

**2006 SALMON LICENCE AREA F TROLL
DEMONSTRATION
INDIVIDUAL TRANSFERABLE CHINOOK QUOTA
(ITQ) FISHERY REVIEW**

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1. Introduction

Under the Fisheries Renewal initiative, the Area F Northern Troll Fleet experimented with an individual transferable Chinook quota (ITQ) management regime in 2005 and 2006. For the directed Chinook fishery, each licence holder was given the option of either fishing in the traditional manner (referred to as the competitive, or derby, fishery) or under an ITQ management regime.

In a competitive fishery licenced vessels compete for the available harvest, or Total Allowable catch (TAC) and the fishery is closed when the TAC is attained. Under an ITQ management regime licenced vessels do not compete for the available harvest, rather, each licensed vessel is allocated a pre-determined share of the TAC prior to the start of the fishing season and this share (or individual quota) can be transferred between licenced vessels.

2. Background and Fishery Summary

In April 2004 *Treaties and Transition - Towards a Sustainable Fishery on Canada's Pacific Coast* by Donald M. McRae and Peter H. Pearse¹ was released. This laid out a vision of fisheries in a post-treaty era and made recommendations that would provide certainty for all participants in the fisheries, ensure conservation of the resource, provide for sustainable use and effective management, improve the economic performance of the fisheries and provide equitable arrangements among fishers and fair treatment of those adversely affected by treaty settlements.

On April 14, 2005, the Minister of Fisheries & Oceans released a statement outlining a blueprint to move forward with fundamental changes in the salmon fishery². This paved the way for demonstration projects to test different fishery regimes. One project was the Area F Chinook ITQ fishery.

In the fall of 2005, a review was conducted of the 2005 ITQ fishery³. This report examines the 2006 fishery.

In 2006, the Pacific Salmon Treaty (PST) allocation for Northern BC was 223,200 Chinook. Seventy thousand were set aside for the recreational Areas 1 and 2 catch, leaving 153,200 Chinook remaining for the troll sector. The winter fishery – October 1 2005 to December 31, 2005, took 25 Chinook. DNA test samples consumed another 1,300, with the remainder allocated to the 246 eligible Area F trollers, which resulted in a quota of 617.7 (rounded to 620) Chinook per vessel. 240 trollers selected the ITQ fishery, and 6 trollers participated in the traditional competitive fishery.

¹ http://www.gov.bc.ca/bcgov/content/docs/@2QS7U_0YQtW/pearse_mcray_report-joint_fish_task_group.pdf

² http://www-comm.pac.dfo-mpo.gc.ca/pages/release/p-releas/2005/nr021_e.htm

³ 2005 LICENCE AREA F ITQ DEMONSTRATION FISHERY-A REVIEW. March 2006. Prepared for: Fisheries and Oceans Canada. Prepared by: Chris Sporer of Christopher Sporer Consultants Ltd.

Both the ITQ and the competitive fishery opened June 7. The ITQ fishery remained open until September 30, which is the end of the 2006 accounting period under the Pacific Salmon Treaty. The competitive fishery closed on June 22, then re-opened on June 29, and closed for good on July 4.

There were 159 Area F trollers that validated Chinook landings, with the remaining 87 vessels transferring their quotas to these vessels. 456 separate reallocations of Chinook were processed.

3. 2006 Preparation

Since the 2006 ITQ fishery was a continuation of 2005, many of the steps and forms just needed updating.

3.1. ITQ Management System Database

The ITQ Management System program needed updating from 2005. This database has a list of all eligible trollers, their initial Chinook quota, any landed fish subtracted from that quota, and any transfers to or from the vessels that would alter the quota.

Scott Gerard of *Beyond Basics* developed the program in 2005 and updated it with the list of ITQ vessels for 2006. The DFO troll manager, Dave Rekdal, working out of the Prince Rupert office, processed all allocation transfers and issued initial and amended experimental licences. The service provider, JO Thomas & Associates, had access to the database and was responsible for entering all landed and validated Chinook.

There were a number of technical issues that needed to be fixed or changed based on feedback from 2005. Since 78 new vessels had selected Area F as a result of an Area re-selection during the winter of 2005 / 06, Mr. Gerard was retained to update the database. This worked smoothly but took some time, and the update was not completed in time for the start of the fishery on June 7. This slowed the experimental licence issuing process down if a vessel that was newly added to the ITQ program needed their licence or amendments to their quota early in the season. Since DFO has moved to a central database for all catch monitoring, called the Fishery Operations System (FOS), there was some discussion about linking the Area F troll ITQ database to FOS, as was currently being piloted with Halibut catches. In the end, due to the temporary nature of the demonstration fishery, and the added expense of doing this, it was decided not to create this link, but the option has been left open for future years.

3.2. Selection of Fishery

A request was mailed to all Area F Licence holders early in the year to determine which system each holder wished to participate in: competitive or ITQ. If a response was not received, then the licence was defaulted into the competitive fishery. This initially resulted in 14 vessels in the competitive fishery and the remaining in the ITQ fishery (154 vessels).

Seven of the 14 vessels that were in the competitive fishery were placed into that fishery by default since no record of their fishery selection was on file. After the lists were released, it was brought to DFO's attention that some omissions or errors had occurred. DFO felt compelled to contact each of the 7 vessels with no selection on file to ensure that they wished to take part in the competitive fishery. In all cases, either due to an absent selection or through misunderstanding of the process, the contacted owners opted into the ITQ fishery. This selection occurred and was clarified prior to the opening of either fishery.

Changing the competitive fishery participation from 14 to 7 concerned other fishermen in the competitive fishery, since they had made their initial choice in the hopes of a "windfall" profit, anticipating that some vessels, through tardiness or neglect, would not respond to DFO, and thus be put into the competitive fishery by default. This would result in a larger quota for the competitive fishery and more chance of catching better than the average catch. Although this point was considered, it was decided that if an error had occurred and a fisherman was assuming they were in the ITQ fishery when in fact they were in the competitive fishery, then it was DFO's responsibility to correct this. Once this was done, one other vessel decided to change fisheries, resulting in six vessels remaining in the competitive fishery, with all the rest in the ITQ fishery. Due to the vast majority of vessels selecting the ITQ fishery, in future years the default will be the ITQ fishery, so if no response is received by DFO, the vessel will be deemed to be in the ITQ fishery.

3.3. Area Re-selections

In 2005, there were 168 troll licences in Area F. In 2006, the total increased to 246. This occurred mainly through the Area Re-Selection process, along with some stacking (a vessel is allowed to re-designate a second licence which is being stacked on that vessel). This Area Re-selection was for one year only (2006), with another re-selection planned for the winter of 2006 / 07.

The timing of the Area re-selection and the overall Regional dynamics of this process are problematical for the northern troll fishery. In both the northern and southern PST Chinook regimes, the accounting year runs from October 1 to September 30 of the following year. Meanwhile, reselection is done approximately in March or April. The Area G Chinook fishery occurs in the winter months, and is over prior to the re-selection. Thus, an Area G troller could participate in the WCVI Chinook fishery, re-select Area F, and participate in the northern fishery in the same year. Meanwhile, any vessel contemplating transferring south will lose a whole season of Chinook fishing. It is recommended that any future troll Area re-selections take effect on October 1.

The other dynamic that is taking place with Area F under an ITQ Chinook fishing regime and the other Areas not, is that trollers wishing to take advantage of quota fishing are transferring north, leaving the other two troll areas, G and H, with a preponderance of vessels who do not want to implement a quota regime. This leaves those who do want to implement quotas in the other areas at a disadvantage numerically. Also, with more vessels shifting north, the individual quota decreases, making the Area F fishery less and

less viable. For instance, in 2005, the quota was 1000 Chinook per vessel, in 2006 it was 620, and for 2007 it will be less as more vessels select the north.

3.4. Experimental Licences

Considerable effort went into preparing and maintaining paper copies of the experimental licences for each vessel. The troll manager spent significant time preparing a licence template and customizing the 240 licences for the vessels that selected the ITQ fishery. Each vessel file had their fishery selection sheet and experimental licence that needed to be prepared, printed and filed.

To distribute the licences, licensing, administration or management staff responded to requests for licence release at any DFO office. As the licences were all filed in Prince Rupert, requests to email, fax or mail licences were made to the Prince Rupert DFO office. Tracking these releases among the various offices and approximately 10 staff proved to be quite cumbersome and time-consuming. Although this process was difficult, it was the best process available. An attempt to streamline this process for 2007 is being made.

3.5. Flags

In 2005, green ITQ flags were issued to all vessels participating in the ITQ fishery, with instructions to fly this flag when participating in the ITQ fishery. It was felt that this would assist enforcement officers in identifying these vessels. Since the vast majority of the vessels participated in the ITQ fishery, the flags were found not to be necessary. No flags were issued for 2006.

4. Management

The ITQ fishery opened on June 7th. Although ITQ participants realized on the one hand that it was not critical to be present for the opening, on the other hand, many were nervous that the WCVI presence would shorten the season. There were 100 trollers present at the opening. As the season progressed, participants came and went. Catches were slow to start as well, which kept fishermen on other endeavours until the Chinook abundance increased.

4.1. Quota Amendments

Once the experimental licences were released, quota transfers began immediately. Initially, these were slow to be processed since the ITQ Management Database was not ready for data entry at the start of the fishery. In 2007, it is anticipated that the database will be updated immediately upon finding out the results of the latest Area re-selection. Once the database was up and running, a dedicated staff member was needed to complete the backlog and to keep up with daily requests. Maintenance of the requests in-season was accomplished, but at times the workload was heavy.

Occasionally it was discovered that the ITQ database had not been updated with the correct vessel names, which slowed the amendments down. This was mainly due to the

fact that fishermen had not all adhered to the May 15th deadline for fishery selection and their vessel had been initially placed in the competitive fishery.

Another time consuming task was the distribution of the amendments after the quota transfers were made. Often incorrect contact information for the vessel or a mistake in the fax number prohibited the amendments from being distributed. Also, due to short fishing trip turn-arounds, some fishermen wanted amendments within short time frames and they had to be sent to DFO offices such as Port Hardy, Queen Charlotte City or Masset on short notice so that they could receive the amendment before fishing.

4.2. Area F Licences

Two licences were needed to participate in the ITQ fishery, the regular Salmon Area F Vessel Licence and the ITQ Experimental Licence. This resulted in some confusion, as both were required to be aboard prior to commencing fishing. This became a stumbling block to releasing experimental licences - the licence holder had to have their 2006 Salmon Area F Vessel Licence renewed prior to any experimental licence being issued. Those licence holders that had subscribed to the ITQ fishery but had not yet renewed their fishing licence were highlighted and their experimental licence withheld. This required daily updating from the Licensing Database and occasionally phone calls from DFO licensing agents that a client had just renewed their Area F vessel license and the ITQ experimental licence could be released.

4.3. Hailing to Two Service Providers

The base program for hailing in and out of a fishery and hailing catch is contracted to Archipelago Marine Research Ltd (AMR). AMR inputs the data from phone calls of fishing activity and catches into the main DFO catch database called the Fishery Operations System (FOS). This is a condition of the Area F fishing license. All Chinook off-loaded from vessels had to be validated, which was a condition of the experimental licence. The ITQ dockside validation contract was awarded to JO Thomas & Associates Ltd (JOT) in 2005 and the contract renewed in 2006. This service provider also needed to be informed about vessel activity, which required the fisherman to contact JOT when commencing and concluding fishing. When the fishing was completed then the fisherman would arrange to be met at an offloading port for Chinook validation.

In summary, two calls were required when entering into the ITQ fishery, one call when leaving the grounds when a port validator was required, and another lengthy call once in port to AMR with the trip report. The confusion over what exactly was required regarding hailing resulted in discrepancies between the FOS number, the validation number, as well as some discrepancies with sales slip numbers. An attempt will be made in 2007 to reduce this redundancy, and the IFMP will clearly reflect what is required of trollers, to eliminate any future confusion on this issue.

4.4. Test Fishing

As in 2005, test vessels were selected (by lottery from a list of those wishing to participate) to catch 200 Chinook twice a month in both Area 1/101 off La Perouse Reef and in Area 2W off Buck Point. This linked to the previous years' data sets and assisted

with determining the stock composition present using DNA analysis. Samples took at least two weeks to be caught, transported to the DNA lab in Nanaimo, and analyzed, which resulted in DFO managers making fishery decisions on 7 to 10 day old data. The sampling regime in 2006 was funded by a combination of budgets including Stock Assessment and Regional Fishery Renewal funding, and a Pacific Salmon Treaty Northern Fund grant of \$50,000.

In addition to the test vessel samples, the commercial catch was sampled to determine the stock composition of what was actually caught. One percent of the catch is targeted to be sampled.

Some additional intermittent sampling was conducted to determine the stock composition in adjacent closed areas, particularly south of the boundary at Frederick Island. If the results were below the 6% management guideline for West Coast Vancouver Island (WCVI) stock prevalence then additional Management Areas could be opened, but this turned out not to be the case, and the majority of 2W remained closed throughout the year.

4.5. Packers

There were some requests for packers to offload catch from ITQ vessels. This was not allowed due to the logistics of validating catch offloaded from the catcher vessel. To abide by the conditions of the experimental licence regarding mandatory validation of all Chinook being offloaded, a validator would need to be aboard the packer. This could be possible for one packer, but if multiple requests were made, there is not the trained validation staff to man all packers. Also the logistics of communication with the validation database would be difficult: once a fishing vessel has offloaded, a certificate of quota remaining could not be issued from the grounds, so a fishing vessel could not continue to fish. Based on these concerns, no packers were allowed to offload Chinook. Other ITQ fisheries have also disallowed packers.

4.6. ITQ Catches and Effort

The ITQ fishery opened June 7. Overflights were conducted on a weekly basis to document the distribution of trollers, and catch records were kept throughout the season. The following table shows the catch during the season.

July 7	101 vessels had validated	33,000 Chinook
July 15	115 vessels had validated	63,500 Chinook
August 7	145 vessels had validated	103,000 Chinook
August 15	152 vessels had validated	112,500 Chinook
September 1	158 vessels had validated	134,000 Chinook
September 21	159 vessels had validated	144,300 Chinook
September 30	159 vessels had validated	148,800 Chinook

4.7. Competitive (Derby) Fishery Catches and Effort

A total of 6 vessels subscribed to the competitive (derby) fishery. The fishery opened June 7 and closed June 22. Fishery then re-opened on June 29 and closed July 4, with

allocation achieved. During this time, there were two vessels that left the grounds to harvest tuna. A total of 3,887 Chinook were harvested against the allocation of 3,720.

5. ITQ Evaluation

5.1. Biological Management

The ITQ demonstration fishery had a number of objectives.

Objective 1: Landings in the quota fishery must be effectively controlled, and West Coast Vancouver Island (WCVI) quota allowance will be adhered to.

The purpose of the DNA testing program was to ensure that the WCVI allowance would not be exceeded. The northern troll allowance in 2006 was 3.2% of WCVI origin Chinook returning to Canada, which amounted to 6344 Chinook. To achieve this, the overall abundance of WCVI in the catch would have to average 4.3%. A management guideline of 6% was used to trigger opening and closing the fishery, although low WCVI abundance throughout most of the season resulted in the fishery not closing in 2006. The allowance was 6344 Chinook of WCVI origin, and final WCVI catch was 6465.

During the season, it became apparent that a portion of the fleet were coming in with large overages (> 20 Chinook), which appeared to be intentional overages with post-trip quota amendments. This was against the rules – additional quota was supposed to be obtained prior to fishing or a fisherman could be charged with exceeding their quota. Although overages were reconciled later with quota amendments, these overages demonstrate that certain fishers were not accepting the risk of obtaining quota prior to fishing and retaining Chinook. The rules regarding quotas were clearly posted, so there should have been no confusion, but because the fishery is relatively new, no charges were laid. The rules will be reviewed for 2007, and clarified both in the IFMP and in a pre-fishery Fishery Notice. In addition, procedures will be altered so that dockside validators will alert DFO staff to large overages during off-loads.

Objective 2: Dumping or high-grading will not be a problem in the quota fishery.

Chinook with white flesh are bought at a lesser price than Chinook with red flesh, and so there has been a suspicion that in the ITQ, fishers would be tempted to throw back Chinook with white flesh. Since the fish has to be dead to inspect properly for flesh color, any high-grading such as this would be a serious concern.

The mix of fish (white and red Chinook) in both the derby and the ITQ fishery was compared in 2005, with no discernable difference, indicating no high grading. Although a formal study did not occur in 2006, discussions with buyers in-season indicated that it was their opinion that high-grading was not occurring.

Objective 3: The Quota fishery will reduce or eliminate the competitiveness of the traditional fishery, leading to a better quality product, a fishery that is open for longer periods of time, and higher prices.

During both 2005 and 2006, the ITQ fishery has remained open throughout the summer, achieving the objective of having the fishery open longer. However, the risk of having it close if the WCVI component climbed above 6% resulted in many fishers “front-end loading” their catch.

Based on feedback from the Area F advisors, the ITQ fishery has lead to a higher quality of product and improved marketing. The higher quality of product appears to be evident in the price of fresh product being twice that of Chinook that were frozen at sea in 2006. Fishermen with smaller vessels that traditionally received less than the frozen product were enjoying higher prices that come with smaller, more frequent deliveries, to enable the product to get to market sooner.

Complementary to the higher quality product was apparently improved marketing. Processors and fishermen evidently were able to take and fill custom orders for fresh product over the period of the open season rather than dump a glut of fresh and frozen product on the market once or twice a year. Some fishermen were able to market their product directly to restaurants or to the general public.

5.2. *Employment and Safety*

Objective 4: Safety will improve in the quota fishery.

The reduction in competitiveness has resulted in an apparent increase in safety. Fishermen were able to choose their days on the water and avoid storms since the pressure to fill the hold was no longer there.

5.3. *Administration and Enforcement*

Although most fishermen deem that the ITQ fishery is a success, based on increased prices, certainty, and safety, significant costs have been incurred by fishermen and by DFO. Fishermen are required to pay for a port validator in the range of \$90 per hour of offload. The average was about 4 hours per season for each IVQ fisherman.

DFO has contributed to the ITQ program as follows:

	<u>2005</u>	<u>2006</u>
ITQ Identification Flags	\$4,200	n/a
Advisor Travel	\$20,000	n/a
Overflights	\$5,000	\$5,000
ITQ Database	\$17,500	\$2,000
Extended Mark Recovery Program	<u>\$11,500</u>	<u>\$13,000</u>
	\$58,200	\$18,000

DNA Stock Identification costs were approximately \$90,000 per year. However, it has not been added to the above amounts because arguably this would have been incurred regardless of the management method used.

The Mark Recovery Program (MRP) refers to sampling the troll catch for coded wire tags during offloading of the troll catch. The cost increases in this program are attributed to

the increased length of the troll season (2 months longer) and changes in the distribution of offloading with increases in Masset and Prince Rupert. There were some cost savings due to J. O. Thomas having both the port validation and MRP program contracts. Discussions will occur in February 2007 to determine how this cost will be covered in 2007. One option is to recover this cost from fishermen which would be approximately \$70 per licence holder.

Port validations have markedly improved accounting in the Chinook fishery both for domestic and international obligations. Some decrease in the accuracy of catch information to the FOS has occurred since some fishers have not adhered to their vessel and experimental licence conditions by not reporting their catches by phone to AMR. As a result of these catch reporting irregularities, the Troll Manager uses a combination of port validations, FOS phone-ins and sales slips to get the most accurate catch per vessel and overall catch by species for the fishery.

In 2006, a number of fishermen had significant discrepancies in their Chinook accounting. Comparisons in validations, hails and sales slips have revealed this. Conservation and Protection staffs are currently investigating these irregularities.

6. SUMMARY

2006 was another learning year for both trollers and managers regarding ITQ Chinook management. Lessons learned and action items as indicated in this document will be followed up on for the 2007 season. Although ITQ management has appeared to benefit the Area F troller, there are some additional changes that may be contemplated in the future, that cannot be accomplished in a demonstration fishery. For instance, all transfers are currently for one year only, and it may be beneficial to allow permanent transfers of quota, but this will not be feasible until the ITQ fishery is adopted formally. In addition, technical work is being done on coho forecasts, and it may be possible to move to an ITQ for coho some time in the future. If this is accomplished, it may be reasonable to allow two or more Area F licences to be stacked on one vessel, which is currently not allowed.