at 0.01% for this species); it is equivalent to the potential of zone 7 (Father/Doda/Caopatina), zone 4 (Goeland/Maicasagi/Olga), and zone 3 (Matagami/Bell River). *See tables in sections 1.4 and 1.5.*

Exploratory fishing in 1991 was too limited to ensure the reproduction of results obtained: 1- the exceptional efficiency of deep nets with multi- or monofilaments (in October, 16 times more efficient than surface nets) and of traps (in October, 2.6 times more efficient than monofilament deep net fishing); 2- the systematic multiplication of results obtained in relation to number of nets set. **Additional exploratory fishing must be undertaken** to confirm harvest potential (*see Annex 4: Summary of exploratory fishing results in 1991*).

In addition, while deep net fishing may seem more efficient, it is important to remember that **most of the LG2 reservoir bottom is wooded**, with the exception of several targeted sites: embankments and areas that were deforested before construction of the dam (for subsistence fishing).

Finally, 17% of the whitefish harvest exceeded acceptable mercury levels (1991). Thus, not all of the harvest can be destined for human consumption.

Until now, *no more than 25% of the whitefish quota available in the areas situated between a 2 to 4 hour radius around Waswanipi (111,060 lbs for the most-fished lakes in zones 4, 5, 6 and 7) has ever been harvested.* In 1994, only 4% of this potential was delivered to the plant.

For the WCF, *the markets for whitefish (fillets and de-boned) are currently limited*

*and will be relatively difficult to develop,* without a serious sales and promotion effort for these products.

## 2.0 REVIEW OF PROCESSING OPERATIONS

## 1. CUMULATIVE INVESTMENT AND THEORETICAL CAPACITY

The cumulative investment since 1989 is over half a million dollars (\$563,852).

The plant's theoretical processing capacity is around 1,000,000 lbs per fishing season (200 days, from 15 May to 30 November). This figure is limited by storage capacity in the raw material storage rooms (~3 tons/day).

Smoking capacity is 200 lbs/day for sturgeon and 400 lbs/day for whitefish.

## 2. VOLUME AND PROCESSED PRODUCTS

In both good and bad years, the WCF processed an average of 27 tons (54,500 lbs) of raw material per year, at a sales price between \$27,190 (1993-4) and \$46,246 (1994-95).

Since 1990, the WCF has offered **22 different products** :

sturgeon:	whole, fillet, smoked, caviar
whitefish:	whole, fillet, de-boned, caviar
sucker:	fillet, de-boned, croquettes
yellow walleye	
(<42cm):	whole, fillet, cheeks, de-boned
pike (<40cm):	whole, fillet, de-boned, croquettes
cisco:	de-boned
burbot:	whole
notched finned hiodon:	?

For these twenty-odd products, the WCF applies **34 product specifications** (not applicable to all species or to all products):

- heads on/off and skins on/off;

- 13 size classifications: fillets 2-4, 4-6, 6-8, 8-10, 10-12 ounces; <4 lbs/>4 lbs; whole 1-2, 2-4 lbs; <5; 5-8, 8-12, >12 lbs;
- 3 preservation methods: fresh, frozen and smoked;
- 6 packaging sizes: frozen 60 lbs (whole) or 4 x 12 lbs (fillets); 50 lbs (fresh); 1/2 or 1 kg (smoked, de-boned); 1 lb (cheeks);
- 3 packaging types: plastic bag/box; tray/saran or vacuum-pack bag; vacuum-pack bag;
- 5 combinations of de-boned meat.

*N.B. No detailed product list exists for the WCF. The list presented here has been compiled from various sources.*

### 3. NUMBER OF EMPLOYEES

Between 1990 and 1994, the number of employees decreased from 14 to 5 , in varying proportions between full and part-time workers. A direct link cannot be drawn between the volume of product processed and the number of employees. At any rate, total salaries alone have always exceeded the total value of sales. (*see sections 2.5 and 2.7*).

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	<u>Volume (raw lbs)</u>	<u>Total sales</u>	<u>Salaries</u>	<u>Purchase from fishermen</u>
1990	59,296	657	29,498	2412
1991	57,733	44,056	62,269	47,394
1992	68,475	42,655	76,163	28,631
1993	52,490	45,274	74,872	41,567
1994	34,403	27,190	63,586	27,735
1995		46,246		27,279

---

#### 4. FIXED COSTS

Average unit fixed costs are **\$1.78/lb (raw weight)** for processing of an average annual volume of 54,500 lbs of raw material. This amount does not include the cost of the raw material (that must be added in relation to the return on the finished product), or of amortisation of equipment. As such, **most of the products are sold for less than production costs.**

#### 5. THE "BEST-SELLERS"<sup>1</sup>

	Volume (product lbs)	Year	Sale price/lb	TOTAL
1) frozen whole sturgeon	12900	92	1.12-2.25	\$21,736
	4450	94	2.00-2.75-3.65	\$12,460
2) smoked sturgeon	2028	94	10-11.00gross	\$21,294
	722	91	7.00	\$ 5054
3) de-boned sucker	7025	92	2.07	\$14542
	1663	91	1.25	\$ 2079
4) walleye fillets (skin off)	1821	91	2.27	\$ 4134
	1804	92	3.80	\$ 6855
	820	94	7.75gross	\$ 6355

---

<sup>1</sup> Yearly compilations of volumes sold, prices and total sales do not exist. Until 1994, shipping invoices -- the only source of data -- were often incomplete. All volumes and prices reproduced here and in Table 2.8 are approximate and should be read with caution.

5) de-boned pike	3524	91	1.15-1.25	\$ 4229
6)de-boned whitefish	2930	91	1.25	\$ 3662
	2200	92	1.00	\$ 2200
7) whitefish fillets (skin off)	3606	92	0.90	\$ 3245
	528	91	1.80	\$ 950
8) sucker fillets	1544	91	1.15	\$ 1776
9) whole pike	660	91	1.15	\$ 759

### 3.0 STATUS OF EQUIPMENT AND INSTALLATIONS



radio	\$ 2315
N.B. a radio is currently leased	(\$ 300/month)
computer and printer	
(if indeed these are lost)	<u>\$ 2500</u>
	<b>\$ 9210</b>

#### MEDIUM OR LONG TERM:

**Increase freezing capacity** by about 30% (to be verified): decrease freezing time from 3-4 hours to 2-3 hours by upgrading the ventilation system in the room (which implies a loss of space)

Estimated cost (to be verified)                      \$ 5000

**Create a preparation room for croquettes and caviar** (in the coffee-break room) and move the coffee-break room to the front of the plant.

Estimated cost    \$ 4300

#### 4. **TOOLS FOR MANAGEMENT OF EQUIPMENT, SUPPLIES AND INSTALLATIONS:**

Annex B of the *Plant Operation Manual* (Appendix B: Leaflets on Equipment) and Sections 3-7 of the QMP (quality control of ingredients, packaging, labels, cleaning/disinfectant agents and lubricants, construction and maintenance of installation and processing equipment) are currently available to the plant. In order to improve control of production equipment, it seems appropriate to *consolidate these documents and to add:*

- an updated **inventory** of equipment and supplies indicating name of object, model, capacity, technical specifications, date of purchase, purchase price, details of the guarantee, name of supplier;
- **preventive maintenance forms** for equipment/supplies and installations;

- an **upgrading calendar** for equipment and supplies, and for major installations maintenance;

- a **budget** for maintenance and upgrading.

5. **A PERSON IN CHARGE OF EQUIPMENT, SUPPLIES AND INSTALLATIONS MANAGEMENT:**

A qualified individual responsible for the management of equipment, supplies and installations would free the plant manager from these responsibilities.

This role could be given to a plant worker who would see to: updating inventory, tracking the maintenance calendar, supervising repairs and tracking purchases.

#### 4.0 STATUS OF QUALITY CONTROL

## 1. STRENGTHS

The plant has all the basic means at its disposal to ensure efficient quality control:

- installations, equipment and supplies that conform generally to standards for food products;
- a "Guide" for the implementation of a quality control programme (QMP/DFO) and the necessary tools for control;
- the Plant Operations Manual;
- raw material usually of quality "A" (according to freshness tests in 1994).

## 2. SERIOUS DEFECTS ALREADY NOTED:

### Toxicity

- *failure* in the application of the QMP;
- a *recall* of smoked products for bacterial contamination (E. coli);
- a warning for *mercury contamination* of yellow walleye.

### Failure to respect product specifications:

- the plant has already lost an important buyer for fish patties, apparently following an unauthorized modification of the preparation recipe. The result of this event has been the departure of the manager (R. Buffit), who had been responsible for developing the product and for making the commercial contact.
- clients have often complained of products received with torn packaging (not solid enough?);
- handwritten corrections to labels have been observed; these negatively affect their professional appearance.

### **Failure in client relations**

- there has been a lack of follow-up in filling client orders (PlaniMark, p. 27); as for product prices, clients complain of contradictory information coming from different sources.

## **3. MAJOR DEFECTS IN QUALITY CONTROL MANAGEMENT**

The intermittent defects noted above can likely re-occur because major defects exist in the plant's quality control management. These are:

- unstable management (3 managerial changes in 5 years);
- the QMP description and its integration into daily operations (a requirement of the DFO and a condition to the permit) are not completed: means of control and correction measures are not fully integrated (see Section 4.2.1);
- training of staff and managers is inadequate; employees require constant monitoring;
- given the special context of a northern fishery, the means of control of mercury levels (not only a function of fishing gear) are inadequate;
- the systems for organizing information on management and quality control are not working.

## **4. A PERSON IN CHARGE OF QUALITY CONTROL**

Despite the work done so far to integrate different aspects of quality control management into operations, a great deal remains to be undertaken:

- complete the QMP and the Plant Operation Manual;
- undertake the controls and follow-ups required by the quality control management programmes established for the plant in its

**official documents;**

**-establish a filing and classification system for information related to quality control management;**

**- establish a plan and schedule for employee and manager training in industrial practice, in the Laws and Regulations, in management of a quality control programme, etc.**

Given the size of the task and the necessity -- indeed urgency -- to integrate quality control norms, as well as those of the Plant Operation Manual, as quickly as possible into the plant's daily routine, it is recommended that:

**a qualified individual be hired to take responsibility for quality control at the plant, for at least two consecutive operating seasons.**

## 5.0 STATUS OF PRODUCTION CONTROL

## CURRENT SITUATION

No means of controlling **production cost by product** currently exists at the WCF. Moreover, there is no **stock management** by product (raw material and finished product incoming and outgoing from cold storage) that would allow calculation of return.

**Time management** for employees involved in production is limited to the most rudimentary consideration: presence on the job. There are no figures available for time devoted to specific tasks or to specific products, to which employee time should be attributed in the calculation of actual costs (e.g. time used for smoking and vacuum-packaging of sturgeon should be factored into the calculation of the cost of producing smoked sturgeon).

There are no **standards or goals for efficiency or productivity**. Available information concerning efficiency in the production of individual products or the processing of individual species is vague and contradictory (for a summary of this information, see Section 5.4).

**Bookkeeping** is generic and all costs are lumped into a general accounting that is inadequate for effective management decision-making.

The **classification and filing system** for information is haphazard. Consultation of documentation is a laborious task.

Thus, **sales prices** have often been established according to the vagaries of the market, in order to reduce inventory.

**GENERAL COMMENT:** At present, the business is not able to determine production costs by product. Nevertheless, a quick survey of some basic data (however inaccurate) demonstrates the plant's difficulty in making profits under current conditions, even for products that are apparently lucrative. It is obvious that

a knowledge of production costs by product would greatly facilitate management decision-making towards strategic marketing.

#### **RECOMMENDATIONS:**

- 1) As quickly as possible, establish a basic system for accumulating information on unit cost for each product. Priority information is:**
  - finished product yield (reliable basic data)**
  - labour costs specific to each product;**
  - unit packaging costs (complete data);**
  - a bookkeeping system consistent with plant operations that allows a realistic establishment of fixed and variable costs.**
  
- 2) Create a staff position for production control. This person would:**
  - develop the tools and means of collecting information and creating a filing system;**
  - establish minimal efficiency and productivity goals;**
  - exercise the required control;**
  - interpret and deal with information, and react to unexpected changes;**
  - recommend sales prices.**

## 6.0 STATUS OF MARKET AND PRODUCT DEVELOPMENT

Given current financial conditions and in the context of the overall and the desired goal to develop a commercial fishery on Cree Territory, it is essential to develop markets consistent with the needs of the fishery. **On the short term, priorities are:**

1. To diminish unit fixed costs by increasing volume of production.
2. To increase the profit margin by seeking more lucrative markets.
3. To stabilize supplies of raw material by consolidating relations with a core group of fishermen.

## MARKET PRIORITIES

### 1. Volume-based (high volume, medium to low price): Potential Markets

whole sturgeon	wholesalers/distributors
de-boned meat	institutional network
whitefish fillets	industrial kitchens/caterers
smoked sturgeon	export

### 2. Price-based (low volume, high price):

high-quality smoked sturgeon	specialized fish stores
walleye (whole and fillets)	restaurants/high-quality hotels
caviar (sturgeon, whitefish)	export/specialized markets

### 3. Aboriginal and regional markets (low volume, medium to low prices):

Comments: Regional markets include both high- and low-end markets. However, given the demographic spread and the short tourist season, volumes would likely be modest (except for the Poissonnerie Tremblay de Senneterre, with whom partnership agreements might imply substantial orders, especially of whitefish). These markets might nonetheless provide relatively stable opportunities, with which a special relationship is easier to maintain, that offer possibilities for promotion of an important tourist market.

Though less lucrative, volume-based markets help to quickly lower average fixed costs. These markets also offer an excellent opportunity to regularize supply practices with a good group of fishermen.

## **PRICING POLICIES**

Establish a variable pricing policy, based on:

- production costs by product;
- offers tailored to specific potential markets;
- special prices that the fishery wants to maintain (e.g. for the local and Aboriginal market, for purchases directly from the fishery; for the regional market, etc.).

## **SALES INITIATIVES**

1. **Use a qualified and dynamic individual to:**

- **consolidate existing markets (sales role)**
- **develop new markets (marketing role)**
- **supervise the development of promotional strategies and tools**

N.B. Among the products identified as market priorities, **WHITEFISH** and **SUCKER** will require the greatest promotion efforts (see PlaniMark, 1992 and M. Laberge, 1995).

2. **Use promotional tools:**

- a detailed list of all the products offered by the WCF (including specifications, e.g. head on/off, skin on/off, size and type of packaging, etc.), plus a current price list;
- well-presented sample products (well-packaged, well-labelled) and information sheets;
- promotional brochures, posters and hand-outs geared to each potential market; upgrade the quality of business cards; develop of publicity strategy;

- develop an attractive corporate and product image:
    - . a typically Cree enterprise
    - . products from the “cold, pure lakes of the Cree Territory of James Bay”
    - . more attractive alternate names for fish (e.g. “mullet” instead of “sucker”)
    - . take advantage of the Cree language by translating species names and promotional materials (e.g. WCF prestige magazine); offer all material in two or three languages.
3. **Use a promotional strategy:**
- aim at potential markets and new areas;
  - negotiate relationships with wholesalers and distributors for promotion of WCF products;
  - re-establish contacts already made during market studies (see PlaniMark 1992 and M. Laberge, 1995).

## **PRIORITIES FOR PRODUCT IMPROVEMENT**

1. **DE-BONED MEAT**
  - standardize the species combination
  - standardize preparation methods
  - improve packaging and labelling
  - adapt formats in relation to different potential markets
2. **FILLETS**
  - improve IQF packaging
3. **SMOKED STURGEON**
  - standardize recipe and packaging for low-end product
  - standardize recipe and packaging for high-end product

- adapt formats in relation to different potential markets

#### 4. CAVIAR

- standardize processing method
- develop prestige containers and packaging
- develop formats adapted to the marketplace
- develop prestige labelling

#### 5. KOSHER CERTIFICATION

- adopt the methods, recipes and processing procedures for whitefish and sturgeon that conform to kosher standards demanded by many Jewish markets. Include the kosher logo on the labels.

#### 6. CROQUETTES

- standardize the recipe(s), as well as preparation methods
- improve labelling as required

N.B. This product is not a priority since the plant's installations and equipment are currently inadequate for the preparation of large quantities. The market for this product is not lucrative and responds essentially to local demand and to a few specific ethnic markets (Montréal).

#### 7. PRODUCT LIFETIME

- undertake the necessary preservation tests on WCF products.

N.B.1 **Keep an undated Research and Development file** in which all current development work, experiments, results obtained, resource-persons, budgets, expenses, etc. are recorded. This file should be kept as an annex to the Plant Operation Manual. Results integrated into daily business operations should be added to the Plant Operation Manual.

N.B.2 **Assign a person to Product and Procedures improvement.** This person could be either an employee or a consultant. Without anyone assigned

specifically to these tasks, the necessary steps towards consolidating actual markets and development new ones will likely remain dispersed and without follow-up. This assignment should be limited to accomplishing current development goals.

## 7.0 CONCLUSION AND RECOMMENDATIONS

## CONCLUSION

This overview has been organized chapter-by-chapter in order to gain a clearer overall view. It seems now very obvious that the Waswanipi Commercial Fishery has acquired the technical skills necessary to operate well and even excel on the market.

Be it the supply potential or processing capacity, the state of equipment and installations (generally very good), the quality of finished products, their variety or their appropriateness to the marketplace, WCF has many good cards in its hand. The Aboriginal origins of the business, as well as its northern location add special allure from a marketing perspective. Notions of authenticity and product purity are easily associated with it. For a public highly sensitized to environmental purity and the richness of Native cultural heritage, a favourable bias towards Cree products is only a step away.

However, since 1990 the fishing potential of the Cree territory -- stretching between Chibougamou, the northern edge of the Gouin Reservoir, Miquelon and Matagami, as well as the immediate area around Nemiscau (Rupert River/Lake Evans) -- has only been exploited at 2 to 38%,<sup>2</sup> depending on species and years (see Section 1.4). Although the Waswanipi Commercial Fishery has a theoretical capacity equivalent to this harvest potential,<sup>3</sup> it has only operated at 3% to 7% of its capacity since 1990. The seasonal capacity for smoked sturgeon<sup>4</sup> is double the total quota (85,112

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<sup>2</sup> The total quotas available in this territory allow an annual harvest of 885,533 lbs (all species together).

<sup>3</sup> Over 1,000,000 lbs per season, i.e. ~200 days, from May to November.

<sup>4</sup> 200 lbs/day X 200 days = 40,000 lbs of finished product or 160,000 lbs raw weight for a return ~25%.

lbs); the seasonal capacity for whitefish<sup>5</sup> is more or less equivalent to the available quota (317,096 lbs).

Should the number of fishermen currently active, or the average length of their activities be reviewed? Should their activity be spread over the entire fishing season?<sup>6</sup> Is an alignment of prices paid to fishermen with market prices (or an equivalent with the plant's services to them taken into account) a minimum requirement to guarantee their commitment to providing supplies? It may not be within the perimeters of this report to discuss the problems of the participation of the fisherman, but the impact of the situation for the outlook of the fishery is clear.

But all is not lost! Even considering this relatively modest production, the fishery already boasts seven (7) star products: whole and smoked sturgeon; de-boned sucker, whitefish and/or pike; whole and filleted walleye. Whitefish fillet could easily join these ranks if it could be classified and promoted as kosher. Sturgeon and whitefish caviar are difficult to process, but very lucrative and are products that would be in the fishery's interest to develop soon.. following the maximization of these others (see p. 68).

In addition, the fishery has shown than during five years of operation, it is capable of managing the production of 22 different products according to thirty-odd specifications. It possesses the basic tools for quality and production management. In fact, with the exception of several intermittent problems that have been discussed in Section 4.0, the raw material and finished products are generally of good quality

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<sup>5</sup> 400 lbs/day X 200 days = 80,000 lbs or 320 lbs raw weight, for a return roughly equivalent to that of sturgeon (exact return not available).

<sup>6</sup> Raw material storage capacity is currently ~6 tons/day. The addition of 500 lbs isothermic basins stored outside the building is an easy and inexpensive way to increase this capacity.

and apparently<sup>7</sup> meet customer expectations.

Much remains to be done, despite the WCF's firm technical grounding. A look, however cursory, of its most obvious defects augers badly, particularly with regard to product toxicity (mercury levels, bacterial contamination) and to business profitability. These are not minor issues.

The goodwill of several steadfast project members -- the plant manager, some good fishermen and fisherwomen and plant employees -- ensure continuity and coherence for the moment, but it is clear that the responsibilities are many and that the future of a viable commercial fishery at Waswanipi is not a given.

## RECOMMENDATIONS

The terms "consolidation" and "proprietorship" best sum up the priorities recommended over the coming 2 years.

Under these two headings, the following priorities for action are recommended:

### Supply:

#### *Consolidation*

1. Develop the exploitation of the fishing potential allowed by quotas (a) in the regions currently most exploited (see pp. 10, 14); and (b) in high-potential, accessible regions;
2. Establish a logical price structure for fishermen (p. 10) that takes into account both plant production costs and prices generally offered to fishermen (in the region and in Ontario);
3. Align harvest levels with a clearly-identified market demand.

Within this context, the development of a commercial fishery at Chisasibi is a

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<sup>7</sup> Client satisfaction has not been surveyed or studied.

middle- to long-term objective. Although Chisasibi has a considerable potential whitefish harvest, there are a number of reasons (see Section 1) to avoid immediate development of a fishery there, and there is a risk of a counter-productive dispersal of effort in the zones near Waswanipi and the Nemiscau region.

Similarly, the aim to quintuple the annual harvest (from 54,500 lbs. to 250,000 lbs) seems unwise on the short term. Such a radical change would certainly disturb plant organization, already fragile (see below). In addition, is the plant's market not currently limited essentially to one species (whitefish)? This is an important aim, but one that should be developed slowly.

#### *Proprietorship*

- 1- Continue conciliation efforts between different stakeholders and different schools of thought (outfitters, tallymen, fishermen).
- 2- Encourage discussion with community fishermen on the advantages, consequences and responsibilities of being involved with a commercial fishery.

#### **Processing:**

##### *Consolidation*

- 1- Establish production costs by product, using a system of data collection and production cost controls; **assign a person to be responsible for this task.**
- 2- Complete the missing sections of the QMP and integrate control measures into daily operations, in particular *measures for control of mercury levels*; complete the Plant Operation Manual and integrate relevant procedures to daily operations; **assign a person to be responsible for these two related tasks.**
- 3- Develop strategies to decrease fixed unit costs (for example: increase the volume of production, normalize labour costs, normalize inventory levels of materials and supplies).
- 4- Create and use tools for managing equipment, materials and

installations; **hire a person to be responsible for this task.**

- 5- Put a filing and archive system into place.
- 6- Establish a training programme for employees and managers for:
  - . good working habits and quality control management;
  - . production management and accounting procedures specific to a fishery business.

### *Proprietorship*

- 1- **Seek stability at the plant for management and for key positions;** be prepared to have back-up.
- 2- **Identify an administrative link with the Band Council:** someone well-informed of the plant's operations and in charge of supervising its management (close supervision of accounting, management of accounts receivable, management of purchase orders/plant repairs).
- 3- **Offer employee training:** give employees a sense of responsibility to the organization by making full use of their abilities and creativity.
- 4- Include all documents and studies on plant operations into the filing system; make sure that a copy of all such future documents is added to the system.
- 5- **Develop an efficient communications network between the plant, the Band Council and the Cree Regional Authority.**

## **Commercialization and Product Improvement**

### *Consolidation*

- Establish a pricing policy based on production costs and distribute it;
- For a period of 1 or 2 years, **hire a full-time sales representative** to handle promotion (salesman) and marketing development (promotional materials, strategies);
- **hire a person responsible for product improvement** (~1 year);
- prioritize the development of volume markets.

*Proprietorship*

- should the sales representative be a Cree from Waswanipi...?

\* \* \*

Additional discussion of the technical aspects of the project is not useful. The equipment is in place, it works and only needs to roll at full speed! Essentially, consolidation of plant operations and proprietorship of the project by the Cree community are **first and foremost human resource issues**.

Consolidation basically involves integrating a food industry culture into all plant operations, from harvesting to the marketing. It means developing a stable and knowledgeable labour force, one that is “specialized” and “professional”. It also means adopting new work habits where standardization and regularity are acknowledged as the keys to success.

Proprietorship of the project means developing a sense of ownership and pride in seeing the business prosper, of seeing it enter the modern world all the while preserving its uniqueness and its particular place in the world of management and markets. It means wanting to act upon the collective will of the community, up to now seemingly not prepared to face the challenge.

Is the Waswanipi community ready to commit fully to this venture?

If so, consultation and discussions have been very limited to this stage, and the parties concerned must be more fully involved in order to consider as necessary the recommendations proposed here and undertake the work they imply.

\* \* \*

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## **CONTEXTE ET MANDAT**

Construit en 1989, l'usine de transformation de poissons d'eau douce de Waswanipi a maintenant l'expérience de cinq (5) saisons d'opération. Ce projet-pilote d'implantation d'une pêche commerciale sur le territoire des Cris a été généreusement supporté dans le cadre de l'Entente auxiliaire Canada-Québec 1987-90 (développement des pêches, volet III Québec nordique). Évalué en 1991, le projet a été reconduit pour la période 1991-94. Le temps est maintenant venu de faire à nouveau le point.

Le présent document constitue une synthèse d'informations diverses concernant l'évolution des opérations de l'usine, que ce soit au niveau de l'approvisionnement, des conditions de transformation (équipements et installation, gestion et contrôle de la qualité, gestion et contrôle de la production) ou au niveau de la mise en marché. L'exercice constitue un survol historique des cinq années d'opération de l'usine, dans le but d'en dégager les forces acquises, ainsi que les faiblesses les plus gênantes dans le fonctionnement quotidien des opérations ou pour le développement futur de l'entreprise.

Les conclusions et les recommandations seront formulées dans l'objectif immédiat de dégager des constats et de suggérer des priorités d'action. Au-delà des pistes avancées, nous supposons *a priori* qu'aura lieu une phase d'approfondissement de la recherche pour la mise en branle des solutions concrètes.

Si ce sommaire s'appuie invariablement sur les nombreuses études réalisées dans le passé et sur quelques interviews complémentaires, il met tout autant à contribution les compilations annuelles d'achats, de production et de ventes, de même que certaines données comptables. Mentionnons toutefois que les données primaires nécessaires pour cet exercice de synthèse ont exigé plusieurs jours (sinon quelques semaines) de fouille et de compilations diverses. La période de rassemblement des dossiers a été prolongée de façon imprévue : des documents forts pertinents apparaissaient à tout moment provenant de sources progressivement localisées. Et au terme de cette aventure - dont le gérant de l'usine, M. Ronald Bossy fut un précieux collaborateur - force est de constater que des pans de cette réflexion demeurent encore partiellement documentés... ou alignés sur des données incertaines.

## RÉSUMÉ

Le présent document constitue une synthèse d'informations de sources diverses concernant l'évolution des opérations de l'usine, que ce soit au niveau de l'approvisionnement, des conditions de transformation (équipements et installation, gestion et contrôle de la qualité, gestion et contrôle de la production), du développement ou des produits. L'exercice constitue un survol historique des cinq années d'opération de l'usine (1989 à 94), dans le but d'en dégager les forces acquises, ainsi que les faiblesses les plus gênantes dans le fonctionnement quotidien des opérations ou pour le développement futur de l'entreprise.

Il apparaît maintenant plus évident que *Waswanipi Commercial Fisheries* a acquis, avec un investissement cumulé de plus de ½ millions \$, les atouts techniques nécessaires pour bien opérer et même pour performer sur le marché. L'origine autochtone de l'entreprise autant que sa localisation nordique ajoutent, d'un point de vue marketing, des atouts supplémentaires. Il est facile d'y associer des représentations d'authenticité et de pureté des aliments. Chez un public déjà largement sensibilisé à la qualité de l'environnement et à la richesse culturelle des Autochtones, il n'y a qu'un pas à franchir pour induire un préjugé favorable envers les produits crus.

Pourtant, depuis 1990, le potentiel halieutique du territoire cri (885 000 553 lbs, toutes espèces confondues) - s'étendant entre Chibougamau, la limite nord du Réservoir Gouin, Miquelon et Matagami, auquel s'ajoute la région immédiate de Nemiscau (rivière Rupert/ lac Evans) - n'a été exploité qu'entre 2 et 38 %, selon les espèces et les années. Faut-il questionner le nombre de pêcheurs en liste davantage que la durée moyenne ou l'étalement de leur activité de pêche ?

De son côté, l'usine n'a opéré qu'entre 3 et 7 % de sa capacité (~ 1 000 000 lbs/ saison). La capacité saisonnière de fumage de l'esturgeon est le double de l'ensemble du quota de capture (85 112 lbs); celle du corégone est à peu près équivalente au quota disponible (317 096 lbs).

Dans ce contexte de production relativement modeste, l'entreprise distingue déjà sept (7) produits-vedettes : l'esturgeon rond et fumé, la chair émincée de meunier, de corégone et /ou de brochet, le doré entier ou en filet. Le filet de corégone pourrait vraisemblablement déclasser l'un de ceux-là s'il était davantage promu et bénéficiait du sceau «kasher». Les caviars d'esturgeon et de corégone, produits plus délicats à traiter mais combien lucratifs, seraient les nouveaux produits que l'usine aurait avantage à introduire prochainement... après l'optimisation des premiers.

À travers ces cinq années d'opération, l'entreprise a démontré qu'elle est capable de gérer la production de 22 produits différents véhiculant une trentaine de spécifications. Elle dispose d'outils de base pour gérer la qualité et la production. En effet, à part quelques accidents de parcours, la matière première autant que les produits finis sont généralement de bonne qualité et, apparemment, semblent satisfaire les attentes des clients.

Mais si WCF bénéficie de bases techniques adéquates, tout n'est cependant pas encore gagné. La mise en perspective des failles les plus apparentes, même à vol d'oiseau, laisse présager une précarité inquiétante, notamment au niveau de l'inocuité des produits (taux de mercure, contamination bactériologique) et de la rentabilité des opérations... Ce qui ne laisse pas indifférent.

Si la volonté de quelques piliers du projet - en la personne du gérant de l'usine, de quelques bons pêcheurs et pêcheuses, travailleurs et travailleuses de l'usine - constitue pour l'instant une garantie de continuité, le facteur clé de la pérennité du projet et de son développement repose sur l'idée d'un noyau de ressources professionnelles permanentes. Mais force est de constater que la tâche est lourde pour certains et que la réalité d'une pêcherie commerciale rentable à Waswanipi n'est pas du tout acquise.

Ce sont les mots «**consolider**» et «**approprier**» qui résument le mieux les priorités que nous recommandons pour les 2 prochaines années. En somme, la consolidation des opérations et l'appropriation du projet par la communauté crie, *c'est d'abord une question de ressources humaines*.

La consolidation c'est essentiellement l'intégration d'une culture industrielle alimentaire dans toutes les opérations de l'usine : de la capture à la mise en marché. C'est le développement d'une main-d'oeuvre stable et connaissante. C'est aussi l'intégration de nouvelles habitudes de travail où standardisation et régularité sont le crédo du succès.

L'appropriation du projet, c'est développer un sentiment d'appartenance, une fierté de voir prospérer cette entreprise. La voir s'intégrer au monde moderne tout en préservant sa spécificité, ses particularités de gestion et de marchés. C'est vouloir agir sur la mémoire collective d'une communauté peut être un peu trop en mal de défis. La communauté de Waswanipi est-elle déterminée à s'engager à fond dans cette aventure ?

\* \* \*

## **1.0 BILAN DE L'APPROVISIONNEMENT**

---

**À RETENIR**

/ 14

**NOMBRE DE PÊCHEURS ET PÉRIODE D'ACTIVITÉ**

Depuis 1990, le nombre total de pêcheurs ayant participé à l'approvisionnement de l'usine n'a jamais été moindre que 20 (en 1992). C'est la première année d'opération (1990) qui a bénéficié de la participation maximale : 27 pêcheurs.

Les pêcheurs sont généralement actifs pendant 2 ou 3 mois. Toutefois, en 1994, les 2/3 des pêcheurs n'ont pas été actifs plus de 1 ou 2 semaines\*\*. En cinq ans, un (1) seul pêcheur a été actif pendant toute une saison (5 mois, en 1994).

**LES PRIX AU PÊCHEUR**

Il semble que tous les prix actuellement offerts aux pêcheurs soient inférieurs à ceux du marché. (Information à investiguer davantage) La fixation des prix semble aléatoire, ce qui transparait dans le taux d'augmentation fabuleux de certaines espèces :

corégone : 0,45 à 0,70 \$/lb      meunier/brochet : 0,15 à 0,70 \$/lb doré : 0,45 à 1,35 \$/lb

**LES CAPTURES ET LA PART RELATIVE DE CHAQUE ESPÈCE**

1992 a été la meilleure saison de pêche : 68 474 lbs  
1994 a été la plus faible saison \*\*: 34 403 lbs

La part relative des espèces a varié ainsi :

esturgeon :	33 % (1991)	à	64 % (1994)
corégone :	13 % (1994)	à	48 % (1990)
meunier :	6 % (1994)	à	21 % (1992)
doré :	4 % (1993)	à	14 % (1991)
brochet :	6 % (1993)	à	12 % (1991)

**LES ZONES LES PLUS EXPLOITÉES :**

Considérant le volume cumulé depuis cinq ans, les zones les plus pêchées sont :

Esturgeon :	Rivière Rupert et Matagami/Bell River	du 15 mai au 30 novembre
Corégone :	Waswanipi	III : 7 juin/15 juil. + II : 30 mai/30 nov.
Meunier :	Two-Moose, Waswanipi et Father/Doda	III : 7 juin/15 juil. + II : 30 mai/30 nov.
Doré :	Waswanipi, Maicasagi et La Trêve	du 30 mai au 30 novembre
Brochet :	Maicasagi, Waswanipi et Olga	du 30 mai au 30 novembre

**LES ZONES OÙ LES QUOTAS SONT LES PLUS ÉLEVÉS :**

Esturgeon : 1) Rivière Rupert/Evans 2) Father/Doda/des Vents/ Mégiscane  
3) Goéland/Maicasagi/ Olga 4) Waswanipi/Pusticamica/Nicobi  
5) Matagami/Bell River

Corégone : 1) Chisasibi ? 2) Evans/Doda 3) Goéland/Maicasagi/ Olga  
4) Waswanipi/Pusticamica/Nicobi 5) Matagami/Bell River

Meunier : 1) Evans 2) Goéland 3) Matagami/Bell River/Soscuma  
4) Waswanipi 5) Father/Doda

Doré : 1) Rivière Rupert 2) Inconnu/David/Gwillim  
Les autres sites offrent des prises accidentelles

Brochet : 1) Evans/Rivière Rupert 2) Goéland 3) Matagami/Bell River  
4) Waswanipi/Pusticamica/Opawica 5) Father/Doda/Surprise/Caopatina

## À RETENIR (suite)

### OBSERVATIONS :

La pêche dans les zones les plus éloignées (Evans/ Rivière Rupert) semble présenter le plus grand potentiel d'exploitation, pour toutes les espèces. Historiquement, elles sont aussi les plus pêchées pour l'esturgeon.

Pour les autres espèces (corégone, meunier, doré, brochet), la zone de pêche la plus intensive se situe dans un rayon de 2 à 4 heures de route autour de Waswanipi.

### DÉVELOPPER UNE PÊCHE COMMERCIALE À CHISASIBI ?

À Chisasibi, l'exploitation d'une pêche commerciale serait essentiellement une pêche d'automne (octobre) au filet de fonds ou à la trappe et dirigée vers le corégone (potentiel estimé : 98 600 lbs/an).

N.B. Il n'y a pas d'esturgeon.

Le taux de mercure dans le doré est trop élevé.

Le volume potentiel de meunier (4 733 lbs/saison) est insuffisant pour attirer l'attention.

Le volume potentiel de brochet (22 678 lbs/saison) ne représente que la moitié du quota disponible dans la zone Rivière Rupert-Lacs Dana/Evans (actuellement pêché à 0,01% pour cette espèce); il est équivalent au potentiel de la zone 7 (Father/Doda/Caopatina), de la zone 4 (Goéland/Maicasagi/Olga) et de la zone 3 (Matagami/Bell River). Voir les tableaux de la section 1.4 et 1.5.

Les pêches exploratoires réalisées en 1991 étaient modestes et ne permettent pas d'assurer la reproductibilité des résultats obtenus : 1- l'efficacité exceptionnelle des filets de fond en multi ou monofilaments (en octobre, 16 fois plus performants que le filet de surface) et de la pêche à la trappe (en octobre, 2,6 fois plus efficace que la pêche de fond au monofilament); 2- la multiplication systématique des rendements obtenus en fonction du nombre de filets tendus. **De nouvelles pêches exploratoires doivent être réalisées pour confirmer les potentiels de capture estimés.** (Voir l'annexe 4 : Sommaire des résultats des pêches expérimentales réalisées en 1991)

De plus, si la pêche de fond semble la plus efficace, rappelons que **la majeure partie des fonds du réservoir LG2 sont boisés**, sauf quelques sites à cibler : les digues et les aires qui ont été déboisées avant la construction du barrage (pour la pêche de subsistance).

Enfin, **17 % des captures de corégone dépasseraient la limite acceptable de taux de mercure (1991)**. Toutes les captures ne pourront donc pas être dirigées vers la consommation humaine.

Prenons également en considération que, jusqu'à maintenant, *jamais plus de 25 % du quota de corégone disponible dans les zones situées entre 2 à 4 heures de route de Waswanipi (111 060 lbs pour les lacs les plus pêchés des zones 4, 5, 6 et 7) ont été capturées*. En 1994, seulement 4 % de ce potentiel a été livré à l'usine.

Enfin, pour WCF, *les marchés du corégone (filet et chair émincée) sont actuellement limités et s'annoncent relativement difficiles à développer*. À moins qu'un véritable effort de vente et de promotion de ces produits soit réalisé.

## **2.0 BILAN DES ACTIVITÉS DE TRANSFORMATION**

---

## À RETENIR

### 1. INVESTISSEMENT CUMULÉ ET CAPACITÉ THÉORIQUE

L'investissement cumulé depuis 1989 dépasse 1/2 M \$ (563 852 \$).

La capacité théorique de transformation de l'usine est d'environ 1 000 000 lbs/ saison de pêche (200 jours, du 15 mai au 30 novembre). Cette capacité est limitée par la capacité de stockage de la chambre d'entreposage des matières premières (~ 3 tonnes/ jour).

La capacité de fumage est de 200 lbs/jour pour l'esturgeon et de 400 lbs/ jour pour le corégone.

### 2. VOLUME ET PRODUITS TRANSFORMÉS

Bon an mal an, WCF a traité en moyenne 27 tonnes (54 500 lbs) de matière première par année, pour un chiffre de vente variant de 27 190 \$ (1993-94) à 46 246 \$ (1994-95).

Depuis 1990, WCF a offert **22 produits différents** :

Esturgeon :	rond, filet, fumé, caviar
Corégone :	rond, filet, chair émincée, caviar
Meunier :	filet, chair émincée, croquettes
Doré jaune (< 42 cm) :	rond, filet, joues, chair émincée
Brochet (< 40 cm) :	rond, filet, chair émincée, croquettes
Cisco :	chair émincée
Lotte :	rond
Laquaïche :	?

Pour cette vingtaine de produits, WCF gère **34 spécifications** de produit (non applicables à toutes les espèces ni à tous les produits) :

- «head on/off» et «skin on/off»,
- 13 classes de taille : filets : 2-4, 4-6, 6-8, 8-10, 10-12 onces;  
<4lbs/ >4 lbs; rond : 1-2, 2-4 lbs; < 5, 5-8, 8-12, > 12 lbs
- 3 modes de conservation : frais, congelé et fumé;
- 6 formats d'emballage : congelé : 60 lbs (rond) ou 4 X 12 lbs (filet)  
50 lbs (frais); 1/2 ou 1 kg (fumé, émincé); 1 lbs (joues);
- 3 types d'emballage : sac de plastique/carton, barquette/saran ou sac sous-vide, sac de plastique sous-vide;
- 5 combinaisons de chair émincée

*N.B Il n'existe pas de liste détaillée des produits offerts par WCF. La liste présentée ici a été reconstitué à partir de sources diverses.*

**À RETENIR (suite)****3. NOMBRE D'EMPLOYÉ-E-S**

Entre 1990 et 94, le nombre d'employés a varié de façon décroissante, de 14 à 5 personnes, dans des proportions variables temps plein / temps partiel. A priori, on ne peut dégager de liens immédiats entre le volume traité et le nombre d'employés. Enfin, la masse salariale versée a toujours dépassée, à elle seule, la valeur totale des ventes. (Voir sections 2.5 et 2.7)

	<u>Volume (lbs. pds brut)</u>	<u>Ventes totales</u>	<u>Masse salariale</u>	<u>Achats aux pêcheurs</u>
1990	59 296	657 \$	29 498 \$	2 412 \$
1991	57 733	44 056	62 269	47 394
1992	68 475	42 655	76 163	28 631
1993	52 490	45 274	74 872	41 567
1994	34 403	27 190	63 586	27 735
1995		46 246		27 279

**4. LES FRAIS FIXES**

Les frais fixes unitaires moyens sont de 1,78 \$/ lbs (poids brut) pour le traitement d'un volume moyen annuel de 54 500 lbs de matière première. Ce montant exclut le coût de la matière première (qu'on doit ajouter en fonction du rendement en produit fini), et les amortissements d'équipements. Dans ces conditions, la plupart des produits sont vendus à un prix inférieur à leur coût de production.

**5. LES «MEILLEURS VENDEURS»<sup>1</sup> :**

	<u>VOLUME</u> <u>(lbs produits finis)</u>	<u>année</u>	<u>Prix de vente / lb</u>	<u>TOTAL</u>
1) Esturgeon rond congelé	12 900	92	1,12 - 2,25	21 736 \$
	4 450	94	2,00 - 2,75 - 3,65	12 460
2) Esturgeon fumé	2 028	94	10 - 11,00/ gros	21 294
	722	91	7,00	5 054
3) Chair émincée de meunier	7 025	92	2,07	14 542
	1 663	91	1,25	2 079
4) Filet de doré (skin off)	1 821	91	2,27	4 134
	1 804	92	3,80	6 855
	820	94	7,75 (gros)	6 355
5) Chair émincée de brochet	3 524	91	1,15 - 1,25	4 229
6) Chair émincée de corégone	2 930	91	1,25	3 662
	2 200	92	1,00	2 200
7) Filet de corégone (skin off)	3 606	92	0,90	3 245
	528	91	1,80	950
8) Filet de meunier	1 544	91	1,15	1 776
9) Brochet entier	660	91	1,15	759

<sup>1</sup> Il n'existe pas de compilations annuelles des volumes vendus, des prix et de la valeur totale des ventes. Jusqu'en 1994, les factures d'expédition - seule source d'informations - étaient souvent incomplètes. Tous les volumes et les prix reproduits ici et dans le tableau 2.8 ne sont présentés qu'à titre indicatif et doivent être appréciés avec réserve.

### **3.0 ÉTAT DES ÉQUIPEMENTS ET DES INSTALLATIONS**

---

## À RETENIR

**1. LE RENOUELEMENT ANNUEL DES INVENTAIRES DE MATÉRIEL ET DE FOURNITURES**      ~ 2 000 \$  
(1991 : 6 286 \$)

N.B. : Les renouvellements d'inventaires sont parfois trop élevés pour les besoins de l'année. Par exemple, des commandes imposantes d'emballages, d'étiquettes, de papeterie auraient été réalisées en prévision de plusieurs années à venir. En plus d'immobiliser inutilement du capital en inventaire, le matériel ainsi stocké ne peut pas intégrer les améliorations suggérées par l'expérience, ni être modifié pour s'adapter aux exigences d'un éventuel changement imposé par l'environnement de production ou de marché.

**2. LA VÉRIFICATION ET LA MISE AU POINT ANNUELLE DES ÉQUIPEMENTS DE RÉFRIGÉRATION**      1 000 \$

**3. LES DÉPENSES DE RÉPARATION ET D'AMÉNAGEMENT**

À COURT TERME :

**Coût estimé des réparations à effectuer :**

Équipements de production	1 000 \$
Équipements roulants	<u>1 300</u>
	<b>2 300 \$</b>

**Coût estimé des travaux d'aménagement recommandés :**

- Travaux recommandés par P. Morin (MAPAQ) et R. Bossy (WCF)	1 000 \$ 500 \$
- Travaux recommandés par R. Buffit et R. Dion (1991)	
- dans la chambre de fumage	1 445
- système d'évacuation des déchets de production	4 000
- Travaux de normalisation, s'il y a lieu	?
	<u>6 945 \$</u>

**Coût estimé pour le renouvellement**

<b>des équipements perdus :</b>		
Moto-neige		3 500 \$
Remorque à bateau		895 \$
Radio		2 315 \$
N.B. une radio est actuellement louée :		(300 \$/ 3 mois)
Ordinateur et imprimante (si effectivement perdu)		<u>2 500 \$</u>
		<b>9 210 \$</b>

**À RETENIR (suite)****À MOYEN OU LONG TERME :**

**Augmenter la capacité de congélation** de l'usine d'environ 30 % (à vérifier) en diminuant la durée des cycles de congélation de 3-4 heures à 2-3 heures, par l'amélioration du système de ventilation de la chambre (ce qui toutefois impliquerait une perte d'espace).

Coût estimé (à vérifier) : 5 000 \$

**Aménager une salle de préparation des croquettes et du caviar** (dans l'actuelle salle de pause-café) et réinstaller la salle de pause-café à l'avant de l'usine.

Coût estimé : 4 300 \$

**4. DES OUTILS DE GESTION DES ÉQUIPEMENTS, DU MATÉRIEL ET DES INSTALLATIONS :**

L'usine dispose déjà de l'annexe B du *Plant Operation Manuel* (Appendix B : Leaflets on the Equipements) et des sections 3 à 7 du PGQ (contrôle de la qualité des ingrédients, emballages, étiquettes, agents de nettoyage/désinfection et lubrifiants, construction et entretien des installations et du matériel de transformation). Pour faciliter une gestion plus étroite des biens de production, il apparaît pertinent *de jumeler les outils disponibles et de les compléter* par :

- un **inventaire à jour** des équipements et du matériel indiquant notamment : nom, modèle, capacité, spécifications techniques, date et prix d'achat, nature de la garantie, fournisseurs;
- des **fiches d'entretien préventif** des équipements/ matériel et des installations;
- un **calendrier de renouvellement** des équipements et du matériel, de même que des travaux majeurs d'entretien des installations;
- un **budget d'entretien et de renouvellement**.

**5. UNE PERSONNE RESPONSABLE DE LA GESTION DES ÉQUIPEMENTS, DU MATÉRIEL ET DES INSTALLATIONS :**

Une personne qualifiée responsable de la gestion du matériel, des équipements et des installations pourrait dégager le gérant de ces préoccupations. Cette fonction pourrait être attribuée à un employé de l'usine qui verrait à : la mise à jour des inventaires, le suivi du calendrier d'entretien et la supervision des travaux de réparation, la préparation des achats.

## **4.0 ÉTAT DU CONTRÔLE DE LA QUALITÉ**

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## À RETENIR

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### 1. LES FORCES

L'usine possède tous les atouts de base pour réaliser une gestion efficace de la qualité :

- des installations, des équipements et du matériel généralement conformes aux exigences alimentaires;
- un «Guide» d'implantation d'un programme de gestion de la qualité (PGQ/ MPO) et tous les outils de contrôle nécessaires;
- un Manuel de procédures (*Plant Operation Manuel*) de base;
- des matières premières généralement de qualité «A» (d'après les rapports d'évaluation de la fraîcheur en 1994);

### 2. DÉFAILLANCES ACCIDENTELLES MAJEURES DÉJÀ OBSERVÉES

#### Défaillances d'inocuité :

- un *échec* à l'application du PGQ;
- un *ordre de rappel* des produits fumés, pour contamination bactériologique (*E. coli*);
- un avertissement pour contamination du doré jaune au *mercure*.

#### Défaillances dans le respect des spécifications de production :

- on a déjà perdu un acheteur important de croquettes de poisson («patties») apparemment suite à une modification improvisée de la recette de préparation, laquelle aurait été une conséquence du départ du gérant (Mr R. Buffit) qui était à l'origine du développement du produit et du contact commercial;
- plusieurs fois, des clients auraient signalé des emballages brisés (pas assez solides ?) à la réception des produits;
- on a déjà observé que des étiquettes étaient corrigées à la main ou manuscrites, ce qui contribuerait à déprécier la crédibilité des étiquettes.

#### Défaillances dans les relations commerciales :

- on a déjà observé un manque de suivi pour remplir les commandes des clients (PlaniMark, p. 27); concernant les prix des produits, des informations contradictoires selon les sources ont déjà été signalées par des clients.

### 3. LES FAILLES MAJEURES DANS LA GESTION DE LA QUALITÉ

Les défaillances accidentelles reportées précédemment sont susceptibles de se reproduire car il existe des failles importantes au système de gestion de la qualité de l'usine.

Ce sont :

- la gérance de l'usine est instable (3 changements de gérant en 5 ans);
- la description du PGQ et son intégration aux opérations courantes de l'usine (exigé par MPO et conditionnel au permis) ne sont pas complétées : les modalités de contrôle et les mesures de correction ne sont pas entièrement intégrées (voir section 4.2.1);

## À RETENIR (suite)

- la formation des employés et des gestionnaires aux bonnes pratiques industrielles est insuffisante; les employé-e-s exigent une surveillance constante à ce titre;
- dans le contexte particulier des pêches nordiques, les modalités de contrôle du taux de mercure (par la seule sélectivité des engins de pêche) sont insuffisantes;
- sous plusieurs chapitres, le *Plant Operation Manuel* n'est pas assez détaillé; il néglige encore des pans entiers de la production courante; il n'est pas suffisamment arrimé au PGQ;
- le système de classification et de classement de l'information relative à la gestion et au contrôle de la qualité n'est pas fonctionnel.

### 4. UNE PERSONNE RESPONSABLE DE LA GESTION DE LA QUALITÉ

Si beaucoup de travail de mise en place et d'intégration des différents aspects de la gestion et du contrôle de la qualité a été réalisé jusqu'à ce jour, force est de constater que beaucoup reste encore à faire :

- compléter le PGQ et le *Plant Operation Manuel*;
- réaliser les contrôles et les suivis exigés par les programmes de gestion de la qualité établis à l'usine, dans ses documents officiels;
- mettre en place un système de classement et de classification des informations relatives à la gestion de la qualité;
- définir un plan et un calendrier de formation pour les employé-e-s et les gestionnaires sur les bonnes pratiques industrielles dans le secteur alimentaire, les Lois et Règlements, la gestion d'un programme de qualité, etc

Étant donné l'ampleur de la tâche et la nécessité - sinon l'urgence - d'intégrer le plus tôt possible les exigences du programme de gestion de la qualité dans la pratique quotidienne, de même que d'autres dimensions connexes associées au Manuel de procédures, nous proposons de :

**affecter une personne qualifiée, à temps plein, comme responsable de la gestion de la qualité et ce, pendant au moins 2 saisons d'opération consécutives.**

## **5.0 ÉTAT DU CONTRÔLE DE LA PRODUCTION**

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## À RETENIR

### ÉTAT DE SITUATION

À WCF, il n'existe pas de modalités de contrôle des **coûts de production par produit**. Il n'y a pas non plus de **gestion des stocks** par produit (entrées et sorties des chambres froides de matière première et de produits finis) susceptibles d'être associée à un calcul des rendements.

La **gestion du temps** des employé-e-s affectés à la production se limite à une préoccupation de premier niveau : le contrôle de la présence au travail. Il n'y a pas de compilations du temps affecté aux opérations spécifiques à un produit dont le coût de la main-d'oeuvre pourrait lui être attribué (ex. : les opérations de fumage et d'emballage sous-vide pourraient être affectées au coût de production de l'esturgeon fumé).

Il n'y a pas de **standards ou objectifs de rendement et de productivité**. Des données de sources multiples et passablement incertaines sont disponibles sur les rendements en produit fini/ espèce (Voir synthèse de ces informations à la section 5.4).

La **tenue de livre** est globale et tous les coûts sont confondus dans une comptabilité générale, non adaptée aux besoins d'informations pour la prise de décision de gestion.

Le **système de classification et de classement** de ces informations demeure aléatoire et dispersé. La consultation de ces sources s'avère, pour l'instant, un exercice assez laborieux.

Ainsi, les **prix de vente** ont souvent été fixés au gré des opportunités de marché, dans l'objectif immédiat d'écouler les stocks.

### CONSTAT GÉNÉRAL :

Actuellement, l'entreprise n'est pas en mesure d'établir des **coûts de production par produit**. Toutefois, un rapprochement sommaire de quelques données, même incertaines, permet de constater la difficulté de rentabiliser, dans les conditions actuelles de production, même les produits apparemment les plus lucratifs. Il est évident que la connaissance des **coûts de production par produit** faciliterait grandement les décisions de gestion et l'orientation de la stratégie marketing.

### RECOMMANDATIONS :

1) Mettre en place le plus tôt possible, un système minimal de collecte de données destinées à établir les **coûts de production unitaire de chaque produit**. Les priorités d'information seraient :

- les rendements en produit fini (données de base fiables)
- les coûts spéciaux de main-d'oeuvre affectés à chaque produit
- le coût unitaire des emballages (données complètes)
- une tenue de livre adaptée aux opérations de l'usine permettant d'établir convenablement la part des coûts fixes et des coûts variables.

2) Nommer une personne responsable du **contrôle de la production**.

- Celle-ci veillera à :-
- développer des outils et des modalités de collecte d'informations, de même qu'un système de classement;
  - établir des objectifs minimaux de rendement et de productivité;
  - effectuer les contrôles requis;
  - traiter et interpréter les informations; réagir aux écarts imprévus;
  - recommander un prix de vente.

**6.0 ÉTAT DU DÉVELOPPEMENT DES MARCHÉS  
ET DES PRODUITS**

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## À RETENIR

Dans les conditions financières actuelles et dans le contexte d'un objectif global très présent de développer une pêcherie commerciale sur le territoire des Cris, il est prioritaire de développer les marchés qui correspondent aux exigences de l'entreprise. À court terme, les priorités se résument à :

- 1- diminuer les frais fixes unitaires en augmentant le volume de production;
- 2- augmenter la marge bénéficiaire en recherchant les marchés les plus lucratifs;
- 3- stabiliser l'approvisionnement en matières premières en consolidant les relations avec un groupe nominal de pêcheurs.

### DES PRIORITÉS DE MARCHÉ :

#### 1. LES MARCHÉS DE VOLUME :

(volume élevé, prix moyens à faibles)

esturgeon rond  
chair émincée  
filet de corégone  
esturgeon fumé / bas de gamme

#### CRÉNEAUX PRIVILÉGIÉS

- grossistes/ distributeurs  
- réseau institutionnel  
- cuisine industrielle et traiteurs  
- exportation

#### 2. LES MARCHÉS DE PRIX :

(volume faible, prix élevés)

esturgeon fumé/ haut de gamme  
doré (filet et rond)  
brochet  
caviars (esturgeon, corégone)

- poissonneries spécialisées  
- restaurants/ hotels  
  haut de gamme  
- exportation/créneaux spécialisés

#### 3. LES MARCHÉS AUTOCHTONES ET RÉGIONAUX

(volume faible, prix moyens à faibles)

### REMARQUES :

Les marchés régionaux comportent des créneaux de haut et bas de gamme. Toutefois, à cause de la dispersion démographique et de la courte saison touristique, les volumes en cause demeureront probablement modestes (sauf pour la Poissonnerie Tremblay de Senneterre, entreprise de 2e/ 3e transformation, avec qui des ententes partenariales pourraient signifier des livraisons importantes, notamment de corégone). Ces marchés peuvent toutefois véhiculer des opportunités de marché relativement stables, avec lesquels il peut être plus facile d'entretenir une communication privilégiée, propice à une promotion touristique fort intéressante.

Quoique moins lucratifs, les marchés de volume contribuent à abaisser rapidement le coût moyen des frais fixes. Ces marchés seraient également un excellent moyen de consolider les habitudes d'approvisionnement avec un bon groupe de pêcheurs.

### UNE POLITIQUE DE PRIX

Mettre au point une politique de prix différenciés, basée sur :

- les coûts de production par produit,
- l'offre de prix véhiculée dans les différents créneaux de marché;
- les privilèges de prix que l'entreprise souhaite entretenir (exemple : pour le marché local et autochtone, pour les achats directs à la poissonnerie de l'usine, pour le marché régional, etc).

## À RETENIR (suite)

### UN EFFORT DE VENTE

#### 1. AFFECTER UNE PERSONNE QUALIFIÉE ET DYNAMIQUE

- À LA CONSOLIDATION DES MARCHÉS ACTUELS (rôle de vendeur),
- AU DÉVELOPPEMENT DE NOUVEAUX MARCHÉS (rôle d'agent de marketing),
- À LA SUPERVISION DU DÉVELOPPEMENT D'OUTILS ET D'UNE STRATÉGIE DE PROMOTION

N.B.: Parmi les produits visés dans les priorités de marché, c'est le **CORÉGONE** et le **MEUNIER** qui exigeront le plus grand effort de vente et de promotion. (Voir *Planimark, 1992 et M. Laberge, 1995*)

#### 2. UTILISER DES OUTILS DE PROMOTION

- une liste détaillée (avec spécifications head on/off, skin on/off, format et type d'emballage, etc) de tous les produits offerts par WCF; assortie d'une liste de prix à jour;
- des échantillons de produits bien présentés (bien emballés, bien étiquetés) et des feuillets explicatifs;
- des feuillets promotionnels, des affiches et affichettes adaptés à chaque créneau de marché; améliorer les cartes d'affaires; développer une stratégie publicitaire;
- développer une image spécifique et attrayante de l'entreprise et des produits:
  - entreprise typiquement crie;
  - produits provenant des «lacs froids et purs du territoire cri de la Baie James»;
  - dénominations de poisson plus attrayantes (ex. «mullet» au lieu de «sucker»);
  - valorisation de la langue crie en traduisant les noms de poisson et les textes promotionnels (exemple : revue de prestige de WCF); offrir l'information en deux ou trois langues.

#### 3. UTILISER UNE STRATÉGIE DE PROMOTION

- Cibler des créneaux de marché et des territoires à explorer;
- Négocier la collaboration des grossistes et distributeurs pour la promotion des produits WCF;
- Relancer les contacts déjà établis lors des études de marché. (Voir *Planimark, 1992 et M. Laberge, 1995*).

## À RETENIR (suite)

### DES PRIORITÉS DE MISE AU POINT DE PRODUIT

#### 1. CHAIR ÉMINCÉE

- Standardisation des combinaison d'espèces
- Standardisation de la méthode de préparation;
- Amélioration des emballages et de l'étiquetage;
- Adaptation des formats en fonction des différents créneaux de marché

#### 2. FILET

- Mise au point des emballages IQF

#### 3. ESTURGEON FUMÉ

- Standardisation de la recette et des emballages bas de gamme
- Standardisation de la recette et des emballages haut de gamme
- Adaptation des formats en fonction des différents créneaux de marché

#### 4. CAVIARS

- Standardiser la méthode de conditionnement
- Développer des contenants et des emballages de prestige
- Développer des formats adaptés au marché
- Développer des étiquettes de prestiges

#### 5. CERTIFICATION «KASHER»

- Adapter les méthodes, recettes et procédures de traitement des produits du corégone et de l'esturgeon pour rencontrer les critères de conformité *kasher* exigés par plusieurs marchés juifs. Inscrire ce sigle sur les emballages.

#### 6. CROQUETTES

- Standardiser la ou les recettes, de même que les méthodes de préparation
- Mettre au point les emballages (s'il y a lieu)

N.B. Ce produit n'est pas prioritaire car les installations et les équipements ne sont pas adéquats actuellement pour la préparation de volumes importants. C'est un marché peu lucratif répondant essentiellement à une demande locale et à quelques créneaux spécifiques de marchés ethniques (Montréal).

#### 7. DURÉE DE CONSERVATION

- Réaliser les tests de conservation sur les produits offerts par WCF.

**N.B.1 MAINTENIR À JOUR UN CAHIER «R & D»** où sont inscrits tous les travaux de développement en cours, les protocoles expérimentaux, les résultats obtenus, les personnes-ressources, les budgets et les sommes dépensées, etc. Ce cahier devrait être en annexe au Plant Operation Manuel. Les résultats intégrés aux opérations courantes de l'entreprise devraient être également intégrés définitivement au Manuel de procédures.

**N.B.2 AFFECTER UNE PERSONNE À LA MISE AU POINT DES PRODUITS ET DES PROCÉDÉS.** Ce peut être un-e employé-e qualifié-e ou un-e consultant-e. En l'absence d'une personne affectée à cette tâche, les développements nécessaires pour consolider les marchés actuels et en fréquenter de nouveaux, risquent de demeurer des efforts dispersés et souvent sans lendemain. Cette affectation serait limitée à la réalisation des priorités actuelles de développement.

## **7.0 CONCLUSION ET RECOMMANDATIONS**

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## CONCLUSION

Cet exercice de bilan a été mené chapitre par chapitre, pour mieux dégager par la suite, une perspective d'ensemble. Il apparaît maintenant plus évident que *Waswanipi Commercial Fisheries* a acquis les atouts **techniques** nécessaires pour bien opérer et même pour performer sur le marché.

Que ce soit au niveau du potentiel d'approvisionnement ou de la capacité de transformation, de l'état des équipements ou des installations (généralement très bon), de la qualité des produits finis, de leur diversité ou de leur pertinence sur le marché, WCF détient déjà de très bonnes cartes dans son jeu. L'origine autochtone de l'entreprise autant que sa localisation nordique ajoutent, d'un point de vue marketing, des atouts supplémentaires. Il est facile d'y associer des représentations d'authenticité et de pureté des aliments. Chez un public déjà largement sensibilisé à la qualité de l'environnement et à la richesse culturelle des Autochtones, il n'y a qu'un pas à franchir pour induire un préjugé favorable envers les produits crus.

Pourtant, depuis 1990, le potentiel halieutique du territoire cri s'étendant entre Chibougamau, la limite nord du Réservoir Gouin, Miquelon et Matagami, auquel s'ajoute la région immédiate de Nemiscau (rivière Rupert/ lac Evans), n'a été exploité qu'entre 2 et 38 %<sup>1</sup>, selon les espèces et les années (voir section 1.4). Si l'usine de transformation de Waswanipi offre une capacité théorique équivalente<sup>2</sup> au potentiel de capture, elle n'est utilisée, depuis 1990, qu'entre 3 et 7 % de sa capacité. La capacité saisonnière de fumage de l'esturgeon<sup>3</sup> est le double de l'ensemble du quota de capture (85 112 lbs); celle du corégone<sup>4</sup> est à peu près équivalente au quota disponible (317 096 lbs).

Faut-il questionner le nombre de pêcheurs en liste davantage que la durée moyenne de leur activité de pêche ? Peut-on envisager un étalement de cette activité

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<sup>1</sup> L'ensemble des quotas attribués sur ce territoire permet un prélèvement annuel de 885 553 lbs (toutes espèces confondues).

<sup>2</sup> Plus de 1 000 000 lbs par saison i.e. ~ 200 jours, de mai à novembre.

<sup>3</sup> 200 lbs/ jour X 200 jours = 40 000 lbs en produit fini ou 160 000 lbs poids brut pour un rendement ~ 25 %.

<sup>4</sup> 400 lbs/ jour X 200 jours = 80 000 lbs ou 320 000 poids brut, pour un rendement considéré équivalent à l'esturgeon (rendement précis non disponible).

durant toute la saison d'exploitation<sup>1</sup> ? Un alignement des prix aux pêcheurs sur ceux du marché (ou l'équivalent compte tenu des services offerts par l'usine), n'est-il pas une condition minimale pour assurer leur fidélité d'approvisionnement ? S'il n'est pas de notre ressort de discuter ici de la problématique de participation des pêcheurs, nous convenons toutefois de son impact direct sur les perspectives de développement de l'usine.

Mais ne nous laissons pas abattre ! Dans ce contexte de production relativement modeste, l'entreprise distingue déjà sept (7) produits-vedettes : l'esturgeon rond et fumé, la chair émincée de meunier, de corégone et /ou de brochet, le doré entier ou en filet. Le filet de corégone pourrait vraisemblablement déclasser l'un de ceux-là s'il était davantage promu et bénéficiait du sceau «kasher». Les caviars d'esturgeon et de corégone, produits plus délicats à traiter mais combien lucratifs, seraient les nouveaux produits que l'usine aurait grandement avantage à introduire prochainement... après l'optimisation des premiers (voir p. 68).

De plus, à travers ces cinq années d'opération, l'entreprise a démontré qu'elle est capable de gérer la production de 22 produits différents véhiculant une trentaine de spécifications. Elle dispose d'outils de base pour gérer la qualité et la production. En effet, à part quelques accidents de parcours dont nous avons déjà discutés à la section 4, la matière première autant que les produits finis sont généralement de bonne qualité et, apparemment<sup>2</sup>, semblent satisfaire les attentes des clients.

Mais si WCF bénéficie de bases techniques adéquates, tout n'est cependant pas encore gagné. La mise en perspective des failles les plus apparentes, même à vol d'oiseau, laisse présager d'une précarité inquiétante, notamment au niveau de l'inocuité des produits (taux de mercure, contamination bactériologique) et de la rentabilité des opérations... Ce qui ne laisse pas indifférent.

Si la volonté de quelques piliers du projet - en la personne du gérant de l'usine, de quelques bons pêcheurs et pêcheuses, travailleurs et travailleuses de l'usine -

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<sup>1</sup> La capacité de stockage de matières premières est actuellement de ~6 tonnes/ jour. L'ajout de bacs isothermiques de 500 lbs, entreposés à l'extérieur de l'usine, est une possibilité facile et peu coûteuse d'augmenter cette capacité.

<sup>2</sup> Nous n'avons pas fait d'enquête auprès des clients.

constitue pour l'instant une garantie de continuité et de cohérence, force est de constater que la tâche est lourde pour certains et que la réalité d'une pêcherie commerciale rentable à Waswanipi n'est pas du tout acquise.

## RECOMMANDATIONS

Ce sont les mots «**consolider**» et «**appropriier**» qui résument le mieux les priorités que nous recommandons pour les 2 prochaines années.

Voici, en bref, les priorités d'action que nous recommandons de privilégier, sous l'un et l'autre thème.

### APPROVISIONNEMENT :

#### *Consolidation :*

- 1- Développer l'exploitation de tout le potentiel halieutique aloué par les quotas
  - a) dans les zones actuellement les plus exploitées (voir pp. 10, 14);
  - b) dans les zones qui présentent un potentiel élevé et accessible;
- 2- Établir une logique d'attribution des prix au pêcheur (p. 10), tenant compte à la fois des coûts de production de l'usine et des prix généralement offerts au pêcheur (dans la région et en Ontario);
- 3- Arrimer le développement des volumes de capture à une demande fermement identifiée sur le marché.

Dans cette perspective, le développement d'une pêche commerciale à Chisasibi deviendrait un objectif à moyen ou long terme. Si Chisasibi offre un potentiel théorique de capture de corégone fort impressionnable, de nombreuses autres raisons (voir section 1) justifient mal de précipiter, à ce moment-ci, le développement d'une pêcherie dans cette zone... sans risquer une dispersion infructueuse des efforts d'optimisation nécessaires dans les zones à proximité de Waswanipi et dans la région de Nemiscau.

Également, l'objectif de quintupler le volume de capture annuel (passant de 54 500 lbs à 250 000, voir p. 12) à court terme apparaît hasardeux. Un tel changement brusque perturberait certainement l'organisation de l'usine qui manque déjà de «consolidation» (voir ci-après). Et puis ne repose-t-il pas essentiellement sur une espèce (le corégone) dont le marché est actuellement limité? C'est un objectif fort pertinent, mais à développer progressivement.

#### *Appropriation :*

- 1- Continuer les efforts de conciliation entre les différents groupes d'intérêt et les différentes écoles de pensée (pouvoyeur, tallymen, pêcheurs

- 2- Favoriser les discussions avec des pêcheurs de la communauté sur les avantages, les conséquences, les exigences d'être impliqués dans une pêche commerciale.

## TRANSFORMATION

### *Consolidation :*

- 1- Établir des coûts de production par produit, à partir d'un système de collecte de données et de contrôle des coûts de production; **affecter une personne responsable à cette tâche;**
- 2- Compléter les sections manquantes du *PGQ* et intégrer les pratiques de contrôle aux opérations courantes, en particulier les modalités de *contrôle du taux de mercure (ou des classes de taille autorisées)*; compléter le *Plant Operation Manuel* et intégrer les procédures consignées aux opérations courantes; **affecter une personne responsable à ces deux tâches connexes;**
- 3- Élaborer des stratégies pour diminuer les coûts fixes unitaires (par exemple: augmenter le volume de production, rationaliser les coûts de main-d'oeuvre, rationaliser les inventaires de matériel);
- 4- Développer et utiliser des outils de gestion des équipements, du matériel et des installations; **nommer une personne responsable de cette tâche;**
- 5- Mettre en place un système de classement et archivage;
- 6- Établir un plan de formation pour les employés et les gestionnaires sur :
  - les «bonnes pratiques industrielles» et la gestion de la qualité;
  - la gestion de la production et les particularités comptables d'une entreprise de transformation de poisson.

### *Appropriation :*

- 1- **Rechercher une permanence à la gérance de l'usine** et aux postes clés; veiller à toujours **préparer une relève;**
- 2- **Identifier un relai administratif au Conseil de Bande :** une personne bien informée des affaires de l'usine et affectée en priorité à sa gestion (suivi comptable étroit, gestion des comptes à recevoir, gestion des bons de commandes/ réparations de l'usine);
- 3- **Offrir une formation aux employés;** veiller à les responsabiliser par des tâches qui mettent leurs compétences et leur créativité à contribution;
- 4- Accumuler dans le système de classement de l'usine, tous les documents et toutes les études traitant des affaires de l'usine; développer l'habitude d'y acheminer systématiquement une copie;
- 5- **Développer un relai de communication efficace entre l'usine, le Conseil de Bande et l'Administration régionale crie.**

## COMMERCIALISATION ET MISE AU POINT DES PRODUITS

### *Consolidation :*

- Établir une politique de prix basée sur les coûts de production et l'offre;
- Pendant 1 ou 2 ans, **engager un agent des ventes à temps plein**, qui cumule les rôles d'agent de promotion (vendeur) et de développement en marketing (documentation promotionnelle, stratégies);
- **Engager une personne affectée à la mise au point des produits** (~1 an);
- Développer en priorité les marchés de volume.

### *Appropriation :*

- Si l'agent des ventes était un Cri de Waswanipi...

\* \* \*

Il n'est plus utile de continuer à discuter davantage des aspects techniques du projet. Les équipements sont là, ils fonctionnent et ne demandent qu'à «rouler» à pleine vapeur ! En somme, la consolidation des opérations et l'appropriation du projet par la communauté crie, *c'est d'abord une question de ressources humaines*.

La consolidation c'est essentiellement l'intégration d'une culture industrielle alimentaire dans toutes les opérations de l'usine : de la capture à la mise en marché. C'est le développement d'une main-d'oeuvre stable et connaissante; nous l'appelons aujourd'hui «spécialisée» et parfois même «professionnelle». C'est aussi l'intégration de nouvelles habitudes de travail où standardisation et régularité sont le crédo du succès.

L'appropriation du projet, c'est développer un sentiment d'appartenance, une fierté de voir prospérer cette entreprise. La voir s'intégrer au monde moderne tout en préservant sa spécificité, ses particularités de gestion et de marchés. C'est vouloir agir sur la mémoire collective d'une communauté peut être un peu trop en mal de défis.

La communauté de Waswanipi est-elle déterminée à s'engager à fond dans cette aventure ?

Dans l'affirmative, les consultations et les discussions ayant été très limitées à cette étape-ci de la réflexion, les parties concernées devront alors être davantage impliquées pour entériner s'il y a lieu les recommandations proposées ici, puis mettre en oeuvre les actions en découlant.

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M. Alan Penn, coordonnateur  
et Mme Lorraine Brooke, chef de projet  
pour l'Administration Régionale Crie.*

*Enfin,  
mentionnons la participation du directeur d'une entreprise  
de transformation dans le secteur des produits marins  
dont la longue expérience de gestion de la production  
a été généreusement partagée.*

**Annex 2**

**Waswanipi Commercial Fishery Market Study**

**Spring 1995**

**by Marc Laberge**

**March 1995**

**Status Report on Waswanipi Commercial Fishery**

**( Observations and Recommendations )**

**Winter 1995**

Presented to the

***Cree Regional Authority***

**Marc Laberge**

**Mars 1995**

## **Proposed Model**

### ***Basic Assumptions***

- 1- Ten fishermen fishing in the same general area at the same time, this will facilitate transport of ice and pick-up of fish and will also greatly reduce transportation cost.
  
- 2- The 1995 fish plant goal is 250 000 lbs of fish; 60% whitefish ( 150 000 lbs ), 15% sucker ( 37 500 lbs ), 15% sturgeon ( 37 500 lbs ), 5% walleye ( 12 500 lbs ) and 5% pike ( 12 500 lbs ).
  
- 3- Selected fishermen are paid \$50 per day plus \$0.30 / lbs of fish regardless of fish specie. The plant manager will decide where and when the fishermen will fish. The fishermen will be expected to catch on average 180 lbs of fish each per day, i.e. 360 lbs per boat. The fishermen should expect to earn on average \$104 per day ( \$728 per week ).
  
- 4- Equipment will be rented to fishermen at just over fish plant's depreciation cost. The fishermen are responsible for rented equipment and are required to sign a contract with the fish plant manager. In the case of nets, only normal wear will be tolerated. All boats will be obliged to have life jackets supplied at no cost by the fish plant. Gas and oil for motors will be the fishing team's responsibility.
  
- 5- Fish gutters will be paid on average \$8.50 per hour depending on experience based on speed and quality. The budget is for 6 people working 40 hours per week. Fish gutters are expected to handle on average 417 lbs of fish per day each ( 2085 lbs per week ).

- 6- Truck drivers ( 1-2 ) will be paid \$11.00 per hour and may have a flexible schedule. Weekly salary will be around \$440. Drivers will be required to deliver ice, pick up fish and on occasion move boats to different fishing sites. Drivers will on every second day or so, deliver fish to restaurants or other buyers of a same location.
  
- 7- There should be one manager who works in the fish plant only and not delivering fish. He should work for 7.5 months a year starting around April 15 and finishing some time at the end of November. His salary should be \$600 per week based on a 40-45 hour Monday to Friday work week ( the way of the past was that people would knock on the manager's door at all hours of the night bringing him fish which had to be weighed and packed on ice at the fish plant, needless to say he did not enjoy the fishermen's humor ).
  
- 8- There should also be a sales-clerk/ secretary working from Wednesday to Sunday. This persons responsibilities would include selling fish to passing customers mostly on weekends and helping the manager with various chores during the week. His or her hourly rate will be something in the order of \$6.75 an hour ( \$270 per week ).
  
- 9- The fish plant should close up completely sometime in late November and re-open in the middle of April. This would save around \$6000 on hydro bill and \$11 571 on management salary.

## Estimated Operating Cost Associated with Model

### **Salaries ( based on 20 weeks )**

• fishermen ( creation of 10 jobs )	\$145 600
• fish gutters ( creation of 6 jobs )	\$ 40 800
• truck drivers ( creation of 2 jobs max. )	\$ 17 600
• secretary ( creation of 1 job )	\$ 5 400
• manager ( creation of 1 job 32 weeks )	\$ 19 200

sub-total      \$228 600

### **Expenses ( based on 32 weeks )**

• Hydro-Québec	\$ 6 000
• phone	\$ 3 000
• truck ( gas, oil, maintenance, depreciation )	\$ 20 000
• maintenance on equipment	\$ 4 000
• supplies	\$ 10 000
• miscellaneous	\$ 5 000

sub-total      \$ 48 000

+

sub-total      \$228 600

**Total      \$276 600**

## Potential Sales

( Prices are based on 1994 markets )

- Whitefish  
 $150\,000\text{ lbs} \times 45\% = 67\,500\text{ lbs of filets} \times \$3.20\text{ per lbs}$   
 $= \$216\,000$
  - Sturgeon  
 $37\,500\text{ lbs} \times 22\% = 8\,250\text{ lbs of smoked filets} \times \$10.00$   
 $\text{per lbs}$   
 $= \$82\,500$
  - Walleye  
 $12\,500\text{ lbs} \times 50\% = 6\,250\text{ lbs of filets ( cheeks )} \times \$7.50$   
 $\text{per lbs}$   
 $= \$46\,875$
  - Sucker  
 $37\,500\text{ lbs} \times 40\% = 15\,000\text{ lbs of deboned meat} \times \$1.00$   
 $\text{per lbs}$   
 $= \$15\,000$
  - Pike  
 $12\,500\text{ lbs} \times 40\% = 5\,000\text{ lbs of deboned meat} \times \$2.00$   
 $\text{per lbs}$   
 $= \$10\,000$
- Total \$370 375**

## Estimated Operational Profit

( not including loans,taxes )

Potential sales		\$370 375
	-	
Operating cost		\$276 600
		-----
<b>Operational profit</b>	<b>=</b>	<b>\$ 93 775 + caviar</b>

**Estimated Operational Profit per Specie**  
 ( based on lbs of fish caught, i.e. whole not cut )

• Whitefish	sales for 150 000 lbs	\$216 000
	cost for 150 000 lbs ( \$276 600 x 60% )	\$165 960
	operational profit per lbs caught	\$ 0.33 / lbs
• Sturgeon	sales for 37 500 lbs	\$ 82 500
	cost for 37 500 lbs ( \$276 600 x 15% )	\$ 41 490
	operational profit per lbs caught	\$ 1.09/ lbs
• Walleye	sales for 12 500 lbs	\$ 46 875
	cost for 12 500 lbs ( \$276 600 x 5% )	\$ 13 830
	operational profit per lbs caught	\$ 2.64 / lbs
• Sucker	sales for 37 500 lbs	\$ 15 000
	cost for 37 500 lbs ( 276 600 x 15% )	\$ 41 490
	operational profit per lbs caught	- \$ 0.71 / lbs
• Pike	sales for 12 500 lbs	\$ 10 000
	cost for 12 500 lbs ( 276 600 x 5% )	\$ 13 830
	operational profit per lbs caught	- \$ 0.31 / lbs

## Balanced Pricing, Cost and Suggested Selling Price

### Whitefish

- plant cost for 1 lbs of fish caught: \$1.11 / lbs
- plant cost for 1 lbs of filets\*: \$2.46 / lbs
- plant cost for 1 lbs of smoked filets\*: \$4.10 / lbs

\*Since 1 lbs of filets = 2.2 lbs of fish

1 lbs of smoked filets = 3.7 lbs of fish

### Minimum selling price to cover proposed budget ( no operational profit )

- wholefish; gutted head on ( ~ 5% loss ) : \$1.17 / lbs
- roundfish; gutted head off ( ~ 30% loss ) : \$1.59 / lbs
- filets; skin on or off ( ~ 55% loss ) : \$2.47 / lbs
- smoked filets \* ( ~ 73% loss ) : \$4.11 / lbs

### Suggested selling price to reach estimated operational profits ( \$0.33 / lbs )

- wholefish; gutted head on : \$1.52 / lbs
- roundfish; gutted head off : \$2.07 / lbs
- filets; skin on or off : \$3.21 / lbs
- smoked filets \* : \$5.35 / lbs

- \*does not account for cost of smoker in use or any extra time needed for smoking.

### assumptions

whitefish x 45% = filets

filets x 60% = smoked filets

**Sturgeon**

- plant cost for 1 lbs of fish caught: \$1.11 / lbs
- plant cost for 1 lbs of filets\*: \$3.00 / lbs
- plant cost for 1 lbs of smoked filets\*: \$5.04 / lbs

\*Since 1 lbs of filets = 2.7 lbs of fish  
 1 lbs of smoked filets = 4.5 lbs of fish

**Minimum selling price to cover proposed budget ( no operational profit )**

- wholefish; gutted head on ( ~ 5% loss ) : \$1.17 / lbs
- roundfish; gutted head off ( ~ 30% loss ) : \$1.59 / lbs
- filets; skin on or off ( ~ 63% loss ) : \$3.00 / lbs
- smoked filets \* ( ~ 78% loss ) : \$5.04 / lbs

**Suggested selling price to reach estimated operational profits ( \$1.09 / lbs )**

- wholefish; gutted head on : \$2.32 / lbs
- roundfish; gutted head off : \$3.15 / lbs
- filets; skin on or off : \$5.95 / lbs
- smoked filets \* : \$9.99 / lbs

- \*does not account for cost of smoker in use or any extra time needed for smoking.

**assumptions**

sturgeon x 37% = filets

filets x 60% = smoked filets

**Walleye**

- plant cost for 1 lbs of fish caught: \$1.11 / lbs
- plant cost for 1 lbs of filets\*: \$2.22 / lbs

\*Assumptions 1 lbs of walleye = 0.5 lbs of filets and cheeks

**Minimum selling price to cover proposed budget ( no operational profit )**

- wholefish; gutted head on ( ~ 5% loss ) : \$1.17 / lbs
- roundfish; gutted head off ( ~ 35% loss ) : \$1.71 / lbs
- filets; skin on or off ( ~ 50% loss ) : \$2.22 / lbs

**Suggested selling price to reach estimated operational profits ( \$2.64 / lbs )**

- wholefish; gutted head on : \$3.95 / lbs
- roundfish; gutted head off : \$5.78 / lbs
- filets; skin on or off : \$7.50 / lbs

**Sucker**

- plant cost for 1 lbs of fish caught: \$1.11 / lbs
- plant cost for 1 lbs of deboned meat: \$2.78 / lbs

\*Assumptions 1 lbs of sucker = 0.4 lbs of deboned meat

**Minimum selling price to cover proposed budget ( no operational profit )**

- wholefish; gutted head on ( ~ 5% loss ) : \$1.17 / lbs
- roundfish; gutted head off ( ~ 30% loss ) : \$1.59 / lbs
- deboned meat ( ~ 60% loss ) : \$2.78 / lbs

**Actual selling price ( no operational profits ( sold at loss ))**

- deboned meat : \$1.00 / lbs

Note: with present market selling price the fish is sold at a loss in this model. By averaging out the price paid to the fishermen per lbs of fish, some species of fish will be less profitable to the fish plant than others. A few possible ways to reduce this loss would be to find new markets for this product in places such as China town in Montreal or such things as cat food companies and try to sell the product at cost. The plant used to produce fish patties but lost the interest of the buyer, it's a shame that such an expensive deboner machine was purchased based on such a weak market. When new markets are sought past years' prices should not be part of the sales pitch to sell the product. An interesting point here is that this loss is taken into account in this model and there still exists a potential profit to be made, now supposing that the deboned meat is sold at , say cost, the estimated operating profit would increase by \$26 490 ( based on model ), the deboning machine could pay for itself in one season.

**Pike**

- plant cost for 1 lbs of fish caught: \$1.11 / lbs
- plant cost for 1 lbs of filets\*: \$2.78 / lbs
- plant cost for deboned meat : \$2.78 / lbs

\*Assumptions 1 lbs of filets = 2.5 lbs of pike

1 lbs of deboned meat = 2.5 lbs of pike

**Minimum selling price to cover proposed budget ( no operational profit )**

- wholefish; gutted head on ( ~ 5% loss ) : \$1.17 / lbs
- roundfish; gutted head off ( ~ 30% loss ) : \$1.59 / lbs
- filets; skin on or off ( ~ 60% loss ) : \$2.78 / lbs
- deboned meat ( ~ 60% loss ) : \$2.78 / lbs

**Actual selling price ( no operational profits ( sold at loss ))**

- filets skin on or off : \$2.20 / lbs
- deboned meat : \$2.00 / lbs

Note: again this fish has the same problems as the sucker in this model but could also show the same benefits.

## **Potential Problems associated with Model**

- 1. Fishermen may be tempted to sell their sturgeon and possibly walleye privately which would cause serious financial problems for the fish plant. Salary fishermen would have to sign some sort of contract obliging them to sell their fish to the fish plant only. It must be explained that the fish become the plant's property and not the fishermen's.**
- 2. To smoke sturgeon, is a lengthy chore; the filets must be unthawed which takes up lots of space, then soaked in a solution for 4 hours, smoked for 10 hours then vacuum packed. This causes a small problem because the model is based on 8 hour days. Smoking the fish has a greater operation cost associated with it, yet as it stands now the plant's selling price for smoked fish does not reflect this additional cost and, neither does the model. An increase in the selling price of this product of 1 to 2 dollars per lbs of smoked fish should easily cover this cost and not effect the market of this product which is in great demand.**
- 3. The present smoker can only handle a maximum of ~ 130 lbs of filets at a time which produces ~ 80 lbs of smoked sturgeon per 10 hours. Over the 20 week period, if the smoker is used for 50 hours a week a maximum of ~ 8000 lbs of smoked sturgeon can be produced per fishing season.**
- 4. The 250 000 lbs of fish suggested for this model may be extremely difficult to obtain since the largest lakes which have the largest allowable quotas have many complicated problems associated with them. The problems range from distance and accessibility to uncooperative tallymen and fishing outfitters. The break even point of the model is 170 000 lbs of fish broken down in the respective percentages.**

## **Fish Supply**

After reading the proposed model above, one tends to wonder how the fish plant can be doing so bad; after all the model isn't that far off from reality...or is it? The answer is obvious, the way the plant is operating now is very different than the model. Fishermen are not being paid enough money and do not find the job profitable. One fishermen said by the time he drives from his camp to deliver his fish to the plant, he barely breaks even, but then again when asked how far his camp was he said around 4 hours from the plant.

In the model basic assumption # 1, ( fishermen fishing in the same general area at the same time ) was the first and most important assumption. The plant can not rely solely on individual fishing efforts of a few unmotivated fishermen, it needs a main stable supply of fish by a group of serious fishermen. This team would be the heart of the operation. The non-serious fishermen can prolong the life of the fish plant but without the heart of the operation providing the main supply to the plant, it's slow and expensive death is certain.

In order to standardize some of the problems associated with lakes which affect the supply of fish to the plant, lakes having similar problems ( mainly distance ) were grouped together to form zones. In the following few pages each zone is analyzed in order to determine the maximum potential yield each zone is capable of providing and the corresponding estimated potential yield based on problems associated with that particular zone.

## Maximum Potential Yield per Zone

### Zone 1

- Lac Dana, Lac Evans and Lac Théodat
- The distance and access are the main problems of this zone
- The lakes have never been seriously fished
- There may be a road coming down from the north to Lac Evans, but nobody was sure. If there was the total round trip would take about 16 hours.
- There is one outfitter on Lac Evans who said it would be OK to fish with trap nets only , after the tourist leave in late summer.

The maximum combined yield ( lbs ) for the zone is :

- whitefish : 73 552
- sturgeon : 14 712
- walleye : 14 712 accidental
- sucker : 73 552
- pike : 29 421 accidental

The estimated potential yield ( lbs ) based on problems associated with zone :

- whitefish : 0
- sturgeon : 0
- walleye : 0
- sucker : 0
- pike : 0

**Zone 2**

- Lac Opataougaga, Lac Poncheville and Lac Rocher
- Accessible but with some difficulty
- The lakes have never been seriously fished
- The total round trip is around 8-9 hours

The maximum combined yield ( lbs ) for the zone is :

- whitefish : 22 465
- sturgeon : 4 494
- walleye : 4 494 accidental
- sucker : 22 465
- pike : 8 988 accidental

The estimated potential yield ( lbs ) based on problems associated with zone :

- whitefish : 22 465
- sturgeon : 4 494
- walleye : 4 494 accidental
- sucker : 22 465
- pike : 8 988 accidental

**Zone 3**

- Lac Matagami, Bell River and Lac Soscumica
- Lac Soscumica accessible but with extreme difficulty
- The lakes have never been seriously fished
- The total round trip is around 6-7 hours

The maximum combined yield ( lbs ) for the zone is :

- whitefish : 45 497
- sturgeon : 9 099
- walleye : 9 099 accidental
- sucker : 45 497
- pike : 18 198 accidental

The estimated\*potential yield ( lbs ) based on problems associated with zone :

- whitefish : 26 003
- sturgeon : 5 200
- walleye : 5 200 accidental
- sucker : 26 003
- pike : 10 400 accidental

- \*Due to the problems associated with Lac Soscumica it's quotas have been brought to 0.

**Zone 4**

- Lac Goeland ( Gull Lake ), Lac Maicasagi, Lac Chensagi and Lac Olga
- Lac Goeland has MLCP restrictions for whitefish and sucker, fishing can only take place from June 7- July 15
- The lakes have never been seriously fished
- The total round trip is around 3-4 hours
- Access is excellent
- There exists a problem with one outfitter and one tallyman on Lac Goeland

The maximum combined yield ( lbs ) for the zone is :

- whitefish : 50 236
- sturgeon : 10 023
- walleye : 12 225 ( 5 536 accidental on Lac Goeland )
- sucker : 50 236
- pike : 20 090 accidental

The estimated\*potential yield ( lbs ) based on problems associated with zone :

- whitefish : 36 393
- sturgeon : 7 255
- walleye : 9 457 accidental
- sucker : 36 393
- pike : 14 554 accidental

- \*Due to the problems associated with Lac Goeland it's quotas have been reduced to 50% because the tallyman's trap line covers around 50% of the lake

**Zone 5**

- Lac Waswanipi\*, Lac Lichen\*, Lac Lessard\*, Lac Opawica\*(incl. Tush Bay ), Lac Pusticamica, Lac la Ronde\*, Lac Relique\*\*, Lac Nicobi\*\*, Lac Bachelor, Lac Madelaine, Lac Short and Lac Renault
- \* Gill nets and trap nets only from June 7- July 15 for sucker and whitefish
- \*\* Trap nets only from June 7- July 15 for sucker and whitefish
- The total round trip is around 1-2 hours
- Access is excellent
- There exists a problem with 3 outfitters

The maximum combined yield ( lbs ) for the zone is :

- whitefish : 41 116
- sturgeon : 5 926
- walleye : 12 258 ( mostly accidental )
- sucker : 41 116
- pike : 16 555 accidental

The estimated\*potential yield ( lbs ) based on problems associated with zone :

- whitefish : ?
- sturgeon : ?
- walleye : ?
- sucker : ?
- pike : ?

- \*Due to the problems associated with this zone it is extremely difficult to make estimates. The MLCP and outfitters should be meat with.

**Zone 6**

- Lac la Trève, Riv. Lamark, Kapunaputagen and Two Mooses, Lac Presqu'il, Lac Inconnu, Lac Caupichigau, Lac Méchamego\* and Lac des Misérables\*

- \* Trap nets only from June 7- July 15 for sucker and whitefish

- The total round trip is around 2-3 hours
- Access is excellent
- There exists a problem with 2 outfitters

The maximum combined yield ( lbs ) for the zone is :

- whitefish : 15 300
- sturgeon : 4 412
- walleye : 3 704 ( mostly accidental )
- sucker : 15 300
- pike : 6 117 accidental

The estimated\*potential yield ( lbs ) based on problems associated with zone :

- whitefish : 15 300
- sturgeon : 4 412
- walleye : 936 ( mostly accidental 25% of quota )
- sucker : 15 300
- pike : 6 117 accidental

- \*Due to the problems associated with this zone it is difficult to make estimates on walleye since the outfitters will not tolerate commercial fishing of this fish. There does not however seem to be a problem fishing for whitefish in late summer with trap nets.

**Zone 7**

- Lac Father, Doda et Francoise, Lac des Vents, Lac Dickson\*, Lac Surprice, Lac Caopatina, Lac à l'eau Jaune, Lac Hébert, Lac Rane, Lac de la Baie, Lac Bras-Coupé and Lac Muscocho

- \* Trap nets only from June 7- July 15 for sucker and whitefish

- The total round trip is around 2-3 hours
- Access is excellent
- There exists a potential problem with sport fishermen since access is so good

The maximum combined yield ( lbs ) for the zone is :

- whitefish : 44 008
- sturgeon : 8 508
- walleye : 9 835 accidental
- sucker : 44 008
- pike : 17 162 accidental

The estimated potential yield ( lbs ) based on problems associated with zone :

- whitefish : 44 008
- sturgeon : 8 508
- walleye : 9 835 accidental
- sucker : 44 008
- pike : 17 162 accidental

As shown above the fishing zones can provide enough fish to the fish plant to make things work, the problem is with all the restrictions and distance problems, the fishermen could not possibly catch all the estimated yield without being properly coordinated.

## **Fishermen's Operating Cost**

This section deals with basic costs incurred by the fishermen and the fish plant. The idea is to show the difference in costs between the fishermen and the fish plant. As it stands now the fishermen can either rent equipment or use their own, if they choose to use their own equipment there are many hidden costs associated with this which the fishermen have not been taking into account when comes ISP time.

### **1. Cree Yamaha Boats**

Waskaganish still make the boats but the plant is closed in winter because of the high electricity cost for heating. The plant did not have any boats in stock. The boats are also sold by Steve Minish(?) in Val d'Or, he said he has 2, 19-foot boats in stock and also sell motors.

The cost of the boat is \$2 500

- a. The fish plant boat's life span is 10 years;  
Depreciation        \$250 / year
- b. The fishermen's boat life span is 15 years;  
Depreciation        \$167 / year

### **2. Nets**

The cost of fishing nets is around \$1 per foot of net;

- a. The fish plant's fishing net ( 150 ft. ) life span is 2 years;  
Depreciation        \$75 / year per net
- b. The fishermen's fishing net has a life span of around 5 years;  
Depreciation        \$30 / year per net

### 3. **Motors**

The cost of motors varies on the type and horse-power of the engine, a 20 hp seems to be the motor of choice, it's price is around \$2200;

- a. The fish plant's motor has a life span as it stands now of around 4 years only; depreciation is therefore \$550 / year
- b. The life span of a fishermen's motor is around 8 years;  
Depreciation \$275 / year

### 4. **Gas and Oil Cost**

The average fishing team at the moment uses on average 15 gallons of gas per week and 3 containers of oil a week for his motor. The total cost of this is somewhere in the range of \$53.25 / week per motor.

### 5. **Fishermen's Delivery Cost**

The direct cost to the fishermen if he has to deliver his fish is too difficult to determine; presently the fish plant pays out \$0.10 / lbs extra to fishermen delivering their fish. I really don't have a clue what this figure is based on. Depending on the quantity of fish a fishermen brings in his cost varies greatly. Other factors such as the amount of nets used, the distance of his camp and the time of year influence the fishermen's cost. Since there were no serious fishing camps used and fishermen were fishing all over the place, individual costs per camp could not be figured out. If gas is the main expense, an average truck gets 29 km / gallon which averages out to \$0.10 / km.

### 6. **Truck Operation Cost**

The cost of truck operation can be calculated as follows; the truck gets 19 km / gallon, this averages out to \$0.16 per km. Knowing that the hourly rate at the moment is \$10.15 for the driver and that the truck drives an average of 70 km / hour, the total operating cost of the plant truck is \$21.35 / hour or \$0.31 / km ( this does not include the cost of ice to the plant which I had trouble figuring out how to calculate ).

**7. Travel Cost associated with various towns.**

The travel cost below is based on; 1 driver driving at 100 km / hour, taking 1 hour to deliver fish in the town, being paid overtime after 8 hours, having the usual allowances for meals ( \$10, \$15 and \$20 for supper ) and taking a 15 minute break for every 2 hours of driving. The price of gas is \$0.66 / l ( \$2.96 / gal ).

**a. Val d'Or ( 600 km )**

• salary 7.75 hours	\$ 78.66
• gas	\$ 93.47
• expenses	\$ 15.00
• total cost	\$187.13

**b. Chibougameau ( 300 km )**

• salary 4.5 hours	\$ 45.68
• gas	\$ 46.74
• total cost	\$ 92.42

**c. Chisassibi ( 2000 km )**

• salary 23.5 hours	\$276.56
• gas	\$311.58
• expenses	\$ 80.00
• hotel	\$ 68.00
• total cost	\$736.14

**d. Nemaska ( 800 km )**

• salary 10.12 hours	\$113.54
• gas	\$124.63
• expenses	\$ 35.00
• total cost	\$273.17

## 8. *Cost of new truck*

After talking to Gilles Lalande from Gareau Auto in Val d'Or, a new truck similar to what we have now except diesel would cost \$30 200. The truck he had in mind was a 6.5 turbo chevy flat-bed. We could fit our refrigerated tank on the new truck for around \$100. He also said he would take our old truck on a trade and give us ~\$5000, but he first has to check our truck. He says the diesel truck gets 36 km / gal. and 28 km / gal. when fully loaded ( 15 000 lbs ).

## 9. *Principal Cree Camps*

It is very unclear as to whether or not these are fishing camps but at one time or another Albert said they did pick up fish at these places, but not on any regular bases.

lake	name	time for round trip	average yield / week*
1. Opawica	Henry Saganash	1 hour	200 lbs
2. Maicasagi	Mario Lord	4 hours	1200 lbs
3. Bell River	Helen Poucachiche	6 hours	1200 lbs
4. Doda	William A. Dickson	4 hours	200 lbs
5. Quénonisca	Clifford Saganash	8 hours	400 lbs
6. Rocher	Saganash Brothers	8 hours	400 lbs
7. Tush Bay	Claude Gull	1 hour	200 lbs

- \*These figures should not be taken seriously they are just to give a very rough idea of yields picked at one time. Most of these fishermen do not fish seriously.

## 10. *Total Fishermen's Cost*

- a. Supposing a team of fishermen rent all there equipment from the fish plant and the round trip to there camp is the average of those above; 333 km and takes 4.75 hours, this is the cost they are looking at for a 20 week period;

- boat \$ 250
- net ( 20 nets ) \$1500
- motor \$ 550
- fuel and oil \$1065
- pick- up twice / week\* \$4057

Their total cost would be  $\$7422 / 2 \text{ people} = \$3711 \text{ each}$

- \*Note that this includes cost of driver and gas, in proposed model above the truck driver's salary is included as plant operating cost, therefor if the above model ever was to be considered the fishermen would only have to pay for the cost of the truck gas and not the driver's salary. Then again if the concept of zones is ever to be considered along with the model the fishermen would enjoy a free pick-up service because this cost was part of the plant's operating cost.

b. Supposing the team uses their own equipment and deliver their own fish to the fish plant;

- boat \$ 167
- nets ( 20 ) \$ 600
- motor \$ 275
- fuel and oil \$1065
- delivery \$1332
- deprecia. truck \$1000

Their total cost would be  $\$4439 / 2 = \$2220 \text{ each}$

In both cases around 54% of the fishermen's cost is in delivery or pick up.

## **Market Analyses**

Albert and I met with quite a few people in Senneterre, Val d'Or, Chapais and Chibougameau. We talked to restaurant chefs, hotel managers, retail outlets, hospital kitchen managers as well as grocery store managers. Before meeting these people I did a lot of research in the fish plant to make sure I was well prepared to meet the potential buyers and I'm glad I did because there was lots of questions and comments. One thing for sure, the Waswanipi Commercial Fishery had a good reputation, but for it's smoked sturgeon and walleye filets and maybe because before Ron Bossé hiked up the prices in 1994, the fish plant was practically giving away these fish and people were quick to take advantage of the ridiculous low prices. Even white teachers in Waswanipi were buying up the fish and selling them down south. Well, at least the plant is well known now. We did not spend as much time on the road as I expected, after a while the same questions and comments kept being asked.

### **Sturgeon**

There is definitely no problem with the sturgeon market. People still dropped by while I was there in the plant asking for smoked sturgeon, some callers went so far as asking the chief to open the fishery this winter to get some smoked sturgeon so he could bring it with him in Europe to promote the product. Needless to say this would be foolish. One fish store was selling our product for \$15.45 / lbs, we would sell it to her for \$10.00 / lbs. I think an increase of \$1-2 / lbs would not affect our sales one bit. The demand for the product greatly outweighed the supply.

### **Walleye**

The walleye market is in the same shape as the sturgeon market. It seems that's all people talked about was walleye and sturgeon wherever we went. I talked to a friend of mine who is a butcher in Ile Perrot, he told me he buys his walleye for \$7.45 / lbs and sells it for \$10.00 / lbs. This is of course frozen, as a matter of fact nobody cared that our fish are sold frozen in the Abitibi region and they did not expect to buy fresh fish. The fish plant is selling it's walleye for \$9.50 / lbs retail and \$7.75 / lbs wholesale. Again the demand for this product greatly outweighs the supply.

**Whitefish**

The whitefish market is one that needs a lot of work. Unlike the sturgeon and walleye, the whitefish is almost not known by the white buyers. The fish stores' owner in Val d'Or did not even know what color the fish was or where it came from. Some restaurant owners had no idea what I was taking about. I explained to people that the fish was related to trout and can be compared to walleye, then I told them about the price the fish plant sold the fish last year and people became very interested. I also explained to potential buyers that the name of the fish, especially in English misrepresents the fish in that people associate the fish as a low quality product. When I mentioned the idea of calling the fish by it's Cree name ( éticomak? ) they said it would be a great way to present the fish.

The price is an important issue here if the fish is sold at a low price while trying to promote it, it may be associated as a low grade fish and would be hard to raise the price if this attitude was to set in. The current selling price is \$3.20 / lbs for filets and in my opinion it may be just a little to low. However this price can attract walleye buyers and as a matter of fact it is. When walleye filets were all sold at the fish plant people were encouraged to try whitefish filets, apparently these people came back for more and were very pleased.

For the people who did not know of the fish, I said the plant will try and make up sample boxes of a few pounds of whitefish filets this summer and give them at no cost to potential buyers, people were very pleased and anxious to try the fish. I was also thinking of including some information sheet about the biology of the fish and show a picture. A questionnaire can also maybe be in the box. This would certainly help promote the fish.

The Cree communities obviously new about the fish and the plant sold many fish directly at it's outlet. The restaurants in Waskaganish, Nemaska, Ougibougameau which actually only makes up 3 or 4 restaurants said they might be interested in whitefish filets but could not say how much. I really don't see them as large buyers anyway. The hospital in Chibougameau was very interested in the idea of serving Cree food to the sick elders and will be a potential buyer this summer but again quantities will be rather small unless many Crees get sick. The hospital in Chisassibi did not seem to enthusiastic because they get their fish from the fishermen over there, Allan Cookish explained to me.

Of the white people who did know about the fish, there were mixed feelings about it. The restaurant chef from L'Escale in Val d'Or said our filets should be individually vacuum sealed to preserve the fish freshness, but then again he is known to be extremely fussy. Other white people said the fish is full of small bones and is very frustrating to eat, I was very surprised by this, if this is true the fish will never make it to a successful market. I never experienced these small bones myself but I may not remember them. This should be investigated I could not get hold of any fish to see for myself.

One restaurant in Quévillon said they used to serve the fish but people did not like it so they don't serve it anymore. The main grocery store in Chapais said who is going to come to my store and buy fish? Every one around fishes and the fishing is great, he said tourist won't come to buy fish and neither will the locals. He said he had to through away a whole salmon because nobody would buy it.

Although the market for whitefish seems grim, it's not; the fish is new to many people particularly restaurants yet they are very keen in trying the fish. Whether or not the fish is a success depends on the customer, this is why it's so important to make sure the fish is well presented.

An interesting potential buyer is a man called Lucien Tremblay from Senneterre; although not liked by many due to past business operations, I managed to meet with him on two occasions. He posses a processing plant in Senneterre which produces various second and third degree transformed products such as whitefish cretons and smoked whitefish. His products are excellent and he has spent a lot of time finding markets for his products. Although his plant is not in full operation at the moment, it will be very soon he says. He has three daughters who he is giving the business to, and is waiting for them to finish school. The daughters are all very enthusiastic about the plant and are studying related fields in school. I explained to him that I was trying to unblock the whitefish market in order to make way for the large quantity of fish Waswanipi was planning to catch next summer. The meetings were very successful and he and his daughters are very keen on buying all the whitefish we can offer them. Price was not even mentioned although he is aware that the fish were selling for \$3.20 / lbs since he bought all the remaining whitefish in the fish plant last fall.

The other interesting side to this is his smoked whitefish, his daughters have great secret receipts which are creating an increasing demand for the product. This is a great way to promote the fish and get the publics interest. I helped

push his product in restaurants but the people knew about him, they said they tried calling M. Tremblay to buy smoked whitefish but he never called them back. I heard this story from a few different people. When I asked M. Tremblay about this he said he was not ready for the market at the time, his daughters seemed very surprised about this, I don't think they knew about the calls. Personally I feel M. Tremblay was a little scared to face the market without his daughters because he can't read or write, nevertheless his daughters seem anxious to get things going.

To try to compete with M. Tremblay would seem impossible; his smokers are at least 5 times the one in the Waswanipi plant, and are mostly all computerized. Instead I suggest working with him for now by selling our whitefish to him and when the whitefish market picks up, then we may consider smoking our own whitefish with a new smoker but those days seem long ahead at the moment.

### ***Sucker***

The market for this fish is terrible, there used to be a guy who would buy up all the deboned meat, but he disappeared. I tried to promote this product when visiting restaurants by giving free samples away. Chefs seemed interested and said they had ideas for the product. The owner of one gourmet restaurant in Val d'Or, Guislain Trudel was very enthusiastic about the deboned pike and sucker. He has connections in many high places from TV to chef training schools, he is also the main guy responsible for promoting regional food products in Québec. He gave some of our deboned meat to the chef school and they are working on recipes. This product needs a serious buyer though such as places like Chinatown in Montreal. Samples were also given to the Chinese restaurant Kam Ping in Val d'Or were the owner Kam, or is it Ping, seemed very enthusiastic about the price of the product but I told him those were last years prices and the plant may not be able to afford selling at \$1.00 / lbs. I want to say that the presentation of the deboned meat is terrible, I was a little embarrassed to present a product that had the word sucker hand written on it. I told Albert he should have stickers made with the word mullet on them in order to present the product professionally.

**Pike**

The pike market was a little better than the sucker. Chefs make a type of moose with the product and various other products with the deboned meat. Pike filets and round fish interested some chefs who already bought from the fish plant but the quantity needed could not really be determined. There is some market for the fish but it seems to be a small one. Pike filets were selling for around \$2.20 / lbs while the deboned meat sold for \$2.00 / lbs. There was still plenty of deboned pike meat left over from last season.

**Discussion and Recommendations**

The plant is experiencing many problems, one way to solve these problems is to change the attitude of the workers. The way to do this is to satisfy them by increasing their wages, then the plant has to see if it can afford this satisfaction by looking at potential harvests and associated operating costs, once this is solved it then has to find a market which can absorb it's products. Since everything is directly related to each other I felt I could not only look at the potential markets and that I had to understand the other areas of this operation in order to better understand the markets.

There were many other things I would have liked to try with the model but I felt I should not get to carried away. Although it would have been interesting to try it with a market reflecting price paid to the salaried fishermen instead of the \$0.30 / lbs. The idea was to pay a little more for wanted species and a lot less for unwanted species, this would increase the operational profits of the plant by decreasing the operational losses for non-profitable species in 2 ways; 1. the fishermen would not be inclined to fish for the less profitable specie and 2. the less of this type of fish the plant has, the better off it will be.

The problems with the tallymen were not discussed in to much detail, because it was assumed that some sort of arrangement could be worked out. I think there can be quite a few simple solutions such as trap nets and respecting the tallymen's request. In the same manner outfitters can be cooperative if they are respected and understood. Nevertheless there does exist a serious problem and compromises should be made.

Annex 3

**Background Notes on the Income Security Program  
for Cree Hunters and Trappers  
(prepared by Alan Penn)**

The Income Security Program for Cree hunters and trappers (ISP) has consistently been identified as an obstacle (actual and perceived) to the commercial fishery at Waswanipi. This view was amply confirmed during consultations in Waswanipi for the present report. This text reviews the main issues and identifies possible solutions. The statistics for 1994-95 are drawn from the annual report to the Income Security Board.

For the purposes of this analysis, the following features of the ISP should be kept in mind.

1. In 1994-95, there were 354 beneficiaries of the program from Waswanipi (29% of the resident population). Together, the beneficiaries declared 38,704 payable man-days, for an average of 174 man-days per adult, or 258 man-days by beneficiary unit (household). At a regional level, 54.9% of the heads of beneficiary units are under age 48. Total ISP payments at Waswanipi were \$1,730,510 (an average of \$11,389 per beneficiary unit). Of this, the basic amount totaled \$208,504.
2. ISP beneficiaries receive a combination of a per diem payment, and a basic amount. In 1993-94, the per diem stood at \$39.34, and the basic amounts (see below) at \$3,331/adult, \$1,336 per child, and \$1,336 per beneficiary unit. There is also a fur sale exemption which depends on family size and location of hunting territory (the rules of which are set out in by-law no. 12 of the ISP Board).
3. Individual beneficiaries can claim up to 240 man-days a year. For a husband and wife, this, in principle, amounts to \$18,883.20. This income is applied to the calculation of the basic amount at a rate of 40%. For example, if the husband and wife in question had two children, an amount of \$7,553.28 ( $\$18,883.20 \times 0.4$ ) would be deducted from a basic amount of \$10,620.00 (leaving \$3,116.72. In this example, if the couple were fishing commercially, the remaining basic amount would be reduced by 40% of the declared income from commercial fishing.
4. The number of payable man-days is, in practice, fixed by a regional ceiling (350,000). It is the responsibility of a local committee, which determines eligibility, and therefore the

number of beneficiaries. the target number of 240 payable man-days /beneficiary may be reduced if the regional total claimed exceeds 350,000 which was not the case in 1994-95.

5. What is important to the individual fisherman is the remaining basic amount after adjustment for per diem payments. if he has other income (from seasonal employment or from fur sales after deduction of the fur exception, this income will be applied to the basic amount, still at the rate of 40%. For the model family considered here, other sources of income (i.e., other than commercial fishing) would have to reach \$7,712.10) before the basic amount is eliminated.

6. Pension income is exempt from deductions under the ISP and is applied to the basic amount. It therefore, becomes additional income not subject to the 40% rule. UIC income is, however, subject to the 40% rule.

7. The financial impact of commercial fishing revenues on ISP benefits is therefore inversely proportional to the number of payable man-days and the amount of other income.

8. It would be in the interests of the ISP beneficiaries who fish commercially if they compute net income, i.e. revenues from fishing after allowance is made for the cost of fishing. This requires a set of rules for the calculation of net income; it might also be appropriate for the fishery to provide the necessary calculations on the basis of information provided by the ISP beneficiary.

9. Nevertheless, even with the calculation of net income from commercial fishing it appears unlikely, for most individuals, that we would be able to eliminate completely the deductions from ISP benefits. In this sense, ISP income loss, even if it can be reduced, will continue to be seen as a negative consequence of commercial fishing.

10. It should be noted that under the current rules of the ISP, the economic activity of the head of the beneficiary unit also determines the status of other members of the beneficiary unit. Thus, if a husband sets a net for the purpose of commercial fishing, both he and his wife are considered to have spent that day fishing commercially. This significance of this observation becomes apparent in item 11 below.

11. A central difficulty that requires further discussion is the status of commercial fishing as a harvesting activity. Commercial fishing is included in the definition of harvesting in

Section 24 of the James Bay and Northern Quebec Agreement, but time spent fishing commercially is explicitly excluded from the definition of time spent engaged in harvesting activities (30.2.2 of the Agreement). It would obviously be preferable for the prospective fisherman or woman and their dependents if time spent at bush camp with commercial nets could be treated simply as time spent engaged in harvesting activities.

The problem can be illustrated by the case of winter fishing. It is possible, in principle, for families at winter camps who tend their own nets to set additional nets and so provide a modest but steady production of fish while at the winter camp. The current rules, however, would expose the families to a subsequent ruling that the time spent in the bush would not be considered as payable man-days by virtue of the fact that fish had been taken from their nets and subsequently sold within the organizational framework of the commercial fishery.

12. Any system of administrative rules to minimize the impact of commercial fishing on ISP incomes must take into account the fact the ISP year begins on July 1, and that beneficiaries are expected to provide, in advance, statements about time which will be spent in harvesting activities or wage earning in order to determine payments on the quarterly schedule used by the ISP administration. It is important to devise a realistic and workable method for providing the necessary information to the ISP administration in ways which do not further penalize fishermen.

13. There is clearly a problem that needs to be addressed. In the short term, the best that can be done by the Waswanipi Commercial Fishery is to offer fishermen a detailed calculation so that they can see what will be the probable impact, in their case, of commercial fishing. This procedure should include the determination of net income.

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