

Review of the Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

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Review:

Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

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INTRODUCTION

Under the auspices of the Canada-United States Pacific Salmon Treaty (PST), the United States provided Canada with funding for "a fishery mitigation program designed, among other purposes, to reduce effort in its commercial salmon troll fishery."

The PST Voluntary Salmon Troll Licence Retirement Program (PST VST LRP or simply VLRP) was launched in December 2011. The \$30 million (CAD) program budget was allocated as follows: \$28.5 million to licence retirement (and a small portion, if necessary, for removal/disposal of derelict vessels), \$1.0 million for development of a modernized Commercial Salmon Allocation Framework, and \$0.5 million to support impacted communities on the West Coast of Vancouver Island.

Now, Fisheries and Oceans Canada (DFO) wishes to review the program and accordingly, has contracted Nelson Bros Fisheries Ltd (Stuart Nelson and Edwin Blewett) to conduct the review.

There are three main elements of the review:

1. Evaluating the VLRP by assessing its performance against its stated objectives.
2. Gaining feedback from the fleet, incorporating that feedback into our evaluation where appropriate, and reporting on key topics that provide meaningful feedback to DFO on the program.
3. Considering various means of assessing the Fair Market Value (FMV) of commercial salmon troll licences, selecting a preferred method, and applying this method to advise DFO of our assessment of FMV over the program period.

The body of this review is thus provided in three sections:

Section 1 provides an evaluation of the program against its six stated objectives:

1. Establish and implement a voluntary retirement program that applies to all three troll areas (Areas F, G, and H);
2. Ensure eligible participants are provided sufficient notice of retirement opportunities;
3. Allow multiple opportunities for eligible parties to participate in the troll retirement program;
4. Establish and implement a process to identify and pay Fair Market Value (FMV) for licences that are accepted for retirement;
5. Ensure that reduced fee licences are not retired at a rate greater than full fee licences; and
6. Set aside a small portion of the PST funds to address derelict or abandoned vessels that may be associated with the voluntary retirement program.

Section 2 relays the feedback of the troll fleet with regard to the following seven topics:

1. Were the program objectives of the voluntary troll licence retirement process clear and understandable?

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2. Was the information provided to vessel owners regarding the PST Voluntary Salmon Troll Licence Retirement Program clear and informative? What improvements could be made?
3. Was the PST Voluntary Salmon Troll Licence Retirement Program application package explanatory and easy to comprehend? What improvements could be made to the application package?
4. Is the process currently being used to retire salmon troll licenses appropriate? Process considerations could include the mail-out of application materials to licence holders, reverse bid process to solicit offers for licence retirement, responses to offers submitted, and other relevant considerations.
5. Were sufficient opportunities provided for licence holders to retire their licences?
6. What advice can be provided to guide how the funds put aside, if necessary, for the removal or disposal of derelict and abandoned vessels arising from this program should be utilized?
7. Was the objective to maintain the relative ratio of reduced fee to full fee licences in the fleet during the retirement program met?

Section 3 provides our exploration of suitable methods for determining FMV and a valuation range that comprises our assessment of FMV over the period of the VLRP.

A Summary and Recommendations section concludes the report.

Sections 1 and 2 were informed in part or in whole by results of a survey of the commercial salmon troll fleet.

ABOUT THE SURVEY

After considering several options such as focus groups, a survey, and interviews of key sector representatives, we recommended to DFO that the views of salmon troll vessel owners be solicited using a survey questionnaire. DFO accepted our recommended approach.

A survey questionnaire was drafted, reviewed by DFO and tested before being distributed by mail to our survey population of 390 past and present salmon troll vessel owners. A copy of the survey questionnaire is attached at Appendix A. A copy of the Application Package was included in the survey materials sent to salmon troll vessel owners, to assist survey respondents in answering some of the survey questions.

Survey population = 390 past and present salmon troll vessel owners

Survey sample = 63 self-selected respondents who returned a questionnaire.

Our survey was not based on random sampling methods and cannot therefore be said to be representative of the population being sampled. Rather, respondents self-selected: individuals to whom the survey questionnaire was sent decided for themselves whether to participate in the survey. Our survey sample comprises the 63 vessel owners who returned a completed questionnaire.

Although the overall response rate was lower than we had hoped (63 of 390 = 16%), we were fortunate that we obtained questionnaires from roughly equal numbers of vessel owners who had (30) and had not (27) participated in the VLRP (6 respondents skipped this question). Of

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those who had participated in the VLRP, we obtained responses from vessel owners who had had an offer accepted (14) and those who had not (24). Note that a single respondent could have had application rejected and accepted. Under the VLRP, in fact, vessel owners might well use their initial applications to “test the waters” (ie, to try to figure out the Fair Market Value DFO was relying on in the process and eventually be accepted by the program on a later application).

Thus, while our sample cannot be said qualitatively or statistically to be representative of the population of past and present salmon troll vessel owners, we do have reasonable representation from vessel owners in each of four main categories: those who did and did not submit applications to the VLRP and those who had an offer accepted and those who had at least one rejected.

Throughout the review, when summarizing survey findings, we refer to percentages of responses that either agree or disagree with the premise of the question. The “agree” or “disagree” totals in all cases include the sum of the Agree + Somewhat Agree responses or the Disagree + Somewhat Disagree responses, as appropriate to the question.

SECTION 1:

EVALUATION OF THE PACIFIC SALMON TREATY VOLUNTARY SALMON TROLL LICENCE RETIREMENT PROGRAM

In this section we provide our evaluation of the PST LRP against its stated objectives, informed where applicable with the views of the commercial salmon troll vessel owners as reflected in their responses to our survey.

EVALUATION OBJECTIVES

The PST LRP was launched in 2011 with six key objectives:

1. Establish and implement a voluntary retirement program that applies to all three troll areas (Areas G, H and F);
2. Ensure eligible participants are provided sufficient notice of retirement opportunities;
3. Allow multiple opportunities for eligible parties to participate in the troll retirement program;
4. Establish and implement a process to identify and pay Fair Market Value (FMV) for licences that are accepted for retirement;
5. Ensure that reduced fee licences are not retired at a rate greater than full fee licences; and
6. Set aside a small portion of the PST funds to address derelict or abandoned vessels that may be associated with the voluntary retirement program.

A primary focus of this assignment is to determine whether the program is meeting its objectives. A table showing the measures and data we used to inform the evaluation is included at Appendix B.

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OBJECTIVE #1

Establish and implement a voluntary retirement program that applies to all three troll areas (areas F, G, and H).

Capsule Evaluation

DFO established and implemented a voluntary salmon troll licence retirement program that applies to Area F, Area G and Area H in December 2011. A total of 13 rounds have been conducted to date, averaging four rounds per year. The next round is anticipated to be held later this year.

Evaluation Detail

The PST LRP was launched on 23 December 2011:

December 23, 2011

Vancouver, British Columbia – The first round of a two-year, \$ 28.5-million licence retirement program has been launched by the Government of Canada, the Honourable Keith Ashfield, Minister of Fisheries and Oceans, announced today. ...

Application packages are being mailed out this week to invite commercial salmon troll licence holders to submit bids to the Department for the permanent retirement of their licences. In the first round of the licence retirement program, the Department will accept bids from harvesters in the West Coast commercial troll fishery (Area G). A second round will be initiated in early March 2012 for all commercial troll licence holders (Areas F, G, H).¹

The first round of the PST LRP was restricted to Area G but the second and subsequent rounds encompassed all three troll licensed areas

For the first opportunity beginning December 2011, only Area G licence eligibilities and/or packages that include Area G licence eligibilities and that are within fair market value, will be considered.

Subsequent opportunities will include all troll licence eligibilities (Areas F, G and H). It is anticipated that the next opportunity for retirement will occur in early March 2012.²

The following table summarizes the rounds of licence eligibility retirements conducted to date:

¹ Fisheries and Oceans Canada (2011), Press Release – Federal Fisheries Minister Announces Licence Retirement Program for B.C.'s West Coast Chinook Salmon Fishery. <http://www.dfo-mpo.gc.ca/media/npres-communique/2011/np-pr10-eng.htm>

² Fisheries and Oceans Canada (2011), PST VLR Package Cover Letter-final draft, dated 20 December 2011. As of April 11, 2015, the anticipated March 2015 round had not yet been initiated.

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Table 1

Retirement Round	Dates	Applications received	Licence Eligibilities Retired			
			Area F	Area G	Area H	Total
Round 1	December 2011-January 2012	46	0	6	0	6
Round 2	March-April 2012	62	11	8	6	25
Round 3	June-July 2012	39	4	4	2	10
Round 4	August-October 2012	36	4	5	1	10
Round 5	December 2012-January 2013	46	5	4	1	10
Round 6	April-May 2013	35	4	7	3	14
Round 7	June-August 2013	36	7	2	2	11
Round 8	September-October 2013	34	6	4	2	12
Round 9	January-February 2014	26	0	1	0	1
Round 10	March-May 2014	11	2	1	0	3
Round 11	June-August 2014	5	0	0	0	0
Round 12	November-December 2014	5	1	0	1	2
Round 13	February 6-March 4 2015	2	0	0	0	0
Round 14	<i>Anticipated Fall 2015</i>	<i>Not yet initiated – anticipated Fall 2015</i>				
Total to date		381	44	42	18	104

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OBJECTIVE #2

Ensure eligible participants are provided sufficient notice of retirement opportunities.

Capsule Evaluation

DFO has provided sufficient notice of licence eligibility retirement opportunities to salmon troll vessel owners.

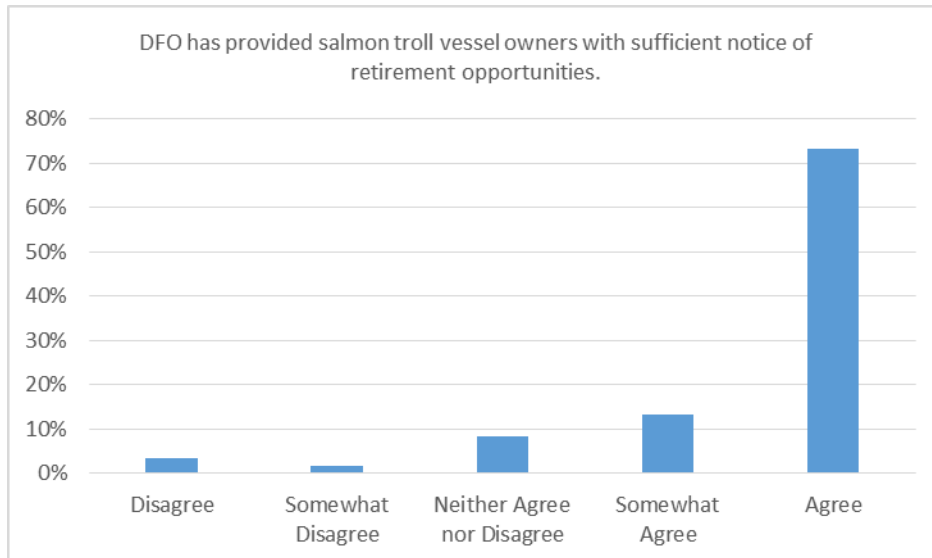
Evaluation Detail

The Salmon Troll Licence Retirement Program was announced by means of a News Release on December 23, 2011.

The first Application Package was distributed to Area G vessel owners on December 20, 2011. After the first retirement round, Application Packages were distributed to vessel owners in all three salmon troll licensed areas at the commencement of each successive round of the VLRP. To date, four retirement rounds have been conducted each year (see Table 1, page 6).

Survey Summary

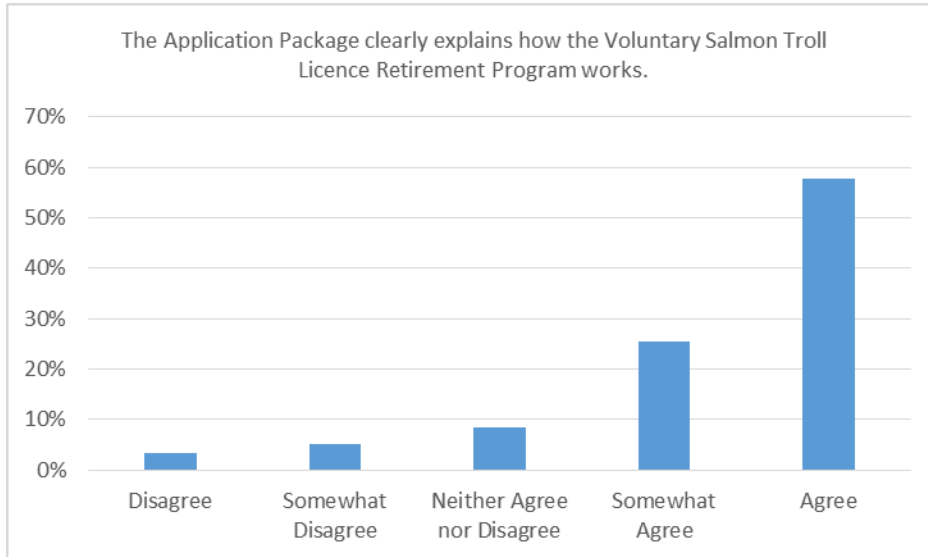
In the survey of salmon troll vessel owners conducted for this Review, 87% of respondents indicated that DFO has provided sufficient notice of retirement opportunities, as shown in the following chart.



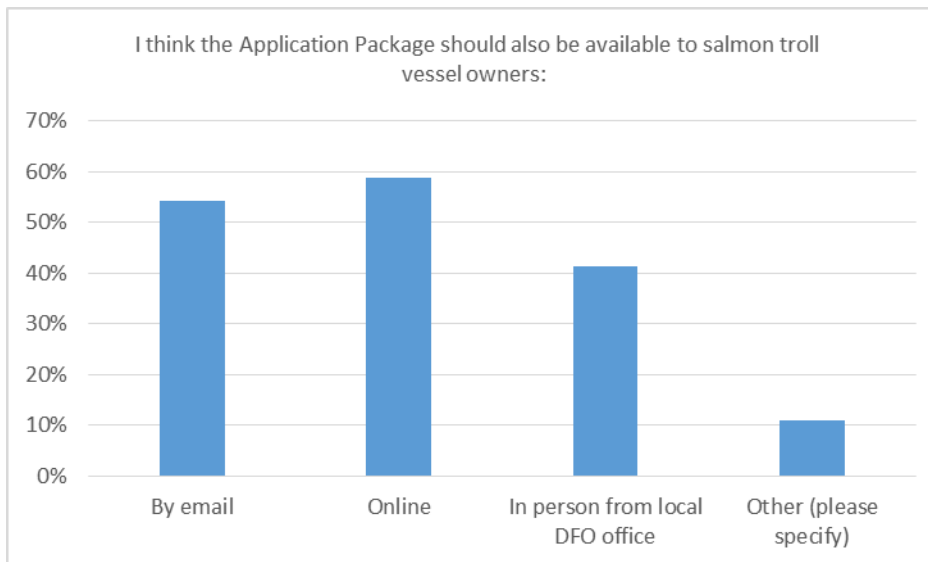
83% of survey respondents agree that the Application Package clearly explains how the PST LRP works.

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54% of survey respondents think DFO should make the Application Package available to salmon troll vessel owners by email and 59% think it should be available online. 41% would like the Application Package to be available at their local DFO office.³



No new or alternative methods of providing Application Packages to salmon troll vessel owners were suggested by respondents. Those who indicated “Other” listed “by mail” while one respondent noted that the “DFO office (is) closed around here.”

The responses indicate that survey respondents want choice in how they access the Application Package.

³ Note the options were not exclusive; respondents were instructed to “Check all that apply.”

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OBJECTIVE #3

Allow multiple opportunities for eligible parties to participate in the troll retirement program

Capsule Evaluation

DFO has provided multiple opportunities for salmon troll vessel owners to retire their licence eligibilities.

Evaluation Detail

Since the inception of the Salmon Troll Licence Retirement Program there have been 13 rounds of retirement opportunities for salmon troll vessel owners in Area G and 12 rounds for salmon troll vessel owners in Area F and Area H (see Table 1, page 6). This clearly meets the test of “multiple opportunities.” The various rounds of the program, and the extent of the uptake by Area for each round, is shown in Table 1 (page 6).

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OBJECTIVE #4

Establish and implement a process to identify and pay fair market value for licences that are accepted for retirement

Capsule Evaluation

DFO has established and implemented a process to identify and pay fair market value (FMV) for licence eligibilities retired under the Salmon Troll Licence Retirement Program. That process is a voluntary Sellers' Auction in which salmon troll vessel owners wishing to offer up one or more of their licence eligibilities submits an application stating the price they would require to relinquish however many licence eligibilities they are offering to retire.

Our evaluation of DFO's Reverse Auction process against alternatives concludes that DFO's first-price, sealed-bid, reverse (sellers') auction with a reserve price is an effective method of identifying and paying FMV for salmon troll licence eligibilities.

While a meshing of willing buyer, willing seller results in prices paid for salmon troll licence eligibilities that technically meet the test of Fair Market Value, troll fishers, as evidenced by survey responses, do not necessarily agree that prices are either fair or sufficient to trigger a significant uptake of transactions under the program.

Evaluation Detail

The process DFO established to identify and pay FMV was a Reverse Auction coupled with a Reserve Price set at the Fair Market Value of a salmon troll licence eligibility as determined by an independent third party.

Evaluating the Salmon Troll Licence Retirement Program against its fourth objective – Establish and implement a process to identify and pay fair market value for licences that are accepted for retirement – would normally require DFO to provide us, at a minimum, with:

1. A description of the method(s) DFO or its independent third-party evaluator uses to estimate fair market value
2. Copies of the models DFO or its independent third-party evaluator uses to compute fair market value.
3. The fair market value estimates used during successive rounds of the Salmon Troll Licence Retirement Program

Due to DFO's concern to ensure the continued integrity of the Salmon Troll Licence Retirement Program, the department decided it should not share its FMV methods and models nor should it share the estimated FMVs it used in assessing selling-price offers from salmon troll vessel owners. DFO is committed to keeping secret both the value and the specifics of how FMV is calculated because it feels that providing that information, even to a third party bound by Confidentiality & Non-Disclosure Agreements, could undermine or be seen to undermine the VLRP process in which DFO asks salmon troll vessel owners to offer a licence eligibility for retirement based on their own assessment of FMV.

DFO therefore instructed us to evaluate the Salmon Troll Licence Retirement Program against this objective by means of the following three assessments:

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1. An assessment of the effectiveness of the Reverse Auction at identifying and paying FMV.
2. An assessment of the fairness of the Reverse Auction.
3. An assessment of the FMVs of salmon troll licences at different times during the operation of the Salmon Troll Licence Retirement Program which DFO can then use – on its own – to compare to the value currently used in successive retirement rounds.

The first two of these approaches are pursued below. The third approach is the subject of part 3 of this report.

Objective #4.1: Effectiveness of Reverse Auction

Capsule Evaluation

Compared with the possible alternatives, DFO's Reverse Auction is an effective process to identify and pay FMV for licence eligibilities retired under the Salmon Troll Licence Retirement Program.

Evaluation Detail

In this section we assess the effectiveness of DFO's Reverse Auction at identifying and paying FMV by comparing its performance against other methods that might have been used in the Salmon Troll Licence Retirement Program.

Alternatives to DFO's Reverse Auction

Although the word "auction" typically conjures up a room full of people bidding on an automobile, a work of art, a race horse or prize at a charity golf tournament, there are in fact many different types of auctions, characterized by a number of different traits:

- **Buyers' vs Sellers' Auction** – Participants bid to purchase item from a seller (Buyers' Auction) or participants bid to sell an item (eg, a salmon troll licence eligibility) to a buyer (Sellers' Auction, also known as a Reverse Auction)
- **Open vs Closed Auction** – Participants are aware of each other's current and previous bids and can rebid at any time (Open Auction) or participants submit sealed-bids (Closed Auction, also known as a Sealed-Bid Auction).
- **First-Price vs Second-Price Auction** – In both First- and Second-Price auctions, the winner is the person who bids the highest amount. In a First-Price Auction, the winning bidder pays the price he/she bid. In a Second-Price Auction, the winning bidder pays the price bid by the second highest bidder.
- **With or without a Reserve Price** – A Reserve Price is a minimum sale price the seller sets before the auction begins. If the final bid falls short of the Reserve Price, then the item remains unsold.

Different types of auctions, which can be defined by choosing combinations of each of the above traits, are described in Appendix 3: Overview of Auctions, page 68.

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DFO's Salmon Troll Licence Retirement Program is a Sellers (or, Reverse) Closed, First-Price Auction with a Reserve Price. The Reserve Price in DFO's case is the estimated Fair Market Value of a salmon troll licence eligibility at the time of the retirement round being conducted.

How does DFO's choice of its Reverse Auction stack up against the possible alternatives? This question is investigated below.

Evaluation of the Effectiveness of DFO's Auction Choice

Buyers' vs Sellers' Auction

With many sellers and one buyer of salmon troll licence eligibilities under the Salmon Troll Licence Retirement Program, the auction is by definition a Sellers' Auction, also known as a Reverse Auction (ie, the reverse of the typical one seller, many buyers auction which is the most common and familiar type of auction to most individuals).

An individual salmon troll vessel owner or a group of them might try to conduct a regular auction to sell their licences but that puts the vessel owner as the instigator of the transaction rather than DFO (ie, if such an auction were organized by salmon troll vessel owners, it would not be within the purview of the Salmon Troll Licence Retirement Program).

Open vs Closed Auction

Had DFO chosen to conduct an Open Auction, it would have required gathering salmon troll vessel owners together in one venue to hear their bids.

More problematically, it would have opened the door to collusion amongst vessel owners to restrict competition and thereby raise bid prices above fair market value.

It has been assumed so far that the bidders act non-cooperatively: They do not coordinate their bids. This assumption may not be appropriate in some circumstances, especially when the same bidders compete with each other over many successive auctions. Collusion may consist of either explicit agreements about which bidder will be allowed to win any particular auction, or implicit understandings that restraint will be exercised in bidding.⁴

By facilitating collusion, an Open Auction would not be consistent with DFO's fiduciary responsibility to pay FMV and to make good use of tax payers' money.

In terms of costs of program administration and fairness of outcomes to all parties, DFO's Closed (Sealed-Bid) Auction is the best choice.

First-Price vs Second-Price Auction

Second-Price Auctions have many interesting and useful theoretical properties, particularly that they remove the incentive to bid strategically.⁵ Despite this "truth-telling" characteristic of Second-Price Auctions, they are seldom used in practice.⁶ The reason is that, "like the English (open-bid, first price) Auction, the second-price auction results in a payment equal to actual

⁴ McAfee and McMillan (1987), page 724.

⁵ McAfee and McMillan (1987), page 708.

⁶ McAfee and McMillan (1987), page 702.

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valuation of the bidder with the second-highest valuation.”⁷ Thus, there is no financial benefit to the auctioneer. We therefore advise against using a Second-Price Auction for the VLRP.

In our opinion, DFO’s use of a First-Price Auction is the best choice.

Reserve Price

DFO’s Reverse Auction includes a Reserve Price equal to the estimated Fair Market Value. Given the potential for collusion even with a Closed (Sealed-Bid) Auction, DFO needs some mechanism to ensure it does not pay “too much” to retire salmon troll licence eligibilities.

The reserve price—DFO’s assessment of FMV—effectively sets the price ceiling on transactions under the VLRP. How this price is determined, and at what level, is a source of contention when the fairness of the process is considered. Too low a price and DFO may be seen to be overly frugal at the expense of the troll fleet; too high a price and it may be accused of inflating values and making business more expensive for individuals engaging in general-market fishery licence transactions.

Conclusion

We conclude that DFO’s selection of a Closed, Sellers, First-Price Auction with a Reserve Price is an effective method to identify and pay FMV for salmon troll licence eligibilities retired under the Salmon Troll Licence Retirement Program, and the most appropriate one it could have chosen from among the alternatives. We recognize, however, that how the Reserve Price (FMV) is set has a large bearing on the effectiveness and perceptions of the program.

Objective #4.2: Fairness of Reverse Auction

Capsule Evaluation

DFO’s Reverse Auction can be judged to be “fair” in that it is effective in paying FMV for licence eligibilities retired under the Salmon Troll Licence Retirement Program.

66% of respondents to the survey of salmon troll vessel owners conducted for this Review do not believe that the DFO’s Reverse Auction process has been fair to salmon troll vessel owners.

Evaluation Detail

DFO has consistently asserted that the reverse auction is a fair process in terms of identifying offers to sell salmon troll licence eligibilities. This trait explains, in part, why the reverse auction has been used for all licence retirement programs conducted by DFO since the first such program was instituted two decades ago.

*The reverse auction process coupled with credible and independent advice on market value is generally regarded as one of the most impartial and fair processes. This process is a long standing practice of this Department and was used in past salmon licence retirement programs in 1996, 1998 and 2000.*⁸

⁷ McAfee and McMillan (1987), page 708.

⁸ Fisheries and Oceans Canada (2011), Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program – Questions and Answers, page 2.

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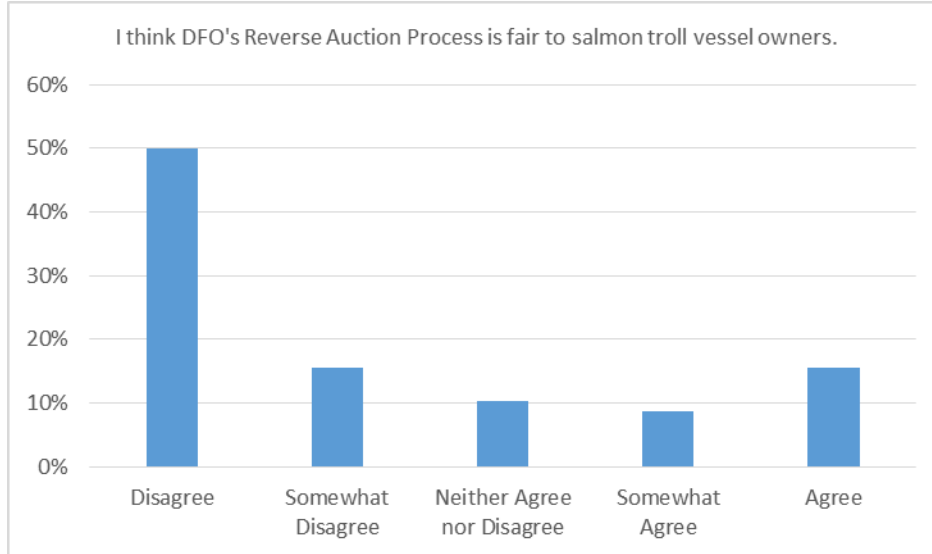
In this section we evaluate the fairness of a Reverse Auction. In this assessment, fairness is equated to paying FMV for licence eligibilities purchased under the Salmon Troll Licence Retirement Program.

We have demonstrated under Objective 4.1 above that DFO's Reverse Auction Process is effective at paying what is determined to be FMV. Coupled with the fact that the Salmon Troll Licence Retirement Program is voluntary (though some salmon troll vessel owners responding to the survey feel strongly that the reduction in quota on the WCVI⁹ introduced a coercive element into the Licence Retirement Program), and that DFO employs independently derived estimates of Fair Market Value to filter Applications to the PST LRP, the evidence indicates that the program is effective in paying FMV and can thus be judged to be fair as defined for this assessment.

Given that the PST LRP is voluntary, vessel owners must be assumed to be offering licence eligibilities for retirement at prices equal to or greater than the value they attach to their licence eligibilities. Thus, if a vessel owner's offer is accepted, the dollar value that he/she is paid will meet or exceed its value to that vessel owner. This means prices paid under the Licence Retirement Program to a salmon troll vessel owner will fall between the owner's individual valuation of his/her licence eligibility and the fair market value of such a licence eligibility.

Survey Summary

According to respondents to the survey of salmon troll vessel owners conducted as part of this review, 66% believe that the Reverse Auction Process is not fair to salmon troll vessel owners while 24% think that it is fair (10% neither agreed nor disagreed with this statement).



Of respondents who believe that the Reverse Auction Process is not fair to salmon troll vessel owners, 54% have submitted at least one application to the VLRP, 35% of which had at least one application accepted. Of those who believe the Reverse Auction Process is fair to salmon troll

⁹ While the WCVI AABM TAC was reduced by 30% overall, over the period the retirement program has operated, there have been some substantial swings in the abundance index that sets the TAC resulting in an above average TAC in 2014.

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vessel owners, 50% have submitted at least one application to the VLRP of which 86% had at least one application accepted.

This line of questioning prompted many written comments from survey respondents (a selection of which are provided in a subsequent section of this report). A couple of themes emerged from those comments:

1. Many trollers take a different view of FMV, beyond representing a value that brings together willing sellers with a willing buyer. They see “fair” as embodying a more-generous price that reflects the value of a licence to a productive active fisher, and is sufficient to prompt enough transactions that the fund provided by the USA is more rapidly drawn down.
2. The use of the term “retirement” in the program is unpopular, for the reason that use of this word brings for some the connotation that the seller of the licence will be set-up financially for retirement because of the transaction, while the reality is that after-tax proceeds fall far short of this benchmark.

These brief summations are drawn from a lengthy list of often tersely worded submissions from survey respondents.

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OBJECTIVE #5

Ensure that reduced fee licences are not retired at a rate greater than full fee licences

Capsule Evaluation

To date, through twelve rounds of retirements, the Salmon Troll Licence Retirement Program has resulted in the retirement of a larger proportion of reduced fee salmon troll licence eligibilities of full fee licence eligibilities.

Evaluation Detail

Retirement of full fee salmon troll licence eligibilities over the course (12 retirement rounds) of the Salmon Troll Licence Retirement Program is shown in Table 2.

Table 2

# Full Fee Salmon Troll Licences	Area F	Area G	Area H	Totals
Prior to Salmon Troll Licence Retirement Program	251	135	68	454
Retired by Salmon Troll Licence Retirement Program	41	38	18	97
After 12th Round of Retirements	210	97	50	357
% Retired by Salmon Troll Licence Retirement Program	16%	28%	26%	21%

Note: the last row excludes:

- PICFI/ATP relinquishments
- Retirement of licence eligibilities due to non-renewal
- Change due to Salmon Troll Area reselections, as a result of salmon licence stacking

Overall, DFO has retired 21% of full fee salmon troll licence eligibilities, ranging from 16% in Area F to 28% in Area G.

Corresponding figures for reduced fee salmon troll licence eligibilities are shown in Table 3.

Table 3

# Reduced Fee Salmon Troll Licences	Area F	Area G	Area H	Totals
Prior to Salmon Troll Licence Retirement Program	3	12	5	20
Retired by Salmon Troll Licence Retirement Program	3	4	0	7
After 12th Round of Retirements	0	8	5	13
% Retired by Salmon Troll Licence Retirement Program	100%	33%	0%	35%

Overall, 35% of reduced fee salmon troll licence eligibilities have been retired under VLRP, compared to 21% for the full-fee licence category. Strictly speaking, then, the VLRP has failed to meet this objective.

However, it is noted that:

- The percentage change in reduced fee licences compared to the general licence pool is slight—reduced fee represented 4.4% of licences at the outset of the program (20 out of 454) and the value now stands at 3.6% (13 out of 357).

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- DFO ceased purchasing reduced fee licences after retirement round 9 in response to this development.
- Relinquishment of salmon troll licences under PICFI/ATP over the last few years (60 licences since 2009) has served to increase the number of licences in the overall Aboriginal pool of licences. Section 3 provides detail on how the pool of commercial salmon troll licences, by category, has changed over the years in response to various fleet restructuring and socio-economic programs.

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OBJECTIVE #6

Set aside a small portion of the PST funds to address derelict or abandoned vessels that may be associated with the voluntary retirement program

Capsule Evaluation

DFO has notionally allocated a small portion of the PST funds provided for the Salmon Troll Licence Retirement Program to deal with derelict or abandoned vessels although no specific amount has been designated for the derelict or abandoned vessel program.

To date, no PST LRP funds have been spent on derelict or abandoned vessels.

Evaluation Detail

The News Release announcing the Salmon Troll Licence Retirement Program¹⁰ makes references to a “\$30 million mitigation strategy ...”.

A DFO document providing “General Information” about the Salmon Troll Licence Retirement Program states that:

... the U.S. will provide Canada \$30 million U.S. Dollars for “a fishery mitigation program designed, among other purposes, to reduce effort in its commercial salmon troll fishery.” ...

The Government of Canada has now decided on three elements for mitigation:

- 1. A voluntary permanent Licence Retirement Program with approximately \$28.5 million CAD with a small portion to be used, if necessary, for removal or disposal of derelict and abandoned vessels arising from the Licence Retirement Program for Areas F, G and H of the commercial salmon troll fleet;*
- 2. Development of a modernized Commercial Salmon Allocation Framework with approximately \$1 million CAD, which takes into account other reforms to salmon fisheries; and*
- 3. Support for economic capacity-building in the West Coast Vancouver Island (WCVI) communities most impacted by reductions in harvest under Chapter 3 (Chinook). Approximately \$500,000 has been set aside to support communities to assess and develop economic development capacity.¹¹*

This identifies “a small portion (of the \$28.5 million permanent Licence Retirement Program) to be used, if necessary, for removal or disposal of derelict and abandoned vessels arising from the

¹⁰ Fisheries and Oceans Canada (2011), page 1.

¹¹ Fisheries and Oceans Canada (2014), page 1.

Review:

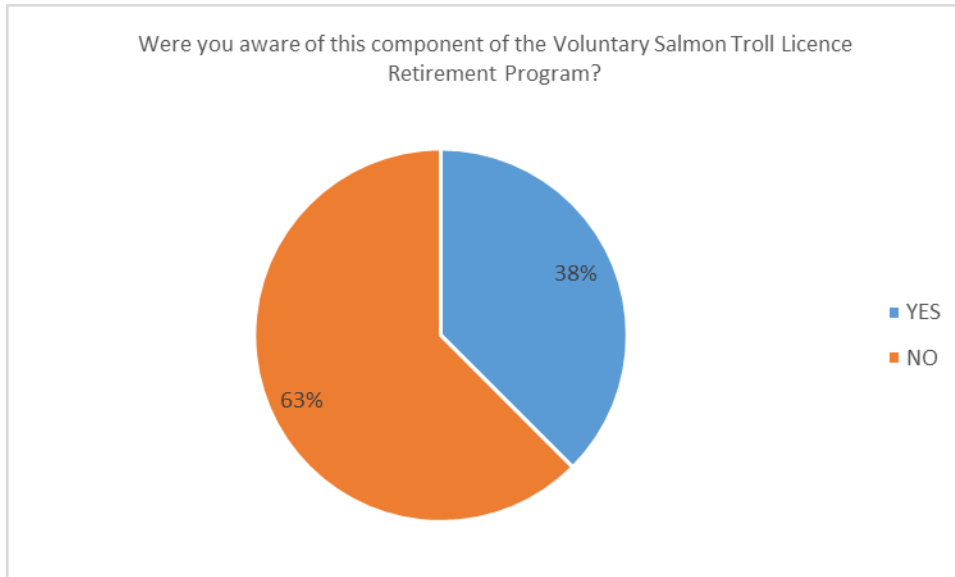
Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

Licence Retirement Program ... “but does not specify an amount. DFO has indicated that to date no funds have been expended used for removal of derelict or abandoned vessels.¹²

DFO’s Questions and Answers document states that, “... a small portion of the funds may be used for removal or disposal of derelict and abandoned vessels arising from this program.¹³

Survey Summary

38% of survey respondents were previously aware of this component of the Salmon Troll Licence Retirement Program.



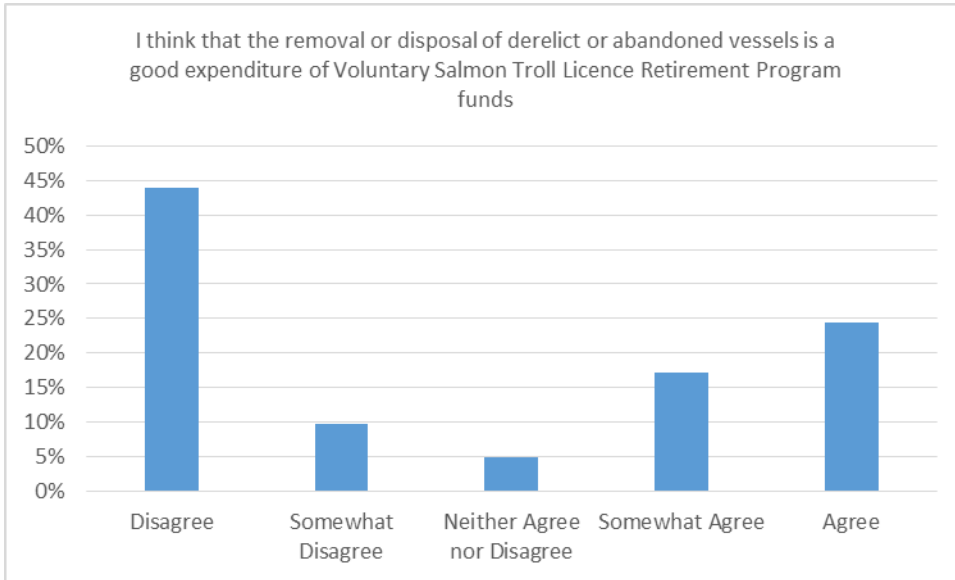
A majority of survey respondents – 54% – disagree that the removal/disposal of derelict/abandoned vessels constitutes good use of PST LRP funds; 39% believe this is a good use of PST LRP funds.

¹² Jeff Grout, pers comm.

¹³ Fisheries and Oceans Canada (undated a), page 3.

Review:

Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program



Review:

Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

SUMMARY OF PROGRAM EVALUATION

Our evaluation of the PST LRP covers six criteria. The evaluation includes our own assessment, based on the information we have uncovered and the analysis we have conducted. It also includes a survey of the views of commercial salmon trollers on the program.

We summarize the evaluation in the following table.

Table 4

Program Objective	Our Evaluation	Fleet Survey
Establish and implement a voluntary retirement program that applies to all three troll areas (Areas G, H and F).	Objective met.	Not included in survey.
Ensure eligible participants are provided sufficient notice of retirement opportunities.	Objective met.	Objective met.
Allow multiple opportunities for eligible parties to participate in the troll retirement program.	Objective met.	Not included in survey.
Establish and implement a process to identify and pay Fair Market Value (FMV) for licences that are accepted for retirement.	<p><i>Effectiveness of reverse auction:</i> Objective met.</p> <p><i>Fairness of reverse auction:</i> The process is fair in that it results in transactions based upon the voluntary actions of sellers and the buyer—a key test of FMV.</p> <p>The level of the Reserve Price (FMV) has a large bearing on how the program is perceived.</p>	<p>Survey Respondents have a very different view of “fair” in FMV. There is strong support for the notion that prices paid have been too low to attract anything but the lowest producers or those most keen to retire.</p> <p>A definition of FMV from the fleet’s perspective would be a price sufficient to attract enough licences to substantially utilize the PST LRP’s budget over a year or two.</p> <p>24% of respondents think the reverse auction process has been fair; 66% think it is not fair.</p>

Review:

Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

Program Objective	Our Evaluation	Fleet Survey
Ensure that reduced fee licences are not retired at a rate greater than full fee licences.	Objective not met. ¹⁴	N/A
Set aside a small portion of the PST funds to address derelict or abandoned vessels that may be associated with the voluntary retirement program.	Objective met, to the extent that funds have been set aside. However, no funds have been expended to date.	Majority of those who responded are not aware of this provision. Majority do not think this would be a good use of funds.

¹⁴ In order to try to meet this objective, DFO has not been accepting reduced fee licences in the PST vst LRP since Round 9.

SECTION 2:

FLEET FEEDBACK ON KEY TOPICS

In this section we report on the survey feedback and information obtained from past and present salmon troll vessel owners on the following topics:

1. Were the program objectives of the voluntary troll licence retirement process clear and understandable?
2. Was the information provided to vessel owners regarding the PST Voluntary Salmon Troll Licence Retirement Program clear and informative? What improvements could be made?
3. Was the PST Voluntary Salmon Troll Licence Retirement Program application package explanatory and easy to comprehend? What improvements could be made to the application package?
4. Is the process currently being used to retire salmon troll licenses appropriate? Process considerations could include the mail-out of application materials to licence holders, reverse bid process to solicit offers for licence retirement, responses to offers submitted, and other relevant considerations.
5. Were sufficient opportunities provided for licence holders to retire their licences?
6. What advice can be provided to guide how the funds put aside, if necessary, for the removal or disposal of derelict and abandoned vessels arising from this program should be utilized?

As mentioned above, although survey respondents were self-selected, we did end up with reasonable representation from vessel owners in each of four main categories: those who did and did not submit applications to the VLRP and those who had an offer accepted and those who had at least one rejected.

We did wonder whether there were any significant differences among these subgroups in terms of responses to key questions such as:

- Understanding of VLRP objectives
- Views on whether DFO had provided vessel owners with sufficient notice of retirement rounds
- Respondents' understanding of the Reverse Auction Process (RAP)
- Opinions on whether the Reverse Auction Process is fair to salmon troll vessel owners
- Likelihood of participating in future rounds of the VLRP
- Awareness that funds had been set aside to deal with derelict and abandoned vessels (DAV)
- Views on whether those funds constituted "good use" of VLRP funds

Review:

Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

The results of our analysis of these questions is shown in the following table.

Table 5

Question	All	F	G	H	Yes	No	Yes-Yes	Yes-No
Participated in the past	53%	51%	60%	53%	100%	0%	100%	100%
Aware of Objectives	90%	93%	95%	87%	97%	92%	93%	100%
Sufficient Notice	87%	93%	75%	100%	93%	85%	93%	93%
Understand Reverse Auction Process	75%	71%	86%	80%	73%	77%	86%	63%
Reverse Auction Process is fair	24%	20%	14%	40%	23%	26%	43%	6%
Aware of Derelict & Abandoned Vessels Program	38%	39%	40%	36%	41%	33%	43%	40%
DAV Program a good use of funds	39%	39%	35%	50%	38%	41%	43%	33%
Participate in future rounds	49%	46%	45%	47%	53%	44%	43%	63%

The abbreviations used in the column headings are explained below:

- All** entire sample
- F** those with F licence
- G** those with G licence
- H** those with H licence
- Yes** those who participated (submitted at least one application)
- No** those who did not participate
- Yes-Yes** Yes who had an application accepted
- Yes-No** Yes who did not have an application accepted

With regard to participation in the VLRP, we obtained similar participation by vessel owners with licences in each of the three salmon troll licensed areas – F, G & H – a little higher in Area G than Areas F or H as might be expected (because it bore the brunt of the TAC reductions).

Awareness of VLRP objectives was high among survey respondents and across the various subgroups examined.

Vessel owners agreed that DFO had provided sufficient notice of retirement rounds. Responses from vessel owners who had and had not participated in the VLRP were reasonably uniform. There was greater variation among vessel owners who hold or held licences for the three troll licence areas.

Similarly, vessel owners' understanding of how the Reverse Auction Process works was high and similar between those who had and those who had not participated in the VLRP but again, variation was higher among salmon troll vessel owners with licences for Areas F, G and H.

Respondents largely do not feel that the Reverse Auction Process is fair to salmon trollers (66% – 10% Neither Agreed nor Disagreed), a view that is very similar between those who had and those who had not participated in the VLRP. Again, variation is greater when viewed through the lens of the troll licence area of the respondent. The main variation here is among those who have participated in the VLRP but not (yet) had an offer accepted: that subgroup has the lowest opinion that the Reverse Auction Process is fair to salmon trollers

Review:

Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

Awareness that funds had been set aside to deal with derelict and abandoned vessels (DAV Program) is generally low and similar throughout the subgroups of respondents examined.

Vessel owners' views on whether the DAV Program constitutes a "good use" of VLRP funds are similar between those who had and had not participated in the VLRP with greater variation among those holding licences for different troll areas.

And finally, respondents from all subgroups examined were about equally likely to participate in future rounds of the VLRP, with slightly higher likelihood among those who had participated in the past and especially among those who have participated but have not yet had an offer accepted.

Overall, while our survey results cannot be said to be representative of the population of 390 salmon troll vessel owners to whom questionnaires were mailed, we did manage to obtain responses from vessel owners that included the main subgroups (licence area, have participated or not in the VLRP and have had an offer accepted or not).

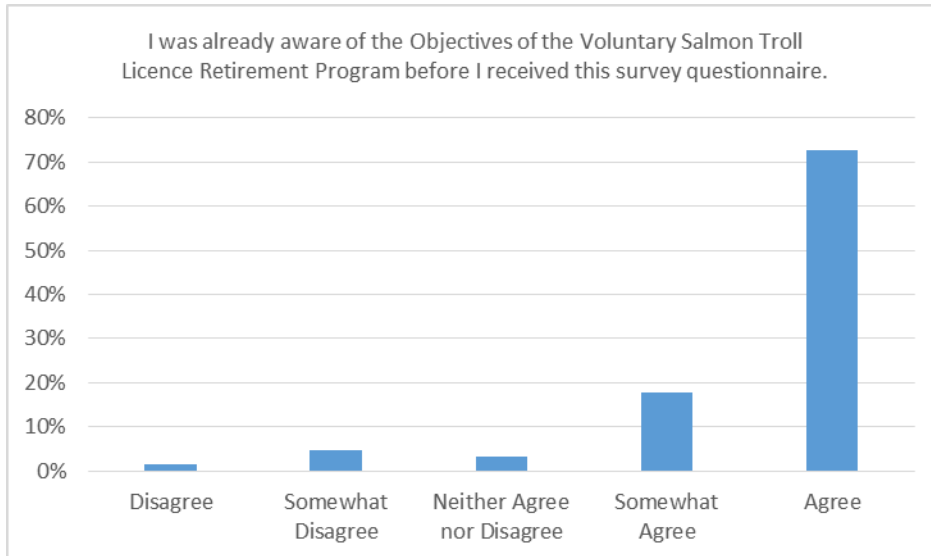
Review:

Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

TOPIC #1

Understanding of VLRP objectives

The survey of salmon troll vessel owners demonstrates that awareness of the Licence Retirement Program and its objectives is high among survey respondents: 90% indicated they were aware of the objectives of the VLRP before they received the survey questionnaire package.



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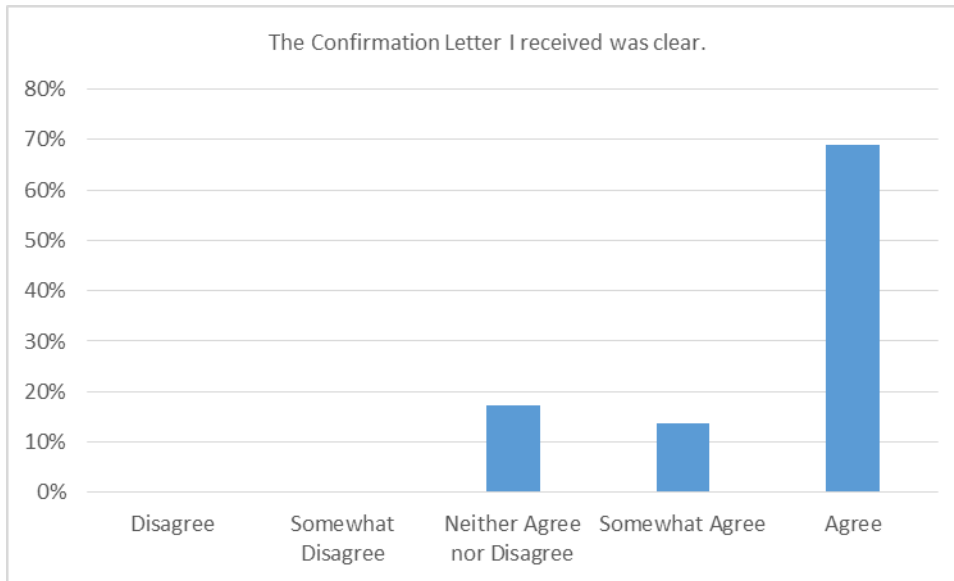
Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

TOPIC #2

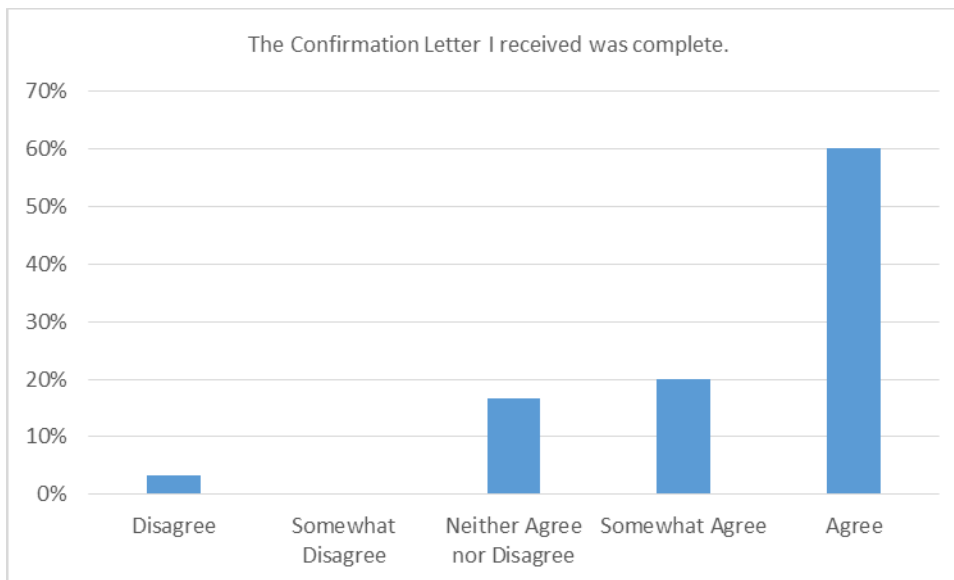
Was the information provided to vessel owners regarding the PST Voluntary Salmon Troll Licence Retirement Program clear and informative? What improvements could be made?

Confirmation Letter

83% of respondents to our survey questionnaire found that the Confirmation Letter they received was clear.



80% indicated that the Confirmation Letter was complete – that information that each respondent thought would be important was included.



Of those who thought the Confirmation Letter was not complete, suggestions for additional information included:

- Indication of when payment would be forthcoming (and adhering to this timeframe).

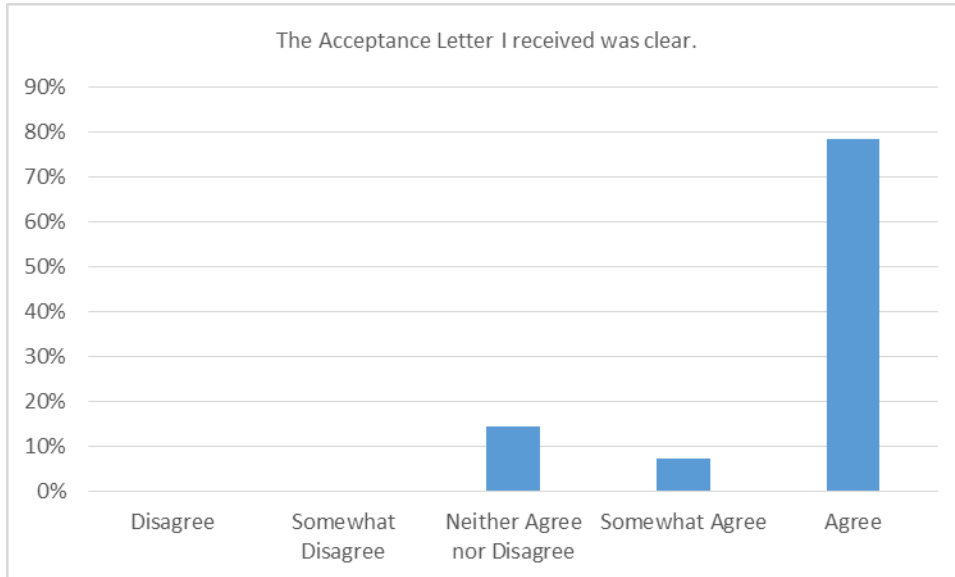
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Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

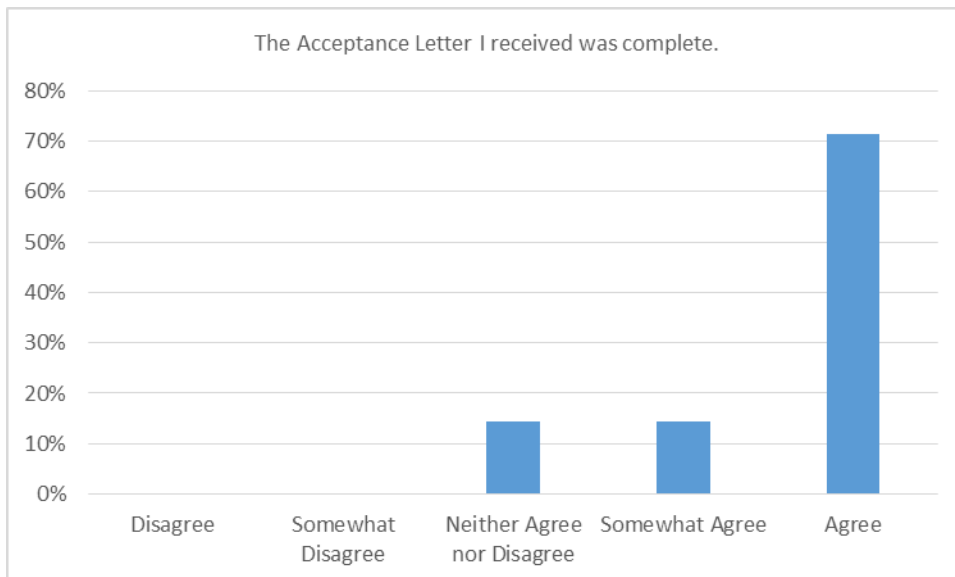
- Reasons for denying the offer, other than price.
- What FMV was used by DFO to decide on whether licences were priced acceptably: “I gave you my idea of FMV, you should give me yours.”

Acceptance Letter

86% of survey respondents thought the Acceptance Letter was clear.



86% also thought the Acceptance Letter was complete – that it included all the important information it should have.



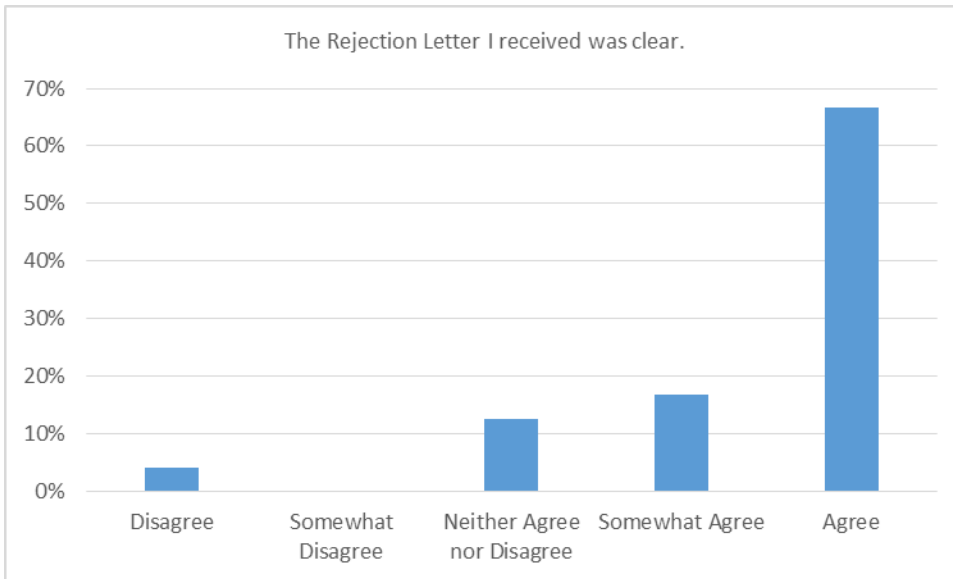
One comment was made about what was missing from the Acceptance Letter – an indication of what value DFO used as fair market value.

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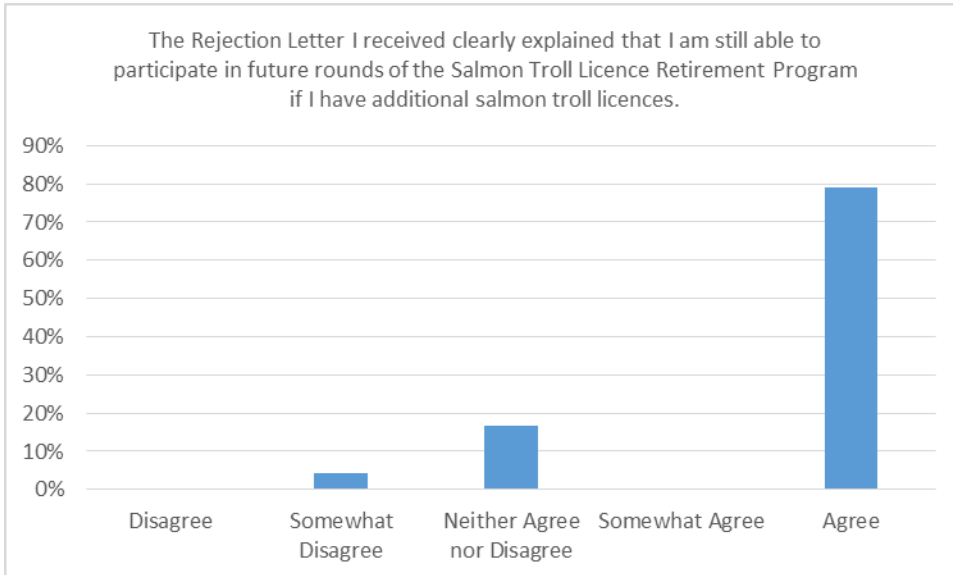
Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

Rejection Letter

83% of respondents thought the Rejection Letter was clear.



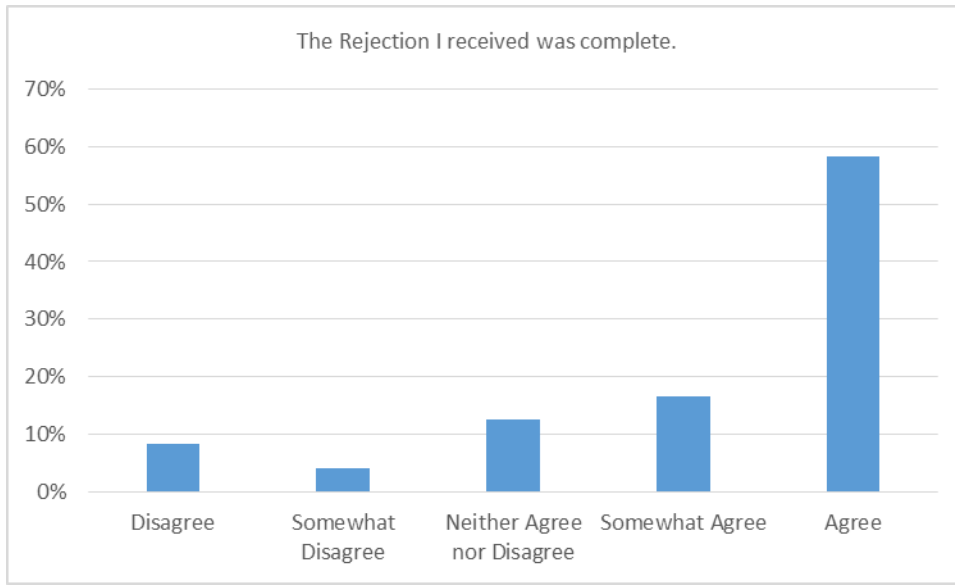
79% of survey respondents agreed that the Rejection Letter made it clear that despite having their current offer rejected, applicants were still able to participate in future rounds of the VLRP.



75% of respondents agreed that the Rejection Letter was complete – that it contained all the important information it should have.

Review:

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The following comments were made by respondents regarding what other information should have been included in the Rejection Letter:

- Prices paid by area.
- Rationale for buying licences from areas unaffected by PST chinook conservation.
- Notice of what prices were accepted in the round.
- What DFO used as fair market value
- No letter received.

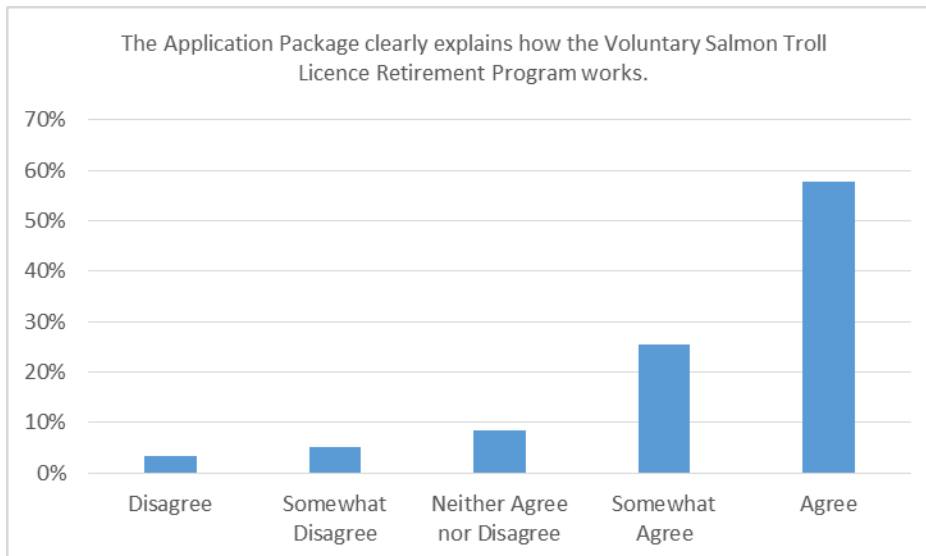
Review:

Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

TOPIC #3

Was the PST Voluntary Salmon Troll Licence Retirement Program application package explanatory and easy to comprehend? What improvements could be made to the application package?

In the survey of salmon troll vessel owners conducted for this Review, 83% of survey respondents agreed that the Application Package clearly explains how the PST LRP works.



The following suggestions were made by survey respondents for how the Application Package might be improved:

- More information on how married licences can be separated.
- Redundancy of mailing out complete packages for each round: “I have 13 packages at home and I don't intend to apply... clearly a notice letter and an on-line application would be a huge cost savings.” “The program should remain open.”
- The Application Package is silent on the subject of whether voluntary licence retirement will benefit those who remain in the commercial troll fishery. In other words, it does not outline to whom or which sector the benefits of troll fleet reduction will attribute.
- Disclosure of what prices have been paid for individual licences to date and the FMV that DFO uses to make decision.
- Some idea of funds remaining, number of boats applying and how many accepted. “I've applied twice but received no feedback on my bids.”

Review:

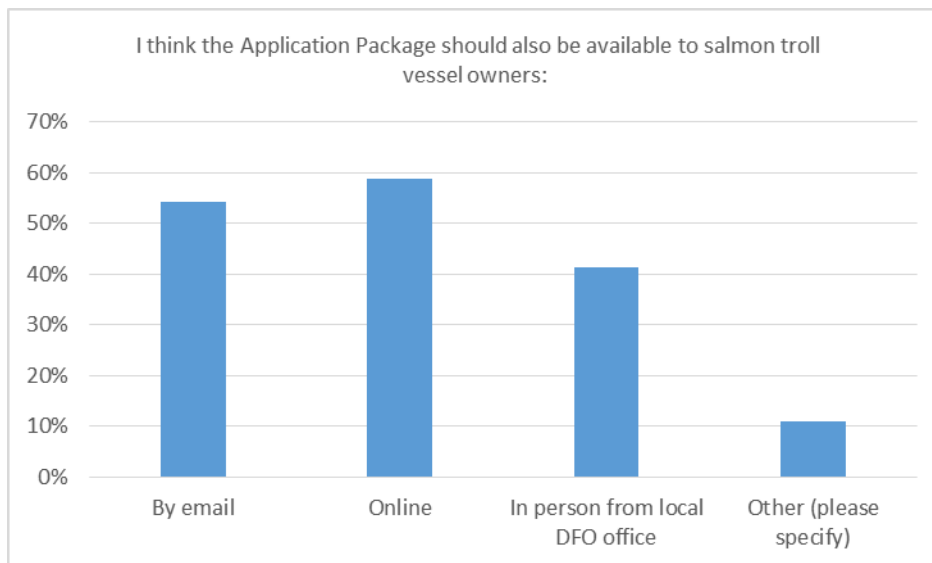
Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

TOPIC #4

Is the process currently being used to retire salmon troll licenses appropriate? Process considerations could include the mail-out of application materials to licence holders, reverse bid process to solicit offers for licence retirement, responses to offers submitted, and other relevant considerations.

Mail out of Application Package

54% of survey respondents think DFO should make the Application Package available to salmon troll vessel owners by email and 59% think it should be available online. 41% would like the Application Package to be available at their local DFO office.¹⁵



No new or alternative methods of providing Application Packages to salmon troll vessel owners were suggested by respondents. Those who indicated “Other” listed “by mail” while one respondent noted that the “DFO office (is) closed around here.”

The responses indicate that survey respondents want choice in how they access the Application Package.

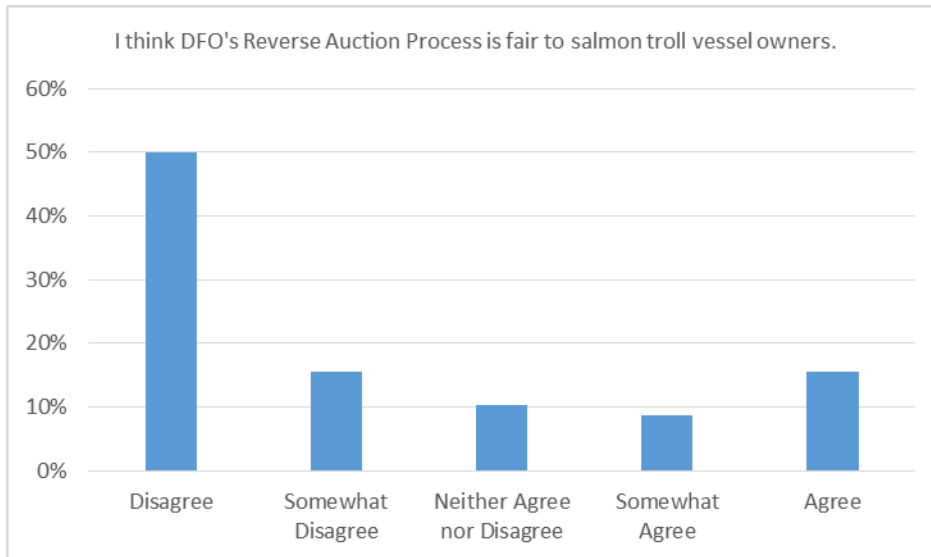
Reverse Auction Process

According to respondents to the survey of salmon troll vessel owners conducted as part of this Review, 66% believe that the Reverse Auction Process is not fair to salmon troll vessel owners while 24% think that it is fair (10% neither agreed nor disagreed with this statement).

¹⁵ Note the options were not exclusive; respondents were instructed to “Check all that apply.”

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Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program



A host of views were provided by survey respondents on this topic, a sample of which follows:

- “Reverse auction is not an auction at all, it only takes out the lowest offers.”
- (the reverse auction is not fair because of) “the costs of the reverse auction process and the fact that we're 4 years into the program, if the license retirement amount was established and offered to those interested, we would have retired more licenses and put more into the pockets of retired fishermen and a lot less into managing the reverse auction.”
- “FMV is the price at which a willing seller and a willing buyer are prepared to consummate a transaction and not an arbitrary value established by a Chartered Business Valuator or some other agent.”
- “Kind of like establishing a property value after you put a road through my house.”

Responses to Offers Submitted

This topic is addressed under Topic #2 above.

TOPIC #5

Were sufficient opportunities provided for licence holders to retire their licences?

This topic is addressed in the evaluation of VLRP Objective #3: Allow multiple opportunities for eligible parties to participate in the troll retirement program (see page 9).

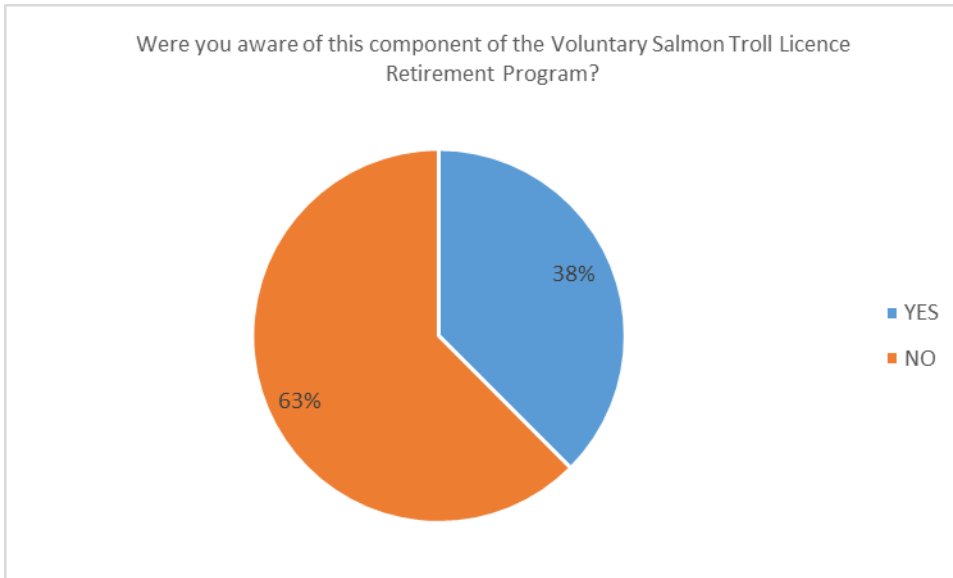
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Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

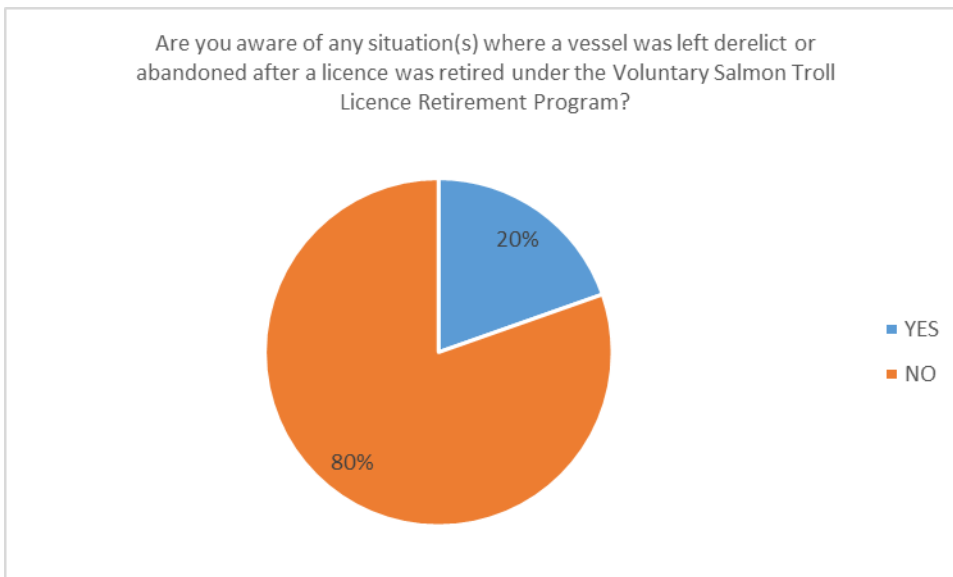
TOPIC #6

What advice can be provided to guide how the funds put aside, if necessary, for the removal or disposal of derelict and abandoned vessels arising from this program should be utilized?

63% of survey respondents were not aware of this component of the VLRP.



20% were aware of a situation in which a vessel was left derelict or abandoned after a licence was retired under the VLRP.



The following points were offered:

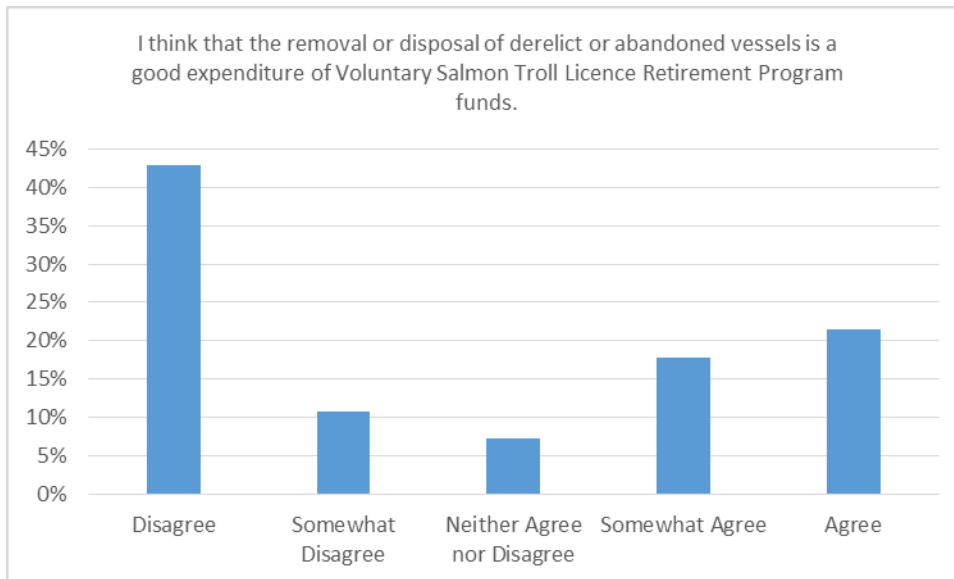
- “Campbell River Harbour Authority has had to deal with abandoned vessels with no licence. One such vessel left the harbour under tow, foundered, and was abandoned on the beach.”

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Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

- “I know of three boats in Comox harbour that had to be hauled away.”
- “Some owners are not taking care of their vessels.”
- “I see many of the vessels for sale at low prices but not being sold. It is expensive to keep vessels as well as disposition is very costly.”

39% of survey respondents replied that the derelict or abandoned vessel program is a good use of VLRP funds. 54% thought that the derelict or abandoned vessel program is not a good use of VLRP funds.



The following reasons were offered by those survey respondents who do not think that the derelict or abandoned vessel program is a good use of VLRP funds:

- “Funds are for retirement only of coast wide troll licence retirement. Not for derelict vessel disposal, which by rights should be up to the vessel owner & not the fund.”
- “The program was meant to reduce the number of troll licences coastwide, not pay for disposal of junk vessels, which rightfully is the owners responsibility.”
- “As far as I know, the American funds were to retire fishing licenses, not vessels.”
- “Pay a value that includes the value of the boat and license so I don't end up losing the value of my boat that I won't be able to maintain, rather than use funds. Give them to the fisherman up front.”

TOPIC #7

Was the objective to maintain the relative ratio of reduced fee to full fee licences in the fleet during the retirement program met?

This topic is addressed in the evaluation of VLRP Objective #5: Ensure that reduced fee licences are not retired at a rate greater than full fee licences (see page 16).

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FINAL COMMENTS PROVIDED BY SURVEY RESPONDENTS

The survey questionnaire wrapped up with an open-ended question inviting respondents to provide any additional comments or suggestions they might have on the VLRP. Following is a cross-section of their views:

- “Active fishermen are reluctant to sell at fire-sale prices. We are all making a living, often a very good living, with our licences and are insulted by the rock bottom prices. If prices come up significantly, many of us would consider selling our licences.”
- “More effort should be made to retire Area G vessels, after all the 30% allocation was removed from Area G. Because of this, I think more money should have been offered to Area G holders wishing to retire, etc. As far as mitigation monies going to Areas F & H at best should be minimal.”
- “Quit stalling with this program at the rate your going it will take another 10 yrs to spend this money... we need Wild Salmon and trees... stop wasting paper until you pony up some real money.”
- “Personally I was offered more for my licence in the open market than has been the price paid by the retirement program.”
- “Give us real market value for our licenses, and finish the program, don't just sit on the money collecting interest.”
- “Offer some financial assistance to younger fishermen looking to get into the industry.”
- “The program has (and is slowly) purchasing the licences of disadvantaged fishermen, ie, the widows, orphans and financially distraught. I would only consider retiring my licence if health failure forced my retirement. I still suspect that the majority of the fish is caught by fewer than half of the vessels licensed. The number of vessels that don't participate annually should prove that. The mean age of trollers is creeping into the sixties so there are bound to be more retirement sales due to poor health as years go by -- a good reason to not cancel the program & allocate the funds elsewhere. To remove the real producing fishermen, the fund will have to pay 50% to 100% more as some compensation for lost income potential.”
- “Do what the Alaskans are doing. They are looking after their troll fisheries and not trying to get rid of them.”
- “The DFO contact person for the program was very knowledgeable and helpful.”
- Consideration should be given to expanding the scope of the Program to enable the acquisition of other commercial fishing privileges (seine and/or gillnet) in order to provide the remaining troll licence holders with a greater share of the overall TAC. This would both provide "mitigation" (as is the intent of the Program) as well as facilitate a fair and dignified exit opportunity for other commercial salmon licence holders.”
- “Pay a decent figure. Not that much more money being paid and you would have bought way more boats and the program would have been wrapped up years ago.”
- “Why give so little when there's enough in the fund to be fair?”

Review:

Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

- “This survey feels like a cover your ass survey. Does not really ask for input on the way it should be run. Just asks if DFO is clear with the paperwork.”
- “Program should post price and let fishermen sell anytime they feel the urge. Too many have second thoughts after having to wait. It takes way too long from the time you submit until you get your cheque. The quicker you can get someone paid the more apt they are to sell.”
- “I strongly recommend that Government programs have no business in moving licence values ahead of outside market values, people just do not seem to understand the implications of this for those that remain in the industry and that is what we are trying to stabilize for future.”
- “Alaska wanted this money spent to retire trollers not give them a slow death. It wasn’t a 10 yr plan. Get on with it, pay \$200,000 for each licence. Stop wasting money sending me forms and asking me to fill out surveys. How much did this survey cost?”
- “Review the actual market value to find out what licenses are worth.”
- “Get serious about retiring licenses, which is your mandate instead of getting the most desperate fisherman who need to sell because of ill health, death, or divorce.”
- “Publishing what DFO is using as fair market value would speed up the process and leave license holders better informed.”
- “A small relaxation of the threshold price may be just enough to ease some of us aging trollers into retirement. Its the hardest decision I've ever had to make.”

Review:

Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

SECTION 3:

ASSESSMENT OF FAIR MARKET VALUE OF COMMERCIAL SALMON TROLL LICENCES

We have been charged with assessing the fair market value (FMV) of commercial salmon troll licences over the period that the PST licence retirement program has been in place.

FMV can be defined as:

The amount for which property would be sold in a voluntary transaction between a buyer and a seller, neither of which is under any obligation to buy or sell. Various factors can have an effect on the fair market value of property, including the uses to which the property has been adapted and the demand for similar property¹⁶.

While the above definition is intended to apply to real estate, it applies nicely to commercial salmon troll licences since these assets are utilized with various effect by individual licence holders—from idle licences to high-liners—and values may be influenced by goings-on in other commercial fisheries.

ABOUT THE MARKET FOR COMMERCIAL SALMON TROLL LICENCES

Ideally, assessing FMV occurs in a well-functioning market with ample supply of product (in this case, commercial salmon troll licences), a host of buyers and sellers, and readily verifiable transaction values. None of these factors is entirely in place in the Pacific salmon troll licence marketplace.

One of the most notable elements of the market is the rapidly declining pool of licences that has resulted from government programs, and the uptake of these programs by individuals in the troll fishery.

Government Licence Retirement Programs in the Salmon Troll Licence Category.

A commonly voiced sentiment in the BC fishing industry is that government licence retirement or relinquishment¹⁷ programs distort the market for commercial fishing licences and potentially inflate market values. Unfortunately there is no objective way of measuring the extent to which this effect actually occurs.

Certainly, government programs have been an aspect of the salmon troll licence market for most of the last 20 years. One clear effect of these programs is a marked reduction in the number of salmon troll licences over time. The government programs that have most impacted troll fleet size are differentiated into three categories:

- Large scale salmon fleet restructuring initiatives intended to address structural issues such as fishing capacity and economic viability, namely the Pacific Salmon Revitalization

¹⁶ From <http://legal-dictionary.thefreedictionary.com/Fair+Market+Value>

¹⁷ Retirement programs remove licences permanently from the commercial fishery, while relinquishment programs like Allocation Transfer Program and Pacific Integrated Commercial Fisheries Initiative transfer them from the general pool of commercial licences to the communal commercial pool.

Review:

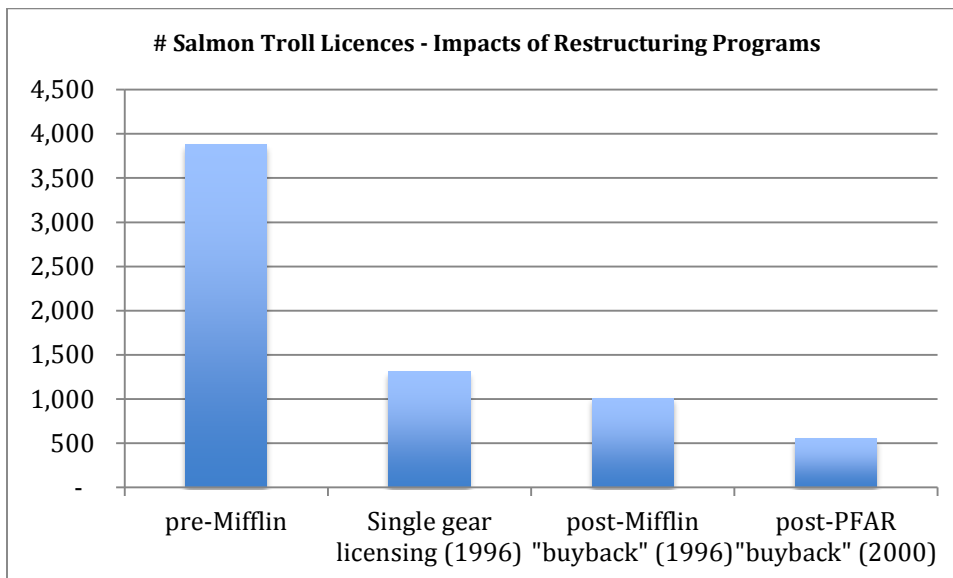
Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

Strategy ("Mifflin Plan") in 1996 and the Pacific Fisheries Adjustment and Restructuring Program ("PFAR") in 1998-2000. Under Mifflin and PFAR licences purchased were extinguished, meaning that remaining licences would share in total allowable catches ("TACs").

- Economic development initiatives intended to enhance First Nations' participation in commercial fisheries, including Allocation Transfer Program (ATP) and Pacific Integrated Commercial Fisheries Initiative (PICFI). Under these programs, commercial licences are relinquished and converted to communal commercial licenses, meaning there is no change to the overall TAC. So long as all commercial licences retired under these program are converted to communal commercial licenses, there is no impact on the number of licence eligibilities that may harvest salmon commercially. There is, however, a reduction in the number of regular commercial licences that are bought and sold in market transactions between willing buyers and sellers and that are eligible for DFO licence retirement programs.
- The Pacific Salmon Treaty Voluntary Licence Retirement Program (PST LRP), whereby troll licences are retired from the industry, and the TAC is reduced accordingly (no net benefit for remaining licences).

Fleet Restructuring Programs

In 1995, before the Mifflin Plan, there were 3,874 licences that could be used by either gillnet or troll fishing gear, at the option of the vessel owner. Some of the licences were, in practice, dedicated gillnetters or trollers, while others engaged in combination fishing. Under provisions of the Mifflin Plan, gillnet/troll licence holders had to select a single gear-type for their licence: gillnet or troll. After gear selection, the number of troll licences stood at 1,316, after which a series of government funded voluntary licence retirement programs took place. The Mifflin Plan reduced the troll licence tally by 305 licences, while PFAR removed another 460 from the pool. The change in the number of troll licences over the restructuring period is shown in the chart below (recall that the value in the first bar includes all gillnet/troll licences):



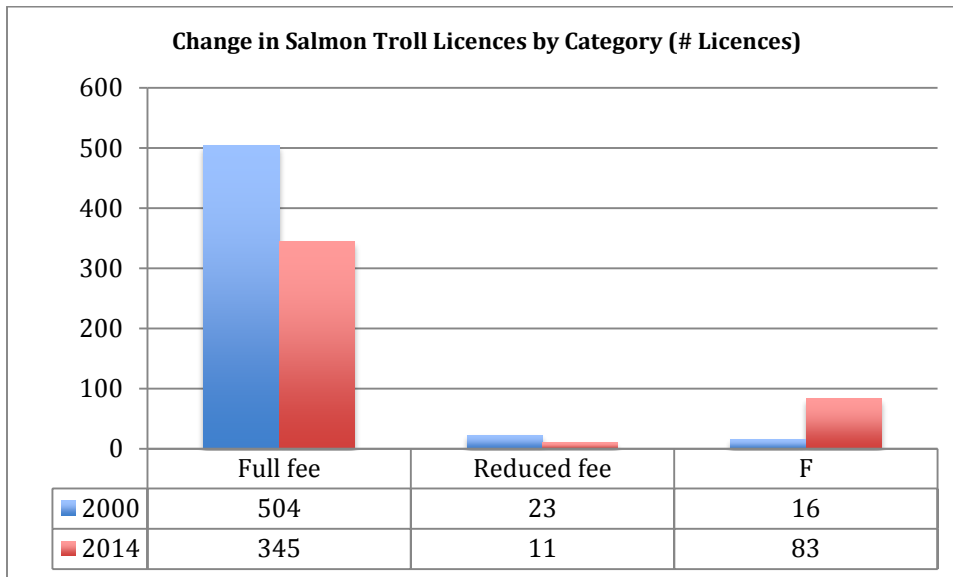
Review:

Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

ATP, PICFI, and PST LRP

Though the scale of ATP, PICFI, and PST LRP is small relative to fleet restructuring programs, the size and composition of the commercial troll licence base has evolved significantly over the last 15 years as a result of retirements and relinquishments under these programs.

The number of salmon troll licences by category (full fee, reduced fee, or FAT¹⁸) is shown as follows:



For the purposes of assessing the market for salmon troll licences, it is the number of full fee and reduced fee licences that is relevant, as these are the categories that can trade in the open market; category FAT licences, held by DFO for First Nations, are effectively non-transferable.

Two factors have altered the composition of the salmon troll licence population as shown in Figure 2:

- Conversion of full or reduced fee licences to category FAT licences (ATP, PICFI).
- Retirement of full or reduced fee licences from the fishery (PST LRP).

The activity of these programs over the recent (2009 –2015) period is shown in the table below:

¹⁸ Category FAT licences are communal commercial licences relinquished from the pool of full fee or reduced fee licences and re-issued to First Nations.

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Pacific Salmon Treaty Voluntary Salmon Troll Licence Retirement Program

Table 6

Year	Retirements/Relinquishments			# Full fee + Reduced fee	# Category FAT
	PST LRP	PICFI/ATP	Total		
2009	0	9	9	506	32
2010	0	20	20	486	52
2011	0	12	12	474	64
2012	51	7	58	459	71
2013	47	12	59	404	83
2014	6	0	6	356	83
2015	0	0	0	356	83
Total	104	60	164		

The data in the preceding table confirms that:

- 104 licences have been retired under the PST LRP. All but six of these licences were retired in 2012 and 2013. Each licence retired under this program is permanently removed from the fleet.
- 83 salmon troll licences in total have been relinquished from the general commercial fishery and converted to category FAT licences.
- Between the PST LRP and PICFI/ATP a total of 164 salmon troll licence have been acquired by the government.
- The number of full and reduced fee licences—those that may trade on the open market—currently stands at 356.

It is clear that government programs have been met by a dramatic decline in the number of commercial salmon troll licences that make up the market.

Influence of Government Programs on Salmon Troll Licence Market

The only certain impact of government-funded programs is that they have reduced the supply of tradable (non-F category) commercial salmon troll licences in the marketplace. Salmon troll vessel owners and other stakeholders hold opinions about how the various “buybacks” have influenced the market. Each year we prepare a report entitled “West Coast Fishing Fleet: Analysis of Commercial Fishing Licence, Quota, and Vessel Values” (the Valuation Report). In preparing the Valuation Report, facts and opinions are gathered from a variety of sources that remain anonymous in order to preserve confidentiality. Some of these comments, drawn from annual Valuation Reports, are cited as follows:

2009

There have been very few private sales of troll licences. Many sources indicate that PICFI is essentially setting the market for salmon licences.

2010

Troll licences have continued to decline in value but have probably leveled off now. (A buyback being made with U.S. funds is first mentioned).

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2011

Troll licences have increased in value with the anticipated expenditure of US grant money to be used to reduce troll effort.

Unlike prior years, there has been a fairly steady private market, not just PICFI.

2012

The anticipated upward price trend to the US grant funded “Mitigation Fund¹⁹” has not really materialized.

Some informants have complained that DFO has been refusing to buy licences at prices that have been fetched on the open market in the last couple of years. Private sales have been reported in the 115-125 range but the Mitigation Fund purchases have topped out around \$110k.²⁰ “This is irritating quite a few people.”

2013

The government has been notoriously tight-fisted in spending money on buying back salmon troll licences with the money the US provided to reduce Canadian troll fishing capacity to the point where the private market has in some cases been higher than the buyback market.

Private sales in the 115 to 150 range but the Mitigation Fund purchases have topped out around 112k.

2014

No major PICFI or Mitigation Fund purchases this year, so the influence of the buyback programs on the licence and quota market has settled...

Other Drivers of the Commercial Salmon Troll Licence Market

The salmon troll licence market is characterized by a diminished supply of licences resulting from a succession of government programs. As indicated by the above comments, stakeholders perceive that government may either drive the market, or lag behind it, with its periodic incursions into the market. Other factors that may influence the market include:

- Speculation regarding implementation of individual vessel quota (IVQ) programs in the salmon fishery. Fisheries such as halibut, sablefish, and geoduck have seen dramatic escalation in licence/quota values following the implementation of IVQ programs. Salmon industry stakeholders have held numerous discussions regarding converting to IVQ management, and some licence areas (eg, F, H, and seine fleets) have adopted pilot IVQ programs. Periodically, salmon licence values—for each of the three gear types—have spiked as individuals have speculated that 1) an IVQ program was forthcoming, and 2) that IVQs would result in a substantial rise in licence values.
- Operating results—including both catch levels and fish prices fetched for the catch—in the commercial salmon fisheries. The licence market often appears to rise based on

¹⁹ The Mitigation Fund is the widely used terminology to refer to the PST LRP.

²⁰ This value is an estimate of the price paid by the program as perceived by the sources interviewed. It is not an official number.

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expectations of a good season upcoming, or after a particularly good season; it falls when expectations are poor or following a disappointing season.

OPTIONS FOR FMV VALUATION METHODOLOGY

Three general approaches for determining FMV of commercial salmon troll licences were considered for application in this project. The valuation methods are:

1. Fundamental Analysis.
2. Transactions-Based approach.
3. Judgment-Based approach.

These techniques are further described below, including an analysis of the pros and cons of each for the task at hand—assessing for DFO the FMV of commercial salmon troll licences.

With this analysis, DFO will gain a benchmark for assessing the actual prices paid by it to retire salmon troll licences over the term of the PST LRP.

Fundamental Analysis

Fundamental analysis calculates the worth of an asset based on its utilization. In the case of a salmon troll licence, fundamental analysis would calculate the value of the licence based on using it in the commercial fishery (either fishing or leasing). Two potential methods are:

- Net present value (NPV) of the discounted cash flows arising from use of the salmon troll licence. This is a financial calculation requiring forecasting of revenues and expenses. It weights near-term cash flows more heavily than more distant ones, and requires a discount rate to be set to reflect the risk of the investment.
- A multiple of the revenue or profit accrued from use of the salmon troll licence. This is a common (simple) method for valuing businesses; for example, a business may be valued at 2x its annual revenue or 10x its annual profit.

Pros

These are methods common in general business for determining the value of an asset or business. They are attractive because they consider the value of an asset based on its utilization. They provide a tangible guide for potential purchasers and sellers of assets.

If an individual were considering purchasing a salmon troll licence, NPV would be a suitable method for determining the price he or she would be willing to pay.

Cons

The FMV's yielded by these approaches vary widely according to the assumptions used to perform the calculations. Each fisherman in the salmon troll fishery could arrive at a different valuation, influenced by his catch and fish price expectations, his fishing and vessel costs, and his assessment of the risk of the project (discount rate). Fundamental analysis yields individual valuations, but is not well suited to generating an "umbrella" FMV assessment for the fleet.

Valuations based on NPV are heavily influenced by the discount rate (risk factor) chosen and the assumption regarding residual value of the asset at the end of the period.

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In addition, DFO does not regularly collect the type of financial data on troll fishing operations that is needed to perform such calculations.

Transactions-Based

This approach uses market transactions data to build a dataset from which FMV can be determined. On the face of it, this is the simplest and most accurate approach—salmon troll licences are worth what buyers and sellers pay for them in the marketplace. Two methods by which this approach could be applied are:

- Researching transactions in the salmon troll licence market. This is the direct approach that works well when there are a high number of verifiable transactions in the marketplace.
- Researching transactions for comparable licences/quotas in other fisheries, and applying judgment to assess the FMV of troll licences based on these comparisons. For example, salmon gillnet and/or salmon seine licence transactions could be considered in the attribution of FMV for salmon troll licences. This is an approach that may be resorted to in the absence of a robust marketplace for salmon troll licences.

Pros

Setting FMV based on actual verifiable transactions in the salmon troll licence market is a method with considerable merit. In a well-functioning market, buyers and sellers factor in key variables (including both fundamentals and supply-demand factors) in setting transactions values.

In the absence of a well-functioning market for salmon troll licences, consideration of licence values in comparable fisheries can provide goalposts or general parameters for salmon troll licence valuation.

Cons

Three factors lessen the efficacy of the transactions-based approaches:

- Salmon troll licence markets are very thin, with a limited number of buyers and sellers. As the number of salmon troll licences has shrunk over the years, so has the market size.
- It is not simple to verify transaction prices, as the information is often confidential, and commonly transactions include assets other than salmon troll licences so that the attribution of the transactions price amongst assets (for example, vessel, licence(s), and fishing gear) is not transparent.
- The federal government has long been a major buyer in the salmon troll licence market, first through licence retirements in the salmon fleet restructuring programs (“Mifflin” and PFAR), and since then through ATP, PICFI, and the PST voluntary relinquishment program. The presence and participation of DFO in the salmon troll marketplace confounds the ability to assess FMV because of the potential for distortion in market prices compared to what the market would set in the absence of government intervention.

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With respect to using comparable assets (eg, gillnet salmon licences) to determine FMV for troll licences, this method clearly lacks precision since there are fundamental differences in the fisheries, and the relationships between them may change from year to year.

Judgment-Based

When data on transactions in the salmon troll licence marketplace is thin, it may be necessary to rely on the judgment of experts to assist in the assessment of FMV. Asking “what do you think a salmon troll licence is worth” to a knowledgeable and objective informant may yield useful information.

Pros

Individuals that are closely connected to the salmon troll fishery and plugged in to the goings-on in the industry can be excellent sources of information. In the absence of concrete transactions data, this may be the best FMV method available, though anecdotal information is best used as a complement, rather than replacement for, verifiable transactions data.

The judgment of knowledgeable and trusted informants can be useful in trying to ascertain open market FMVs in cases where a large government retirement/relinquishment program potentially distorts the market.

Cons

Anecdotal information in the absence of firm transactions data, is a tenuous footing for assessing FMV. Little confidence could be ascribed to a valuation of FMV based primarily on this method.

CHOSEN METHOD FOR ASSESSING FMV

Our chosen option for assessing FMV combines transactions-based and judgment-based methods, using fundamental analysis as a reference point. Elements of the approach to be applied in this assignment are identified as follows:

- Utilize concrete transactions data to the greatest extent possible.
- Utilize objective sources.
- Track transactions over time to determine trends and ranges.
- Consider factors such as vessel length, area, licence category, and other assets that may be involved in the transaction.
- Supplement objective sources with the judgment and opinion of trusted informants.
- Differentiate “open market” from “government” transactions.
- Use fundamental analysis—specifically net present value (NPV) calculations—to provide an additional basis for valuation. Although NPV yields a wide range of values that are influenced by the revenue, cost, discount rate, and residual value assumptions used, it may nevertheless be informative to the analysis at hand.

While the approach chosen is a hybrid of the three approaches considered, the transactions method is the one accorded the most weight in our assessment of FMV. We will apply the

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above-described methodology and provide our assessment of FMV over the term of the PST LRP to date.

A prerequisite of our methodology is that the person(s) conducting the research, and weighing the input from various sources, must be knowledgeable about the industry and familiar with its players, so that potential bias can be filtered out.

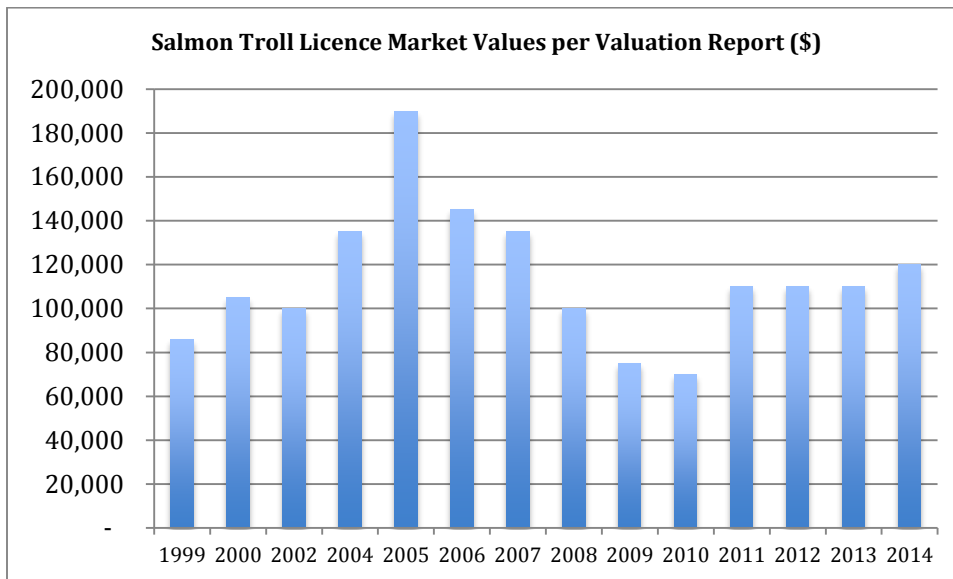
A key factor supporting use of this approach is that we have annually prepared for DFO a report entitled “West Coast Fishing Fleet: Analysis of Commercial Fishing Licence, Quota, and Vessel Values” (the Valuation Report). Having prepared the Valuation Report each year, we have collected valuation data for commercial troll licences each year dating back to 1998. There is no need to collect new raw valuation data, but rather, information already collected will be reviewed and analyzed from the perspective of the exercise at hand. In the absence of an existing database of valuation data, the task of collecting information that dates back 3-4 years would be extremely challenging, as the record-keeping capabilities—and memories—of informants would be unduly stretched.

Specific data from the annual Valuation Reports will not be shown in our analysis, as such information is only divulged to us on the proviso of confidentiality being preserved.

APPLYING THE FMV METHODOLOGY

Salmon Troll Licence Market Values

The starting point for assessing the FMV of salmon troll licences is considering the values pegged in the annual Valuation Reports. These values are shown, for the extended period 1999 to 2014, in the following chart:



A key methodological element of the Valuation Report is that values are pegged as of March 31 each year; the same date is used each year for consistency or reporting over time. As is pointed out annually, however, troll licence values may vary considerably within each year.

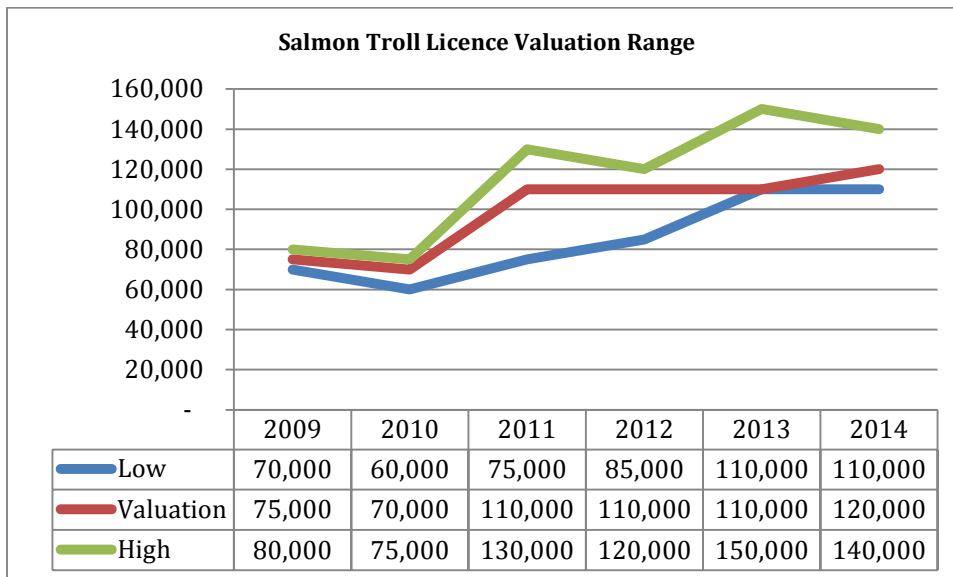
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Examination of the above chart reveals that troll licence values ascended rapidly leading up to 2005, after which they descended sharply, bottoming-out in 2009 and 2010. By 2011 they returned to values seen in the early 2000s. It is notable that the run-up in values in 2005 occurred in the absence of any major government retirement/relinquishment programs. Rather, this inflation was fueled by improved catches and prices of chinook salmon and speculation regarding an impending fleet-wide IVQ program (that only materialized for pilot fisheries in some areas).

Our Assessment of FMV of Salmon Troll Licences

The highs and the lows within each valuation year (the period April 1 to March 31) as unearthed in research for the annual Valuation Reports are depicted in the graph below:



The range of values shown in the above chart comprises our assessment of the market value of commercial troll licences for the indicated years. We believe that FMV lies in the range shown in the graph for the period 2009-2014. We attribute the general increase in values since 2010 to improved perceived fundamentals of the fishery coupled with a declining supply of general category salmon troll licences.

Net Present Value

As mentioned above, NPV is a suitable calculation for assessing FMV based on the fundamentals of the licence—that is expected earnings power—but NPV calculations require a host of data that is not routinely collected, and rely on a variety of assumptions that strongly influence results.

Next, we provide a table that provides NPV calculations for salmon troll licences under the following scenarios:

- The source data is the salmon troll fleet financial projections found in the report Fleet Financial Performance 2009 (Nelson).
- Salmon trollers are divided into production tiers: the top 1/3, the middle 1/3, and the bottom 1/3. Salmon troll production is highly skewed amongst the tiers.

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- Two measures of profitability are assessed: “Contribution” is revenue less the variable expenses associated with operating the licence. It is the sum that contributes to paying the fixed expenses (overhead) associated with operating the vessel. The contribution measure might be appropriate if the vessel was already operating in one or more fisheries (thus, fixed expenses were already covered) but added a salmon troll licence. The other measure is “EBITDA” which is a measure of the pre-tax and pre-financing cash flow associated with operating the vessel; this is closer to a bottom-line measure that includes vessel fixed expenses.
- A residual licence value of \$100,000 is assumed (arbitrary) in year 10.
- Three discount/risk rates are evaluated: 5%, 10%, and 15%. We deem that a 10% discount rate is likely an adequate reflection of the risks associated with commercial salmon troll operations.

NPV values for the range of assumptions are provided below:

Table 7

NPV	5%		10%		15%	
	Contribution	EBITDA	Contribution	EBITDA	Contribution	EBITDA
Top tier	\$341,751	\$251,021	\$261,650	\$189,452	\$206,939	\$147,969
Middle tier	\$177,282	\$86,551	\$130,774	\$58,575	\$100,042	\$41,071
Bottom tier	\$108,212	\$17,482	\$75,812	\$3,613	\$55,150	(\$3,821)
<i>Average</i>	<i>\$209,082</i>	<i>\$118,351</i>	<i>\$156,079</i>	<i>\$83,880</i>	<i>\$120,710</i>	<i>\$61,740</i>

Using NPV methodology, the value of a salmon troll licence ranges from a high of \$341,000—reflecting a top-tier salmon troller using a 5% discount rate and assessing the investment based on its contribution margin; to a low of negative \$3,800 for a bottom tier salmon troller using the EBITA measure and a 15% discount rate.

We deem that the middle-ground assumptions (an average troller using the EBITA measure and a 10% discount rate) is reasonable. Interestingly, using these assumptions, the NPV of a troll licence is about \$84,000 (circled in the table above), which is very close to the valuation range provided as our assessment of the 2009 FMV (\$70,000 – 80,000).

NPV methodology helps shed light on why troll licence holders place such divergent values on their licences. It supports the assertion of some fishermen that their licences are worth far more than DFO’s assessment of FMV, and also explains why others are willing to surrender their licences for lower values. It also serves, for the single year of 2009, to validate the FMV assessment provided by the methodology used in the annual Valuation Reports.

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SUMMARY OF FAIR MARKET VALUE ASSESSMENT

We deem that the FMV of commercial salmon troll licences during the period of the PST LRP (and the year immediately preceding it) to fall within the following range:

Year/Valuation	Low	High
2009	70,000	80,000
2010	60,000	75,000
2011	75,000	130,000
2012	85,000	120,000
2013	110,000	150,000
2014	110,000	140,000

A range, rather than a single value is appropriate, because:

- Rates fluctuate within a year.
- Rates paid by industry vs. government may vary within a year.

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SUMMARY AND RECOMMENDATIONS

In the course of this review we evaluated the PST LRP against its founding objectives, canvassed the views of the commercial troll fleet through a survey and reported the findings, and conducted our assessment of the FMV of troll licences over the period of the VLRP. We now summarize our findings and provide recommendations for program improvement.

SUMMARY

Our evaluation of the program relative to its objectives is essentially favourable. Utilizing the funds endowed by the USA under the Pacific Salmon Treaty, DFO has:

- Established a VLRP that applies to all three troll areas (F, G, and H).
- Provided sufficient notice to eligible participants of retirement opportunities; in fact, some trollers lament that they have been provided excessive notice in the form of 13 multi-page mail-outs.
- Allowed multiple opportunities for trollers to participate through a 13-round process.
- Established a process for licence retirement that succeeds in identifying licences for retirement and paying FMV for these licences. While the process has technical merit, the notion of FMV is not shared by DFO and the troll fleet (as reflected in the feedback we received).
- Attempted to retire reduced fee troll licences at a rate equal to or less than that for full fee licences. DFO has fallen slightly short in this area, but is addressing this shortcoming by not accepting applications for reduced fee licences until the imbalance is addressed.
- Set aside funds to address derelict or abandoned vessels, though no funds have been used for this purpose to date.

We also solicited feedback from salmon troll vessel owners of record—current, and those who have had licences retired under the program—on a variety of topics related to the conduct of the program. The survey is not representative of the population being sampled because the respondents were not selected by random sampling; rather, they were self-selected: individual salmon troll vessel owners to whom the survey questionnaire was mailed decided for themselves whether to participate in the survey or not.

Our survey sample comprises the 63 vessel owners who returned a completed questionnaire. The level of response to the survey, 63 returned out of 390 distributed, was lower than we had hoped for but we gauge that the response provides us with a cross section of opinion to adequately inform our work.

While respondents were generally positive about the administration of the program, they were not so generous in their views regarding FMV as determined by DFO. This is an intuitive finding that reflects human nature—it is always preferable to sell an asset for a higher price, particularly when the funding source (in this case the USA) is seen to be at a distance and not disadvantaged by the price paid.

Finally, after considering various approaches for doing so, we provided an assessment of FMV of commercial salmon troll licences over the period of the VLRP. This assessment provides DFO

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with a benchmark against which to compare the FMVs that it has been using over the same period.

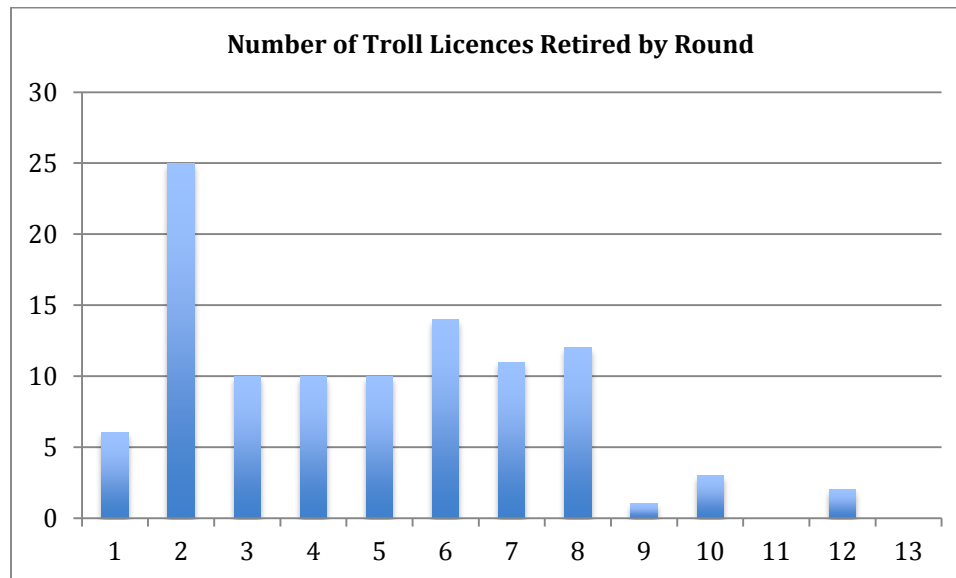
RECOMMENDATIONS FOR CONSIDERATION

We offer the following observations and suggestions for VLRP refinement and improvement based on our analysis, experience, and review of feedback:

1. There appears to be an opportunity to accrue savings and efficiency by lessening the frequency of mailing-out VLRP packages and materials. Perhaps a notice of an impending retirement round could be mailed-out (a single page?) and full packages, if not already in possession of salmon troll vessel owners, could be made available through electronic mediums (or mail as a last resort).
2. The possibility of conducting an “open,” ongoing program—continuous instead of conducted in distinct rounds—could be considered as well, to save some of the administrative burden associated with opening and closing rounds, and to provide fishermen with the flexibility to sell when it suits them.
3. It may be useful for DFO to clarify, or further emphasize, the primary goal of the VLRP—that it is not a socio-economic program (like Mifflin or PFAR) but rather is intended to remove capacity from the fishery and thereby better the situation for remaining participants. The intention of the program, all things considered, is to mitigate the negative impacts that would otherwise be felt by the fleet. That is, communication could be provided by DFO to troll fishers to mollify their expectations regarding the program.
4. Several respondents to the survey were irked (and perhaps even confused) by the use of the word “retirement” in the VLRP name and in the program materials. They connote the word with the ability to retire comfortably in the post-trolling phase of their lives. The word “retirement” reflects the technical treatment of the licences by DFO but perhaps DFO could consider revising the nomenclature—that is remove the word “retirement”—to reduce the potential for confusion or conflict.
5. Regarding the future of the VLRP, it is evident that the uptake of the program has slowed dramatically over time, and that the majority of the fund remains un-spent after three years. The following graph shows the number of retirements by round:

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Assuming an average licence retirement value of \$110,000 (estimate), then \$11.4 million would have been spent to date, leaving a balance of \$17.1 million in the fund. In order to restore greater activity in an increasingly moribund program, we suggest that a stimulus of some kind is needed.

6. DFO could develop, in conjunction with troll fleet interests, a strategy for utilizing the balance of the fund; for instance, is the vision to continue with retirement rounds as in the past, regardless of low level of uptake, over the indefinite future? Or, at some point, will the fund be returned or re-profiled for other purposes? Or is there merit in taking actions to accelerate uptake of the fund?
7. In the past we have received feedback from industry sources indicating that they prefer, when government is intervening in the licence marketplace, that the “buyback” program be in the form of an intense pulse, rather than a protracted program. For instance, both “Mifflin” and PFAR made large buys of licences and were out of the market in a relatively short period. By contrast, the PICFI program was in some circles seen as more disruptive, as it continued for about five years. The VLRP also has the potential to drag on for many (more) years. Consideration could therefore be given to invigorating the program by DFO raising the Reserve Price (estimation of FMV) to trigger more transactions.
8. DFO could consider expanding its use of NPV methods to broaden its concept of FMV (if it is not already using this method). NPV calculations cover a range of different circumstances in the troll fishery, and return a wide range of values. Use of NPV to inform FMV could warrant raising the ceiling price used by DFO in the reverse auction process and trigger more transactions. NPV is a valid FMV measurement tool that may require DFO to collect more data than is presently held.
9. Use of program funds for derelict vessels is contentious, but activity to date in this program component has been nil. DFO could take two paths:

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- a. DFO could consult with key commercial fishing harbours in BC regarding the derelict vessel issue. Survey respondents identified issues in Campbell River and Comox. If the fund is to be in place it may as well be used.
- b. DFO, in conjunction with appropriate parties, could re-profile these funds to another, more broadly supported, use.

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APPENDICES:

1. Sample of survey distributed to commercial salmon troll vessel holders of record.
2. Table of evaluation measures and data sources for evaluation.
3. Overview of Auctions

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APPENDIX A: SURVEY QUESTIONS

Background

-
1. Prior to the announcement of the Salmon Troll Licence Retirement Program on December 23, 2011, for which area(s) did you hold salmon troll licences? (Indicate all that apply)

Area F

Area G

Area H

I was already aware of the Objectives of the Voluntary Salmon Troll Licence Retirement Program before I received this survey questionnaire.

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

The Application Package – Distribution

The following questions refer to the sample Application Package included with the survey questionnaire.

2. DFO has provided salmon troll vessel owners with sufficient notice of retirement opportunities

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

3. I think the Application Package should also be available to salmon troll vessel owners:

CHECK ALL THAT APPLY; ADD OTHERS IF YOURS ARE NOT LISTED

Option	<input checked="" type="checkbox"/>
By email	<input type="checkbox"/>
Online	<input type="checkbox"/>
In person from local DFO office	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>

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The Application Package – Content

4. The Application Package clearly explains how the Voluntary Salmon Troll Licence Retirement Program works.

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

5. If you have any suggestions about how the Application Package could be improved, please provide them here

USE SEPARATE PAGE IF YOU NEED MORE SPACE

The Reverse Auction Process used to Retire Licences

Explanation of the Reverse Auction Process used in the Salmon Troll Licence Retirement Program

A reverse auction is used to select licences to be retired from among the Applications in each round. No price negotiation occurs.

Only those Applications that are within Fair Market Value (FMV) are considered. For the purposes of the Salmon Troll Licence Retirement Program, DFO retained an independent third party to provide estimates of the FMV of salmon troll licences.

In DFO’s Reverse Auction Process used to retire salmon troll licences, the lowest bids within fair market value are considered first.

6. The above explanation accurately describes my understanding of how the Voluntary Salmon Troll Licence Retirement Program Reverse Auction process works.

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

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7. I think the Reverse Auction Process as described above is fair to salmon troll vessel owners.

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

8. If you answered other than AGREE to Question #0, please explain why you think the Voluntary Salmon Troll Licence Retirement Program Reverse Auction process is unfair to salmon troll vessel owners

USE SEPARATE PAGE IF YOU NEED MORE SPACE

The Licence Retirement Program

Several rounds of retirements are conducted each year. Information on the 12 rounds completed since the Voluntary Salmon Troll Licence Retirement Program was announced on December 23, 2011 is shown in the following table.

Retirement Round	Duration of each Round	Applications received	Licence Eligibilities Retired			
			Area F	Area G	Area H	Total
Round 1	December 2011-January 2012	46	0	6	0	6
Round 2	March-April 2012	62	11	8	6	25
Round 3	June-July 2012	39	4	4	2	10
Round 4	August-October 2012	36	4	5	1	10
Round 5	December 2012-January 2013	46	5	4	1	10
Round 6	April-May 2013	35	4	7	3	14
Round 7	June-August 2013	36	7	2	2	11
Round 8	September-October 2013	34	6	4	2	12
Round 9	January-February 2014	26	0	1	0	1
Round 10	March-May 2014	11	2	1	0	3
Round 11	June-August 2014	5	0	0	0	0
Round 12	November-December 2014	5	1	0	1	2
Total to date		381	44	42	18	104

The 13th round was announced in February 2015 and closed in March 2015. DFO is currently in the process of finalizing the thirteenth round.

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9. Would you consider retiring your licence(s) in future rounds of the Voluntary Salmon Troll Licence Retirement Program?

YES
Go to Question #10

NO
Go to Question #11

10. Please check all the reasons that you responded YES to Question #0

CHECK ALL THAT APPLY – ADD OTHER REASONS IF YOURS ARE NOT LISTED

Reason	<input checked="" type="checkbox"/>
I still have salmon troll licences I want to sell/retire	<input type="checkbox"/>
I no longer fish my licence(s)	<input type="checkbox"/>
I hope to get the price I am seeking from the Licence Retirement Program	<input type="checkbox"/>
I think the prospects for the salmon troll fishery in the future are poor	<input type="checkbox"/>
I'm planning to retire	<input type="checkbox"/>
I think I can get a better price than by selling my licence(s) privately	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>

Go to Question #12

11. Please check all the reasons that you responded NO to Question #0

CHECK ALL THAT APPLY –ADD OTHER REASONS IF YOURS ARE NOT LISTED

Reason	<input checked="" type="checkbox"/>
I do not have any salmon troll licences left	<input type="checkbox"/>
I plan to continue fishing the salmon troll licence(s) I have now	<input type="checkbox"/>
I think the prospects for the salmon troll fishery in the future are good	<input type="checkbox"/>
I think I can get a higher price by selling my licence(s) privately	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>

Go to Question #12

Your Participation in the Licence Retirement Program

12. Have you ever submitted an Application to retire a salmon troll licence(s) under the Program?

YES
Go to Question #13

NO
Go to Question #28

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13. What factors did you consider in coming up with the price you asked for your licence(s) in your Application(s)?

CHECK ALL THAT APPLY –ADD OTHER REASONS IF YOURS ARE NOT LISTED

Factor	<input checked="" type="checkbox"/>
What I paid for my licence when I bought it	<input type="checkbox"/>
What someone told me they were paid for their licence(s)	<input type="checkbox"/>
What I heard from someone that a third party was paid for their licence(s)	<input type="checkbox"/>
Prices I saw in magazines advertising salmon troll licences for sale	<input type="checkbox"/>
Prices of non-salmon troll licences I know about	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>

If you submitted an Application to the Program, you should have received one or more of the following letters from DFO:

Confirmation Letter	Confirming that DFO had received your Application
Acceptance Letter	Informing you that your Offer to retire your licence(s) had been Accepted
Rejection Letter	Informing you that your Offer to retire your licence(s) had been Rejected

The following questions concern these letters.

Confirmation Letter

14. The Confirmation Letter I received was clear.

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

15. The Confirmation Letter I received was complete. That is, the letter was not missing any information that I think was important to include.

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

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16. If your response to Question #15 was other than AGREE, please explain what was missing in your opinion from your Confirmation Letter. If you have any other suggestions for improving the Confirmation Letter, please include them here.

USE SEPARATE PAGE IF YOU NEED MORE SPACE

Acceptance Letter

17. Was any Application you made to retire your salmon troll licence(s) under the Program accepted?

YES
Go to Question #18

NO
Go to Question #23

18. The Acceptance Letter I received was clear.

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

19. The Acceptance Letter I received was complete – it was not missing any information that I think was important to include.

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

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20. If your response to Question #19 was other than AGREE, please explain what was missing in your opinion from your Acceptance Letter. If you have any other suggestions for improving the Acceptance Letter, please include them here.

USE SEPARATE PAGE IF YOU NEED MORE SPACE

21. Did you follow through with retiring your licence after your offer was accepted?

YES
Go to Question #23

NO
Go to Question #22

22. Please check all the reasons that you responded NO to Question #21

CHECK ALL THAT APPLY –ADD OTHER REASONS IF YOURS ARE NOT LISTED

Reason	<input checked="" type="checkbox"/>
I was trying to figure out what price DFO would pay me to retire my licence	<input type="checkbox"/>
I changed my mind	<input type="checkbox"/>
I got a better offer before I received my Acceptance Letter	<input type="checkbox"/>
I got a better offer after I received my Acceptance Letter	<input type="checkbox"/>
I was waiting until I sold my vessel	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>

Rejection Letter

23. Was any Application you made to retire your salmon troll licence(s) under the Program rejected?

YES
Answer Questions #24

NO
Go to Question #28

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24. The Rejection Letter I received was clear.

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

25. The Rejection Letter I received clearly explained that I am still able to participate in future rounds of the Salmon Troll Licence Retirement Program if I have additional salmon troll licences.

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

26. The Rejection Letter I received was complete – it was not missing any information that I think was important to include.

1	2	3	4	5
Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree

27. If your response to Question #26 was other than AGREE, please explain what was missing in your opinion from your Rejection Letter. If you have any other suggestions for improving the Rejection Letter, please include them here.

USE SEPARATE PAGE IF YOU NEED MORE SPACE

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Derelict or Abandoned Vessels

Some of the funds allocated to the Voluntary Salmon Troll Licence Retirement Program were put aside to pay for the removal or disposal of vessels left derelict or abandoned after a licence was retired under the Program.

28. Were you aware of this component of the Voluntary Salmon Troll Licence Retirement Program?

YES

NO

29. Are you aware of any situation(s) where a vessel was left derelict or abandoned after a licence was retired under the Voluntary Salmon Troll Licence Retirement Program?

YES

NO

Go to Question #30

Go to Question #31

**30. If you answered YES to Question #29, please describe the situation(s) you are aware of
USE SEPARATE PAGE IF YOU NEED MORE SPACE**

31. I think that the removal or disposal of derelict or abandoned vessels is a good expenditure of Voluntary Salmon Troll Licence Retirement Program funds.

1

2

3

4

5

Disagree

Somewhat
Disagree

Neither Agree
nor Disagree

Somewhat
Agree

Agree

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32. If your answer to Question #31 was other than AGREE, please explain why you think this component is not a good expenditure of program funds

USE SEPARATE PAGE IF YOU NEED MORE SPACE

In Conclusion ...

Thank you for participating in this survey of commercial salmon troll vessel owners.

33. If you have any additional comments or suggestions about the Voluntary Salmon Troll Licence Retirement Program, please provide them below.

USE SEPARATE PAGE IF YOU NEED MORE SPACE

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APPENDIX B: MEASURES & DATA

#	PST LRP Objectives	DFO data	Survey of Vessel Owners	Consultants' Analysis
1	Establish and implement a voluntary retirement program that applies to all three troll areas (Areas G, H and F)	Generally, any and all data that describe the dimensions and performance of the program, including: # rounds by date # retirements by round, by area, by each of the four prioritization categories # retirements – full-fee vs reduced-fee	Awareness of PST LRP among vessel owners Participation by vessel owners in PST LRP Acceptance and rejection rates in PST LRP	
2	Ensure eligible participants are provided sufficient notice of retirement opportunities	Samples of Application Package and letters	Awareness of PST LRP among vessel owners Vessel owners comments on quality of Application Package and letters in terms of clarity, informativeness, etc Vessel owners comments on distribution of Application Package...by post, by email, online, at local DFO offices, etc	
3	Allow multiple opportunities for eligible parties to participate in the troll retirement program	# rounds by date	Vessel owners comments on adequacy of access (# rounds, timing, etc)	

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#	PST LRP Objectives	DFO data	Survey of Vessel Owners	Consultants' Analysis
4	Establish and implement a process to identify and pay fair market value for licences that are accepted for retirement			
4.1	Effectiveness of Reverse Auction			Analyze effectiveness of Reverse Auction to pay FMV for salmon troll licences (eg, by assessing it against options and highlighting pros and cons).
4.2	Fairness of Reverse Auction		Vessel owners comments on understanding of and fairness of reverse auction	
4.3	FMV methods and estimates			Provide review of alternate and complementary methods of estimating FMV of salmon troll licences. Provide range estimate of FMV of salmon troll licences at different times since the inception of the PST LRP (at least one per year).
5	Ensure that reduced fee licences are not retired at a rate greater than full fee licences	For full-fee and reduced-fee salmon troll licences: <ul style="list-style-type: none"> • # salmon troll licences before inception of PST LRP: • # salmon troll licences retired under PST LRP 		Perform calculations regarding pro rata retirement of reduced fee licences.

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#	PST LRP Objectives	DFO data	Survey of Vessel Owners	Consultants' Analysis
6	Set aside a small portion of the PST funds to address derelict or abandoned vessels that may be associated with the voluntary retirement program	\$ amount set aside for this purpose \$ amount expended for this purpose, by round and total	Vessel owners opinions on: <ul style="list-style-type: none">• Use of funds for this purpose• Effectiveness of this component• Treatment of abandoned vessels within the program.	

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APPENDIX C: OVERVIEW OF AUCTIONS

Background

The word “auction” usually conjures up a room full of people wanting to buy whatever one person (the auctioneer, on behalf of the real seller) wants to sell. In fact, there are many different types of auctions of which the most familiar auction, described above, is one type. Technically, this type of auction is a *buyers, open, ascending-price, first-price auction*.

Auctions have various traits by which they differ. Four traits by which auctions differ are listed and explained below:

Buyers or Sellers, also known as Demand or Supply – The most common auction described above is a *Buyers’ Auction* in which many buyers compete to purchase from one seller. In a *Sellers’ Auction*, in contrast, many sellers compete to sell to a single buyer. The LRP is a *Sellers’ Auction*. A *Sellers’ Auction* is also known as a *Reverse Auction*. A *Reverse Auction* is necessarily a *Descending Bid Auction* (see below).

Open or closed – In an *Open Auction*, buyers are aware of each other’s current and previous bids and can rebid at any time. In a *Closed Auction*, buyers submit sealed-bids. The LRP is a *Closed Auction*.

Ascending-Bid or Descending-Bid – In an *Ascending-Bid Auction* of the most common form, participants bid openly against one another, with each subsequent bid required to be higher than the previous one. The auction ends when no participant is willing to bid further, at which point the highest bidder pays their bid price. In a *Descending-Bid Auction*, the auctioneer begins with a high asking price for the item or all or some quantity of like items. The price is lowered by the auctioneer until a participant is willing to accept the auctioneer's price for the item or some quantity of the goods in the lot. If the first bidder does not purchase the entire lot, the auctioneer continues lowering the price until all of the items have been bid for (or the reserve price is reached). The best known example of a *Descending Bid Auction* is the Dutch auction, named for the auction type used to sell Dutch tulips.

First-Price or Second-Price – In a *First-Price Auction*, the winning bidder pays the price he or she bid. In a *Second-Price Auction*, the winning bidder pays the second highest bid price rather than his or her own bid price.

Other terms to understand about auctions include:

Reserve Price – A *Reserve Price* is a minimum sale price the seller sets before the auction begins. If the final bid falls short of the *Reserve Price*, then the item remains unsold. In the context of the Salmon Troll Licence Retirement Program, DFO’s determination (via independent third party analysis) of fair market value acts as a *Reserve Price*. If all the offers from vessel owners during a Retirement Round are above Fair Market Value, then no licence eligibilities are purchased and none is retired.

Collusion – *Collusion* is defined as “a secret understanding between two or more persons to gain something illegally, to defraud another of his or her rights, or to appear as adversaries though in agreement.”²¹ If bidders in an auction know the identity of other bidders, there is a risk of *collusion*: bidders could agree to keep prices low (or selling prices high, as in the case of the

²¹ Dictionary.com. Retrieved 10 April 2015.

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Salmon Troll Licence Retirement Program) and thereby limit competition which could dramatically affect selling or buying prices determined by an otherwise unimpaired auction. In the context of the Salmon Troll Licence Retirement Program, there is a risk of implicit or explicit collusion among salmon troll vessel owners in particular because their total number is relatively small, individual vessel owners tend to know many of their colleagues, and there is a lot of communication among members of the group.

DFO's Reverse Auction Defined

Based on the above discussion, DFO's Reverse Auction is defined by the following traits:

- It is a **Reverse Auction** – that is, a Sellers Auction
- It is a **Closed Auction** – prices are tendered as sealed-bids, not openly in a dynamic bidding situation.
- It is a **First-Price Auction** – participants whose offers are accepted receive the price they bid to retire their licence(s)
- It has a **Reserve Price** – all bids accepted must be no greater than the estimated FMV of a salmon troll licence eligibility during the retirement round in which bids are solicited from salmon troll vessel owners.