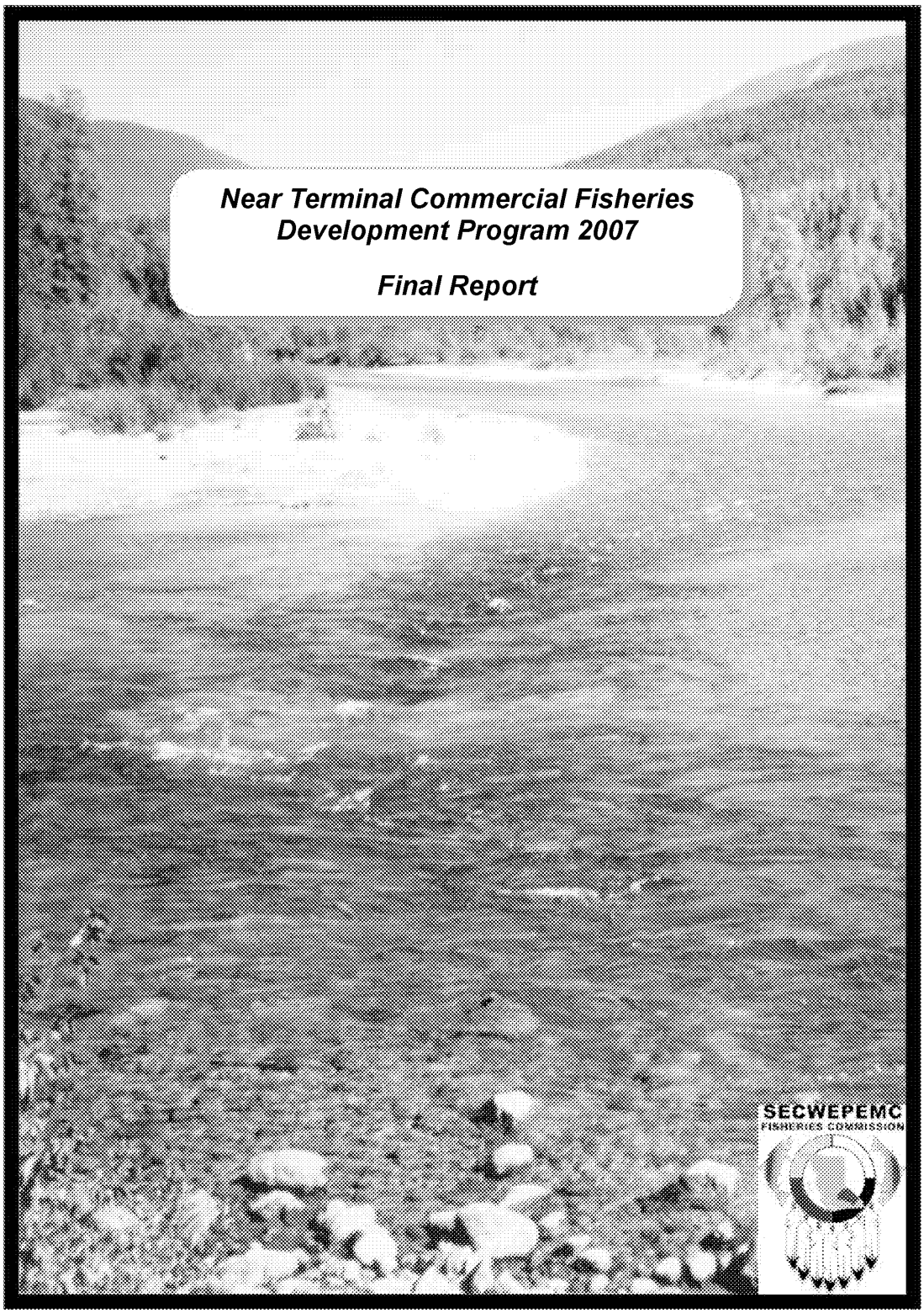
Near Terminal Commercial Fisheries
Development Program 2007
Final Report
SECWEPEMC
FISHERIES COMMISSION

Near Terminal Commercial Fisheries Development Program 2007

Final Report

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- Mike Anderson, Skeetchestn Indian Band;
- Mike McLean, McLegg Aquaculture; and,
- Dave Moore, Fisheries Development Services.

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EXECUTIVE SUMMARY

The Secwepemc Fisheries Commission (SFC) has conducted three years of preliminary feasibility studies or demonstration fisheries from 2004 to 2006. SFC is developing a preliminary, multi-year production and business plan as a foundation for commercial salmon fisheries in the Thompson-Shuswap sub-basin of the Fraser River. The goal of the 2007 program was to collect information to test assumptions and further refine the business plan.

Six fisheries were planned from early August to late September. Primary processing of a portion of SFC's fish was undertaken at Siska's licensed plant. Three marketing and sales strategies were tested: fish market operations; local delivered sales; and, direct sales to licenced buyers. The Big Sky Fresh Fish Market was operated to sell whole fish and products processed at the Siska Plant. A consultant was hired to explore local delivered sales with restaurants and retail outlets. Preliminary sales calls were made to restaurants, specialty seafood stores, institutions and smaller supermarkets in the BC southern interior region. Whole pink salmon were sold from the landing site directly to a licensed commercial fish buyer/broker.

In late July, the proposal was approved by DFO and a Commercial Licence was received. Due to a serious conservation concern, the two sockeye fisheries did not proceed. Three chinook fisheries and one fishery targeting pink salmon were conducted. Only two of the four fisheries were able to harvest an appreciable number of chinook. A total of 144 chinook and 10,697 pink salmon were landed. Over half of the pink allocation was caught, while only 29% of the chinook allocation could be landed. The second week's catch of chinook (27 fish) were processed into 250 lbs of steaks and fillets at the Siska plant. Just over 200 lbs of chinook salmon products were sold from the Big Sky Fresh Fish Market and Siska also sold some of our chinook products at their fish market. Chinook salmon supply was insufficient to adequately assess the local delivered sales market. Five restaurants in the BC southern interior were surveyed, but no sales were made. Three retail outlets in the Okanagan were contacted; two were sent product samples and one bought a small quantity. The fish buyer/broker bought 25,215 lbs of female pink salmon; the males were taken away at no charge. Approx. 1,500 lbs of chinook were also taken by the buyer/broker, but no payment or sales information was received. About 10% of the chinook produced in the program were actually sold.

Production volumes and sales volumes were calculated to identify reasonable daily targets and annual allocations for the business plan. As well, the potential profitability of each fishery and the temporary fish

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market was calculated to identify break-even conditions. The following recommendations for the future of the program were made:

1. The true costs associated with Program Administration and Management services need to be recognized and included in the business plan.

2. New funding should be sought so that additional human resources can be found to assume key roles within the program. Some expertise should continue to be shared through strategic partnerships with other inland First Nations groups working towards common goals.

3. Angling and gillnetting in the Thompson River should be discontinued. The Kamloops Lake gillnet fishery should be repeated in 2008 and extended over a longer time period to more fully assess its production capacity and potential profitability. There is a need to improve the efficiency of the fishery; more fish must be caught at a lower cost for it to be profitable.

4. Beach seining on the Thompson River should be the method of choice for sockeye and pink fisheries in years when sufficient TAC is available. For pink harvests the timing of the fishery could be expanded to early October. There is a need to improve on the efficiency of the operation. More fish need to be caught, while expenses need to be reduced. Improvements to the landing site should be considered to allow for the use of a forklift for moving totes.

5. Ice deliveries need to be cost-shared and coordinated with other First Nations producers.

6. The relationship with Siska First Nation for processing should continue in 2008.

7. A better location for the fish market must be found in Kamloops close to either a busy highway or within a busy shopping district.

8. A plan for disposing of all unsold fish or fish products should be developed in advance of any fish market being conducted.

9. If large chinook salmon are to be sold again at a fish market, it is recommended that they be size graded by weight and only fish that fit into the available transport boxes should be offered for sale. Larger chinook must be processed and/or sold elsewhere.

10. Sales prices at temporary fish markets must be set much lower.

11. Local, delivered sales need to be pursued and assessed in more depth. Before the fishery begins, it is necessary to meet with chefs/owners to discuss their purchasing preferences and take pre-orders. An extended sales period is needed; options for blast freezing and holding surplus product must be explored with Siska First Nation.

12. SFC needs to actively engage with our First Nations partners to screen prospective fish buyer/brokers as early as possible each year.

13. The issue of killing high numbers of fish of no value (i.e., male pink salmon) presents a profound ethical and business development challenge. There is a need for alternative products, processing technologies and markets to be explored. It is recommended that SFC support innovative research and development projects to realize more value from all fish harvested.

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INTRODUCTION

The Secwepemc Fisheries Commission (SFC) is a non-profit, support service agency operating as a division of the Shuswap Nation Tribal Council Society. We are based in Kamloops in south-central BC within the territory of the Secwepemc or Shuswap people. One of the SFC's goals is to assist our affiliated communities with re-establishing an economy related to fishing in our territory.

On behalf of our affiliated communities, SFC has been leading commercial fisheries planning in the Thompson/Shuswap sub-basin. Our vision is to increase Secwepemc involvement in the economy of the emerging inland salmon fisheries in the Fraser River watershed. SFC has conducted three years of preliminary feasibility studies or demonstration fisheries from 2004 to 2006. This work, referred to now as Phase 1, was structured to answer key fisheries management and business viability questions (Ross 2006).

PREVIOUS STUDIES

SFC's commercial fisheries feasibility research to date has focused on the following:

1. selecting target stocks and obtaining demonstration commercial fishing licenses;
2. testing harvest production methods, locations and capacity;
3. determining fish handling and transportation options;
4. identifying licensing, certification and regulatory requirements;
5. preparing a range of product samples and assessing market quality;
6. developing collaborative arrangements with other First Nations;
7. determining capital and operating costs; and,
8. test marketing fish locally (wholesale and retail).

As part of the 2006 research study, SFC hired a consultant to provide advice and analyses on the feasibility of local/inland processing of our salmon (Moore 2007a, 2007b). Working closely with SFC staff, the consultant was tasked with:

- exploring options and providing advice for local fresh and processed product sales;
- developing a detailed multi-year production and marketing plan; and,
- designing a preliminary business plan for establishing local primary processing facilities.

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Important conclusions and recommendations from 2006 were as follows:

- Choosing the best business model to suit the local fishery will depend upon harvest production capacity and variability, and upon local marketing capacity.
- There are minimum production and marketing targets for each business model where inland fisheries will begin to turn a profit; best values generally come from optimizing local markets.
- There is a need to plan for periods of high and low production; and for seasonal processing and marketing.
- There is a need for stepped progression of infrastructure development towards local processing and marketing; need to move beyond Wholesale to Processor model to a more sophisticated processing business.
- There is a need to develop collaborative, flexible linkages between participating Secwepemc communities and other First Nations, particularly the Siska First Nation with their processing plant.

GOAL & OBJECTIVES

In 2007 SFC was ready to move beyond Phase 1 feasibility research to Phase 2 - a *Near Terminal Commercial Fisheries Development Program*. SFC is developing a preliminary, multi-year production and business plan (2007-2010) as a foundation for commercial salmon fisheries in the Thompson-Shuswap sub-basin of the Fraser River, our principal management area.

The goal of the 2007 program was to collect information to test assumptions and further refine our multi-year business plan. The following primary objectives were addressed in 2007:

1. Closely collaborate with other Fraser Watershed First Nations salmon producers (primarily Siska First Nation) through all phases of the work to share capacity;
2. Meet or exceed our harvest production and local marketing targets; and,
3. Share our lessons learned from planning, harvest, transportation, processing, marketing and sales.

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PARTNERS

SECWEPEMC FISHERIES COMMISSION

SFC operates as a division of the Shuswap Nation Tribal Council Society. We administer a multi-band AFS[1] agreement, as well as the Thompson/Shuswap AAROM[2] Collaborative Management body on behalf of the 10 affiliated Secwepemc communities. Because of our administrative and management capacity, SFC held the demonstration commercial fishing license from DFO on behalf of the participating Secwepemc communities at this stage of program development.

SFC's role in the program was generally one of program planning, management and monitoring. More specifically, SFC was responsible for:

- program development - coordination, logistical support, planning; securing program funding; managing budgets;
- ongoing liaison with participating Secwepemc communities and other First Nations partners;
- hiring consultants, advisors and/or contractors;
- catch monitoring, data summarization and analyses; and,
- program evaluation and reporting.

PARTICIPATING SECWEPEMC COMMUNITIES

During the program development phase, Secwepemc commercial fisheries are being planned and managed by the SFC. Individuals from the participating communities are designated as the participants in each fishery. Participants in the 2007 fishery were to be from the Skeetchestn, Kamloops, Adams Lake and Little Shuswap Indian Bands. The participating Secwepemc communities conducted fish harvesting, landing and transportation under contract to SFC. Local sales and marketing were conducted by designated Skeetchestn community members under contract to SFC at the Big Sky Fresh Fish Market near Savona, BC.

PROGRAM FUNDING

Since SFC is associated with a non-profit society, any revenues realized in the program will be reinvested in future commercial fisheries development activities. The budget to conduct the 2007 program came from two sources:

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[1] *Aboriginal Fisheries Strategy*
[2] *Aboriginal Aquatic Resource and Oceans Management*

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1. SFC dedicated staff time and operational budgets to the project through our AAROM collaborative management agreement (2007-08); and,

2. Matching funding from Department of Fisheries and Oceans BC Interior (Resource Management) was leveraged for the study and used primarily to pay for equipment leases, materials and supplies, and travel expenses.

PROGRAM ELEMENTS

PRE-SEASON PLANNING

GENERAL CONSULTATIONS

A pre-season meeting was held with local DFO staff to review potential commercial fishing opportunities. A preliminary program plan and proposal was subsequently sent to DFO in mid-June. SFC made a pre-season presentation at the Fraser Watershed Joint Technical Committee meeting (Kamloops, June 21) to inform other Fraser First Nations of our proposal. Another pre-season presentation was made to the Sports Fish Advisory Board – Interior Chapter (July 3).

COLLABORATIONS WITH SISKA FIRST NATION

In early June and again in July discussions occurred between SFC and Siska First Nation staff to coordinate our respective commercial fisheries programs and proposals. The need to develop a formal inter-tribal protocol agreement and host community-based forums was discussed, but never acted upon. Instead, the collaborations with Siska focused on:

- making arrangements to transport SFC fish to Siska's micro-processing plant for heading, gutting and egg recovery;
- developing common branding, labelling, packaging, and pricing options; and,
- sharing infrastructure costs (e.g., ice, totes, display cooler units, fish boxes, etc.).

There was some discussion on the possibilities of closely integrating the two programs by sharing allocations, revenues and expenses. This degree of collaboration was deemed premature this year.

PRODUCTION PLAN

ALLOCATION REQUESTS

Pre-season planning was done to estimate potential small-scale commercial allocations for healthy salmon stocks returning to our territory (Table 1). The targets were arrived at after considering brood year escapement estimates for chinook and forecasted returns at the 50% probability for sockeye.

Table 1: Pre-season request for 2007 demonstration fishery harvest allocations.

Species / Stock	*Run Size Cycle Avg.*	*Brood Year Escapement (est.)*	*Run Size Forecast (@ 50% prob.)*	*Requested Allocation*
Early Summer Sockeye (Fennell, Raft, Scotch, Seymour)	45,449	55,348	310,000	**5,000**
Late Sockeye (Adams, Shuswap)	343,150	381,278	994,000	**15,000**
Chinook (Summer 4_1 - Adams, S. Thompson, Little, L.&M. Shuswap)	n/a	69,341	n/a	**600**
Pink (Fraser)	12,120,896		19,570,000	**20,000**

PROPOSED HARVEST LOCATIONS

Six separate fisheries were planned at three different locations (Figure 1) and at various times from early August to late September (Table 2). Not all of these were approved.

Table 2: Proposed fisheries for 2007 near terminal commercial fisheries program.

Harvest Location	*FN Authority*	*Gear*	*Timing*	*Species / Stock*	*Harvest Target*
1. Thompson River	Skeetchestn	beach seine	August 9-18	Early Sockeye	5,000
2. Thompson River	Skeetchestn	beach seine	Sept. 15-30	Late Sockeye	12,500
				Pink	20,000
3. Shuswap Lake/Little River	Adams Lake & Little Shuswap	beach seine	Sept. 20-28	Late Sockeye	2,500

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Harvest Location	FN Authority	Gear	Timing	Species / Stock	Harvest Target
4. Kamloops Lake	Kamloops	selective set gillnet (8" mesh)	Aug. 23 – Sept. 14	Chinook	200
5. Thompson River	Skeetchestn	angling	Aug. 15 - Sept. 14	Chinook	200
6. Thompson River	Skeetchestn	selective set gillnet (8" mesh)	Aug. 15 - Sept. 14	Chinook	200

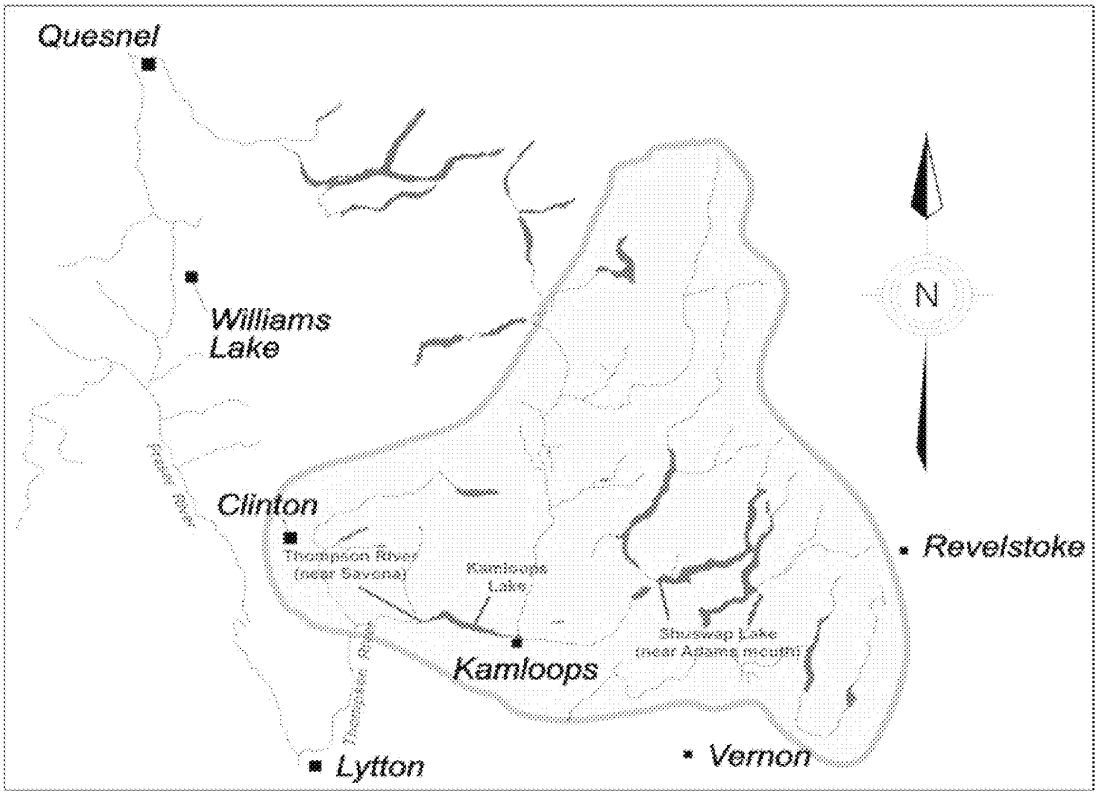

Figure 1: Map of study area within SFC's AAROM program principal area of operations.

Harvesting operations were scheduled so as to capture the entire allocation in as short a period of time as possible; the timing and duration of each fishery was subject to in-season availability of fish.

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During beach seine fisheries for pink salmon, by-catch of chinook (adults and jacks) was kept for licensed commercial sale.

HARVEST CONDITIONS

There were no alterations allowed to fish habitat during harvest operations (e.g., construction of road access to fishing locations and/or landing stations, removal of bottom structures to enhance beach seining operations, etc.). Blood resulting from the bleeding of harvested fish was disposed of into the river or lake of origin. There was no disposal of fish offal or other waste products into the river or lake where the harvest had occurred.

Any tagged salmon were to be recorded and reported with any tags being recovered from harvested salmon. Tissue samples were taken from all chinook landed for later DNA analysis. Any "exotic" fish species captured in the course of fishing activity were to be retained and submitted to provincial fisheries authorities for examination (note: "exotics" include yellow perch, bass, sunfish, crappie, pumpkinseed or tench).

COMMUNICATIONS WITH DFO

A pre-season meeting was held with local DFO Conservation and Protection staff to review the fishing plan and the license conditions. Regular, in-season telephone calls were made to DFO Conservation and Protection staff to give updates on the progress of the project and discuss any changes to the program of work.

SFC Demonstration Fishery Notice Forms (Appendix 1) were prepared 24 hours prior to a fishery commencing to provide the following information to DFO:

- time and date when a specific fishery will commence;
- specific location where fishing activity will occur and location of the landing site;
- names, designation numbers and band names of participants who will be operating the fishing gear;
- names of individuals who will be transporting the fish from the landing site to the processing plant or point of sale.

ADDRESSING CONSERVATION CONCERNS

Selective fishing techniques were used where possible and harvests were maintained at sustainable levels by targeting on strong stocks. Fishing was to be discontinued if coho salmon mortalities occurred. Procedures were implemented to estimate and limit by-catch mortalities. All fish other than harvest target species were released to the water alive, if possible. All by-catch mortalities were documented by SFC

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project monitors. Fish species caught incidentally that were dead or did not recover were used for FSC purposes by the Skeetchestn or Kamloops Bands and were not offered for sale.

PROTECTING FSC FISHERIES

There was no interference, displacement or competition with any FSC[3] fisheries. As a principle FSC fisheries always take precedence over commercial fisheries in our territory.

Fish harvested under FSC licenses were kept separate from fish harvested under a demonstration commercial fishery license:

- wherever possible, demonstration commercial fishery harvest operations were scheduled on different days and in different locations than FSC fisheries;
- there were separate harvest data forms as well as separate monitoring procedures and designated fishers for demonstration fishery harvest operations than for FSC fisheries;
- SFC staff and participating band fisheries coordinators were present to oversee all demonstration fishery fishing activities; full contact information for participants was forwarded to DFO.

LINKAGES WITH STOCK ASSESSMENT PROGRAMS

To responsibly plan and manage commercial harvests, in-season data on timing and relative abundance of the target stocks escaping to our territory is required. As a longer term objective, SFC will collaborate with DFO and other First Nations producers to develop improved in-season management indicators and tools for our priority stocks. In 2007 because the requested allocations were relatively small, accurate in-season stock assessment data was not considered critical.

TRANSPORTATION & PROCESSING PLAN

LANDING, TRANSPORT & MONITORING

Target species captured were bled immediately at the harvest locations. To retain value and maintain quality, fish were placed immediately into totes in an ice-slurry prior to transport. Fish were transported from harvest locations to Designated Landing Sites where fish were counted by SFC monitors. The same Designated Landing Site was operated for more than one fishery when they were in close proximity to one another.

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[3] *Food, Social and Ceremonial fisheries*

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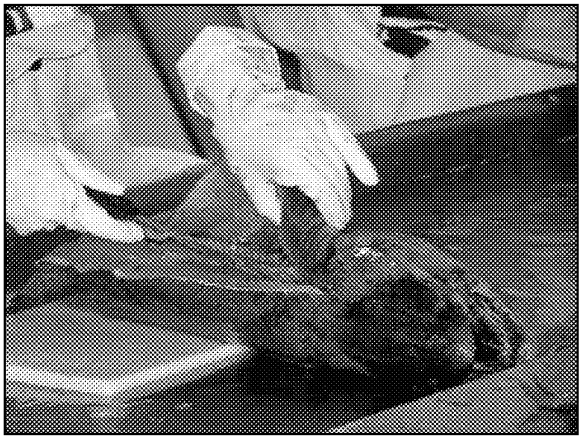
Landing slips were issued to participants in the fishery (crew leader) and to buyers, and copies were forwarded to DFO. Trucks with proper inspection and documentation were used to transport landed fish to either the Siska Processing Plant or to the Big Sky Fresh Fish Market. SFC monitors recorded information on all landed salmon, released fish and any by-catch into an inventory tracking system. Harvests of pink salmon were sorted by gender and counted into fish totes numbered with tote tags. SFC reported in-season harvest information to DFO from each fishery. Fish slips were forwarded to DFO at the end of all fisheries.

SISKA PROCESSING PLANT

Primary processing of a portion of SFC's fish was undertaken at Siska's licensed plant located just south of Lytton (1½ hours away). The plan was for higher volumes (over ½ tote per day) of SFC fish to be transported from the landing sites directly to the Siska plant. At the plant SFC's fish were to be washed, sorted, graded, and processed according to our specifications. Options included heading and gutting, gilling and gutting, steaking, and/or filleting. Egg recovery was to be done at either Siska or at a licensed facility in the lower mainland. The processed fish products were to be weighed, bagged, cooled and transported on ice in insulated totes or fish boxes back to Big Sky Fresh Fish Market for sale.



MARKETING & SALES PLAN

Business plan research conducted in 2006 for SFC concluded that in low volume years the best value for sockeye and chinook products could be realized by optimizing local fish sales (Moore 2007a, b). Realizing good value from pink salmon, on the other hand, requires extracting the eggs at a federally certified processing plant, with the nearest being located in the lower mainland. Therefore, at this time

pinks are best sold whole in high volumes directly to licenced fish buyers/brokers who can arrange for ice, transportation, processing and egg recovery.

For 2007 the marketing and sales objectives of the program were as follows:

- to match production input (supply) with marketing output (demand);
- to explore options for local marketing and sales in the BC southern interior for fresh whole and processed sockeye and chinook products;
- to establish standardized branding, labelling, packaging, and pricing options in collaboration with Siska First Nation;
- to sell a high volume of pink salmon directly to a licenced fish buying company.

To assist with the marketing and sales element of the program, a consultant was hired jointly by SFC and the Siska First Nation (Michael McLean – McLegg Aquaculture). The main deliverable in his contract was to complete a fish marketing research and development plan. Using advice from the consultant, the approach adopted by SFC for 2007 involved testing three marketing and sales strategies:

1. *Fish Market Operations* – explore local consumer direct markets by selling fresh sockeye and chinook salmon products at the Big Sky Fish Market;
2. *Local Delivered Sales* – explore local custom markets selling fresh sockeye and chinook salmon products through local delivered sales to restaurants, specialty seafood stores and institutions; and,
3. *Direct Sales to Licenced Buyers* – explore selling whole pink salmon directly to fish buyers/brokers.

These three market strategies chosen in 2007 are described in detail below.

FISH MARKET OPERATIONS

In 2006 SFC assisted the Skeetchestn Band in receiving health certification and a provincial licence to operate a public road-side fresh fish market at the Big Sky Gas Station complex located on reserve lands adjacent to the Trans-Canada Highway 10 kms west of Savona, BC. Approximately 100 fresh, whole sockeye were sold directly to customers on one Saturday as a "proof of concept".

In 2007 the plan was to operate the Big Sky Fresh Fish Market over an expanded number of days to sell whole fish as well as products processed at the Siska Plant. This year SFC applied for the Fish Buying Station Licence (shore license for salmon buyer) from the Ministry of Agriculture and Lands (MAL) Fisheries and Aquaculture Licensing and Compliance Branch. An annual fee of $230 was paid and the

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licence was received in late August (Appendix 2). A joint health inspection of the fish market facility was done by MAL and Health Canada inspectors on August 28.

Fish for sale were quickly cooled in an ice-slurry immediately after harvest. A transport truck with a covered fish tote disinfected prior to and after use was used to deliver processed or unprocessed fish to the fish market site. These fish were transferred to a fish tote stored under a canopy on a cleaned asphalt surface at fish market prior to sale.

A 12 x 20 foot tent canopy was constructed during market days to keep sun and rain off of the sales area and products. A leased travel trailer with hot and cold potable water and stainless steel sinks provided hand washing facilities for sales staff. A biodegradable disinfectant and a water hose with potable water was onsite for cleaning of the sales operations area. A covered garbage can was onsite and garbage was removed regularly; the can was disinfected after unloading. A few key infrastructure improvements were made: temporary highway signs; transport totes; an electronic commercial weigh scale and a display cooler unit (leased).

Locking fish totes with lids containing shaved ice were used to store fish prior to sales. Fish were placed as required into the refrigerated display cooler during sales operations. The majority of the inventory was kept on ice in an adjacent fish tote. A thermometer inside was used to ensure air temperatures were maintained at 1-4^{0}C. All refrigeration unit surfaces were cleaned as required throughout the sales day.

All staff used disposable latex gloves during handling of fish. Gloves were washed or replaced after each sale of fish. Fish were removed from the display cooler unit, wiped with a paper towel, and handed to the

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customer in a food safe plastic bag. Customers did not touch the fish or the display area surfaces. All sales staff wore waterproof aprons during sales.

A record of all fish transferred to the fish market from harvest operations was kept on site. To assist with traceability issues and for SFC's record keeping, each customer received a copy of a sales receipt displaying the date, the DFO licence number, the number of pieces and/or the weight of fish bought, the price per pound, and the total cost. A record of all sales was kept on site for review by regulatory agencies.

Whole fish were available for sale for one day only. At the end of each sales day fish not sold were donated to the local Skeetchestn Band for use as FSC fish. Records of this transfer were maintained onsite.

Waxed cardboard fish transport boxes were on site and available for sale. Processed fish were weighed and placed into sealed food-safe sealable plastic bags and a self-designed and printed label was affixed (Figure 2). In tandem with the Siska First Nation, all products sold were identified as River–Fresh Wild Pacific Salmon – a new high quality, local brand.

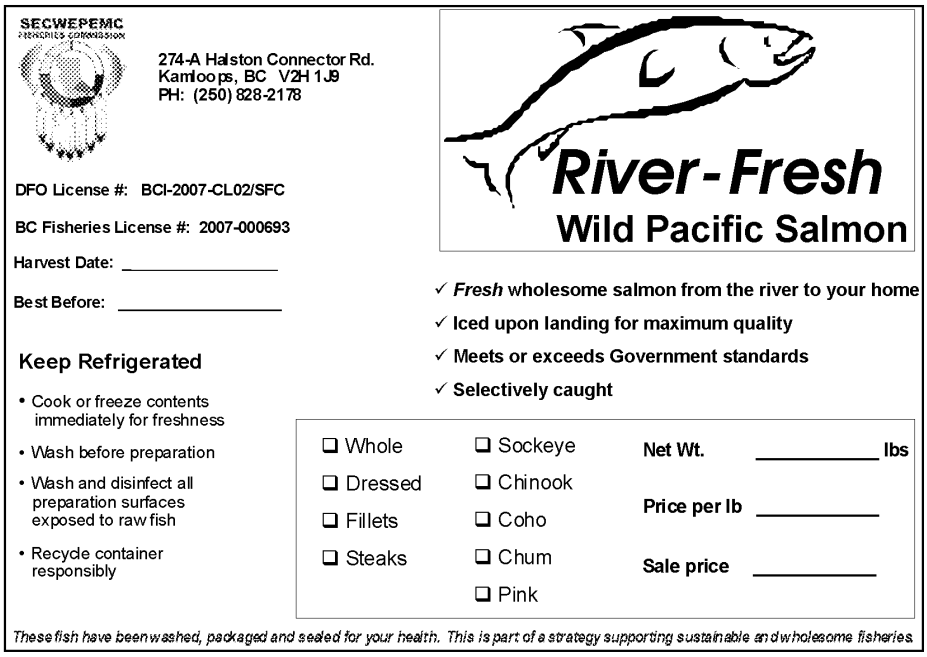

Figure 2: River–Fresh Wild Pacific Salmon label used with all processed products sold.

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LOCAL DELIVERED SALES

As part of the contract, the marketing and sales consultant was hired to assess and develop local custom markets with local restaurants and retail outlets. Preliminary sales calls were made to restaurants, specialty seafood stores, institutions (i.e., prisons, hospitals) and smaller supermarkets in the BC southern interior region.

SFC's chinook products were offered for sale, but our pink salmon were not. Product samples were requested and provided in some cases. A contact list of prospective customers was developed containing pre-order information and purchasing preferences, such as: species; quality; quantity; processing specifications; and delivery requirements.

Two detailed product price lists for the River–Fresh Wild Pacific Salmon brand were developed: i) for retail and restaurant outlets; and ii) for fresh fish markets. The product range on the sheets was fresh sockeye, chinook, and pink salmon products in various portion sizes and processing options. Salmon roe was also included.

DIRECT SALES TO BUYERS/BROKERS

Whole pink salmon (both males and females) were sold from the landing site directly to a licensed commercial fish buyer/broker (West Pac Sales Ltd.), who supplied the totes and shaved ice on-site. The same company simultaneously purchased pinks from the Siska First Nation.

A simple but accurate product inventory tracking system was developed. Fish were sorted by gender and counted at the landing site by SFC monitors into separate totes with ice. Average weights were then calculated for each tote of fish sold by weighing 10 fish at random. The totes were transported by the fish buyer/broker from the Thompson River beach seine landing site to processing facilities in the lower mainland. The Big Sky Fresh Fish Market did not sell any fresh pink salmon products.

RESULTS

COMMERCIAL LICENCE

At the end of July, SFC's demonstration commercial fisheries proposal was finally approved in principle by DFO and an Aboriginal Communal Commercial Licence was received. The amounts of sockeye available for harvest were to be based on run size and available total allowable catch (TAC), however,

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due to a serious conservation concern the two proposed sockeye fisheries did not proceed. This resulted in the Adams Lake and Little Shuswap bands not being involved in the program this year.

According to DFO, the chinook allocation was limited to only 500 fish based on the amount of chinook available from retired commercial licences. On September 3rd DFO determined that a TAC could also be declared for pink salmon in the Fraser River system. Subsequently, the SFC's licence was revised to include a pink salmon allocation of 20,000 (Appendix 3). These delays in approving the licence while waiting for in-season TAC to be declared made planning for the fisheries quite a challenge. Developing sub-contracts for the fishing crews and making arrangements for a pink salmon buyer/broker had to be completed in short order.

Ultimately, three chinook fisheries and one beach seine fishery primarily targeting pink salmon were conducted (Figure 3): Chinook fisheries were generally held Wednesday to Friday to ensure that fresh fish were available for sale at the Saturday fish markets.

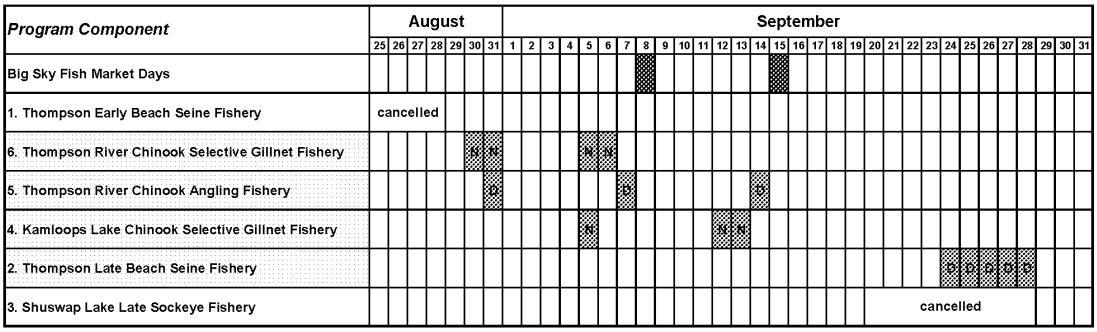

Figure 3: Production schedule from 2007 Near Terminal Commercial Fisheries Development Program (*note: 'N' indicates nightime fishing and 'D' indicates daytime fishing*).

PRODUCTION FROM EACH FISHERY

THOMPSON RIVER GILLNET

This fishery was conducted by Skeetchestn Band participants under contract to the SFC. Fishing sites were tested on the Thompson River approximately 1 km downstream from the outlet of Kamloops Lake on the west side of the river. Two gillnets were set from shore as far into the current as possible utilizing back-eddies. The Skeetchestn Band's boat was used to set anchors and a pulley system was used for checking the nets. Both gillnets were actively fished overnight by separate 3 person teams to ensure any

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chinook harvested could be landed quickly and bled properly. Half-sized totes and shaved ice were on site. The gillnets were approximately 100 feet long by 24 feet deep with an 8 inch mesh size (minimum).

This fishery was not very successful at landing the target species and the by-catch mortality was high (Table 3). All fish mortalities were taken as FSC fish by the Skeetchestn Band. Even though 10 nights of fishing was planned, the fishery was delayed in starting and was discontinued after only 3 nights fishing (August 30, September 5 and 6).

Table 3: Catch and release data from Thompson River Gillnet fishery.

Target Fish Landed	*Fish Released Live*	*Fish Mortalities*
4 chinook	0	22 sockeye 1 chinook

THOMPSON RIVER ANGLING

This fishery was conducted by a Simpcw First Nation participant working for the Skeetchestn Band under contract to the SFC. He was the only qualified and interested fisher that the Skeetchestn Band could find for the work. Using single barbless hooks, he tried numerous locations in the Thompson River below Kamloops Lake putting in 25.5 hours total fishing effort over three full days (August 31, September 7 and 14). Unfortunately, this fishery showed almost no success at landing the target species, although the by-catch mortality was very low (Table 4). The fisher did manage to land one chinook on the last day and was given permission to take the fish for FSC purposes.

Table 4: Catch and release data from Thompson River Angling fishery.

Target Fish Landed	*Fish Released Live*	*Fish Mortalities*
0 chinook	8 rainbow trout	1 chinook 1 rainbow trout

KAMLOOPS LAKE GILLNET

This fishery was conducted by Kamloops Band participants using their river jet boat under contract to the SFC. Various gillnet locations in Kamloops Lake were tested within 1 km of the outlet (Figure 4). The two nets used were 30 feet deep with a minimum mesh size of 8 inches. One net used was 600 feet long and the other was 300 feet long.

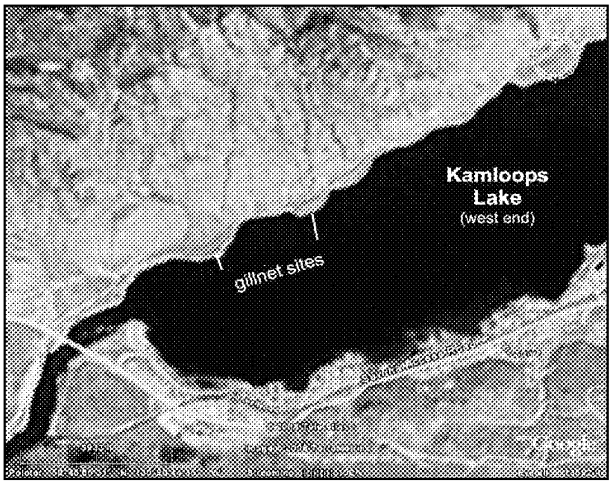

Figure 4: Locations of Kamloops Lake gillnet fishery.

A 3 person crew set the nets and attempted to actively pick them throughout each night of fishing. A full-sized tote with ice and smaller bleeding totes were onboard the boat. The harvested chinook were delivered the next morning for either temporary storage on ice at the Big Sky fish market location or for transport to the Siska Processing Plant. All fish mortalities were taken as FSC fish by the Kamloops Band. The total fishing effort was 39 hours over 3 full nights of fishing (September 5, 12, 13). This fishery showed moderate success at landing the target species, but the by-catch mortality was high (Table 5).

Table 5: Catch and release data from Kamloops Lake Gillnet fishery.

Target Fish Landed	*Fish Released Live*	*Fish Mortalities*
45 chinook	9 sockeye 12 pinks 1 rainbow trout	29 sockeye 1 coho 7 pinks 2 rainbow trout

THOMPSON LATE BEACH SEINE

This fishery was conducted by a crew of six technicians from the Skeetchestn Band under contract to the SFC. Kamloops Band participants were also hired under contract to the SFC for the use of their river jet boat and operator. The beach seine site was on the Thompson River at Steelhead Provincial Park approximately 1 km downstream of Kamloops Lake. This site has been tested in previous years and seems ideal for beach seining because it features a boat launch, a snag-free river bottom and a slow moving back-eddy where salmon seem to congregate. The beach seine net used was approximately 500

feet long and 30 feet deep. The net was set from a platform on the boat. A vehicle was used to slowly pull the net ashore. This fishery demonstrated a high degree of success at landing the target species and the by-catch mortality was zero (Table 6).

Table 6: Catch and release data from Thompson Late Beach Seine fishery.

Target Fish Landed	*Fish Released Live*	*Fish Mortalities*
10,697 pinks 95 chinook	19 sockeye 46 coho 17 chinook 2 pinks 7 rainbow trout	0

Over a 4½ day period of fishing from September 24-28, 48 seine sets were made with an average catch of 223 pink salmon per set (Table 7).

Table 7: Average pink salmon catch per set from Thompson River Late Beach Seine Fishery.

Date	Pink Catch	No. of Sets	Avg. Catch per Set
24-Sep-07	402	6	67
25-Sep-07	1,454	13	112
26-Sep-07	2,298	10	230
27-Sep-07	2,434	10	243
28-Sep-07	4,109	9	457
Total	**10,697**	**48**	**223**

Catch success increased each day as the fishery was conducted. In the first couple of days this was likely due to the crew becoming more efficient with seining operations, but later it seems that the pink salmon were becoming more abundant in the river.

SUMMARY

A total of 144 chinook and 10,697 pink salmon were landed for sale in the four fisheries (Table 8). Tissue samples were taken for DNA analyses of 142 of the landed chinook (98.6%), but results were not available for this report.

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Table 8: Summary of catch and effort from demonstration commercial fisheries.

Fishery Name	Effort	Fish Landed		CPUE	
		Chinook	Pink	Chinook	Pink
Thompson Late BS	48 sets	95	10,697	2.0	222.9
Kamloops Lake GN	39 hrs	45	0	1.2	0.0
Thompson GN	30 hrs	4	0	0.1	0.0
Thompson ANG	25.5 hrs	0	n/a	0.0	n/a
Totals		**144**	**10,697**		

Over half of the pink salmon allocation in the licence was caught, while only 29% of the chinook allocation could be landed (Table 9).

Table 9: Requested allocation compared with the approved allocations and resulting actual harvest.

Species	Requested	Approved	Harvested	% of Allocation
sockeye	15,000	0	0	n/a
chinook	600	500	144	28.8
pink	20,000	20,000	10,697	53.5

TRANSPORTATION & PROCESSING

Shaved, salted ice was purchased from the lower mainland and transported by commercial freight to Kamloops. SFC picked up and delivered approximately 1 ton of ice per week for the various chinook fisheries.

The Siska Processing Plant did not pass the inspection and receive the licence in time to process the first week of SFC's chinook catches (Sept. 6-7). The second week's catch of chinook (27 fish) were processed into 250 pounds of steaks and fillets at the Siska plant (Sept. 14). Processed products were weighed, placed into food-safe plastic bags and transported on ice in totes back to the Big Sky Fish Market. Chinook catches were lower than anticipated, so SFC was able to handle all transportation of our fish to and from the Siska plant.

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MARKETING & SALES

FISH MARKET OPERATIONS

The fresh fish market was open for business at the Big Sky Gas Station complex on two consecutive Saturdays (September 8 and 15) to conduct direct sales of fresh chinook products to the general public. On the first Saturday whole chinook were offered for sale from 10:00 am until 4:00 pm, while on the second Saturday processed chinook (i.e., fillets and steaks) were available from 10:00 am until 2:30 pm. Earlier planned market days were cancelled due to a failure to harvest sufficient fish.

The electronic weigh scale was used to accurately weigh all products sold and the price was rounded down to the nearest 50 cents or dollar to facilitate make change. Limited advance advertising was done, but colourful posters were put up the day before the public sales on various nearby community bulletin boards and shop windows. Printed highway signs were also set-up on the day of sale (Figure 5).

Figure 5: Marketing poster and highway sign for Big Sky Fish Market

Just over 200 pounds of chinook salmon products were sold from the Big Sky Fresh Fish Market (Table 10). Only a handful of customers ventured into the fish market and very few made purchases. Sales of the unprocessed products were better than for the processed products. The price per pound was reduced throughout the day during both sales days in the hopes of increasing sales.

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Table 10: Fresh salmon sales from Big Sky Fish Market.

Date	Product Type	Available for Sale (lb)	Net Wt. Sold (lb)	Price/lb (avg)	Total Sales	No. of Buyers	Avg. Wt. Sold per Buyer (lb)	Avg. Sale per Buyer
08-Sep-07	round chinook	363	164.46	$2.36	$388.50	7	23.49	$55.50
15-Sep-07	processed chinook	250	43.75	$3.94	$172.25	8	5.47	$21.53
Totals		613	208.21	$2.69	$560.75			

At the end of the market day on September 8 the remaining unsold whole fish were taken for FSC fish by the Skeetchestn Band. At the end of the market day on September 15 the remaining unsold processed fish products were kept in food-safe bags on ice and attempts were made to find buyers by telephone. The surplus product was delivered the following Monday to our marketing and sales consultant at the Siska processing plant. Siska First Nation was able to sell some of our chinook products at their fish market from September 17-30 and the rest went to the lower mainland for sale.

Local Delivered Sales

Restaurants and retail fish outlets contacted stated that they mainly want sockeye and some chinook salmon products. None were interested in any pink salmon products. In 2007 there were no sockeye available and the chinook salmon supply was insufficient to adequately assess local delivered sales to the restaurant market.

Three retail outlets in the Okanagan were contacted. Two were sent chinook product samples and one bought a small quantity (25.5 lbs). The customer paid for the shipping costs and delivery was made from the Siska Plant using a freight company.

Five restaurants in the BC southern interior were surveyed, but no sales were made. They were very interested in buying local product from local suppliers. They expressed a strong demand for wild salmon products and stressed that quality was extremely important. Institutions such as prisons and hospitals were also approached, but no sales were made.

Direct Sales to Buyers/Brokers

The commercial fish buyer/broker brought totes and ice to the Thompson River Late Beach Seine Fishery site. Over 25,200 lbs of females and 17,900 lbs of males were loaded into the buyer/broker's vehicle at the landing site and transported on ice to processing plants in the lower mainland (Table 11).

Table11: Direct sales of pink salmon.

Gender	# Pieces	Avg. Wt.	Total Wt. (est)	price per lb	total sales
male	4,242	4.2	17,970.9	$0.00	$0.00
female	6,455	3.9	25,214.8	$0.32	$8,068.75
Total	**10,697**	**4.0**	**43,185.7**		**$8,068.75**

SFC received 32¢ per pound for the females only; the males were taken away at no charge. Full payment was received within a few weeks. Totes full of females were taken away either the same day or the next day from the landing site. By contrast some totes full of males waited three days before being removed reflecting the buyer/broker's contention that these fish were essentially of no value.

Approximately 1,500 pounds of chinook salmon caught in the Thompson River Late Beach Seine Fishery were also taken by the buyer/broker, but no payment or sales information was received by the SFC despite months of promises.

SUMMARY

Chinook sales at the Big Sky Fish Market were very poor, especially for the processed product available on the second day (Table 12). Offering chinook products for local, delivered sales was not successful due to a lack of products and established markets. Selling pink salmon directly to a buyer/broker was successful, but only for the females.

Table 12: Summary of sales from Near Terminal Commercial Fishing Development Program.

Date	Customer	Product Type	Fishery	net weight sold (lb)	price/lb (avg)	Total Sales
08-Sep-07	public - fish market (Big Sky)	round chinook	Thompson GN, Kamloops Lake GN	164.46	$2.36	$388.50
15-Sep-07	public - fish market (Big Sky)	processed chinook	Thompson GN, Kamloops Lake GN	43.75	$3.94	$172.25
19-Sep-07	Codfather's Seafood (Kelowna)	round chinook	Thompson GN, Kamloops Lake GN	15	n/a	$0.00
28-Sep-07	West Pac Sales	fresh pinks	Thompson Late BS	25,214.8	$0.32	$8,068.75
28-Sep-07	Codfather's Seafood (Kelowna)	round chinook	Thompson Late BS	25.5	$5.25	$133.88
02-Oct-07	Buy the Sea (Penticton)	round chinook	Thompson Late BS	15	n/a	$0.00
TOTAL				**25,478.5**		**$8,763.38**

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PROGRAM EVALUATION

The goal of the 2007 program was to collect information to test assumptions and further refine our multi-year business plan. Various production and marketing parameters need to be estimated and confirmed within the business plan.

The program evaluation methods chosen were to:

a. calculate production volumes versus sales volumes to identify reasonable daily targets and annual allocations; and,

b. calculate the potential profitability of each fishery and the temporary fish market to identify break-even conditions.

PRODUCTION VS SALES

VOLUMES

All female pink salmon harvested in the program were sold immediately to a fish buyer/broker, but there were great challenges in matching production volumes with sales volumes for chinook salmon. The objective in the 2007 program was to harvest a small number of chinook to assess the local sales demand. SFC conducted four fisheries and contracted local processing services at Siska's plant for one small lot of chinook. Three sales options were explored for fresh and processed chinook products. Only two of the four fisheries were able to harvest an appreciable number of chinook. Only about 10% of the chinook produced in the program were actually sold (Table 13).

Table 13: Chinook salmon production versus sales volumes.

Fishery	Total Catch	No. Fishing Days	Avg. Catch per Day	Avg. Wt.	Harvest Wt.
Thompson R. Late BS	95	4.5	21.1	16.0	1,520
Kamloops Lk. GN	45	3	15.0	16.0	720
Thompson R. GN	4	3	1.3	16.0	64
Thompson R. ANG	0	3	0.0	0	0
TOTAL	**144**				**2,304**

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Fishery	Sales Method	Product	Total Sales (lb)	No. Sales Days	Avg. Sales per Day (lb)
Kamloops Lk. GN	Fish Market	whole	164.46	1	164.46
Kamloops Lk. GN	Fish Market	processed	43.75	1	43.75
Kamloops Lk. GN	Direct Local Sales	processed	25.5	1	25.5
Thompson R. Late BS	Buyer/Broker	whole	0	1	0
TOTAL			**233.71**		

This inability to sell our chinook was mainly due to the fish buyer/broker in effect "stealing" fish during the pink beach seine fishery. As well, fish market sales were very slow and direct local sales were nearly non-existent. The average chinook catch per day by fishery and the average chinook sales per day at the fish market will be used to set targets for production and marketing in the business plan.

TIMING

The erratic timing pattern of the chinook catches also made sales more difficult. The Kamloops Lake Gillnet fishery started late and only operated for two weeks with moderate success. The Thompson River Late Beach Seine fishery had more success, but was concentrated into a one week period (Table 14).

Table 14: Timing of chinook salmon catches versus sales by week.

Week	Starting	CATCH	SALES (lbs)
1	Aug-19		
2	Aug-26	0	
3	Sep-02	22	164
4	Sep-09	27	44
5	Sep-16		
6	Sep-23	95	
7	Sep-30		26
8	Oct-07		
Total		**144**	**234**

Without a consistent supply of chinook production it was nearly impossible to approach retail fish markets or restaurants with any certainty of product availability. Also, the temporary weekly fish market at Big Sky had little opportunity to establish itself and develop a market because its operations were limited to two Saturdays. It's possible that sales may have increased if it could have remained open a few more days.

PROFITABILITY OF THE FISHERIES

Potential profitability was assessed for only the two fisheries that were successful in catching fish. Net income per day was calculated from the potential revenue minus the fixed and variable costs per day.

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This analysis assumed that all production could be sold; with chinook selling for $3.00 per pound and pink (females) averaging 32¢ per pound.

KAMLOOPS LAKE GILLNET FISHERY

The average catch of 15 chinook per night in the Kamloops Lake gillnet fishery was not sufficient for this fishery to be profitable regardless of how long it operated (Figure 6). The fixed cost was $300 and the variable cost was $900 per night.

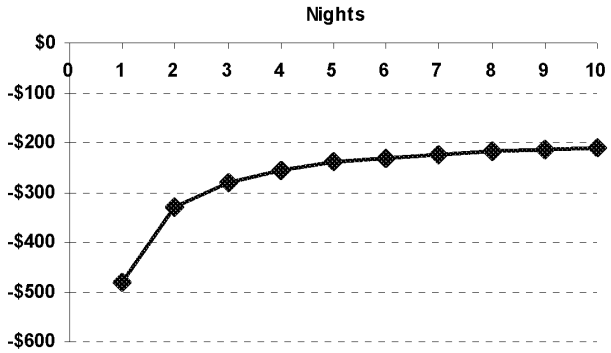

Figure 6: Net income per night of the Kamloops Lake Gillnet fishery (at a production rate of 15 chinook per night).

However, if the production rate could be raised to an average of 20 chinook per night the fishery could potentially break-even by the fifth night. Alternatively, if the price per pound for the product could be raised to $4.00 per pound, the fishery could also break-even after 5 nights.

THOMPSON RIVER LATE BEACH SEINE FISHERY

The Thompson River Late Beach Seine fishery averaged 21 chinook and 1,434 female pink salmon harvested per day. Neither the female pink catch nor the chinook catch alone was sufficient for this fishery to be profitable. However, the catch of both species taken together allowed the fishery to be potentially profitable by the second day of operations (Figure 7). The fixed cost was $1,000 and the variable cost was $2,000 per day.

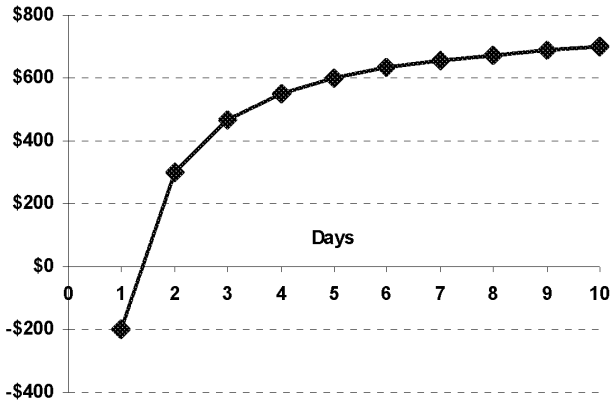

Figure 7: Net income per day of the Thompson River Late Beach Seine fishery (at a production rate of 21 chinook and 1,434 female pink salmon per day).

For this fishery to break-even after 5 days on the pink catch alone, a production rate of 2,000 females per day would have to be achieved. This will be considered for the 2009 fishery when requesting a pink salmon allocation from DFO.

PROFITABILITY OF THE FISH MARKET

The potential profitability of the Big Sky Fish Market was assessed by calculating the potential net income per day of sales operations using actual revenue and expense data from the 2007 program (Figure 8). The fixed cost was $3,000 and the variable cost was $675 per day.

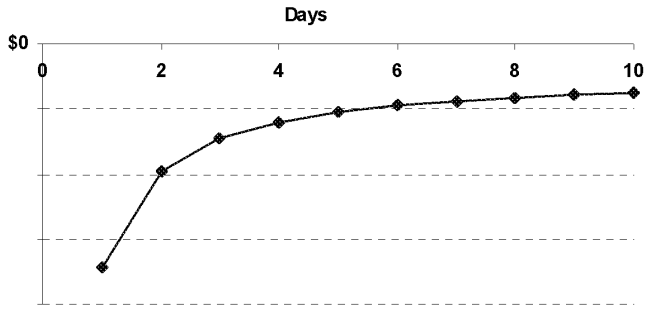

Figure 8: Net income per day of the Big Sky Fish Market.

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Only 104 lbs of product were sold per day at an average price of $2.69 per lb. At these sales levels the fish market could never approach profitability. However, a break-even point could potentially be reached after 8 days if sales per day could be tripled (to 300 lbs) and the sales price per pound increased to an average of $4.00 per lb.

CONCLUSIONS & RECOMMENDATIONS

Despite the numerous challenges, the Near Terminal Commercial Fisheries Development Program was a worthwhile experiment able to collect information to test assumptions and further refine our multi-year business plan.

PROGRAM ADMINISTRATION & MANAGEMENT

The amount of time and energy required for administration and management of the near terminal commercial fisheries development program was considerable. Developmental research projects by their nature are more time consuming because of all the unknowns. For the last several years SFC staff have been undertaking this research to assert economic development for Shuswap Nation Tribal Council communities. In 2007, SFC staff were responsible for nearly all aspects of the program, including: planning; budgeting; liaising with DFO; liaising with federal and provincial health inspectors; purchasing; preparing sub-contracts with bands and the marketing consultant; monitoring the fisheries; assisting with the fish market; transporting ice and fish; liaising with the fish buyer/broker; summarizing and analyzing data; evaluating progress; reporting on results; and, invoicing. All of this in-kind work resulted in significant and excessive SFC staff overtime being accumulated. The true costs associated with these services need to be recognized and included in the business plan.

To progress further with the development of a viable commercial fisheries enterprise, SFC and the participating Secwepemc communities will plainly require additional capacity. Next year, SFC staff must find acceptable ways to reduce our role in the program. It is strongly recommended that new funding be sought and that additional human resources be found that can assume key roles within the program. As well, some expertise should continue to be shared through strategic partnerships with other inland First Nations groups working towards common goals.

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PRODUCTION, TRANSPORTATION & PROCESSING

Chinook angling was not successful because it was too difficult to catch the fish in the strong currents of the Thompson River. Angling does not seem to be a reliable harvest method for this species in this location. Chinook gillnetting in the Thompson River was also not successful because it was too difficult to maintain the net in the swift, deep water. Angling and gillnetting in the river should be discontinued.

Gillnetting in Kamloops Lake with longer nets was more successful in harvesting chinook, but by-catch may be a concern. Also, high winds on the lake caused some difficulties when checking the nets. This harvest method and location should be repeated in 2008 and extended over a longer time period to more fully assess its production capacity and potential profitability. In general, there is the need to improve the efficiency of the fishery; more fish must be caught at a lower cost for it to be profitable.

The late beach seine fishery on the Thompson River was highly successful at catching pink salmon, even though some production delays occurred because the fish buyer/broker did not have totes and ice on site and the harvest crew had to wait. The by-catch of marketable chinook was also significant. The catch success for pink salmon was at its highest on the last day of the fishery. This suggests that in the future the timing of the fishery could be expanded to early October. Beach seining at this location should regularly be the method of choice for sockeye and pink fisheries in years when sufficient TAC is available. However, there is a need to continue to improve on the efficiency of the operation. More fish need to be caught, while labour and vehicle expenses need to be reduced. Improvements to the landing site should be considered to allow for the use of a forklift for moving totes.

Arranging deliveries of enough shaved ice to supply the various fisheries and the fish market was quite a challenge. The ice had to be shipped in from Richmond by the tonne and was therefore very expensive. Much of it was subsequently wasted when catches from the fisheries were poor. Ice deliveries need to be cost-shared and coordinated with other First Nations producers wherever possible.

Only one small lot of chinook were processed at the Siska processing plant in 2007. This was not sufficient to fully assess logistics and expenses. The relationship with Siska First Nation should continue in 2008 assuming that their plant will be open for business.

MARKETING & SALES

Selling pink salmon to a fish buyer/broker at the landing site went relatively well this year, however, marketing our chinook proved to be very challenging. Neither the temporary fish market nor local,

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delivered sales were very successful, but both did provide valuable information for future marketing and sales. In general, there is the need to obtain more value from the products by selling more locally.

FISH MARKET

There were many logistical issues encountered with the temporary fish market that were not anticipated. The harvested fish needed to be held on-site prior to market day, however, the temporary fish market with its flimsy canopy was not a very secure location. To address this issue a heavy duty chain and padlock were purchased to deter thieves from stealing fish from the holding tote.

The fish market canopy could not easily be set up and taken down, so it was decided to leave it up between market days. Unfortunately, it was damaged during a high wind one night. Several replacement poles were purchased and tears in the canopy mended with duct tape. More care needs to be taken with tying down and securing the canopy in the future.

Dealing with the unsold fish at the end of a market day was another unanticipated problem. The license stated that remaining whole fish would be given away as FSC fish within the local Skeetchestn community. However, the band's catch monitor could not be located on a Saturday evening and, after working all day, the sales clerks refused to clean fish to give away to band members. Dealing with unsold processed fish products presented a different challenge. They could be kept longer on ice, so they weren't given away to band members at the end of the market day. Instead, they were transported on ice to a secure location in Kamloops until arrangements could be made to transport them to Siska for sale. Some of these products were subsequently sold from Siska's fish market, but much of it was unaccounted for. It is recommended that a plan for disposing of all unsold fish or fish products be developed in advance of any fish market being conducted. As well, there is a need to better synchronize harvest, processing and sales in terms of timing and volumes.

The highway signs and advertising posters apparently had little impact in attracting prospective customers to the fish market. There were absolutely no customers for long periods of time which may have affected the attitude and enthusiasm of the sales clerks when potential customers did materialize. Clearly, more sophisticated advertising is required.

Choosing to set up the fish market beside the Big Sky Gas Station may not have been the best decision in hind-sight. The benefits of locating on-reserve were far outweighed by the fact that most gas station customers were natives who never have to buy their salmon. Although the location is on the Trans Canada Highway, it was not very busy and few non-native people stopped in during the course of the market days. Most potential customers that did stop said they would have preferred fresh sockeye and

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only a few were willing to consider chinook. Before a temporary fish market is operated again, a better location must be found in Kamloops close to either a busy highway or within a busy shopping district.

Whole chinook salmon were thought to be too large for some customers (average 16 lbs). Some customers said they didn't have knives at home to clean such large fish and the license conditions wouldn't allow our sales clerks to do it for them. Few customers had coolers with them large enough to accommodate the length of the fish. The 36" x 12" food-safe plastic bags were often too small for these fish and people didn't want leakage into the trunks of their vehicles. Unfortunately, the waxed fish transport boxes were not received in time for the first market day when whole product was available due to a delay in shipping. If large chinook salmon are to be sold again at a fish market, it is recommended that they be size graded by weight and only fish that fit into the available transport boxes should be offered for sale. Larger chinook must be processed and/or sold elsewhere.

The sales price for the fish was thought to be too high by some customers, especially for the processed products. The prices were carefully set in discussion with our marketing consultant who had completed a review of the competition. However, it seemed that people checking out a temporary fish market (especially on a rural Indian Reserve) were expecting a substantial bargain; few were interested in paying prices that approached those featured at grocery stores. One car-load of people drove from Kamloops to the market specifically to buy fish based on our advertising posters. They balked at the prices and left without making a purchase. It is possible that some customers were expecting to pay the same low prices as the unregulated "black market" for native-caught salmon. In the future, it is recommended that sales prices at temporary fish markets be set much lower.

LOCAL DELIVERED SALES

In 2007 our chinook salmon harvest was too small and sporadic to adequately assess local delivered sales to restaurants, retail fish outlets and institutions. Restaurants and fish retail outlets contacted were very interested in buying local wild salmon products from local suppliers, but they stressed that quality was extremely important. Institutions such as prisons and hospitals were also approached, but no sales were made.

Assuming that there is an opportunity for a licensed fishery next year, it is recommended that local, delivered sales be pursued and assessed in more depth. Before the fishery begins, it is necessary to meet with chefs/owners to discuss their purchasing preferences and take pre-orders. It will be necessary to pay shipping costs and provide product samples to as many local sales outlets as possible. All products sold should be properly chilled, labelled and shipped in fish transport boxes. To maintain market share products should be made available for as long as possible, therefore, an extended sales period is needed. Options for blast freezing and holding surplus product must be explored with Siska First Nation.

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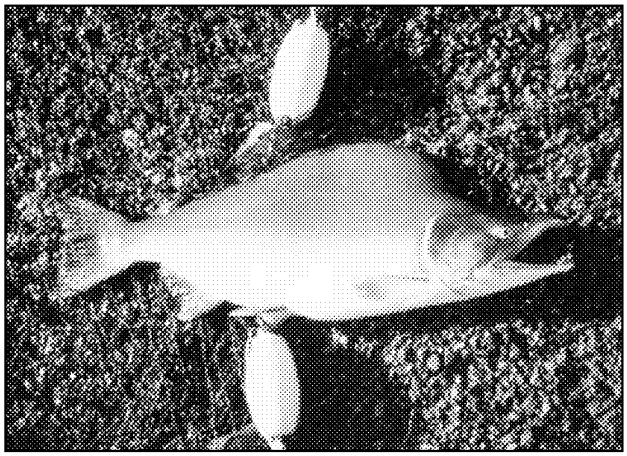
DIRECT SALES TO BUYERS/BROKERS

SFC staff relied on our marketing consultant and our First Nation partners to find a qualified fish buyer/broker to handle the production from our pink fishery. This reliance meant that SFC staff had little control over who was chosen and when they would contact us to make the necessary arrangements. Even two weeks before the fishery, we were uncertain if the buyer/broker was genuinely interested in doing business with us. Clearly, more lead time is required to properly plan these developmental fisheries. A more serious issue was that despite detailed inventory being done, most of the chinook caught during the beach seine fishery were "stolen" by the buyer/broker. No payment or sales information was received by the SFC despite months of promises.

Unfortunately, this was not the first time that SFC had been taken advantage of by a fish buyer/broker. A system needs to be developed to hold the scoundrels accountable. It is strongly recommended that SFC staff actively engage with our First Nations partners to screen prospective fish buyer/brokers as early as possible each year.

By contrast, direct sales of pink salmon to the buyer/broker were successful and SFC received payment promptly at season's end, but for the females only. Receiving nothing for the males was unexpected and disappointing. The buyer/broker insisted that these fish were essentially of no value. The issue of killing high numbers of fish of no value presents a profound ethical and business development challenge for the SFC. Clearly, in the long term there is a need for alternative products, processing technologies and markets to be explored. It is recommended that SFC support innovative research and development projects to realize more value from all fish harvested.



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APPENDICES

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Appendix 1: Demonstration Fishery Notice Form.

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SECWEPEMC FISHERIES COMMISSION

Aboriginal Communal Fishing Licence

Licence No. BCI-2007-CL01 / SFC DemoFishery

Demonstration Fishery Notice

Fishery Name & Specific Location:			
Dates & Times Fishery Commences:			
Participant Names, Designation Numbers & Band Names:	*Name*	*No.*	*Band*
Landing Site Location:			
Names of Individuals Transporting Fish from Landing Site:			

Special Notes:

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Appendix 2: Fish Buying Station Licence issued by BC Ministry of Agriculture and Lands.

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RECEIVED
AUG 31 2007
OFFICE OF SNTC

BRITISH COLUMBIA
The Best Place on Earth

Ministry of Agriculture and Lands Licence No.: 2007-000693

FISH BUYING STATION LICENCE

SHUSWAP NATION TRIBAL COUNCIL of
304 - 355 YELLOWHEAD HIGHWAY
KAMLOOPS BC, B.C. V2H 1H1

having made an application and paid the prescribed fee(s) is hereby licensed pursuant to Sections 13 and 14.2 of the Fisheries Act and Regulations thereunder to operate the fish buying station described herein for the purpose of buying fish of the species or category indicated below.

Type of fish buying station: Shore station

Station name: BIG SKY
Address: 1000 TRANS CANADA HIGHWAY
KAMLOOPS, B.C. V2H 1H1

Category	Paid
SALMON BUYER	230.00

Starts: 2007/08/29 Expires: 2007/12/31 (midnight)

Ministry of Agriculture and Lands

per _____

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Appendix 3: Aboriginal Communal Fishing Licence issued by Fisheries and Oceans Canada.

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ABORIGINAL COMMUNAL FISHING LICENCE FOR THE SHUSWAP NATION TRIBAL COUNCIL TO HARVEST CHINOOK AND PINK SALMON FOR DEMONSTRATION FISHERY PURPOSES

This licence is issued under authority of the Fisheries Act and subsection 4(1) of the Aboriginal Communal Fishing Licences Regulations.

This licence does not define an Aboriginal right to fish or its scope; however, for the fishing season, it is intended to provide a mechanism, for reasons of proper management and control of the fisheries and conservation and protection of fish, for requiring compliance with the provisions of this licence.

This licence is issued to the Shuswap Nation Tribal Council (SNTC) and, subject to the Fisheries Act and regulations thereunder, confers the authority to fish under the following conditions:

Definitions:

' DFO 'means Fisheries and Oceans Canada;

' Fishery ' means fishing under the authority of this licence;

" First Nation ' means the Shuswap Nation Tribal Council (SNTC), and for purposes associated with the provisions of this licence includes the following member bands who will be participating in the demonstration fishery authorized by this licence:

a) Skeetchestn Indian Band
b) Bonaparte Indian Band
c) Kamloops Indian Band

" FSC ' means Food, Social and Ceremonial;

" Monitor ' means a person appointed by the First Nation to carry out catch monitoring activities associated with the fishery;

' Participant ' means an individual designated to fish in accordance with the provisions in this licence and to fish under the authority of this licence. For purposes of issuing a landing slip to fishers delivering fish harvested by means of a beach seine operation, the 'participant' shall be the crew leader of the fishing crew operating the beach seine fishing gear.

' Chinook ' a species of salmon with the scientific name Oncorhynchus tshawytscha

Canada

' Pink Salmon ' a species of salmon with the scientific name Oncorhynchus gorbuscha

'Secwepemc Fisheries Commission (SFC)' means the division of the Shuswap Nation Tribal Council responsible for fisheries management activities undertaken on behalf of the tribal council

Species and Quantity:

The following harvest provisions apply to this Fishery:

Up to 500 Chinook and 20 000 Pink salmon may be harvested in specific quantities within fishing areas as outlined under the **'Area, Dates and Times'** category following.

Area, Dates and Times:

1. Chinook may be harvested from the waters of Kamloops Lake during the period 0001 hours August 22 to 2400 hours September 30, 2007;
2. Chinook may be harvested from the waters of the Thompson River from the Bonaparte River to the mouth of Kamloops Lake during the period 0001 hours August 22 to 2400 hours September 30, 2007;
3. Pink Salmon may be harvested from the waters of the Thompson River from the Deadman River to the mouth of Kamloops Lake during the period 0001 hours September 5 to 2400 hours September 30, 2007;

Fishing times, dates, and locations outlined above may be varied or closed by the Director-General, Pacific Region in accordance with the Fishery (General) Regulations should a conservation concern for Early Summer run or Late run chinook and Fraser River pink salmon be identified in-season.

Disposition of Fish:

The following provisions apply:

- Without prejudice to future agreements or regulations, sale of chinook and pink salmon caught under the authority of this licence for demonstration fishery purposes is permitted.

- Fish species other than chinook and pink salmon, caught incidentally while fishing under the authority of this licence, shall be returned to the water immediately upon capture if deemed to be in a vigorous and healthy condition. Fish species caught incidentally while directing harvest on chinook and pink salmon and deemed to be

highly stressed as a result of the capture event may be retained in a recovery tank until such time as the fish is deemed sufficiently recovered. Once sufficiently recovered from the capture event, the fish shall be released to the water. *This provision shall not apply to fish species classified as 'exotics' (ie: yellow perch, bass, sunfish, crappie, pumpkinseed, tench, or carp). Any 'exotic' fish species captured in the course of fishing activity shall be retained and submitted to provincial fisheries authorities for examination.*

Gear and Gear Identification:

Use of the following fishing gear in the designated fishing areas noted is permitted:

(a) Harvest of Chinook in Kamloops Lake shall be undertaken via selective gillnet (8" mesh or larger);

(b) Harvest of Chinook in the Thompson River shall be undertaken via rod and reel and/or selective gillnet (8" mesh or larger);

(c) Harvest of Chinook and Pink salmon in the Thompson River shall be undertaken via Beach seine;

Fishing gear utilized in the demonstration fishery and left unattended shall be clearly marked as follows:

Secwepemc Fisheries Commission Demonstration Fishery
Licence No. BCI-2007-CL02-SFCDemoFishery

Designation of Individuals:

Fishing under this licence will be carried out by persons who are designated by the First Nation. The First Nation will designate persons to fish and will issue personal and non transferable designation cards to the Participants to fish under this licence.

Persons authorized to fish under this licence shall carry proof of designation and will present such documentation on request by any Fishery Officer or ex-officio Fishery Officer.

Designation of Landing Sites:

The First Nation will operate a landing site(s) within the area where fishing is permitted. The First Nation will notify DFO of the specific location of the landing site(s) when it is determined

and will advise DFO of the time periods when the landing site(s) will be in operation. The First Nation will notify DFO of any changes to the location of the landing site(s) or time of operation. Such notification shall be made at least twenty four (24) hours prior to operation of the landing site(s).

.

Landing Sites:

Members and / or employees of the First Nation shall not transport any chinook and pink salmon from a landing site unless all chinook and pink salmon have been inspected (inspections as required) and counted and each Participant delivering chinook and pink salmon to the landing site has been issued a Landing Slip for all fish delivered. For purposes of this provision, the 'participant' will be the crew leader of any crew harvesting fish under this licence.

Landing Slips:

All chinook and pink salmon caught by a Participant of the First Nation under the authority of this licence must be inspected at the landing site by a Monitor who will issue the Participant a landing slip which shall specify the following information:

1) date and time of landing
2) participant's name, designation number and Band name
3) location of fishing
4) landing site location
5) the number of chinook and pink salmon landed, and
6) the name and signature of the Monitor inspecting the catch

For purposes of this provision, the 'participant' will be the crew leader of any crew harvesting fish under this licence.

Monitoring and Catch Reporting:

Catch monitoring will be conducted by the First Nation. A record must be kept of all chinook and pink salmon harvested under the authority of this licence. A record must also be kept of the number and species of fish returned alive and unharmed to the water.

Chinook and pink salmon caught under the authority of this licence will be reported by fax on the ***FISH TRANSPORT AUTHORIZATION & REPORT*** form to Fishery Officer Cliff Todd within 24 hours of delivery to a sales outlet.

Canada

Copies of completed sales slips resulting from commercial transactions of chinook and pink salmon will be provided to Fishery Officer Cliff Todd within 7 days of the commercial transactions taking place.

When fishing under the authority of this licence, an authorized representative of the First Nation shall contact Fishery Officer Cliff Todd and provide the following information:

- time and date when fishing commences;
- specific location where fishing activity will occur;
- the names of Participants who will be operating the fishing gear;
- the names of individuals / employees who will be transporting the fish from the landing site to the point of sale.

An interim report outlining catch / harvest information on the number of chinook and pink salmon and exotic fish species that were retained and the number of each species that were released to the water shall be prepared by the Secwepemc Fisheries Commission (SFC) and reported to DFO Resource Manager Dean Allan by November 15, 2007. A comprehensive final report describing all elements of the demonstration fishery shall be completed by the SFC and forwarded to the Department of Fisheries and Oceans in Kamloops, B.C. by March 31, 2008.

Contact information:

Cliff Todd
Fishery Officer
Fisheries And Oceans Canada
Kamloops, BC

Tel: 851- 4877 / Fax: 851- 7717

Dean Allan
Resource Manager
Fisheries and Oceans Canada
Kamloops, B.C.

Tel: 851- 4821 / Fax: 851- 4873

Other Provisions:

Canada

1. Fishing operations shall be undertaken in a manner that does not compromise the integrity of beach seine fishing operations undertaken by the Department of Fisheries & Oceans (DFO) for salmon stock assessment purposes. Priority with respect to accessing beach seine fishing sites shall be assigned to DFO staff responsible for undertaking salmon stock assessment work.

2. Compliance with the Fisheries Act and the regulations made under the Act is a condition of this licence.

Clifford Todd
Cliff Todd, Fishery Officer
Fisheries and Oceans Canada

Sept 4, 2007
Date

Canada

Appendix 4: Harvest Data By Fishery.

a. Thompson River Chinook Gillnet

b. Thompson River Chinook Angling

c. Kamloops Lake Chinook Gillnet

d. **Thompson River Late Beach Seine**

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2007 COMMERCIAL FISHERY - THOMPSON RIVER CHINOOK GILLNET

Start Date	**30-Aug-07**	**Start Time:**	9:00 PM	**Fishing Location:**	**Harla and Farons site**
End Date:	**31-Aug-07**	**End Time:**	7:00 AM	**Crew:**	**FM, KJ, HJ, CL, CJ, KJ**

Time	Chinook Landed			Released Fish								**Notes** (tags, marks, mortalities, observations, etc.)
	Total	Running Total	# DNA Taken	SK	CO	CH	Pi	RbT	sucker	whtfsh	other	
9:50												1 SK MORT
10:23												2 SK MORT
12:10	1	1	1?									1 SK mort; Unsure if collected DNA sample
2:26												
Totals												

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2007 COMMERCIAL FISHERY - THOMPSON RIVER CHINOOK GILLNET

Start Date	**05-Sep-07**	**Start Time:**	7:30 PM	**Fishing Location:**	**300 m below beach seining site**
End Date:	**06-Sep-07**	**End Time:**	5:30 AM	**Crew:**	**FM, HJ, KJ**

Time	Chinook Landed			Released Fish								Notes (tags, marks, mortalities, observations, etc.)
	Total	Running Total	# DNA Taken	SK	CO	CH	Pi	RbT	sucker	whtfsh	other	
9:43	1	1	1									1 Sockeye mort
11:10	1	2	1									1 Sockeye mort
1:00	1	3	1									4 Sockeye mort
3:23	1	4	1									
Totals			4									

Secwepemc Fisheries Commission

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2007 COMMERCIAL FISHERY - THOMPSON RIVER CHINOOK ANGLING

Date:	**31-Aug-07**	**Start Time:**	12:30 PM	**Fishing Location:**	**Thompson River**
		End Time:	9:00 AM	**Crew:**	**Bill Steel**

Time	Chinook Landed			Released Fish								**Notes (tags, marks, mortalities, observations, etc.)**
	Total	Running Total	# DNA Taken	SK	CO	CH	Pi	RbT	sucker	whtfsh	other	
2:48	0							1				Caught on Roe @ mouth of Kamloops Lake (outlet north side)
3:08	0							1				South side below bridge
4:52	0							1				
4:56	0							1				
5:02	0							1				
5:22	0							1				
5:41	0									1		
5:47	0							1	1			
6:13	0								1			
6:40	0							1				Rbt hooked in eye (taken home)
Totals								8	2	1		

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2007 COMMERCIAL FISHERY - KAMLOOPS LAKE CHINOOK GILLNET

Start Date:	Sept 5/07	Start Time:	17:30	Fishing Location:	East end of Kamloops Lake
End Date:	Sept 6/07	End Time:	6:30	Crew:	Barry Bennett, Aaron Gillespie

Net Check Time	Chinook Landed			Fish Released								Notes (tags, marks, mortalities, observations, etc.)
	Total	Running Total	# DNA Taken	SK	CO	CH	Pi	RbT	sucker	whtfsh	other	
20:00	0	0	0									
21:45	7	7	7									1 SK mort
00:45	2	9	2									
06:00	9	18	9									3 SK morts (very windy)
Totals		*18*										

Secwepemc Fisheries Commission

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2007 COMMERCIAL FISHERY - KAMLOOPS LAKE CHINOOK GILLNET

Start Date:	12-Sep-07	Start Time:	18:30	Fishing Location:	West end of Kamloops Lake
End Date:	13-Sep-07	End Time:	unk	Crew:	Aaron, Faron, Harla

Net Check Time	Chinook Landed			Fish Released								Notes (tags, marks, mortalities, observations, etc.)
	Total	Running Total	# DNA Taken	SK	CO	CH	Pi	RbT	sucker	whtfsh	other	
10:50												morts - 1 Sockeye; 1 Pink; used 600' net
11:10	1	1	1	1			1					300' net
	7	8	8	2			1					6 Sockeye morts; 600' Net
	8	16	16	3			1					9 Sockeye morts, 2 Pink morts; used 300' net
Totals				6			3					

Page 1 of 1 Pages

Secwepemc Fisheries Commission

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CAN022234_0059

2007 COMMERCIAL FISHERY - KAMLOOPS LAKE CHINOOK GILLNET

Start Date:	13-Sep-07	Start Time:	19:30	Fishing Location:	Kamloops Lake
End Date:	14-Sep-07	End Time:	unk	Crew:	A. Gillespie, Faron Manuel, S?

Net Check Time	Chinook Landed			Fish Released								Notes (tags, marks, mortalities, observations, etc.)
	Total	Running Total	# DNA Taken	SK	CO	CH	Pi	RbT	sucker	whtfsh	other	
02:00	6	6	6	1			1					1 Pk mort 1 Rbt mort 2 SK mort 1 Co mort 600' net
02:30	3	9	3	1			2				1 carp	3 PK mort 3 SK mort 300' net
04:30	1	10					1					3 SK mort 600' net
05:00	1	11		1			3	1				1 SK mort 1 Rbt mort 300' net
06:15	0	11					1					600' net
06:30	0	11					1					300' net
Totals				3			9					

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CAN022234_0060

2007 COMMERCIAL FISHERY - THOMPSON LATE BEACH SEINE

Date: 24-Sep-07 **Fishing Location:** Steelhead Park Beach

Monitor: M. Ross

Set No.	Time	Pink Landed ♂	Pink Landed ♀	Pink Landed Total	Pink Landed Cumul. Total	Chinook Landed	# CH DNA Taken	Released Fish SK	CO	CH	Pi	RbT	sucker	whtfsh	other	Notes
1	14:20	25	14	39	39	1	1	1	3				13			21.9 lbs (CH)
2	14:50	7	12	19	58								5			
3	15:40	31	22	53	111	1	1						1			10.1 lbs (CH)
4	16:50	82	103	185	296	6	6	1	2			1	1			longer net used (500')
5	17:15	13	20	33	329	1	1						4			
6	17:45	27	46	73	402			1					2			
					Totals	9	9	3	5			1	26			

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2007 COMMERCIAL FISHERY - THOMPSON LATE BEACH SEINE

Date: 25-Sep-07

Fishing Location: Steelhead Park - Thompson River

Monitor: M. Ross

Set No.	Time	Pink Landed ♂	Pink Landed ♀	Pink Landed Total	Pink Landed Cumul. Total	Chinook Landed	# CH DNA Taken	Released Fish SK	CO	CH	Pi	RbT	sucker	whtfsh	other	Notes
1	08:20	63	88	151	151	1	1	1	1				1			
2	09:00	111	107	218	369			1								
3	09:40	65	59	124	493	11	2		2							
4	10:30	61	87	148	641	3	3	1	2		1		1			Strange coloured pink - orange
5	11:10	69	95	164	805	3	3		2							
6	12:00	12	11	23	828	1	1		1							Problem unhooking boat at end of set
7	13:00	11	18	29	857				1							Problem unhooking boat at end of set
8	13:38	29	66	95	952	4	4		1				1			1 over ripe CH taken by mistake
9	14:06	13	27	40	992	3	3		1				5			
10	14:35	55	77	132	1124	2	2		2			1				
11	15:15	27	50	77	1201	1	1	1					1			
12	15:58	68	125	193	1394	3	3		2				2			
13	16:40	12	48	60	1454											Ran out of ice and totes with lids; quit early
					Totals	***32***	***23***	4	15		1	1	11			

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CAN022234_0062

2007 COMMERCIAL FISHERY - THOMPSON LATE BEACH SEINE

Date: 26-Sep-07

Fishing Location: Thompson River - Steelhead Park

Monitor: M. Ross

Set No.	Time	Pink Landed ♂	Pink Landed ♀	Pink Landed Total	Pink Landed Cumul. Total	Chinook Landed	# CH DNA Taken	Released Fish SK	CO	CH	Pi	RbT	sucker	whtfsh	other	Notes
1	10:20	176	239	415	415	2	2	1	3		1		12			late start; waiting for totes & ice
2	11:09	75	113	188	603	1	1	1					2			
3	11:45	32	57	89	692											
4	12:55	93	203	296	988	5	5	1	1				4			1 Jack Spring taken
5	13:40	105	178	283	1271	1	1	1	3				6			
6	14:30	49	98	147	1418	1	1	1	2				4			
7	15:20	100	154	254	1672	5	5	1	2				5			
8	16:08	70	122	192	1864	1	1						2			
9	16:50	123	150	273	2137	3	3		1				1			
10	17:33	53	108	161	**2298**	1	1			1		1	8			1 CH released - very ripe
				Totals		***20***	***20***	6	12	1	1	1	44			

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CAN022234_0063

2007 COMMERCIAL FISHERY - THOMPSON LATE BEACH SEINE

Date: 27-Sep-07

Fishing Location: Savona - Steelhead Park

Monitor: A. Gillespie

Set No.	Time	Pink Landed ♂	Pink Landed ♀	Pink Landed Total	Pink Landed Cumul. Total	Chinook Landed	# CH DNA Taken	Released Fish SK	CO	CH	Pi	RbT	sucker	whtfsh	other	Notes
1	08:40	319	326	645	645	3	3			1						1 CH released - spawner female
2	09:35	199	182	381	1026	0	0					1				
3	10:20	65	95	160	1186	5	5	1		1			1			1 Spawned out male CH
4	11:15	63	106	169	1355	0	0	2	2							
5	12:55	85	106	191	1546	2	2		3				5			
6	14:00	48	119	167	1713	3	3	1	1				8			
7	15:05	63	86	149	1862	2	2		1	1			2		1	Other - Dolly Varden
8	16:00	44	74	118	1980	0	0		1	1			5			
9	16:45	75	150	225	2205	4	4		3							
10	17:30	71	158	229	**2434**	5	5			2			1			
					Totals	***24***	***24***	4	11	8		1	22		1	

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CAN022234_0064

2007 COMMERCIAL FISHERY - THOMPSON LATE BEACH SEINE

Date: 28-Sep-07

Fishing Location: Steelhead Park - Thompson River

Monitor: M. Ross

Set No.	Time	Pink Landed ♂	Pink Landed ♀	Pink Landed Total	Pink Landed Cumul. Total	Chinook Landed	# CH DNA Taken	Released Fish SK	CO	CH	Pi	RbT	sucker	whtfsh	other	Notes
1	08:18	412	535	947	947	6	6		1				1			
2	10:53	95	209	304	1251	3	3						4			
3	11:34	151	221	372	1623	1	1			1						
4	13:02	159	256	415	2038	0	0		1	1			5			
5	13:50	204	289	493	2531	1	1	1							1	1 Northern Pike Minnow
6	14:42	127	220	347	2878	1	1			1		2				
7	15:37	162	279	441	3319	0	0			3		1				
8	16:32	134	321	455	3774	3	3	1	1	2			1			
9	17:18	109	226	335	**4109**	3	3									
					Totals	***18***	***18***	2	3	8		3	10		1	

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