



FINAL
Tsawwassen First Nation
Post-Season Fisheries
Report, 2009

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October 2010

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LIST OF ACRONYMS

CCTAC	Canadian Commercial Total Allowable Catch
CPE	catch-per-effort
CTAC	Canadian Total Allowable Catch
DFO	Department of Fisheries and Oceans
FOG	Fisheries Operational Guidelines
FSC	food, social, and ceremonial
HD	Harvest Document
IFMP	Integrated Fisheries Management Plan
JFC	Joint Fisheries Committee
JTC	Joint Technical Committee
MOE	Ministry of Environment (Province of BC)
PSC	Pacific Salmon Commission
TAFP	Tsawwassen Annual Fishing Plan
TCC	Terminal Commercial Catch
TFA	Tsawwassen Final Agreement
TFD	Tsawwassen Fishing Department
TFN	Tsawwassen First Nation
THA	Tsawwassen Harvest Agreement

1 Introduction

1.1 Tsawwassen Final Agreement

Tsawwassen First Nation has the right to harvest for domestic purposes:

- a) Fish and aquatic plants in the Tsawwassen Fishing Area; and
- b) Intertidal bivalves in the Tsawwassen Intertidal Bivalve Fishing Area,

as outlined in the Tsawwassen Final Agreement (TFA 2007; Chapter 9). Starting on the Treaty Effective Date (3 April 2009), all Tsawwassen fisheries must be conducted in a manner that is consistent with the Tsawwassen Final Agreement, Tsawwassen Harvest Agreement, Harvest Documents, Tsawwassen Fisheries Operational Guidelines (FOG 2009) document, Tsawwassen law, and applicable federal and provincial government laws. As indicated in the TFA, Tsawwassen fisheries must be conducted within the Tsawwassen Fishing Area or Tsawwassen Intertidal Bivalve Fishing Area (see Figures 1.1 and 1.2) unless otherwise permitted in Harvest Documents or licences issued by Fisheries and Oceans, Canada.

1.2 Joint Fisheries Committee

On the Treaty Effective Date, a Joint Fisheries Committee (JFC) was formed to facilitate the planning and management of the Tsawwassen First Nation (TFN) fishing rights consistent with the content of the TFA (Chapter 9). The JFC consists of one representative from Canada, the province, and Tsawwassen First Nation; although, additional individuals may participate in meetings to assist the designated representatives. The JFC will meet a minimum of twice yearly: first, to review the Tsawwassen Annual Fishing Plan (TAFP) and, second, to conduct a post-season review of TFN's fisheries. The JFC will also discuss other relevant matters associated with the implementation of the TFA Fisheries Chapter. For a more detailed list of functions and responsibilities of the JFC, refer to the TFA (Chapter 9) or section 8 of the FOG document (Appendix C).

A further extension of the JFC is the Joint Technical Committee (JTC) which is formed and directed by the JFC. The JTC is responsible for technical fisheries issues as set out by the JFC. The JTC operates on a consensus basis, thus, if a matter cannot be resolved it is deferred to the JFC. For more detailed list of functions and responsibilities for the JTC, refer to the FOG document.

1.3 Domestic Fisheries Allocations

Tsawwassen Domestic Allocations for Fish and Aquatic Plants are calculated using formulas described in the TFA (Appendix J-2). Information used to calculate the Tsawwassen food, social, and ceremonial (FSC) allocation for sockeye is based on the Canadian Total Allowable Catch (CTAC). For example:

$$\text{TFN FSC sockeye allocation} = 1\% \times \text{CTAC for CTAC} < 500,000$$

Data collected throughout the fishing season may cause changes to the CTAC; thereby modifying the TFN allocation for sockeye. Any changes that may affect the FSC allocations are to be communicated to all parties involved through the JFC.

Modifications to FSC allocations may occur pre-, in-, and post-season for an individual species.

1.4 Tsawwassen Harvest Agreement and Commercial Allocation

The Tsawwassen Harvest Agreement (THA) came into effect on 3 April 2009 for the purposes of increasing the commercial fishing capacity of the Tsawwassen First Nation (TFA, Chapter 9). Tsawwassen commercial allocation for salmon is described in Clause 11 of the Tsawwassen First Nation Harvest Agreement. Each year, Fisheries and Oceans will issue licences for the Tsawwassen commercial allocation of sockeye, chum, and pink salmon. Tsawwassen's commercial allocations vary with the size of the Canadian Commercial Total Allowable Catch (CCTAC) for sockeye and pink salmon and the Terminal Commercial Catch (TCC) for chum salmon.

In addition, the Tsawwassen Harvest Agreement allows for the commercial harvesting of crab in Management Areas I and J (see Figure 1.3). Tsawwassen First Nation may not relinquish more than five crab licences on an annual basis. Crab fishers must comply with the regulations and requirements set out in the THA and any licence issued by Fisheries and Oceans, Canada.

2 Fisheries Management

2.1 Fisheries Operational Guidelines

As indicated in the TFA, "the Tsawwassen Fisheries Operational Guidelines set out the operational principles, procedures and guidelines to assist the Parties (TFN, Canada and British Columbia) in implementing the Fisheries chapter of the TFA." The FOG document (FOG 2009) describes current fisheries management goals and procedures for harvestable fish stocks that reside or migrate through the Tsawwassen Fishing Area. The goals and procedures outlined in the FOG document are essential for ensuring the TFA is being implemented properly. In addition, it should be acknowledged that these goals and procedures will evolve over time, and it will be the role of the JFC to review the FOG document as needed on an annual basis to incorporate any new information (e.g., updates on escapement targets, new fisheries management policies, stock trends) that may apply to TFN fisheries management.

2.2 Tsawwassen Fishing Plan 2009

Every year, Tsawwassen First Nation develops a Tsawwassen Annual Fishing Plan that may be submitted for comment and feedback to the JTC before it is submitted to the JFC where it is reviewed to assist in the planning for Tsawwassen's fisheries and the issuance of Harvest Documents. In 2009, the effective date of the Tsawwassen Annual Fishing Plan was 3 April 2009 and carries through to 31 March 2010. Tsawwassen's Annual Fishing Plan provides the JTC and the JFC with proposed harvest plans and harvest expectations for each species (i.e., salmon, crab, bivalves, groundfish, and aquatic plants) based on pre-season forecasts. The TAFP also notifies the JTC and JFC of TFN's harvest levels, preferred harvest times, and fishing areas and methods for each species or species-group. Conservation measures for each species are also highlighted in the Annual Fishing Plan. The 2009 TAFP is found in Appendix A.

2.3 Harvest Documents

Fisheries and Oceans, Canada is responsible for issuing Harvest Documents for all TFN fisheries for salmon, groundfish, intertidal bivalves, crab, and other marine fish species. The Parks Canada Agency is responsible for issuing Harvest Documents for TFN bivalve fisheries occurring within national park intertidal areas. The BC Ministry of Agriculture and Lands is responsible for issuing Harvest Documents for aquatic plants and the BC Ministry of Environment is responsible for issuing Harvest Documents for sturgeon and steelhead, where applicable. Tsawwassen Harvest Documents will be consistent with what is outlined in the TFA and FOG document. Tsawwassen First Nation is obligated to inform TFN fishers prior to a fishery opening of their fishing rights and any provisions outlined in the Harvest Document. Appendix B provides examples of Harvest Documents issued to TFN in 2009 for the various species and fisheries (i.e., sockeye FSC, crab FSC, and chum commercial). For further clarification of Harvest Documents refer to the TFA and FOG document.

2.4 Catch Monitoring Procedures

As outlined in Appendix D of the FOG document: “the overall goal of the catch monitoring program is to ensure accurate information is gathered to aid all Parties in the management of the fishery and implementation of the TFA.”

In order to accurately estimate FSC salmon harvest for TFN, the following data must be collected:

1. TFN FSC salmon fishers are required to report their harvest and fishing effort information after a day’s fishing to the Tsawwassen Fishing Department (TFD). Reporting of catch and effort can be provided via phone or on-site interview conducted by a staff member of the TFD staff (interviewers). Interviews will record catch (kept and released), effort (hours fished), and gear type (number and type of nets used) information on the “TFN Salmon Fisheries Interview Dataform” (see Appendix C). An attempt is made to contact active fishers via the phone after a FSC opening period (one or more consecutive days of fishing) to confirm complete catch and effort data.
2. Each TFN harvester will be required to maintain a daily fishing log using the “TFN Salmon Fisheries Log Dataform” (see Appendix C). TFN fishers will submit salmon fishing logs after each FSC fishery, preferably at the landing site, to allow verification of the hailed catch. Catch calendars are also available to record the days when fishing occurred for each species of salmon (see example month in Appendix C).
3. TFD staff will conduct random inspections of TFN FSC fishing vessels, during a fishery, to validate salmon catch. Counting a vessel’s catch or validation will either occur during an on-water interview or at landing site. The JTC proposed validation coverage be 20% or more for each fishery.
4. Within 24 hours of the close of a fishery, TFD will provide a preliminary report to Fisheries and Oceans that includes the number of vessels participating, the type of gear used, fishing effort (in hours), and the catch by species. Preliminary catch reports will be finalized within 48 hours of the close of a fishery.

In order to accurately estimate the crab and non-salmon FSC harvest for TFN, the following data must be collected:

1. Similar to the FSC salmon data collection requirements, TFN fishers are required to report any retention of FSC crab or non-salmon species. Catch and fishing effort can be reported directly to TFD or by on-site interview conducted by a TFD staff member. Interviewers will record catch and effort information for crab fishing on the “TFN Crab Fishing Interview Dataform” and other non-salmon species on the “TFN Other Fisheries Interview Dataform” (see Appendix C).
2. TFN fishers will be required to maintain daily fishing logs for crab fishing efforts using the “TFN Crab Fisheries Log Dataform” and all fishing efforts directed at other fish species should be recorded on the “TFN Other Fisheries Log Dataform” (see Appendix C). TFD staff will compare the logs to the on-water interviews for an accurate account of total catch and effort. In addition, catch calendars are also available to record the days when fishing occurred for each species (see example month in Appendix C).
3. FSC fishing targeting crab and other non-salmon species will be validated similar to the salmon fisheries. Validation will occur after a completed fishing trip to ensure accuracy of the information recorded on the daily fishing logs.
4. Within 72 hours of the end of each month, TFD staff will provide a catch and effort report for FSC crab and other non-salmon species. TFD staff will follow-up with any fishers that did not comply with the reporting requirements.

See Appendix D of the FOG document for further detailed information on TFN catch monitoring procedures.

3 Salmon FSC Fisheries 2009

3.1 Allocations

Table 3.1 summarizes TFN’s FSC salmon fishery allocations for 2009 based on pre-, in-, and post-season estimates. TFN’s FSC allocations for pink, coho, and chum were 2,500, 500, and 2,576, respectively. The pink, chum, and coho allocations remained constant throughout the 2009 fishing season; whereas, the Chinook and sockeye TFN FSC allocations changed significantly in-season.

The allocation for sockeye salmon is determined using an abundance-based formula that is driven by the Canadian Total Allowable Catch. As indicated in the FOG document, when the CTAC is greater than or equal to 3 million sockeye salmon, TFN’s FSC allocation is fixed at 15,226 sockeye. In 2009, the pre-season FSC sockeye allocation was determined to be 15,226 as set out in the TFA (Appendix J-2) and the FOG document (Section 9.3.1; Table 9.1). However, due to the unexpectedly low numbers of sockeye that returned to the Fraser River in 2009, the CTAC was changed drastically in-season; thereby affecting TFN’s FSC sockeye allocation. The sockeye allocation decreased significantly, from 15,226 pre-season to 1,610 on 21 August (Appendix D, Table 9.2) just prior to Tsawwassen’s second sockeye fishery on 25 August (Table 3.2). The preliminary post-season estimates from the Pacific Salmon Commission (PSC) February 2010 meeting indicated that the TFN’s FSC sockeye allocation will likely be

lower than the 21 August estimate (Appendix D, Table 9.3). Final estimates of run size for each of the Fraser sockeye run-timing groups are not expected before May 2010; therefore, it is recommended that the information in Appendix D be used by the JTC to formulate advice for the JFC regarding sockeye overages and underages for the 2009 TFN FSC fishery.

Pre-season, the Chinook allocation was determined to be 625 as set out in the TFA (Appendix J-2) and the FOG document (Section 9.5). In mid-August, TFN wrote a letter to Fisheries and Oceans requesting an increase to their Chinook allocation, because of the extremely low abundance of sockeye. TFN's letter of request was reviewed and their allocation was temporarily increased in-season to 900 Chinook (Table 3.1).

For a comparison of TFN's 2009 salmon harvest to post-season allocations, refer to section 3.5 (Overages and Underages).

3.2 Fishery Openings and Target Species

Table 3.2 summarizes Tsawwassen First Nations' Food, Social, and Ceremonial (FSC) salmon fishery openings for 2009, listed by week-ending date. There were four occasions where there were multiple openings within a week (i.e., weeks ending 31 May, 28 June, 19 July, and 26 July). The FSC Chinook salmon fisheries began the week ending 29 March and continued through to the week ending 9 September. Between March and September, there were also two FSC salmon openings directed at sockeye salmon (week ending 26 July and 30 August) with the incidental catch of Chinook permitted. FSC fisheries directed at chum salmon began the second week of October and ended 15 November.

Table 3.2 also includes a list of the Tsawwassen Harvest Agreement salmon fishery openings. Further details on the THA salmon openings will be discussed in section 4.2.

3.3 Catch and Effort

Catch and effort for each salmon species was estimated from on-water and shore-based interviews by simply summing the catch and effort for all interviews. All fishers were contacted via phone after a FSC opening to confirm complete catch and effort data. This also allowed technicians to log catch and effort from fishers that were not encountered on the water. In addition, records were kept to indicate those interviews for which the catch was verified by the interviewer.

The total reported FSC harvest and effort of each salmon species is shown in Table 3.3. The overall FSC harvest of sockeye was estimated at 1,132; of this catch 68% (766) was harvested the week ending 30 August. Total FSC Chinook harvest was reported at 995 with the peak occurring during the week ending 16 August (225). The total chum harvest in the FSC fisheries was 1,320 and occurred from the weeks endings 11 October to 8 November. Sixty percent (798) of the total FSC chum harvest was harvested the week ending 18 October.

There were no directed TFN FSC fishery openings for pink, coho, or steelhead; however, these fish were caught and kept incidentally during the Chinook, sockeye, and chum salmon FSC fisheries. The total estimated FSC harvest of pink, coho, and steelhead were 72, 57, and 2, respectively.

Table 3.3 shows fishing effort (defined as the number of hours that nets were in the water fishing) by week. Total fishing effort for the FSC fishery openings was reported as 1,034 hours. However, bycatch salmon that were kept and taken home as part of the chum THA fishery (25 October) were categorized as FSC harvest, but no specific effort was recorded during this fishery. Therefore, the total fishing effort for FSC harvest was slightly higher than the 1,034 hours reported.

Table 3.4 summarizes Tsawwassen's FSC salmon catch and effort for interviews only. On-water interviews allowed for validation of the catch either by direct observation or counting individual fish. In some cases this included watching a fisher remove the fish from an entire set. The JTC proposed that at least 20% of the salmon catch be validated through interviews. Overall, interviews represented 23% of the total fishing effort for salmon and substantially more than the 20% goal for sockeye (68%), pink (76%), and chum (44%). The 20% sampling goal was not achieved for Chinook or coho (Table 3.4). Only 15% of the total Chinook catch was interviewed because of the lack of survey effort in April, May, and June. The interview process was not initiated until mid-July, at which point, the Chinook season was almost half over. Only 9 % of the coho catch data was based on interviews because most of coho catch (45 of 57 fish) were caught as bycatch in the TFN commercial chum fishery on 25 October (HD-482). No interviews were conducted during the commercial chum fishery because all catches were reported at landing mandatory landing sites.

Table 3.4 also compares the catch-per-effort (CPE) by species for interviewed data versus non-interviewed data. The average CPE for Chinook was similar CPE for both interviewed (0.64 Chinook/h) and non-interviewed data (1.06). The average sockeye CPE from interviewed fishers (3.26 sockeye/h) was substantially higher than that for non-interviewed fishers (0.47). However, most of the sockeye catch (967 of 1132 fish) occurred during two directed sockeye fisheries that occurred during the weeks ending 26 July (HD-438) and 30 August (HD-457). For these sockeye fisheries, interviews accounted for 70% of the catch and CPE for these fisheries was similar for interview (7.9) and non-interview data (7.9 and 5.5 sockeye/h, respectively). The survey results for FSC chum fisheries were similar to those for sockeye. The average chum CPE from interviewed fishers (2.45 chum/h) was higher than that for non-interviewed fishers (0.93 chum/h). The majority of the chum FSC catch (798 of 1,320 fish) occurred in the week ending 18 October when CPE was 24.4 chum/h for interview data and 14.7 chum/h for non-interview data. The most likely reason for the higher catch rate for interview data is that surveyors are more likely to encounter the best fishers because they tend to fish more than the other fishers. Sample sizes for pink and coho CPE were too small to make any meaningful comparisons between the interview and non-interview data.

3.4 Bycatch

Table 3.5 summarizes the bycatch (fish released from nets) during the Tsawwassen FSC salmon fisheries in 2009. Bycatch harvest reports for sturgeon, flounder, steelhead, pink, and coho were 78, 336, 0, 180, and 5, respectively. Fifty percent (167) of the flounder bycatch was harvested in the week ending 24 May during a directed Chinook FSC fishery. All (100%) of the pink salmon bycatch (180) was harvested during the second FSC sockeye fishery opening that occurred during the week ending 30 August. Similarly, the total coho bycatch (5) was harvested in early November during a chum FSC fishery.

Table 3.6 further details Tsawwassen FSC releases of sturgeon by fishing location. There was a total of 78 sturgeon released as bycatch from May to November, with the highest number (17) of sturgeon caught during the week ending 12 July in the Canoe Pass to Deas location (Stat Area 29-14).

3.5 Overages and Underages

It is acknowledged that the precise achievement of these Tsawwassen Allocations cannot be consistently meet on a seasonal basis. Therefore, the TFA (Appendix J of the TFA) outlines the calculation process if there is a difference between what was caught and what was allocated (termed “overages” and “underages”), by species.

An overage occurs when Tsawwassen harvest exceeds the defined Tsawwassen allocation whereas; an underage occurs when Tsawwassen harvests less than the defined Tsawwassen allocation. Underages can occur because another group harvested more, or because there was uncertainty in the management process for that species. The amount of the overage or underage will be documented in a multi-year accounting process.

Table 3.7 summarizes the Tsawwassen FSC salmon catch, allocation, balance (overages and underages), and carry forward amounts for each salmon species. Tsawwassen harvested less than the defined allocation by 2,428, 443, and 1,256 for pink, coho, and chum salmon, respectively. No carry forward is proposed for these species because Tsawwassen fishing efforts were less than that required to harvest the TFN allocations for these species.

The majority of the salmon fishing effort in 2009 was targeted at Chinook due to the poor return of Fraser sockeye. The pre-season Chinook allocation (625) was exceeded by mid-August and before Tsawwassen fishers had harvested their allocation of sockeye. In light of the unexpectedly poor sockeye returns, TFN requested an increase in the their FSC Chinook allocation to allow fishers to retain Chinook caught during the sockeye and chum fisheries and provide a few more fish to the community. Prior to the 25 August sockeye fishery opening, Department of Fisheries and Oceans (DFO) approved a “special circumstances” increase in the TFN Chinook allocation to 900 fish. Chinook returns to the Fraser were relatively strong in late August and harvest by TFN fishers exceeded the Tsawwassen FSC Chinook allocation by 95 fish, therefore, this overage will be carried forward and reduce the TFN Chinook allocation in future years until the account is balanced.

The appropriate Tsawwassen FSC allocation for sockeye was difficult to determine in 2009 because of the large changes in the Fraser in-season estimate of the Tsawwassen FSC sockeye allocation (1,610) computed just prior to TFN’s second sockeye fishery on 25 August 2009 was higher than the final Tsawwassen FSC sockeye catch (1,132). The preliminary post-season estimate of the Tsawwassen FSC sockeye allocation was 830 based on the CTAC. However, there were substantial differences between the Canadian Total Catch and the preliminary post-season estimate for CTAC for the various run-timing groups. The JTC needs to determine how to handle these differences and derive a scientifically defensible post-season estimate for CTAC. Given the large uncertainty about the abundance of sockeye returning to the Fraser River in 2009 and the record low sockeye catch by TFN fisheries, the JTC recommended to the JFC that the 2009

Tsawwassen FSC allocation for sockeye be set equal to the TFN sockeye catch (i.e., no carry forward for sockeye). The JFC accepted this recommendation.

3.6 Recommendations

The following are recommendations for the 2010 FSC fishing season:

- Continue to improve the completeness of catch reporting by filing reports to Fisheries and Oceans within 24 to 48 hours, as outlined in the Harvest Documents and the TFN Fisheries Operational Guidelines.
- Develop a system to ensure that all active TFN fishers are contacted following each opening to obtain complete catch and effort information.
- Provide pre-season training in data collection, data entry, and catch reporting to newly hired technicians.
- Investigate the possibility of replacing the current Microsoft Excel spreadsheet to an updated Atlegay model for data entry and reporting purposes. The Atlegay model would provide a single source for TFN catch data and related fisheries information in addition to streamlining reporting and data provision.
- Improve the landing validation program. Technicians should differentiate on their datasheets if a harvest was counted, estimated, hailed, or not observed. Achievement of the 20% sampling goal for all salmon fisheries will require increased on-water surveys or interview effort for Chinook fisheries.
- The JTC needs to determine how to handle these differences between Total Catch and CTAC for the various sockeye run-timing groups and understand how the post-season estimates for CTAC for Fraser sockeye have been determined by DFO and PSC.

4 Salmon Commercial (THA) Fisheries 2009

4.1 Allocations

Tsawwassen First Nation was authorized to sell 8,113 chum salmon during commercial THA fisheries. Like the FSC fisheries, the THA fisheries are subject to conservation needs and to agreed-upon monitoring, enforcement, and management regimes. There were no THA licences issued to TFN for sockeye and pink salmon. For sockeye it was due to conservation concerns, for pink it was due to the lack of available selective gear to undertake a THA fishery.

4.2 Fishery Openings and Target Species

Tsawwassen First Nation was involved in one Economic Opportunity fishery during the salmon season: the fishery opened at 12:00 hours on Saturday, 24 October 2009 and closed at 12:00 hours on Sunday, 25 October 2009 (Table 3.2). This fishery was directed at chum salmon; however, an incidental catch of pink, Chinook, and hatchery marked coho was also permitted.

4.3 Catch and Effort

The total chum salmon harvested during the 24-hour THA fishery in October was 3,416 chum (Table 4.1). Catch from this fishery was estimated using a Mandatory Landing Program in which fishers' catch was enumerated at landing sites throughout the fishing area. Tsawwassen harvested less than the defined allocation by 4,697 chum. Fishing effort was not recorded for this fishery. Justification for this limited fishing window was the Integrated Fisheries Management Plan (IFMP) objective for conserving steelhead that requires the protection of 80 percent of the steelhead stock at a 90 percent confidence level. TFN has expressed concerns regarding the basis for this restriction of their THA fisheries for chum and requested that the JFC examine the scientific basis for this restriction and measures that could be taken to provide TFN fisheries with the opportunity to harvest their full THA chum allocation in future years.

4.4 Bycatch

Table 4.1 summarizes the number of fish reported as released or FSC fish from the THA chum fisheries. Releases included 6 chum, 15 coho, 1 Chinook, and 1 sturgeon (Table 4.1). There were no sockeye or steelhead released as bycatch during the TFA chum fishery. In addition, some of the bycatch from this fishery was kept and classified by Fisheries and Oceans as FSC harvest (take home). The majority of the salmon kept were coho (45), and a small number of Chinook (4), steelhead (2), and sockeye (1) were also retained (Table 4.1). The FSC (take home) harvest from the Economic Opportunity fishery is also included in the FSC catch summary, Table 3.3.

4.5 Recommendations

- The rationale for strict limitation of TFN commercial fishing opportunities for chum salmon requires further discussion between TFN, MOE (Ministry of Environment), and DFO fisheries managers. The TFN were restricted to a one-day chum fishery and thus harvested less than half of the chum allocation defined in their Harvest Agreement.
- JTC to identify selective harvest methods to allow for the harvest of the TFN's commercial chum allocation.

5 Crab Fisheries 2009

5.1 FSC Openings, Catch and Effort

There were four licences issued for TFN FSC crab harvest, of which three were issued after the implementation of the TFN Treaty (3 April 2009; see Table 5.1). The four FSC crab licences spanned the time period from 5 February to 31 December, targeting Dungeness, Graceful, and Red Rock crab species. However, TFN fishers only kept Dungeness crab, which were all harvested using traps. No crab were harvested by TFN members using hand picking method in 2009.

Table 5.2 summarizes the FSC Dungeness crab catch and effort by licence. Overall, there was a total of 24,712 Dungeness crab harvested under the four licences with approximately 50% (11,496) of the total harvest captured under the HD-420 licence from June to September. Licence or Harvest Document-420 also recorded the highest amount

of fishing effort 19,879 trap-days. Comparatively, fishers active during the February to April period (licence CL-400) harvested 333 Dungeness crab and reported only 1,105 trap-days of fishing effort.

For another perspective, Table 5.3 breaks down the total Dungeness crab harvest, releases and effort by month rather than licence. The month of May recorded the highest Dungeness crab harvest (6,060) and fishing effort (7,015 trap-days) whereas December had the lowest recorded harvest and fishing effort (180 and 1,300 trap-days, respectively). Inclement weather probably played a factor for the low harvest in December. Soft-shell crab would account for a high portion of the releases in May and June. Most of the releases in other months were crabs smaller than the minimum size limit.

5.2 Commercial Openings, Catch and Effort

In 2009, there were commercial crab openings in the south coast management areas. The first opening occurred in Area I from 15 June to 30 November and the second opening occurred in Area J from 15 July to 30 November (Figure 1.2). The commercial crab openings ran concurrently with the FSC crab fisheries openings, which potentially limited the FSC TFN crab harvest because of the proximity of the commercial harvest and additional impact to the crab stocks.

There are TFN FSC crab fishers who also commercially harvest crab. These fishers are required to report their catch directly to DFO managers on a monthly basis.

5.3 Recommendations

The following are recommendations for the 2010 FSC crab fishing season:

- Clarify times recorded on the crab FSC report to reflect AM or PM. In the future, all fishers need to record times via the 24-hour clock.
- Inform commercial crab operators about the need to remove or cover-up the number from the commercial crab vessel stickers during FSC fishing.
- Discuss with FSC crab operators about limiting crab fishing to daylight hours only.
- Ensure FSC and commercial crab harvest be kept separate and cannot be fished simultaneously.
- Document the distribution of the crabs for TFN members or other FN communities.
- Continue to improve the completeness and timeliness of catch reporting to Fisheries and Oceans.
- Conduct on-water surveys at regular interval during the FSC crab fishery to verify catch and effort reports.

6 Other Fisheries 2009

6.1 Eulachon

The IFMP for eulachon indicates that: “Due to conservation concerns, only very limited Fraser ceremonial fisheries for eulachon will be considered in 2009.” Three ceremonial licences were issued for eulachon (20 April, 27 April, and 3 May) and all were 12 hours or less in duration. A total of 39 lbs. of eulachon were harvested in April and 10 lbs. in May.

6.2 Intertidal Bivalves

Intertidal bivalves may be harvested for FSC purposes in the Intertidal Bivalve Fishing Area by any designated TFN fishermen at the times and locations defined in the Tsawwassen Harvest Document. While the JTC is working on drafting an Intertidal Bivalve Harvest Document, no Harvest Document was issued in 2009; therefore, no harvest of bivalves took place. Tsawwassen First Nation is currently in consultation with the Hul’qumi Treaty Group and other First Nations to discuss terms and conditions governing the harvest of intertidal bivalves where the Tsawwassen Intertidal Bivalve Fishing Area overlaps the traditional territories for other First Nations. Tsawwassen First Nation has signed a protocol agreement with the Cowichan First Nation outlining the terms and conditions governing the harvest of intertidal bivalves, where the Tsawwassen Intertidal Bivalve Fishing Area overlaps Cowichan traditional territory.

6.3 Shrimp and Prawns

Shrimp and prawns may be harvested for FSC purposes by TFN fishermen as outlined in a Tsawwassen Harvest Document. There were no Harvest Document licences issued for shrimp and prawns, and no TFN FSC harvest of these species occurred in 2009.

6.4 Rockfish, Lingcod, Halibut, Dogfish, and Sole (Groundfish)

Rockfish, lingcod, halibut, dogfish, and sole may be harvested for FSC purposes by TFN fishermen as defined in a Tsawwassen Harvest Document. In 2009, TFN was issued a Harvest Document licence (LFA-09-HD-413) for groundfish that opened 16 May and closed 30 September, with rod and reel as the mandatory gear type. However, there was no recorded harvest of groundfish by TFN fishers in 2009.

6.5 Marine Aquatic Plants

The harvest of aquatic plants (including attached and detached kelps and seaweeds) within the Province of British Columbia is managed by the Aquaculture Operations Branch of the BC Ministry of Agriculture and Lands. Tsawwassen First Nation is currently in discussions with the Province of BC and Fisheries and Oceans to review the aquatic plants harvest details, including: harvest techniques, plant identification, and reporting. The JTC is currently tasked with the review of a draft Harvest Document for aquatic plants and identifying the primary target species and preferred harvesting methods for these species. TFN members did not harvest aquatic plants in 2009.

7 References

- TFA. 2007. Tsawwassen First Nation Final Agreement signed by Canada, British Columbia and the Tsawwassen First Nation in December 2007. 214 p. plus appendices.
- THA. 2006. Tsawwassen First Nation Harvest Agreement signed by Canada, British Columbia and the Tsawwassen First Nation in December 2006. 12 p.
- FOG. 2009. Tsawwassen Fisheries Operational Guidelines approved by Canada, British Columbia and the Tsawwassen First Nation on the Effective Date (3 April 2009). 57 p. plus appendices.

8 Acknowledgments

It is often forgotten that the final products depend ultimately on the diligence and dedication of the individuals who collect the data in the field. With this in mind, we would like to thank the following Tsawwassen First Nation fisheries program staff for their contributions in conducting the field program: Ruth Kenny, Tammy Williams, Joe Williams, Liana Williams, and Flavian Harry (fisheries officer) all of whom worked with diligence and enthusiasm in conducting the interviews, on-water patrols, and processing of data that produced the primary data for the study. As well, we thank Tony Jacobs for his advice and guidance during the fishing season. We would also like to thank the many Tsawwassen fishers who provided their catch and effort information to TFN fisheries program staff.

From Fisheries and Oceans Canada, we thank Terri Bonnet, Ken Green, Bridge Ennevor, Ann-Marie Huang, Greg Mallette, Marla Maxwell, Matt Parslow, and Diana Trager for their assistance with the many tasks required to implement TFN fisheries and prepare this report. From the BC Ministry of Environment, we thank Duane Jesson for facilitating communication with provincial government ministries. In addition, we would like to acknowledge Dave Robichaud and Kerry Stratton (LGL Limited) for their assistance in editing and formatting of the report.

TABLES

Table 3.1. Tsawwassen FSC salmon fishery allocations (in pieces), 2009.

Season	Chinook	Sockeye ¹	Pink	Coho	Chum
Pre-season	625	15,226	2,500	500	2,576
In-Season	900	1,610	2,500	500	2,576
Post-Season	900	830	2,500	500	2,576

¹ Post-season estimate is preliminary (see Appendix D for details).

Table 3.2. Tsawwassen FSC and Economic Opportunity salmon fishery openings by date, gear type, and target species, 2009.

Week Ending	Licence #	Fishery Type	Target Species	Opening	Closing	Gear Type
				Date and Time	Date and Time	
29-Mar	LFA-09-CL406/Tsawwassen	FSC - Communal	Chinook	28-Mar 9:00	28-Mar 21:00	drift net,set net
5-Apr	LFA-09-HD-CL401/Tsawwassen	FSC - Communal	Chinook	4-Apr 9:00	4-Apr 21:00	drift net,set net
12-Apr	LFA-09-HD-CL401/Tsawwassen	FSC - Communal	Chinook	11-Apr 9:00	11-Apr 21:00	drift net,set net
19-Apr	LFA-09-HD-CL401/Tsawwassen	FSC - Communal	Chinook	18-Apr 9:00	18-Apr 21:00	drift net,set net
26-Apr	LFA-09-HD-CL401/Tsawwassen	FSC - Communal	Chinook	25-Apr 9:00	25-Apr 21:00	drift net,set net
3-May	LFA-09-HD-411/Tsawwassen	FSC - Communal	Chinook	2-May 12:00	3-May 12:00	drift net,set net
10-May	LFA-09-HD-411/Tsawwassen	FSC - Communal	Chinook	9-May 12:00	10-May 12:00	drift net,set net
17-May	LFA-09-HD-411/Tsawwassen	FSC - Communal	Chinook	16-May 12:00	17-May 12:00	drift net,set net
24-May	LFA-09-HD-411/Tsawwassen	FSC - Communal	Chinook	23-May 12:00	24-May 12:00	drift net,set net
31-May	LFA-09-HD-411/Tsawwassen	FSC - Communal	Chinook	30-May 12:00	31-May 12:00	drift net,set net
31-May	LFA-09-HDcer-407/Tsawwassen	FSC - Ceremonial	Chinook	26-May 12:00	26-May 22:00	drift net,set net
7-Jun	LFA-09-HD-415-AMD01/Tsawwassen	FSC - Communal	Chinook	5-Jun 12:00	7-Jun 12:00	drift net, rod and reel,set net
14-Jun	LFA-09-HD-415-AMD01/Tsawwassen	FSC - Communal	Chinook	12-Jun 12:00	14-Jun 12:00	drift net, rod and reel,set net
21-Jun	LFA-09-HD-415-AMD01/Tsawwassen	FSC - Communal	Chinook	19-Jun 12:00	21-Jun 12:00	drift net, rod and reel,set net
28-Jun	LFA-09-HD-410cer-AMD01/Tsawwassen	FSC - Ceremonial	Chinook	22-Jun 8:00	23-Jun 8:00	drift net,set net
28-Jun	LFA-09-HD-422/Tsawwassen	FSC - Communal	Chinook	26-Jun 12:00	28-Jun 12:00	drift net
5-Jul	LFA-09-HD-422/Tsawwassen	FSC - Communal	Chinook	3-Jul 12:00	5-Jul 12:00	drift net
12-Jul	LFA-09-HD-424/Tsawwassen	FSC - Communal	Chinook	10-Jul 12:00	12-Jul 12:00	drift net
19-Jul	LFA-09-HD-430-AMD01/Tsawwassen	FSC - Communal	Chinook	17-Jul 12:00	19-Jul 12:00	drift net
19-Jul	LFA-09-HD-431-AMD01/Tsawwassen	FSC - Communal	Chinook	18-Jul 11:00	18-Jul 20:00	drift net,set net
26-Jul	LFA-09-HD-434/Tsawwassen	FSC - Communal	Chinook	24-Jul 12:00	26-Jul 12:00	drift net
26-Jul	LFA-09-HD-438/Tsawwassen	FSC - Communal	Sockeye	25-Jul 14:00	25-Jul 22:00	drift net,set net
2-Aug	LFA-09-HD-441/Tsawwassen	FSC - Communal	Chinook	31-Jul 12:00	2-Aug 12:00	drift net
9-Aug	LFA-09-HD-444-AMD01/Tsawwassen	FSC - Communal	Chinook	7-Aug 12:00	9-Aug 12:00	drift net
16-Aug	LFA-09-HD-448/Tsawwassen	FSC - Communal	Chinook	14-Aug 12:00	16-Aug 12:00	drift net
30-Aug	LFA-09-HD-457/Tsawwassen	FSC - Communal	Sockeye	25-Aug 12:00	25-Aug 18:00	drift net,set net
6-Sep	LFA-09-HDcer-417/Tsawwassen	FSC - Ceremonial	Chinook	1-Sep 9:00	2-Sep 9:00	drift net
11-Oct	LFA-09-HD-475/Tsawwassen	FSC - Communal	Chum	10-Oct 12:00	11-Oct 12:00	drift net, rod and reel,set net
18-Oct	LFA-09-HD-478/Tsawwassen	FSC - Communal	Chum	16-Oct 12:00	18-Oct 12:00	drift net, rod and reel,set net
25-Oct	LFA-09-HD-482/Tsawwassen	Economic Opportunity	Chum	24-Oct 12:00	25-Oct 12:00	drift net
8-Nov	LFA-09-HD-484/Tsawwassen	FSC - Communal	Chum	1-Nov 8:00	2-Nov 8:00	drift net, rod and reel,set net
8-Nov	LFA-09-HD-487/Tsawwassen	FSC - Communal	Chum	6-Nov 12:00	8-Nov 12:00	drift net, rod and reel,set net
15-Nov	LFA-09-HD-490/Tsawwassen	FSC - Communal	Chum	13-Nov 12:00	15-Nov 12:00	drift net, rod and reel,set net

Table 3.3. Summary of Tsawwassen FSC salmon catch and effort, 2009.

Week Ending ¹	Licence #	Effort Hours	Tsawwassen Catch (Kept)						
			Chinook	Sockeye	Pink	Coho	Chum	Steelhead	
19-Apr	HDCL401	2	0	0	0	0	0	0	
10-May	HD-411	8	1	0	0	0	0	0	
24-May	HD-411	6	4	0	0	0	0	0	
31-May	HDcer-407	4	0	0	0	0	0	0	
31-May	HD-411	18	0	0	0	0	0	0	
7-Jun	HD-415	18	3	0	0	0	0	0	
14-Jun	HD-415	18	9	0	0	0	0	0	
21-Jun	HD-415	36	39	0	0	0	0	0	
28-Jun	HD-410cer	8	6	0	0	0	0	0	
28-Jun	HD-422	39	48	1	0	0	0	0	
5-Jul	HD-422	105	71	9	0	0	0	0	
12-Jul	HD-424	140	120	3	0	0	0	0	
19-Jul	HD-430	14	4	5	0	0	0	0	
19-Jul	HD-431	37	2	57	0	0	0	0	
26-Jul	HD-434	17	5	0	0	0	0	0	
26-Jul	HD-438	56	8	201	0	0	0	0	
2-Aug	HD-441	11	20	4	1	0	0	0	
9-Aug	HD-444	78	135	23	0	0	0	0	
16-Aug	HD-448	86	225	61	0	0	1	0	
30-Aug	HD-457	79	76	766	71	0	0	0	
6-Sep	HDcer-417	153	211	1	0	0	0	0	
11-Oct	HD-475	18	0	0	0	1	278	0	
18-Oct	HD-478	43	3	0	0	6	798	0	
25-Oct	HD-482	0	4	1	0	45	0	2	
1-Nov	HD-484	31	1	0	0	4	188	0	
8-Nov	HD-487	13	0	0	0	1	55	0	
15-Nov	HD-490			no fishing due to bad weather					
Total		1,034	995	1,132	72	57	1,320	2	

¹ Fish caught 25-Oct as by-catch to the Chum EO fishery and taken home. No specific effort recorded.

Table 3.4. Summary of Tsawwassen FSC salmon catch and effort (vessel-hours) for interviews only and comparison of catch-per-effort estimates for fishers interviewed while fishing (interviewed) and those reporting after the fishery (non-interviewed).

Week Ending ¹	Licence #	Effort Hours	Tsawwassen Catch (Kept)						
			Chinook	Sockeye	Pink	Coho	Chum	Steelhead	
19-Apr	HDCL401	0	0	0	0	0	0	0	
10-May	HD-411	0	0	0	0	0	0	0	
24-May	HD-411	0	0	0	0	0	0	0	
31-May	HDcer-407	0	0	0	0	0	0	0	
31-May	HD-411	0	0	0	0	0	0	0	
7-Jun	HD-415	0	0	0	0	0	0	0	
14-Jun	HD-415	0	0	0	0	0	0	0	
21-Jun	HD-415	0	0	0	0	0	0	0	
28-Jun	HD-410cer	0	0	0	0	0	0	0	
28-Jun	HD-422	0	0	0	0	0	0	0	
5-Jul	HD-422	0	0	0	0	0	0	0	
12-Jul	HD-424	23	7	1	0	0	0	0	
19-Jul	HD-430	0	0	0	0	0	0	0	
19-Jul	HD-431	8	0	19	0	0	0	0	
26-Jul	HD-434	0	0	0	0	0	0	0	
26-Jul	HD-438	28	7	101	0	0	0	0	
2-Aug	HD-441	0	0	0	0	0	0	0	
9-Aug	HD-444	0	0	0	0	0	0	0	
16-Aug	HD-448	8	38	3	0	0	0	0	
30-Aug	HD-457	66	70	640	55	0	0	0	
6-Sep	HDcer-417	70	26	1	0	0	0	0	
11-Oct	HD-475	3	0	0	0	1	60	0	
18-Oct	HD-478	17	1	0	0	2	418	0	
25-Oct	HD-482	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1-Nov	HD-484	12	1	0	0	2	98	0	
8-Nov	HD-487	0	0	0	0	0	0	0	
15-Nov	HD-490		no fishing due to bad weather						
Total (interviews)		235	150	765	55	5	576	0	
Total (non-interviews)		799	845	367	17	52	744	2	
Grand Total		1,034	995	1,132	72	57	1,320	2	
Total catch interviewed		23%	15%	68%	76%	9%	44%	0%	
Catch-per-effort (CPE)									
Interview Data only			0.64	3.26	0.23	0.02	2.45	0.00	
Non-Interview data only			1.06	0.46	0.02	0.07	0.93	0.00	

¹ Fish caught 25-Oct as by-catch to the Chum EO fishery and taken home. No specific effort recorded.

Table 3.5. Tsawwassen bycatch from the FSC salmon fisheries, 2009.

Weekend Ending	Licence #	Effort Hours	Bycatch (released)				
			Sturgeon	Flounder	Steelhead	Pink	Coho
19-Apr	HDCL401	2	0	0	0	0	0
10-May	HD-411	8	0	0	0	0	0
24-May	HD-411	6	2	167	0	0	0
31-May	HDcer-407	4	2	0	0	0	0
31-May	HD-411	18	1	111	0	0	0
7-Jun	HD-415	18	4	26	0	0	0
14-Jun	HD-415	18	0	0	0	0	0
21-Jun	HD-415	36	0	0	0	0	0
28-Jun	HD-410cer	8	0	0	0	0	0
28-Jun	HD-422	39	0	0	0	0	0
5-Jul	HD-422	105	6	0	0	0	0
12-Jul	HD-424	140	17	1	0	0	0
19-Jul	HD-430	14	2	0	0	0	0
19-Jul	HD-431	37	3	0	0	0	0
26-Jul	HD-434	17	2	0	0	0	0
26-Jul	HD-438	56	12	28	0	0	0
2-Aug	HD-441	11	3	0	0	0	0
9-Aug	HD-444	78	1	1	0	0	0
16-Aug	HD-448	86	13	2	0	0	0
30-Aug	HD-457	79	1	0	0	180	0
6-Sep	HDcer-417	153	1	0	0	0	0
11-Oct	HD-475	18	0	0	0	0	0
18-Oct	HD-478	43	0	0	0	0	0
25-Oct	HD-482	0	0	0	0	0	0
1-Nov	HD-484	31	5	0	0	0	5
8-Nov	HD-487	13	3	0	0	0	0
15-Nov	HD-490		no fishing due to bad weather				
Total		1,034	78	336	0	180	5

Table 3.6. Tsawwassen FSC releases of sturgeon (bycatch) by date and location, 2009.

Week Ending	Locations ¹					Total
	T1	T2	T3	T4	T5	
19-Apr						0
10-May						0
24-May			4			4
31-May			1			1
7-Jun			4			4
14-Jun						0
21-Jun						0
28-Jun						0
5-Jul			2	4		6
12-Jul			17			17
19-Jul			5			5
26-Jul		5	9			14
2-Aug		1		2		3
9-Aug				1		1
16-Aug			11	2		13
30-Aug			1			1
6-Sep				1		1
11-Oct						0
18-Oct						0
25-Oct						0
1-Nov				5		5
8-Nov				3		3
15-Nov		no fishing due to bad weather				
Total	0	6	54	18	0	78

¹T1 = Roberts Bank (29-6,29-7), T2 = Sandheads (29-9, 29-10), T3 = Canoe Pass to Deas (29-14), T4 = Steveston-Pattullo (29-13), T5 = Pattullo-Port Mann (29-17), T6 = North Arm (29-12)

Table 3.7. Tsawwassen FSC salmon overages and underages based on 2009 allocations.

	Chinook ¹	Sockeye	Pink ²	Coho ²	Chum ²
Total Catch	995	1,132	72	57	1,320
Allocation	900	1,132	2,500	500	2,576
Remaining	-95	0	2,428	443	1,256
Carry forward	-95	0	0	0	0

¹ DFO approved a “special circumstances” increase in the TFN chinook allocation to 900 fish for 2009.

² Underage not carried forward due to limited Tsawwassen harvesting effort.

Table 4.1. Summary of bycatch (released and take-home) from the TFN Chum Economic Opportunity fishery, 24-25 Oct, 2009.

Packer	EO Catch Chum	Released (bycatch)						FSC (take home)			
		Chum	Coho	Chinook	Sockeye	Steelhead	Sturgeon	Coho	Chinook	Steelhead	Sockeye
Avisa	1,532	0	0	0	0	0	0	19	3	0	0
Elva M	991	0	3	1	0	0	0	3	0	0	0
Chimo IV	893	6	12	0	0	0	1	23	1	2	1
Totals	3,416	6	15	1	0	0	1	45	4	2	1

¹ Note the total of FSC take home from the EO fishery is also included in the FSC catch summary Table 3.3.

Table 5.1. Tsawwassen FSC crab fishery openings by target species, date, and gear type, 2009.

Week Ending	Licence #	Fishery Type	Target Species ¹	Opening	Closing	Gear Type
				Date and Time	Date and Time	
5-Apr	LFA-09-CL400/Tsawwassen	FSC - Communal	Crab	5-Feb 12:00	2-Apr 23:59	dip net, hand picking, net, ring, trap
31-May	LFA-09-HD-CL400/Tsawwassen	FSC - Communal	Crab	4-Apr 0:01	31-May 23:59	dip net, hand picking, net, ring, trap
4-Oct	LFA-09-HD-420/Tsawwassen	FSC - Communal	Crab	3-Jun 0:01	30-Sep 23:59	dip net, hand picking, net, ring, trap
3-Jan	LFA-09-HD-473/Tsawwassen	FSC - Communal	Crab	1-Oct 0:01	31-Dec 23:59	dip net, hand picking, net, ring, trap

¹ Crab species include Dungeness, Graceful, and Red Rock Crab.

Table 5.2. Tsawwassen FSC Dungeness crab catch and effort by licence, 2009.

Licence	Date (2009)	Dungeness Crab			
		Number Kept	Number Released	Effort (hours)	Trap-days
CL-400	5-Feb - 2-Apr	333	26	472	1,105
HDCL-400	4-Apr- 31-May	8,783	3,114	6,244	11,274
HD-420	3-Jun - 30-Sep	11,496	8,343	11,261	19,879
HD-473	1-Oct - 31-Dec	4,100	2,277	5,808	11,204
Totals		24,712	13,760	23,785	43,462

Table 5.3. Tsawwassen FSC Dungeness crab catch and effort by month, 2009.

Months	Dungeness Crab			
	Number Kept	Number Released	Effort (hours)	Trap-days
March	250	10	400	1,000
April	2,806	539	2,340	4,364
May	6,060	2,591	3,976	7,015
June	3,351	1,966	2,303	4,271
July	3,222	3,143	3,460	5,833
August	3,232	2,493	3,074	5,363
September	1,691	741	2,424	4,412
October	2,571	1,412	2,472	4,314
November	1,349	795	2,712	5,590
December	180	70	624	1,300
Totals	24,712	13,760	23,785	43,462

FIGURES

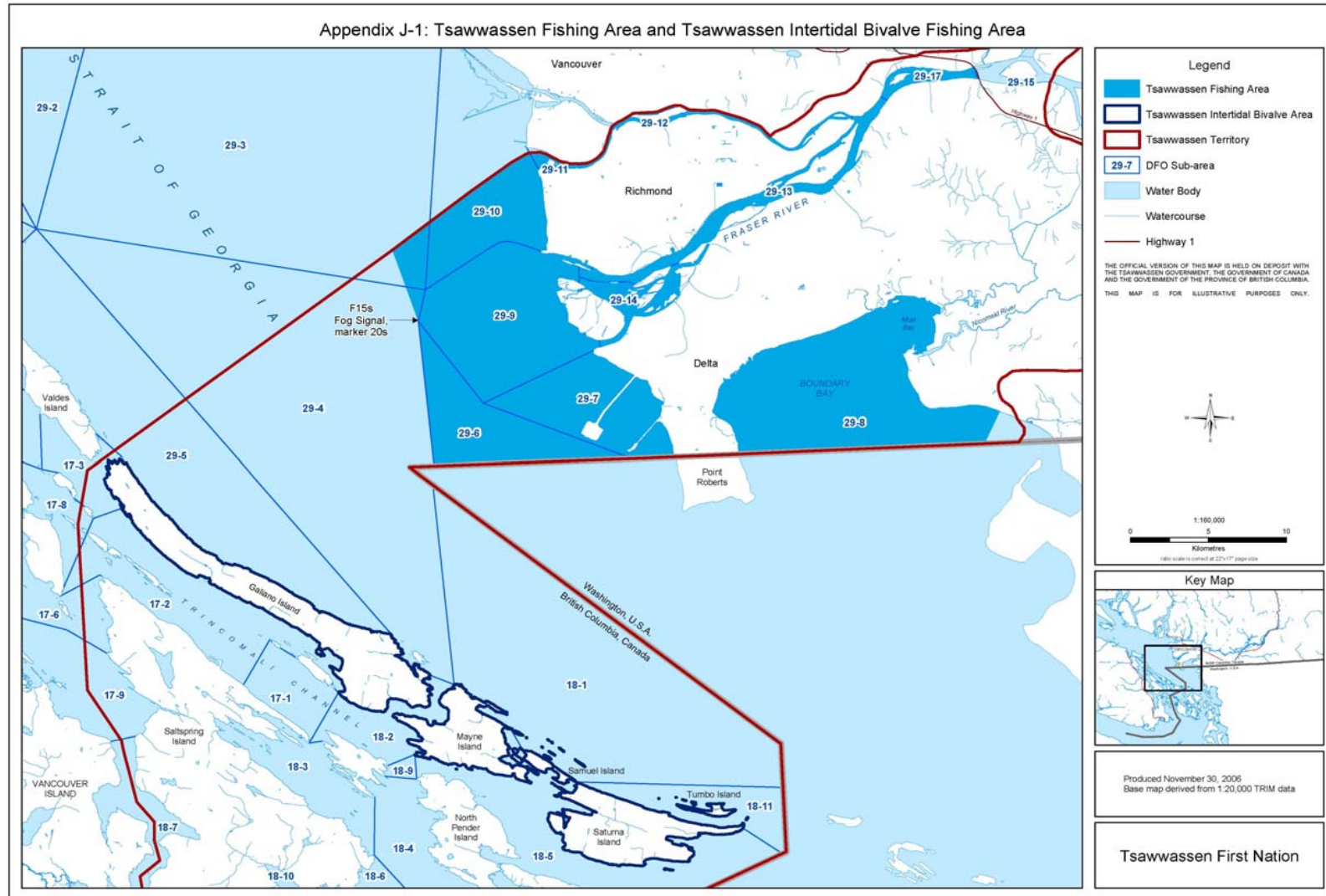


Figure 1.1. Tsawwassen Fishing Area and Tsawwassen Intertidal Bivalve Fishing Area.



Figure 1.2. Tsawwassen Fishing Area (enlarged map with location names).

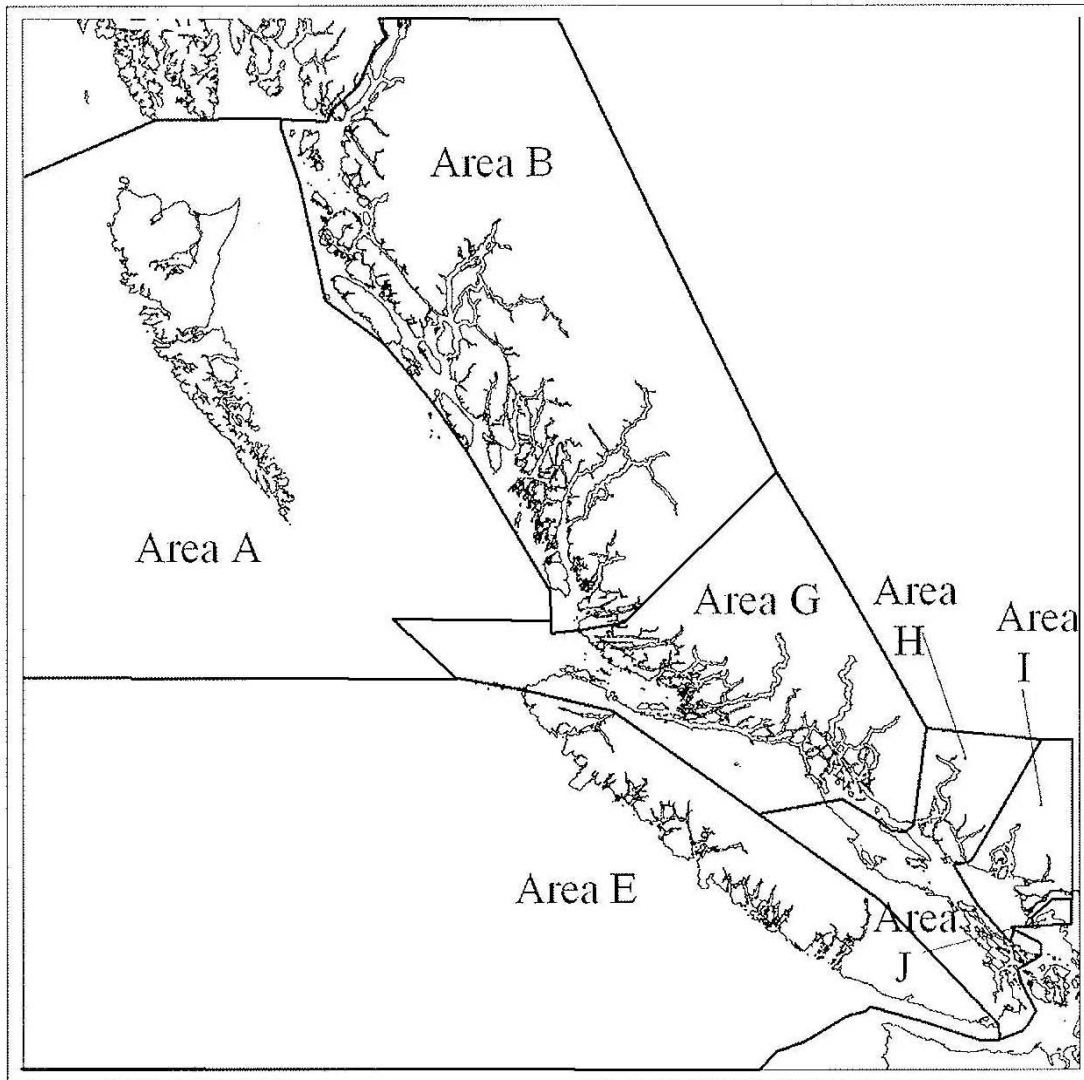


Figure 1.3. Map of Commercial Crab Management Areas.

APPENDICES

APPENDIX A
Tsawwassen Fishing Plan 2009



**Tsawwassen First Nation
Fisheries Department**

TSAWWASSEN ANNUAL FISHING PLAN 2009

This fishing plan has been prepared by Tsawwassen First Nation (TFN) for submission to the Joint Fisheries Committee to assist in the planning for Tsawwassen fisheries to be conducted after the Effective Date (3 April 2009).

The following sections provide the proposed harvest plans and harvest expectations for each salmon species, based on pre-season run size forecasts, to ensure that the Department of Fisheries and Oceans (DFO) is aware of potential TFN's harvest levels and preferred harvest times, areas and methods for each species or species group.

General

Tsawwassen fisheries will be conducted in a manner consistent with the Tsawwassen First Nation Final Agreement, Tsawwassen First Nation Harvest Agreement, Harvest Documents, Tsawwassen Fisheries Operational Guidelines (FOG) document, Tsawwassen Law, Federal Laws and British Columbia Law. As indicated in the Tsawwassen Final Agreement, Tsawwassen fisheries will be conducted within the Tsawwassen Fishing Area or Tsawwassen Intertidal Bivalve Fishing Area (see 2009 Fishing Calendar), unless otherwise permitted in Harvest Documents or licences issued by DFO. The specific catch monitoring requirements and plans for each species are defined in the Tsawwassen FOG document. The following species specific plans summarize the conservation issues and provide details on Tsawwassen proposed fishing times, gear and size restrictions for each species.

Eulachon

Conservation: The IFMP for eulachon indicates that: "Due to conservation concerns, only very limited Fraser River ceremonial fisheries for eulachon will be considered for 2009".

TFN Fishery: A small ceremonial harvest of eulachon is proposed for 2009. Eulachon may be harvested for ceremonial purposes by specifically designated TFN

fisher at the times and locations defined in a Tsawwassen Harvest Document.

Timing: From April 19st through May 15st of 2009, TFN's proposed eulachon fishing should be permitted for time periods equivalent to that permitted for other First Nation's fishing in the Tsawwassen Fishing Area, and the weekly timing for these fisheries will be determined in consultations with DFO prior to April 19th.

Gear: Gillnet mesh size no less than 25 mm and no greater than 50 mm with a maximum net length of 275 m.

Size: There are currently no size restrictions for FSC harvests of eulachon.

Chinook

Conservation: Concerns have been identified regarding early timing Chinook stocks that migrate through the lower Fraser River in April through mid-June, early Stuart sockeye from mid-June through mid-July, and late-run sockeye stocks from mid-August through the end of September.

TFN Fishery: Chinook salmon may be harvested for Food, Social, and Ceremonial (FSC) purposes by any designated TFN fisher at the times and locations defined in a Tsawwassen Harvest Document. TFN fishers and the TFN Fisheries Department will endeavour to minimize the encounter rate and harvest for non-target species (i.e., species without directed fishing effort during the Chinook salmon fishing periods).

Timing: From April 3st through May 31st of 2009, TFN's proposed Chinook fishing is a minimum of 12 hours per week or time equivalent to that permitted for other First Nation's fishing in the Tsawwassen Fishing Area; and these weekly fisheries will start on Friday or Saturday at a time that will be determined in weekly consultations with DFO on the Wednesday prior.

From June 1st through July 5th of 2009, TFN's proposed Chinook fishing is a minimum of 24 hours per week or time equivalent to that permitted for other First Nation's fishing in the Tsawwassen Fishing Area; and these weekly fisheries will start on Friday or Saturday at a time that will be determined in weekly consultations with DFO on the Wednesday prior.

From July 6th through August 16th of 2009, TFN's proposed Chinook fishing is 48 hours per week or time equivalent to that permitted for other

First Nation's fishing in the Tsawwassen Fishing Area; and these weekly fisheries will start on Friday at a time that will be determined in weekly consultations with DFO on the Wednesday prior.

From March 1th through March 31st of 2010, TFN's proposed Chinook for ceremonial purposes is 12 hours per week or time equivalent to that permitted for other First Nation's fishing in the Tsawwassen Fishing Area; and these weekly fisheries will start on Friday or Saturday at a time that will be determined in weekly consultations with DFO on the Wednesday prior.

Gear: Beach seines or other approved selective fishing methods may be used during any fishing period, if identified on the Harvest Documents.

Drift Nets and Set Nets with a minimum mesh size of 12cm/4.8in, a maximum length of 50 fathoms for drift nets and 10 fathoms for set nets, and a maximum depth of 60 meshes may be used, except during period when larger mesh size is required to minimize the catch of Early Stuart or Late-run sockeye stocks (see below). Drift Nets and Set Nets with a minimum mesh size of 20cm/8.0in, a maximum length of 50 fathoms for drift nets and 10 fathoms for set nets, and a maximum depth of 60 meshes may be used during the period when Early Stuart sockeye and late-run sockeye are migrating through the TFN fishing areas (approximately 20 June – 16 July; and 16 Aug. – 30 Sep. 2009).

Size: No Chinook with less than 30cm/12in in nose-fork length will be harvested, other than as by-catch that is unlikely to survive if released.

Expectation: The expected harvest level for 2009 is 625 Chinook.

Sockeye

Conservation: Conservation concerns are anticipated for several of the components of the 2009 sockeye return to the Fraser River: the Early Stuart stock, some Early Summer stocks, some the Late-run stocks (e.g., Cultus Lake stock). Pre-season estimates of run timing suggests that 80% of Early Stuart will pass through the TFN salmon fishing area before 16 July 2009. From 16 July 2009 through 15 August 2009, most of the sockeye migrating through the TFN salmon fishing area will be originating from the Early-summer run and the Summer-run stocks. After 15 August 2009, the Late-run

stocks (including Cultus Lake) could begin to enter the Fraser River in significant numbers depending on the extent to which these fish delay in the lower Georgia Strait. The pre-season forecasts for the total return of Fraser sockeye in 2009 is 10.5 million (254,000 Early Stuart, 739,000 Early Summers, 8,677,000 Summers, 334,000 Birkenhead and 573,000 “true” Lates). These estimates represent the 50% probability level for each timing group (i.e., there is a 50% probability that the run will be higher than these estimates).

TFN Fishery: Sockeye salmon may be harvested for Food, Social, and Ceremonial (FSC) purposes by any designated TFN Fishermen at the times and locations defined in a Tsawwassen Harvest Document. Once the first in-season Canadian Commercial Total Allowable Catch has been determined for Fraser sockeye salmon, TFN will be issued licences by DFO for the Tsawwassen commercial allocation for Fraser River sockeye salmon, as defined in the TFN Harvest Agreement. DFO will determine the timing, location and other details related to TFN commercial harvest opportunities. TFN fishers and the TFN Fisheries Department will endeavour to minimize the encounter rate and harvest for non-target species (i.e., species without directed fishing effort during the sockeye salmon fishing periods).

Timing: From July 17th through August 17th of 2009, the TFN’s proposed sockeye fishing is 48 hours per week; and these weekly fisheries will start on Friday at a time that will be determined in weekly consultations with DFO on the Wednesday prior.

From August 18th through August 31th of 2009, the TFN’s proposed sockeye fishing is 24 hours per week, if required to achieve the TFN sockeye allocation. These weekly fisheries will start on Friday or Saturday at a time that will be determined in weekly consultations with DFO on the Wednesday prior.

Gear: Beach Seines or other approved selective fishing methods may be used during any fishing period, if identified on the Harvest Documents.

Drift Nets and Set Nets with a minimum mesh size of 10cm/4in, a maximum length of 50 fathoms for drift nets and 10 fathoms for set nets, and a maximum depth of 60 meshes may be used.

Size: No sockeye less than 30cm/12in in nose-fork length will be harvested, other than by-catch that is unlikely to survive if released.

Expectation: Based on the pre-season (50% probability) run size forecast, the expected harvest level for 2009 is 15,200 sockeye in TFN FSC fisheries and 14,800 in TFN sales fisheries.

Pink

Conservation: Conservation concerns related to some Late-Summer Fraser sockeye stocks, Fraser steelhead and Interior Fraser coho could affect the timing and fishing methods permitted for commercial fisheries that target Fraser pink salmon stocks. No conservation concerns have been raised for the 2009 pink salmon return to the Fraser River. The IFMP for Southern BC salmon identifies escapement goal of 6 million for Fraser pink salmon.

TFN Fishery: Pink salmon may be harvested for Food, Social, and Ceremonial (FSC) purposes by any designated TFN fishers at the times and locations defined in a Tsawwassen Harvest Document for fisheries that target Fraser sockeye salmon. Once the first in-season Canadian Commercial Total Allowable Catch has been determined for Fraser pink salmon, TFN will be issued licences by DFO for the Tsawwassen commercial allocation for Fraser River pink salmon, as defined in the TFN Harvest Agreement. DFO will determine the timing, location and other details related to TFN commercial harvest opportunities. TFN fishers and the TFN Fisheries Department will endeavour to minimize the encounter rate and harvest for non-target species (e.g., steelhead, sturgeon, Interior Fraser coho).

Timing: TFN harvests of pink salmon for FSC purposes will occur during sockeye FSC fisheries as defined above. TFN commercial harvests of Fraser River pink salmon will occur between August 1st and September 30th depending on the run timing, harvesting method and conservation concerns for other species. The precise timing for these commercial fisheries will be determined in weekly consultations with DFO during this period.

Gear: As defined above for sockeye, Drift Nets and Set Nets with a minimum mesh size of 10cm/4in, a maximum length of 50 fathoms for drift nets and 10 fathoms for set nets, and a maximum depth of 60 meshes may be used to harvest pink salmon for FSC purposes.

It is anticipated that beach seines or other approved selective fishing methods will be required to harvest the Tsawwassen commercial allocation for Fraser River pink salmon due to minimize the impact on non-target species.

Size: No pink less than 30cm/12in in nose-fork length will be harvested other than as by-catch that is unlikely to survive if released.

Expectation: Based on the pre-season (50% probability) run size forecast, the expected harvest level for 2009 is up to 2,500 pink salmon as incidental catch in TFN sockeye fisheries and 10,000-50,000 in TFN sales fisheries.

Chum

Conservation: Conservation concerns related to Fraser steelhead and Interior Fraser coho could affect the timing and fishing methods permitted for commercial fisheries that target Fraser chum salmon stocks. TFN has not been informed of No conservation concerns have been raised for the 2009 chum salmon return to the Fraser River. The IFMP defines the decision guidelines for fisheries that target Fraser River chum salmon stocks.

TFN Fishery: Chum salmon may be harvested for Food, Social, and Ceremonial (FSC) purposes by any designated TFN Fishermen at the times and locations defined in a Tsawwassen Harvest Document. Once the first in-season Canadian Commercial Total Allowable Catch has been determined for Fraser pink salmon, TFN will be issued licences by DFO for the Tsawwassen commercial allocation for Fraser River pink salmon, as defined in the TFN Harvest Agreement. DFO will determine the timing, location and other details related to TFN commercial harvest opportunities. TFN Fishermen and the TFN Fisheries Department will endeavour to minimize the encounter rate and harvest for non-target species (e.g., steelhead, sturgeon, Interior Fraser coho).

Timing: From October 1st through November 30th of 2009, TFN chum fishing will be restricted to 48 hours per week; and these weekly fisheries will start on Friday or Saturday at a time that will be determined in weekly consultations with DFO on the Wednesday prior.

Gear: Beach seines or other approved selective fishing methods may be used during any fishing period, if identified in the Harvest Documents.

Drift Nets and Set Nets with a minimum mesh size of 15.8cm/6 ¼in, a maximum length of 50 fathoms for drift nets and 10 fathoms for set nets, and a maximum depth of 60 meshes may be used during the period of October 1st through November 31st of 2009.

Size: No chum less than 30cm/12in in nose-fork length will be harvested other than as by-catch that is unlikely to survive if released.

Expectation: The expected harvest level for 2009 is up to 2,570 chum salmon in TFN FSC fisheries and 8,000 chum in TFN sales fisheries, based on the average returns and commercial CTAC for 2003-07.

Coho

Conservation: Conservation concerns have been identified for Interior Fraser coho stocks, however, returns to some lower Fraser coho stocks are likely to be

sufficient to allow for directed or selective fisheries on these stocks and TFN will work with DFO to prepare a TFN fishing plan for a coho fishery to be initiated in late October 2009.

TFN Fishery: Coho salmon may be harvested for Food, Social, and Ceremonial (FSC) purposes by any designated TFN Fishermen at the times and locations defined in a Tsawwassen Harvest Document. TFN fishers and the TFN Fisheries Department will endeavour to minimize the encounter rate and harvest for non-target species (e.g., sturgeon and steelhead).

Timing: From October 1st through November 30th of 2009, TFN may harvest any marked coho captured in their chum fisheries.

Gear: Beach seines or other approved selective fishing methods may be used during any fishing period, if identified in the Harvest Documents.

Drift Nets and Set Nets with a minimum mesh size of 15.8cm/6 ¼in, a maximum length of 50 fathoms for drift nets and 10 fathoms for set nets, and a maximum depth of 60 meshes may be used during the period of October 1st through November 31st of 2009.

Size: No coho less than 30cm/12in in nose-fork length will be harvested other than as by-catch that is unlikely to survive if released.

Expectation: The expected harvest level for 2009 is 500 coho salmon harvested as incidental catch in TFN chum fisheries or caught using selective harvesting techniques to capture specific coho stocks.

Crab

Conservation: No conservation concerns have been identified for Dungeness crab harvesting in the Tsawwassen Fishing Area, however, the following conservation issues have been identified by DFO:

- All harvesters (Commercial, First Nation, and Recreational) should have the same minimum size limit for conservation of female crab. Commercial and recreational harvesters must release all females regardless of size. First Nation fishers are encouraged to release all female crabs caught in food, social and ceremonial fisheries in Pacific Region Management Areas 28 & 29.
- Crab harvesting during “soft shell” periods is not authorized for commercial harvesters for conservation reasons. Crabs with soft shells are susceptible to significant mortality during the fishing and handling process required for release of female and undersized crabs. At this

time First Nation harvesting for domestic purposes is allowed during the commercial closed period for soft shell.

- It is recommended that TFN crab harvesters reduce fishing effort during the soft-shell period to reduce mortalities of undersized crabs. In areas 28 and 29, the soft-shell or moulting period is from April to mid-June (April to mid-July in Boundary Bay). The commercial crab season is closed from December to mid-June in areas 28 and 29 (December to mid-July in Boundary Bay).

TFN Fishery: Crab may be harvested for FSC purposes by any designated TFN Fishermen at the times and locations defined in a Tsawwassen Harvest Document. TFN fishers and the TFN Fisheries Department will endeavour to minimize the encounter rate and harvest for non-target species.

Timing: From April 3rd 2009 through March 31st of 2010, 24 hours per day, every day.

Location: As noted in the Tsawwassen FOG document, crab buoys are not permitted in the portion of the Tsawwassen Fishing Area defined as the “Navigational No Float Zone”. TFN fishers are permitted to fish for crab in this zone but buoys for their crab traps must remain outside this zone.

Gear: Each TFN vessel may use up to a maximum of 50 traps to harvest crab for FSC purposes. The follow requirements apply to all traps used to catch crabs:

- Biodegradable escapement mechanisms are required on each trap in the form of either a rot cord, rot panel or rot panel alternative. These mechanisms are designed to minimize the effects of ghost fishing by traps.
- All crab traps must be fitted with at least one escape hole (at least 100 mm in diameter) that is not more than 100 mm below the top of the frame. The commercial fishery requires at least two escape holes, one of which must be at least 105 mm in diameter.

Size: The minimum size for Dungeness cCrab is 16.5cm/6.5in and for Red Rock Crab is 11.5cm/4.5in, both measured in a straight line across the widest part of the carapace, or shell. All crab less than the minimum size limit shall be immediately released to the area of capture.

Intertidal Bivalves

Conservation: No conservation concerns have been identified for intertidal bivalves in the Tsawwassen Intertidal Bivalve Fishing Area.

TFN Fishery: Intertidal bivalves may be harvested for FSC purposes by any designated TFN Fishermen at the times and locations defined in a Tsawwassen Harvest Document.

Timing: From April 3rd 2009 through March 31st of 2010, 24 hours per day, every day, except during periods when the proposed fishing area is closed due to marine biotoxins or sanitary contaminations.

Location: As described in the Tsawwassen FOG document:

- all clam harvesters are advised to check before they harvest that the area is not closed because of marine biotoxin or sanitary contamination.
- Where the Tsawwassen Intertidal Bivalve Fishing Area overlaps with a National Park Reserve or a National Marine Conservation Area, terms and conditions governing harvest will be developed following consultations with Parks Canada.

Gear: TFN members propose to use typical hand pick harvesting techniques (shovels, rakes and buckets) to harvest intertidal bivalves for FSC purposes.

Size: There are currently no size restrictions for FSC harvests of intertidal bivalves.

Shrimp and Prawns

Conservation: No conservation concerns have been identified for shrimp and prawns in the Tsawwassen Fishing Area.

TFN Fishery: Shrimp and prawns may be harvested for FSC purposes by any designated TFN Fishermen at the times and locations defined in a Tsawwassen Harvest Document. TFN fishers and the TFN Fisheries Department will endeavour to minimize the encounter rate and harvest for non-target species.

Timing: From April 3rd 2009 through March 31st of 2010, 24 hours per day, every day.

Location: As noted in the Tsawwassen FOG document, crab buoys are not permitted in the portion of the Tsawwassen Fishing Area defined as the "Navigational No Float Zone". As indicated for crab, TFN fishers are

permitted to fish for shrimp and prawns in this zone but buoys for their shrimp and prawn traps must remain outside this zone.

Gear: TFN members propose to use standard shrimp and prawn traps to harvest shrimp and prawns for FSC purposes.

Size: There are currently no size restrictions for FSC shrimp and prawn harvests.

Rockfish, Lingcod, Halibut, Dogfish and Sole

Conservation: Currently, the stock status data and conservation concerns for rockfish, and lingcod are not sufficient to close the FSC fishery for these species in the Tsawwassen Fishing Area. No conservation concerns have been identified for halibut and dogfish in the Tsawwassen Fishing Area.

TFN Fishery: Rockfish, lingcod, halibut, dogfish and sole may be harvested for FSC purposes by any designated TFN Fishermen at the times and locations defined in a Tsawwassen Harvest Document. TFN fishers and the TFN Fisheries Department will endeavour to minimize the encounter rate and harvest for non-target species.

Timing: From April 3rd 2009 through March 31st of 2010, 24 hours per day, every day.

Gear: TFN members propose to use rod and reel gear to harvest rockfish, lingcod, halibut, dogfish and sole for FSC purposes.

Size: There are currently no size restrictions for FSC harvests of rockfish, lingcod, halibut, dogfish and sole.

Sturgeon and Steelhead

Conservation: Conservation concerns have been identified for Fraser River white sturgeon and steelhead in the Tsawwassen Fishing Area.

TFN Fishery: All live white sturgeon and steelhead caught in TFN fisheries will be immediately released. No TFN fisheries will target white sturgeon or steelhead in 2009. In the event that a white sturgeon or steelhead caught in a TFN fishery is dead or likely to die, that fish may be retained by a TFN fisher for FSC purposes, as per the generally agreed upon practice for other Fraser River First Nation FSC fisheries. No steelhead or sturgeon may be retained in TFN commercial fisheries.

Timing: NA

Gear: NA

Size: NA

Marine Aquatic Plants

Conservation: No conservation concerns have been identified for marine aquatic plants in the Tsawwassen Fishing Area.

TFN Fishery: Tsawwassen members may harvest marine aquatic plants for FSC purposes in the Tsawwassen Fishing Area.

Timing: From April 3st 2009 through March 31st of 2010, 24 hours per day, every day.

Gear: TFN members propose to use hand picking methods to harvest marine aquatic plants for FSC purposes.

APPENDIX B
Examples of Harvest Documents



**Fisheries and Oceans
Canada**

**Pêches et Océans
Canada**

July 24, 2009

LFA-09-HD-438/TSAWWASSEN

HARVEST DOCUMENT FOR TSAWWASSEN FIRST NATION FOR SALMON

Whereas a final agreement with Tsawwassen First Nation is now in effect;

And whereas the final agreement describes a fishing right and provides for the issuance of harvest documents for the fishing right.

And whereas, under the final agreement, a harvest document may be, among other things, a licence or other document, or amendment thereto, issued by the Minister under Federal Law or Provincial Law in respect of the fishing right;

Now therefore, this harvest document is issued under the authority of section 7 of the *Fisheries Act* and section 4 of the *Aboriginal Communal Fishing Licences Regulations*.

This harvest document is issued to Tsawwassen First Nation in accordance with the final agreement and confers, subject to the *Fisheries Act* and regulations thereunder, the authority to fish under the following conditions:

Definitions

“Drift Net” means a gillnet free floating in the water, not attached in any manner to the shore, operated from a boat.

“DFO” means the Department of Fisheries and Oceans.

“Fishery” means fishing under the authority of this harvest document.

“Identification Number” in respect of a vessel means

(a) in the case of a registered commercial fishing vessel, the vessel registration number, and

(b) in the case of a vessel that is not a registered commercial fishing vessel, the number of the vessel identification decal issued by Tsawwassen First Nation.

“Observer” means an observer designated under section 39 of the *Fishery (General) Regulations*.

“Participant” means an individual carrying on fishing or any related activity, including transporting fish caught under the authority of this harvest document.

“Set Net” means a gillnet that is either tied to shore at one end and anchored in the river at the other end, or anchored in the river at both ends, or tied to the shore at one end and tied to a net pole at the other end.

“TFN” means Tsawwassen First Nation

“TFD” means Tsawwassen Fishing Department located at 131 North Tsawwassen Drive, V4M 4G2 604-948-5217

1. Dates and Times

Subject to amendments to the conditions of this harvest document and subject to close times as may be varied by the Director General, Pacific Region, DFO in accordance with the *Fishery (General) Regulations*, fishing is authorized by this harvest document for the following fishing periods:

- i. 14:00 hours, Saturday, July 25, 2009 to 22:00 hours, Saturday, July 25, 2009

2. Species and Quantity

The Fishery is limited to a harvest of: **sockeye salmon with incidental catch of chinook salmon.**

All efforts and attempts shall be made to return all non-target species including but not limited to viable steelhead, Dolly Varden, cutthroat trout, bull trout and sturgeon to the water alive.

Subject to closures and other conditions of this licence, the authority to fish under this licence will expire on **Saturday, July 25, 2009** or earlier if DFO, after consultation with Tsawwassen First Nation has determined there is a conservation concern.

3. Use of Fish

Fish caught under this harvest document are for food, social and ceremonial purposes. Sale of fish caught under this harvest document is not permitted.

4. Gear

The following gear is permitted to be used:

Drift Nets on condition that:

- i. Nets do not exceed a maximum of 50 fathoms or 300 feet in length and a maximum depth of 60 meshes, with a minimum mesh size of 4.8 inches.
- ii. Each Participant fishes only one net,
- iii. Only one net is fished from any vessel,
- iv. Each net is attended at all times by the Participant who is fishing the net.
- v. No vessel fishing under the authority of this harvest document has on board, in a hung condition, any net that does not meet the conditions in (i) above, and
- vi. Spare nets on board a vessel actively fishing are kept in a stowed condition.

Set Nets on condition that:

- i. Nets do not exceed a maximum of 10 fathoms or 60 feet and a maximum depth of 60 meshes,
- ii. All Set Nets are identified by a floating buoy prominently displaying the Participant's designation number, and the Participant's designation number is the only number displayed on the buoy, and.
- iii. All Set Nets fished from poles have buoys attached to the end of the net farthest from the beach by means of a tag line of sufficient length to allow the buoys to be on the surface of the water and clearly visible for inspection at all times.

Rod and Reel**5. Area**

Those waters of the Fraser River westerly of the power lines immediately downstream of the Port Mann Bridge and the waters of the Strait of Georgia bounded by a line commencing at Point Grey thence northerly to the light on Point Atkinson, thence westerly to the light on Point Cowan on Bowen Island, thence following the southerly shoreline of Bowen Island to the light on Cape Roger Curtis, thence in a direct line southeasterly to the Roberts Bank LL# 309 (known as the Hooter Buoy) thence due west to the 40 metre contour line as shown on C.H.S. 3463, thence follow the 40 metre contour line to the International border. Portions of DFO Management Sub-areas 29-3, 29-4, 29-6, 29-7, 29-9, 29-10, 29-11, 29-12, 29-13, 29-14, 29-17.

6. Designation of Individuals and Vessels

Where Tsawwassen First Nation designates an individual; a Tsawwassen fishing licence will be issued. An individual fishing under this harvest document must carry their Tsawwassen fishing licence at all times while participating in the Fishery or while transporting fish harvested in the Fishery and must present it to any DFO Fishery Officer, DFO Fishery Guardian or Aboriginal Fishery Officer upon request.

A vessel used in the Fishery must be identified by affixing a vessel identification decal issued by Tsawwassen First Nation. The decal must be affixed to the vessel so that the decal is legible and unobstructed when viewed from another vessel or from shore. Where the vessel is not a registered commercial vessel, the decal must be uniquely numbered. Where the vessel is a registered commercial vessel, the decal must not be numbered.

Prior to each fishing period, the Tsawwassen First Nation will provide to DFO a list of Tsawwassen First Nation members and vessels designated to fish under this Harvest Document and, in the case of a vessel, the vessel's Identity Number, and will immediately inform DFO of any changes to the list.

7. Monitoring and Harvest Reporting

7.1 Participant and Interview Data

Participants are required to notify the TFD of their intentions to harvest fish prior to their participation in each fishing period and report their catch and fishing effort information to the TFD after completion of each fishing period. These notifications and reports can be provided by phone to the TFD or by interview to an on-duty member of the TFN catch monitoring crew. Interviewers will record Salmon catch and effort information on the “TFN Salmon Fisheries Interview Data Form”.

7.2 Daily Fishing Logs

Each Participant will maintain a daily fishing log using the “TFN Salmon Fisheries Log Data Form”. Upon completion of each fishing period, each Participant will submit logs to monitors at landing sites or directly to the TFD office.

7.3 Validation

TFN will conduct on-water catch monitoring surveys or TFN fisheries officer patrols at least once every day during fishing period and, will record vessels participating in the Fishery. TFN will compare these records with the list of vessels designated to fish under this harvest document, will observe catches and compare it with catch reported orally to the TFD or recorded in daily logs.

Catch per vessel data will be verified through a random and representative sampling of a percentage of vessel landings by TFN shore based monitors. Efforts should be made to provide a representative sample of the various vessel types, fishing locations and gear observed in the Fishery in these validation activities. During landing validation TFN monitors will interview the Participants to obtain hours fished, number and species of Salmon and other species retained and released and perform a count the vessel’s catch. The percentage of vessels needing validation will vary dependent on the type of fishery and will be discussed at joint technical committee meetings or in season as needed but it is proposed that coverage should be in the range of 20%.

7.4 Reporting

Within 24 hours of the close of a fishing period, TFN will provide a preliminary catch report to DFO, including the names and the Vessel Identification Numbers that participated in the Fishery, the gear used, hours fished, status of the report (final or preliminary), number and species of Salmon and other species retained, and number and species of Salmon and other species released. Along with reported catch information, TFN will submit a report of validations conducted during the opening, including Vessel Identification Numbers, gear type, hours fished, number and species of Salmon and other species kept and number and species of Salmon and other species released. TFN will contact Participants who did not report after the Fishing period to determine whether they


did participate, and if so, collect the requisite information. The preliminary catch report will be finalized within 48 hours of the close of the Fishing period.

8. Other Provisions

Pursuant to subsection 22(6) of the *Fishery (General) Regulations*, compliance with the *Fisheries Act* and the regulations made under the *Act* is a condition of this harvest document.

Name/Title: Terri Bonnet/ Resource Manager LFA

Department of Fisheries and Oceans

Signature:  _____

Date: July 24, 2009



**Fisheries and Oceans
Canada**

**Pêches et Océans
Canada**

June 03, 2009

LFA-09-HD-420/TSAWWASSEN

HARVEST DOCUMENT FOR TSAWWASSEN FIRST NATION FOR CRAB

Whereas a final agreement with Tsawwassen First Nation is now in effect;

And whereas the final agreement describes a fishing right and provides for the issuance of harvest documents for the fishing right.

And whereas, under the final agreement, a harvest document may be, among other things, a licence or other document, or amendment thereto, issued by the Minister under Federal Law or Provincial Law in respect of the fishing right;

Now therefore, this harvest document is issued under the authority of section 7 of the *Fisheries Act* and section 4 of the *Aboriginal Communal Fishing Licences Regulations*.

This harvest document is issued to Tsawwassen First Nation in accordance with the final agreement and confers, subject to the *Fisheries Act* and regulations thereunder, the authority to fish under the following conditions:

Definitions

“DFO” means the Department of Fisheries and Oceans.

“First Nation” means the Tsawwassen First Nation.

“Fishery” means fishing under the authority of this harvest document.

“Identification Number” in respect of a vessel means

- (a) in the case of a registered commercial fishing vessel, the vessel registration number, and
- (b) in the case of a vessel that is not a registered commercial fishing vessel, the number of the vessel identification decal issued by Tsawwassen First Nation.

“Observer” means an observer designated under section 39 of the *Fishery (General) Regulations*.

“Participant” means an individual carrying on fishing or any related activity, including transporting fish caught, under the authority of this harvest document.

1. Dates and Times

Subject to amendments to the conditions of this harvest document and subject to close times as may be varied by the Director General, Pacific Region, DFO in accordance with the *Fishery (General) Regulations*, fishing is authorized by this harvest document from:

00:01 hrs Wednesday, June 3, 2009 to 23:59 hours Wednesday September 30, 2009

2. Species and Quantity

The Fishery is limited to a harvest of:

Dungeness Crab

Graceful Crab

Red Rock Crab

The minimum size for Dungeness Crab is 165 mm and for Red Rock Crab is 115 mm, both measured in a straight line across the widest part of the carapace, or shell. All crab less than the minimum size limit shall be immediately released to the area of capture.

Fishers are encouraged to immediately release all female crabs to the area of capture in a manner that causes least harm.

Subject to closures and other conditions of this licence, the authority to fish under this licence will expire on **Wednesday, September 30, 2009** or earlier if DFO, after consultation with Tsawwassen First Nation has determined there is a conservation concern.

3. Use of Fish

Fish caught under this harvest document are for food, social and ceremonial purposes. Sale of fish caught under this harvest document is not permitted.

4. Gear

The following gear is permitted to be used:

Hand-picking, Dip Net, Ring Net, and Traps, on condition that:

- (i) Traps set individually each have attached a floating buoy legibly marked with the name of the First Nation and Participant and with the Identification Number for the vessel used; and multiple traps set in a string have a floating buoy legibly marked name of the First Nation and Participant and with the Identification Number for the vessel used attached to both ends of each string.
- (ii) All buoy lines must be of a non-floating material so that the lines remain below the surface of the water while fishing, in order to minimize navigational hazards.
- (iii) All crab traps must be fitted with at least one escape hole (ring) that is at least 100 mm in diameter and that is not more than 100 mm below the top of the frame.
- (iv) All traps have a section in the top or side that has been secured by a length of untreated cotton twine no greater than No. 120. On deterioration this must produce a rectangular opening with a minimum size of 7 cm x 20 cm, or a square opening with a minimum size of 11 cm x 11 cm.
- (v) A maximum of 50 traps may be fished per vessel.

All submerged fishing gear must have a float of sufficient size such that it will not submerge with tidal or current change.

Floating buoys must remain at all times outside of the Navigational No Float Zone shown on the map in the schedule to this harvest document. Any floating buoys placed in the Navigational No Float Zone are subject to removal under authority of the Navigable Waters Protection Act.

Crab fishers are reminded to consider the impact on navigation when placing gear outside the Navigational No Float Zone.

5. Area

Fishing is permitted in the Tsawwassen Fishing Area as described in the Tsawwassen Final Agreement.

6. Designation of Individuals and Vessels

Tsawwassen First Nation may not designate individuals who are not Tsawwassen Members to harvest crab.

Where Tsawwassen First Nation designates an individual; a Tsawwassen fishing licence will be issued. The Tsawwassen fishing licence must be carried at all times while participating in the Fishery or while transporting fish harvested in the Fishery and must be presented to any DFO Fishery Officer, DFO Fishery Guardian or Aboriginal Fishery Officer upon request.

A vessel used in the Fishery must be identified by affixing a vessel identification decal issued by Tsawwassen First Nation. The decal must be affixed to the vessel so that the decal is legible and unobstructed when viewed from another vessel or from shore. Where the vessel is not a registered commercial vessel, the decal must be uniquely numbered. Where the vessel is a registered commercial vessel, the decal must not be numbered.

Before the Fishery commences, Tsawwassen First Nation will provide to DFO a list of Tsawwassen First Nation members and vessels designated to fish under this Harvest Document and, in the case of a vessel, the vessel's Identity Number, and will immediately inform DFO of any changes to the list.

7. Monitoring and Harvest Reporting

Participants will notify the Tsawwassen fisheries department before they initiate fishing efforts and will report their catch and fishing effort information after each fishing trip. These notifications and reports may be reported directly to the Tsawwassen fishing department or by interview to an on-duty member of the Tsawwassen fisheries department catch monitoring crew. The Tsawwassen fisheries department will record catch and effort information on the "TFN Crab Fishery Interview Data Form".

Within 72 hours of the end of each month, Tsawwassen First Nation will provide DFO with a list of all Participants and vessels that participated in the Fishery and a preliminary estimate of the total catch by species for that month.

Each Participant will maintain a daily fishing log for crab fishing efforts using the "TFN Crab Fisheries Log Data Form".

7.1 Validation

Tsawwassen First Nation will conduct on-water catch monitoring surveys or Tsawwassen First Nation's fisheries officer patrols at random intervals during the Fishery and will record Fishery participants and observe catches for comparison with reported list of Fishery participants and the catch reported in daily logs. Tsawwassen First Nation will conduct interviews, after completed fishing trips of fishers to obtain data that to validate the information recorded in the harvest logs.

7.2 Reporting

Within 72 hours of the end of each month, Tsawwassen First Nation will provide to the DFO Management Biologist (telephone: 604 666-6608, fax:604-666-7112) a summary table showing the number of Participants interviewed after a fishing trip, the catch and effort observed and the catch and effort reported directly to Tsawwassen fisheries department and recorded in the daily fishing logs.

8. Other Provisions

Pursuant to subsection 22(6) of the *Fishery (General) Regulations*, compliance with the *Fisheries Act* and the regulations made under the *Act* is a condition of this harvest document.

8.1 Soft-Shell Periods

Fishers are reminded that there is increased mortality during the crab soft-shell periods and are encouraged to carry out their fishing activity, as much as possible, during other time periods. The crab soft-shell periods are April to mid-June in the Fraser River estuary and May to mid-July in Boundary Bay.

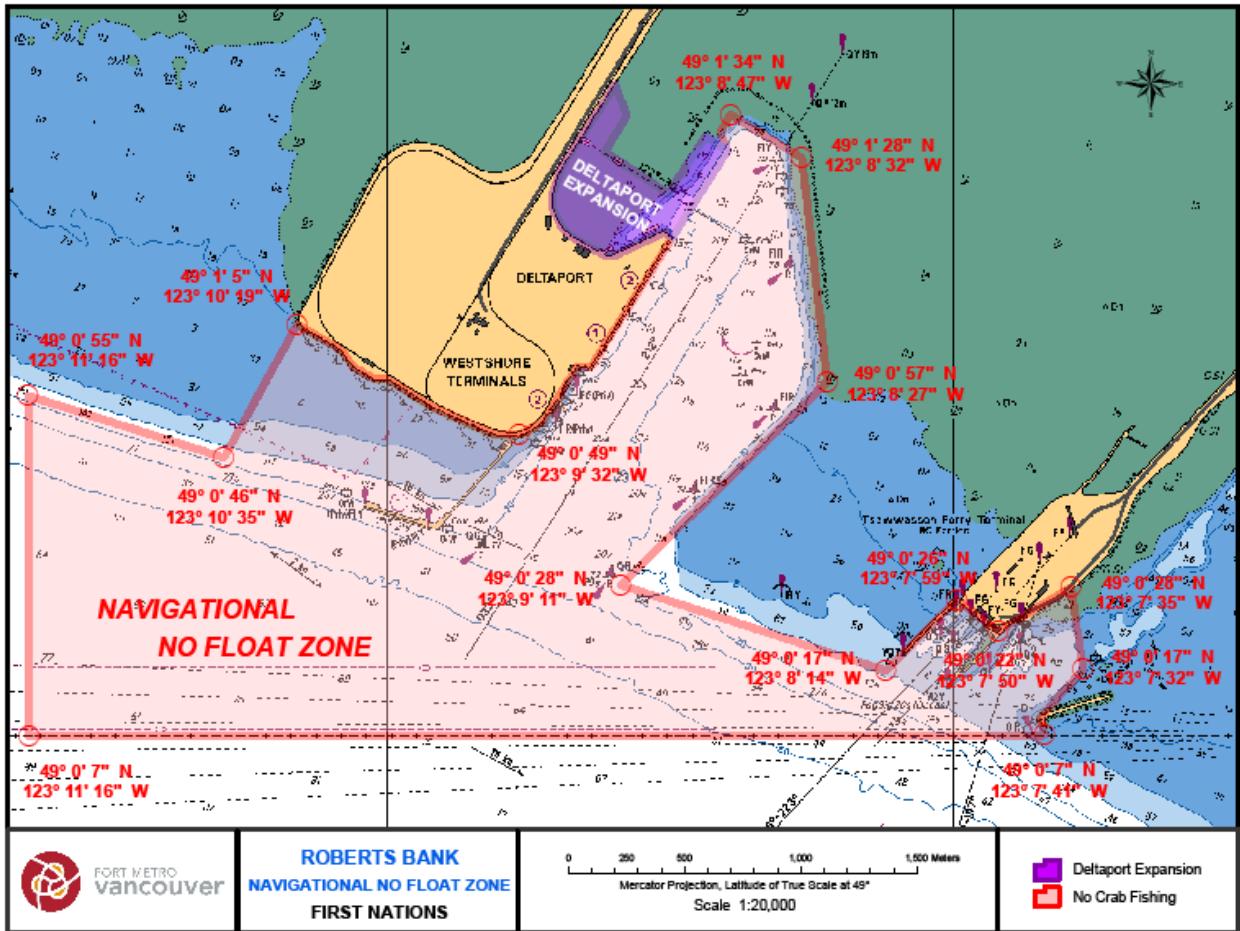
Name/Title: Terri Bonnet/ Resource Manager LFA

Department of Fisheries and Oceans

Signature:  _____

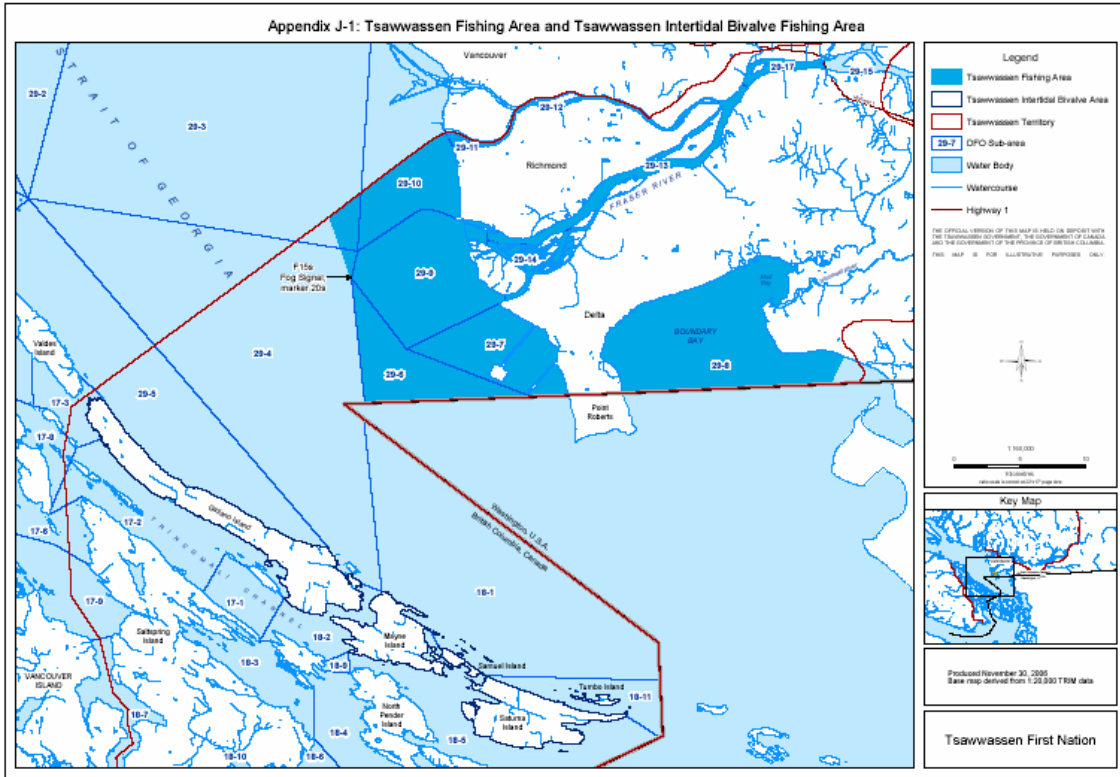
Date: June 03, 2007_____

Schedule A Navigational No Float Zone



Map created on October 10, 2008.

Tsawwassen Fishing Area





**Fisheries and Oceans
Canada**

**Pêches et Océans
Canada**

October 22, 2009

LFA-09-HD-482/TSAWWASSEN

**COMMERCIAL LICENCE FOR TSAWWASSEN FIRST NATION FOR CHUM
SALMON**

Whereas the Tsawwassen First Nation Harvest Agreement is now in effect;

This licence is issued under the authority of section 7 of the *Fisheries Act* and section 4 of the *Aboriginal Communal Fishing Licences Regulations*.

This licence is issued to Tsawwassen First Nation and confers, subject to the *Fisheries Act* and regulations thereunder, the authority to fish under the following conditions:

Definitions

‘DFO’ means the Department of Fisheries and Oceans.

‘Drift Net’ means a gillnet free floating in the water, not attached in any manner to the shore, operated from a boat.

‘Fishery’ means fishing under the authority of this licence;

‘Hatchery Marked Coho’ means a coho salmon marked by the absence of the adipose fin and having a healed scar in place of that absent fin (an adipose fin consists of a small fleshy appendage without fin ray support, located dorsally between the rayed dorsal fin and caudal (tail) fin);

‘Identification Number’ in respect of a vessel means

- (a) in the case of a registered commercial fishing vessel, the vessel registration number, and
- (b) in the case of a vessel that is not a registered commercial fishing vessel, the number of the vessel identification decal issued by Tsawwassen First Nation.

‘Landing Site’ means a site designated by DFO and the Monitoring and Enforcement Committee that has a monitor on duty during the Fishery.

‘Monitor’ means an individual hired by the First Nation to carry out monitoring activities.

‘Observer’ means an observer designated under section 39 of the *Fishery (General) Regulations*.

‘Participant’ means an individual carrying on fishing or any related activity, including transporting fish caught under the authority of this licence.

‘TFN’ means Tsawwassen First Nation

‘TFD’ means Tsawwassen Fishing Department located at 131 North Tsawwassen Drive, V4M 4G2 604-948-5217

1. Dates and Times

Subject to amendments to the conditions of this licence and subject to close times as may be varied by the Director General, Pacific Region, DFO in accordance with the *Fishery (General) Regulations*, fishing is authorized by this licence for the following fishing periods:

12:00 hours, Saturday, October 24, 2009 to 12:00 hours, Sunday, October 25, 2009

2. Species and Quantity

The Fishery is limited to a harvest of **8,113 chum salmon** and an incidental catch of pink, chinook and hatchery marked coho.

All efforts and attempts shall be made to return all non-target species including but not limited to viable wild coho, chinook, sockeye, steelhead, Dolly Varden, cutthroat trout, bull trout and sturgeon to the water alive.

Subject to closures and other conditions of this licence, the authority to fish under this licence will expire on **Sunday, October 25, 2009** or if the allocation for the year has been caught or earlier if DFO, after consultation with Tsawwassen First Nation has determined there is a conservation concern.

3. Use of Fish

Chum salmon harvested under this licence may be sold, traded or bartered. Any hatchery marked coho or chinook salmon harvested under this licence may not be sold, traded or bartered.

4. Gear

The following gear is permitted to be used:

Drift Nets on condition that:

- (i) Nets do not exceed a maximum of 100 fathoms or 600 feet in length and a maximum depth of 60 meshes, **with a minimum mesh size of 6 ¼ inches.**
- (ii) Each Participant fishes only one net.
- (iii) Only one net is fished from any vessel.
- (iv) Each net is attended at all times by the Participant who is fishing the net.
- (v) No vessel fishing under the authority of this licence may have on board any net that does not meet the conditions in (i) above.
- (vi) Spare nets on board a vessel actively fishing are kept in a stowed condition.

All vessels greater than 30' in length must be equipped with an operating revival tank. The purpose of which is to revive and hold those species of salmon, including steelhead, which the vessel is prohibited from retaining. The revival tank shall meet the following specifications:

- (a) constructed of non-transparent material;
- (b) minimum inside dimensions of 90 cm x 40 cm x 40 cm;
- (c) equipped with a tight fitting lid; and
- (d) designed so as to receive a continuous flow of oxygenated seawater throughout the tank.

The revival tank must be operating at all times while fishing and also when fish are being held in the tank after fishing is completed. While operating, the revival tank must be filled with water and there must be a constant exchange of oxygenated seawater throughout the tank.

The revival tank and equipment shall be kept clean and the tank shall be used for no other purpose than that outlined above.

5. Area

Those waters of the Fraser River westerly of the power lines immediately downstream of the Port Mann Bridge and the waters of the Strait of Georgia bounded by a line commencing at Point Grey thence northerly to the light on Point Atkinson, thence westerly to the light on Point Cowan on Bowen Island, thence following the southerly shoreline of Bowen Island to the light on Cape Roger Curtis, thence in a direct line southeasterly to the Roberts Bank LL# 309 (known as the Hooter Buoy) thence due west to the 40 metre contour line as shown on C.H.S. 3463, thence follow the 40 metre contour line to the International border. Portions of DFO Management Sub-areas 29-3, 29-4, 29-6, 29-7, 29-9, 29-10, 29-11, 29-12, 29-13, 29-14, 29-17.

6. Designation of Individuals and Vessels

Where Tsawwassen First Nation designates an individual; a Tsawwassen fishing licence will be issued. An individual fishing under this harvest document must carry their Tsawwassen fishing licence at all times while participating in the Fishery or while transporting fish harvested in the Fishery and must present it to any DFO Fishery Officer, DFO Fishery Guardian or Aboriginal Fishery Officer upon request.

A vessel used in the Fishery must be identified by affixing a vessel identification decal issued by Tsawwassen First Nation. The decal must be affixed to the vessel so that the decal is legible and unobstructed when viewed from another vessel or from shore. Where the vessel is not a registered commercial vessel, the decal must be uniquely numbered. Where the vessel is a registered commercial vessel, the decal must not be numbered.

Prior to each fishing period, the Tsawwassen First Nation will provide to DFO a list of Tsawwassen First Nation members and vessels designated to fish under this Harvest Document and, in the case of a vessel, the vessel's Identity Number, and will immediately inform DFO of any changes to the list.

7. Landing Slips

All fish caught by a Participant under the authority of this licence must be inspected by an Observer, Monitor, DFO fishery officer, or Aboriginal Fisheries Officer at the Participant's Landing Site, and such person shall issue a landing slip ('Landing Slip') to the Participant.

The Participant must obtain a Landing Slip each and every time that salmon caught under the authority of this Licence are landed. The Landing Slip will specify:

- the Landing Site;
- the date and time of landing;
- the Participant's name and designation number;
- the number of salmon landed for each species of salmon;
- the name and signature of the inspecting Observer, Monitor, DFO fishery officer, or Aboriginal Fisheries Officer ; and
- in the case of shallow seine fishing, the vessel name, commercial fishing vessel number or Ministry of Transport identification number.

8. Proof of Landing

Except where fishing or transporting salmon to a Landing Site, a Participant having possession of salmon caught under the authority of this Licence must carry a Landing Slip for the salmon. The Participant shall show Landing Slips to any DFO Fishery Officer, Aboriginal Fisheries Officer, Monitor or Observer upon request.

9. Transportation of Salmon

A Participant will transport all fish caught under the Communal Commercial Licence from the fishing site where, or the boat from which, the fish were caught immediately and directly to a Landing Site for inspection and counting by species within one hour after the closing time as set out by the Communal Commercial Licence.

A Participant may identify to the First Nation a second Participant who may transport the salmon to the Landing Site. No Participant will be authorized to transport salmon on behalf of more than three Participants in addition to him/herself. A Participant must inform the First Nation of such arrangements at least forty-eight hours prior to the start of a Fishery opening. The First Nation will provide DFO and the Planning Committee with a list of Participants authorized to transport salmon on behalf of other Participants during normal office hours of 0800 hours to 1600 hours, Monday to Thursday and prior to 1300 hours on Friday, and not less than six hours before the start of the Fishery opening.

10. Monitoring, Reporting and Validation

Participant and Interview Data

Participants are required to notify the TFD of their intentions to harvest fish prior to their participation in each fishing period and report their catch and fishing effort information to the TFD after completion of each fishing period. These notifications and reports can be provided by phone to the TFD or by interview to an on-duty member of the TFN catch monitoring crew. Interviewers will record Salmon catch and effort information on the "TFN Salmon Fisheries Interview Data Form".

Daily Fishing Logs

Each Participant will maintain a daily fishing log using the "TFN Salmon Fisheries Log Data Form". Upon completion of each fishing period, each Participant will submit logs to monitors at landing sites or directly to the TFD office.

Validation

TFN will conduct on-water catch monitoring surveys or TFN fisheries officer patrols at least once every day during fishing period and, will record vessels participating in the Fishery. TFN will compare these records with the list of vessels designated to fish under this harvest document, will observe catches and compare it with catch reported orally to the TFD or recorded in daily logs.

Catch per vessel data will be verified through a random and representative sampling of a percentage of vessel landings by TFN shore based monitors. Efforts should be made to provide a representative sample of the various vessel types, fishing locations and gear observed in the Fishery in these validation activities. During landing validation TFN monitors will interview the Participants to obtain hours fished, number and species of Salmon and other species retained and released and perform a count the vessel's catch. The percentage of vessels needing validation will vary dependent on the type of fishery and will be discussed at joint technical committee meetings or in season as needed but it is proposed that coverage should be in the range of 20%.

Reporting

Within 24 hours of the close of a fishing period, TFN will provide a preliminary catch report to DFO, including the names and the Vessel Identification Numbers that participated in the Fishery, the gear used, hours fished, status of the report (final or preliminary), number and species of Salmon and other species retained, and number and species of Salmon and other species released. Along with reported catch information, TFN will submit a report of validations conducted during the opening, including Vessel Identification Numbers, gear type, hours fished, number and species of Salmon and other species kept and number and species of Salmon and other species released. TFN will contact Participants who did not report after the Fishing period to determine whether they did participate, and if so, collect the requisite information. The preliminary catch report will be finalized within 48 hours of the close of the Fishing period.

11. Other Provisions

Pursuant to subsection 22(6) of the *Fishery (General) Regulations*, compliance with the *Fisheries Act* and the regulations made under the *Act* is a condition of this licence.

Name/Title: Terri Bonnet /Resource Manager LFA

Department of Fisheries and Oceans

Signature:  _____

Date: _____ October 22, 2009 _____

APPENDIX C
Dataforms

TSAWWASSEN FIRST NATION - SALMON FISHERIES INTERVIEW DATA FORM - 2009-10 (revised 28 July 09)

Monitor's Name : _____

SET NET / DRIFT NET
Put Set and Drift Net Catch on Separate Sheets Even
 from the Same Fisher.

Date : _____ Sheet ID : _____

Site Location : _____

Fishing Area (Zone) _____

#	Name of Fisher	No.	Fishing Area	Mesh Size	Count or Hail?	# Drifts	Interview Time		Net Set (Start of Fishing)		Net Picked (End of Fishing)		Fish Kept					Fish Released			Still Fish'n (Y/N)			
							Date	Time	Date	Time	Date	Time	Sock	Chin	Pink	Coho	Chum	Other	Sturg	FL		Sthd	Other	
1					C / H																			
2					C / H																			
3					C / H																			
4					C / H																			
5					C / H																			
6					C / H																			
7					C / H																			
8					C / H																			
9					C / H																			
10					C / H																			
11					C / H																			
12					C / H																			
13					C / H																			
14					C / H																			
15					C / H																			
16					C / H																			
17					C / H																			
Fishing Areas		* T1 = Roberts Bank (29-6,29-7), T2 = Sandheads (29-9, 29-10), T3 = Canoe Pass to Deas (29-14), T4 = Steveston-Pattullo (29-13), T5 = Pattullo-Port Mann (29-17), T6 = North Arm (29-12).										TOTALS												

Comments: _____

TSAWWASSEN FIRST NATION - SALMON FISHERIES LOG DATA FORM - 2009

Fisher Name/No. _____

Vessel Name/No: _____

Sheet ID : _____

#	Fishing Location	Location Code	Net Length (feet)	Mesh Size (inches)	# of drifts	Data Recorded		Net Set (Start of Fishing)		Net Picked (End of Fishing)		Fishing Effort Hours	Fish Kept						Fish Released (species & #)	Hailed in Y/N				
						Date	Time	Date	Time	Date	Time		Hours	Sock	Chin	Pink	Coho	Chum			Steelhd	Other		
	<i>Canoe Pass</i>	<i>T3</i>	<i>300</i>	<i>4.5</i>	<i>3</i>	<i>Apr. 4</i>	<i>2100</i>	<i>Apr. 4</i>	<i>0900</i>	<i>Apr. 4</i>	<i>2000</i>	<i>11</i>		<i>3</i>							<i>1 Sturgeon</i>	<i>Y</i>		
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
13																								
14																								
15																								
16																								
Fishing Areas	* T1 = Roberts Bank (29-6,29-7), T2 = Sandheads (29-9, 29-10), T3 = Canoe Pass to Deas (29-14), T4 = Steveston-Pattullo (29-13), T5 = Pattullo-Port Mann (29-17), T6 = North Arm (29-12).										TOTALS													

Comments: _____

Example Month Food Fishing Calendar

Fisher: *Eddie McKay*

On each fishing date, please record the species (see below) and the amount caught (number or lbs).

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 <i>Crab - 12</i> <i>Spring - 23</i>	2	3	4 <i>Crab - 15</i>	5	6	7
8	9	10	11	12	13	14
15	16	17	18 <i>Spring- 23</i> <i>Steelhead - 2</i>	19	20	21 <i>Spring - 10</i> <i>Crab - 8</i>
22	23	24	25	26	27	28
29 <i>Spring - 30</i> <i>Sockeye - 12</i>	30					

Species: Sockeye, Chinook or Spring, Coho, Chum, Pink, Steelhead, Halibut, Lingcod, Dogfish, Rockfish, Crab, Geoduck, Clams, Oysters, Prawns, and Shrimp.

TSAWWASSEN FIRST NATION - CRAB FISHING INTERVIEW DATA FORM - 2009-10

Sheet ID: _____

Monitor's Name: _____

Location: _____

Date: _____

#	TFN FISHER		FISHING METHOD (GL/SL)	STAT. AREA (Area-Sub)	HAULED		SOAK TIME Hours	DEPTH Meters	SPECIES (DU/RR)	CATCH INFO.		Number of Traps Pulled	REMARKS OR COMMENTS
	NAME	No.			Date	Time				Number Kept	Number Released		
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

Methods: GL = Ground Line, SL= Single Lines

Species: DU= Dungeness, RR=Red Rock, G=Graceful

TSAWWASSEN FIRST NATION - CRAB FISHING LOG DATA FORM - 2010

Sheet ID: _____

Fisher Name/No. _____ **Vessel Name/No.** _____

#	FISHING METHOD	STAT. AREA	HAULED		SOAK TIME	DEPTH	SPECIES (DU/RR)	CATCH INFO.		Number of Traps Pulled	REMARKS OR COMMENTS
	(GL/SL)	(Area-Sub)	Date	Time	Hours	Feet		Number Kept	Number Released		
	SL	29-6	Apr. 20	1800	48	50	DU	8	2	2	2-female crab released
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

Methods: GL = Ground Line, SL= Single Lines

Species: DU= Dungeness, RR=Red Rock, G=Graceful

TSAWWASSEN FIRST NATION - OTHER FISHERIES INTERVIEW DATA FORM - 2009-10

Sheet ID: _____

Monitor's Name: _____

Location: _____

Date: _____

#	TFN FISHER		SPECIES (Code)	FISHING METHOD (Code)	STAT. AREA (Area-Sub)	LANDING		FISHING TIME Hours	DEPTH Meters	CATCH INFO.		Units (Code)	Number of Traps Pulled	REMARKS OR COMMENTS
	NAME	No.				Date	Time			Number Kept	Number Released			
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Species: RF= Rockfish, LC = Lingcod, HB=Halibut, DF=Dogfish, C=Clams, O= Oysters, P=Prawns, S=Shrimp
 Methods: HL= Hook & Line, LL=Long-line, HP= Hand pick, T=Trap
 Units: P = Pieces, KG=kilograms, LB=pounds, B=5 gallon bucket

TSAWWASSEN FIRST NATION - OTHER FISHERIES LOG DATA FORM - 2010

Sheet ID: _____

Fisher Name/No. _____

Vessel Name/No. _____

#	SPECIES	FISHING METHOD	STAT. AREA	LANDING		FISHING TIME	DEPTH	CATCH INFO.		Units (Code)	Number of Traps Pulled	REMARKS OR COMMENTS
	(Name)	(Code)	(Area-Sub)	Date	Time	Hours	Meters	Number Kept	Number Released			
	Copper RF	RR	29-7	Apr. 10	1600	2.5	60	2	1	P		1-small lingcod released
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

Species: RF= Rockfish, LC = Lingcod, HB=Halibut, DF=Dogfish, FS=flounder/sole, C=Clams, O= Oysters, P=Prawns, S=Shrimp
 Methods: RR=Rod & Reel, LL=Long-line, HP= Hand pick, T=Trap
 Units: P = Pieces, KG=kilograms, LB=pounds, B=5 gallon bucket

APPENDIX D
Sockeye Salmon Allocations Tables

Tsawwassen First Nation Post-Season Summary, 2009 Final

Table 9.1. Pre-season estimates used to determine the initial 2009 TFN allocation and develop management plans for Fraser sockeye (4 Mar 2009).							
Pre-Season	Early Stuart	Early Summers	Summers	Birkenhead	Late Summers	Total	
Forecast Return	254,000	739,000	8,677,000	334,000	573,000	10,577,000	50% probability forecast
Total Allowable Mortality (TAM) Rate		60%	60%	60%	20%		Provided by Jeff (2009_escapement_plan_options_Jan 7 2009_v2.pdf)
Pre-season Total Escapement Target	108,000	295,600	3,470,800	133,600	458,400	4,466,400	Esc. Target = Total Run * (1-TAM)
Pre-season Management Adjustment*	63,720	124,152	242,956	0		430,828	MA = %MA * Total Escapement Target
Adjusted Escapement Target	171,720	419,752	3,713,756	133,600	458,400	4,897,228	Escapement Target + MA
Projected Test Fishery Catches	3,000	9,000	45,000	4,000	7,000	68,000	Very preliminary estimate of test fishing catch distribution
Aboriginal Exemption	79,280	25,227	329,183	1,058	11,190	400,000	AE=TAC for Estu and remainder distributed proportional to TAC
Total Allowable Catch (TAC)	79,280	310,248	4,918,244	196,400	107,600	5,611,772	TAC = Total Run - Esc. Target - Test - MA
US Total Allowable Catch	0	47,028	757,195	32,231	15,908	852,363	USTAC = 16.5% of (TAC-Aboriginal Exemption)
Canadian Total Allowable Catch (CTAC)	79,280	263,220	4,161,049	164,169	91,692	4,759,409	CTAC = TAC - USTAC
Planned First Nations FSC Catch	79,280	55,803	882,147	34,804	19,439	1,009,000	Assumed 1009K distributed proportional to CTAC
Planned Recreational Catch	0	5,624	88,909	3,508	1,959	100,000	Assumed 100K distributed proportional to CTAC, excluding Early Stuart
Canadian Commercial TAC (CCTAC)	0	201,793	3,189,993	125,857	70,294	3,587,937	CCTAC = CTAC-FSC-Rec
Accessible CCTAC		201,793	1,500,000	125,857	70,294	1,897,944	estimate constrained by ESum & Late TAC
TFN Allocation FSC	254	842	13,312	525	293	15,226	Distributed proportional to CTAC for fishery timing purposes
TFN Harvest Agreement Allocation	0	1,574	24,882	982	548	14,804	Distributed proportional to CCTAC for fishery timing purposes
*Percent Management Adjustment	59%	42%	7%	0%		n/a	

Table 9.2. In-season estimates used to determine the 2009 TFN allocation and implement management plans for Fraser sockeye (21 August 2009).							
In-Season	Early Stuart	Early Summers	Summers	Birkenhead	Late Summers	Total	
In-Season Run Size Estimate	85,000	175,000	700,000	100,000	450,000	1,510,000	in-season estimates as of 21-Aug
Total Allowable Mortality (TAM) Rate		0%	26%	26%	20%		Summers and Birkenhead TAM based on escapement target for summers
In-season Total Escapement Target	85,000	175,000	520,000	74,300	360,000	1,214,300	Esc. Target = Total Run * (1-TAM)
In-season Management Adjustment*	0	0	109,200	0		109,200	MA = %MA * Total Escapement Target
Adjusted Escapement Target	85,000	175,000	629,200	74,300	360,000	1,323,500	Escapement Target + MA
Actual or Projected Test Fishery Catches	1,740	5,000	18,000	1,500	6,000	32,240	from 21-Aug PSC TAC sheet
Aboriginal Exemption	0	0	52,800	24,200	84,000	161,000	
Total Allowable Catch (TAC)	0	0	52,800	24,200	84,000	161,000	TAC = Total Run - Esc. Target - Test - MA
US Total Allowable Catch	0	0	0	0	0	0	USTAC = 16.5% of (TAC-Aboriginal Exemption)
Canadian Total Allowable Catch (CTAC)	0	0	52,800	24,200	84,000	161,000	CTAC = TAC - USTAC
Planned First Nations FSC Catch	0	0	52,800	24,200	84,000	161,000	
Planned Recreational Catch	0	0	0	0	0	0	
Canadian Commercial TAC (CCTAC)	0	0	0	0	0	0	CCTAC = CTAC-FSC-Rec
Accessible CCTAC	0	0	0	0	0	0	
TFN Allocation FSC	0	0	528	242	840	1,610	Distributed proportional to CTAC for fishery timing purposes
TFN Harvest Agreement Allocation	0	0	0	0	0	0	Distributed proportional to CCTAC for fishery timing purposes
*Percent Management Adjustment	38%	60%	21%	0%		n/a	

Table 9.3. Post-season estimates required to determine the 2009 final TFN allocation and assess overages and underages for Fraser sockeye (Preliminary).							
Post-season	Early Stuart	Early Summers	Summers	Birkenhead	Late Summers	Total	preliminary post-season numbers from February PST meeting
Post-Season Run Size Estimate	85,000	175,000	650,000	60,000	400,000	1,370,000	in-season run size as of 3-Oct-2009
Total Allowable Mortality (TAM) Rate	0%	0%	20%	20%	20%		TAMs for run sizes above
Post-season Total Escapement Target	85,000	175,000	520,000	48,000	320,000	1,148,000	Esc. Target = Total Run * (1-TAM)
Post-season Management Adjustment*	0	0	130,000	0		130,000	Calculated using a % of the Total Escapement Target
Adjusted Escapement Target	85,000	175,000	650,000	48,000	320,000	1,278,000	Escapement Target + MA
Test Fishery Catches	1,940	5,520	15,760	1,580	7,340	32,140	as of 21-Jan-2010 (i.e. post-season actual catch)
Aboriginal Exemption	0	0	0	10,420	72,660	83,080	max EStu, remainder re-dist based on amh pre-season table
Total Allowable Catch (TAC)	0	0	0	10,420	72,660	83,080	TAC = Total Run - Esc. Target - Test - MA
US Total Allowable Catch	0	0	0	0	0	0	USTAC = 16.5% of (TAC-Aboriginal Exemption)
Canadian Total Catch (CTC)	7,300	9,500	44,000	1,500	6,300	68,600	Canadian Catch as of 21-Jan-2010 (excluding all test fisheries Sep 2009)
Canadian Total Allowable Catch (CTAC)	0	0	0	10,420	72,660	83,080	CTAC = TAC - USTAC
First Nations FSC Catch	7,300	9,500	44,000	1,500	6,300	68,600	Canadian FSC Catch as of 21-Jan-2010
Recreational Catch	0	0	0	0	0	0	Recreational Catch 2009
Canadian Commercial TAC (CCTAC)	0	0	0	0	0	0	CCTAC = CTAC-FSC-Rec
Actual Commercial TAC (CCTAC)	0	0	0	0	0	0	CDN Commercial Catch in 2009
Accessible CCTAC	0	0	0	0	0	0	estimate constrained by ESum & Late TAC
TFN Allocation FSC						831	Final FSC Allocation
TFN Harvest Agreement Allocation						0	Final Commercial Allocation
*Percent Management Adjustment	38%	60%	28%	0%		n/a	997