The Chum IQ Seine Demonstration Fishery in 2005

A Review

Prepared for:

Canada Fisheries & Oceans Vancouver, BC

Prepared by:

GSGislason & Associates Ltd. Vancouver, BC

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Preface

Fisheries & Oceans Canada retained GSGislason & Associates Ltd. to review the Area B chum IQ demonstration fishery.

The consultants have benefited from discussions with industry, government, and others. Notwithstanding this assistance, the authors have final responsibility for the analyses and conclusions of the study.

2005 Area B Chum IQ Seine Demonstration Fishery - Summary

Background

- 39 of the 166 licenced Area B seine licence holders had a non-transferable Individual Quota (IQ) of 4,672 pieces of chum for the Johnstone Strait fall fishery
- the remaining 127 seine licence holders were potentially eligible to fish two competitive one day openings surrounding the two week IQ fishery in October 2005
- the IQ level was determined by the average catch rate in the first competitive opening

Catch Results

- all 39 IQ vessels fished and had an average catch of 4,610 fish or 99% of their quota
- 102 vessels of the 127 potential competitive fleet fished and had an average catch of 3,870 fish per active licence (poor weather contributed to a less-than-normal catch)
- about 2/3 of the competitive fleet caught less than the IQ fleet average of 4,610 fish
- the vast majority of the IQ fleet is based in the Vancouver area, local fishing knowledge is less important in an IQ fishery

Impacts

- resource sustainability IQ fleet fished within designated catch level
 - better catch monitoring processes produced more timely and accurate catch records, but more work still needed
- financial benefits \$300,000 increase over competitive fishery format (\$100,000 fuel cost savings on boats plus \$200,000 increased fish values/reduced processing costs from better quality flesh and roe)
 - large "upside" as markets gets familiar with better quality fish, as more fish are bled
- labour impacts crew sizes maintained as IQs were not transferable
 - IQ fishing format allowed some boats, traditionally having trouble getting crews, to operate because: I) the fishery involved one trip instead of two, and 2) each person knew approximately what their income would be
- administration requires third party Dockside Monitoring
 - requires more timely planning process

The Future

- experiment should continue for 2006 with changes
 - announcement to be made several months in advance
 - develop formal evaluation framework
 - contract third party evaluation & data collection
 - reassess method for determining IQ level
 - contract third party Dockside Monitoring Program (DMP) services
- "lessons learned" critical to salmon fleet management reform

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1.0 Introduction

I.I Background

In 2005 a pilot Individual Quota (IQ) demonstration project for the Johnstone Strait commercial chum fishery in Area B was implemented. The demonstration fishery flowed from the April 2005 announcement by the federal Minister of Fisheries and Oceans encouraging pilot projects for the 2005 fishing year. The IQ vessels operated under Scientific Licence.

1.2 Study Scope

This report presents a review of the 2005 demonstration chum fishery, its design, performance, and "lessons learned". The study review addresses biological, economic, social, and administrative/design aspects of the pilot IQ fishery.

The study is a review and not a full evaluation (e.g., a formal survey of all southern seine licence holders was not conducted). Canada Department of Fisheries and Oceans (DFO) did not want a full evaluation at this early time i.e., after year one of what may be a multi-year experiment. A more comprehensive evaluation of the Area B chum IQ pilot may occur in the future.

1.3 Information Sources

The research program included both primary (interview) and secondary (information review) research:

- interviews with 16 individuals for the commercial industry, government, and non-commercial industry organizations (see Attachment A)
- review of the DFO catch database for the Johnstone Strait chum fishery in 2004 and 2005 – logbooks, telephone hail, observer, dockside monitoring etc. data – plus other material related to the design of the 2005 IQ fishery

The consultant also made two presentations to the Area B Seine Society Board of Directors.

I.4 Report Outline

The next section presents an overview of the Johnstone Strait chum fishery as it traditionally is prosecuted and an overview of the procedures in place for the 2005 pilot. Then actual 2005 catch levels are discussed. Thereafter, the 2005 pilot is assessed under several headings:

- Resource Sustainability
- Business Impacts
- Labour Impacts
- Administrative and Enforcement

We then draw conclusions. The text is supported by Exhibits.

2.0 IQ Demonstration Fishery Design

2.1 The Traditional Competitive Fishery

In recent years the Johnstone Strait (JS) fall chum fishery has been managed by DFO using a harvest rate approach. The management objective is to achieve an exploitation rate of about 15% overall for the commercial fishery of which 11% is targeted for the seine sector (the other 4% goes to gillnet and troll). The run size is very unpredictable and DFO does not make a run size projection.

DFO analysis indicates that, based on historical fishing patterns, the 11% seine exploitation rate can be achieved with 120 seine vessels fishing in Johnstone Strait for 12 hours and 10 hours on two days 3 weeks apart in October each year. DFO typically has designated the two openings as the first and fourth Mondays in October to allow fish caught to be delivered to processing plants before the weekend, and to prevent conflict with recreational vessels on weekends. Each Area B seine licence had to be attached to a licenced fishing vessel in order to be eligible to fish.

The seine fleet harvests migrating stocks of Fraser River, Qualicum River and other southern chum stocks in the JS fishery. The Qualicum fish usually arrive later and are smaller on average than Fraser fish. As a result, the average size of fish declines in the second fishery opening.

There are 166 Area B seine licence holders eligible to fish Johnstone Strait chum with seine gear but not all licence holders participate in the fishery – about 10 of the 166 are First Nation communal "F" licences some of which are not attached to a vessel i.e., they are not ready to fish. Until 2005 the fishery has been a competitive, open or derby fishery where the vessels compete with one another for the available catch. Typically 110 to 120 vessels participated in recent years but there was no restriction on participation i.e., all 166 could arrive and fish. There has been no compulsory Dockside Monitoring Program (DMP) of validation of deliveries.

2.2 The 2005 Demonstration IQ Fishery

In 2005 a demonstration IQ component of the fishery was implemented. The intent was to have one third, or at most 40 of the anticipated 120 participating vessels, operate under an IQ fishery with an equal IQ per vessel. There would still be two competitive fishery openings 3 weeks apart for the remaining two thirds or 80 vessels.

The plan was to have the IQ fishery operate for a two week window between the two competitive fishery openings. The IQ level would be determined based on the catch per vessel in the first competitive opening. Originally DFO proposed that the IQ level be 1.2 times the average catch per vessel in the first opening.

The Area B Seine Society Board of Directors balked at this formula saying that it did not provide an incentive to test the IQ concept – they suggested that a 1.8 multiplying factor would be more appropriate (this would still provide a 10% discount or buffer from the full 2 multiplying factor). DFO subsequently did some additional modelling work which suggested that the 1.8 multiplying factor could still meet overall conservation objectives.

The I.8 factor approach was adopted with each vessel receiving an IQ of 4,672 fish (the average catch per boat of the 97 vessels participating in the first competitive opening on October 3 was approximately 2,600 fish). Implementation features were:

- DMP validation of offloads at the processing plant based on weight (average weight of fish taken from a minimum of 3 totes was used to estimate pieces landed) i.e., actual pieces were not counted
- vessels had to "hail out" 72 hours prior to departing for the fishing grounds and "hail in"
 24 hours prior to offloading
- offloads from one boat to another were not allowed
- IQ's were not transferable from one boat to another
- each vessel skipper on an IQ boat operated under a Scientific Licence (see Attachment B)
- the IQ fishery was open from October 6 through October 21
- subarea 13-7 Deepwater Bay was closed to seine fishing on October 8-10 and 15-16 i.e., on the two weekends plus the Thanksgiving Day Monday (to prevent conflicts with the recreational fishing fleet)

Coincidentally only 40 vessels expressed an interest in participating in the IQ fishery with one vessel withdrawing at the last minute (otherwise a draw would have been held to select the IQ vessels). Selected IQ vessels had to post a \$5,000 performance bond to the Area B Seine Society.

The second competitive fishery opening occurred on October 24, 2005.

3.0 2005 Catch Levels and Distribution

Exhibits 1, 2, and 3 present the 2005 catch levels of the IQ fleet (39 active vessels), the competitive fleet (102 active vessels), and the total fleet (141 active vessels). IQ fleet catch data came from the Area B Seine Society database. Competitive fleet catches were estimated from the DFO catch database – some estimation was needed since, as of December 2005, the database was incomplete.

Catch Results. The results are:

- the 39 IQ fishery vessels caught 179,900 chum or an average of 4,610 per vessel
- the 102 competitive fishery vessels caught 395,000 chum or an average of 3,870 per active vessels
- the 141 total active vessels caught 574,900 chum or an average of 4,080 per active vessel

The per vessel catch rates for the competitive fishery vessels were over 40% less in 2005 than in 2004 – bad weather during the second opening in 2005 was part of the reason for the decline.

About two thirds of the 127 eligible competitive fishing vessels caught less than the IQ fishing fleet average of 4,610 fish in 2005 (see Exhibit 4). At least four vessels fished in the competitive fishery and caught nothing e.g., had vessel/equipment malfunction, got "weathered in". In particular, the second competitive fishery opening was plagued by bad weather – the catch in the second opening was much less than in the first opening.

	Area B Johnstone Strait Fall Chum Catch	
2002	494,000 pieces	
2003	700,200 pieces	
2004	724,600 pieces	
2005*	574,900 pieces	

^{*179,900} in the IQ fishery, 395,000 in the derby fishery Source: DFO database and Area B Seine Society database

The 39 IQ fishery vessels delivered their catch to 12 different processing plants over the October 11 to October 21 2005 period. Each vessel fished from 1-3 days (the norm was 2 days).

Regional Considerations. A total of 33 or 85% of the 39 licenced vessels participating in the IQ fishery had Lower Mainland owners. The potential Area B seine fleet of 166 licence holders had a much lower 68% Lower Mainland ownership share. Vessel owners from Alert Bay and Campbell River opted for the competitive fishery option.

Exhibit 1: Catches of the 2005 Seine Chum IQ Fleet in Johnstone Strait for 2004 and 2005

		2004*	2005**
Licences	- number	39	39
	- active	24	39
Chum Catch pieces		109,800	179,900
Av Catch	 per licence 	2,820	4,610
	- per active licence	4,580	4,610

^{*} Comprised part of the open (competitive) fishery in 2004

Source: DFO Catch Records and Area B Seine Society

Exhibit 2: Catches of the 2005 Competitive Seine Chum Fleet in Johnstone Strait for 2004 and 2005

		2004	2005*
Licences	- number	127	127
	- active	92	102
Chum Catch pieces		614,800	395,000
Av Catch	 per licence 	4,840	3,110
	- per active licence	6,680	3,870

^{* 127} is the 166 total Area B Seine licences less the 39 in the 2005 chum IQ fishery

Source: DFO Catch Records

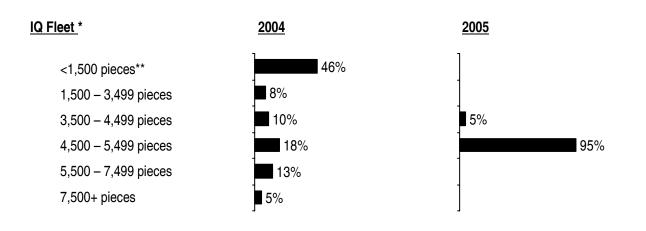
Exhibit 3: Catches of the Total Seine Chum Fleet in Johnstone Strait for 2004 and 2005

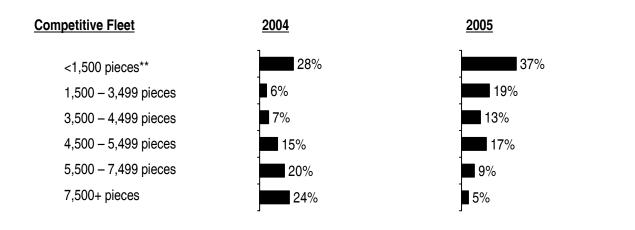
		2004	2005
Licences	- number	166	166
	- active	116	141
Chum Catch pieces		724,600	574,900
Av Catch	 per licence 	4,370	3,460
	- per active licence	6,250	4,080

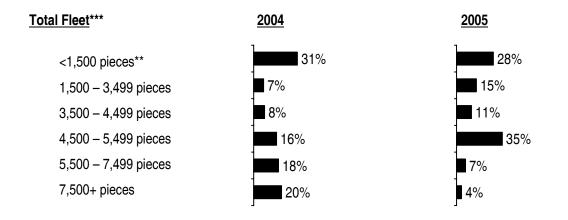
Source: DFO Catch Records and Area B Seine Society

^{**} IQ fishery in 2005 with each licence having a catch limit of 4,672 pieces

Exhibit 4: Catch Distribution in the Johnstone Strait Seine Fleet for 2004 and 2005







^{*} IQ in 2005 was 4,672 pieces

Source: DFO Catch Records

^{**} Includes licences with zero catch

^{***} Total fleet involves 166 licences - 39 IQ plus 127 competitive

4.0 Impacts

In the absence of the IQ demonstration fishery in 2005, the traditional two-one day openings, 3 weeks apart, would have been implemented. All licenced Area B seine vessels would have been eligible to participate in the competitive fishery.

Exhibit 5 presents some comments from our interviews related to the impacts of the IQ fishery.

4.1 Resource Sustainability

Participation. The IQ fishery concept was predicated on a total fleet participation of about 120 vessels – 40 in the IQ fishery plus 80 in the competitive fishery. In practice, 141 vessels fished – 39 in the IQ fishery plus 102 in the competitive fishery, an 18% increase in participation overall.

Some of the increase may reflect higher prices paid in 2005 and the fact the Area B seine fleet did not have its first sockeye/pink fishery opening until mid September i.e., many licence holders were anxious to fish.

But several Vancouver-area vessels that normally did not participate in the Johnstone Strait chum fishery did participate in the 2005 IQ fishery (15 of the 39 IQ vessels did not participate in 2004). Local knowledge is not as important in an IQ fishery as in a competitive fishery. As a result, we conclude that participation in the 2005 increased as a result of the IQ demonstration fishery.

Catch Levels. The IQ fleet received an IQ of 4,672 fish each, 1.8 times the average catch of 2,600 chum from the first October 3 2005 opening in the competitive fishery i.e., the competitive fleet was projected to catch 5,200 chum on average over the two openings.

The anticipated catch for the projected (preseason) 120 active vessels then was 602,880 fish – 40 vessels at 4,672 fish per vessel plus 80 vessels at 5,200 fish per vessel. Actual catch was 574,900 fish or 95% of the "target" 602,880 i.e., the fishery overall operated within the anticipated catch level even though fleet participation was higher than projected.

Overages and Underages. The IQ vessels had overages on their 182,208 aggregate catch limit (39 vessels x 4,672 fish/vessel) of 5,100 fish in total or 3%. The proceeds from sale of this overage fish was donated to the Commercial Salmon Advisory Board (CSAB).

Highgrading. DFO indicated that there were no reports of highgrading or significant bycatch.

Other Users. Our discussions with the recreational, aboriginal, and other commercial fishing sectors suggested no significant impacts or implications on these users. The recreational sector saw the closure of subarea 13-7/Deepwater Bay to the seine fleet on weekends as advantageous (but the seine fleet saw this as an infringement of their "rights").

Exhibit 5: Selected Interview Comments

- 1. "the preseason forecast for chums can be very inaccurate"
- 2. "the IQ approach needs each boat to fish to a number all other IQ fisheries fish to a number and this number is set preseason"
- 3. "defining the demonstration IQ level solely from the first derby fishery results is a crap shoot catches can be affected by weather, run timing, tides, dispersion of fish etc."
- 4. "in fall it can be very difficult to get a crew for an open fishery if the skipper does not have confidence in his crew to operate confidently and safely, then he will not go out some boats don't fish in the fall because they can't get crew"
- 5. "proper planning for the 2005 fall chum fishing was compromised as everybody was waiting for the first openings for sockeye and pink fisheries"
- 6. "local knowledge is less important in an IQ fishery, that is why Vancouver boats gravitated to the IQ fishery, Alert Bay and Campbell River boats did not"
- 7. "hired skippers fear that they will lose their jobs under a IQ fishery many local skippers and owner-operators find it hard to deal with change"
- 8. "egos, local peer pressure forced many skippers to opt for the derby [open] fishery in 2005"
- 9. "there are safety benefits to an IQ fishery. If it blows, you can go the next day [and not lose fish]"
- 10. "bleeding fish needs extra crew and a different type of crew"
- 11. "it takes time to develop the market for a new product"
- 12. "benefits to processors from the IQ fishery included: I) lower overtime hours, less contracting out to custom processing plants, 2) increased roe recovery and quality, and 3) better quality flesh/less bruising"
- 13. "since the IQ fishery was announced very late our company decided to pay the same to IQ and non-IQ fishermen even though the IQ fishery produced better fish and better margins next year we may pay more for IQ fish"
- 14. "it is easier to find a market for a finite number of fish if you had 6 or 8 weeks notice for the IQ fishery a major retail buyer may be willing to do a promotion"
- 15. "companies don't want fish deliveries on weekends"
- 16. "DFO needs to pay more attention to the Area B elected officials in the Commercial Salmon Advisory Board (CSAB) process the Area B Seine Society is not as open and transparent"

Data Quality. It is unknown how reliable is the data on released fish in DFO's catch database – there is no compulsory observers and/or cameras on board the vessels (the discard data is self-reporting).

DFO made a concerted effort to expeditiously collect and analyze the catch records from the first competitive fishery as this data formed the basis for setting the IQ level – this was a benefit. The DMP program for IQ vessels also assisted in producing more timely and better quality data. Nevertheless, we found that the DFO 2005 catch database was incomplete as of December 2005, necessitating some estimation procedures. There is a need to improve the catch reporting of all salmon fisheries in BC.

DMP personnel did not directly count pieces of fish unloaded but rather used an indirect method, based on average weight, to estimate pieces. DFO had indicated that their estimated piece count figures were actually 5% higher than actual counts, based on limited examples where both techniques were used for the same vessel. In the future, it may be advisable to convert the piece-based IQ to a weight-based IQ based on a typical average weight per fish.

DFO Management Approach. In light of insights gleaned from fleet behaviour and effort under the 2005 IQ pilot, it would be prudent for DFO to review its harvest rate strategy and modelling approach to see if adjustments are warranted.

4.2 Business Impacts

Handling and Quality Improvements. The IQ fleet had 2 weeks to catch their allocation. As a result, they did not catch the fish as fast, brailed the fish from the seine net more slowly, and handled the fish more carefully. The result was improved roe quantity and quality, and improved flesh quality as well. And there was less stress on the vessel, gear and crew from slowing down the rate of harvest.

In the competitive fishery, it may take a processor 3 or 4 days to process the glut of fish arriving at the plant all on the same day – the roe recovery/grade is noticeably less the second day at the plant and declines rapidly (by the fourth day roe recovery is essentially zero). With the IQ fishery, processors/buyers could schedule days for vessels to fish to prevent gluts at the plant.

Processors suggest that the improved quality of the fish resulted in:

- higher roe recovery and/or grades,
- greater flesh quality e.g., less bruising, better refrigeration

These quality benefits resulted in potentially increased market returns to processors. However, the late announcement of IQ program during the last week of September meant that processors could not necessarily market this better quality to buyers in the year 2005. If the IQ program proceeded again in 2006, but with a more timely announcement allowing more planning, then the market benefits would be much more significant.

Cost Savings. The IQ fleet made only one fishing trip to Johnstone Strait instead of the normal two, a savings on fuel costs. Seine fishermen suggested the savings to be approximately \$2,500 for each trip foregone from Vancouver – this amounts to approximately \$100,000 for the 39 IQ vessels in total. Processors also indicated cost savings from less overtime for plant workers, less use of contracted-out processing services, and less use of packers.

There was some increase in crew labour costs on the one vessel that bled fish (see discussion below), but this increased cost was minimal i.e., less than 1% of total labour costs for the 39 IQ vessels.

Bleeding Fish. Only one vessel bled their fish (another vessel did bleed some fish but decided the vessel configuration was not suitable after bleeding about 60 fish, and abandoned the experiment for 2005). This one vessel had 2 extra paid crew members on board.

Apparently the bled fish from this one boat was a vastly superior product to even the IQ non-bled fish and went to a specialized smoker market. The smoked product had a significantly higher recovery rate due to less bruising, the need for less trimming etc.

To bleed fish and to tap the economic potential from doing so will require changes in procedures from all participants in the value chain:

- vessels need to alter on-board handling procedures, equipment, refrigeration, and crews
- plants need to segment bled fish from the production line and/or process into different high value products
- marketers need to cultivate a market for this new high quality product

We note that all Area B seine vessels may not have the right configuration, necessary deck space etc. to conduct a bleeding program.

Financial Benefits. The benefits from increased quality and/or lower plant costs in 2005 are estimated to be relatively modest at about 22 cents per kg (10 cents/lb) split between the processor and the fishermen. The financial benefits from the production of bled fish were higher than this.

In some cases, IQ fishermen received a higher price than non-IQ fishermen. In other cases the processor paid IQ and non-IQ fishermen the same price even though the IQ fish was better quality and produced better margins – the company did not want to set one group of fishermen against another in the first year of an experiment where the experiment was announced very late (the companies may pay different prices in 2006 if the experiment continues).

The financial benefits to industry in 2005 from the IQ catch of 863,000 kg (4,610 fish/boat \times 4.8 kg/fish \times 39 boats), then are:

Fleet Fuel Savings ~ \$100,000 Higher Prices/Lower Costs ~ \$200,000 ~ \$300,000 These benefits likely would be greater in 2006, if the IQ fishery model was continued, since the market would have gained some appreciation of this better quality fish.

And benefits would be much greater if fishermen bled a much greater amount of their catch in the future (some fishermen indicate that they will adapt their on-board handling procedures to do so if the experiment continues next year).

4.3 Labour Impacts

Crew Size. The normal crew size of 5 people per vessel was utilized in the fishery except in the single situation where fish was bled, as mentioned previously, two additional crew were hired e.g., crew size of 7 utilized. Vessels could not lease IQs from other vessels so there was no consolidation of one or more IQs onto one boat (resulting in loss of crew jobs).

Problems Crewing Boats. Several interviewers indicated that it was very difficult, especially for Vancouver-based boats, to get crew to fish in the competitive fall fishery for chum. Individuals did not want to travel the long distances for 2 one day openings 3 weeks apart where the remuneration/ wages were uncertain. As a result, several boats normally remained "tied up".

Some of these boats participated in the 2005 fishery for the first time in several years because I) the IQ fishery involved only one trip instead of two, and 2) each crew member knew approximately what his settlement wage would be.

One owner of two seine boats, with only enough individuals to crew one boat, put one boat in the IQ fishery and the other in the competitive fishery, and used the same crew for each.

Safety. The IQ fishery concept through slowing down the fishing process, and through allowing one to wait until bad weather abates without losing fishing opportunities, enhances crew safety.

The 2005 Nitinat seine chum fishery, which operated in late October on the West Coast of Vancouver Island under a competitive fishery format, experienced crew injuries which necessitated emergency air lift of crew for medical attention. These injuries are much less likely to occur under the IQ fishery format.

4.4 Administration and Enforcement

The DMP Activity. DFO managed the DMP offload program. Apparently they used DFO personnel having other responsibilities e.g., a diver doing stream surveys was on call to monitor offloads. In several instances, the DMP personnel arrived late at the offload site thereby delaying the unloading and processing of fish.

Industry feels that it would be better in the future if a third party contractor provides offload services.

Selection of IQ Vessels. The random draw mechanism proposed for selecting IQ vessels, from those expressing interest, is fair (although a random draw was not needed in 2005 since there was no oversubscription of interest).

The Planning Process. The IQ demonstration fishery concept was only ratified in the last week of September. This left very little time for vessel owners and processing plant alike to plan their operations. A much greater 3 to 4 months lead time is advisable to all concerned.

Specification of IQ Level. The IQ level was based on the average catch per vessel in the first competitive fishery. This mechanism is wrought with variability related to the weather, tides, dispersion of fish etc.

A second concern relates to what happens if the mix of IQ and non-IQ vessel changes e.g., 80 boats go into the IQ fishery and only 40 go into the competitive fishery. How does one specify the IQ level? (or how does one specify the IQ level for a 100% IQ fishery?). DFO needs to rethink its specification process for setting the IQ level under a range of options.

5.0 Conclusions

This report has presented the results of a review of the 2005 Area B chum IQ demonstration fishery, an innovative experiment in salmon fisheries management. In our opinion, the results are sufficiently promising so that the experiment should be continued into 2006. In fact, our discussions suggest that if the experiment was continued in 2006 many more than 40 licence holders would be interested in participating.

We suggest the following changes for the 2006 experiment:

- the announcement of its continuance for 2006 should be made several months in advance so that all value chain players can plan their activities
- DFO develop a formal evaluation framework to guide the review/evaluation of the second year of the experiment so that the appropriate questions are asked – DFO did not have such a framework for this review (the review of other demonstration fisheries also would benefit from a formal evaluation framework)
- DFO contract with a third party to conduct the evaluation so that appropriate data can be collected in-season to answer the above questions, and
- DFO reassess the way it designates the quota level for the IQ fleet, ideally so that it can be determined pre-season (similar to all other IQ fisheries in BC)
- DFO/industry contract with a third party firm to provide Dockside Monitoring Program (DMP) services for the IQ fleet

We also suggest that industry and DFO consider implementing DMP for the complete Johnstone Strait fall chum fishery, IQ plus competitive components, to enhance catch reporting – a strong catch reporting system is a key component for demonstrating that fisheries are sustainable.

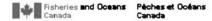
The "lessons learned" from the Area B demonstration IQ fishery are critical to more broad-based salmon fisheries reform in the Pacific Region.

Attachment A: List of People Interviewed

Name		Affiliation	
1.	Ashton, Chris*	Salmon seine fisherman	
2.	Budden, Glen*	Salmon seine fisherman	
3.	Buker, Sandy	Area B Seine Society	
4.	Chatwin, Murray*	Ocean Fisheries	
5.	Cue, Chris*	Canadian Fishing Company	
6.	Goruk, Ron	DFO	
7.	Maynard, Jeremy	SFAB	
8.	Mirau, Brad	Aero Trading	
9.	Morley, Rob	Canadian Fishing Company	
10.	Orr, Craig	Marine Conservation Caucus	
11.	Patten, Bruce	DFO	
12.	Rezansoff, Bob*	Salmon seine fisherman	
13.	Rombough, Les	Salmon gillnet fisherman	
14.	Saito, Wayne	BC Ministry Agriculture & Lands	
15.	Smith, Daryl	Salmon seine fisherman	
16.	Thomson, Alistair	DFO	

^{*} In addition to personal interviewers being interviewed one-on-one, these individuals attended an Area B Board of Directors meeting where the consultant made a presentation on the project (other attendees included Gordon Wasden, Ted Assu, Greg Wadhams, and Don Assu).

Attachment B: Sample Scientific Licence



2005 EXPERIMENTAL FISHING LICENCE

This Scientific Licence is issued under the authority of the Fisheries Act, R.S.C. 1985, Chapter F-14.

Licence Number: XEX 39 2005 Commence Date: 11 Oct 2005

Expiry Date: 21 Oct 2005

Purpose: To explore the benefits of spreading out the chum harvest to allow for a more consistent flow of fish into the marketplace and provide fishers an opportunity for valued added harvesting or processing.

Licensee:

ERLING M OLSEN

4500 WESTWATER DR SUITE 420

RICHMOND BC V7E 6S1

Phone: 604-271-4828

Designated Vessel: ANGELA LYNN VRN:20704 Vessel Owner: LEADER FISHING LTD

This licence is subject to the terms and conditions that are included herein and/or attached hereto. These conditions are part of the licence and may not

be removed.

Carmen McConnell, Resource Manager

Date

Fisheries and Oceans Canada, Pacific Region

Species and Catch Limits:

Species Catch Limit / Comment Chum Salmon 4,672 Pieces

Pink and Sockeye bycatch may also be retained.

Collection Methods / Gears:

SALMON PURSE SEINE

Minimum bunt mesh size is 100 mm (fall bunt)

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Areas:

Management Area 12 Management Area 13 Open from 0001 hrs Thursday Oct 6 to 23:59 hrs Friday Oct 21 in the following sub-areas:

AREA 12:

In Sub areas 12-1 to 12-6, 12-8 to 12-12, 12-18 (easterly of a line running from Lewis Point to Donegal Head on Malcolm Island), 12-21 and 12-24. Minimum bunt mesh size of 100 mm. The seine ribbon boundary will not be in effect.

Sub-area 12-20 (Parsons Bay) is open from 0001 hrs Friday Oct 14 to 23:59 hrs Friday Oct 21.

AREA 13:

13-8 to 13-10, a portion of 13-11 lying west of a line from Bodega Point on Quadra Island to a boundary sign at 50 degrees 16.390 minutes N by 125 degrees 22.620 minutes W, 13-27 TO 13-32, 13-35 (westerly of a line running from a boundary sign at Gunner Point across to a boundary sign on the Hardwicke Island shore opposite) and 13-40 (westerly of a line running from the Prominent Point approximately 1.5 miles east of Eden Point across to a boundary sign on the Hardwicke Island shore opposite). The regular Amor de Cosmos creek boundary will be in effect. Minimum bunt mesh size of 100 mm. The seine ribbon boundary will not be in effect.

Sub-area 13-7 (excluding Deepwater Bay) is open from 0001 hrs to 23:59 hrs on the following days 0ct 6,7, 11-14 and 17-21.

Reporting Requirements: At Close of Project

This licence was prepared by: Carmen McConnell

Dated: 11 Oct 2005

Licence Serial No.: 175599

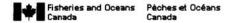
Terms and Conditions

This licence is valid from 0001 hrs October 6, 2005 to 2359 hrs October 21, 2005.

The DFO project manager for this fishery is Ron Goruk (Telephone: (250) 286-5884 or FAX: (250) 286-5898).

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The Licensee is required to abide by all Fisheries Regulations and the Conditions of 2005/2006 Salmon Area B Licence.

The Licensee is entitled to harvest up to a maximum of 4672 of chum salmon. No amount of chum salmon can be transferred to another person. Any Licensee who exceeds the catch target will be considered to have breached these licence conditions.

The Licensee must validate all catch at the point of offloading by DFO or a representative.

The Licensee is not entitled to have fished in the October 3 competitive fishery, nor are they permitted to fish in the October 24, 2005 competitive fishery.

The Licensee must retain all chum salmon caught up to the Catch Limit identified under the heading "Species and Catch Limits". Sorting and retaining chum salmon based on size or sex is not permitted.

All Licensees must report to the Area B Seine Society (Sandy Buker 604-684-4493), with the date and the Sub Area(s) they intend to fish, 72 hours prior to departing for the fishing grounds.

The Licensee must report catches to AMR upon commencement of fishing at 1-888-387-0007.

24 hours prior to offloading all Licensees must report the expected time of offload and location to Sandy Buker at 604-684-4493.

Copies of this licence must accompany the collecting personnel, be on board any collecting vessel and be carried with the transport vehicle at all times during collection and transport of samples. The licence must be produced upon the request of a Fishery Officer or Guardian.

The vessel master shall provide records, in the form commonly known as a fish slip, of all fish landed under the authority of this licence. The vessel master shall ensure that the fish slip is posted not later than seven days after landing and sent to:

Fisheries and Oceans Canada Regional Data Unit Suite 200-401 Burrard Street Vancouver BC V6C 3S4

Fish slip books may be purchased at most Departmental offices. Phone (604) 666-2716 for more information.

The Licensee is responsible for ensuring that all necessary health and safety

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training has been completed by those persons working on the project, and that those persons working under authority of this licence will employ safe working conditions and practices according to the Canadian Labour Code.

A breach of licence conditions is a Fisheries Act offence.

This licence may be revoked or amended by the Department prior to the expiry date as may be considered necessary by the Department.

See attached documents.

