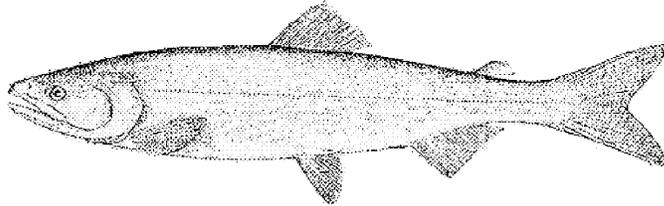


**PACIFIC REGION
DRAFT #2
INTEGRATED FISHERIES
MANAGEMENT PLAN
SALMON
SOUTHERN B.C.**

JUNE 1, 2009 TO MAY 31, 2010



Oncorhynchus spp



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Canada

This Integrated Fisheries Management Plan is intended for general purposes only. Where there is a discrepancy between the Plan and the Fisheries Act and Regulations, the Act and Regulations are the final authority. A description of Areas and Subareas referenced in this Plan can be found in the Pacific Fishery Management Area Regulations.

DFO-01264

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DRAFT #2

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DEPARTMENT CONTACTS

A more comprehensive list of contacts can be found online at:
www.pac.dfo-mpo.gc.ca/ops/fm/toppages/contacts_e.htm

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PSC Test Fisheries (Recorded, In-Season Information) (604) 666-8200

Recreational Fishing:
www.pac.dfo-mpo.gc.ca/recfish/default_e.htm

Commercial Fishing:
www.pac.dfo-mpo.gc.ca/ops/fm/Commercial/index_e.htm

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PICFI Coordinator	Gerry Kelly	(250) 754-0208
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Recorded Information - Port Alberni		(250) 723-0417

Recorded Information - Port Hardy
Pacific Fishery Licence Unit
60 Front Street
Nanaimo, B.C. V9R 5H7

(250) 949-6422

(250) 754-0400

INDEX OF WEB-BASED INFORMATION

FISHERIES AND OCEANS CANADA - GENERAL INFORMATION

Main Page (www.dfo-mpo.gc.ca/) Our Vision, Latest News, Current Topics

Acts, Orders, and Regulations (www.dfo-mpo.gc.ca/communic/policy/dnload_e.htm)

Canada Shipping Act, Coastal Fisheries Protection Act, Department of Fisheries and Oceans Act, Financial Administration Act, Fish Inspection Act, Fisheries Act, Fisheries Development Act, Fishing and Recreational Harbours Act, Freshwater Fish Marketing Act, Navigable Waters Protection Act, Oceans Act.

Reports and Publications (www.dfo-mpo.gc.ca/publication_e.htm)

Administration and Enforcement of the Fish Habitat Protection and Pollution Prevention Provisions of the *Fisheries Act*, Audit and Evaluation Reports - Audit and Evaluation Directorate Canadian Code of Conduct for Responsible Fishing Operations, Departmental Performance Reports, Fisheries Research Documents, Standing Committee's Reports and Government responses, Sustainable Development Strategy.

Waves (<http://inter01.dfo-mpo.gc.ca/waves2/index.html>)

Fisheries and Oceans Canada online library catalogue

Pacific Salmon Treaty (www.psc.org)

Background information; full text of the treaty.

PACIFIC REGION - GENERAL

Main Page (www.pac.dfo-mpo.gc.ca/)

General information, Area Information, Latest News, Current topics.

Policies, Reports and Programs

(www.pac.dfo-mpo.gc.ca/species/salmon/policies/default_e.htm)

Reports and Discussion Papers, New Directions Policy Series, Agreements.

Oceans Program (www.pac.dfo-mpo.gc.ca/oceans/default_e.htm)

Integrated Coastal Management; Marine Protected Areas; Marine Environmental Quality; Oceans Outreach; Oceans Act.

PACIFIC REGION - FISHERIES AND AQUACULTURE MANAGEMENT

Main Page (www.pac.dfo-mpo.gc.ca/ops/fm/fishmgmt_e.htm)

Commercial Fisheries, New and Emerging Fisheries, Recreational Fisheries, Maps, Notices and Plans.

Aboriginal Fisheries Strategy (www.pac.dfo-mpo.gc.ca/tapd/afs_e.htm)

Aboriginal Fisheries Strategy (AFS) principles and objectives; AFS agreements; Programs; Treaty Negotiations.

Recreational Fisheries (www.pac.dfo-mpo.gc.ca/recfish/default_e.htm)

Fishery Regulations and Notices, Fishing Information, Recreational Fishery, Policy and Management, Contacts, Current B.C. Tidal Waters Sport Fishing Guide and Freshwater Supplement; Rockfish Conservation Areas, Shellfish Contamination Closures, On-line Licensing.

Commercial Fisheries (www.pac.dfo-mpo.gc.ca/ops/fm/Commercial/index_e.htm)

Links to Groundfish, Herring, Salmon, Shellfish and New and Emerging Fisheries homepages; Selective Fishing, Test Fishing Information, Fishing Areas, Canadian Tide Tables, Fishery Management Plans, Commercial Fishery Notices (openings and closures).

Fisheries Notices (www-ops2.pac.dfo-mpo.gc.ca/fns_reg/index.cfm)

Want to receive fishery notices by e-mail? If you are a recreational sport licence vendor, processor, multiple boat owner or re-distribute fishery notices, register your name and/or company at the web-site address above. Openings and closures, updates, and other relevant information regarding your chosen fishery are sent directly to your registered email. It's quick, it's easy and it's free.

Integrated Fishery Management Plans

(www-ops2.pac.dfo-mpo.gc.ca/xnet/content/MPLANS/MPlans.htm)

Current Management Plans for Groundfish, Pelagics, Shellfish (Invertebrates), Minor Finfish, Salmon; sample Licence Conditions; Archived Management Plans.

Salmon Test Fishery - Pacific Region

(www-ops2.pac.dfo-mpo.gc.ca/xnet/content/salmon/testfish/default.htm)

Definition, description, location and target stocks.

Licensing (www.pac.dfo-mpo.gc.ca/ops/fm/Licensing/Default_e.htm)

Contact information; Recreational Licensing Information, Commercial Licence Types, Commercial Licence Areas, Licence Listings, Vessel Information, Vessel Directory, Licence Statistics and Application Forms.

Salmon (www.pac.dfo-mpo.gc.ca/species/salmon/default_e.htm)

Salmon Facts; Salmon Fisheries; Enhancement and Conservation; Research and Assessment; Consultations; Policies, Reports and Agreements; Glossary of Salmon Terms.

Fraser River/B.C. Interior Area Resource Management and Stock Assessment
(www.pac.dfo-mpo.gc.ca/fraserriver/)

Contact information; Test fishing and survey results (Albion, creel surveys, First Nations); Fraser River sockeye and pink escapement updates; Important notices; Recreational fishing information.

North Coast Resource Management (www.pac.dfo-mpo.gc.ca/northcoast/default.htm)

First Nations fisheries, Recreational fisheries; Commercial salmon and herring fisheries; Skeena Tye test fishery; Counting facilities; Post-season Review; Contacts.

Yukon/Transboundary Rivers Area Main Page

(www.pac.dfo-mpo.gc.ca/yukon/default_e.htm)

Fisheries Management; Recreational fisheries; Habitat; Fisheries Management; Licensing; Contacts.

PACIFIC REGION – OCEANS, HABITAT AND ENHANCEMENT

Main Page (www-heb.pac.dfo-mpo.gc.ca/default_e.htm)

Publications (legislation, policy, guidelines, educational resources, brochures, newsletters and bulletins, papers and abstracts, reports); GIS maps and Data (Habitat inventories, spatial data holdings, land use planning maps); Community involvement (advisors and coordinators, educational materials, Habitat Conservation and Stewardship Program, projects, Streamtalk).

PACIFIC REGION - POLICY AND COMMUNICATIONS

Main Page (www-comm.pac.dfo-mpo.gc.ca/)

Media Releases; Salmon Updates, Backgrounders, Ministers Statements, Publications; Contacts.

Consultation Secretariat

(www-comm.pac.dfo-mpo.gc.ca/pages/consultations/consult_e.htm)

Consultation Calendar, Policies; National; Partnerships; Fisheries Management, Oceans, Science and Habitat and Enhancement Consultations; Current and Concluded Consultations.

Publications Catalogue

(www-comm.pac.dfo-mpo.gc.ca/pages/NPubCatalogue/pubs_e.asp)

Listing of information booklets and fact sheets available through Communications branch.

Species at Risk Act (SARA)

(www.pac.dfo-mpo.gc.ca/sara/default_e.htm)

SARA species; SARA permits; public registry; enforcement; Stewardship projects; Consultation; Past Consultation; First Nations; Related Sites; For Kids; News Releases.

PACIFIC REGION - SCIENCE

Main Page (http://www-sci.pac.dfo-mpo.gc.ca/sci/default_e.htm)

Science divisions; Research facilities; PSARC; International Research Initiatives.

Salmon and Freshwater Ecosystems (SAFE)

(www-sci.pac.dfo-mpo.gc.ca/mehsd/index_e.htm)

Research; Research Sites; Research Programs; Fraser River Environmental Watch Program; Publications and Reports; Photo Gallery; Pink Salmon/Sea Lice Monitoring Program.

GLOSSARY

A more comprehensive glossary is available online at:

http://www.pac.dfo-mpo.gc.ca/species/salmon/salmon_glossary/glossary_e.htm

AABM	Aggregate Abundance Based Management
AAROM	Aboriginal Aquatic Resource and Oceans Management
AHC	Area Harvest Committee
AFS	Aboriginal Fisheries Strategy
ATP	Allocation Transfer Program
AUC	Area Under the Curve
BKD	Bacterial Kidney Disease
COHO ABM	Coho Abundance Based Management
COSEWIC	Committee for the Status of Endangered Wildlife in Canada
CPUE	Catch per unit effort
CSAB	Commercial Salmon Advisory Board
CWT	Coded wire tag
ESSR	Excess Salmon to Spawning Requirements
FRP	Fraser River Panel
FSC	Food, social and ceremonial
IHPC	Integrated Harvest Planning Committee
ISBM	Individual Stock Based Management
MVI	Mid Vancouver Island
PICFI	Pacific Integrated Commercial Fisheries Initiative
PSARC	Pacific Scientific Advice Review Committee
PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
RCA	Rockfish Conservation Area
SARA	Species at Risk Act
SEP	Salmonid Enhancement Program
SFAB	Sport Fishing Advisory Board
SHMF	Selective Hatchery Mark Fishery
TAC	Total allowable catch
WCVI	West Coast Vancouver Island
WSP	Wild Salmon Policy (<i>Canada's Policy for Conservation of Wild Pacific Salmon</i>)

1. **MANAGEMENT CHANGES FOR 2009/2010**

- **Next steps in improvements to fishery catch monitoring.**

The development of an improved catch monitoring regime will continue to be a priority in the management of commercial, recreational and First Nations fisheries. The Department is working with stakeholder and First Nation groups to develop catch monitoring standards for all fisheries. The standards focus on data collected to estimate catches, releases, and other essential biological data for stock assessments and fishery management evaluations.

The Department released a consultation document in February, 2008 called "*Interim Fishery Monitoring and Catch Reporting Standards for Commercial Salmon Fisheries*". This document will form the basis for discussion with the commercial salmon fleet regarding interim fishery monitoring and catch reporting standards.

- **Pacific Integrated Commercial Fisheries Initiative (PICFI)**

This initiative, launched in 2007 and scheduled to end in 2012, is aimed at achieving environmentally sustainable and economically viable commercial fisheries, where conservation is the first priority and First Nations' aspirations to be more involved are supported.

For further information, please visit:

http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/Consultation2007/PICFI/default_e.htm

- **Demonstration Fisheries.**

In 2009, Area Harvest Committees will continue to explore innovative ways to access TAC more efficiently, to increase market value of the product, or to access TAC that may be unavailable due to conservation concerns, or to access TAC that a full fleet fishery is unable to access.

As in previous years, the focus with First Nations will be on experimenting in terminal areas on abundant stocks. These fisheries will be conducted separately from food, social and ceremonial fisheries, under the same priority and similar rules as the commercial fishery and fish harvested will be off-set with licenses voluntarily relinquished from the commercial fishery.

- **Management measures to protect Early-Timed Fraser River chinook.**

Spawning escapements of Early-Timed Fraser chinook have declined to very low levels and the Department is implementing measures to reduce harvest impacts. Management measures similar to 2008 are required for commercial, recreational and First Nation fisheries to prevent further decline of Early-Timed Fraser chinook.

- **Management measures to protect Spring and Summer (Age 5₂) chinook.**

The Department proposes to use the predicted return to the Fraser River of 40,000 chinook based on an inseason assessment of Albion test fishery catches as the basis for a 2 zone management approach in 2009 until WSP benchmarks and exploitation rate targets can be identified. The predicted return to the Fraser River will be used to assess which management zone and management actions will be used for fishery planning purposes.

- **Management measures to protect Early Stuart sockeye**

Early Stuart has experienced poor returns in recent years, partly due to high en-route mortality as they migrate up the Fraser River. The 2009 cycle line is the dominant year for Early Stuart sockeye and the forecast abundance may allow for harvest depending on the escapement option selected. In the event that a total allowable catch is not available, the Department will use window closures and other fishing restrictions in commercial, recreational and First Nations fisheries to allow escapement objectives to be met. Any targeted fisheries will need to be carefully planned and paced in order to ensure escapement targets are met

- **Tsawwassen Treaty Implementation.**

The Tsawwassen Final Agreement between the Tsawwassen First Nation, the Province of British Columbia and Canada takes effect in 2009. The 2009 Tsawwassen FSC fisheries will be implemented as detailed in the Tsawwassen First Nation Final Agreement and Tsawwassen Fisheries Operation Guidelines. Conduct of Tsawwassen commercial fisheries will be guided by the Tsawwassen First Nation Harvest Agreement.

- **Okanagan Sockeye**

Due to strong returns of Okanagan sockeye in 2008, well in excess of the PSARC approved spawning goal, specific conservation measures for this stock are not identified in this Management Plan.

- **Pacific Salmon Treaty**

On December 23, 2008, Canada and the US ratified new provisions for five chapters under Annex IV of the PST. These new chapters came into effect on January 1, 2009 and the new management regimes are being implemented by DFO and US agencies for the 2009 season. Significant changes from the previous chapters are highlighted in Section 3.7 of this draft IFMP.

2. INTRODUCTION

This 2009/2010 Southern B.C. Salmon Integrated Fisheries Management Plan (IFMP) covers the period June 1, 2009 to May 31, 2010 for First Nations, recreational and commercial fisheries for Pacific salmon in the southern areas of B.C. It is designed to describe the approach to fisheries in tidal and non-tidal waters from Cape Caution south to the B.C./Washington border, including the Fraser River watershed. Pacific salmon species covered in the plan include sockeye, coho, pink, chum and chinook salmon.

This plan describes the management of Pacific salmon fisheries in southern B.C. and the factors that influence decision-making.

This plan incorporates the results of consultations and input from the Integrated Harvest Planning Committee (IHPC), south coast First Nations, and south coast recreational and commercial advisors and the Marine Conservation Caucus.

Fisheries and Oceans Canada will continue to consult with First Nations, recreational, and commercial fish harvesters to further co-ordinate fishing activities in 2009. Further consultations

will occur as updated forecast information becomes available or when observed in-season returns are not covered by the decision guidelines.

Details about on-going policy development and other departmental initiatives can be found on the Fisheries and Oceans Canada website. For more specific information, refer to the Index of Web Based Information section of this document.

3. GENERAL CONTEXT

3.1. Background

Departmental policy development related to the management of fisheries is guided by a range of considerations that include legislated mandates, judicial guidance and international and domestic commitments that promote biodiversity and a precautionary, ecosystem-based approach to the management of marine resources. Each of the policies were developed with considerable consultation from all those with an interest in salmon management. While the policies themselves are not subject to annual changes, implementation details are continually refined where there is general support.

3.2. Policy Framework for the Management of Pacific Salmon Fisheries

Salmon management programs in 2009 will continue to be guided by policy and operational initiatives adopted over the past several years. These include; *Canada's Policy for Conservation of Wild Pacific Salmon (WSP)*, *An Allocation Policy for Pacific Salmon*, Pacific Fisheries Reform, *A Policy for Selective Fishing*, *A Framework for Improved Decision Making in the Pacific Salmon Fishery*, the Integrated Harvest Planning Committee, and Pacific Region Fishery Monitoring and Reporting Framework.

Canada's Policy for Conservation of Wild Pacific Salmon (also called the Wild Salmon Policy) sets out the vision regarding the importance and role of Pacific Wild salmon as well as a strategy for their protection. More information on this can be found in Section 2.3.1 of this plan or on the internet at http://www-comm.pac.dfo-mpo.gc.ca/publications/wsp/default_e.htm

An Allocation Policy for Pacific Salmon, announced in 1999, contains principles to guide the management and allocation of the Pacific salmon resource between First Nations, commercial and recreational harvesters, and forms the basis for general decision guidelines outlined in Section 4.1 of this plan.

Pacific Fisheries Reform, announced by the Department in April of 2005, provides a vision of a sustainable fishery where the full potential of the resource is realized, Aboriginal rights and title are respected, there is certainty and stability for all, and fishery participants share in the responsibility of management. Future treaties with First Nations are contemplated, as is the need to be adaptive and responsive to change. This policy direction provides a framework for improving the economic viability of commercial fisheries, and to addressing First Nations aspirations with respect FSC and commercial access and involvement in management. Over the past two years work has also been initiated between the recreational sector (SFAB), DFO and the Province of B.C. that recognizes the current and future value of the recreational fishery via the development of a vision and strategic plan for the recreational fishery in BC. The draft

document, *A Vision for Recreational Fisheries in British Columbia 2008-2012, encompassing tidal waters and anadromous species of the West Coast of Canada*, is the result of that effort and is intended to chart a course for the future for a recreational fishery in BC that is sustainable, provides benefits to Canadians, and is managed in an integrated fashion that respects the interests of others.

In May 1999, the Department released *A Policy for Selective Fishing in Canada's Pacific Fisheries*. Under the Department's selective fishing initiative, harvester groups have experimented with a variety of methods to reduce the impact of fisheries on non-target species, with a number of measures reaching implementation in fisheries.

Consultative elements of an Improved Decision Making discussion paper have been implemented through establishment of the Consultation Secretariat, which works to improve the flow of information between stakeholders and the Department. Up-to-date information pertaining to on-going consultations can be found on the Secretariat's website at: http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/consult_e.htm

The Integrated Harvest Planning Committee (IHPC) for salmon is comprised of First Nations, recreational and commercial interests (as represented by the Sport Fishing Advisory Board and the Commercial Salmon Advisory Board) and the Marine Conservation Caucus (representing a coalition of "environmental" organizations). This committee is recognized to be the primary source of stakeholder input into Salmon Integrated Fisheries Management Plans.

Further information on salmon consultations, including terms of reference, membership, meeting dates and records of consultation can be found on the Salmon Consultation website at: http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/consultations/salmon/sapdefault_e.htm

In 2002, the Department released the Pacific Region Fishery Monitoring and Reporting Framework. This framework will be used as the main reference tool during coast-wide consultations to identify necessary improvements in fishery monitoring and catch reporting systems. This framework outlines the department's goals, objectives and requirements in catch monitoring.

On May 1, 2004, Fisheries and Oceans Canada (DFO) introduced a new national policy entitled, *Access to Wild Aquatic Resources as it Applies to Aquaculture*. For the purposes of this policy, wild aquatic resources include both wild salmon, defined in 'Canada's Policy for Conservation of Wild Pacific Salmon' and hatchery stocks managed by DFO.

Aquaculturists require access to the resource to conduct their aquaculture operations. This policy is consistent with the commitment taken by DFO in its "Aquaculture Policy Framework" introduced in 2002 to provide aquaculturists with predictable, equitable, and timely access to the aquatic resource base.

This policy provides the aquaculture industry with access to stocks in a manner that is consistent with the department's sustainable management of those stocks. Access requests for aquatic

resources will be considered by the regional aquaculture offices in collaboration with the ongoing fisheries management planning process.

For further information refer to the following web link: <http://www.dfo-mpo.gc.ca/aquaculture/aquaculture-eng.htm>

3.3. Conservation

Given the importance of Pacific salmon to the cultural and socio-economic fabric of Canada, conservation of these stocks is of the utmost importance. In order to achieve this, specific actions are taken to not only ensure protection of fish stocks, but also freshwater and marine habitats. Protecting a broad range of stocks is the most prudent way of maintaining biodiversity and genetic integrity.

Management of a natural resource like salmon has a number of inherent risks. Uncertain forecasting, environmental and biological variability as well as changes in harvester behaviour all add risks that can threaten conservation. Accordingly management actions will be precautionary and risks will be specifically evaluated. Conservation of salmon stocks is the best approach to reduce risk of long term negative impacts to these stocks and the social and economic values that are derived from them.

3.3.1. Wild Salmon Policy

The WSP, which was approved in 2005, sets out a process for the protection, preservation and rebuilding of wild salmon and their marine and freshwater ecosystems for the benefit of all Canadians. The policy provides for the identification of irreplaceable groupings of stocks (called "Conservation Units") and the identification of upper and lower benchmarks that are a measure of the biological status of each CU. Other features of the WSP include the monitoring of habitat status and a process for public engagement in the establishment of long term strategic plans for Conservation Units.

The Conservation Units have been established. A link to the document describing them can be found at:

http://www.dfo-mpo.gc.ca/CSAS/Csas/Publications/ResDocs-DocRech/2007/2007_070_e.htm

A methodology to evaluate the biological status of the Conservation Units is currently being developed. Work is focused on the process of establishing benchmarks, the development of habitat and ecosystem indicators for monitoring and testing an integrated planning process.

3.3.2. Species at Risk Act

The *Species at Risk Act* (SARA) came into force in 2003. The purposes of the *Act* are "to prevent wildlife species from being extirpated or becoming extinct, and to provide for the recovery of a wildlife species that are extirpated, endangered or threatened as a result of human

activity and to manage species of special concern to prevent them from becoming endangered or threatened”.

Endangered, threatened, and special concern marine species in Pacific region currently listed under Schedule I of SARA are:

1. Blue whale – Endangered
2. Killer whale southern resident population – Endangered
3. Killer whale northern resident population – Threatened
4. Killer whale transient population – Threatened
5. Leatherback turtle – Endangered
6. North Pacific right whale – Endangered
7. Sei whale – Endangered
8. Northern Abalone – Threatened
9. Fin whale – Threatened
10. Humpback whale – Threatened
11. Sea otter – Threatened*
12. Green sturgeon – Special Concern
13. Grey whale – Special Concern
14. Harbour porpoise – Special Concern
15. Killer whale offshore population – Special Concern
16. Olympia oyster – Special Concern
17. Steller sea lion – Special Concern

In addition to the existing prohibitions under the *Fisheries Act*, it is illegal to kill, harm, harass, capture, take, possess, collect, buy, sell or trade any listed endangered or threatened animal or any part or derivative of an individual. These prohibitions apply unless a person is authorized, by a permit, licence or other similar document issued in accordance with SARA, to engage in an activity affecting the listed species or the residences of its individuals. Species listed as special concern are not included in these prohibitions.

Listing

Committee on the Status of Endangered Wildlife in Canada (COSEWIC) designated marine or anadromous species in Pacific region currently under consideration for listing under Schedule I of SARA are:

1. Basking shark – Endangered
2. Bocaccio – Threatened
3. Canary rockfish - Threatened
4. Northern fur seal – Threatened
5. Okanagan Chinook – Threatened
6. Longspine thornyhead – Special Concern
7. Rougheye rockfish types I & II – Special Concern

* In 2007, COSEWIC re-assessed sea otter as a species of “Special Concern.” It is currently in the listing process, proposed to be re-listed as “Special Concern,” replacing the current “Threatened” listing.

8. Yelloweye rockfish (inside and outside waters) – Special Concern
9. Sea otter – Special Concern
10. Sixgill shark – Special Concern
11. Soupfin shark (tope) – Special Concern

The formal SARA legal listing process begins when the Minister of Environment issues a response statement, detailing how he intends to proceed with the COSEWIC species designations. Response statements can be found on the SARA Public Registry website at: www.sararegistry.gc.ca.

Listing decisions are likely to take place in Spring 2009 for Northern fur seal, longspine thornyhead, roughey rockfish, sea otter, sixgill shark, and soupfin shark (tope).

COSEWIC Assessments – In November 2009, COSEWIC will be assessing the status of quillback rockfish, yellowmouth rockfish, darkblotched rockfish, and spiny dogfish (Atlantic and Pacific populations). Additionally, a Call for Bids to write Designatable Unit reports for sockeye and chinook salmon was posted on the COSEWIC website in the fall of 2008. These reports will help inform future status reports for these salmon species. For more information, please visit the COSEWIC website at: <http://www.cosewic.gc.ca>.

White Sturgeon

In August of 2006, four populations of white sturgeon (Upper Fraser, Upper Columbia, Nechako, and Kootenay River) were listed as Endangered under SARA, while two populations (Lower Fraser and Mid Fraser) were not. Only those populations listed under SARA are subject to the general prohibitions.

A SARA recovery strategy is currently being developed for the four listed populations, which will set a recovery goal and supporting objectives, and will also incorporate management activities for the two non-listed populations.

Salmon

Three populations of salmon (Cultus Lake sockeye, Sakinaw Lake sockeye, and Interior Fraser coho) have been designated as Endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Following extensive public and stakeholder consultation processes for each population, the Minister of Environment, in consultation with the Minister of Fisheries and Oceans, did not include these population on Schedule I of SARA. However, recovery efforts are continuing for each population.

DFO, in cooperation with the Interior Fraser Coho Recovery Team, have developed the *Conservation Strategy for Coho Salmon, Interior Fraser River Populations*. This strategy is an integral tool in effecting recovery of these unique coho populations. It is a science-based document that describes the species' biology, habitats and threats. The strategy also identifies a recovery goal, with accompanying principles and objectives designed to guide activities to

achieve recovery. To view the conservation strategy, please visit http://www.pac.dfo-mpo.gc.ca/species/salmon/InteriorFraserCohoCS/default_e.htm.

Conservation Strategies for Cultus and Sakinaw Lake sockeye have also been finalized, and can be viewed at

http://www.pac.dfo-mpo.gc.ca/species/salmon/cultus_sockeye_cs/default_e.htm and

http://www.pac.dfo-mpo.gc.ca/species/salmon/sakinaw_sockeye_cs/default_e.htm. Specific conservation objectives for these and other stocks are laid out in Section 4.

3.3.3. Northern and Southern Resident Killer Whales

Northern resident killer whales (KW) are listed as Threatened and southern resident KW are listed as Endangered under SARA. There are currently 83 southern residents and approximately 250 northern residents. The final Recovery Strategy for Northern and Southern Resident Killer Whales in Canada was finalized in March 2008, and can be viewed at http://www.sararegistry.gc.ca/document/default_e.cfm?documentID=1341. Critical habitat areas were delineated and four key anthropogenic threats were identified: quality and abundance of prey, contaminants, physical disturbance, and acoustic disturbance.

Prey:

Diet research indicates that resident KWs feed primarily on chinook salmon during the spring and summer months based on genetic sampling of scales and tissue recovered from feeding events. The summer and fall spatial and temporal distribution of resident KWs in coastal waters appears to be associated with the timing and abundance of chinook salmon in coastal areas. Winter and spring feeding and distribution of KWs is less well understood. Chinook are available year round and have a high fat content and caloric value. Research has indicated a significant correlation of low resident KW birth rates and high mortality rates with low Pacific chinook abundance index values. Ongoing research is required to understand the mechanisms for this relationship and whether there are chinook abundance index values and potential threshold values where resident KW may be impacted. Research is also ongoing to examine the energetic requirements of resident KW and the estimated number of chinook consumed annually.

The IFMP reflects the renewed Pacific Salmon Treaty signed in January 2009. The Pacific Salmon Treaty is intended to ensure successful chinook conservation and fishery management measures implemented under the Treaty are intended to recover, maintain and protect salmon stocks in Canada and the U.S. A comprehensive, scientific, abundance-based framework is used to manage all chinook fisheries subject to the Treaty which sets a numerical limit for catch based on abundance of chinook. New measures in the renewed Treaty will further reduce the West Coast of Vancouver Island Canadian total allowable chinook catch by 30% and the South East Alaska total allowable chinook catch by 15% in 2009. These measures will reduce the chinook harvest in these areas by approximately 81,000 chinook in 2009 compared with pre-renewal arrangements. In addition, the status of chinook populations is monitored and a range of additional harvest reductions are outlined under the Treaty if specific chinook stocks or stock groups decline below specified levels to protect and conserve biological diversity and production under a range of conditions. The IFMP also include domestic conservation measures including harvest reductions in a range of First Nation, recreational and commercial fisheries to protect specific stocks of concern including West Coast of Vancouver Island, Lower Georgia Strait, early-timed and Spring and Summer Fraser chinook populations. All of these chinook measures are intended to

protect and conserve a healthy and productive chinook resource with sustainable harvests and ecosystem benefits to resident killer whales and other species.

Contaminants:

There are numerous chemical and biological pollutants that may directly or indirectly impact resident KW ranging from persistent organic pollutants to antibiotic resistant bacteria and exotic species. Recent studies indicate resident KWs have high levels of some contaminants with males having the highest levels.

Disturbance:

All cetaceans including resident killer whales, are being subject to increasing amounts of interruption from vessels, aircraft and anthropogenic noise. Industrial activities such as dredging, drilling, construction, seismic testing and military sonar and other vessel use of low and mid-frequency sonars also impact the acoustic environment. The means by which physical and/or acoustic disturbance can affect resident killer whale at both the individual and population level are not well understood, but may depend whether the disturbance is chronic or acute.

The Marine Mammals Regulations under the *Fisheries Act* and prohibitions under *SARA* specifically prohibit the disturbance and harm of killer whales. Guidelines for marine mammal viewing have also been developed. To avoid disturbing killer whales and other marine mammals, fish harvesters are advised to follow the *Be Whale Wise (BWW); Marine Wildlife Guidelines for Boaters, Paddlers and Viewers*, which are available from local Fishery Offices or on-line at: http://www.pac-mpo.gc.ca/species/marinemammals/default_e.htm

Non-compliance with the BWW Guidelines may lead to charges under the Marine Mammal Regulations and/or SARA.

Critical Habitat

In the March 2008 Recovery Strategy for the northern and southern resident killer whales, their critical habitat was defined. On February 23, 2009 a Species at Risk Act Sect 58(4) Order by the Ministers of Fisheries and Oceans, and Environment was posted to protect that critical habitat from destruction. These actions include enforcement, protection, management, research, stewardship and public education directed towards the threats to critical habitat identified in the Recovery Strategy i.e. quality and abundance of prey, contaminants, and physical and acoustic disturbances. These actions are undertaken by multiple DFO sectors. The outcomes will inform further actions.

3.4. Marine Mammal Management Plans

DFO is currently developing SARA Management Plans for four marine mammals listed as Special Concern: offshore killer whale, harbour porpoise, grey whale, and Steller sea lion. These plans, which will be posted on the SARA Registry for public comment in 2009, describe species biology, distribution, and threats, as well as recommending potential actions to protect these species, and mitigate impacts from key threats. Several key threats to these species include oil spills, chemical pollution, acute noise stress, reduced prey availability, habitat degradation and fishing gear entanglement.

Whale Depredation

Depredation (the removal of fish from fishing gear) by killer whales has been reported by groundfish longline, salmon troll, and recreational harvesters in BC.

Depredation is a learned behaviour that spreads throughout the whale social groups and once established is impossible to eliminate. It is critical that BC harvesters do not encourage this learning by having whales associate obtaining fish with fishing activity. Encouraging this behaviour will quickly lead to significant losses for commercial and sports fish harvesters.

The most important approach to prevent this from spreading is by NOT feeding whales directly or indirectly and not hauling gear in the vicinity of killer whales and sperm whales. Typically killer whales pass quickly through an area allowing fishing to resume. It is also recommended that you advise other fish harvesters in the area if you encounter depredation. Additional tips on avoiding depredation events can be found in the DFO Marine Mammal Bulletin #2.

If you experience depredation by whales, please report the incident by email MarineMammals@pac.dfo-mpo.gc.ca or by calling (250) 756-7253. Reporting all incidents will assist DFO and fish harvesters in understanding this problem and help in developing strategies to avoid it.

Marine Mammal Incident Network and Marine Mammal Sightings Network

Marine mammals incidents comprise a range of occurrences which may include; live strandings, dead, sick or injured animals, entanglements or potential violations (disturbance, harm or harassment).

To report a marine mammal incident, including violations, call DFO's Observe Record, Report (ORR) line at 1-800-465-4336. All entanglement or by-catch of marine mammals must be reported by current log book/reporting requirements.

Observations of orphaned seal pups may be reported to the Vancouver Aquarium Marine Mammal Rescue and Rehabilitation (604) 258-SEAL (7325). In many cases seal pups are not truly orphaned, and staff at these facilities will assess the circumstances.

To report a sightings of a cetacean (whale, dolphin, or porpoise) or sea turtles contact the BC Cetacean Sightings Network as soon as possible by phone at 1-866-I SAW ONE (472-9663) or

www.vanaqua.org . You may also participate in a formalized logbook program by calling or contacting the Network.

For More Information and Contacts

More information on COSEWIC, SARA, and the listing process can be found at:

www.cosewic.gc.ca/

www.dfo-mpo.gc.ca/species-especes/home_e.asp

www.sararegistry.gc.ca/

Contacts for marine mammal inquiries:

Fisheries and Oceans Canada Contacts:

MarineMammals@pac.dfo-mpo.gc.ca

Paul Cottrell (604) 666-9965

John Ford (250) 729-8375

BC Commercial Fishing Industry Contacts:

Jake Vanderheide (250) 709-2336

Terry Gustafson (250) 743-5213

David Boyes (250) 338-2188

Henry Heggelund (250) 642-3319

3.5. First Nations and Canada's Fisheries Framework

The Government of Canada's legal and policy frameworks identify a special obligation to provide First Nations the opportunity to harvest fish for food, social and ceremonial purposes. The Aboriginal Fisheries Strategy (AFS) was implemented in 1992 to address several objectives related to First Nations and their access to the resource. These included:

- improving relations with First Nations,
- providing a framework for the management of the First Nations fishery in a manner that was consistent with the 1990 Supreme Court of Canada Sparrow decision,
- greater involvement of First Nations in the management of fisheries, and
- increased participation in commercial fisheries (Allocation Transfer Program or ATP).

The AFS continues to be the principal mechanism that supports the development of relationships with First Nations including the consultation, planning and implementation of fisheries, and the development of capacity to undertake fisheries management, stock assessment, enhancement and habitat protection programs.

The Aboriginal Aquatic Resources and Oceans Management (AAROM) program has been implemented to fund aggregations of First Nation groups to build the capacity required to coordinate fishery planning and program initiatives. AAROM is focused on developing affiliations between First Nations to work together at a broad watershed or ecosystem level – a

level at which there is a certain number of common interests and where decisions and solutions can be based on integrated knowledge of several Aboriginal communities. In the conduct of their activities, AAROM bodies are working to be accountable to the communities they serve, while working to advance collaborative relationships between member communities, DFO and other interests in aquatic resource and oceans management.

As part of the reform of Pacific fisheries and the recently announced PICFI initiative in 2007, DFO is looking for opportunities to increase First Nations participation in new economic fisheries. Treaty provisions are likely to provide for economic provisions and new planning approaches and fishing techniques will be required to ensure an economically viable fishery. In recent years some "demonstration fisheries" have been initiated where some of these facets of potential future fisheries have been explored. Similar projects could be anticipated again in 2009 subject to available commercial TAC. The Department is also working with First Nations and others with an interest in the salmon fishery to have better collaboration of fishery planning.

3.5.1. Pacific Integrated Commercial Fisheries Initiative

The Pacific Integrated Commercial Fisheries Initiative (PICFI) is a new initiative aimed at achieving environmentally sustainable and economically viable commercial fisheries, where conservation is the first priority and First Nations' aspirations to be more involved are supported. The Government of Canada has committed \$175 million over five years to implement the initiative. PICFI builds on fisheries reform work begun in response to the 2004 reports of the First Nations Panel on Fisheries and the Joint Task Group on Post-treaty Fisheries, as well as subsequent discussions in a wide variety of forums that have confirmed the need for PICFI.

3.5.2. Fishery Monitoring and Catch Reporting

A complete, accurate and verifiable fishery monitoring and catch reporting program is required to successfully balance conservation with the objectives of optimal harvest levels. Across all fisheries, strategies are being developed to improve catch monitoring programs by identifying standards that must be achieved as well as clarifying roles and responsibilities of the Department and harvesters. The Department has recently released a consultation document on catch monitoring standards for the commercial salmon fishery.

Further details are contained in section 8. New technologies (e.g., E-logs) are also being used to facilitate the timely submission of data directly into centralized DFO databases.

3.6. Scientific Support

The research activities of the Department's science branch are summarized in scientific papers that are peer reviewed through the Pacific Scientific Advice Review Committee (PSARC). The advice is then forwarded to the appropriate sectors for review and adoption as required.

Specific areas of focus for Pacific salmon research in 2009 include:

- Continuing progress on the ecosystem research initiative in the Strait of Georgia in support of the ecosystem approach to resource use.

- continuing investigations into climate change and salmon fisheries issues
- Assessments of specific stocks (priority assessments identified by Fishery Management) and continuation of Cultus and Sakinaw lake sockeye recovery efforts
- Annual pre-season forecasts of abundance and run timing for specific salmon populations for fishery planning.
- Initial implementation of WSP methodology to identify upper and lower benchmarks for salmon CU's, completion of habitat and ecosystem indicators and Regional reviews
- Implementation of WSP pilots for development of strategic plans – Barkley Sound (Area 23) salmon
- Implementation of programs designed to address priority actions in the Pacific Salmon Commission report on the Coded-wire tagging program as described in the renegotiated annexes of the Pacific Salmon Treaty.
- Implementation of a Sentinel Stock Program for chinook salmon spawning in the WCVI, Fraser River, and northern B.C. as described in the renegotiated annexes of the Pacific Salmon Treaty.
- In-season management tools for predicting terminal run size and potential escapement for Fraser chinook stocks (e.g. Spring and Summer Fraser chinook) based on the Albion chinook test fishery data.
- support of the aquaculture site selection and screening process by providing science advice for decision making

3.7. Pacific Salmon Treaty

In March 1985, the United States and Canada agreed to co-operate in the management, research and enhancement of Pacific salmon stocks of mutual concern by ratifying the Pacific Salmon Treaty (PST).

The Pacific Salmon Commission (PSC), established under the PST, provides regulatory and policy advice as well as recommendations to Canada and the United States (US) with respect to interception salmon fisheries. The chapters in Annex IV outline the joint conservation and harvest sharing arrangements between Canada and the US for key stocks and fisheries subject to the Treaty. Five of these chapters were set to expire at the end of 2008 and were recently renewed by the Parties: Chapter 1 (Transboundary Rivers); Chapter 2 (Northern Boundary); Chapter 3 (Chinook); Chapter 5 (Coho); and Chapter 6 (Chum). [See section on “PST Renewal - 2009” below]. Chapter 4, which covers Fraser River sockeye and pink salmon, is scheduled to expire at the end of 2010.

Under the terms of the Treaty, the responsibility for in-season management of all species rests with the Parties to the agreement, except for the in-season management of Fraser River sockeye and pink salmon, where the Fraser River Panel (FRP) is specifically delegated the responsibility for in-season management, with assistance from PSC staff.

In order to properly account for the full impact of fishing on chinook and coho stocks, the PST specifies that all parties develop programs to monitor all sources of fishing related mortality on

chinook and coho. Catch monitoring programs are being modified to include estimates of encounters of all legal and sub-legal chinook and coho, as well as other salmon species, in all fisheries.

Coded-wire tag (CWT) data are essential to the management of chinook and coho salmon stocks under the PST. In 1985, the United States and Canada entered into an August 13, 1985 Memorandum of Understanding in which “the Parties agree to maintain a coded-wire tagging and recapture program designed to provide statistically reliable data for stock assessments and fishery evaluations”. Both countries recognized the importance of the CWT program to provide the data required to evaluate the effectiveness of bilateral conservation and fishing agreements. This approach has been confirmed with the recent release of an expert panel review that concluded the CWT system was the only technology that is currently capable of providing the data required for PST management regimes for chinook and coho salmon.

PST Renewal – 2009

On December 23, 2008, Canada and the US ratified new provisions for five chapters under Annex IV of the PST. These new chapters came into effect on January 1, 2009 and the new management regimes are being implemented by DFO and US agencies for the 2009 season (including this draft IFMP). Significant changes from the previous chapters are highlighted, below:

Chapter 1 (Transboundary Rivers): The Transboundary chapter sets out the conservation and harvest sharing arrangements for sockeye, coho, chinook, and pink salmon for several transboundary rivers flowing from the Yukon to the Pacific through southeast Alaska, including the Stikine, Taku, and Alsek Rivers. The renewed chapter includes new harvest sharing arrangements for sockeye on the Taku River and a renewed commitment to the joint enhancement program for sockeye in the Transboundary Area.

The chapter also includes new arrangements for the management of sockeye on the Alsek River, including the ability of either party to recommend new commercial fisheries. The agreement includes new provisions for Canada to access salmon that are surplus to the spawning requirements outlined in the chapter and maintains the previous harvest sharing arrangements for chinook, sockeye and coho salmon on the Stikine River, as well as chinook and coho on the Taku River.

Chapter 2 (Northern Boundary): This chapter, as well as the chinook chapter, governs fisheries covered in the NC Salmon IFMP. The new chapter reflects only minor, administrative changes from the previous regime (i.e. the previous conservation and harvest sharing arrangements for Northern British Columbia and Southeast Alaska chum, sockeye and pink fisheries are maintained).

Chapter 3 (Chinook): The new chinook regime includes significant changes from the previous agreement. Building on changes made in 1999, the Parties have agreed to maintain the current abundance-based management regime for chinook, including the existing aggregate abundance based management (AABM) fisheries and individual stock based

management (ISBM) fisheries. The most significant aspects of the new chinook chapter include harvest reductions in Canadian and US fisheries to address conservation concerns in both countries: the previous catch ceilings for the Southeast Alaskan (SEAK) AABM fishery have been reduced by 15%, while the catch ceilings for the Canadian WCVI AABM fishery have been reduced by 30% from previous levels.

In addition, the chapter includes new, additional provisions to protect weak stocks, including the potential for further harvest reductions in the SEAK and Northern BC AABM fisheries, as well as the individual stock-based management (ISBM) fisheries in both countries, should certain stocks fail to meet escapement objectives outlined in the agreement.

The agreement also includes provisions for a bilateral funding framework to support implementation of the new chinook chapter. The fund will be endowed by both Canada and the US, with the following key elements: (i) \$30M which Canada can access to help mitigate the impacts of harvest reductions in Canada; (ii) \$15M (\$7.5M from each country) over five years to support the coastwide coded-wire tag (CWT) program; (iii) \$10M from the Northern and Southern Endowment Funds for a "Sentinel Stocks Program"; (iv) up to \$3M which Canada can access to support pilot projects and the evaluation of mass-marking and mark-selective fisheries in Canada; and (v) \$1M from the US to improve the analytical models to implement the chinook agreement.

Chapter 5 (Coho, Southern BC and Washington State): The renewed chapter for coho incorporates the joint Southern Coho Management Plan developed in 2002 with the abundance-based management framework established in 1999.

Chapter 6 (Chum, Southern BC and Washington State): Substantive changes to the chum chapter were agreed to by both countries in 2006. However, the new chapter incorporates further revisions, including: the introduction of a 20% fixed harvest rate in Johnstone Strait, linking the U.S. catch ceiling to the abundance of Fraser River chum (i.e. in the case of a terminal run size below 900,000 chum salmon, the U.S. would restrict its fisheries in Area 7 and 7A to 20,000 chum), and the establishment of a "critical level" for southern-bound chum salmon of one million. There will also be a defined start date for U.S. fisheries in Areas 7 and 7A of October 10 and the removal of the previous "underage" provisions for U.S. harvest.

3.8. Gwaii Haanas National Marine Conservation Area

The *Canada National Marine Conservation Areas Act* provides for the establishment of a network of marine conservation areas that are representative of Canada's Oceans and Great Lakes. The *Act* requires that an NMCA is divided into zones that foster and encourage ecologically sustainable use of marine resources and zones that fully protect special features or sensitive elements of ecosystems. Sustainable use includes First Nations traditional use, commercial and recreational marine resource harvesting. Non-renewable resource extraction activities (hydrocarbons, minerals, aggregates) are not permitted within a NMCA.

16.1.1 In 1985, the Council of the Haida Nation designated the lands and waters in the Gwaii Haanas area as a Haida Heritage Site. In 1993, the Government of Canada and the Council of the Haida Nation signed the Gwaii Haanas Agreement, committing each party to cooperatively

manage the Gwaii Haanas Archipelago as a National Park (Land) Reserve and Haida Heritage Site. In this same agreement, the Government of Canada and the Council of the Haida Nation, agreed to enter a future agreement respecting the planning, operation and management of the waters surrounding the Gwaii Haanas Archipelago. This commitment is being pursued through the establishment of a NMCA for the waters surrounding the Gwaii Haanas National Park Reserve.

Parks Canada, Fisheries & Oceans Canada and the Council of the Haida Nation are currently working together toward the establishment of the Gwaii Haanas NMCA through the exchange of marine resources, fisheries and cultural data, and coordinated consultations. The timeline for establishment is dependent on the completion of the interim management and zoning plans and approval through the Parliamentary process, with a projected establishment date for the fall of 2009. Once established, measures respecting the management of the Gwaii Haanas NMCA will be articulated in future IFMP's.

3.9. Fishing Vessel Safety

Commercial fishing is recognized as a very dangerous activity. Concerns over fishing related injuries and deaths have prompted DFO to proactively work with Transport Canada and Worksafe BC to ensure coordinated approaches to improving fishermen's safety. See Appendix 2 for more information.

4. OBJECTIVES

4.1. Fishery Management Objectives for Stocks of Concern

4.1.1. Lower Strait of Georgia Chinook

The objective for Lower Strait of Georgia (LGS) chinook in 2009 is to continue management actions to reduce fishery exploitation similar to 2005-2007 in known areas of significant impact.

Chinook returns to many Lower Strait of Georgia (LGS) systems generally continue to be at low levels. For Cowichan River, the Pacific Salmon Commission (PSC) indicator for LGS wild fall chinook, 2007 and 2008 escapement estimates are well below the escapement goal of 6,500 natural spawners. Early marine survivals are expected to be poor similar to the recent years.

A chinook recovery plan has been initiated in the Cowichan Valley. A coordinator has been contracted to provide an integrated approach that will incorporate water management plans, urban development, industrial and commercial needs and ensure that a comprehensive approach is taken to address the recovery of Cowichan chinook.

LGS chinook are impacted by mixed stock chinook harvest in commercial and recreational fisheries off the Queen Charlotte Islands, WCVI, Strait of Georgia, and in terminal First Nations fisheries. Restrictions introduced in 2004 through 2008 (shaping of WCVI commercial troll fisheries, restrictions and closures in the terminal and approach areas for recreational harvesters and First Nations) will continue.

4.1.2. Interior Fraser River coho, Lower Fraser coho, Strait of Georgia coho

The objective for Interior Fraser River coho (including Thompson River coho) is to limit the Canadian exploitation rate to 3% (not including terminal harvest on systems experiencing strong escapements).

Conservation measures with the objective of reducing harvest related impacts to Interior Fraser coho were first implemented in 1998. Since then, the conservation objective has been clarified to limit the exploitation rate to 3% or less.

Returns in 2009 are the brood of 2006, when an estimated index of 7700 fish returned to the Interior Fraser River, the lowest return on record. Escapement returns in 2008, well below the interim critical benchmark, indicate that poor marine survivals continue to be an ongoing concern and coupled with freshwater habitat impacts (water supply) will continue to limit recovery and further the requirement for actions to limit exploitation.

During May through September, when Interior Fraser coho are encountered in southern B.C. waters, management actions will range from non-retention to time and area closures. The following areas and fisheries are affected:

- West Coast Vancouver Island (WCVI) troll and recreational fisheries in offshore areas from late May until mid-September.
- Commercial net and recreational fisheries in the Straits of Juan de Fuca (Area 19 and 20) from June until early October.
- Commercial, recreational and First Nations fisheries in Johnstone and Queen Charlotte Straits from early June until late August.
- Commercial, recreational and First Nations fisheries in the Strait of Georgia from June until early October, and
- Commercial, recreational and First Nations fisheries in the Fraser River from early September until mid-October.

4.1.3. Cultus Lake and Late Run

The objective for Cultus Lake sockeye is to limit the exploitation rate to 20 percent.

Cultus Lake sockeye is a component of the Late Run Fraser River sockeye aggregate which is typically harvested in southern B.C. waters in August and September. Concerns for the entire Late Run aggregate have been acute in recent years (since 1996) due to a trend of abnormal early migration and associated high levels of pre-spawn and en-route mortality.

The returns of sockeye salmon to Cultus Lake have been particularly low relative to historic averages. To work toward rebuilding of this population, late run fishery management actions have been implemented to ensure low to moderate fishery exploitation levels on this stock. Enhancement measures have included fry and smolt releases as well as a captive brood program. Freshwater measures in the past have included predator control (removal of approximately 16,000 adult northern pikeminnow in 2007), removal of Eurasian watermilfoil and contaminant

studies. Studies in 2007 and 2008 are designed to estimate the abundance and behaviour of the pikeminnow population as well as the efficacy of the predator control program.

All Canadian fisheries that could harvest Cultus Lake sockeye will be impacted by the need to limit exploitation on this stock. This includes:

- Closures in all fisheries with the possibility of impacting Cultus or Late Run fish when harvest limits for this stock group have been reached.
- Restrictions to First Nations fisheries in Queen Charlotte and Johnstone Straits, Strait of Georgia, Strait of Juan de Fuca, west coast of Vancouver Island and the lower Fraser River downstream of the Vedder River. However, where surpluses are identified, first priority will be accorded to First Nations for opportunities to harvest fish for FSC purposes.
- Restrictions to recreational salmon fisheries in southern B.C. This will include sockeye non-retention in specific locations when Cultus Lake sockeye are present and allowable harvest limits have been reached.
- Closures to commercial salmon fisheries in southern B.C. when Late Run sockeye are present, or expected to be present in the area as it will not likely be possible to identify Cultus Lake sockeye in-season in 2009 due to relative low abundances of Cultus Lake sockeye compared to other co-migrating sockeye stocks. These closures will come into effect when allowable harvest limits for this stock group have been reached. Fisheries directed at other stocks or species of salmon will be subject to late run/Cultus constraints.

Within the Fraser River upstream of the Fraser/Vedder confluence, recreational and First Nations fisheries for Late Run Fraser River sockeye will be constrained under conditions of early river migration timing or adverse migration conditions which can be expected to result in a high level of enroute mortality.

Work is underway to promote rebuilding of the Cultus Lake population. Smolt assessment including, the application of special tags to track both smolt and adult migration patterns, will be undertaken. Predator control measures will be continued and studies to increase the understanding of threats to freshwater habitats will be done. In addition, the Department will continue with enhancement activities including the captive brood program where a small segment of the population is held until maturity and a variety of release strategies are implemented including fed fry and smolts. Release targets for the enhancement program are 50,000 smolts into Sweltzer Creek, and 150,000 par and over 500,000 fed fry into Cultus Lake itself.

For harvest constraints on the late run sockeye stock group aggregate refer to Section 5.4 Fraser River sockeye decision guidelines.

4.1.4. Sakinaw Lake Sockeye

The objective for Sakinaw Lake sockeye is to stop their decline and re-establish a self-sustaining, naturally spawning population.

This objective will not be achieved until spawner abundance relative to previous brood years increases for at least 3 out of 4 consecutive years and there are no fewer than 500 natural spawners annually.

To achieve this objective quickly, a captive brood stock program designed to maintain genetic integrity and minimise inbreeding was initiated in 2001. Achieving this objective also meant that mortality, including fishing mortality, needed to be minimised, as much as practicable.

Sakinaw Lake is located in the Strait of Georgia near Sechelt, B.C. Migration timing data on Sakinaw Lake sockeye are extremely limited. Some data suggests Sakinaw Lake sockeye have a prolonged migration period commencing in Johnstone Strait in late May to July and arriving at the entrance to Sakinaw Lake in upper Strait of Georgia in July and August. Given this historical timing pattern, Sakinaw Lake sockeye are vulnerable to harvest directed at Fraser River sockeye stocks in July extending into mid August.

As with Cultus Lake sockeye harvest related measures to ensure protection for this stock are to continue.

Most fisheries that have potential to intercept Sakinaw Lake sockeye will continue to be delayed prior to the last week of July to ensure a significant portion of the return has passed through major fisheries in Johnstone Strait. The plan will provide for:

- Restrictions in First Nations FSC fisheries prior to the last week of July.
- Recreational fisheries in Queen Charlotte Strait, Johnstone Strait, and upper Strait of Georgia will be closed to sockeye retention prior to the last week of July. The waters near the mouth of Sakinaw Creek in Area 16 will be closed to fishing all season as well as sockeye non-retention restrictions in Area 16 until early to mid August when sockeye retention opportunities are expected to be available in Sabine Channel.
- Commercial fisheries in Queen Charlotte Strait and Johnstone Strait will be closed prior to the last week of July, and upper Strait of Georgia (including Sabine Channel) until early to mid August.

Recovery planning efforts to ensure rebuilding of this stock will continue to be supported. In addition to harvest related measures, there will be continued improvements made to the habitat (debris removal from spawning areas), investigations into the impacts of predation (seals, otters and lamprey), and enhancement work. Eggs are incubated in nearby hatchery facilities and the resulting fry are returned to the lake. The captive brood program will continue as a form of insurance to reduce the possibility of extirpation. There have been no returns of sockeye spawners in 2007 and 2008 and none are expected in 2009.

4.1.5. WCVI Chinook

The objective for West Coast of Vancouver Island (WCVI) chinook is to manage Canadian ocean fisheries (specified below) to an exploitation rate of 10%. The objective for North Coast chinook is to manage in accordance with the allocation policy, and to manage the northern troll fishery to a WCVI chinook exploitation rate of 3.2%.

For the past several years WCVI chinook have experienced poor marine survival rates and low spawner levels, and are a stock of concern.

For purposes of calculating the WCVI allowance for north coast chinook fisheries, all WCVI chinook caught and kept in Canadian fisheries are assumed to be returning in the present year. Fisheries that this limit applies to are the northern troll, QCI sport, WCVI troll and WCVI sport. The exploitation rate is measured by Coded Wire Tag (CWT) data gathered from these fisheries. The exploitation rate limit includes chinook caught and kept, as well as an estimate of fishing related mortalities.

As in the past, commercial troll fisheries in the North Coast will be monitored in-season using DNA analysis to minimize impacts on these stocks. While DNA analysis will guide in season management actions, the official measure of success will be made using post-season CWT cohort analysis.

The total allowable catch under the PST for 2009 for north coast AABM fisheries, which include Areas 1 and 2 for recreational and Areas 1 through 5 for commercial troll, is 143,000. From the total TAC, 50,000 will be reserved for the recreational fishery, leaving 93,000 for northern troll (Area F). This equates to 327 chinook for each of the 284 Area F troll licences.

On the West Coast of Vancouver Island, Robertson Creek returns are estimated in 2009 to make up 60% of the total return. The forecast for Robertson Creek is then expanded to get an estimate of the total return for WCVI. For 2009, the forecast return of Robertson Creek chinook is 53,360 and expands to a total return to WCVI of 89,383. The area F troll fishery will be managed to 3.2% of the WCVI return, a limit of 2,860 WCVI chinook.

4.1.6. Steelhead

The objective for Interior Fraser River steelhead provided by the B.C. Ministry of the Environment is to protect 80% of the run with a 90% certainty in Fraser River commercial gill net fisheries. This objective does not apply to selective commercial fisheries (those using gear types other than gill nets) or fisheries conducted terminally on single stocks. In addition, other commercial south coast fisheries are to release to the water with the least possible harm all steelhead caught incidentally in fisheries targeting other species.

The expected outcome of this objective is to provide commercial opportunity while minimizing risk and level of steelhead exploitation through providing a window for commercial fishing opportunity.

There are ongoing discussions between DFO and the Province to develop a management framework for Interior Fraser steelhead. It is expected that this management framework could include the following three items:

- 1). Shifting the timing of the fishery window to protect the Deadman River component of the run while avoiding the peak timing of steelhead escapement.
- 2). Improving steelhead catch monitoring in fisheries that occur on the stocks prior to the Fraser

River and the development of "stop light" criteria that would govern opening fisheries in future years based on abundance indicators.

3). The application of the management objectives in this approach are tied to escapement targets of steelhead stocks. The size and the timing of the fishery window may be varied in future years in accordance with abundance of the constituent stocks. If current freshwater and ocean conditions persist and result in reduced escapements then opportunities for non-selective fisheries will be curtailed.

4.1.7. Nimpkish sockeye

The objective is to minimize the impact of Canadian fisheries.

Nimpkish sockeye are encountered in Queen Charlotte Strait and Queen Charlotte Sound typically during June and July. In order to protect this stock, time and area closures are implemented until late July in marine areas above Lewis Point.

4.1.8. Early-Timed (ET) Fraser Chinook

The objective is to implement management actions that will reduce the exploitation rate approximately 50% relative to the 2006 to 2007 period.

The ET Fraser chinook populations (including Spius, Coldwater, upper Chilcotin, Louis, Chilako, Cottonwood, and Birkenhead stocks) have migration peaks in the Fraser River during the March to May period. In the 2009 Salmon Outlook, ET Fraser chinook stocks have been classified as *stock of concern* given poor marine survival and very poor spawning escapements. The status of Birkenhead has also been downgraded to *stock of concern* given a sharp decline in escapement observed in 2008 and a low brood year escapement in 2004 (180 adults), despite three years of large spawning escapements (>1250 adults).

Most ET Fraser chinook are primarily encountered in fisheries on the WCVI, Juan de Fuca, and in the Fraser River, but have been encountered at low rates in other areas. The Birkenhead population has a northerly distribution and is more frequently encountered in the North Coast and S.E. Alaska. The Department has been meeting with harvesters to develop fishery measures that will be implemented in the spring of 2009. A summary of the preliminary post-season review of the fishery management actions implemented in 2008 is included in section 9.1. On-going analysis, consultations and discussions on fishery management approaches, including updated information from coded-wire tag recoveries in 2008 fisheries, will take place in the coming year to further refine the management approach for the 2010 season. Management actions for 2010 for commercial and recreational fisheries in marine areas will likely be required beginning in March 2010 consistent with the conservation objective and allocation priorities. Revisions to the management approach may be considered in April 2010 based on the 2009 post-season review. Additional consultations will occur in 2010 for First Nation fishery plans.

4.1.9. Spring and Summer Fraser Chinook

The objective for Spring and Summer (age 5₂) Fraser chinook is to ensure the spawner abundance of these populations does not decline below the 1979 to 1982 base period level of 30,050.

To achieve this objective the Department proposes to use the relationship between the cumulative Catch Per Unit Effort (CPUE) of chinook caught in the Albion chinook test fishery to predicted terminal return to the Fraser River of spring and summer Fraser chinook (predominately age 5₂ stream type chinook) to guide management actions using a two-zoned approach. The average estimated escapement of Spring and Summer (age 5₂) Fraser chinook during the 1979-1982 base period was approximately 30K spawners. Terminal harvest rates in the Fraser River have averaged between 15 to 28% on this population group over the last decade. Assuming a harvest rate of 25%, a terminal return of 40,000 chinook to the Fraser would result in 30,000 spawners. The Department proposes to use a terminal return of 40,000 chinook as the basis for a 2 zone management approach in 2009 until WSP benchmarks and exploitation rate targets can be identified.

Management Zones:

Zone	Predicted Return to the Fraser River	Rationale
2	Above 40,000	Rebuilding required; continue to use management actions implemented in previous years prior to 2008. (e.g. remove recreational and commercial restrictions implemented in 2008, allow additional FSC fishing time)
1	Below or equal to 40,000	First Nations opportunities similar as in 2006-2008. Management actions to reduce harvest in recreational and commercial fisheries similar to 2008.

The first in-season prediction of the return to the Fraser River based on the Albion Chinook test fishery will be made on approximately May 31, 2009 and the final update will be made on approximately June 15, 2009. The predicted return to the Fraser River will be used to assess which management zone will be used for fishery planning purposes.

Although a very low return (e.g. below 20 to 25 thousand) is not expected in 2009, marine survival rates have been highly variable in recent years and there is a possibility this could occur. In addition, lower brood year spawner abundances associated with returns in future years, starting in 2010, may increase the potential for low returns if marine survival rates do not improve. If a very low return was identified in-season, the Department would consider additional fishery management actions consistent with Allocation priorities. Further analysis, consultations and discussions on the management zones and fishery management approaches will take place in the coming year to further refine the management approach for the 2010 season.

4.1.10. Inshore Rockfish

The management objective for inshore rockfish is to continue conservation strategies that will ensure stock rebuilding over time. A fishing mortality rate of less than 2.0 percent (all Pacific Region fisheries) will be required to achieve this objective.

Rockfish Conservation Areas (RCAs) are no fishing zones for fishing gear that impact on rockfish. There are currently 164 RCAs along the coast of British Columbia. The RCAs have been implemented within the Strait of Georgia and in all outside waters including the Queen Charlotte Islands. The conservation strategy for rockfish along the coast of British Columbia is long term. Rockfish are a long-lived species with a low level of productivity and therefore rebuilding will take several decades. The strategy addresses four areas under the fisheries management and stock assessment regime:

- a) Protect a part of inshore rockfish populations from harvest through the use of Rockfish Conservation Areas.
- b) Collect information on total fishery mortalities through improved catch monitoring programs.
- c) Reduce harvests to levels that are less than the estimates of natural mortality; estimated at 2%.
- d) Improve the ability to assess the status of inshore rockfish populations and to monitor changes in abundance.

Fishers are reminded prior to fishing to check with the local DFO office to verify RCA and other closures currently in effect. A description of all RCAs can be found at:

http://www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/rca_e.htm

4.2. First Nations Objectives

The objective is to manage fisheries to ensure that, after conservation needs are met, First Nations' food, social and ceremonial requirements and treaty obligations to First Nations have first priority in salmon allocation in accordance with the *Allocation Policy for Pacific Salmon*

Feedback from consultation sessions is relied on to measure the performance of providing first priority to First Nations for opportunities to catch fish for FSC purposes and any treaty obligations.

4.3. Recreational and Commercial Objectives

The objective is to manage fisheries for sustainable benefits consistent with established policies.

A primary objective in the recreational fishery is maintaining the expectation and opportunity to catch fish in a predictable manner. In the commercial fishery, the objective is to improve the economic performance of fisheries, to provide certainty to participants, and to optimize harvest opportunities. However, stocks of concern will continue to constrain opportunities in many fisheries resulting in less than optimal opportunities. Both fisheries will be managed to achieve maximum benefits where possible in accordance with conservation and allocation policies.

4.4. International Objectives

The objective is to manage Canadian treaty fisheries to ensure that obligations within the Pacific Salmon Treaty (PST) are achieved.

Details can be found at the Pacific Salmon Commission (PSC) website at:

<http://www.psc.org/Index.htm>.

Review of the performance of the PST provisions occurs annually at two bilateral meetings of the Southern and Fraser Panels of the PSC and those results are published post-season.

4.5. Domestic Allocation Objectives

The objective is to manage fisheries in a manner that is consistent with the *Allocation Policy for Pacific Salmon* and the 2009 Pacific Salmon Allocation Implementation Plan.

An Allocation Policy for Pacific Salmon can be found on-line at:

<http://www-comm.pac.dfo-mpo.gc.ca/publications/allocation/AllocationPolicyoct201.htm>.

The Allocation Policy for Pacific Salmon identifies the priority for allocation of salmon harvest and sets sharing arrangements for each of the three commercial fishing gear groups. The target gear share is 40% seine, 38% gill net and 22% troll. The CSAB provided advice to the Department on 2009 sharing arrangements in April 2009. For 2009, the sharing arrangements based on pre-season estimates of expected harvests are estimated to be 39% seine, 34% gill net and 27% troll. An explanation of some of the features of Allocation planning is set out in Section 5.1.7.

4.6. Compliance Management Objectives

Conservation and Protection Program Description

The Conservation and Protection (C&P) program promotes and maintains compliance with legislation, regulations and management measures implemented to achieve the conservation and sustainable use of Canada's aquatic resources, and the protection of species at risk, fish habitat and oceans.

The program is delivered through a balanced regulatory management and enforcement approach including:

- promotion of compliance through education and shared stewardship;
- monitoring, control and surveillance activities; and,
- management of major cases /special investigations in relation to complex compliance issues.

In carrying out activities associated with the management of Pacific salmon as outlined in this management plan, C&P will utilize principle-based approaches and practices which are consistent with the National Compliance Framework and the DFO Compliance Model.

Regional Compliance Program Delivery

For the Pacific salmon fisheries in the south coast management area, C&P will be utilizing a broad scope and blend of tools and approaches to manage compliance to achieve conservation and sustainability objectives, including:

- Maintain and develop relationships with First Nations communities, recreational groups and commercial interests through dialogue, education and shared stewardship.
- Work towards the goal of increased accountability, traceability and compliance within all salmon fisheries. Illegal sales of salmon will continue to be a regional priority.
- Prioritize enforcement efforts on those measures directed towards conservation objectives.
- Fish habitat protection will continue to be a key focus of Fishery Officer efforts.
- Utilize 'Integrated Risk Management' to ensure Fishery Officer efforts are focused and directed at problems of highest risk.
- Maintain high profile Fishery Officer presence through patrols by vehicle, vessel and aircraft to detect and deter violators.
- Monitor and verify catches and offloads of salmon to ensure accurate catch reporting and accounting.
- Audit and monitor catch reporting data to ensure timely and accurate catch and effort reporting.
- Maintain or increase Fishery Officer efforts to protect Fraser River salmon stocks with priority to those stocks of concern.
- Increase Fishery Officer efforts to protect Early-Timed, Spring and Summer Fraser, WCVI and Cowichan chinook stocks.
- Continue to utilize covert surveillance (unmarked vessels/ vehicles and plain clothes Fishery Officers) to detect violations and gather evidence in problem fisheries.
- Employ targeted compliance monitoring with the use of enhanced surveillance techniques, video cameras /long distance spotting scopes, trail cameras and vessel mounted digital video.
- Implement a program of 'Intelligence-led investigations' to specifically target enforcement efforts and increase successes.
- Increase patrol effort during open timed fisheries to increase intel gathering, build relationships with stake holders and ensure compliance to licence conditions.
- Inspect fish storage and retail outlets for compliant product
- Maintain a violation reporting 24 hour hotline to ease reporting of violations
- C&P will continue to promote 'restorative justice' principles in all fisheries

Consultation

Conservation and Protection works closely within the Fisheries and Aquaculture Management sector and Habitat and Enhancement Branch to ensure that Fishery & Habitat Management plans are enforceable and implemented in a controlled, fair manner. C&P has a multi-faceted role as educator, referee, mediator and law enforcer. Conservation and Protection participates on a regular basis with consultations within the fishing community and general public. Education, information and shared stewardship are a foundation of C&P efforts. C&P participates in all

levels of the advisory process from Regional Integrated Harvest Planning Committee through to individual fishery sectoral committees. The importance of local field level Fishery Officer input to these programs has proven invaluable and will continue.

C&P will continue meeting at the local level with individual First Nations, through the Fishery Officer First Nation Liaison Program to First Nations Planning committee meetings that involve many first nations' communities at one time.

C&P officers participate in local fishery management 'roundtables' and Sport Fishery recreational advisory councils in their respective areas and participate at Sport Fishery Advisory Board meetings.

Fishery Officers are viewed as the public face of the department. During their day-to-day activities, the fishing community and general public provide comment and input that is promptly communicated to C&P managers, Fisheries Managers and Habitat Management staff. This public feedback is critical in identifying issues of concern and providing accurate feedback on emerging issues.

Compliance Performance

At the end of each season, statistics are compiled on the numbers of checks conducted from various platforms (vessel, vehicle and foot), and the number of charges resulting from these checks and others. Using this information, staff can evaluate whether compliance management objectives were met and whether the activities undertaken were effective. Overall compliance rates for each area and fishery are calculated to help identify priority areas for enforcement in subsequent seasons. In addition, valuable narrative data is collected to ensure problem areas are identified and addressed.

Reports generated from C&P's Fisheries Enforcement Activity Tracking System (FEATS) are tracked and analyzed against business plan projections to see if patrol effort is taking place in areas where increased compliance is needed.

Current Compliance Issues

The key compliance issues within the Pacific salmon fisheries in the south coast management area have been identified as:

- Unauthorized sale of salmon.
- WCVI chinook. Compliance within the recreational fishery with the seasonal 'conservation corridor'. Closed times and area closures as well as size limits and selective fishing problems were identified in 2008.
- Early-Timed Fraser River chinook. Closed time, area closures, quota, size limits and selective fishing measures within the Victoria area fishery.
- Catch records and reporting in all fisheries including specific problems identified in commercial salmon area E gill net, Area G troll, B seine (Nitinat) and D gill net (Straits/Gulf).
- Catch monitoring and traceability in Johnstone Strait and Fraser River approach First Nation fisheries.
- Somass sockeye conservation, catch monitoring and unauthorized sales

- Fishing with drift nets in the Fraser River during set net only times.
- Recreational fishing night closed time enforcement for the Fraser River.
- Closed time enforcement for Thompson River coho.
- Compliance of First Nations selective beach seine fishery on the Fraser River to licence conditions and the harvest of authorized species.
- Ensure revival tank operations in the commercial gill net fishery for the protection of Thompson River bound coho.
- Monitor compliance measures to protect Cultus Lake sockeye

Compliance Strategy

In 2009, specific objectives for the salmon fishery will be to focus compliance management efforts on:

- Maintaining enhanced coverage both on the Fraser River and in marine approach waters (Johnstone Straits) by undertaking vessel, vehicle, and air patrols.
- Work to curtail illegal sales through a program designed to improve traceability of catch (improved catch monitoring and plant / storage verification)
- Improvements to fishery monitoring and catch reporting requirements
- Illegal retention of prohibited species
- Close time patrols balanced with random open time patrols
- Work with stakeholders to improve regulatory compliance
- Recreational - daily limits, non-retention and closed area enforcement
- Maintain or increase Fishery Officer efforts to protect Fraser River salmon stocks with priority to those stocks of concern.
- Somass sockeye conservation, catch monitoring and unauthorized sales. Continue as in past years the 'Somass Strategic Approach' area specific project management enforcement plans
- Increase Fishery Officer efforts to protect Early-Timed Fraser, WCVI and Cowichan chinook stocks through implementation of area specific project management enforcement plans.
- Monitor and verify catches and offloads of salmon to ensure accurate catch reporting and accounting.
- Conduct frequent and timely inspections of fish storage and processing facilities through a coordinated program of catch accountability and traceability. Communication and transfer of intelligence between areas will be strengthened.
- Audit and monitor catch reporting data to ensure timely and accurate catch and effort reporting.

The management of Pacific salmon remains a high priority for C&P for 2009. There are, however, other priorities and sustaining agenda activities which must be delivered by C&P for other mandated program areas such as habitat management, the Canadian Shellfish Sanitation Program, maritime security, and the protection of species at risk.

In order to balance multiple program demands, C&P utilizes a comprehensive risk-based integrated work planning process to address the highest risks to sustainability and establish annual operational priorities. This process ensures that resources are allocated in alignment with identified priorities to achieve broad departmental objectives in a way that best serves the interests of Canadians.

4.7. Enhancement Objectives

Objective: Enhancement Operations facilities will continue efforts focused toward production supporting conservation and sustainable fisheries and provide key support to other priority watershed and public involvement activities.

Objective: DFO will continue working with hatcheries operated by volunteers or by communities under contract to DFO and with hatcheries operated by community volunteers to meet shared objectives for conservation, public stewardship, community capacity development, habitat conservation and fish production.

4.7.1. Background

The Salmonid Enhancement Program (SEP) in British Columbia, Canada is comprised of nearly 300 projects across B.C. and the Yukon and includes hatcheries, fishways, spawning and rearing channels, and small classroom incubators. Projects range in size from spawning channels producing nearly 100 million juvenile salmon annually to school classroom incubators releasing fewer than one hundred juveniles (per aquarium).

The following tables detail proposed enhancement targets for hatcheries and managed spawning channels operated by DFO staff or contracted to community and native groups. Egg targets are determined pre-season for each stock and consider potential adult production based on average fecundities, average incubation to release survival rates and average marine survival rates. Expected adults were calculated based on long-term average survivals for the species, area and stage at release and may not reflect current marine survivals.

DFO is aware of potential interaction with wild stocks. This can take the form of greater than target exploitation rates on wild stocks due to abundant hatchery stocks; predation or competition for available food sources; or negative genetic effects. Hatchery programs are designed to avoid or minimize the risk of negative interactions with wild stocks.

Hatcheries may collect additional eggs for other programs for education, research or stock re-establishment. These additional eggs are not included in the hatchery egg targets in the following tables, but are noted in the comments. For the 2008 brood year, in addition to major DFO operations and contract hatcheries (Community Economic Development Program or CEDP), larger or more complex Public Involvement Projects (Designated Public Involvement or DPI), operated by volunteers, are included in these tables. The smaller Public Involvement Projects that are not included are focused toward stewardship, stock rebuilding or educational activities and do not release large numbers of fish. Facilities may also enhance steelhead and cutthroat under the direction of the Province of BC. Targets for these species are not included. SEP also works with First Nations, industry, community groups and other government agencies

to design and implement habitat restoration projects. Habitat related activities are not addressed in this report.

4.7.2. General

Small adjustments are made to some egg targets to reflect current fecundity and rearing survival to maintain consistent release numbers. Adult broodstock at some hatcheries are screened for the presence of the causative organism of Bacterial Kidney Disease (BKD), depending on the prevalence of BKD in the stock. BKD is a common disease in Pacific salmon populations which can be problematic in fish culture. There may be small numbers of surplus chinook and coho fry released into natal streams from Spius Creek Hatchery, depending on the incidence (i.e. the lower the incidence of BKD, the higher the fry release). Recently, this has ranged from 0-30k.

4.7.3. Chinook

Discussions are ongoing with Area staff to determine possible production cuts, increases or changes needed to align hatchery operations with budgets for DFO operated hatcheries (Enhancement Operations). At present, all 2009 brood proposed production targets for these facilities remain the same as for 2008 brood.

Table 1a) Proposed 2009 Brood Production Targets for Chinook – DFO Enhancement facilities

Project	Run	Stock	Release Site	Stage	2008 Brood Targets		2009 Brood Proposed		
					Eggs	Release	Eggs	Release	Exp Adults
Big Qualicum R	Fall	Big Qualicum R	Big Qualicum R	Smolt 0+	4,200,000	3,500,000	TBD	TBD	5,250
Capilano R	Fall	Capilano R	Capilano R	Smolt 0+	850,000	460,000	TBD	TBD	530
			Capilano Est	Seapen0+		100,000	TBD	TBD	140
Chehalis R	Summer	Chehalis R	Chehalis R	Smolt 0+	500,000	390,000	TBD	TBD	3,900
	Fall	Harrison R	Harrison R	Smolt 0+	420,000	300,000	TBD	TBD	6,000
Chemainus R	Fall	Chemainus R	Chemainus R	Smolt 0+	175,000	160,000	TBD	TBD	430
Chilliwack R	Spring	Chilliwack R	Chilliwack R	Smolt 0+	62,500	50,000	TBD	TBD	500
	Summer	Chilliwack R	Chilliwack R	Smolt 0+	512,500	410,000	TBD	TBD	4,100
	Fall	Chilliwack R	Chilliwack R	Smolt 0+	1,250,000	1,000,000	TBD	TBD	20,000
Conuma R	Fall	Burman R	Burman R	Seapen0+	300,000	250,000	TBD	TBD	3,100
	Fall	Conuma R	Conuma Est	Seapen0+	2,100,000	1,700,000	TBD	TBD	25,500
	Fall	Gold R	Gold R	Smolt 0+	0	0	TBD	TBD	0
	Fall	Muchalat R	Muchalat R	Smolt 0+	0	0	TBD	TBD	0
	Fall	Sucwoa R	Sucwoa Est	Seapen0+	50,000	40,000	TBD	TBD	600
	Fall	Tlupana R	Tlupana Est	Seapen0+	50,000	40,000	TBD	TBD	600
Inch Cr	Summer	Maria SI	Hope SI	Smolt 0+	150,000	100,000	TBD	TBD	1,000
			Maria SI	Smolt 0+		0	TBD	TBD	0
			Wahleach Cr	Smolt 0+		0	TBD	TBD	0
	Fall	Stave R	Stave R	Smolt 0+	275,000	210,000	TBD	TBD	4,200
L Qualicum R	Fall	L Qualicum R	L Qualicum R	Smolt 0+	3,150,000	2,250,000	TBD	TBD	6,300
Nitinat R	Fall	Nitinat R	Nitinat Lk	Seapen0+	2,500,000	2,000,000	TBD	TBD	16,000
			Sarita R	Smolt 0+	450,000	100,000	TBD	TBD	550
			Poett Nook	Seapen0+		300,000	TBD	TBD	2,400
Puntledge R	Summer	Puntledge R	Puntledge R	Seapen0+	2,400,000	200,000	TBD	TBD	880
				Smolt 0+		1,600,000	TBD	TBD	7,040
	Fall	Puntledge R	Puntledge R	Smolt 0+	1,500,000	1,200,000	TBD	TBD	5,280
Quinsam R	Fall	Quinsam R	Quinsam R	Smolt 0+	4,400,000	1,900,000	TBD	TBD	7,030
			Discovery Pass	Seapen0+		1,000,000	TBD	TBD	3,700

			Campbell R	Egg Plnt		1,000,000	TBD	TBD	672
Robertson Cr	Fall	Nahmint R	Nahmint R	Smolt 0+	250,000	165,000	TBD	TBD	1,353
				Seapen0+		60,000	TBD	TBD	900
	Fall	Robertson Cr	Robertson Cr	Smolt 0+	7,200,000	6,000,000	TBD	TBD	49,200
Shuswap R	Summer	Shuswap R Low	Shuswap R Low	Smolt 0+	550,000	500,000	TBD	TBD	2,000
	Summer	Shuswap R Mid	Shuswap R Mid	Smolt 0+	250,000	200,000	TBD	TBD	800
Spius Cr	Spring	Coldwater R	Coldwater R	Smolt 1+	90,000	50,000	TBD	TBD	200
	Spring	Nicola R	Nicola R	Smolt 1+	220,000	140,000	TBD	TBD	560
	Spring	Salmon R/TOMF	Salmon R/TOMF	Smolt 1+	120,000	70,000	TBD	TBD	280
	Spring	Spius Cr	Spius Cr	Smolt 1+	90,000	50,000	TBD	TBD	200
Tenderfoot Cr	Summer	Porteau Cv	Porteau Cv	Seapen0+	1,400,000	800,000	TBD	TBD	1,120
			Squamish Est	Seapen0+		400,000	TBD	TBD	560
		Cheakamus R	Cheakamus R	Smolt 0+	117,000	100,000	TBD	TBD	140

Table 1b) Proposed 2009 Brood Production Targets for Chinook – Community Economic Development and Designated Public Involvement Projects.

Project	Run	Stock	Release Site	Stage	2008 Brood Targets		2009 Brood Proposed		
					Eggs	Release	Eggs	Release	Exp Adults
Alouette R	Fall	Chilliwack R	Alouette R, S	Smolt 0+		200,000		200,000	4,000
Chapman Cr	Fall	Lang Cr	Chapman Cr	Smolt 0+		100,000		100,000	132
Clayoquot	Fall	Kennedy R Low	Kennedy R Low	Smolt 0+	525,000	380,000	525,000	380,000	3,040
Cowichan R	Fall	Cowichan R	Cowichan R	Fed Spr	2,000,000	1,000,000	2,000,000	700,000	980
			Cowichan R	Smolt 0+		700,000		1,000,000	3,900
			Cowichan Bay	Seapen0+		100,000		100,000	390
Englishman Enh	Fall	L Qualicum R	Englishman R	Fed Spr		210,000		210,000	294
Esquimalt Har	Fall	Nitinat R	Esquimalt Har	Seapen0+		172,000		172,000	1,376
Gillard Pass	Fall	Phillips R	Phillips R	Smolt 0+	200,000	90,000	220,000	100,000	148
			Fanny By/JNST	Seapen0+		90,000		100,000	148
Goldstream R	Fall	Goldstream R	Goldstream R	Smolt 0+	50,000	36,000	250,000	240,000	675
Gwa'ni	Fall	Sebalhall Cr	Vernon Lk	Smolt 0+			50,000	45,000	166
		Woss R	Woss Lk	Smolt 0+	200,000	40,000	200,000	180,000	666
			Nimpkish Lk	Smolt 0+		90,000		0	0
			Vernon Lk	Smolt 0+		30,000		0	0
			Anutz Lk	Smolt 0+		20,000		0	0
Kingfisher /TOMF	Summer	Shuswap R, Low	Shuswap R, Low	Smolt 0+	200,000	144,000	200,000	144,000	576
L Campbell R	Fall	L Campbell R	L Campbell R	Smolt 0+	100,000	75,000	100,000	75,000	105
Nanaimo R	Summer	First L/GSVI	First L/GSVI	Smolt 0+	250,000	180,000	250,000	180,000	486
	Fall	Nanaimo R	Nanaimo R	Smolt 0+	450,000	350,000	450,000	350,000	945
Nicomekl R	Fall	Serpentine R	Nicomekl R	Smolt 0+		50,000		50,000	70
Oyster R	Fall	Oyster R	Oyster R	Smolt 0+	60,000	45,000	60,000	45,000	122
P Hardy Marble	Fall	Marble R	Marble R	Smolt 0+	1,100,000	900,000	1,100,000	900,000	7,200
			Quatsino Sd	Seapen0+		90,000		90,000	720
Powell R	Fall	Lang Cr	Lang Cr	Smolt 0+	800,000	100,000	800,000	130,000	140
			Duck Lk	Smolt 0+		500,000		530,000	700
			Willingdon Est	Seapen0+		100,000		40,000	43
San Juan R	Fall	San Juan R	San Juan R	Smolt 0+	1,000,000	720,000	1,000,000	720,000	5,760
Sayward F&G	Fall	Salmon R/JNST	Salmon R/JNST	Smolt 0+	150,000	120,000	150,000	120,000	133
Sechelt	Fall	Lang Cr	Maclean Bay	Seapen0+		150,000		75,000	105

Serpentine R	Fall	Serpentine R	Serpentine R	Smolt 0+	80,000	57,600	80,000	57,600	81
Sliammon R	Fall	Lang Cr	Sliammon R	Smolt 0+		150,000		150,000	210
			Theodosia R	Seapen0+		150,000		150,000	210
Sooke R	Fall	Sooke R	Sooke R	Fed Spr	250,000	180,000	250,000	180,000	720
		Nitinat R	Sooke R	Smolt 0+		212,500		212,500	1,169
Tahsis	Fall	Leiner R	Leiner R	Seapen0+	100,000	72,000	150,000	110,000	720
		Tahsis R	Tahsis R	Seapen0+	250,000	200,000	150,000	110,000	800
Thornton Cr	Fall	Thornton Cr	Thornton Cr	Smolt 0+	300,000	216,000	300,000	216,000	1,728
	Fall	Toquart R	Toquart R	Smolt 0+	350,000	252,000	230,000	170,000	1,360
Tofino	Fall	Bedwell R	Bedwell R	Smolt 0+	0	0	60,000	58,000	252
		Cypre R	Cypre R	Smolt 0+	175,000	160,000	175,000	160,000	1,280
		Tranquil Cr	Tranquil Cr	Smolt 0+	50,000	36,000	50,000	36,000	288

Capilano Hatchery is now rearing 100k chinook in seapens near the West Vancouver Laboratory. A number of Lower Fraser tributaries support small, genetically distinct and indigenous populations of chinook. A small population indigenous to the upper reaches of the Chilliwack River will continue to be the focus for the enhancement program to ensure their conservation. Targets proposed are maximums and are unlikely to be achieved as it is extremely difficult to access adults in the upper river where the small return has lots of room to hide.

Following five years of brood capture efforts on Gold and Muchalat Rivers (Conuma River Hatchery) in which samples were insufficient to determine the status of a remnant population, in 2007 production ceased pending a review of the strategy in order to minimize the risk of exacerbating any negative effects of Robertson Creek chinook strays to that system. This review is under way, but results are not yet available for this report.

Maria Slough (Inch Creek Hatchery) chinook salmon existed in one side channel of the lower Fraser River. Nearby Hope Slough has habitat suitable for this stock and is now receiving both habitat restoration and fish culture support to further improve this indigenous chinook population. Wahleach Slough may also receive further transplants of this stock, once habitat issues are resolved with BC Hydro.

The last Puntledge River summer chinook captive brood females at Rosewall Creek Hatchery were taken in 2005. Beginning in 2006, a portion of the adult broodstock collected in the Puntledge was held on cooler water at Rosewall Creek Hatchery, which greatly reduced pre-spawn mortality and increased egg fertility. Juveniles were initially reared at Rosewall Creek Hatchery before being returned to Puntledge Hatchery for final rearing. This strategy will continue. In addition, a seapen release strategy was continued for summer chinook due to concerns over seal predation.

Eggs were collected from Cheakamus River (Tenderfoot Creek Hatchery) chinook in the fall of 2008 as part of an ongoing response to the caustic soda spill into the Cheakamus River in August 2005. Habitat restoration projects will continue to be developed on the major chinook salmon spawning tributaries within the Squamish River watershed, the estuary and the Mamquam Blind Channel. Discussions will continue on means of improving the effectiveness of hatchery and habitat restoration programs as part of the Squamish River Watershed Salmon Recovery Plan process.

Alouette Hatchery has received 100k smolts from Chilliwack Hatchery for several years.

Cowichan River Hatchery has a target of 2M eggs which they are unlikely to attain with the present returns to the river. They are allowed to take only 40% of the female returns.

Goldstream Hatchery's target for chinook is incidental. Chinook are a very minor stock in this river. They incubate and rear Nitinat eggs for the seapens at Esquimalt Harbour (included here) and Saanichton (too small to be included).

Release strategies have been reviewed at Gwa'ni Hatchery and several changes were made based on biological needs. Releases will no longer be made to Anutz and Nimpkish lakes and Vernon Lake will receive Sebalhall Creek stock.

The Penny Creek Hatchery (Doug Little Hatchery) has been closed. Options regarding potential sites for relocating the facility are being discussed along with enhancement priorities for the area. The new hatchery is not expected to be completed until 2010, at the earliest.

A release of 150k seapen smolts for Powell River is proposed again for 2008 brood, subject to funding. Powell River may also do some of the 2008 brood chinook in a seapen off Texada Is.

The Sechelt target was reduced due to decreased ability to pay for rearing at Powell River.

Some hatcheries take additional chinook eggs beyond their own targets for approved transfers to projects not included in the tables. For 2008, these include: Little Qualicum (200k for Englishman River); Nitinat River (350k for Victoria and Sooke area); Powell River (530k for Area 15 & 16 projects); Chilliwack River (500k fall chinook for lower Fraser projects and 250k summers for Chehalis Hatchery); and Serpentine River (70k for Nicomekl River Hatchery).

4.7.4. Coho

Discussions are ongoing with Area staff to determine possible production cuts, increases or changes needed to align hatchery operations with budgets for DFO operated hatcheries (Enhancement Operations). At present, all 2009 brood proposed production targets for these facilities remain the same as for 2008 brood.

Table 2a) Proposed 2009 Brood Production Targets for Coho – DFO Enhancement facilities

Project	Run	Stock	Release Site	Stage	2008 Brood Targets		2009 Brood Proposed		
					Eggs	Release	Eggs	Release	Exp Adults
Big Qualicum R	Fall	Big Qualicum R	Big Qualicum R	Smolts	1,200,000	1,000,000	TBD	TBD	11,000
Capilano R	Fall	Capilano R	Capilano R	Smolts	1,500,000	525,000	TBD	TBD	8,400
Chehalis R	Fall	Chehalis R	Chehalis R	Smolts	1,001,000	800,000	TBD	TBD	12,800
			Cogburn Cr	Smolts		0	TBD	TBD	0
Chilliwack R	Fall	Chilliwack R	Chilliwack R	Smolts	1,400,000	1,200,000	TBD	TBD	19,200
	Fall	Elk Cr/LWFR	Elk Cr/LWFR	Smolts	0	0	TBD	TBD	0
Conuma R	Fall	Conuma R	Conuma R	Fed Spr	140,000	52,000	TBD	TBD	520
				Smolts		50,000	TBD	TBD	1,000
Inch Cr	Fall	Inch Cr	Inch Cr	Smolts	185,000	150,000	TBD	TBD	2,400
	Fall	Norrish Cr	Norrish Cr	Smolts	100,000	75,000	TBD	TBD	2,400
	Fall	Stave R	Stave R	Smolts	275,000	225,000	TBD	TBD	3,600
Nitinat R	Fall	Nitinat R	Nitinat R	Smolts	300,000	100,000	TBD	TBD	4,000
			Darlington Lk	Fed Spr		25,000	TBD	TBD	500
			Flora Lk	Fed Spr		25,000	TBD	TBD	500
			Francis Lk	Fed Spr		50,000	TBD	TBD	1,000
Puntledge R	Fall	Puntledge R	Puntledge R	Fed Spr	1,300,000	200,000	TBD	TBD	1,600
				Smolts		600,000	TBD	TBD	9,600
Quinsam R	Fall	Quinsam R	Quinsam R	Fed Spr	1,100,000	100,000	TBD	TBD	400
				Smolts		800,000	TBD	TBD	6,400
Robertson Cr	Fall	Robertson Cr	Robertson Cr	Smolts	475,000	400,000	TBD	TBD	18,000

Shuswap R	Fall	Duteau Cr	Duteau Cr	Fed Spr	74,000	60,000	TBD	TBD	480
Spilus Cr	Fall	Coldwater R	Coldwater R	Fed Spr	150,000	20,000	TBD	TBD	160
				Smolts		70,000	TBD	TBD	1,120
	Fall	Deadman R	Deadman R	Smolts	40,000	30,000	TBD	TBD	480
	Fall	Salmon R/TOMF	Salmon R/TOMF	Fed Spr	170,000	60,000	TBD	TBD	480
				Smolts		70,000	TBD	TBD	1,120
Tenderfoot Cr	Fall	Cheakamus R	Cheakamus R	Smolts	100,000	90,000	TBD	TBD	1,440
	Fall	Mamquam R	Mamaquam R	Smolts	110,000	45,000	TBD	TBD	720
			Loggers Lane Cr	Fed Spr		50,000	TBD	TBD	400
	Fall	Tenderfoot Cr	Tenderfoot Cr	Smolts	220,000	130,000	TBD	TBD	2,080
			Brohm Lk	Fed Spr		50,000	TBD	TBD	400

Table 2b) Proposed 2009 Brood Production Targets for Coho – Community Economic Development and Designated Public Involvement Projects.

Project	Run	Stock	Release Site	Stage	2008 Brood Targets		2009 Brood Proposed			
					Eggs	Release	Eggs	Release	Exp Adults	
Alouette R	Fall	Alouette R S	Alouette R S	Fed Spr	270,000	100,000	270,000	100,000	800	
				Smolts		80,000		80,000	1,280	
Chapman Cr	Fall	Chapman Cr	Chapman Cr	Smolts	110,000	80,000	110,000	80,000	880	
						20,000		20,000	220	
Fanny Bay	Fall	Coal Cr	Coal Cr	Smolts	25,000	16,875	0	0	0	
						10,000	6,750	10,000	6,750	74
		Rosewall Cr	Rosewall Cr	Smolts	100,000	67,500	40,000	34,000	374	
Gillard Pass	Fall	Ito Cr	Stuart Is Str	Fed Spr	25,000	20,000	25,000	20,000	80	
Goldstream R	Fall	Goldstream R	Goldstream R	Smolts	100,000	90,000	100,000	90,000	990	
Gwa'ni	Fall	Nimpkish R	Nimpkish R	Fed Spr	100,000	85,000	100,000	85,000	680	
Halalt Band	Fall	Bonsall Cr	Bonsall Cr	Fed Spr	50,000	45,000	50,000	45,000	270	
Horseshoe Bay	Fall	Capilano R	Horseshoe Bay	Seapen		5,000		5,000	55	
Kanaka Cr	Fall	Kanaka Cr	Kanaka Cr	Fed Spr	200,000	80,000	200,000	80,000	640	
				Smolts		50,000		50,000	800	
L Campbell R	Fall	L Campbell R	L Campbell R	Fed Spr	75,000	24,300	75,000	24,300	194	
				Smolts		30,000		30,000	480	
Little R	Fall	Little R	Little R	Fed Spr	50,000	15,000	50,000	15,000	90	
				Smolts		30,000		30,000	330	
Nanaimo R	Fall	Nanaimo R	Nanaimo R	Fed Spr	200,000	50,000	260,000	125,000	750	
				Smolts		45,000		67,000	737	
	Fall	Nanaimo R	Millstone R	Fed Spr		60,000		60,000	360	
Nicomekl R	Fall	Nicomekl R	Nicomekl R	Smolts	75,000	50,625	100,000	75,000	810	
Oyster R	Fall	Oyster R	Oyster R	Fed Spr	150,000	100,000	150,000	100,000	600	
				Smolts		40,000		40,000	440	
P Hardy/ Marble	Fall	Link R	Link R	Fed Spr	200,000	162,000	200,000	162,000	1,620	
						110,000	90,000	0	0	0
						86,000	70,000	100,000	90,000	450
		Waukwaas Cr	Waukwaas Cr	Unfed	85,000	10,000	100,000	40,000	200	
				Smolts		60,000		50,000	1,000	
P Hardy/ Quatse	Fall	Cluxewe R	Cluxewe R	Fed Spr	165,000	45,000	165,000	45,000	180	

				Smolts		90,000		90,000	720
	Fall	Quatse R	Quatse Lk	Fed Spr	165,000	22,500	165,000	22,500	90
			Quatse R	Fed Spr		22,500		22,500	90
				Smolts		90,000		90,000	720
Powell R	Summer	Lang Cr	Haslam Lk	Fed Spr	320,000	200,000	320,000	200,000	1,200
			Lang Cr	Fed Fall		100,000		80,000	800
San Juan R	Fall	San Juan R	Harris Cr/TOMF	Fed Spr	200,000	45,000	200,000	45,000	900
			Lens Cr	Fed Spr		45,000		45,000	900
			Lens Lk	Fed Spr		40,000		40,000	800
			Pixie Lk	Fed Spr		45,000		45,000	900
Sechelt	Fall	Capilano R	Maclean Bay	Seapen	100,000	70,000	110,000	100,000	1,100
Serpentine R	Fall	Serpentine R	Serpentine R	Smolts	95,000	64,000	100,000	75,000	1,024
Seymour R	Fall	Seymour R	Hurry Cr	Smolts	165,000	75,000	165,000	75,000	1,200
			Seymour R	Fed Spr		40,000		40,000	320
Sliammon R	Fall	Sliammon R	Sliammon R	Fed Spr	60,000	50,000	60,000	50,000	300
Sooke R	Fall	Demamiel Cr	Young Lk	Fed Spr	150,000	35,000	150,000	35,000	700
			Young Lk	Smolts		80,000		80,000	3,200
Thompson R N	Fall	Dunn Cr	Dunn Cr	Smolts	30,000	20,250	30,000	20,250	324
	Fall	Lemieux Cr	Ianson Ch	Smolts	30,000	20,250	30,000	20,250	324
	Fall	Louis Cr	Louis Cr	Smolts	30,000	20,250	30,000	20,250	324
Thornton Cr	Fall	Kennedy R Up	Kennedy R Up	Fed Spr	0	0	0	0	0
	Fall	Lost Shoe Cr	Lost Shoe Cr	Fed Spr	0	0	0	0	0
	Fall	Maggie R	Maggie R	Fed Spr	0	0	0	0	0
	Fall	Thornton Cr	Thornton Cr	Smolts	60,000	40,000	60,000	40,000	1,600
Tofino	Fall	Cypre R	Cypre R	Fed Spr	100,000	81,000	100,000	81,000	1,620
		Kootowis Cr	Kootowis Cr	Fed Spr	100,000	81,000	100,000	81,000	1,620
		Tranquil Cr	Tranquil Cr	Fed Spr	74,000	60,000	74,000	60,000	1,200

Production of adipose clipped smolts for potential harvest opportunities in 2010 will continue for stocks supporting hatchery mark-selective recreational fishery opportunities, including: Capilano, Chehalis, Chilliwack, Inch, Norrish, Stave, Tenderfoot, Alouette, Coquitlam, Kanaka, Little Campbell Nicomekl, Serpentine, and Seymour in the Lower Mainland; Big Qualicum, Nitinat, Puntledge, Quinsam, Robertson, French Creek, Little River, Millard Creek and Rosewall Creek on Vancouver Island; and Lang Creek and Chapman Creek on the Sunshine Coast.

Capilano Hatchery also incubates and rears 100K smolts for seapens at Sechelt.

Chehalis River Hatchery has stopped releasing coho smolts to Cogburn Creek due to difficulty of access.

The coho target for Conuma River is for 52k fed fry releases. An additional egg collection and release of 50k coho as yearling smolts will occur, subject to funding by the Nootka Sound Watershed Society.

The transfer of 100k Puntledge River coho fry to Tsolum River is not proposed for brood 2008 due to uncertainty of habitat quality.

The coho smolt release target for Robertson Creek Hatchery was reduced to 400k beginning with brood 2005 in order to reduce surplus production. Increases beyond this level will be subject to completed funding agreements.

The Fanny Bay Hatchery will concentrate on Rosewall Creek stock, although at a reduced level due to higher than optimal escapement over the last few years.

The Little River target was revised downward because too many fish were being produced for the size of the stream.

Nanaimo River release strategies were reviewed and it was decided to increase both fry and smolt releases. The transplant to Millstone River will take advantage of the new access to the upper river.

The Marble Hatchery targets have been reviewed and some changes are recommended.

Sechelt Hatchery stocks will be done at Chapman Cr, which allows for a slight increase in the target.

Thornton Creek Hatchery no longer enhances Lost Shoe Creek.

4.7.5. Chum

Discussions are ongoing with Area staff to determine possible production cuts, increases or changes needed to align hatchery operations with budgets for DFO operated hatcheries (Enhancement Operations). At present, all 2009 brood proposed production targets for these facilities remain the same as for 2008 brood.

Table 3a) Proposed 2009 Brood Production Targets for Chum – DFO Enhancement facilities

Project	Run	Stock	Release Site	Stage	2008 Brood Targets		2009 Brood Proposed		
					Eggs	Release	Eggs	Release	Exp Adults
Big Qualicum R	Fall	Big Qualicum R	Big Qualicum R	Chan Fry	125,000,000	54,000,000	TBD	TBD	486,000
Chehalis R	Fall	Chehalis R	Chehalis R	Fed FW	6,400,000	1,000,000	TBD	TBD	7,600
				Unfed		5,000,000	TBD	TBD	35,000
Chilliwack R	Fall	Chilliwack R	Chilliwack R	Unfed	2,500,000	2,000,000	TBD	TBD	14,000
			Atchelitz Cr	Unfed		0	TBD	TBD	
			L Chilliwack R	Unfed		0	TBD	TBD	
			Lückakuck Cr	Unfed		0	TBD	TBD	
Conuma R	Fall	Canton Cr	Canton Cr	Fed FW	1,200,000	1,000,000	TBD	TBD	9,100
	Fall	Conuma R	Conuma Est	Seapen	2,000,000	1,500,000	TBD	TBD	22,200
	Fall	Sucwoa R	Sucwoa R	Fed FW	1,200,000	1,000,000	TBD	TBD	9,100
	Fall	Tlupana R	Tlupana R	Fed FW	1,200,000	1,000,000	TBD	TBD	9,100
Inch Cr	Fall	Inch Cr	Inch Cr	Fed FW	1,200,000	800,000	TBD	TBD	12,000
			Nicomen SI	Fed FW		200,000	TBD	TBD	3,000
L Qualicum R	Fall	L Qualicum R	L Qualicum R	Chan Fry	62,000,000	38,000,000	TBD	TBD	190,000
Nitinat R	Fall	Nitinat R	Nitinat Lk	Fed FW	37,000,000	30,000,000	TBD	TBD	627,000
			Klanawa R	Fed FW		3,000,000	TBD	TBD	62,700
Puntledge R	Fall	Puntledge R	Puntledge R	Fed FW	3,000,000	2,700,000	TBD	TBD	35,640
Tenderfoot Cr	Fall	Tenderfoot Cr	Tenderfoot Cr	Unfed	85,000	75,000	TBD	TBD	525
Weaver Sp Ch	Fall	Weaver Sp Ch	Weaver Sp Ch	Chan Fry	4,125,000	2,700,000	TBD	TBD	18,900

Table 3b) Proposed 2009 Brood Production Targets for Chum – Community Economic Development and Designated Public Involvement Projects

Project	Run	Stock	Release Site	Stage	2008 Brood Targets		2009 Brood Proposed		
					Eggs	Release	Eggs	Release	Exp Adults
Alouette R	Fall	Alouette R S	Alouette R N	Fed FW	200,000	195,000	200,000	195,000	2,925
Chapman Cr	Fall	Chapman Cr	Chapman Cr	Unfed	250,000	220,000	750,000	700,000	4,900
Fanny Bay	Fall	Rosewall Cr	Rosewall Cr	Fed FW	250,000	225,000	250,000	225,000	1,575
Goldstream R	Fall	Goldstream R	Goldstream R	Fed FW	104,000	75,000	104,000	75,000	330
Gwa'ni	Fall	Nimpkish R Low	Nimpkish R Low	Fed FW	2,000,000	1,800,000	2,000,000	1,800,000	23,760
Halalt Band	Fall	Bonsall Cr	Bonsall Cr	Unfed	45,000	41,000	45,000	41,000	287

	Fall	Chemainus R	Chemainus R	Egg Plant	500,000	425,000	500,000	425,000	1,275
Kanaka Cr	Fall	Kanaka Cr	Kanaka Cr	Fed FW	250,000	150,000	250,000	150,000	2,250
			Byrne Cr	Fed FW		25,000		25,000	375
			Kaymar Cr	Fed FW		5,000		5,000	75
Little R	Fall	Puntledge R	Little R	Fed FW		95,000		95,000	1,254
Nanaimo R	Fall	Nanaimo R	Nanaimo R	Unfed	1,250,000	1,062,500	1,250,000	1,062,500	7,438
Nicomekl R	Fall	Chehalis R	Nicomekl R	Unfed		95,000		95,000	665
Oyster R	Fall	Oyster R	Oyster R	Fed FW	350,000	320,000	350,000	320,000	4,224
P Hardy/Quatse	Fall	Quatse R	Quatse R	Fed FW	125,000	100,000	125,000	100,000	1,337
Powell R	Fall	Lang Cr	Lang Cr	Fed FW	800,000	750,000	800,000	750,000	9,900
San Juan R	Fall	San Juan R	San Juan R	Fed FW	50,000	36,000	50,000	36,000	612
Sechelt	Fall	Angus Cr	Maclean Bay	Seapen	800,000	750,000	750,000	700,000	9,240
Serpentine R	Fall	Chehalis R	Serpentine R	Fed FW		150,000		150,000	2,550
Seymour R	Fall	Alouette R S	Seymour R	Fed FW	150,000	100,000	150,000	100,000	1,500
			Maplewood Cr	Fed FW		20,000		20,000	300
Sliammon R	Fall	Sliammon R	Sliammon R	Unfed	3,400,000	2,500,000	3,000,000	1,700,000	17,500
				Fed FW		500,000		900,000	6,600
Thornton Cr	Fall	Mercer Cr	Mercer Cr	Fed FW	60,000	50,000	60,000	50,000	850
	Fall	Salmon Cr/SWVI	Salmon Cr	Fed FW	600,000	500,000	600,000	500,000	8,500
	Fall	Twin Rivers	Twin Rivers	Fed FW	60,000	50,000	60,000	50,000	850

At a few facilities, chum production has been supplemented by First Nations for ESSR harvest. The 2008 Chehalis River egg target is set at 6.4M. Of these, the 5M targeted to be released as unfed fry may be fed if funding is provided by the Chehalis Band.

All Chilliwack Hatchery production will be released back to the river for the next few years due to recent poor adult returns. The transplants to Atchelitz, Luckakuck and Little Chilliwack rivers are suspended for the time being.

Inch Creek Hatchery is now releasing part of its chum production to Inch Creek and part to Nicomen Slough.

The Namgis First Nation provides supplemental funding to the Gwa'ni Hatchery to pay for the collection of up to an additional 8M chum salmon eggs, over and above the 2M eggs in their CEDP contract.

The target for Seymour River is reduced in odd years to allow room for pink production.

The Sliammon River target has been reviewed and minor changes in the release strategy are proposed. Sliammon increased production in 2007 in order to meet the river's carrying capacity while enhancing their ESSR potential. Returns from enhanced stocks are well below predicted returns.

Sechelt production is now being done on a pilot basis from the Chapman Creek Hatchery.

Additional chum eggs collected by hatcheries beyond their own targets for approved transfers to other projects not included in the tables include: Big Qualicum River (300k for Area 14S projects); Capilano River (30k for McKay Creek project); Chehalis River (300k for lower Fraser River projects); Inch Creek (100k for lower Fraser River projects); Tenderfoot Creek (400k for Bowen Island and West Vancouver projects); Puntledge River (400k for Area 14N projects); Quinsam River (350k Campbell River chum eggs for local public involvement projects); Alouette River (420k for lower Fraser River projects); and Kanaka Creek (100k for lower Fraser River projects and schools).

4.7.6. Pink

Discussions are ongoing with Area staff to determine possible production cuts, increases or changes needed to align hatchery operations with budgets for DFO operated hatcheries (Enhancement Operations). At present, all 2009 brood proposed production targets for these facilities remain the same as for 2008 brood.

Table 4a) Proposed 2009 Brood Production Targets for Pink – DFO Enhancement facilities

Project	Run	Stock	Release Site	Stage	2008 Brood Targets		2009 Brood Proposed		
					Eggs	Release	Eggs	Release	Exp Adults
Chehalis R	Fall	Chehalis R	Chehalis R	Unfed	300,000	250,000	TBD	TBD	0
Puntledge R	Fall	Quinsam R	Puntledge R	Unfed	2,500,000	2,400,000	TBD	TBD	22,560
	Fall	Glendale	Glendale R	Chan Fry	37,500,000	18,800,000	TBD	TBD	368,500
Quinsam R	Fall	Quinsam R	Quinsam R	Unfed	6,800,000	5,400,000	TBD	TBD	161,460
			Discovery Pass	Seapen		1,000,000	TBD	TBD	35,700
Tenderfoot Cr	Fall	Cheakamus R	Cheakamus R	Unfed	1,250,000	1,000,000	TBD	TBD	0
Weaver Sp Ch	Fall	Weaver Sp Ch	Weaver Sp Ch	Chan Fry	1,920,000	921,600	TBD	TBD	0

¹ Pinks are present on the Fraser River and Cheakamus River during odd years only.

Table 4b) Proposed 2009 Brood Production Targets for Pink – Community Economic Development and Designated Public Involvement Projects

Project	Run	Stock	Release Site	Stage	2008 Brood Targets		2009 Brood Proposed		
					Eggs	Release	Eggs	Release	Exp Adults
Chapman Cr	Fall	Chapman Cr	Chapman Cr	Unfed	400,000	250,000	400,000	250,000	2,350
			Gibsons	Seapen		100,000		100,000	2,400
Cowichan R	Fall	Quinsam R	Cowichan Bay	Seapen		200,000		200,000	4,800
Englishman R	Fall	Quinsam R	Englishman R	Unfed		1,000,000		1,000,000	22,560
Fanny Bay	Fall	Quinsam R	Coal Cr	Unfed		1,000,000		1,000,000	22,560
Kanaka Cr ¹	Fall	Harrison R	Kanaka Cr	Unfed		600,000		0	0
Nanaimo R	Fall	Nanaimo R	Nanaimo Area	Seapen	1,200,000	1,000,000	1,000,000	900,000	21,600
Nile Cr	Fall	Big Qualicum R	Deep Bay	Seapen		450,000		450,000	16,065
		Quinsam R	Nile Cr	Unfed		1,000,000		1,000,000	22,560
Oyster R	Fall	Oyster R	Oyster R	Unfed	900,000	810,000	2,500,000	2,250,000	7,125
Powell R	Fall	Lang Cr	Lang Cr	Unfed	600,000	500,000	600,000	500,000	8,150
P Hardy/Quatse	Fall	Cluxewe R	Cluxewe R	Unfed	1,000,000	800,000	1,000,000	800,000	15,680
		Quatse R	Quatse R	Unfed	1,500,000	1,350,000	1,500,000	1,350,000	26,460
Sechelt	Fall	Sechelt Cr	Maclean Bay	Seapen	350,000	300,000	300,000	250,000	6,000
Seymour R ¹	Fall	Chilliwack R	Seymour R	Unfed	1,800,000	1,440,000	0	0	0
Tsolum R	Fall	Puntledge R	Tsolum R	Unfed		1,000,000		1,000,000	22,560

¹ Pinks are present on the Fraser River during odd years only.

In 2006, DFO began discussions with the Province of BC to investigate options to provide more opportunities for recreational fishing in Georgia Basin using pink salmon releases from seapens – building on the experience of Quinsam and Puntledge Hatcheries. A contract was let by the Province to compile a list of potential release sites and DFO wrote a preliminary set of guidelines for project development. In 2007, three new seapen sites received approval for operation: Deep Bay, Gibsons and Cowichan Bay. In 2008, revised guidelines and a process for project proposals are under development. The brood 2007 projects will be reviewed. As in previous years, egg transfers will occur based on strength of the donor stocks and a prioritized

plan. Low returns are expected in 2008, as was the case in 2006, and there will likely be insufficient eggs for all requests.

Chehalis Hatchery takes about 1.7M extra eggs in odd years from Chehalis swim-ins and Weaver Spawning Channel (both in the Harrison system) to supply eggs to several small Public Involvement projects, as well as Kanaka Creek Hatchery.

In addition to its own egg target, Quinsam River Hatchery supplies eggs for approved transfers to other east coast Vancouver Island projects to re-establish former pink runs and contribute to local recreational fisheries. Depending on availability, this amounts to ~7M eggs over and above the Quinsam target. To reduce pressure on the Quinsam/Campbell pink population, in 2007 some projects collected eggs from returns from previous transplants. This will continue and possibly expand in 2008.

The Nanaimo River release target is proposed to increase from 400k to 1M (subject to funding being secured for site modifications at Nanaimo River Hatchery).

The Oyster River target needs further review.

Enhancement of pink stocks with the Sechelt band is under discussion pending the Sechelt site review. Sechelt Creek and Chapman/Wilson stocks are the two stocks available. A suitable incubation source for pinks has yet to be found.

4.7.7. Sockeye

Discussions are ongoing with Area staff to determine possible production cuts, increases or changes needed to align hatchery operations with budgets for DFO operated hatcheries (Enhancement Operations). At present, all 2009 brood proposed production targets for these facilities remain the same as for 2008 brood.

Table 5a) Proposed 2009 Brood Production Targets for Sockeye – DFO Enhancement facilities

Project	Run	Stock	Release Site	Stage	2008 Brood Targets		2009 Brood Proposed		
					Eggs	Release	Eggs	Release	Exp Adults
Gates Sp Ch	Summer	Gates R	Gates R	Chan Fry	9,000,000	4,500,000	TBD	TBD	30,150
Horsefly Sp Ch	Summer	Horsefly Ch	Horsefly Ch	Chan Fry	35,000,000	17,500,000	TBD	TBD	117,250
Nadina Sp Ch	Summer	Nadina R	Nadina R	Chan Fry	7,000,000	3,500,000	TBD	TBD	23,450
Inch Sock Sat	Summer	Pitt R Up	Pitt R Up	Fed Spr	2,500,000	2,000,000	TBD	TBD	20,000
	Fall	Cultus Lk	Cultus Lk	Fed Spr	1,000,000	550,000	TBD	TBD	825
				Fed Fall		150,000	TBD	TBD	450
				Smolts		50,000	TBD	TBD	1,500
Shuswap R	Summer	Adams R Up	Adams R Up	Fed Spr	1,200,000	1,000,000	TBD	TBD	9,900
	Summer	Okanagan R	Okanagan R	Fed Spr	1,800,000	1,450,000	TBD	TBD	14,350
Weaver Sp Ch	Fall	Weaver Sp Ch	Weaver Sp Ch	Chan Fry	65,000,000	46,800,000	TBD	TBD	313,560

Table 5b) Proposed 2009 Brood Production Targets for Sockeye – Community Economic Development and Designated Public Involvement Projects

Project	Run	Stock	Release Site	Stage	2008 Brood Targets		2009 Brood Proposed		
					Eggs	Release	Eggs	Release	Exp Adults
Gwa'ni	Fall	Sebalhall Cr	Vernon Lk	Unfed	500,000	400,000	500,000	400,000	2,680
	Fall	Woss R	Woss Lk	Unfed	1,000,000	800,000	1,000,000	800,000	5,360
Sakinaw L	Fall	Sakinaw L	Sakinaw L	Fed Spr	250,000	200,000	1,000,000	850,000	17,000

The National Recovery Plan for Sakinaw sockeye includes an egg target based on 50% of female spawners, rather than a specific number. All resulting fry are released as fed fry to Sakinaw Lake with the exception of ~1500-2000 transferred to Rosewall Creek Hatchery for captive rearing. Captives from broods 2002, 2004 and 2005 are now currently held at Rosewall. Returns were very low in 2006 and 2007, however, maturing captive brood continue to provide juveniles for release. With the maturation of the 2004 and 2005 brood lines in late 2008, potential fry releases might be up to 850k.

Survival rates to adult for Cultus Lake releases have been developed as part of the Cultus Lake Recovery Plan: 0.15% for summer releases, 0.3% for fall releases and 3% for smolt releases.

5. DECISION GUIDELINES AND SPECIFIC MANAGEMENT MEASURES

The following comprehensive decision guidelines outline management responses that will be invoked under a range of in-season circumstances, and the general rationale to be applied in making management decisions.

Decision guidelines are meant to capture general management approaches with the intention of working towards multi-year management plans.

Specific fishing plans for 2009 are described in Sections 6, 7 and 8.

5.1. General Decision Guidelines

5.1.1. Pre-season Planning

Development of decision guidelines is part of the pre-season planning process. Development is guided by relevant departmental policies (See Section 3), scientific advice, consultation with harvesters and other interests, and the experience of fishery managers.

Pre-season decisions include the development of escapement targets, exploitation rate limits, sector allocations and enforcement objectives.

5.1.2. In-season Decisions

In-season decision points vary from fishery to fishery depending on type, availability and quality of in-season information and the established advisory, consultation and decision-making processes. Decisions include opening and closure of fisheries, level of effort deemed acceptable, gear type restrictions, deployment of special projects, etc.

Where possible, in-season decisions will be consistent with pre-season plans; however, the implementation and applicability of decision guidelines and pre-season plans can be influenced in-season by a number of factors. These include unanticipated differences between pre-season forecasts and in-season run size estimates, unexpected differences in the strength and timing of co-migrating stocks, unusual migratory conditions and the availability and timeliness of in-season information.

5.1.3. Allocation Guidelines

Allocation decisions are made in accordance with the *Allocation Policy for Pacific Salmon*.

Table 6 describes a generalized framework by which fishing opportunities are allocated to different fishing sectors at different abundance levels.

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Table 6. Allocation guidelines

	Low Abundance		High Abundance		
First Nations FSC	Non-retention / closed	By-catch Retention	Directed	Directed	Directed
Recreational	Non-retention / closed	Non-retention	By-catch Retention	Directed	Directed
Commercial	Non-retention / closed	Non-retention	By-catch Retention	By-catch Retention	Directed

NOTE: This table describes conceptually how First Nations, recreational and commercial fisheries might be undertaken across a range of returns. It does not imply that specific management actions for all stocks exactly follow these guidelines, but rather is an attempt to depict the broad approach.

The allocation guidelines above refer to target stocks. The application of the *Allocation Policy for Pacific Salmon* on non-target stocks is case specific. The inadvertent harvest of different species of concern is referred to as by-catch. The inadvertent harvest of stocks of concern within the same species (i.e. Cultus Lake sockeye when harvesting Summer Run sockeye) is referred to as incidental harvest. Both by-catch and incidental harvest are factored into the calculation of exploitation rates on various stocks, and therefore, fishing plans are designed to be consistent with existing policies and to keep exploitation rates on stocks of concern within the limits described in the fishery management objectives (Section 4.1).

All harvest groups have recommended that the Department consult on by-catch/incidental harvest allocations. However, the Department does not allocate by-catch or portions of the acceptable exploitation rate on stocks of concern. The Department considers a number of fishing plan options and attempts to address a range of objectives including minimizing by-catch and incidental catch.

5.1.4. First Nations - Food, Social and Ceremonial (FSC)

The *Allocation Policy for Pacific Salmon* provides that after requirements for conservation, the first priority in salmon allocation is to FSC for harvest opportunities under communal FSC licences issued to First Nations, and to treaty rights for harvest opportunities for domestic purposes (consistent with Treaty Final Agreements).

While these opportunities will be provided on a priority basis, it does not necessarily mean that fishery targets for First Nations will be fully achieved before other fisheries can proceed. For example, many First Nations conduct their FSC fisheries in terminal areas while other fisheries are undertaken in marine areas or approach areas. The general guideline is that the fishing plan must adequately provide for the First Nations' FSC harvests that will occur further along the migration route over a reasonable range of potential run sizes.

5.1.5. First Nations- Economic Opportunities

DFO will be undertaking a series of discussions with First Nations regarding fishing for economic purposes to experiment with mechanisms to integrate management of fisheries following the negotiations of treaties.

These fisheries are undertaken with two principles:

- These fisheries are of the same priority as the commercial fishery.
- The share of fish harvested by First Nation economic opportunity fisheries must be fully mitigated over time by the retirement of commercial salmon licences from the commercial fishery.

As part of the reform of Pacific fisheries and the recently announced PICFI initiative in 2007, DFO is looking for opportunities to increase First Nations participation in new economic fisheries.

5.1.6. Recreational Fisheries

Under the Department's *Allocation Policy for Pacific Salmon*, after FSC fisheries, the recreational sector has priority to directed fisheries for chinook and coho salmon. For sockeye, pink and chum salmon, the policy states that recreational harvesters be provided predictable and stable fishing opportunities. Management actions previously applied in 1999-2008 will be implemented in 2009 and include: recreational harvest of sockeye, pink, and chum will be limited to a maximum average of 5% of the combined recreational and commercial harvest of each species on a coast-wide basis.

If stock abundance information suggests that conservation objectives cannot be attained, closures or non-retention regulation will generally be applied. In some cases, recreational fisheries with a non-retention restriction in place will remain open while First Nations FSC fisheries directed on stocks of concern are closed, provided the recreational fishery is not directed on the stock of concern, nor is the impact on the stock of concern significant.

Prior to a directed commercial fishery on specific chinook and coho stocks, the fishing plan will provide for full daily and possession limits for the recreational sector on those stocks. Decision guidelines may also identify considerations for changing the area of the fishery, modifying dates or changing daily limits.

5.1.7. Commercial Fisheries

The *Allocation Policy for Pacific Salmon* provides for at least 95% of the combined commercial and recreational sockeye, pink and chum harvest to be allocated to the commercial sector. Commercial harvest of chinook and coho salmon will occur when abundance permits and First Nations and recreational priorities are considered to have been addressed.

Specific sector target allocations are: seine 40%, gill net 38%, and troll 22% expressed on a sockeye equivalent basis. The ability to achieve these targets is often compromised by conservation constraints and other factors. Commercial allocation targets by area and by species will be included in Appendix 4.

Low impact fisheries (limited number of vessels) generally occur prior to those having a higher impact (full fleet), particularly at low run sizes, at the start of the run when run sizes are uncertain or when stocks of concern have peaked but continue to migrate through an area.

When one commercial gear type is unlikely to achieve its allocation, the usual approach will be that the same gear type, but in a different area, will be provided opportunities to harvest the uncaught balance.

Allocation targets are not catch targets for each sector. While the Department will usually plan and implement fisheries to harvest fish in accordance with allocation targets, opportunities may be provided that are inconsistent with the allocation targets. For example, in the case of Late Run Fraser River sockeye, the Department may choose to close marine fisheries (seine, gill net and troll) and open river fisheries (gill net) to take advantage of a low abundance of Cultus or Late Run sockeye and a significantly larger run size of Summer Run sockeye.

5.1.8. Excess Salmon to Spawning Requirements Fisheries

Salmon fisheries are managed with the objective of reaching escapement targets or harvesting a certain proportion of the run. Uncertain forecasts, inaccurate in-season run size estimates and mixed-stock concerns can result in escapement to terminal areas that are in excess of their required habitat or hatchery spawning capacity. In these cases, Excess Salmon to Spawning Requirements (ESSR) fisheries may occur.

The Department will attempt, wherever practical, to eliminate or minimize ESSRs by harvesting in the FSC, recreational, and commercial fisheries. It is not the intention of the Department to establish new ESSR fisheries to displace existing fisheries.

First priority will be to use identified surpluses to meet outstanding FSC requirements which cannot be met through approved FSC fisheries. This may be done under a communal licence. As a second priority, the local band or Tribal Council may be offered the opportunity to harvest all or part of the surplus under an ESSR licence.

5.1.9. Selective Fisheries

Selective fishing is defined as the ability to avoid non-target fish, invertebrates, seabirds, and marine mammals or, if encountered, to release them alive and unharmed (see Policy for Selective Fishing in Canada's Pacific Fisheries). Selective fishing technology and practices will be adopted where appropriate in all fisheries in the Pacific Region, and there will be attempts to continually improve harvesting gear and related practices.

All sectors have responded positively to the growing conservation consciousness. First Nations have embraced the principles of selective fishing by adopting more selective fishing gear, as often these types of gear reflect a traditional way of fishing for many First Nations. The Canadian commercial fishing sector has developed its own Canadian Code of Conduct for Responsible Fishing Operations. Over 80% of Canada's fishing organizations have signed on and ratified the Code that is overseen by a Responsible Fishing Board. Similarly, the recreational sector in the Pacific Region, through the

Sport Fishing Institute (SFI) has been working on the creation of the Tidal Angling Guide Standards document. This document outlines the curriculum and certification process for industry based tidal water anglers. The SFI has been investigating the possibility of utilizing the expertise of Industry Training organizations to bolster their efforts and to ensure that the program, once created, is recognized provincially and possibly nationally. The SFI hopes to complete this work and launch the Tidal Angling Guide certification program by end of 2009.

5.2. AABM/ISBM Chinook

Chinook fisheries in B.C. are managed under the umbrella of the PST, with domestic considerations for stocks of concern, allocation between sectors of the fishery, and application of selective fishing practices.

5.2.1. PST Chinook Abundance Based Management Framework

The basis for managing fisheries impacting chinook from Alaska to Oregon is the chinook abundance based management system in Chapter 3 of the PST. This management system was adopted in 1999 and defined harvests of chinook through 2008. Chapter 3, revised for implementation in 2009, maintains the abundance based management framework established under the 1999 Agreement.

Two types of fisheries are identified in this agreement; that is, Aggregate Abundance Based Management (AABM) and Individual Stock Based Management (ISBM). In southern B.C., the AABM applies to the following waters on the WCVI:

- Offshore waters including Areas 121 to 127.
- Inside waters including Areas 21, 23, and 24 in the period Oct 16 to July 31; and Areas 25, 26, and 27 in the period Oct 16 to June 30.

ISBM areas are all those that are not AABM.

The mixed-stock aggregate fisheries of Southeast Alaska, northern B.C., and WCVI are managed on the forecast abundance of the aggregate of stocks (called Aggregate Abundance Based Management or AABM fisheries). In the AABM fisheries a total allowable catch is determined based on the forecast abundance of the aggregate of stocks. Along the WCVI and northern B.C., the AABM fishery includes the WCVI and North Coast troll fisheries and the "outside" WCVI and Queen Charlotte Islands recreational fishery. Fisheries are managed based on a chinook fishery year which extends from October 1 in one calendar year to September 30 in the next calendar year. The revised PST agreement stipulates a 30% reduction in harvest rate in the WCVI AABM area, but no change in northern B.C.

For the remaining fisheries, the agreement imposes a limit on the adult equivalent mortality rate for individual stock groups (called Individual Stock Based Management or ISBM). Under ISBM, fisheries are regulated to limit impacts on individual stock groups. In Canada, the adult equivalent mortality rate in all ISBM fisheries was limited to 65% of the historic (or base period) adult equivalent mortality rate on each stock group.

Further explanation and the text of the chinook agreement can be found on the PSC website at: www.psc.org/Index.htm.

5.2.2. Domestic Considerations

Within the PST chinook management framework, Canadian domestic policy will further define fishing opportunities. The domestic objectives or policies which will most affect fishing opportunities include conservation, the WSP, the *Allocation Policy for Pacific Salmon*, and the *Policy for Selective Fishing in Canada's Pacific Fisheries*. Domestic conservation concerns may reduce the total allowable catch (TAC) to levels less than identified under the PST chinook AABM fisheries, and may limit opportunities in the ISBM fisheries. For example, since abundance of WCVI wild chinook was "critically" low in recent years, exploitation rates were reduced in troll, terminal recreational and First Nations fisheries. Allowable catch is allocated to sectors according to the priorities set out in the *Allocation Policy for Pacific Salmon*. Similarly, restrictions in the ISBM fisheries will be imposed in accordance with priorities outlined in the *Allocation Policy for Pacific Salmon*. Selective fishing practices are also considered when developing fishing opportunities.

5.2.3. Stock Status Outlook

The provisional 2008/09 TAC for the WCVI AABM, based on the abundance index from the Chinook Technical Committee (CTC) Chinook Model is 107,800. The WCVI AABM TAC includes a 30% reduction from the allowable catch under the Annex IV provisions of the 2008 PST agreement. This harvest level provides for an anticipated harvest of approximately 5,000 chinook in the First Nations fisheries, 50,000 chinook in "outside" recreational fisheries and 52,800 chinook in the WCVI commercial Area G troll fishery.

Stock aggregates categorized as "low" abundance will limit both AABM and ISBM fisheries. WCVI wild chinook are in "low" status and will require limitations on overall exploitation. Other southern B.C. chinook populations that are forecasted to have "low" returns include the Early-Timed Fraser River and Spring/Summer run Fraser chinook and Lower Strait of Georgia chinook. Limiting harvest of these stocks will require shaping of fisheries to limit impact in times and areas where these stocks are prevalent.

In contrast, there are some stocks exhibiting "moderate to high" abundance in recent years, including the Summer Run chinook destined to spawn in the South Thompson River watershed.

5.2.4. Fishery Guidelines

Shaping of fisheries will be required to limit impacts on chinook stocks forecast to return at "low" levels, including the WCVI wild chinook, Early-Timed and Spring/Summer Fraser chinook and Lower Strait of Georgia (LGS) chinook stocks.

Management measures are also taken in chinook AABM and ISBM fisheries to limit impacts on co-migrating stocks of concern such as Interior Fraser coho. Table 7a outlines the risks to co-migrating stocks posed by AABM fisheries targeting chinook.

Table 7a. Assessment of risk of impact on stocks of concern during chinook fisheries in the AABM management area of the WCVI

Fishery Period	Risk of impact on stocks of concern
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Fishery Period	Risk of impact on stocks of concern
Oct. - Feb.	Low risk. Fisheries in October are outside the migration period and area for several stocks of concern, including Interior Fraser coho, WCVI chinook, and Early-Timed and Spring/Summer run Fraser River chinook. Catch will be comprised of fish returning in subsequent calendar year or later. The majority of the chinook catch will be of stocks of U.S. and lower Fraser River origin.
Mar. – May	Moderate - High risk. Specific concerns for Early-Timed Fraser chinook. Increased incidence of lower Strait of Georgia chinook especially in May.
June - mid-Sept.	Moderate - High risk. Potential concern for impacts on spring/summer run Fraser chinook in June and July. Monitoring of coho encounters in early to mid-June is required. Risk increases as coho recruit to fishery. Stocks of concern, including interior Fraser coho are prevalent. Selective fishing methods may reduce risk by avoiding coho. Concerns for impacts on returning local WCVI stocks. Offshore fishing may reduce risk by avoiding WCVI chinook. Concerns for impacts on lower Strait of Georgia chinook.
Late Sept.	Low risk. Coho impacts reduced because nearing end of migration out of WCVI area. WCVI chinook may be avoided by area restrictions. Concerns for impacts on lower Strait of Georgia chinook.

Because there is a TAC identified for the AABM management area, targeted chinook fisheries are planned for First Nations, recreational, and commercial sectors in 2009. Table 7b describes management measures that will be taken to minimize impacts on stocks of concern in AABM chinook fisheries.

Table 7b. Stock outlook and management actions anticipated in AABM chinook fisheries to limit impacts on stocks of concern

Stock of Concern (constraint)	Stock Outlook for 2009	First Nation (FN) Fishery	Recreational Fishery	Commercial Fishery
WCVI chinook	<ul style="list-style-type: none"> - Low hatchery return of 3 and 5 yr olds. - Concerns persist for wild stocks. 	- Harvest levels outlined in communal licences	<ul style="list-style-type: none"> - Ongoing terminal area restrictions for wild stocks of concern. - Max. size limit inside the management corridor and other areas shoreward of the management corridor(daily limit of 2 chinook, 45 – 77 cm only) 	<ul style="list-style-type: none"> - Area G -Time and area closures on WCVI (i.e. avoid inshore fisheries during the time period July to September). - Area F - measures in the North Coast troll fishery
South Coast Coho (including Interior Fraser River)	<ul style="list-style-type: none"> - Status is low. - Low returns expected because of continued poor marine survivals. 	- Harvest levels outlined in communal licences	<ul style="list-style-type: none"> - Coho retention limited to selective hatchery mark fishery (SNMF) only. 	<ul style="list-style-type: none"> - Non retention of wild coho. - Potential for limited SHM coho retention in Sept.
Early Timed Fraser chinook	<ul style="list-style-type: none"> - Returns for 2009 are expected to continue to be well below long term average and target levels. 	No impacts on WCVI First Nations fisheries anticipated	No impacts on WCVI recreational fisheries anticipated	<ul style="list-style-type: none"> - Time and area closures and potential effort limits March to May. - Specific management measures to be determined.

Stock of Concern (constraint)	Stock Outlook for 2009	First Nation (FN) Fishery	Recreational Fishery	Commercial Fishery
Spring/Summer run Fraser chinook	<ul style="list-style-type: none"> - Returns for 2009 are expected to continue to be well below long term average and target levels. - Abundance reforecast in-season. 	No impacts on WCVI First Nations fisheries anticipated	No impacts on WCVI recreational fisheries anticipated	<ul style="list-style-type: none"> - Potential effort limits late May to July. - Specific management measures to be determined
Strait of Georgia chinook	<ul style="list-style-type: none"> - Lower Strait of Georgia chinook remains stock of concern. Continued poor returns anticipated in 2009. 	- Harvest levels outlined in communal licences	- No impacts on WCVI recreational fisheries anticipated	<ul style="list-style-type: none"> - AABM harvest rate reduction limits impacts on LGS chinook - Time and area closures (Areas south of Estevan Point closed in March and April) - reduced harvest levels in period March to June.

In the ISBM management area inside of Vancouver Island, fisheries are constrained in order to meet PST obligations to reduce chinook harvest rates from adult equivalent mortality levels. To meet this requirement in mixed-stock fisheries, there is generally non-retention of chinook in commercial fisheries (though by-catch retention may be allowed in some troll and gill net fisheries), recreational fisheries targeting chinook have daily and annual limits, and First Nations are provided limited opportunities for FSC purposes only. In particular, management action will continue to minimize impacts on Strait of Georgia origin chinook in 2009. Further fishery opportunities may be provided in-season in terminal locations with an identified surplus. Table 7c summarizes management actions taken in ISBM management areas to reduce impacts on stocks of concern.

Table 7c. Management actions anticipated in ISBM chinook fisheries to limit impacts on stocks of concern

Stock of Concern (constraint)	Stock Outlook for 2009	First Nation (FN) Fishery	Recreational Fishery	Commercial Fishery
WCVI chinook	<ul style="list-style-type: none"> - Reduced hatchery return of 4 yr olds. - Concerns persist for wild stocks. 	<ul style="list-style-type: none"> - Communal licence harvest targets - conservation measures under discussion. 	<ul style="list-style-type: none"> - Time and area closures - Max. size limit inside the WCVI management corridor and other areas shoreward of the management corridor (daily limit of 2 chinook, 45 – 77 cm only) - Some areas will be 2 chinook but only 1 >77cm - Catch limits - Measures will vary by area. 	<ul style="list-style-type: none"> - Time and area closures during the July to September period.
South Coast Coho (including Interior Fraser River)	<ul style="list-style-type: none"> - Status is low. - Low returns expected because of continued poor marine survivals. 	<ul style="list-style-type: none"> - Time and area restrictions - Gear restrictions - Communal licence harvest targets. - Measures will vary by area 	<ul style="list-style-type: none"> - Time and area closures - SHMF for coho - Catch limits - Measures will vary by area. 	<ul style="list-style-type: none"> - Generally non-retention of coho except for by-catch retention in terminal fisheries in Nootka and Barkley. - Gear restrictions (i.e. barbless hooks)

Stock of Concern (constraint)	Stock Outlook for 2009	First Nation (FN) Fishery	Recreational Fishery	Commercial Fishery
Early timed Fraser chinook and Spring/Summer run Fraser chinook	- Returns for 2009 are expected to continue to be well below long term average and target levels	- Time and area restrictions - Gear restrictions - Communal licence harvest targets - Measures will vary by area	- Time and area closures - Catch limits - Measures will vary by area. - Additional measures in place in 2009 on portions of Areas 19, 20 and in the Fraser River	- No directed commercial chinook salmon fisheries anticipated in ISBM waters on the east side of Vancouver Island.
Strait of Georgia chinook	- Lower Strait of Georgia chinook remains stock of concern. Continued poor returns anticipated in 2009.	- Time and area restrictions - Gear restrictions - Communal licence harvest targets. - Measures will vary by area	- Time and area closures - Catch limits - Measures will vary by area.	- No directed commercial chinook salmon fisheries anticipated in ISBM waters on the east side of Vancouver Island.
North Vancouver Island / Johnstone Strait Sockeye	- Returns expected to be well below average.	- No impacts on FN directed chinook fisheries anticipated.	- Time and area sockeye non-retention - Catch limits - Gear restriction (i.e. barbless hooks)	- No directed commercial chinook salmon fisheries anticipated in ISBM waters on the east side of Vancouver Island.

5.3. ABM Coho

Coho fisheries in southern B.C. are managed under the umbrella of the PST, with domestic considerations for stocks of concern, allocation between sectors of the fishery, and application of selective fishing practices. Note that the coho provisions negotiated in 2002 have been incorporated in the new PST for 2009.

5.3.1. PST Coho Abundance Based Management Framework

The basis for managing fisheries impacting wild coho originating from southern B.C., Washington State, and Oregon is set out in the PST. This abundance based management system was adopted in 2002 and will define harvests of Southern coho through 2018. The ABM plan constrains total fishery exploitation of key stock management units, including Strait of Georgia mainland, Strait of Georgia Vancouver Island, lower Fraser, and Interior Fraser. Other Canadian management units of domestic importance include the WCVI, Johnstone Strait - Mainland Inlets, and the Central Coast. In the United States, the management units relevant to the agreement include the Skagit River, the Stilliguamish, the Snohomish, Hood Canal, tributaries to the Strait of Juan de Fuca, the Quillayute, the Hoh, Queets, and Grays Harbour. For each of these management units, annual limits of fishing mortality will be established based on the level of abundance and the health of the wild stocks. The text of the agreement and formulae for sharing between the two countries can be found on the PSC website at: www.psc.org/Index.htm

Under the principles of coho ABM management, as stocks become less abundant, more stringent fishery management actions will be implemented. As stocks become more abundant, increased fishing opportunities will be considered.

5.3.2. Domestic Considerations

Within the PST coho management framework, Canadian domestic policy will further define fishing opportunities. The domestic objectives or policies that will most affect fishing opportunities include conservation objectives, the WSP, the *Allocation Policy for Pacific Salmon*, and *A Policy for Selective Fishing in Canada's Pacific Fisheries*. Domestic conservation concerns may limit total fishing mortality to a level less than stipulated in the PST coho ABM. For example, if abundance is "critically" low, such as the case with Interior Fraser coho in recent years, domestic fisheries may be limited below the lowest allowable exploitation identified by the coho ABM agreement. Allowable catch is allocated to sectors according to the priorities set out in the *Allocation Policy for Pacific Salmon*. Selective fishing practices are also taken into account when developing fishing opportunities.

5.3.3. Stock Status Outlook

For 2009, the status of southern B.C. stocks remains low to moderate. Returns to WCVI stocks in 2008 were relatively strong compared to recent years, however forecast models indicate that the low marine survivals will continue. Stocks in Johnstone Strait and Interior Fraser are low status, however forecast models indicate a slight improvement for 2009. Stocks in Strait of Georgia and Lower Fraser remain at low status and forecast models indicate no change. The distribution model indicates a strong 'inside' year meaning that Strait of Georgia and Fraser stocks will return early in summer 2009 which is different than recent years and similar to historic trends.

5.3.4. Fishery Guidelines

Management of salmon fisheries in southern B.C. will be shaped to accommodate the status level of coho within management units defined by the PST. Table 8a summarizes the general fishery management approaches by fishery sector associated with each status level (critically low, low, moderate, and abundant).

Table 8a. Southern B.C. coho mixed-stock fishery guidelines

	Coho Abundance / Status Level (3 levels within PSC Coho ABM and 4 levels in domestic Canadian management)			
PSC STATUS	LOW		MODERATE	ABUNDANT
DOMESTIC	Critically Low	Low	Moderate	Abundant
	Objective: No directed fisheries and avoidance.	Objective: Fisheries uncertain and likely small.	Objective: Normal fisheries are probable.	Objective: Extensive fisheries are likely.
First Nations FSC Fisheries	NON-DIRECTED FISHERIES AND AVOIDANCE, VERY LIMITED BY-CATCHES PERMITTED.	Opportunities will range from limited directed fisheries to regular FSC fisheries.	Regular FSC fisheries.	REGULAR FSC FISHERIES.
Recreational Fisheries	Severe restrictions in approach areas, non-retention and avoidance through time and area closures. SHMF may be considered.	A combination of SHMF and limited retention fisheries are possible, depending upon time and area under consideration.	Up to normal limits, marked and unmarked.	Normal limits.
Commercial - Net Fisheries	Severe restrictions including time and area closures, non-retention and avoidance. Selective fishing practices are required.	Generally non-retention and selective fishing practices. Potential for limited by-catch retention for gill nets.	Generally non-retention and selective fishing practices. Potential for limited by-catch retention for gill nets.	Some non-retention and increased potential for by-catch retention for gill nets and seines.
Commercial - Troll Fisheries	Severe restrictions including time and area closures, non-retention and avoidance. Selective fishing practices are required.	Generally non-retention and selective fishing practices. Potential for limited by-catch retention.	Limited by-catch retention possible. Potential for small target catch fisheries.	Targeted fisheries are likely.

Under "low" status, the United States is limited to 10% exploitation on coho originating from the Interior Fraser management unit. Canadian fisheries will be managed to limit total fishing mortality to a maximum of 3% for the Interior Fraser management unit, a level which recognizes the continued low status of this stock aggregate. The 3% limit on exploitation will result in management actions that limit encounters of wild coho in southern B.C. fisheries where Interior Fraser coho are prevalent, that is, in waters south of Cape Caution. Non-retention of wild coho will generally be in effect except First Nations FSC fisheries, where retention as a by-catch during fisheries for other species may be permitted, depending on the time and area of the fishery. First Nations FSC opportunities will also be considered in specific terminal systems where escapement levels as determined by counting fences are an accurate reflection of total abundance. Selective fishing practices will be required in all commercial and recreational fisheries. There may be wild coho retention in terminal locations with identified surpluses. The level of compliance to selective fishing standards will be monitored. Poor selective fishing practices during periods of high prevalence of Interior Fraser coho stocks may result in reduced fishing opportunities. In addition, avoidance of coho will be required during periods of high prevalence of Interior Fraser coho.

Coho fishing mortality will be determined pre-season from estimated encounters, fishing effort levels, best estimate of the proportion of Interior Fraser River stocks within the total encounters, and an average release mortality rate. A post-season review will be conducted to confirm the estimated Interior Fraser impact.

Directed coho fisheries will be constrained when there is evidence of co-migrating stocks of concern. Table 8b summarizes management actions that will be taken to limit impacts on salmon stocks of concern encountered in coho fisheries.

Table 8b. Management actions in coho fisheries to limit impacts on stocks of concern

Stock of Concern (constraint)	Stock Outlook for 2009	First Nation (FN) Fishery	Recreational Fishery	Commercial Fishery
Strait of Georgia Coho (including lower Fraser)	<ul style="list-style-type: none"> - Critically low - Stock of concern status. - Returns are expected to be well below desired levels. 	<ul style="list-style-type: none"> - Time and area closures - Harvest levels outlined in communal licences - Measures will vary by area and associated impacts on individual stocks. 	<ul style="list-style-type: none"> - Time and area closures - Gear restrictions (i.e. barbless hooks) - Catch limits - Measures will vary by area and associated impacts on individual stocks. See Section 7.3. 	<ul style="list-style-type: none"> - No directed commercial coho fisheries (or coho retention) in areas where Strait of Georgia coho are found. - Significant restrictions on commercial fisheries directed at other salmon stocks in areas where Georgia St coho are found.
Interior Fraser River coho	<ul style="list-style-type: none"> - Critically low - Stock of concern status. -Returns are expected to be well below desired levels. 	<ul style="list-style-type: none"> - Time and area closures - Harvest levels outlined in communal licences - Measures will vary by area and associated impacts on individual stocks. 	<ul style="list-style-type: none"> - Time and area closures - Gear restrictions (i.e. barbless hooks) - Constraints on coho by-catch - Measures will vary by area and associated impacts on individual stocks. See Section 7.3. 	<ul style="list-style-type: none"> - No directed commercial coho fisheries (or coho retention) in areas where Interior Fraser coho are found. - Significant restrictions on commercial fisheries directed at other salmon stocks in areas where Interior Fraser coho are found.

The ABM approach will be to substantially reduce coho exploitation below historic levels, and may result in some terminal surpluses. Terminal selective fishery opportunities and by-catch retention may be considered in-season in locations in which coho surpluses are identified.

5.4. Fraser River Sockeye Decision Guidelines

5.4.1. Background

Fraser River sockeye are managed on the basis of the four management groups (Early Stuart, Early Summer, Summer, and Late Run). In recent years Birkenhead sockeye have been

separated from the remaining Late Run stocks as their timing is more similar to the timing of Summer run stocks. Spawning escapement targets and harvest rules are developed annually for each stock timing aggregate as well as for Birkenhead sockeye.

The Fraser River Sockeye Spawning Initiative/WSP process was initiated in 2006 and has been continued for the identification of 2009 escapement strategy options.

5.4.2. General Constraints

Though TAC is identified on various stock groupings in most years, certain conservation and management constraints can affect harvesting opportunities. These constraints are expanded upon below.

5.4.3. Pre-season Planning

Prior to each fishing season, decisions are made about spawning escapement targets, harvest rates, management priorities and identification of conservation constraints. These decisions are made based on pre-season forecasts of run size, timing, stock composition, other technical information and input from various consultative processes. Potential fishing opportunities are identified based on these pre-season guidelines.

Run Size Forecast: Table 9 contains the 2009 forecast for all management groups.

Pre-season forecasts of run size at various probability levels are developed for major sockeye stocks within the four management groups (Early Stuart, Early Summer, Summer and Late). The 75% probability forecast indicates that the actual number of returning sockeye salmon has a 75% chance of being at forecast level or larger, while the 50% forecast is the mid-range forecast (i.e., there is an equal chance the return may be greater than or less than forecast). Forecasting methodology is found on the PSARC website at: www.pac.dfo-mpo.gc.ca/sci/psarc/. The 2009 forecast assumes that marine survival will be similar to the historical average. The 50% probability forecast will be used for fishery planning purposes. However given the recent trend in runs returning less than the 50% probability forecast level, work is ongoing to assess potential qualitative indicators of marine survival which would then be considered in planning fisheries.

Table 9. Pre-season forecasts for 2009 by stock/timing group and probability.

Sockeye stock/timing group	CU's (Table 2)	Forecast Model ^b	Probability of Achieving Specified Run Sizes ^a						
			Mean Run Size ^c		0.1	0.25	0.5	0.75	0.9
			all cycles	2009 cycle					
Early Stuart ^d	1,2	Pooled	335,000	797,000	645,000	426,000	255,000	165,000	107,000
Early Summer			-	-	2,284,000	1,338,000	739,000	443,000	264,000
<i>(total excluding miscellaneous)</i>			<i>(501,000)</i>	<i>(316,000)</i>	<i>(1,234,000)</i>	<i>(749,000)</i>	<i>(443,000)</i>	<i>(272,000)</i>	<i>(177,000)</i>
Bowron	3	Ricker (eff)-pi	23,000	13,000	25,000	16,000	10,000	6,000	4,000
Fennell	4	Ricker (eff)	28,000	17,000	101,000	60,000	34,000	21,000	12,000
Gates	5	Ricker (eff)-cyc	65,000	52,000	224,000	127,000	74,000	44,000	30,000
Nadina	6,7	Ricker (eff)-peak	81,000	78,000	181,000	118,000	73,000	43,000	28,000
Pitt	8	Power (eff)	61,000	79,000	270,000	189,000	124,000	86,000	58,000
Raft	4	Power (eff)	32,000	31,000	209,000	131,000	78,000	49,000	32,000
Scotch	9	RS1 (naive)	64,000	20,000	170,000	77,000	32,000	13,000	6,000
Seymour	9	Ricker (eff)-cyc	147,000	26,000	54,000	31,000	18,000	10,000	7,000
Misc ^e	9	R/S	-	-	22,000	12,000	6,000	4,000	2,000
Misc ^f	4,10	R/S	-	-	47,000	27,000	13,000	8,000	4,000
Misc ^g	11	R/S	-	-	25,000	14,000	7,000	4,000	2,000
Misc ^h	12	R/S	-	-	156,000	88,000	44,000	25,000	13,000
Misc ⁱ	4	R/S	-	-	800,000	448,000	226,000	130,000	66,000
Summer			5,677,000	11,111,000	31,813,000	16,071,000	8,677,000	4,914,000	2,858,000
Chilko	13,14	Power (smolt)	1,760,000	1,396,000	9,466,000	6,136,000	4,175,000	2,870,000	1,857,000
Late Stuart	15,16	R1C (naive)	834,000	2,300,000	3,538,000	1,469,000	553,000	208,000	86,000
Quesnel ^j	17,18,19	Pooled	2,556,000	7,082,000	18,037,000	7,936,000	3,575,000	1,575,000	724,000
Stellako	19,20,21	Larkin (eff)	527,000	333,000	772,000	530,000	374,000	261,000	191,000
Late			-	-	2,875,000	1,616,000	907,000	517,000	327,000
<i>(total excluding miscellaneous)</i>			<i>(3,242,000)</i>	<i>(946,000)</i>	<i>(2,665,000)</i>	<i>(1,482,000)</i>	<i>(843,000)</i>	<i>(485,000)</i>	<i>(310,000)</i>
Cultus	22	Power (Smolt)-Jack	19,000	3,000	16,000	10,000	5,000	3,000	1,000
Harrison	23	Ricker (eff)-PDO	47,000	NA	373,000	160,000	69,000	46,000	33,000
Late Shuswap	24	Ricker (eff)-cyc	2,204,000	78,000	407,000	171,000	70,000	26,000	10,000
Portage	25	Ricker (eff)	58,000	74,000	259,000	140,000	66,000	31,000	16,000
Weaver	26	Larkin (eff)	432,000	332,000	906,000	546,000	336,000	200,000	126,000
Birkenhead	27	Power (eff)	482,000	459,000	704,000	455,000	297,000	179,000	124,000
Misc. Shuswap ^k	24,28,29	R/S	-	-	91,000	56,000	27,000	17,000	11,000
Misc. non-Shuswap ^k	30,31	R/S	-	-	119,000	78,000	37,000	15,000	6,000
TOTAL			-	-	37,617,000	19,451,000	10,578,000	6,039,000	3,556,000
<i>(TOTAL excluding miscellaneous)</i>			<i>(9,755,000)</i>	<i>(13,170,000)</i>	<i>(36,357,000)</i>	<i>(18,728,000)</i>	<i>(10,218,000)</i>	<i>(5,836,000)</i>	<i>(3,452,000)</i>
Pink Salmon	32		12,067,000	-	32,939,000	24,858,000	17,535,000	12,490,000	9,343,000

- a. probability that the actual run size will exceed the specified projection.
- b. see Cass et al. (2006) and DFO (2007) for model descriptions.
- c. sockeye: 1980-2005 (excluding miscellaneous stocks); pink: 1961-2005.
- d. Early Stuart is pooled Power and RS2 model (average weighted from retro analysis)
- e. unforecasted misc. Early Summer stocks (Early Shuswap stocks: S.Thompson); return timing most similar to Scotch/Seymour).
- f. unforecasted misc. Early Summer stocks (N. Thomson tributaries; return timing most similar to Fennell/Bowron/Nadina).
- g. Nahatlach River & Lake
- h. Chilliwack Lake and Dolly Varden Creek; return timing most similar to Early Stuart.
- i. North Thompson River.
- j. Quesnel is a pooled Larkin and Power model (average weighted from retro analysis performance during dominant yr)
- k. unforecasted miscellaneous Late Run stocks; true lates made up a very small component (~800 at 50% prob. level)

Model definitions: pi (Pine Island SST covariate); cyc (cycle line data only); peak (Fraser R. peak discharge covariate); PDO (Pacific Decadal Oscillation (PDO) covariate); RS1 (product of R/S from last generation & eff fem spawners in brood year); R1C (rec from last last generation); R/S (used for stocks with no recruit data: product of R/S for run timing group and eff fem spawners).

2009 Escapement Strategy and Harvest Rate Calculations: The Fraser River Sockeye Spawning Initiative (FRSSI) was undertaken to develop escapement strategies for Fraser River sockeye. Early in 2009, a multi-sector group comprised of First Nations, recreational, commercial and

environmental participants participated in a meeting to assist in the evaluation of the 2008 escapement strategy and to identify potential improvements for 2009.

FRSSI uses a simulation model to evaluate different management objectives and assumptions about stock dynamics in a consistent framework. The FRSSI model was developed to improve our understanding of the complex interaction between the population dynamics of individual stocks and escapement strategies that, due to practical constraints on in-season management, are applied to groups of stocks. The model currently includes 19 stocks (i.e. production units delineated based on spawning site and timing), grouped into 4 timing aggregates for management purposes. Each model scenario applies a specified escapement strategy to a timing aggregate 48 years into the future, starting with recent years, and tracks the performance of each individual stock within the aggregate.

The stocks within each timing group are modelled individually, based on the historical relationship between spawning escapement (i.e. number of adults in the brood year) and recruitment (i.e. number of 4 and the lower Fraser River downstream of the most consistent data available, but does not capture the dynamics of each individual life stage (e.g. egg-to-fry survival, juvenile migration).

Refer to report number 2855 by Pestal et al. (2008) on the following website for more information about the FRSSI process:

http://www.dfo-mpo.gc.ca/libraries-bibliotheques/manu_e.htm

Table 10a. Fraser River sockeye escapement plan options for 2009 at the 50% probability forecast. Note that the highlighted options are the 2008 escapement plan applied to the 2009 forecasts.

50p		No Fishing Point / Fixed Escapement Target*	Cut-back Point*	TAM* at Run Size	Esc. Target	pMA**	Mgmt Adj.	Expl. Rate after MA	Total Allowable Catch
Early Stuart	2009 Forecast (50p)			255,000		0.59			
Option 1	4,000	10,000	60%	102,000			60,180	36%	92,820
Option 2	52,000	130,000	60%	102,000			60,180	36%	92,820
Option 3	108,000	270,000	58%	108,000			63,720	33%	83,280
Option 4	156,000	390,000	39%	156,000			92,040	3%	6,960
NEW Option 5	200,000	500,000	22%	200,000			118,000	0%	-
Early Summer	2009 Forecast (50p)			443,000	w/o misc	0.42			
				739,000	w. misc				
Option 1	80,000	200,000							
	133,454	333,634	60%	295,600			123,000	43%	320,400
Option 2	120,000	300,000	60%	295,600			123,000	43%	320,400
	200,181	500,451							
Option 3	200,000	500,000							
	333,634	834,086	55%	333,634			138,826	36%	266,500
Option 4	260,000	650,000							
	433,725	1,084,312	41%	433,725			180,474	17%	124,800
Summer	2009 Forecast (50p)			8,677,000		0.07			
Option 1	520,000	1,300,000	60%	3,470,800			242,956	57%	4,963,200
Option 2	800,000	2,000,000	60%	3,470,800			242,956	57%	4,963,200
Option 3	1,000,000	2,500,000	60%	3,470,800			242,956	57%	4,963,200
BK Group	2009 Forecast (50p)			334,000					
									(note: no MA is applied to Birkenhead type)
Option 1			60%	133,600				60%	200,400
Option 2			60%	133,600				60%	200,400
Option 3			60%	133,600				60%	200,400
Late	2009 Forecast (50p)			546,000	w/o misc	0.87			20%
				573,000	w. misc (note: Birkenhead type not included)				114,600
Fixed ER	n/a	n/a	20%	458,400	n/a	n/a	n/a	20%	114,600
total TAC (using proposed 2009 options)									5,681,880

Table 10b. Fraser River sockeye escapement plan options for 2009 at the 75% probability forecast. Note that the highlighted options are the 2008 escapement plan applied to the 2009 forecasts

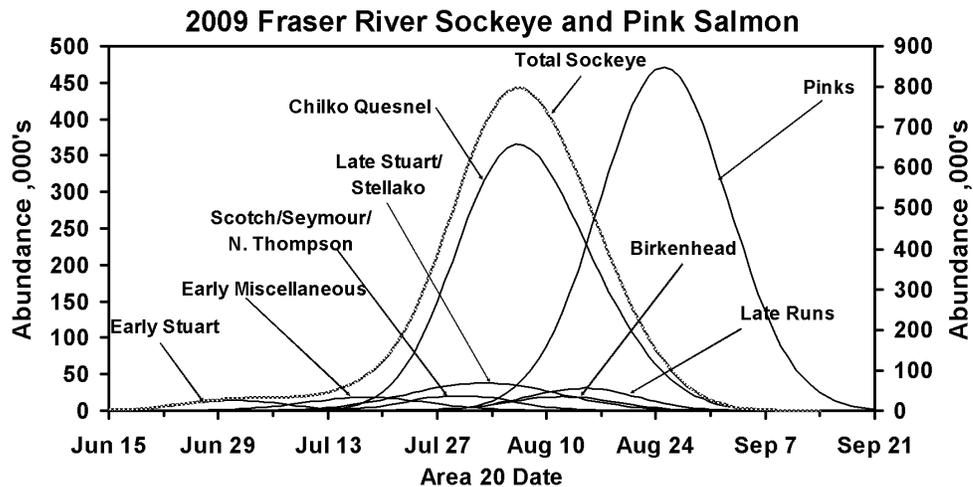
75p		No Fishing Point / Fixed Escapement Target*	Cut-back Point*	TAM* at Run Size	Esc. Target	pMA**	Mgmt Adj.	Expl. Rate after MA	Total Allowable Catch
Early Stuart		2009 Forecast (75p)		165,000		0.59			
Option 1	4,000	10,000	60%	66,000		38,940	36%	60,060	
Option 2	52,000	130,000	60%	66,000		38,940	36%	60,060	
Option 3	108,000	270,000	35%	108,000		63,720	0%	-	
Option 4	156,000	390,000	5%	156,000		92,040	0%	-	
NEW Option 5	200,000	500,000	0%	165,000		97,350	0%	-	
Early Summer		2009 Forecast (75p)		272,000	w/o misc	0.40			
				443,000	w. misc				
Option 1	80,000	200,000							
	130,294	325,735	60%	177,200		71,400	44%	194,400	
Option 2	120,000	300,000							
	195,441	488,603	56%	195,441		78,750	38%	168,800	
Option 3	200,000	500,000							
	325,735	814,338	26%	325,735		131,250	0%	-	
Option 4	260,000	650,000							
	423,456	1,058,640	4%	423,456		170,625	0%	-	
Summer		2009 Forecast (75p)		4,914,000		0.07			
Option 1	520,000	1,300,000	60%	1,965,600		137,592	57%	2,810,800	
Option 2	800,000	2,000,000	60%	1,965,600		137,592	57%	2,810,800	
Option 3	1,000,000	2,500,000	60%	1,965,600		137,592	57%	2,810,800	
BK Group		2009 Forecast (75p)		194,000				(note: no MA is applied to Birkenhead type)	
Option 1			60%	77,600			60%	116,400	
Option 2			60%	77,600			60%	116,400	
Option 3			60%	77,600			60%	116,400	
Late		2009 Forecast (75p)		306,000	w/o misc	0.87		20%	
				323,000	w. misc (note: Birkenhead type not included)			64,600	
Fixed ER	n/a	n/a	20%	258,400	n/a	n/a	20%	64,600	
total TAC (using proposed 2009 options)									3,160,600

Run Timing: Fishing plan options are evaluated for a range of possible run sizes and return timing. In 2009, pre-season fishing plans will be developed at both the 50% and 75% probability levels. In-season run-size estimates form the basis for management once these estimates are available. Figure 1 depicts the preliminary run timing for the 2009 cycle and forecast abundance (based on the 50% probability level) for the four Fraser River sockeye aggregates.

Management Adjustments: Management adjustments are added to the escapement goal when necessary to account for discrepancies between Mission hydro-acoustic measurements and in-river catch and spawning escapement estimates and en-route mortalities (i.e. more fish are needed to pass by Mission than spawning ground requirements in order to account for measurement errors and en-route losses). Setting appropriate management adjustments is a

major component of pre-season and in-season decision-making by the FRP. Management Adjustment Models consider observed biases as well as impacts from in-river water discharge, water temperature and timing of river entry to assist in this determination. Management adjustments are adopted by the FRP and have been applied to all four run timing groups. Regardless of the causes, management adjustments to all management groups may be made in-season to increase the probability that spawning targets will be met.

Figure 1. Expected run timing of Fraser River sockeye in Area 20.



Note that Figure 1 depicts the abundance and run timing of fish in Area 20 or Strait of Juan de Fuca. Recent anomalies in the Late Run timing are associated with timing of entry to the Fraser River, and are therefore not reflected in Figure 1.

5.4.4. In-season Decisions

Run Size Estimation and TAC calculations: Pre-season forecasts of run size at various probability levels different than the 50% probability level may be used to guide development of pre-season harvest plans. In-season run size estimates based on information from test fishing operations, catches during commercial fishery openings and assessment fisheries, and hydro-acoustic estimates of abundance at the PSC hydro-acoustic facility at Mission, B.C. will be provided by the PSC staff to the FRP for consideration. In 2009, the primary Mission acoustic estimate will be derived from a combination of a shore based split beam system and from a single and split beam system located on a boat that transects the river slightly downstream from the shore based system.

The FRP will meet regularly from late June to mid-September to review information as it becomes available over the course of the sockeye and pink migration. Run size estimates will be regularly updated through the FRP process. In-season run size estimates are then used to set spawning escapement objectives, gross escapement objectives, calculate available TAC, and determine opportunities for fishery openings. The TAC will also be affected by the ability of

harvesters to access this TAC as well as a number of factors, including in-river migration conditions and conservation requirements for other co-migrating stocks or species.

Information on in-season run size estimates and management actions, such as openings and closures, as well as other important information for commercial, recreational and First Nations fisheries are posted on the Internet regularly throughout the fishing season by the Department and the PSC at: www.psc.org/NewsRel/Index.htm (PSC) and at DFO, fishery specific notices can be found at:

Aboriginal: http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=aboriginal

Commercial: http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=commercial

Aboriginal: http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=recreational

5.4.5 Early Stuart Management

Early Stuart has experienced poor returns in recent years, partly due to high en-route mortality as they migrate up the Fraser River. The 2009 abundance 50p forecast of 255,000 is much larger than last year's run size in the 2008 "off-cycle" year, but amounts to only about one third of the average for this "dominant" cycle line. The forecast ranges from 165,000 (75p) to 426,000 (25p). However, the forecast model has a tendency in recent years to over-estimate true returns given the lower productivity of this stock. The 75% probability level (165,000) estimates more closely track the actual returns in recent years. This would indicate adoption of a more precautionary approach may be warranted.

The long-term escapement strategy, as adopted in 2007, is to reduce total allowable mortality at run sizes below 270,000, with minimal allowable mortality at run sizes below 108,000. The implications of this long-term strategy for 2009 fishing plans will be strongly influenced by in-season run size estimates over the forecast range as well as management adjustments to account for environmental conditions during the return migration. Target exploitation rate for 2009 ranges from 32% at the mid-point of the forecast range to 0% at the lower end of the forecast range, given long-term average management adjustments for this stock.

In recent years, window closures and other fishing restrictions have been necessary in commercial, recreational and First Nations fisheries to allow escapement objectives to be met. At the forecast run size it is not expected that measures as restrictive as window closures may be necessary in 2009 in order to meet escapement objectives. However, any targeted fisheries will need to be carefully planned and paced in order to ensure escapement targets are met. [Note: If Option 5 in Table 10A and 10B is implemented, window closures will likely be necessary in 2009 to meet escapement objectives.]

At the 50p forecast level of 255,000 and historical MAs a limited harvestable surplus is available and at the 75p forecast level of 165,000 and historical MAs the harvestable surplus ranges from 0 to 80,000.

Significant consultation on the 2009 escapement plan and management strategy will be required in order to finalize the decision rules for Early Stuart sockeye.

5.4.6. Late Run Management:

Late Run sockeye have been entering the Fraser River much earlier than historically and have experienced very high levels of en-route and/or pre-spawn mortality since the mid 1990s. While a range of studies have been undertaken to attempt to understand the cause and impact of this phenomenon, no causal factors have been identified. Planning for 2009 will consider the pattern of migration and resulting mortalities to address the risk of early entry occurring in 2009 and the associated impacts will be incorporated into the plan. The Cultus Lake stock will continue to be a factor in planning fisheries for 2009.

5.4.7. Management Adjustments

Management adjustments are estimated pre-season for all run timing groups by the FRP. They may also be modified in-season by the FRP based on indications of adverse migration conditions in the Fraser River reported in weekly Environmental Watch reports and models used to predict the impact of current Fraser River conditions on the mortality of migrating fish. For further information see: www-sci.pac.dfo-mpo.gc.ca/fwh/.

5.4.8. Issues

Determining the migration pattern and run size of Cultus Lake sockeye will be difficult in 2009 due to the expectation of low abundance in relation to other Late and Summer run stocks. Consequently, Cultus Lake exploitation rates will be estimated in-season based on the available information for other late run stocks excluding the earlier timed Birkenhead and Harrison fish. Harsh in-river environmental conditions or early entry of Late runs into the Fraser River may result in management actions in order to ensure target spawning goals are met. With restrictions to protect co-migrating Cultus Lake sockeye, some Summer Run and Late run stocks may arrive at the spawning grounds in numbers well in excess of spawning requirements. In addition to harvest restrictions, other recovery actions are underway for Cultus Lake sockeye. Increased numbers of smolts from the hatchery releases, and an experimental predator control program conducted by Area E fishers should increase the probability of the stock recovering over the next few generations. The Department will continue to work with all harvesters in order to have orderly and manageable fisheries conducted.

5.4.9. Prospects for 2009

General outlooks for the four stock aggregates, as well as stocks of special concern are outlined in Table 11.

Table 11. General fisheries outlook for 2009 Fraser sockeye

Stock/MU	Outlook	Comments
Early Stuart	Any targeted fisheries will need to be carefully planned and paced in order to ensure escapement	The median (50% probability level) return forecast for Early Stuart is 254,000 sockeye. The 2009 cycle is the dominant cycle for Early Stuart. The 2005 brood year escapement (99,000 adults) was 40% below the previous generation (2001) of 170,000

	targets are met. A precautionary approach to fishery planning may be warranted.	adults, was the lowest on the cycle for the past four decades, and was 55% below the recent cycle average (1981-2001). The 75% probability level of 165,000 was closer to the recently observed returns for this model.
Early Summer	There will be opportunities for directed fisheries. However, fishery planning may need to consider options to reduce impact on some weak co-migrating Early Summer stocks.	The total 50p forecast for the stocks is 443,000 which is 140% of the mean cycle-year average of 316,000 (not including miscellaneous Early Summer stocks). The forecast return at the 75% probability level is 272,000 sockeye. Including miscellaneous stocks the 50p and 75p forecast is 739,000 and 443,000, respectively. While the forecast is above the cycle-year average there are concerns for some stocks returning to the South Thompson and upper Fraser.
Summer	Directed fisheries expected, but will be constrained by concerns for ensuring Early Summer targets and conservation concerns for Cultus and Sakinaw are met	The Summer run consists of four main stocks Chilko, Late Stuart, Stellako and Quesnel. The 2009 cycle is the dominant cycle for Late Stuart and Quesnel. Escapement in the 2005 brood year was 1.3 million effective female spawners for these four stocks which is below the cycle year average for these stocks of 1.6 million (1980-2005). The 50% probability forecast of 8.677 million is 78% of the mean cycle-year return of 11.1 million. The 75% probability forecast is 4.9 million.
Late Run	About average, but concerns for high enroute mortality continues (directed fisheries unlikely)	The 2005 brood year is an off cycle for the highly cyclic Late Shuswap stock. Total Late run escapement in 2005 was 280,000 effective female spawners for these stocks which is above the cycle average of 100,000 (1980-2005). The spawning escapement for Harrison, in particular, has been well above documented escapements in the 2005 (200,000 effective females) and 2006 (90,000 effective females) brood years. The 50% probability forecast of 843,000 (excluding the miscellaneous stocks) is 89% of the average cycle year return of 946,000. This is the lowest of the off-cycle years, dominated by a Weaver forecast of 336,000 (50p).

Special Concern Cultus Lake	– Conservation concern	The stock continues to be very depressed and requires continued protection. Returns and escapement have substantially declined since the 1960s. The median (50% probability level) return forecast for Cultus is 5,000 sockeye. Escapement has been trending downward and the brood year escapement (2005) of 112 adult spawners was 75% below both the previous generation (2001) of 500 adults and the recent cycle average (1981-2001). On-going recovery actions (e.g. predator removal and hatchery enhancement) for this COSEWIC listed species ('endangered') are expected to continue in 2009.
Special Concern - Strait of Georgia Sakinaw	Conservation concern	The stock is extremely depressed, requiring continued protection. A return of up to 100 fish is expected this year.

5.5. Barkley Sound Sockeye

5.5.1. Background

- The Barkley Sound stock group is composed of sockeye returning to the Somass River (Sproat and Great Central Lake) and Henderson Lake.
- The stock group returns from May to October; the main fishing period typically occurs from mid-June to early August.
- This group of stocks is fished by First Nations, the recreational sector and the commercial sector (gill net, troll and seine).
- Somass optimum escapement is estimated to be 350,000 (200,000 Great Central Lake and 150,000 Sproat Lake) and 50,000 for Henderson Lake, while the minimum escapement is set at 200,000 (Great Central and Sproat Lake combined). Under the Somass Sockeye Harvest Strategy, escapement goals increase with run size reaching 600,000 for a run of 1.8 million.
- The harvest plan is based on variable exploitation rate set out in the Somass Management Framework.
- The Barkley Sound sockeye fishery is terminal, with no directed fisheries outside Barkley Sound.
- A Multi Party advisory body assists in the development of harvest plans and in-season management for the various fisheries.
- The basis for developing annual harvest plans on these stocks is to provide for:
 - economic opportunities and FSC needs of a number of Nuuchahnulth Tribal Council First Nations,
 - stable and predictable access for the recreational fishery, and

- meeting commercial catch allocations by licence category for “B” “D” and “G”

5.5.2. General Constraints

- Lack of precision of in-season run size estimates in the early portion of the season limits the exploitation rate.
- Environmental conditions impact the timing of entry into the river.
- Non-target by-catch (coho, chinook, steelhead) is of concern.
- Henderson sockeye is generally the weakest of the three sockeye stocks and frequently requires management measures to prevent overexploitation.

5.5.3. Pre-season Planning

- A pre-season forecast is used to determine opening dates.
- Access issues are dealt with by the CSAB process for commercial fisheries, the SFAB for recreational fisheries, and the Nuu-chah-nulth Tribal Council for First Nations fisheries. The Tseshaht and Hupacasath First Nations annually negotiate FSC sockeye requirements. Consultation will occur regarding the sequence and timing of these fisheries.
- In years of below average abundance catch targets for all participants must be set not to exceed a fixed overall harvest rate for the month of June. This cautionary approach is required to minimize the risk of over harvesting prior to commencement of in-season run size reforecasts.

5.5.4. In-season Decisions

- In order to provide protection for Henderson sockeye, boundary adjustments occur in-season. In past years gill net fisheries were moved inside of Pocahontas Point after mid-July depending on the level of concern for Henderson sockeye. With continuing low escapements to Henderson Lake, gill net fisheries will move inside of Pocahontas Point in early July.
- The framework in Table 8 was developed in consultation with Tseshaht and Hupacasath First Nations, commercial and recreational harvesters. The fishing plan for 2009 will be finalized through continuing negotiations.

Table 12: Key Decision Points for Barkley Sound Sockeye

Run Size	FIRST NATIONS FISHERIES	Recreational Fisheries	Commercial Fisheries
Less than 200,000	No harvest	No harvest	No harvest
200-210,000	Harvest initiated	No harvest	No harvest
210-240,000	HARVEST	No harvest	No harvest
240-400,000	Harvest	Harvest initiated	No harvest
Greater than 400,000	HARVEST	Harvest	Harvest initiated

Weekly in-season run size estimates are derived from commercial, recreational and First Nations fishery catches, escapement estimates from electronic counters on Sproat and Stamp Rivers, and estimates of terminal abundance from seine test fisheries and river surveys. The Barkley Sound Working Group meets weekly beginning in the last week of June to review the information and determine in-season run size estimates.

In-season harvest plan decisions are based on a weekly forecast and the status of catches relative to allocations. A multi party advisory board, the Somass Round Table process, meets weekly in-season to review the weekly run size re-forecast, catch and escapement for the purpose of developing weekly fishing plans. Commercial boundary adjustments to protect Henderson Lake sockeye in the first week of July may be required.

5.5.5. **Issues**

- Determining recreational daily limits at low run sizes.
- Henderson sockeye: Inability to determine proportion of Henderson sockeye present in the weekly catch.
- Uncertainty over Somass and Henderson run-timing.
- Lack of agreement about escapement goals at higher run sizes.
- Sharing arrangements and timing of access for seine and gill net.
- Maa-nulth participation will be required in the advisory process.
- Uncertainty associated in negotiating economic opportunities for Tseshaht and Hupacasath First Nations.

5.5.6. **Prospects for 2009**

Sockeye returns to Barkley Sound have been low recent years. As forecast, the combined return to the three Barkley sockeye CU's in 2008 were very low, precluding fisheries. A low but improving sockeye return is anticipated in 2009.

Based on integration of information from all forecasts and their past performance, we adopt a management pre-season forecast of 350,000 adult sockeye returning to Barkley Sound in 2009. As in past years, this pre-season forecast provides information to guide fisheries planning in the months leading up to the start of the return. The pre-season forecast is revised in-season based on information provided through test fishing and escapement enumeration, with in-season forecast revisions anticipated to begin in July, 2009.

5.6. **Okanagan Sockeye**

5.6.1. **Background**

Okanagan sockeye is the last remaining viable sockeye salmon stock returning to Canada through the Columbia River. Run timing into the Okanagan depends on water temperature. Peak spawning usually occurs from mid to late October. Of all Okanagan River sockeye enumerated at Wells Dam on the Columbia River, on average only 50% of those adults are enumerated on the spawning grounds.

5.6.2. **General Constraints**

Most harvest occurs in First Nations fisheries undertaken in U.S. sections of the Columbia River. Okanagan First Nation fishing opportunities in Canadian sections of the Okanagan River are based upon in-season decisions made using the harvest guidelines outlined in section 4.6.4.

5.6.3. Pre-season Planning

The escapement goal is 35,500 fish as enumerated on an indexed section of the spawning ground or 61,200 fish as enumerated through Wells Dam on the Columbia River in Washington State. The Okanagan First Nations harvest plan is based on the escapement of sockeye through Wells Dam on the Columbia River by July 15.

5.6.4. In-season Decisions

If projected escapement past Wells Dam on the Columbia River is less than 10,000 sockeye, extremely limited Okanagan First Nations fishing for FSC purposes is recommended. If projected escapement past Wells Dam is between 10,000 and 60,000 fish, a Canadian First Nations allowable catch of 5% of the run that has migrated past the dam by July 15 is permitted. If projected escapement past Wells Dam exceeds 60,000 fish, a Canadian First Nations allowable catch of 10% of the run that has migrated past the dam by July 1 is permitted. Should the projected escapement past wells dam exceed 80,000 fish recreational and First Nations Economic fisheries may be considered.

5.6.5. Prospects for 2009

The preliminary forecast return for Okanagan River sockeye in 2009 is 165,900 fish with approximately 95% of the return comprised of 4 year old fish. Returns are expected to exceed the long term average for the Year 2009 cycle based on brood year returns and smolt surveys. Spawning escapement in the 2005 brood year was 31,536 (AUC count) and the average spawning escapement on the 2009 cycle is 24,852(AUC count). However, a high degree of uncertainty exists with respect to marine survival conditions. Harvest opportunities for First Nations FSC purposes in Canada is anticipated and limited directed fishing opportunities on these stocks by other harvest groups is expected to occur.

5.7. Johnstone Strait Chum

5.7.1. Background

The Johnstone Strait chum fishery targets fall run chum stocks that migrate through Johnstone Strait. Most of these fish spawn in Johnstone Strait, Strait of Georgia, and Fraser River areas, though a small component is bound for Washington State systems. The main components of the harvest are the Mid Vancouver Island (MVI) and Fraser River stock groupings. The migration timing of these fall chum stocks in the Johnstone Strait fishing area range from September to November with the peak typically early to mid October. Mixed-stock fisheries occur in Areas 12 and 13 with terminal opportunities where surpluses are identified. Harvesters include First Nations (FSC fisheries), recreational, and commercial (seine, gill net and troll).

Due to the variation in chum returns over the years a new strategy for chum management was initiated in Johnstone Strait starting in 2002. In order to ensure sufficient escapement levels while providing more stable fishing opportunities, a fixed exploitation rate strategy was implemented. The exploitation rate is set at 20% across all harvesters, regardless of total abundance. Of this 20%, 15% is allocated to the commercial sector, and the remaining 5% is set

aside to satisfy FSC, recreational, test fish requirements and to provide a buffer to the commercial exploitation. Past tagging studies conducted in 2000, 2001 and 2002 helped in the development of this strategy in assessing the exploitation rate and migration timing of chum stocks in the Johnstone Strait.

Under the fixed harvest rate model, commercial fleets are expected to have more consistent and predictable fishing opportunities than with the previous clockwork model. This was one of the main objectives for the new approach. This goal has been met with regular fisheries planned each year well in advance of the actual return. A chum working group meeting will be scheduled in April to begin planning discussions for 2009 fishery.

It is anticipated that there will be two competitive seine openings, however options for a demonstration fishery in 2009 are under discussion with the Area B Harvest Committee.

In 2007, 15 troll vessels participated in an Individual Transferable Quota demonstration fishery. The initial quota was based on a conversion of the ITQ fisheries share of the allowable troll exploitation rate into pieces based on the estimated exploitation rate and catch in the first seine fishery.

In 2008, a full fleet share-based demonstration troll fishery was implemented involving transferable boat days. The initial allocation of boat days was based on Area H's share of the allowable troll exploitation rate. The fishery was divided into two fishing periods with a short break in between. Boat days were transferable within each fishing period but not between periods. A maximum of one third of the total number of boat days held could be carried over from fishing period one to fishing period two provided that that the day(s) was not fished.

5.7.2. General Constraints

- For Inside Southern chum salmon a critical threshold, where little or no harvesting occurs, is defined as 1.0 million in Chapter 6 of the PST.
- For run sizes above the critical threshold, fisheries will be conducted using a fixed harvest rate approach. The fixed harvest rate approach is based upon a 20% harvest rate on the return through Johnstone Strait (15% commercial and 5% for FSC, recreational and test fishing).
- When run sizes are expected to be below the critical threshold commercial fisheries will be suspended and there will be only assessment fisheries and non-commercial fisheries.
- No commercial opportunities will occur prior to late September due to coho conservation requirements.
- First Nations harvest opportunities are provided to meet FSC requirements.
- Recreational fishing opportunities are provided at normal daily limits of four chum per day.

5.7.3. Pre-season Planning

The fixed harvest rate fishing schedule is based upon effort, time and area. Fishing schedules are initially developed based on the assumption of 'normal fleet participation' (i.e. recent year's maximum fleet participation in the chum fishery or trend in effort).

Fishing schedule and exact fishing dates will be confirmed pre-season following consultation with industry and other stakeholders. Considerations are given to avoid weekend commercial fisheries, particularly seines, in order to minimize any conflicts with the recreational fishery.

Following is the fishing plan that has been developed for the past three years. Modifications to address processing issues will be discussed with fishing advisors prior to the fishery.

Seines - First Fishery

- First fishery will provide for a one day, 12 hour fishery, at the end of September or first week of October. No opportunities for extended fishing time for the first fishery.

Seines - Second Fishery

- Second fishery will provide for a one day, 10 hour fishery, in the third week of October. Note that the reduction in time to 10 hours is due to reduced daylight hours).
- If effort during the first and/or second fishery is considerably less than anticipated or severe weather hampers the fishery then additional fishing time will be considered.
- A demonstration fishery component to the fishery for 2009 is under consideration by the Area B Harvest Committee.

Gill net

- Gill net fisheries are scheduled to commence at the end of September or first week of October.
- Fishing times are scheduled separate from the seine fishery when and where possible.
- Duration of the fishing period is generally 41 hours and will be confirmed in-season based on effort.
- Fishing opportunities during the weekend needs to be confirmed - some concerns have been expressed with fish arriving at the plants on the weekend.

Troll

- Fisheries are scheduled to commence at the end of September or first week of October.
- In 2009, Area H is again exploring a share based demonstration fishery. Details will be confirmed prior to the fishery.

5.7.4. In-season Decisions

License area advisors are consulted on harvesting opportunities through in-season licence area advisory bodies. These consultations are done regularly through weekly conference calls starting late September.

The following considerations will guide fisheries management decisions in-season:

- Amount of effort in each fishery and time period.

- Weather conditions during the fishery.

5.7.5. Issues

- Requests from Industry to modify the plan in-season to provide more fishing time in years when there appears to be a very large return.
- When run size is expected to be below the critical threshold of 1.0 million fish commercial fisheries will be suspended and there will be only assessment fisheries and non-commercial fisheries.
- There have been requests by the commercial sector, particularly by the seine fleet to review the effort based management approach and develop a revised approach that is better suited to implement share based (ITQ) fisheries.
- The option for a seine and troll demonstration fishery in 2009 needs to be confirmed.
- A plan to minimize gear conflicts between the commercial and recreational sectors was implemented in 2007. Sub area 13-7 (Deepwater Bay) was closed during weekends and Thanksgiving Monday to the commercial sector. During weekdays Sub areas 13-6 and 13-7 were open to commercial gear. Discussions will continue in the planning process to address this potential conflict.

5.7.6. Prospects for 2009

The 2009 chum return through Johnstone Strait is projected to be low to near target, based on the below average returns encountered in 2008, the low parental brood composition of the 2005 return, and the high variability in chum returns. Ocean survival rates will be a key factor in the strength of 2009 returns.

5.8. Fraser River Chum

5.8.1. Background

The Fraser River chum run size estimate is derived from a run size estimation model based on the Albion test fishery with the first estimate available in mid-October. The escapement goal for Fraser River chum is 800,000.

5.8.2. General Constraints

In-river commercial gear is restricted to gill nets with a minimum mesh size of 158 mm (approximately 6.25"). Revival tanks are mandatory, as identified in the 2009 Area E Gill Net Conditions of Licence. By-catch of other species will be minimized as required (e.g. coho and steelhead). Conservation of Interior Fraser coho will result in fishing restrictions from early September to mid-late October in the main stem of the river from the mouth to Mission. Conservation of upper Fraser steelhead will result in fishing restrictions to protect steelhead. These restrictions will result in fishing opportunities delayed until after mid-October in order to meet conservation requirements for Interior Fraser steelhead. Development of a Fraser River commercial chum salmon management plan will require involvement from the Province of British Columbia.

5.8.3. Pre-season Planning

The practice of providing forecasts for Fraser River chum salmon has been discontinued in recent years for two reasons:

- Chum salmon typically have highly variable survival and maturation rates; and

- Adoption of a management regime based on decision rules that encompass a broad range of abundance estimates as determined by the Albion test fishery make a forecast unnecessary.

Fishing plans will be developed that meet the objective for Interior Fraser River Steelhead to protect 80% of the run with a 90% certainty in Fraser River fisheries. There are ongoing discussions between DFO and the Province to develop a management framework for Interior Fraser Steelhead.

5.8.4. Decision Guidelines

Table 13 provides a summary of key decisions for the management of the Fraser River chum fishery. Further changes may be made to Table 13, dependent on results of further analysis.

Table 13. Key decision points for Fraser River chum

Run Size	Harvest Plan	First Nations	Commercial	Recreational
<800,000 in Fraser	<10%	Limited (Reduced hours and days/week fishing).	Closed	Restricted openings
800,000-916,000 in Fraser	Catch not to exceed 81,000 (72,000 First Nations and 9,000 test fishing)	Normal (72,000)	Closed	Tributary openings
916,000-1,050,000 in Fraser	Commercial catch not to exceed 10% for chum.	Normal (72,000)	Open (35,000-105,000)	Open
>1,050,000 in Fraser	Commercial catch not to exceed 15% for chum.	Normal (72,000)	Open	Open

The following additional decision guidelines apply to the management of the Area 29 chum fishery.

- Mandatory non-retention of all incidentally caught steelhead and coho
- Mandatory revival tanks (refer to 2009 Area E Gill net Condition of Licence for further details).
- Albion test fishing data will be used to identify the abundance of chum salmon returning to the Fraser River. The first in-season run strength assessment will be announced October 15.
- A minimum commercial TAC of 35,000 chum has been identified as a requirement to support a one day commercial fishery.
- No night fishing.

- The standard fishing areas for directed chum harvesting are primarily inside the river (portions of Sub area 29-9 and 29-11 through 29-17).
- Avoid over-harvesting of specific chum stocks by harvesting over a broad time period.
- Whenever practical, 24 hours notice will be provided for openings.
- Advisors will be updated on current in-season status through conference calls.

5.8.5. Issues

There is currently fleet implementation of selective fishing methods to avoid/reduce steelhead encounters in order to minimize steelhead mortality. Shorter nets, reduced soak times and shorter duration fishery open times have been tested since 2002 with some success and will continue to be implemented in 2009. The importance of timely commencement of the chum fishery in order to harvest higher quality chum salmon is recognized but must fall within steelhead management objectives. In addition to Area E fisheries, commercial fisheries for Lower Fraser River First Nations for chum salmon will be considered; if Fisheries Agreements are negotiated they will assume the same priority as Area E commercial fleet fisheries.

5.8.6. Prospects for 2009

Although formal quantitative forecasts are no longer prepared for Fraser River chum, a stock status of "near target" abundance is anticipated. Based on the brood year return and survival conditions, surplus returns to the Fraser River are expected. Steelhead prospects are poor; the stock continues to show a downward decline and the abundance is well below carrying capacity. As such, Fraser River commercial fisheries will continue to be restricted. Management of the chum fisheries will be based upon in-season information; efforts will be made to balance objectives of working within constraints imposed by co-migrating stocks of concern and scheduling fisheries at or near peak of chum abundances in order to maximize potential harvest.

5.9. Area 14 Chum

5.9.1. Background

This fishery is directed at the enhanced stocks of three river systems; Puntledge, Little Qualicum and Big Qualicum Rivers. Chum returning to this area have been enhanced since the late 1960s and terminal fisheries have occurred in October and November since the 1970s. The returning Area 14 chum abundance is forecasted pre-season using brood escapement, average survival and age composition. In-season run strength is assessed from any early catches, visual observations at river estuaries and by escapement counts to the three river systems. The escapement goals for the three river systems are 60,000 for Puntledge River, 130,000 for Little Qualicum River, and 100,000 for Big Qualicum River, adding up to an overall escapement goal of 290,000 chum not including enhancement facility requirements (approximately 10,000 chum). This fishery has a specific harvest strategy, implemented since 1981. This strategy consists of limited early harvest prior to escapement occurring. The allowable early chum harvest is calculated from 65% of the predicted surplus (terminal return run size minus escapement (300,000) and buffer (100,000). The buffer safeguards against errors in forecast stock abundance. The surplus within the 100,000 buffer and remaining 35% of the surplus may be harvested provided that escapement targets have been achieved. Since 2002, Puntledge River stock returns have been above average resulting in terminal fisheries focusing on this slightly earlier timed stock.

Strait of Georgia chum are managed as a component of “mixed-stock harvest strategy” chum for Johnstone Strait and the northern Strait of Georgia. Fishing opportunities are guided by commercial allocation targets for chum salmon in the south coast. Management is guided by advice from the South Coast Chum Advisory Committee which has been in operation since 2004. This committee represents interests for mid-Vancouver Island, Johnstone Strait and WCVI fisheries.

First Nations FSC fisheries are conducted in Area 14 and at the hatcheries prior to consideration of ESSR fisheries. Tidal recreational fisheries are subject to the normal daily and possession limits (daily limit four per day/possession eight) and are open throughout the area. Once escapements have been confirmed, non-tidal recreational fisheries for chum, chinook and coho in the Puntledge and Big Qualicum Rivers will be considered. These fishing opportunities may occur as early as the second to fourth week of October based upon in-season and past return timing of chum, chinook and coho. The management objectives for Area 14 are:

- Achieve Area 14 chum escapement requirements of 300,000.
- Ensure adequate chinook and coho escapements to Area 14 enhancement facilities.
- Provide access to First Nations for FSC purposes.
- Maximize economic return.
- Work towards south coast chum allocation targets for gill net, seine and troll.
- Minimize the harvest of passing stocks.
- Attempt to manage initial fisheries in Area 14 to avoid large surpluses (i.e. greater than 100,000).

5.9.2. General Constraints

Beach boundaries are in effect to protect coho and chinook. Boundaries may range from half a mile to one and a half miles depending upon by-catch concerns and time of year. French Creek radius boundary and Baynes Sound closures are in effect to protect wild chum and coho stocks. Coho conservation measures are in effect until November 10, including non-retention, maximum soak times for gill nets, barbless hooks for trollers and mandatory brailing for seines. By-catch concerns for coho are minimal after November 10. Outside boundaries are designed to minimize impacts on passing stocks. The gill net fishery may be restricted to daylight hours only if there are significant levels of non-target species catch (e.g. coho).

5.9.3. Pre-season Planning

Opportunities for gill net, seine and troll fishery openings starting in the second or third week of October are based on pre-season forecasts and, in-season catch per unit effort (CPUE) information from commercial chum fisheries in Johnstone Strait.

A limited early harvest of chum is planned prior to escapement occurring based on the formula described above. Escapement information becomes increasingly important when considering further opportunities.

The recommended approach regarding Area 14 is made at the first meeting of the Chum Advisory Committee. This meeting is tentatively scheduled for Thursday, October 1, 2009. If poor catches in the commercial chum fisheries in Johnstone Strait indicate low chum abundance,

the decision may be deferred until the following week. Seine opportunities are normally considered from late October to late November although there may be consideration of controlled (limited effort) fishing earlier. Based on feedback from the Area D Harvest Committee, the open times for gill net fisheries in Area 14 in the latter part of 2007 were changed to start at 9am and finish at 9pm, based on a 48 hour opening, rather than 4pm to 4pm. This approach was also taken in 2008 and will be reviewed during the initial chum advisory meetings in 2009.

5.9.4. In-season Decisions

Additional opportunities using in-season data are evaluated at weekly meetings of the Chum Advisory Committee which usually occurs from mid-October to late November. Each week, the following considerations will guide the length of net and troll openings:

- If gear counts indicate a modest fleet size of 50 vessels or less, gill net and troll openings may be expanded beyond one to two days per week subject to stock expectations.
- Escapement information is factored into the amount of fishing time that is provided. For example, there is a possibility for reducing or eliminating beach and creek mouth boundaries when the overall escapement goal has been reached, individual surpluses have been identified and by-catch of non-target species is not an issue. Escapements are monitored by Fisheries and Oceans Canada Stock Assessment and local hatchery staff.
- Additional fishing days are considered if time is lost due to poor weather conditions.
- A limited effort seine fishery with a catch target will be considered from late October to late November, based on chum escapement, abundance in the approach areas and allocation guidelines. Full fleet opportunities may also be available. Further fishing opportunities for gill net and troll may be considered following the seine fisheries.

5.9.5. Issues

- The presence of sea lions in Area 14 appears to have reduced net and troll CPUE, reduced escapement in some streams, and altered migration and holding behaviour which has impacted assessment capabilities. These impacts will be considered in the management of the fishery, and may include exploring new assessment techniques.
- In recent years the Puntledge River has experienced proportionally greater escapements than the two Qualicum Rivers and in the last two years, escapements to the two Qualicum Rivers have been below target. This trend may continue necessitating consideration of fishing strategies to increasingly target the Puntledge River return.

5.9.6. Prospects for 2009

Brood year (2005) escapements for Strait of Georgia chum were low. Survival rates appear average to low. Preliminary 2008 returns are projecting to be higher than pre-season forecast. For 2009, a below average return is expected, however, chum forecasts remain highly uncertain. Some fishing opportunities are anticipated.

5.10. Area 16 Chum Decision Guidelines

5.10.1. Background

This fishery targets wild chum stocks returning to river systems in the Jervis Inlet area. The main systems are Tzoonie, Deserted and Skwawka Rivers. The overall escapement goal for

Jervis Inlet streams is 110,000. These terminal fisheries occur when the individual or combined escapement goals have been assured. Fishing opportunities do not occur on a regular basis. There were no fisheries in Area 16 in 2008.

Management is guided by advice from the South Coast Chum Advisory Committee which has been in operation since 2004. This committee represents interests for mid-Vancouver Island, Johnstone Strait and WCVI fisheries. Fishing opportunities do not occur on a regular basis. Area 16 chum are fishing opportunities are guided by coast-wide allocations of chum salmon. Assessment in the area is conducted by Fisheries and Oceans Canada Charter Patrol, Stock Assessment, and Sechelt Indian Band staff.

5.10.2. General Constraints

There is mandatory non-retention of coho. Fishing is limited to terminal areas to minimize impacts on passing stocks.

5.10.3. In-season Decisions

The Sechelt Indian Band harvest FSC fish, primarily by gill net, when surpluses are available.

Commercial fishing opportunities are evaluated at weekly meetings of the Chum Advisory Committee, starting about October 1, 2009. In-season data is reviewed on a weekly basis until the end of the season, which usually occurs around the end of November. Area 16 chum fisheries are not planned based on pre-season forecasts alone. The potential implementation of a limited fleet-size (e.g. three to five vessels) weekly assessment fishery in the lower Jervis Inlet area may be discussed with the Area E and H Harvest Committees. A weekly assessment fishery in the last two weeks of October and the first week of November may, over time, provide an earlier indication of overall abundance returning to this area. Fishing opportunities will be provided in an area when the escapement goal has been achieved. Achievement of the escapement goal includes the numbers of fish in-river plus the amount of fish inside a designated sanctuary area. The earliest potential fishing opportunity is anticipated near the end of October.

5.10.4. Prospects for 2009

A below average return is expected to Area 16 streams based on trends in recent years. Fishing opportunities are unlikely.

5.11. Area 17 Chum Decision Guidelines

5.11.1. Background

This fishery is directed primarily at Nanaimo River stocks. The Nanaimo River chum stocks are supplemented by the Nanaimo River Hatchery on poor return years. Escapements fluctuate annually and fishery openings are planned in-season based on escapement estimates. Management is also guided by advice from the MVI Chum Subcommittee as discussed for Areas 14 and 16. Local FSC opportunities are undertaken by Nanaimo First Nations in consultation with the Department. Area 17 chums are managed as a component of Study Area chums and fishing opportunities are guided by coast-wide allocations of chum salmon. The overall escapement goal for the Nanaimo River is 60,000.

5.11.2. General Constraints

- Sub area boundaries protect migrating Fraser River chum and confine the fishery to the Nanaimo River stock.
- Coho and chinook conservation measures in effect until November 10 include non-retention, maximum soak times for gill net, and barbless hooks for troll.
- The gill net fishery may be restricted to daylight hours only if coho encounters are high. Restrictions would be implemented after consultation with the MVI Chum Subcommittee.

5.11.3. In-season Decisions – Net and Troll

Preseason forecasts are helpful in defining possible opportunities, but decisions to open fisheries are not based on preseason information. Opportunities are evaluated during the weekly in-season review of Nanaimo escapement estimates within the MVI Chum Subcommittee process.

Escapement estimates are derived from helicopter over-flights, combined DFO/Snuneymuxw in-river assessment, on-grounds charter patrol surveys of approach and terminal areas and fishery officer patrols of the river.

Opportunities for gill net, troll and seine fisheries are discussed once fish have started to enter the Nanaimo River and are present in terminal areas. Final decisions are made at the weekly Friday Subcommittee meeting. If commercial opportunities are identified, management will be guided by the following considerations:

- Gill nets open for one or two days. Fishing days and duration subject to escapement levels.
- Troll open seven days per week because of demonstrated low catch rates.
- After initial opening, continued fishing opportunities depend upon information derived from CPUE in the commercial fisheries, and on-going approach area and in-river assessments.
- If catches remain good and escapement goal is reached, commercial fisheries can continue.
- Additional fishing days will be considered if time is lost due to poor weather conditions.

5.11.4. Issues

The gill net fleet will be allowed to use 90 mesh Alaska twist in Area 17 based on previous work conducted in Area 14. The two areas are similar with respect to target species and incidental catch issues, and therefore the results from Area 14 are applicable to Area 17.

5.11.5. Other Fisheries

First Nations FSC fisheries as well as tidal/non-tidal recreational fisheries are conducted on these stocks. Tidal recreational fisheries are subject to the normal daily and possession limits and there are no closed areas. There are no opportunities for non-tidal recreational fisheries in the Nanaimo River.

5.11.6. Prospects for 2009

Brood year (2005) escapements were above escapement targets. However, survival rates appear average to low. Preliminary 2008 returns are projected to be higher than the pre-season forecast. For 2009 an average return is expected, however, chum forecasts remain highly uncertain.

5.12. Area 18 Chum Decision Guidelines

5.12.1. Background

This fishery is directed primarily at Cowichan River stocks and to some extent Goldstream chum are also harvested. Fishery openings in mid to late November are limited to Satellite Channel to minimize impact on the earlier timed Goldstream stocks. Chemainus River stocks are also impacted but likely to a lesser extent.

Fishery openings are planned in-season based on escapement estimates. Management is also guided by advice from the Cowichan Fisheries Roundtable (the Roundtable) and the MVI Chum Subcommittee.

5.12.2. General Constraints

- Sub area boundaries protect coho holding off Cherry Point.
- Beach boundaries are in effect to protect coho and chinook.
- Other coho conservation measures in effect include non-retention, maximum soak times for gill nets, barbless hooks for troll, and mandatory brailing for seines.
- The gill net fishery may be restricted to daylight hours if coho encounters are high. This would be implemented after consultation with the Roundtable and the MVI Chum Subcommittee.

5.12.3. In-season Decisions – Net and Troll

Preseason forecasts are helpful in defining possible opportunities, but decisions to open fisheries are not based on preseason information. Opportunities are evaluated during the weekly in-season review of Cowichan escapement estimates within the Roundtable and the MVI Chum Subcommittee process.

Results from the 2007 and 2008 season show that the DIDSON counter may offer a more accurate and consistent method of gathering escapement estimates, both in-season and post-season. With this new assessment tool, the Roundtable had proposed a set of specific decision guidelines which would trigger commercial and recreational fisheries in Area 18 in 2008. However, because the Didson counter escapement estimates have been consistently higher than other methods of assessment the triggers for a commercial fishery will need to be re-evaluated.

The re-evaluation of the in-season commercial fishery triggers occurred on April 2, 2009 by Cowichan Round Table. Representatives were present from all sectors except the Recreational sector.

The revised escapement target of 160,000 was tabled and accepted by the Harvest Committee members. The revised chum target is based on habitat area and chum spawning densities in the Cowichan River. The old Cowichan chum salmon target of 110,000 was largely based on historical escapement estimates (visual inspection). Since the 2006 installation of the Didson Counter sonar has been used to estimate the number of fish swimming past a lower river site. The sonar was instituted to assess the chum stocks as the current visual method had deteriorated, due to poor visibility through the water column (silt) and often high water from fall storms. It was felt that "Decision Rules" could be developed using the Didson counter and the seine test fishery could be developed and appended to the 2009/2010 South Coast Salmon IFMP.

After discussion it was decided that the interim trigger, for commercial fisheries, could remain similar to the previous year. However, the initial "trigger" (Didson escapement estimate of 40-50,000 chum) would not trigger a fishery, but would be the start point for the test fishery in the Area 18. As escapement numbers build and it becomes obvious that escapement targets will be reached chum fisheries would take place after consultation with the Cowichan Harvest Roundtable and the Mid-Vancouver Island Chum Commercial Fisheries representatives.

It was the Cowichan Harvest Roundtable's goal to identify potential commercial fisheries earlier in the run timing, to harvest the identified surplus throughout the run-curve instead of cropping the surplus for the end of the run, and to be able to make decisions quickly so that fisheries could be initiated in a quick and timely manner.

Regardless of in-river escapement estimates, the assessment of marine abundance through the test fishery and/or overflights will decide if there is an opening on Cowichan chum stocks in the 2009 season.

Specific dates and boundaries will be determined in season by the roundtable process. Timing of migration is also important in terms of the health of the run and in relation to mixed stocks of Goldstream chum in the Area 18 fishing area. These issues will also need to be addressed on an in-season basis.

- 40,000- 50,000 of the 160,000 escapement target in the Cowichan River would be the start date for the seine test fishery in Area 18.
- Overflight and seine testfish information would be used in conjunction with upper river spot indicators to determine whether the remainder of the escapement goal was expected to be achieved.
- Dependant on in-stream migration numbers and marine approach area abundance and small gillnet and troll fisheries could be initiated on short notice.
- Gillnet and troll commercial fisheries would be subject to commercial licence area allocation status.
- Recreational fisheries in the river could also open at this time, and remain open until further notice.
- Troll may remain open until further notice (depending on allocation).
- Sustained in river chum migration and fish abundance in the marine area indicating a higher probability of reaching escapement goals could trigger a seine fishery.
- Seine commercial fisheries would be subject to commercial licence area allocation status.
- Subject to fishery review and continued escapements, commercial fisheries may continue and opening type would be adjusted to meet overall guidelines.

5.12.4. Issues

- After initial review DFO South Coast Resource Management was not ready to designate specific escapement, chum migration/day, and run timing dates as specific triggers for a

commercial fishery prior to the SC Salmon IFMP final edits were required. A review of these data is in progress and should be ready prior to the 2009 Cowichan Chum run timing. However, limited (number of years) may prolong development of these reference points.

- Both the commercial sector and First Nations are concerned about application of the ESSR policy as it pertains to the Cowichan and Goldstream chum stocks. A review of the policy is underway, however the current ESSR policy provides for harvest arrangements of Cowichan chum by local first Nations.
- Discussions are ongoing concerning First Nations economic opportunities.

5.12.5 Other Fisheries

First Nations FSC fisheries and tidal/non-tidal recreational fisheries are conducted on these stocks. Tidal recreational fisheries are subject to the normal daily and possession limits. Non-tidal recreational fisheries will also be considered in 2009, if escapement and FSC needs are met.

5.12.6 Prospects for 2009

The main component of the Cowichan River Brood year (2005) was unable to be assessed because of extremely poor water conditions. However, survival rates appear average to low. Preliminary 2008 returns were higher than the pre-season forecast. For 2009 a below average return is expected, however, chum forecasts remain highly uncertain.

5.13. Area 19 Chum Decision Guidelines

5.13.1. Background

This fishery is directed primarily at Goldstream River stocks although some Cowichan River chum are also harvested. Fishery openings set for mid to late November are limited to the portion of Saanich Inlet (Sub area 19-8) which is outside or to the north of Squally Reach. This area restriction is implemented to minimize impact on Goldstream chinook and coho.

Fisheries are planned in-season based on escapement estimates. Management is also guided by advice from the MVI Chum Subcommittee. Area 19 falls under the same management regime as Area 18, and fishing opportunities are guided by coast-wide allocations of chum salmon. The overall escapement goal for the Goldstream River is 15,000.

If a surplus is identified, an economic opportunity fishery to Saanich Tribes will be conducted separately from food, social and ceremonial fisheries under the same priority and similar rules as the commercial fishery and fish harvested will be off-set with licenses retired from the commercial fishery.

5.13.2. General Constraints

- Sub area boundaries to protect chinook and coho holding in Squally Reach.
- Gill nets may be restricted to daylight hours if coho encounters are high.
- Additional conservation measures are in effect such as non-retention of coho and chinook, maximum soak time for gill nets, barbless hooks for troll, mandatory brailing for seines, and on-board observers.

5.13.3. In-season Decisions – Net and Troll

Chum fisheries in Area 19 are also managed on the basis of in season escapement estimates. There is no counting fence on the Goldstream, and escapement estimates, however since this is a relatively small system with good viewing conditions, escapement estimates can be derived from stream walks.

If commercial opportunities are identified, management will be guided by the following considerations:

- Gill nets and troll open first. Gill nets open for one or two days. Fishing days and duration are subject to escapement levels. Troll typically has low catch and low effort and has been allowed to remain open for extended periods.
- Seines open for one to two days once a review of gill net catch and escapement estimates indicates a significant surplus is available.
- Seines and gill nets will alternate fishing days subject to escapement estimates and the entire Subcommittee review process.
- After the initial opening, continued fishing opportunities depend upon information derived from CPUE in the commercial fisheries, and on-going approach area and in-river assessments, as well as encounters of chinook and coho.
- If catches remain good and escapement is reached, commercial fisheries can continue.

5.13.4. Issues

- Further discussions on harvest planning arrangements are required for potential commercial and Saanich Tribes economic opportunity fisheries. The goal will be to attempt to finalize plans well in advance of the fishing season.

5.13.5. Prospects for 2009

Brood year (2005) escapements were average and did meet escapement targets. Survival rates appear average to low. Preliminary 2008 returns are projected to be higher than the pre-season forecast. For 2009 a below average return is expected, however, chum forecasts remain highly uncertain.

5.14. Nitinat Chum

5.14.1. Background

The minimum gross escapement goal is 225,000; 175,000 into the rivers, 10,000 for FSC fisheries, and a minimum 40,000 into the hatchery. The maximum escapement target is 325,000. These additional 100,000 chum salmon are partly utilized as hatchery broodstock. It is also thought that these additional chum will increase the distribution of spawners in the Nitinat River and to other Nitinat Lake tributaries.

- Commercial fisheries occur on a regular basis for seine and gill net, trolling is also permitted, but there has been little interest.
- The fishing period is generally October 1 to November 15.
- A gill net test fishery occurs in Nitinat Lake that provides weekly escapement estimates for the lake beginning in the last week of September.
- Escapement estimates for the Nitinat River and other lake tributaries are based on river swims and aerial surveys.

5.14.2. General Constraints

- Typically no commercial fishery prior to the first week in October due to Fraser River steelhead bycatch concerns unless consultations with provincial fisheries biologist allows for late September opening.
- Fisheries from October 01 to October 15 will operate inside a one mile boundary between Dare Point and Pachena Point, with a weedline of between 1.2 and 2.0 metres in order to minimize steelhead mortalities.
- After October 15, fisheries are permitted within a two mile boundary of the shore line between Bonilla Point and Pachena Point.
- Non-retention of steelhead, coho and chinook during periods of low abundance.
- No commercial fishery inside Nitinat Lake.
- Boundaries at Cheewhat and Klanawa Rivers in place to protect local chum and coho.
- When both fleets fish together gill nets only may be permitted between Bonilla Point and Logan Creek, subject to coho encounters.

5.14.3. Pre-season Planning

- Annual pre-season forecasts for the Nitinat system (predominantly enhanced) are based on escapement, hatchery fry output and estimated survival rates.
- The fishing plan will be developed by August 2009
- In the early portion of the fishery (Oct 01-15) the allocation target will be 75% gill net and 25% seine. The overall fishery allocation target is 30% gill net and 70% seine.
- If the forecast surplus is low a gill net test fish program outside Nitinat Lake may be implemented to provide additional abundance information.
- If no surplus is forecast, the commercial fishery is contingent on in-season assessment.

5.14.4. In-season Decision Guidelines

- Gill net and limited fleet seine fisheries may occur in the first week of October if an adequate surplus is forecast or if assessment information is required.
- A gill net and seine advisory group will be convened as required to assist the DFO fishery manager in developing weekly inseason fishing plans.
- In the early portion of the fishery (Oct 01-15) seine fisheries will be assigned a weekly catch target.
- If the forecast surplus is low weekly escapement milestones must be achieved before openings are scheduled.
- A full fleet seine fishery may proceed when there is a need to limit the migration of chum into Nitinat Lake. This depends on escapement numbers to Nitinat Lake and an identifiable surplus outside the lake. During this phase of the fishery both gill net and seines will fish at the same time in the same areas, except that gill nets have an exclusive fishing area between Bonilla Point and Logan Creek.
- The commencement/continuation of fisheries after the first week of October is contingent on achieving established escapement milestones:
 - Oct. 5-8 75,000
 - Oct. 9-11 125,000
 - Oct. 16-18 175,000

- Oct. 23 225,000

5.14.5. Issues

- Area B AHC intends to work towards share-based fishery arrangements in the Nitinat fishery.
- Fish in the lake are not available to the commercial fishery.
- Accuracy of preseason forecasts have been very poor.
- An outside gill net test fishery in early October may be required in years where a below average return is forecasted.
- Uncertainty regarding the use of test fisheries to assist inseason management of the fishery.

5.14.6. Prospects for 2009

Brood year escapements were average to below average. 2007 and 2008 returns were lower than expected. The forecast return of chum in 2009 of 310,000 is low relative to the long term average.

5.14.7. Other Fisheries

- First Nations FSC: no constraints on FSC fisheries at normal run sizes; Ditidaht First Nation works closely with Nitinat Hatchery and participates in research projects which normally require a modest allocation of chum.
- Recreational/Tidal: normal limits; finfish closure at mouth of the Nitinat River to prevent foul hooking. Non-tidal: fishery contingent on escapement and concern for impacts on spawning fish.
- ESSR fishery in Nitinat Lake by Ditidaht First Nations when surplus occurs.
- A scientific licence may be issued to the Ditidaht First Nation to provide biological samples and additional information on stock status and movement in Nitinat Lake.

Table 11. 2009 Nitinat Chum Fishing Plan

DATE	GUIDELINES	ACTION
Week 9/3 (Sep 13-19)		No fisheries due to Fraser steelhead concerns. No gill net test or commercial fishery anticipated.

Week 9/4 (Sep20-Sep 26)		No fisheries due to Fraser steelhead concerns. No gill net test or commercial fishery anticipated
Week 10/1 (Sep 27- Oct 3)	No fishery until October 01 Fishery opportunity based on preseason forecast. Escapement in lake by Oct. 5-8 = 75,000 *	Gill net and seine fishery anticipated. Fishery inside a line 1 mile south of Pachena point to 1 mile south of Dare Pt. Continue assessment with test fishing and escapement monitoring to lake.
Week 10/2 (Oct 4-10)	Escapement in lake by Oct 9-11 = 125,000; *	Fisheries in this week dependent Early season allocation is 75:25 gill net:seine. Maximum gill net catch of 200,000 chum before seine fishery.
Week 10/3 (Oct11-17)	Escapement in lake by Oct 16-18 = 175,000; *	Seine and/or gill net opportunities depending on escapement to date, escapement rate, effort.
Week 10/4 (Oct18-24)	Escapement in lake by Oct 23 = 225,000;	Seine and/or gill net opportunities depending on escapement to date, escapement rate, effort.

* With sufficient stock outside. Min weekly influx = 50,000.

5.15. Nootka Chum

5.15.1. Background

- Conuma Hatchery enhances four systems in Tlupana Inlet that have different run timings. There are approximately 30 unenhanced wild chum river systems in Nootka Sound.
- The general fishery management approach is to achieve an approximately 20% exploitation rate in the approach waters (outer Nootka Sound). This is believed to be achieved by fishing one day per week during daylight hours with a “moderate” fleet of approximately 50 gill-net vessels. A review of the harvest approach has been initiated which will include discussion with interested stakeholders.
- Seines have fished in years of high chum abundance.
- Outer Nootka boundaries are designed to target fish migrating through the approach area and to avoid fish holding off the stream mouths.
- A terminal harvest in Tlupana Inlet occurs if a surplus is identified through in-season abundance indicators.
- There is potential for an ESSR fishery which is dependent upon identifying a surplus to the enhanced systems in Tlupana Inlet through inseason abundance indicators. The likelihood of an ESSR fishery has been reduced in recent years due to the ability of the fishing industry to conduct controlled fisheries on identifiable surpluses.

5.15.2. General Constraints

- Daylight only fisheries to reduce by-catch (chinook and dogfish).
- Stream mouth boundary at Marvinas Bay to protect local stocks adjacent to fishing area.
- Hisnit Inlet closed during Tlupana Inlet fisheries to protect Deserted River chums.
- The goal is to optimize Nootka chum harvest and limit by-catch of chinook and dogfish.
- A mid- to late-September start date is normal.
- There are separate approach area and terminal fisheries to facilitate bio-sampling for age and hatchery contribution.
- Concern for wild chinook stocks in mid-September in outer Nootka Sound.

5.15.3. Pre-season Planning

- The first gill net fishing date typically occurs after September 20th.
- Following the harvest rate management strategy, a fishery would not occur if the forecast was extremely poor.

5.15.4. In-season Decisions

- If fleet size is modest (maximum 50 vessels) openings are one day per week in approach waters.
- If fleet size is small (less than 25 vessels) openings may be two days per week in approach waters.
- A terminal fishery on hatchery stocks in Tlupana Inlet is carried out if there is an identified surplus based on escapement or test-fishery information.
- Seine opportunities will be considered in-season if chum abundance is adequate.

5.15.5. Issues

- Minimum forecast to trigger commercial fishery will be developed.
- Conuma Enhancement Facility frequently has difficulty in achieving egg targets on all four Tlupana Inlet enhanced systems (Sucwoa, Tlupana, Conuma and Canton)
- Conuma hatchery chum production targets may be reduced.
- Deserted River chum stocks are no longer enhanced. This will require additional protection during later Tlupana Inlet openings.
- Chinook by-catch in mid-September needs to be considered.
- With the introduction of the limited fleet fishery in Esperanza Inlet the overall Area 25 chum harvest rate is under review.
- Coho (and chinook) retention in net fisheries when abundance permits.

5.15.6. Prospects for 2009

Brood year escapements were average to above average. 2008 returns were generally lower than expected. Low anticipated returns will likely result in reduced fishery opportunities in 2009.

5.16. Nimpkish Chum

5.16.1. Background

Nimpkish chum have later timing than other Johnstone Strait chum stocks and are harvested in the terminal area. The spawning escapement goal for the river is set at 110,000 chum with additional fish required for brood-stock (approximately 3,000 females). The Namgis First Nation participates in the management of this stock.

Returning chum are assessed by scheduled over-flights of the river and in-river assessment activities (swim surveys). Other assessment alternatives are currently being considered, such as small fleet gill net assessment fisheries in years when surpluses are expected.

Should a commercial fishing opportunity be identified, Area B and D fisheries would be based on the current status of chum allocation goals, fleet participation and expected catch levels. Once all commercial and recreational opportunities are exhausted and if a surplus remains, an ESSR opportunity may be provided.

5.16.2. General Constraints

- Area of fishing is confined to a portion of Subareas 12-18 and 12-19 to direct harvest on returning Nimpkish River chum and minimize impact on other salmon species.
- Collection of assessment information and river enumeration is often hampered by poor weather conditions, affecting the accuracy of in-season run size estimation and fishing opportunities.

5.16.3. Pre-season Planning

- Confirm in-season assessment programs for 2009.

5.16.4. In-season Decisions

- Commercial Area B and D harvest opportunities will be subject to abundance levels and harvest sharing arrangements by all parties.

5.16.5. Issues

- Ability to accurately determine run strength due to poor weather and high water conditions.
- The late timing of this stock can result in market availability issues.

5.16.6. Prospects for 2009

A poor return is expected based on a below average escapement in the parental brood years of 2004 and 2005 along with recent trends of continued poor ocean survival. No surplus is expected in 2009.

5.17. Limited Effort Terminal Chum

- Starting in 2004 the Area D Gill net Association proposed limited, small fleet fishing opportunities for chum salmon in terminal areas.
- The intent of this program is to determine if small scale limited effort gill net fisheries could be economically viable while limiting exploitation rates to 10 to 20% of returning stocks and also providing stock assessment information.
- In 2008, these fisheries occurred in: Barkley Sound where 8 vessels fish a maximum of 2 days per week; Clayoquot Sound 4 vessels started 2 weeks later than Barkley Sound to avoid chinook by-catch; Esperanza Inlet 8 vessels fished concurrent with the Nootka Sound gill net openings to a maximum of 2 days per week; Quatsino Sound (Neroutsos Inlet) 2 vessels fished 1 day per week for a total of 3 fishing days; Bute Inlet 5 vessels fished for a total of 3 fishing days.

- An assessment review has been conducted for limited effort chum fisheries in Areas 23-25. Fishery planning in 2009 will be guided by the preseason forecast and the limited effort chum fishery assessment review document.
- There are currently no plans for expanding these fisheries in 2008.
- Fishing plans are developed including observer coverage and data collection for each area.
- Decision guidelines have been developed for each of these fisheries, contact the local resource manager for details.
- For Quatsino Sound and Bute Inlet no opportunities are anticipated in 2009.

5.18. Fraser River Pink

The forecast return for Fraser River pink salmon at the various probability levels is shown below.

	Forecast Model	Mean Run Size	Probability Level				
			0.1	0.25	0.5	0.75	0.9
Pink	Fry-salinity	12,067,000	32,939,000	24,858,000	17,535,000	12,490,000	9,343,000

The 2009 escapement strategy for Fraser pink salmon continues to be based on an interim escapement goal of 6 million Fraser River pink salmon (plus an additional 30% of the run at run sizes above 20 million) with an exploitation rate cap of 70%. Escapement targets and exploitation rates are outlined in the escapement plan in Table 12.

Table 12. Fraser River Pink Salmon Escapement Plan for 2009. Run size forecasts showing 50 percent probability levels. Numbers are in thousands of fish.

Stock Group	Run Size Estimate of forecasted stocks	Run Size Reference Points	Total Mortality Rate Guidelines	Total Allowable Mortality at Run Size	Escapement Target at Run Size
Fraser Pink	-	7,059	0% - 15%		
	7,059	17,143	15% - 65%		
	17,535,000	17,143	65% - 70%	66%	6,000,000

Preseason fishing plans are developed based on the 50 percent probability level forecast. In-season run size estimates form the basis for management once these estimates are available. At each of the forecast run sizes there will likely be TAC available for fisheries to be directed on Fraser pink salmon. However, it is expected that conservation constraints for stocks of concern such as Late run and Cultus sockeye, Interior Fraser coho and Interior Fraser steelhead will likely constrain the ability to harvest the identified TAC.

5.19. Mainland Inlet Pink

5.19.1. Background

Mainland Inlet pink are comprised of two main stocks, the Kakweiken River in Thompson Sound and the Glendale system in Knight Inlet. Other significant Mainland Inlet stocks include the Phillips River. These stocks are mainly harvested in terminal areas and provide opportunities for all three commercial gear types, although seines catch the majority of fish. Opportunities are also available for First Nations and recreational harvesters however effort is low.

The migration of these stocks to the terminal areas normally begins in early to mid-August and is usually complete by the middle to the end of September. These stocks may be managed as an aggregate early in the season (provided surpluses are expected for both stocks) and then separately as they enter the terminal areas. Seine and troll test fisheries in the terminal areas can be used as a tool for in-season assessment in years when good returns are expected. Fleet size during these fisheries is highly variable and depends on other fisheries occurring during the same time period (e.g. Fraser River sockeye fisheries) as well as market prices. Over-flights are also used to assist in estimating abundance in the terminal areas, as well as provide in-season river escapement estimates.

Normal recreational fishery opportunities are available. First Nations fishing opportunities on these stocks are normally available but interest is usually low.

5.19.2. General Constraints

- Directed Mainland Inlet pink fisheries are restricted to terminal areas.
- Daylight fishing only.
- Fishing boundaries are established to minimize encounters of chinook, coho, sockeye and chum and to ensure escapement targets are reached.
- Upper Knight Inlet boundary is implemented to conserve weaker stocks of pink.
- Kakweiken, Glendale and Phillips pink stocks are managed separately.
- In 2008 a cautious approach to managing these stocks will continue due to continued uncertainties on return rates.
- No directed commercial fisheries are anticipated. This will be confirmed based on in-season assessment.

5.19.3. Pre-season Planning

- Develop assessment plans for in-season monitoring.
- Develop plans for a continuation of Broughton Archipelago pink salmon action plan and studies.

5.19.4. In-season Decisions

Commercial representatives are consulted through in-season licence area advisory bodies. Weekly assessments to determine abundance and potential fishing opportunities are based on over-flights, on-grounds surveys of the terminal areas and in some years, seine, gill net, and troll test fisheries.

The following considerations will guide fisheries management decisions:

- Commercial fishing opportunities are generally not considered until at least 30 to 40% of target escapements are in the river or are identified in terminal sanctuary areas, and there

is evidence that a significant proportion of the return has not yet entered the river or sanctuary area.

Issues

- The commercial industry may have marketing and quality concerns during a protracted fishery in years when a significant surplus is available.
- The abundance of these stocks can be highly variable and there are difficulties in assessing these stocks due to glacial water conditions and limitations of available assessment methods.
- Continuation of Broughton Archipelago pink salmon action plan and studies.

5.19.5. In-season Decisions

These systems are dominant even-cycle year. Recent cycle returns in 2002, 2004, 2006 and 2008 have all been well below average. Returns are highly variable. No surplus is expected in 2009 however, in-season monitoring will confirm run strength.

6. SOUTHERN B.C. / FRASER RIVER FIRST NATIONS FISHING PLAN (FSC FISHERIES ONLY)

6.1. Catch Monitoring and Reporting Initiatives

6.1.1. FN Electronic Reporting System

Since the year 2000, Fisheries and Oceans Canada have been working with First Nations groups to design and develop an electronic recording and reporting systems for First Nations Food, Social and Ceremonial catch data. The PC based software has incorporated recommendations from numerous First Nations members and is based on their reporting requirements within their communities and those required by the Department. The application also has a licencing system, allowing First Nations to track FSC catch and other fishing information for their members.

The ultimate goal of this initiative is to improve the efficiency and accuracy of reporting FSC catch and other fishing information to the Department.

For 2009 this program will be expanded to other interested First Nations group within the Pacific Region, including the B.C. Interior area.

For more information please contact Ron Goruk at 250-756-7392 or Carmen McConnell at 250-756-7272.

6.1.2. Improving Coded Wire Tag (CWT) sampling of FSC fisheries

Many First Nations FSC fisheries have not been sampled for CWTs, and most of those that were have been inconsistently or inadequately sampled for CWTs. Since many of these fisheries are terminal and intercept chinook and/or coho indicator stocks, this is a serious concern because it generates unknown bias for cohort analyses and implementation of PST management regimes for chinook and coho salmon. In 2006, the Department began addressing this concern in the lower

Fraser River FSC fisheries that retain chinook or coho salmon. Fishery monitors, who were already in place for catch data collection, were instructed to obtain heads from adipose fin-clipped chinook and coho if the fisher did not object. This project was successful, and will expand in 2009 to improve coverage of lower Fraser River FSC fisheries, as well as to include other FSC fisheries in the Pacific Region. Because the complexity of FSC fisheries varies greatly in the Region, other approaches to CWT sampling these fisheries will also be explored.

6.2. Specific Conservation Measures

6.2.1. Lower Strait of Georgia Chinook

Protective measures will be considered in terminal areas to reduce harvest impacts. Potential measures will be the subject of discussion with First Nation communities prior to development of the fishing plan.

6.2.2. Interior Fraser River, Lower Fraser and Strait of Georgia coho

Historical coded wire tag (CWT) data and DNA sampling indicate that Thompson and upper Fraser River coho are present in the lower Fraser River from late-August until mid-October. Closures during the following periods will be implemented in portions of the Fraser River to protect Thompson and upper Fraser River coho:

Fraser River – below Mission	September 8 to October 9
Fraser River - Mission to Hope	September 10 to October 12
Fraser River – Hope to Sawmill Creek	September 12 to October 15
Fraser River – Sawmill Creek to Lytton	September 21 to December 31
Thompson River - Upstream to Bonaparte River confluence.	September 28 to December 31

During these times fishing will be restricted to very limited selective and experimental fisheries for all harvesters.

6.2.3. Cultus Lake and Late Run Sockeye

There are expected to be restrictions and closures for First Nations fisheries that target Fraser River sockeye stocks throughout southern BC in order to afford protection to Cultus Lake and Late Run stocks. Harvest limitations may also be required in the Fraser River upstream of the Vedder River confluence with the Fraser River to protect returns of Late Run sockeye that may be subject to significant levels of en-route mortality as forecasted by timing of river entry date.

6.2.4. Sakinaw Lake Sockeye

Harvest related measures to ensure protection of Sakinaw Lake sockeye are expected to continue in 2009. These measures include restrictions in First Nations FSC fisheries prior to the last week of July in Johnstone Strait and until early to mid-August in the northern Strait of Georgia. The waters near the mouth of Sakinaw Creek in Area 16 will be closed to fishing all season. Returns to Sakinaw Lake have been 100 or less since 2004, with no fish returning in 2007 or 2008. The 2007 smolt production which will be the main component of the 2009 return was estimated at 4000 fish. Based on the 2008 return (zero adults from 11 000 smolts), the return in 2009 is expected to be extremely low.

6.2.5. Nimpkish Sockeye

The 2009 return is expected to continue to be well below historic levels. Harvest related measures continue to be required to minimize impacts on this stock. These measures include sockeye non-retention in First Nations FSC fisheries in Area 12 above Lewis Point until late July.

6.2.6. Early Stuart Sockeye

The 2009 forecast is for a return of 255,000 sockeye (revised) at the 50% probability level. The 2009 cycle is the dominant cycle for Early Stuart. The 2005 brood year escapement was 99,000 adults. This is 40% below the previous generation (2001) of 170,000 adults and was the lowest escapement on this cycle for the past four decades. Fishery implementation will depend upon the in-season assessment of run size, the conservation and harvest plan (developed through pre-season consultations) and the available TAC for this stock group.

6.2.7. Early-Timed Fraser Chinook

In 2008, the Department consulted on and implemented additional management actions in commercial, recreational and Fraser River First Nation fisheries. The goal of these actions was to reduce harvest effort on these stocks of concern by approximately 50%. This goal was achieved. Spawning escapements in 2008 averaged approximately 35% of brood year escapements (2003). Additional management actions may be necessary in 2009 and 2010 to further reduce impacts on these stocks.

6.2.8. Spring and Summer Fraser Chinook

In 2008, new research identified a strong relationship between the cumulative CPUE of Spring and Summer run chinook in the Albion chinook test fishery and terminal returns. The Department proposes to use this relationship to guide management actions using a two zone management approach. At terminal returns less than 40 000 chinook, the Department proposes First Nations opportunities similar as in 2006-2008 and management actions to reduce harvest in recreational and commercial fisheries similar to those imposed in 2008. At terminal returns greater than 40 000 chinook, the Department proposes using management actions similar to those implemented in the years prior to 2008. (e.g. remove recreational and commercial restrictions implemented in 2008, allow additional FSC fishing time).

6.2.9. Inshore Rockfish

The management objective for inshore rockfish is to introduce conservation strategies that will reverse declines and ensure stock rebuilding over time. A fishing mortality rate of less than 2.0 percent (all Pacific Region fisheries) will be required to achieve this objective.

Rockfish Conservation Areas, (RCA's, no fishing zones for gear that impact on rockfish), have been implemented within the Strait of Georgia and in all outside waters including the Queen Charlotte Islands. The conservation strategy for rockfish along the coast of British Columbia is long term. Rockfish are a long-lived species with a low level of productivity and therefore rebuilding will take several decades.

6.3. Communal Licence Harvest Targets

First Nations access to salmon for FSC purposes is managed through communal licences. These licences are designed for the effective management and regulation of First Nations fisheries through a negotiated series of mutually acceptable conditions wherever possible. The dates, times and locations where harvesting may occur, type of gear, and other conditions are described in these licences. Communal licences can be amended in-season for resource conservation purposes.

Fisheries and Oceans Canada seeks to provide for the effective management and regulation of First Nations fisheries through the negotiation of mutually acceptable and time-limited Fisheries Agreements. Where agreement cannot be reached, Fisheries and Oceans Canada will issue an Aboriginal Communal fishing licence to the group authorizing them to fish for FSC purposes.

Draft anticipated harvest targets for communal licences in the Fraser River and south coast of B.C. are outlined in Table 16. Consultation with First Nations in each of the areas is underway. Actual catches will be dependent on, among other factors, in-season assessments of actual stock strength and management measures taken to ensure conservation of individual stocks.

Table 15. Communal licence harvest targets

	South Coast	Lower Fraser	Middle/Upper Fraser	Total
Sockeye				
Fraser River	260,000	449,000	300,000	1,009,000
Non-Fraser River	20,000	0	0	20,000
Coho	43,000	0	1500*	44,500
Pink	60,000	125,000	500	185,500
Chum	155,000	72,000	500	227,500
Chinook	34,000	12,000	18,000	64,000
Total Salmon	572,000	658,000	320,500	1,550,500

*Note: Majority of harvest in mid/upper Fraser area is anticipated to occur from terminal systems experiencing strong escapements as identified using enumeration by counting fence methodology

6.4. Aboriginal Commercial Fishing Opportunities

The AFS was implemented to address several objectives related to First Nations and their access to the resource. One of these objectives was to contribute to the economic self-sufficiency of Aboriginal communities. An integral component of the AFS is the Allocation Transfer Program (ATP). This Program facilitates the voluntary retirement of commercial licences and the issuance of licences to eligible Aboriginal groups in a manner that does not add to the existing fishing effort on the resource, thereby providing Aboriginal groups with much needed employment and income. Since 1994-95, when the ATP was first launched, over 250 commercial licences have been issued to Aboriginal groups.

Negotiations in order to provide economic opportunities to First Nations in Barkley Sound and the lower Fraser River will be undertaken as in recent years. Economic opportunity fisheries will be conducted under agreements that specify provisions for planning fisheries, allocations, catch reporting requirements as well as roles and responsibilities regarding the management of the fishery. All economic opportunity fisheries will be managed as the same priority as the commercial fishery. In the lower Fraser, DFO will work with First Nations and commercial

harvesters to develop an approach to an integrated commercial fishery based on the principles of transparency, accountability and collaboration. Specific elements of this approach will include defined harvest shares, enhanced catch monitoring and compliance programs, some initial work on a traceability program and improved collaboration amongst harvesters.

Discussions regarding demonstration fisheries that will provide economic opportunities for First Nations are on-going with First Nations and stakeholders. For 2009, as in previous years, the focus with First Nations will be on experimenting in terminal areas on abundant stocks. These fisheries will be conducted separately from food, social and ceremonial fisheries, under the same priority and similar rules as the commercial fishery and fish harvested will be off-set with licenses retired from the commercial fishery.

6.5. Special Projects or Initiatives

6.5.1. Fraser Salmon Conservation and Harvest Planning Arrangements

In January 2008, Fisheries and Oceans staff initiated a series of meetings with First Nations throughout the South Coast and the Fraser River watershed to discuss possible management approaches in the case that there are insufficient salmon returns to meet FSC requirements. A similar process has been initiated in 2009 in an effort to further discussions on management principles and approaches for Fraser salmon. Meetings will be conducted during the winter and spring of 2009.

6.5.2. FSC Coordinated Fishery

In recent years, a number of marine First Nations have worked cooperatively to harvest salmon, particularly Fraser sockeye, for FSC purposes. Discussions are currently underway regarding the potential for a cooperative fishery in 2009.

6.6. Tsawwassen Fisheries

The 2009-2010 season marks the first year of implementation for the *Tsawwassen First Nation Final Agreement*. Under the Agreement, the Tsawwassen Joint Fisheries Commission, composed of representatives from Tsawwassen First Nation, B.C. and Canada, will provide recommendations to the Minister on the issuance of 'Harvest Documents' to licence the Food Social and Ceremonial (FSC) salmon fishery. These recommendations will be guided by the *Tsawwassen First Nation Final Agreement*, Tsawwassen Fisheries Operation Guidelines and the relevant South Coast IFMPs. Actual harvest opportunities will depend on, among other factors, in-season assessments of stock strength and management measures taken to protect stocks and species of concern. Tsawwassen commercial fisheries, as outlined in the Tsawwassen First Nation Harvest Agreement, will operate under the similar rules and priority as other commercial fisheries. Details of Tsawwassen domestic (FSC) and commercial fisheries management and allocations can be found in Appendix 12.

7. SOUTHERN B.C. / FRASER RIVER RECREATIONAL FISHING PLAN

Recreational fishing opportunities for salmon are regulated by the *British Columbia Sport Fishing Regulations, 1996* made under the *Fisheries Act*. The regulations are generally

summarized in the *2007 to 2009 British Columbia Tidal Waters Sport Fishing Guide* and the *2007 to 2009 British Columbia Freshwater Salmon Supplement*.

This information is subject to change in-season if additional conservation concerns arise or if additional recreational opportunities become available. Changes will be communicated through Fishery Notices, media reports, telephone information lines and/or postings on the Pacific Region Fisheries and Oceans Canada website at: www.pac.dfo-mpo.gc.ca/recfish.

7.1. Catch Monitoring and Reporting Initiatives

7.1.1. Increasing Coded Wire Tag (CWT) submission rates

The CWT program relies on voluntary submissions of heads from adipose fin clipped chinook and coho salmon to estimate the quantity and stock composition of salmon in various fisheries. Over the past several years, submission rates have decreased. Returns of heads from adipose clipped coho salmon have become so low that they no longer provide sufficiently precise CWT catch estimates for stock assessment purposes. In certain fisheries, recovery rates of heads from adipose clipped chinook salmon are also low.

Sport catch taken on guided trips, both lodge-based and non-lodge based, is one sector of the sport fishery that has seen increased head submission rates in recent years, due to cooperation of the guides in collecting and in some cases delivering heads. In 2008, the Department will strive to increase the proportion of guiding companies collecting heads to better represent their fishing activity. Where possible, head collections and logbook data will be combined to realize the full benefits of these programs

To increase awareness of the CWT program and to increase the rate of salmon head submissions, the Department is increasing promotion of the CWT program through communications with the SFAB and Sport Fishing Institute. For further information on the CWT program, please see:

http://www.pac.dfo-mpo.gc.ca/recfish/Tagging/salmonhead_e.ht

7.1.2. Recreational E-logs

The development of an improved catch monitoring regime will continue to be a priority in the management of recreational fisheries. The Department of Fisheries and Oceans is working with the Sport Fishing Institute and Sport Fishing Advisory Boards to develop catch monitoring standards and logbook systems for the recreational fishery.

In 2009 the Department will be continuing with a co-management project with the Sport Fishing Institute, Sport Fishing Advisory Boards and members from the Provincial Government by piloting an electronic logbook system for the third consecutive year. The software application consists of three components; a PC based component, a Dockside handheld component and an On Water handheld component. The design of the handheld components is based on the content of current paper logbooks and advice from the recreational sector. The ultimate goal of this new initiative is to improve the efficiency and compliance of reporting catch and other recreational fishing information to the Department.

In 2008 there were 55 handheld units operating in 12 Lodges along the Pacific Coast. For 2009 the Department is intending to expand on last year's pilot.

For more information please contact Ron Goruk at 250-756-7392, Carmen McConnell at 250-756-7272.

7.2. Chinook

Conservation concerns persist for wild chinook originating from WCVI systems, Lower Strait of Georgia (in particular the Cowichan River chinook) stocks and the Early-Timed Fraser River chinook stocks.

7.2.1. Lower Strait of Georgia

Conservation concerns for Lower Strait of Georgia (LGS) chinook stocks will guide fisheries planning in 2009. The Cowichan River chinook stock is an indicator stock of the LGS chinook aggregate. Escapement trends have been declining in recent years. In 2008 escapement did increase but still remained well below the escapement target. Management actions instituted in 2008 will again be implemented in 2009 and will include a number of chinook non-retention areas as well as a recreational closed area near Cape Mudge.

7.2.2. West Coast Vancouver Island

In 2008, the management actions in the chinook conservation corridor included a daily limit of two chinook with a maximum size limit of 77 cm. (excluding that portion of the corridor south of **48° 55.872'N, 125° 33.028'W**). The daily limited of 2 per day with a maximum size of 77 cm in the conservation corridor will be maintained in 2009.

The forecasted return to the Stamp River (Robertson Creek Hatchery) has declined from 2008 levels. The chinook escapement target is based on an egg target of 57.5 million (50M river, 7.5M Hatchery). With the 2009 return dominated by 4 year old fish 34,000 chinook are required to meet the egg target. The total allowable harvest is 13,000. New management actions may/will be implemented to reduce catch in Area 23. Similarly the return to the Conuma River (Conuma River Hatchery) has also declined with a return to the terminal area of 9,000 chinook. Management actions may/will also be implemented in portions of Area 25.

Since 1999, a recreational fishery "management corridor", extending one nautical mile offshore from the surfline, has been in place along the West Coast of Vancouver Island in order to lower the exploitation rate on adult female chinook that are travelling along the shoreline back to their natal streams. The surfline is defined in the *Pacific Fishery Management Area Regulations, 2007*.

The length at age distribution of WCVI origin chinook indicates that the majority of age 3 fish less than 77 cm are males, and, that the majority of age 4 fish greater than 77 cm are large spawning females. The maximum size limit regulation of 77cm inside the corridor provides recreational fishery opportunities yet allows for increased protection of large female chinook (wild) returning to the west coast of Vancouver Island systems.

The outer limit of the chinook conservation corridor is described as a line drawn seaward of the surfline with a minimum distance of one nautical mile to the surfline.

A line that begins at Bonilla Point, then to 48° 34' 571" N 124° 43' 138" W seaward of Bonilla Point.

7.2.3. Spring and Summer Fraser River

Spawning escapements of Spring and Summer, including the Early-Timed, Fraser chinook have declined to very low levels in recent years. Recent management actions have not been successful at reversing the declining abundance of Early-Timed Fraser chinook. Management actions instituted in 2008 are proposed for 2009, with some changes, and may include slot limits and chinook non-retention areas (see Appendix 6).

7.3. Interior Fraser River Coho

Conservation measures to protect coho will be similar to those implemented in 2008. There will be no retention of wild coho, with the exception of some terminal areas which have an identified surplus.

Selective hatchery marked coho fishing opportunities will be similar to those provided in 2008. That is you may retain two hatchery marked coho per day from June 1 to December 31 in tidal waters unless otherwise specified in the final plan or by fishery notice. Increased opportunities for the recreational fishery on hatchery marked coho will be determined in-season. A hatchery marked coho is defined as one that has a healed scar in place of an adipose fin.

Interior Fraser River coho are present in the lower Fraser River from late August until mid-October. Conservation measures are necessary during the time period when much of the run passes through an area. These dates are adjusted slightly each year to commence on the Tuesday following Labour Day. Conservation measures will be in place in the portion of the river listed during the times listed below:

Fraser River - Below Mission	September 8 to October 9
Fraser River - Mission to Hope	September 10 to October 12
Fraser River - Hope to Sawmill Creek	September 12 to October 15
Fraser River - Sawmill Creek to Lytton	September 21 to December 31
Fraser River - Lytton to Williams Lake	September 28 to December 31
Fraser River - Upstream of Williams Lake	October 3 to December 31
Thompson River –	
Upstream to the outlet of Kamloops Lake	September 23 to December 31
Upstream of Kamloops Lake	October 7 to December 31

The Department will be assessing the impacts of either:

- implementing a) no fishing for coho and b) a bait ban while salmon fishing during the above time period; or
- implementing a total closure to fishing for salmon during these times.

Decisions with respect to management actions deemed necessary to address conservation concerns will be made in consideration of the objectives listed in Section 3 of this plan.

7.4. Sockeye

Measures are required in order to meet conservation objectives for stocks of concern such as the Fraser River Late Run timing group, Cultus Lake, Sakinaw Lake and Nimpkish River sockeye stocks.

For southern BC tidal waters, it is anticipated that sockeye non-retention will be in effect during those times and in those areas when stocks of concern are present. For example, in inside waters (Johnstone Strait, Strait of Georgia, Strait of Juan de Fuca) sockeye retention is unlikely to be permitted until late July or early August when Early Summer stocks are migrating through the area. In non-tidal waters, sockeye non-retention is in effect year-round except where harvestable surpluses are identified and potential impacts on stocks of concern are within management constraints. For 2009, sockeye fishing opportunities are anticipated to begin in late July in tidal waters or early August in non-tidal waters.

The sockeye return to the Somass River this year is expected to be well below average. As a result all fisheries in Alberni Inlet will be managed to ensure escapement levels are maintained. Due to the anticipated poor return, fishing opportunities for sockeye in Area 23 are uncertain.

7.5. Pink

In most south coast tidal waters, the daily limit will be four pink salmon. See Appendix 6.

Fraser River pink exhibit odd year cyclic dominance. Retention of pink salmon will be permitted in the following waters, subject to meeting the conservation objectives outlined in Section 3 of this plan:

- Fraser River downstream of the Alexandra Bridge;
- Stave River;
- Harrison River downstream of Highway No. 7 Bridge; and
- Chilliwack River.

Initially, the daily limit will be two per day. The daily limit will be reviewed and potentially amended once an in-season run size is available for pink salmon.

7.6. Chum

In most south coast tidal waters the daily limit will be four chum. See Appendix 6

8. SOUTHERN B.C. / FRASER RIVER COMMERCIAL FISHING PLAN

8.1. Catch Monitoring and Reporting Initiatives

The development of an improved catch monitoring regime will continue to be a priority in the management of commercial fisheries. The Department will work with the Commercial Salmon Advisory Board and Area Harvest Committees to implement tools and develop annual catch monitoring plans for commercial fisheries. The standards focus on data collected to estimate

catches, releases, and essential biological data, such as CWT sampling, for stock assessments and fishery evaluations.

Traceability of commercially harvested fish is increasingly a focus of concern as a result of the need to provide market confidence in resource sustainability and product safety. The Department will work with all fleets to implement components of traceability. These could include mandatory hail-in/hailout provisions (currently in place in troll fisheries) and a pilot mandatory dockside monitoring program.

8.2. Coded Wire Tag (CWT) Sampling of Freezer Troll Catch

The importance of adequately CWT sampling this catch has increased as the portion of landings frozen at sea has increased. There are three ongoing concerns with CWT sampling of freezer troll catch which continue to be addressed in 2009.

The first concern results from the removal of heads from the catch at sea when trollers freeze their catch. For commercial landings chosen for CWT sampling, sampling activity must examine 100% of the landed fish, and collect all heads that are suspected to contain a CWT. Therefore, trollers removing heads at sea are required by Condition of Licence to keep all heads from retained chinook and coho and deliver them to processing plants when landing their catch. However, heads are not always delivered, and when they are delivered, many deliveries have to be excluded from the CWT sample because they contain fewer heads than the body count in the landing.

The second concern also results from the removal of heads before sampling. Recognizing that freezer trollers may have space limitations for retaining heads, the Department allows the alternative of retaining only the portion of the head likely to contain the CWT, referred to as the 'snout'. Unfortunately, many deliveries of snouts have to be excluded from the CWT sample because the snouts have been cut too small, making it likely that CWTs actually present in the fish are not included in the sample.

To help address these concerns, the Department:

- i) has standardized the requirements regarding head retention and delivery from all retained coho and chinook in the Conditions of Licence for all troll Licence Areas;
- ii) has specified, as a Condition of Licence, the minimum portion of each head that must be retained;
- iii) will provide instructions regarding these conditions, via troll Fishery Notices, this document (Appendix 8), and other routes.

The third concern results because freezer trollers often land two or more weeks worth of catch during one landing. The Mark Recovery Program (MRP) is required to estimate the catch of CWTs by week. Ice trollers land often enough that CWTs detected in their catch can be attributed to the week they were caught in. However, when freezer trollers land after a trip lasting two or more weeks, and deliver heads for the entire fishing trip duration, it is unknown which week each discovered CWT was caught in; thus, such samples can not contribute to the

estimates of CWT catch by week (but are still useful for improving estimates of CWT catch in each fishery).

To address this concern, the Department has implemented a program in which special purpose bags and labels are provided to freezer trollers for use in storing and labelling head samples separately according to the week they were caught. For 2009, freezer trollers will be able to pick up packages of bags and labels at Fishery Licensing offices in Vancouver, Nanaimo, and Prince Rupert. Vessel masters unable to pick up bags from licensing offices should contact the Department toll-free at 1-866-483-9994 to arrange delivery.

8.3. Implementation

Due to uncertainty of both timing and size of returning salmon runs, many commercial openings are not confirmed until a few days prior to the actual opening. Also, the management plan for any area may change in-season. Fishing Areas, Sub areas or portions thereof, provisions for extensions, opening patterns and the duration of the fishing season can all be adjusted based on factors such as weak stock concerns, target stock abundance, fishing effort, rate of gear selectivity, domestic allocations and other factors.

This fishing plan is designed to minimize the incidental harvest and by-catch of a range of stocks of concern (see section 4.1 – Management Objectives for Stocks of Concern). Fisheries that occur on the South Coast may be required to release all non-target species to the water with the least harm, depending on local stock concerns.

In 2009, DFO will continue to encourage the development of demonstration fisheries that promote biologically sustainable and economically viable fisheries. Fishery managers are working with fleet advisors to develop demonstration fisheries that experiment meeting a range of objectives including matching fleet size to the available stock, pacing fisheries to maximize value of the harvest and developing more cooperative fishing arrangements between harvesters. Reports on previous demonstration fisheries can be found on-line at: www.pac.dfo-mpo.gc.ca/species/salmon/policies/default_e.htm. See Appendix 10 for further details for 2009 projects.

Catch monitoring improvements will be a priority in the management of commercial fisheries. For 2009, DFO in consultation with Industry will focus efforts on improvements to current catch monitoring and reporting requirements and standards.

8.4. Test Fishing

DFO uses a range of methodologies to determine in-season stock abundance and composition. Historically, test fisheries have played an essential role in collecting the data necessary to set user TAC's and to ensure that conservation objectives are met. Recent federal court decisions have required changes to the way DFO has traditionally delivered test fishing programs. As in the 2008 salmon fishing season, DFO will work in close collaboration with resource users to ensure that the fisheries data collections necessary to set TAC's and to ensure conservation will continue to be undertaken.

8.5. Licence Application and Issuance

The 2009/2010 Salmon licensing period will encompass April 1, 2009 to March 31, 2010. Applications must be completed and submitted to a Pacific Fishery Licence Unit by March 31, 2010 along with the required fee.

Prior to annual licence issue, vessel owners must ensure that:

- a) Any Ministerial conditions placed on the licence eligibility have been met
- b) Any conditions of the previous year's licence have been met, such as:
 - i. Submission of all harvest logs for 2007 (for further information contact the Salmon Catch Monitoring Unit at 250-756-7000); and
 - ii. Submission of all fish slips for 2007 (for further information contact the Regional Data Unit at 604-666-2716).

For further licensing information see:

http://www.pac.dfo-mpo.gc.ca/species/salmon/default_e.htm

8.5.1. Fisher Identification Number

DFO has introduced unique Fisher Identification Numbers (FIN) assigned to all Pacific commercial harvesters. Once the FIN is issued to a fisher, it will not change from year to year. More information on FIN may be obtained from your DFO fisheries manager, or the Pacific Fishery Licensing Unit (PFLU).

8.6. Mandatory Log-Book and In-season Catch Reporting Program

The current mandatory log-book and in-season reporting program for catch information will remain in place for all commercial fisheries. In-season decisions could be directly affected by the level of compliance to the in-season reporting provisions.

The Conditions of Licence, for the 2009 season, require that commercial fish harvesters make service arrangements with an approved service provider in order to fulfill reporting requirements. An approved service provider is a third party company, organisation or individual who meets departmental requirements for technical capability, impartiality and security, and who will provide services including, but not limited to, the following:

- Provide fish harvesters with harvest logs for recording of catch information;
- Establish and maintain a computer network with secure access to the departmental salmon fishery database and computer software that will enable data entry into that database;
- Establish and maintain a mechanism (such as a call centre) that will receive in-season reports, enter the reported information electronically into the departmental salmon fishery database, and provide fishers with a confirmation number for their report;
- Submit the post-season catch reports required by conditions of licence electronically to the departmental salmon fishery database, and issue letters confirming receipt of these reports;
- Contact reporting fishers to resolve data quality issues that are identified to the service provider by the Department;
- Provide a support person for fishers to contact following the fishing season for resolving catch reporting licence condition clearance issues;

- Provide the Department with a weekly update on the status (e.g. active, returned, lost) of the harvest logs that they have issued.

The above information is a synopsis of the service provider requirements. For the complete service provision requirements, contact the Department. Information on contacting currently approved service providers will be included with licence packages mailed to licence holders.

8.6.1. E-Logs

Commercial Electronic Logbooks (E-Logs)

For the 2009 fishing season, Fisheries and Oceans Canada will be continuing a co-management arrangement with commercial salmon fishermen and continue to pilot an Electronic Logbook system for the fifth consecutive salmon season. The PC based software application has been designed following the current paper versions of the commercial salmon logbooks for gill net, seine and troll. The ultimate goal of this initiative is to improve efficiency and compliance of reporting catch to the Department.

In 2009 there may be as many as 100 commercial salmon fishing vessels from all the licence groups piloting the software application along the Pacific Coast. Catch data and other fishing information will be transmitted to the Department in the manner outlined in their conditions of licence, with respect to electronic logbooks. Participants in this pilot will not be required to purchase the salmon logbook service or be required to phone in their catch and fishery information to the service provider.

For more information please contact Ron Goruk at 250-756-7392, Carmen McConnell at 250-756-7272.

8.7. Non-retention Species

There will be non-retention of chinook and coho in most southern B.C. commercial fisheries with the exception of some Area E (Fraser River) and Area G (WCVI) fisheries as well as some terminal opportunities where surpluses are identified. Non-retention of steelhead will be in effect in all commercial fisheries.

There are also local and at times seasonal restrictions on various other salmon species. Please refer to the Fishery Notice that is released prior to every commercial fishery to determine any locally restricted species, or any in-season updates to the above.

8.8. Revival Tanks

Revival tanks conforming to the conditions of licence will be required for all vessels participating in commercial salmon fisheries. All prohibited species captured incidentally must be either revived in the revival tank and released, or released directly to the water in a manner that causes the least harm. If in-season indicators show a deterioration of expected stock levels, additional measures may be implemented.

Revival tank construction drawings and additional details are available from the Fisheries and Oceans Canada website at: http://www.pac.dfo-mpo.gc.ca/ops/fm/selective/default_e.htm.

8.9. Gill Net Construction

Gill nets of two different constructions may be used in all South Coast Areas except for Areas 20 and 22, where net construction must be of the 30 filament type (multi-strand). Net construction in all other areas may either be of the 30 filament type (multi-strand) or Alaska Twist (six strands).

The use of Alaska Twist gill nets with four or five filaments of equal diameter in each twine of the web will be permitted in certain gill net fisheries, (excluding Areas 20 and 22) in 2009 providing that an approved study has been undertaken. Fish harvesters that wish to use this gear should contact their local fishery manager.

Specific restrictions such as the specifications for net construction and revival tanks are found in the conditions of the individual licences, which are attached to the licence. Fish harvesters are urged to read these conditions carefully to ensure that their vessel and fishing techniques are in accordance with their licence.

8.10. Retention of Lingcod by Salmon Troll

To help meet the conservation and sustainability objectives under groundfish integration, an individual quota (IQ) system has been established for the lingcod fishery. Initial allocation of quota was based on catch history from 1996 to 2003 as this time period coincided with the Dockside Monitoring Program. For those who have fished lingcod in conjunction with salmon during the qualifying years, fish slips were used to determine catch.

Implementation of an integrated groundfish fishery for this year has management implications for those wishing to retain lingcod while salmon trolling. Similar to last year, all vessels wishing to retain any amount of lingcod must have their fish validated through the established dockside monitoring program. In addition to this, any vessel wishing to land lingcod must acquire sufficient quota to do so.

Requirements include the following (less than 500 lbs of lingcod per trip):

- Vessel must have sufficient IVQ
- Transportation requirement – All lingcod must be transported by the licensed vessel either directly to land or to a fish pen
- Hail in and Hail out requirements through the designated service provider Archipelago Marine Research Ltd (AMR)
- Specific locations and times at which landing of fish is permitted
- Landing requirements – The landing of any fish of any species is not permitted unless a designated observer is present to authorize the commencement of weight verification.

Vessels wishing to retain and land **more than 500 lbs** per trip of lingcod must, in addition to all of the above, meet the new electronic monitoring requirements. For more information on these requirements please refer to the 2009/2010 Groundfish Integrated Fisheries Management Plan.

The salmon troll fishery is currently permitted to retain 20 rockfish per day (excluding Yelloweye, Quillback, China, Tiger and Copper, as by-catch to salmon fishing (i.e. during

salmon troll open times and when salmon are retained on board the vessel). This allowance will continue in 2009. There are no additional monitoring requirements.

8.11. Selective Fishing / Conservation Measures

In 2009, the Department will work with Area Harvest Committee representatives to continue to implement selective fishing measures to avoid non-target fish or, if encountered, to release them alive and unharmed. These measures include but are not limited to the use of troll plugs, Alaska twist gill nets, maximum gill net set time and net length, gill net mesh size, gill net depth, brailing for seine vessels, and revival tanks.

8.11.1. Other Conservation Measures

In 2009, Fisheries and Oceans Canada will once again be seeking the co-operation of harvesters in minimizing fishing activities in Robson Bight. This is part of a long-term management plan to afford protection to the killer whale populations that frequent this area during periods from mid-May to early October. Fish harvesters are requested not to moor in the Robson Bight area until 24 hours prior to any fishery being announced for that respective gear type. Information on this management initiative can be obtained from Department charter vessels on the grounds and from Fisheries and Oceans Canada offices.

8.12. Catch Monitoring Standards

The Department has recently released a consultation document in February, 2008 called "*Interim Fishery Monitoring and Catch Reporting Standards for Commercial Salmon Fisheries*". This document will form the basis for discussion with the commercial salmon fleet regarding interim fishery monitoring and catch reporting standards. Applying consistent standards will improve the integration of fisheries, will increase transparency, will improve the reliability of data and will facilitate management and accountability. The document sets out interim standards for reporting parameters (catch, release, effort, non-fish harvest), reporting frequency as well as accuracy/precision targets for all commercial salmon fisheries.

These interim standards will be used to discuss with commercial harvesters which specific fisheries may require enhanced monitoring, identify specific monitoring objectives and an affordable approach to collect the required information. This approach will provide for the collaborative evaluation of the interim standards, examining potential financial implications to harvesters and the overall effectiveness. Consultation will include obtaining feedback regarding full application of these revised standards in the 2010 fishery.

Timely and accurate information on harvest and harvesting practices is essential to properly assess the status of fish stocks and to support resource management for the conservation and the long term sustainability of fish resources. To address all elements of the Wild Salmon Policy, an effective catch reporting system will be required to assess the status of Conservation Units.

Furthermore, a 'share-based' management framework as envisioned in Pacific Fisheries Reform requires accurate, timely and verifiable catch reporting. However, several issues have been identified with the current monitoring of Pacific commercial salmon fisheries and the reporting of catch and associated harvest mortalities, including inconsistent requirements, inaccessible data, poor data precision and incomplete or missing data. This document is intended to provide a framework to initiate discussion on:

- elements of fishery monitoring and catch reporting (FM&CR) standards, (i.e. what information is required and why)
- identifying required improvements and their associated rationale for each specific harvest opportunity,
- priorities for improvements in catch monitoring
- provide a basis for planning and implementing the most effective approach to achieve required monitoring programs within two years.

Effective FM&CR programs are important to support fishery planning by First Nations, stakeholders, all levels of government and to meet Canada's international and other reporting obligations on fisheries. A fully developed, well documented and statistically verifiable fishery monitoring system is one important component of "eco-certification". Yet another facet of this is the issue of bio-security and the need to insure traceability of fish from the water to the buyer. Traceability can increase the value of products, assure continued access to world markets and assist with longer term economic stability of the commercial fishing industry. An essential first step in traceability is the full documentation of the commercial harvest together with its source fishery and fishing fleet. Finally, DFO is committed to implementing defined shares in the management of salmon fisheries; confidence among all harvesters in catch data is essential to achieving the trust required to support defined harvest shares.

8.13. Demonstration Fisheries (Pacific Fisheries Reform)

The Department has conducted extensive consultations with the commercial salmon industry and First Nations concerning fisheries reform and renewal. Changes in the fishery will be designed to improve biological and economic performance of the fishery.

In an ever-changing environment such as resource conservation, a group may want to explore special harvesting initiatives or new management approaches to develop flexible fisheries with greater harvester control that improve product quality, increase value to the fleet and have better catch monitoring and compliance with catch limits. Projects that fall under this category may include investigating quota management in salmon fisheries, fishing in an unconventional area/time, or testing the abundance of stocks prior to full fleet fisheries. Special projects or initiatives may have significant components that relate to selective fishing.

Special projects or initiatives should be planned well in advance of proposed implementation so that effective planning and approval can take place. If a group is interested in pursuing a special project or initiative they should contact the appropriate departmental resource manager and advisors for that fishery. After discussion, the resource manager will likely require a detailed proposal to submit for approval.

It should be noted that all special projects will have to be evaluated for conflicts with recent court cases regarding the Minister's authority regarding use of fish (See Section 7.3).

8.14. South Coast Net

8.14.1. Juan de Fuca Strait and Fraser River - Area 20 and 29

Actual opportunities for targeted Fraser River sockeye fisheries will be determined based upon in-season assessment and abundance of Fraser River sockeye stocks and subject to achieving

fisheries management objectives for Late Run and Cultus Lake sockeye and Interior Fraser coho. In 2009, based on the pre-season forecast, directed commercial fisheries targeting Fraser River sockeye returns are anticipated mainly on the summer run component of the return.

Based on the pre-season forecast for Fraser River pink, commercial opportunities targeting Fraser River pink are anticipated and will be determined based upon in-season assessment and abundance of Fraser River pink and subject to achieving fisheries management objectives for Late Run and Cultus Lake sockeye and Interior Fraser coho. Seine opportunities directed on Fraser River pink are not anticipated in Area 20 due Interior Fraser coho constraints however will be confirmed in-season.

In Area 20, controlled fishing opportunities targeting Fraser River sockeye will be considered for licence Area B in Juan de Fuca Strait (Area 20) however, this will be subject to available TAC, in-season diversion rate estimates of Fraser River sockeye and impacts on stocks of concern.

In Area 18 and Area 29, off the Fraser River mouth, harvest opportunities for Area B will be considered in these areas if required.

Based on pre-season forecasts, opportunities for Area E in Area 29 are anticipated.

The FRP, in conjunction with PSC staff and Fisheries and Ocean Canada, will develop and implement Fraser River sockeye fishing plans for these areas, as they fall within Panel management responsibilities.

Early to Late July - Area 20 and 29

- No fisheries anticipated prior to late-July in order to protect Fraser River Early Stuart sockeye stocks.

Late July to Mid August - Area 20

- Limited, controlled effort seine fisheries are anticipated to be available mainly on Summer Run sockeye, fleet size limitations, strict selective fishing techniques and monitoring will be required.
- Avoidance of coho, Cultus and late run sockeye, TAC and diversion rate will be factors determining available harvest opportunities on Early Summer and Summer Run stocks during this period.

Late July to Mid August - Area 29

- Area E opportunities are anticipated targeting summer run sockeye, subject to available TAC, and Cultus and late run sockeye constraints.
- Area B seine fisheries off the Fraser River mouth may be considered targeting summer run sockeye, subject to available TAC, and Cultus and late run sockeye constraints and TAC is not achieved in traditional areas of Juan de Fuca and Johnstone Straits and will be determined in-season

Late August to early September – Area 20

- Directed pink fisheries in Area 20 for Area B are not anticipated due to constraints on Interior Fraser coho however will be confirmed in-season.

Early September to Mid October - Area 20 and 29

- Area 20 expected to remain closed to protect Interior Fraser coho and Cultus Lake sockeye.
- Area 29 fishing opportunities will not be available due to Interior Fraser coho, Cultus Lake sockeye and Interior Fraser River steelhead conservation constraints.

Late October to Early November - Area 29

- Potential gill net fishing opportunities for chum salmon will be determined in-season, based upon in-season assessment of the abundance of the chum salmon return and conservation objectives for Interior Fraser steelhead.

Early November to Late November - Area 29

- Potential gill net fishing opportunities will be determined in-season, based upon in-season assessment of the chum salmon return.

Refer to Appendix 10 for potential demonstration fisheries.

8.14.2. Johnstone Strait (Areas 11 to 13)

Actual opportunities for targeted Fraser River sockeye fisheries will be determined based upon in-season assessment and abundance of Fraser River sockeye stocks and subject to achieving fisheries management objectives for Late Run and Cultus Lake sockeye, Nimpkish sockeye, Sakinaw sockeye and Interior Fraser coho. In 2009, based on the pre-season forecast, directed commercial fisheries targeting Fraser River sockeye returns are anticipated mainly on the summer run component of the return.

Based on the pre-season forecast for Fraser River pink, commercial opportunities targeting Fraser River pink are anticipated and will be determined based upon in-season assessment and abundance of Fraser River pink and subject to achieving fisheries management objectives for Late Run and Cultus Lake sockeye and Interior Fraser coho.

Early to Late July - Areas 11 to 13

- No fisheries are anticipated prior to late July in order to protect Sakinaw Lake sockeye and Fraser River Early Stuart sockeye. No fishing opportunities are available above Lewis Point prior to late July to protect returning Nimpkish River sockeye.

Late July to Mid August - Areas 11 to 13

- Gill net and seine opportunities targeting mainly Fraser River summer run sockeye are anticipated. Opportunities will be subject to available TAC and constraints for Cultus Lake and late run sockeye and Interior Fraser coho.

Late August to Mid September - Areas 11 to 13

- No directed Fraser River sockeye fishing opportunities are anticipated due to management constraints for Cultus Lake and Late run sockeye. Directed Fraser River Pink opportunities are anticipated subject to available TAC and constraints for Cultus Lake and late run sockeye and Interior Fraser coho. Controlled limited fisheries are anticipated to minimize impacts on stocks of concern.

Late July to early September - Areas 12 and 13 (Mainland Inlets)

- Mainland Inlet pink – This is the off cycle year for most mainland inlet pink stocks. Returns are expected to be low to near target abundance and no directed fishing opportunities are anticipated, however in-season assessment will determine if any potential fishing opportunities are available. There will be no fishing opportunities unless surpluses are identified in-season.
- Bute Inlet Chum – Fishing opportunities targeting Orford River chum are not anticipated based on recent year trends of poor returns, however this will be determined in-season.

Early October to Late October - Areas 12 and 13 (Johnstone Strait mixed stock chum fishery)

- The chum pre-season forecast indicates low to near target based on the escapements from the 2005 brood year. The fixed harvest rate strategy which was implemented starting in 2002 is planned to continue in 2009. For seines, two fisheries are anticipated and will be provided before and after the peak, however plans are under review. Gill net fisheries will be scheduled during the October time period.
- Specific fishing plans will be determined pre-season following consultation with industry. A chum working group meeting will be scheduled for April to begin this planning process.

Late November to early December

- No fishing opportunities directed at Nimpkish River chum are anticipated due to an expected poor return; however, abundance levels and potential opportunities will be determined in-season.

Refer to Appendix 10 for potential demonstration fisheries

8.14.3. Strait of Georgia - Areas 14 to 19

- No fisheries are planned to occur in Area 16 (Sabine Channel). Consideration may be given in-season for Fraser River sockeye fisheries in Sabine Channel if warranted and will be subject to Sakinaw Lake sockeye constraints as well as constraints for other stocks of concern.
- Chum fishing opportunities in terminal areas will be determined in-season and discussed through pre-season meetings and the chum advisory process. The following opportunities may be available:

Early October to Late-November - Area 14

- Possible Area D gill net openings starting in early October. Further gill net openings are subject to overall abundance in Area 14 and escapements in the Puntledge, Little Qualicum and Big Qualicum Rivers. Limited effort Area B seine opportunities may be

available in late October dependent on escapement levels, abundance and allocation status. Full fleet opportunities may also be available.

Late-October to Mid-November - Area 16

- Gill net and seine opportunities are not anticipated due to the recent trend of poor returns however will be confirmed in-season. Subject to escapement levels in Jervis Inlet in the Tzoonie, Deserated and Skwakwa Rivers. Area B seine opportunities will depend on abundance and allocation status

October to Early November - Area 17

- Possible Area E gill net opening. Openings are subject to in-season abundance estimates of Nanaimo River chum. Area B seine opportunities will depend on abundance and licence area allocation status.

Late-October to Early December - Areas 18/19

- Possible Area E and B fisheries in Satellite Channel and Saanich Inlet. Openings are subject to in-season abundance estimates for the Cowichan and Goldstream Rivers. Fishing opportunities will be dependent on abundance and also licence area allocation status.

Refer to Appendix 10 for potential demonstration fisheries.

8.14.4. West Coast Vancouver Island - Areas 21 to 27

Preliminary forecast information for WCVI chinook, sockeye and chum salmon indicate returns well below the long term averages. Commercial opportunities may be limited in 2009.

Sockeye

Mid June to Late July/Early August - Area 23

- Preliminary forecast for Barkley Sound sockeye indicates a return well below the long term average that may not provide for commercial opportunities.
- Opportunities will be determined based on in-season assessment.

Chinook

Mid August – Early September Area 23

- Gill net and seine opportunities in Alberni Inlet dependent on the pre-season forecast and allocation guidelines.

Mid August - Area 25

- Gill net opportunities in Tlupana Inlet dependent on the pre-season forecast and allocation guidelines.

Chum

Mid September to Late October - Area 23

- Limited small fleet gill net opportunities in Barkley Sound dependent on the pre-season forecast and allocation guidelines.

Mid September to Late October - Area 24

- Limited small fleet gill net opportunities in Clayoquot Sound dependent on the pre-season forecast and allocation guidelines.

Mid September to Late October - Area 25

- Possible gill net chum fisheries in outer Nootka Sound (Sub area 25-7 and portion of 25-6). Maximum 50 boat days per week operating a maximum 2 days per week.
- Limited small fleet gill net fishery in Esperanza Inlet (Sub area 25-13 and portions of 25-14) dependent on the pre-season forecast and allocation guidelines.
- Possible seine opportunity dependent on abundance levels and allocation considerations.
- Terminal fisheries in Tlupana Inlet based on identified surplus chums to enhanced systems.

October - Area 21 and 121

- Dependent on pre-season forecast Area E gill net fishery anticipated for two days per week starting and limited fleet seine fisheries October 01-08 (daylight only) inside one mile boundary and north of Dare Point.

Further fisheries depend on reaching escapement milestones into Nitinat Lake and indications of abundance through commercial fishing, test fishing and stream enumeration.

8.15. Area G Troll

8.15.1. Sockeye

Area G access to Fraser sockeye in 2009 will be dependent upon stock abundance and allocation balances.

Due to the expected low return of Barkley Sound sockeye, Area G fishing opportunities targeting these stocks in Area 23 are not anticipated.

8.15.2. Fraser River Pink

8.15.2.1. Fraser River Pink

A fishable surplus of Fraser pinks is anticipated in 2009. Area G access will be dependent on relative allocation balances.

8.15.3. Chum-West Coast Vancouver Island

Troll opportunities will be dependent on abundance and allocation guidelines. Consultations with Area G troll may be conducted to discuss possible terminal chum opportunities. Forecast chum returns are low for 2009; however, opportunities may be available in areas such as Nootka Sound (Areas 25 and 125), and Nitinat (Areas 21 and 121) and will be determined in-season. Terminal chum opportunities usually occur in early October. Chum salmon may also be retained as incidental catch in other directed fisheries, such as the chinook fishery in Areas 23 to 27, and 123 to 127.

8.15.4. Coho

Management measures to protect stocks of concern, including Interior Fraser and Strait of Georgia coho, will constrain WCVI fisheries in the offshore area. However, there may be potential opportunities available for select hatchery marked coho retention during directed chinook fisheries. The time frame for these fisheries would be in the September and October period when Interior Fraser and Strait of Georgia coho have migrated through the fishing area.

8.15.5. Chinook

Under the PST, WCVI chinook fisheries are based on an Aggregate Abundance Based Management AABM model. Fisheries are prosecuted on an aggregate of United States and Canadian chinook stocks. Initial abundance forecasts provide estimates for two years in advance. For management purposes, the chinook fishery year encompasses the period October 2009 to September 2010.

Effective January 1, 2009 the renegotiated Pacific Salmon Treaty terms were put into effect including the implementation of a 30% reduction in the Total Allowable Catch (TAC) for the WCVI AABM starting in this fishing season (Oct 2008-Sept 2009).

On March 27, 2009, the Chinook Technical Committee completed the final calibration of the Chinook Model for the 2009/10 season. The Abundance Index (AI) for the 2009 season is 0.72 which is a decrease from 2008 which results in a potential available catch in the WCVI AABM fishery of 107,800 chinook subject to domestic stocks of concern constraints. For planning purposes, the preliminary Area G harvest level is determined by subtracting the anticipated First Nations (5,000) and recreational (50,000) catches from the total TAC. The WCVI commercial Area G troll fishery harvest level is therefore 52,800 chinook, an approximate 50% reduction from the 08/09 fishery season. Adjustments to this harvest level will be made in-season based upon observed First Nations and recreational catches.

Within the bounds of the PST provisions, Area G chinook fisheries will be managed to limit impacts on domestic stocks of concern, including Early-Timed Fraser chinook, Spring/Summer run Fraser chinook, Lower Strait of Georgia (LGS) chinook, and Interior Fraser coho.

Early-Timed and Spring/Summer Fraser chinook stocks are present off the WCVI during the spring and summer period on their migration back to the Fraser River. Time/area and effort restrictions, similar to the previous year, will be implemented to limit Area G impacts on Fraser chinook stocks of concern during the March to July period.

LGS chinook, identified in the fishery by the tagged Cowichan River stock, are broadly distributed in time and area on the WCVI. A number of management approaches have been utilized in previous troll fisheries to limit impacts on LGS chinook. Initially, limits were set on Cowichan chinook CWT encounters with the objective of a 10% reduction in harvest rate on LGS chinook. Given the uncertainty associated with the relatively small proportion of LGS chinook in the WCVI fishery, the approach of reducing the overall Area G harvest rate by reducing the Area G TAC was adopted to limit impacts in 2008. For 2009, it is anticipated that the substantial reduction in Area G harvest rate (approximately 50%) under the new PST agreement should provide sufficient protection for LGS chinook. In addition, the fishery will be managed to disperse harvests throughout the fishery year to afford further protection to this stock of concern.

A preliminary forecast indicates that WCVI wild chinook continue to be a stock of concern. As a result, management measures consistent with the previous year will be implemented to protect this stock. The objective for Area G in 2009 will be to avoid encounters with WCVI chinook by restricting the troll fishery to offshore areas during the summer period. Specifically, there will be a 5 nautical mile inside boundary in South West Vancouver Island and a 2 nautical mile boundary in North West Vancouver Island during the period that WCVI chinook return to the West Coast of the island. The 5/2 nautical mile boundary may be reduced to 1 nautical mile as the WCVI chinook migration comes to an end. If further restrictions were required for conservation purposes zone/area and time closures could be implemented.

Anticipated Chinook Opportunities for Area G Troll

Management actions will be taken in the 2008/2009 chinook year to limit the annual exploitation rate on LGS, Early-Timed Fraser, Spring/Summer Fraser, WCVI chinook and Interior Fraser coho. The following fishing plan is subject to change if the status of a domestic stock passing the WCVI changes to a "stock of concern". Fishery openings are planned to distribute harvests proportionately over all fishery periods.

April to Mid-June - WCVI - Portions of Area 123, 124 to 127, 24 to 27

Management measures will be taken to protect Early-Timed and Spring/Summer Fraser Chinook during the spring and early summer while these stocks pass through the WCVI area. Management measures include a closed time extending from March 15 to April 20. During the latter portion of April, NWVI and terminal areas 23 – 27 only will open for a maximum of 250 boat days. In May, the fishery will be extended incrementally into SWVI and effort will be limited to 1000 boat days. Fishing effort in the first half of June will be limited to 650 boat days and all areas will be closed prior to June 16. To ensure catches are dispersed proportionately over the fishing year, harvests in the April to June period will be limited to approximately 40% of the TAC.

July and August - Areas 123 to 127

To protect Spring/summer Chinook stocks of concern that are prevalent on the WCVI during the summer period, the entire fishing area will be closed from June 16 to July 31. As in the previous year, a Chinook directed selective fishery limited to approximately 11,000 chinook will be conducted in August. To limit impacts on Interior Fraser Coho, the Chinook directed fishery will be restricted to plug gear only. In addition, the August fishery will be confined to offshore waters (5 miles in SWVI and 2 miles in NWVI) to avoid WCVI origin Chinook.

Late August to Mid-October - Terminal WCVI Coho and Chinook Fisheries

Because of forecast low returns of WCVI Chinook, terminal opportunities targeting enhanced stamp/somass and Conuma Chinook and coho are not anticipated in 2009.

September - WCVI - Areas 123 to 127

Directed chinook fishery opportunities are anticipated in September. During the first half of September, the fishery will be plug-only to limit Interior Fraser Coho impacts and will be

confined to offshore areas (5 miles in SWVI and 2 miles in NWVI) to avoid WCVI Chinook. In the latter half of September, Interior Fraser Coho are expected to have passed through the area, therefore retention of select hatchery marked coho will be allowed. WCVI Chinook are also expected to have passed through offshore waters by this time so that the inside fishing boundary can be relaxed to one mile offshore. Catches will be limited to approximately 20% of TAC for September.

October through winter time period - to May 2010- Areas 23 to 27 and 123 to 127

As of October 2009, Chinook fisheries will be managed under PST defined allowable limits for the 2009/10 fishery year. For the winter period from October to early-March, low intensity fisheries are anticipated, with harvest levels set to harvest approximately 20% of the 2009/10 TAC (based on the two year out forecast). In the March to May period, management measures are likely required to protect Early-timed Fraser Chinook.

8.16. Area H Troll

8.16.1. Sockeye

Actual opportunities for targeted Fraser River sockeye fisheries will be determined based upon in-season assessment and abundance of Fraser River sockeye stocks and subject to achieving fisheries management objectives for Late Run and Cultus Lake sockeye, Nimpkish sockeye, Sakinaw Lake sockeye and Interior Fraser coho. In 2009, based on the pre-season forecast, directed commercial fisheries targeting Fraser River sockeye returns are anticipated mainly on the summer run component of the return. These fisheries will be managed in a manner consistent with Fraser River Panel objectives. Details on weekly fishing strategies will be determined through the Fraser River Panel and through consultation with Area H advisors.

The following Subareas are expected to open in late July to mid August: 12-1, a portion of 12-2, 12-3, 12-4, 13-7 (excluding Deepwater Bay), 13-8, 13-9 and 13-27 to 13-32. Additional Subareas may open in Upper Area 12 subject to the development of a fishing strategy for all gear groups in that area. A staggered opening (from north to south) or closure (from south to north) may be considered if it results in increased fishing time without increased impacts on stocks of concern.

In addition, Areas 18 and 29 may open in relation to the abundance and timing of Early Summer and Summer run stocks which may not be timed with opportunities in Johnstone Strait. Fishing opportunities in the lower Strait of Georgia will be confirmed in-season following consultation with industry and will depend on run size, diversion rate, and remaining Area H allocation.

See Appendix 10 for demonstration fisheries under consideration.

8.16.2. Pink

8.16.2.1. Fraser River Pink

Area H will be permitted to retain pink salmon by-catch in directed Fraser River sockeye fisheries occurring in Areas 12, 13, 18, and 29 with the possible exception of the waters of

Queen Charlotte Strait north of Lewis Point where pink non-retention may be required to protect migrating Mainland Inlet pink.

Directed Fraser River pink fisheries are likely to occur in Area 12, 13 and 18 in mid to late August to mid September. Area 16 may open subject to appropriate monitoring levels. Area 29 off the Fraser River may open if it is determined that Late-run Fraser River sockeye are not holding in this area. Fraser River pink opportunities could be significantly impacted by concerns for Late-run Fraser River sockeye and Cultus Lake sockeye. Consideration may be given to a stepped opening and closing strategy to allow the earliest possible opening time (e.g. open northern Area 12 first before southern Area 12 followed by Area 13).

See Appendix 10 for demonstration fisheries under consideration.

8.16.2.2. Mainland Inlet Pink

Odd years are typically off-cycle years for most mainland inlet pink systems. Similar to 2008, expectations for 2009 are low to near target. Fishing opportunities in 2009 are not anticipated but will be confirmed in-season based on abundance assessments (e.g. overflights, escapement counts and possibly assessment fisheries). A troll fishery may be conducted in late July in Area 12 to assist in determining the abundance of pink. Boundaries will be determined in-season. Coho sensitive areas will remain closed. Fishing opportunities will be considered in mid to late August to mid-September in Area 12, 13, 18 and 29 if stocks appear to be returning in sufficient abundance. Details will be determined in-season.

8.16.3. Chum

Early October/Late October - Area 12 and 13

- Johnstone Strait chum expectations are low to near target in 2009 based on the below average returns encountered in 2008 (preliminary), the low parental brood composition of the 2005 return and the high variability in chum returns. Chum fishing opportunities are anticipated to commence in the first week of October. The “mixed-stock harvest strategy” chum fishing plan will be finalized pre-season following consultations with stakeholders.
- See Appendix 10 for demonstration fisheries under consideration.

October/November – Area 14-17

- Chum fishing opportunities in terminal areas will be determined in-season and discussed through pre-season meetings and the chum advisory process.

Mid to Late October - Area 29

- Potential fishing opportunities for chum in Area 29 will be determined in-season based on in-season abundance assessments.

8.16.4. Coho

There will be no coho retention opportunities in 2009, however limited terminal assessment fishery opportunities may be considered subject to in-season information but are not anticipated.

8.16.5. Chinook

Due to concerns for Lower Strait of Georgia stocks, no directed chinook fisheries are planned for 2009 and there will be non-retention in fisheries directed at other stocks.

During pre-season discussions with Area H advisors, the possibility of continuing the chinook sampling program in Area 29 in mid-August to mid-September will be reviewed.

Limited terminal assessment fishery opportunities may be considered subject to in-season information.

See Appendix 10 for further details.

9. POST-SEASON REVIEW 2008

9.1. Conservation / Sustainability Objectives

9.1.1. Lower Strait of Georgia Chinook

The objective for Lower Strait of Georgia (LGS) chinook is to continue with reduced fishery exploitation management measures that were implemented in 2007 in known areas of significant impact.

Chinook returns to many LGS systems have been declining since the late 1990's and continue to be at low levels. For the Cowichan River, the PSC indicator for LGS wild fall chinook, the preliminary 2008 return remained low with a total adult return of 2,255, including 1,109 natural adult spawners. The escapement goal is 6,500 natural adult spawners. Early marine survivals and adult returns are expected to continue to be poor similar to recent years.

9.1.2. Interior Fraser River, Lower Fraser and Strait of Georgia coho

Objective: The objective for Interior Fraser River coho (including Thompson River coho) is to limit the Canadian exploitation rate to 3% (not including terminal harvest on systems experiencing strong escapements).

The best available estimate for the total impact of southern BC fisheries on Interior Fraser coho for 2008 is 1.84%. In 2008 escapements back to the Interior were significantly lower than those observed in 2007. The total spawning escapement of 14,248 is well below the interim critical benchmark suggested by the recovery team, but is slightly higher than escapements observed for the parental brood year.

In 2008 the total abundance of Interior Fraser coho was estimated to be 16,610 which is slightly lower than the brood year abundance of 16,712 and 19% higher than the parental brood escapement. Escapement returns in 2008 indicate that poor marine survivals continue to be an ongoing concern and coupled with freshwater habitat impacts (water supply) will continue to limit recovery and further the requirement for actions to limit exploitation.

9.1.3. Cultus Lake Sockeye

The objective for Cultus Lake sockeye is to limit exploitation rate to 20%.

In 2008, Summer run and Late run (including Birkenhead) sockeye returned at less than the 75p forecast. The smaller than expected returns allowed for First Nations FSC fisheries throughout the season and resulted in one short commercial and recreational opening just before the estimates of Summer run size dropped from the 50p forecast. The estimated exploitation rate for Cultus sockeye for 2008 was 14%.

9.1.4. Sakinaw Lake Sockeye

The objective for Sakinaw Lake sockeye is to stop their decline and re-establish a self-sustaining, naturally spawning population.

Annual exploitation rates were previously calculated using a model that incorporated daily harvest rate estimates for Fraser sockeye in Johnstone Strait combined with Sakinaw fence count (i.e. return timing) data. In years with low escapements, timing was estimated based on records for years with abundant timing data. In 2007 and 2008, no adult sockeye were recorded entering the Sakinaw Lake system.

In addition, the uncertainties associated with timing and harvest rates are difficult to quantify and probably large, meaning that exploitation rate calculations are imprecise. For these reasons, we are unable to evaluate whether the 2007 objective of stopping the decline of this population was achieved.

In spite of strong efforts to minimize mortality and increase the abundance of this population, spawner numbers remain extremely low. Only 1 fish returned to Sakinaw Lake in 2006 and zero fish in 2007 and 2008. However, 420,000 sockeye progeny from captive brood were released into Sakinaw Lake in 2008. This cohort will be smolting in 2009 and should return in 2011.

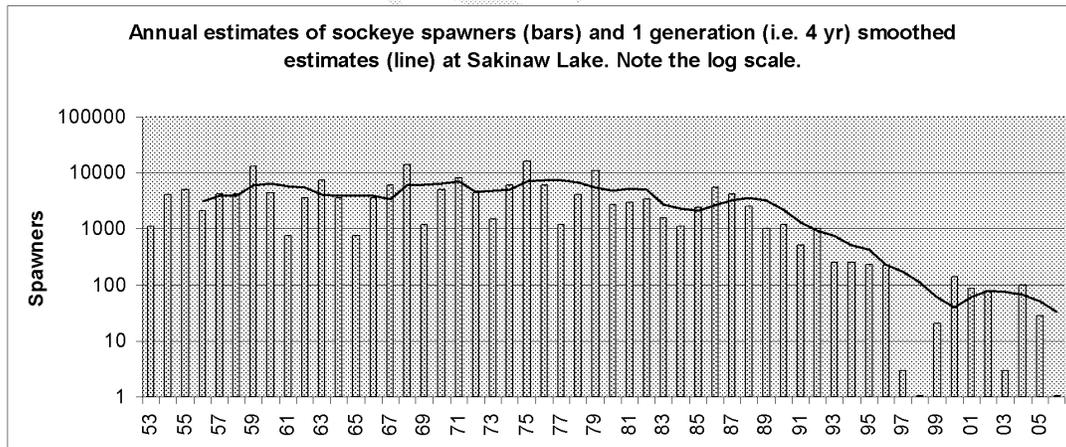


Figure 2. Log scale of Sakinaw Lake sockeye spawner estimates over time

9.1.5. WCVI Wild Chinook

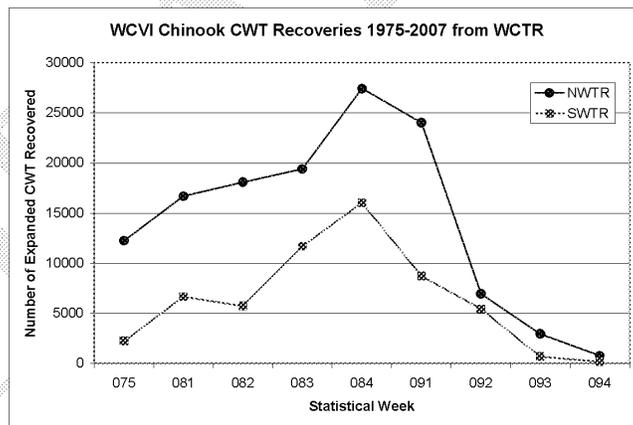
The objective for WCVI chinook is to lower the impact of Canadian ocean fisheries (not including enhanced terminal areas) to an exploitation rate of 10%.

Management methods used to protect WCVI chinook included in-season estimates of Northern Troll catch composition and the closure of that fishery when the composition of their catch was estimated to be at a maximum harvest rate of 3.2%. Additionally, the WCVI troll fishery was closed in July and August, and inshore areas were closed to both recreational and commercial chinook harvest in September and October to allow a migration corridor for returning WCVI origin chinook.

The time and area management actions for the WCVI troll fishery are designed to maintain negligible impact on these stocks. A limited Area G troll plug fishery occurred in early August. The fishery was designed to avoid WCVI origin chinook by restricting fishing in NWVI, and the overall TAC. DNA results from the plug fishery suggest negligible impacts on WCVI origin chinook in both SWVI ($0 \pm 0.1\%$ or approximately 0 ± 9 chinook) and NWVI ($4.3 \pm 2.4\%$, or approximately 22 ± 12 chinook).

In 2008, the September fishery started earlier than in past years: September 2nd versus mid-September. Effort was limited in NWVI to reduce impacts on WCVI chinook. Historical CWT data suggest WCVI origin chinook are still vulnerable to the WCVI troll fishery until approximately the third week in September, particularly in NWVI (Figure 1.) DNA results from September 2-14 suggest low impacts on WCVI origin chinook in both SWVI ($0 \pm 0.1\%$ or approximately 0 ± 42 chinook) and NWVI ($5.4 \pm 2.3\%$, or approximately 197 ± 84 chinook). DNA analysis will guide in-season management actions, but the official measure of success will be made using post-season CWT cohort analysis.

Figure 1. Historical CWT recoveries from WCVI chinook stocks in the WCVI troll fishery, 1975-2007.



With the exception of either hatchery or enhanced stocks, abundance of WCVI origin chinook remains very low. Populations originating from Clayoquot Sound (Statistical Area 24) and those subject to higher exploitation in terminal areas (e.g. in Alberni Inlet) are at critically low levels. Returns from 2004 brood year in 2007 and 2008 were extremely low due to apparently unfavourable marine conditions during the sea entry year (2005).

The Canadian Ocean fisheries exploitation rate on WCVI chinook in 2008 was 8.2%.

9.1.6. Interior Fraser River Steelhead

The objective for Interior Fraser River steelhead provided by the B.C. Ministry of the Environment is to protect 80% of the run with a 90% certainty in Fraser River commercial gill net fisheries. This objective does not apply to selective commercial fisheries (those using gear types other than gill nets) or fisheries conducted terminally on single stocks. In addition, other commercial south coast fisheries are to release to the water with the least possible harm all steelhead caught incidentally in fisheries targeting other species.

In order to achieve this objective in 2008, the BC Ministry of the Environment used a model to project the potential dates for a Fraser River commercial fishery that would protect 80% of the steelhead run with 90% certainty. This model is based on run-timing and migration speed data for steelhead, taken from historical catch in the Albion test fishery and studies on in-river migration speeds. There is no in-season update available for this model, as the Albion test fishery does not intercept enough steelhead in a given year to quantify any in-season changes in run-timing or abundance.

Using this model, the BC Ministry of the Environment concluded that the steelhead objective could be met by having a one day fishery on or after October 25th. Based on this recommendation, a 12 hour fishery occurred for Area E gill nets on October 29th. The regulations for this fishery included mandatory non-retention of steelhead, as well as maximum net length of 100 fathoms, 30 minute maximum soak times, and mandatory revival tanks. The only other commercial fishery directed at chum in the Fraser River used selective beach seine gear near the mouth of the Harrison River. This fishery released all intercepted steelhead.

In the marine areas, with limited Fraser River sockeye-targeted fisheries, a consistent fishing pattern of the Johnstone Strait mixed stock chum fishery relative to recent years and mandatory revival tanks for by-catch, the impact on Interior steelhead would be lower than recent years.

Other management measures that were taken to protect Interior Fraser steelhead in 2008 included the Provincial closure of the Thompson River hook-and-release fishery.

It is unknown at this point what the actual steelhead escapement was in 2008, or whether the target escapement to the Thompson and Chilcotin River steelhead groups of more than 1250 fish was met.

9.1.7. Okanagan Sockeye

The objective for Okanagan sockeye is to minimize the impact of Canadian fisheries in years of low abundance.

2008 saw returns of a historical high, 165,334 sockeye migrated past Wells Dam on the upper Columbia River which resulted in a spawning escapement estimate of 124,383 ("Area Under the Curve" estimate). This escapement is the largest on record in the last 60 years and well exceeds the PSARC approved spawning goal objective of approximately 30,000 fish. The 2008 return was comprised primarily of 4 year old fish. In excess of 2,500 sockeye were harvested by Okanagan First Nation bands for FSC purposes.

9.1.8. Nimpkish Sockeye

Objective: The objective for Nimpkish sockeye is to minimize the impact of Canadian fisheries

Nimpkish sockeye are encountered in Queen Charlotte Strait and Queen Charlotte Sound typically during June and July. In order to protect this stock, time and area closures are implemented until late July in marine areas above Lewis Point.

In 2008, directed Fraser sockeye commercial and recreational fisheries were very limited and only occurred in late July. Effort was restricted to below Lewis Point in order to protect returning Nimpkish sockeye. In 2008 the Nimpkish sockeye return (Figure 3) demonstrated a continued low (relative to the long term average) but stable trend.

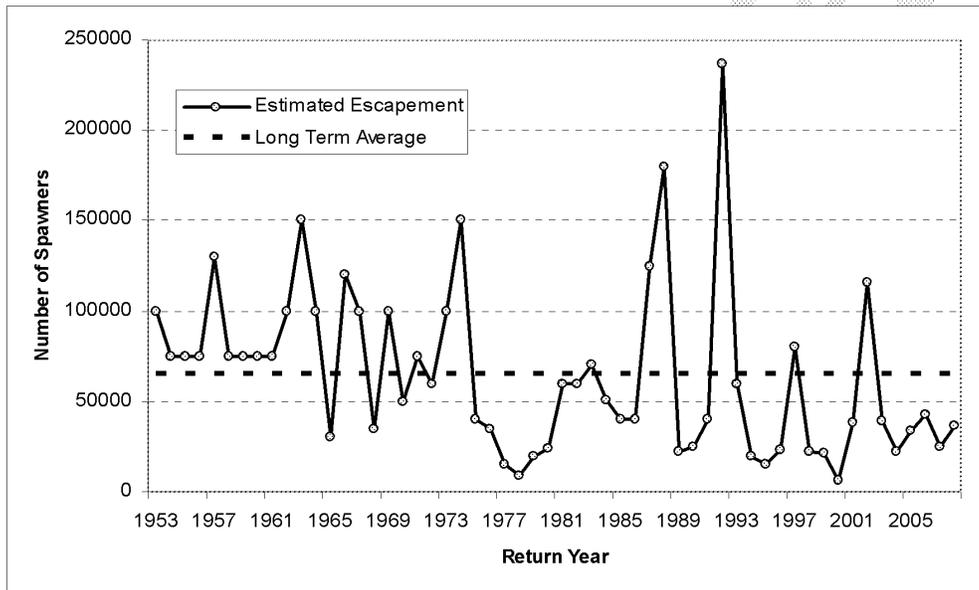


Figure 3. Historic trend of Nimpkish River sockeye escapement

9.1.9. Early Timed Fraser Chinook

The objective for Early-timed Fraser chinook is to reduce the exploitation rate to less than in previous years. Increased management measures for all fisheries that impact these populations will be developed in 2008 to minimize any further declines in escapement. Additional management measures may be required in 2009.

In response to the continued decline in abundance of Early-timed Fraser chinook stocks in recent years, the Department put in place additional management measures in 2008 to reduce fishery impacts on Early-timed Fraser chinook by 50% overall, compared with impacts observed in recent years. Fishery reductions were structured so that the brunt of the conservation burden was borne by commercial and recreational fisheries, rather than First Nations' fisheries. However, all

fisheries which have been shown to impact Early-timed Fraser chinook were subject to additional management measures.

The potential effect of the 2008 management actions was evaluated pre-season in an impact analysis, which estimated the reductions in Early-timed Fraser chinook harvest that would have occurred had the proposed management actions been implemented in previous years. Overall, this analysis showed that the proposed actions would have reduced impacts on Early-timed Fraser chinook by 50%, had they been implemented in 2006 and 2007. Estimated reductions for specific sectors were as follows: First Nations – 46%; recreational – 67%; commercial – 65%.

In order to assess the effectiveness of the 2008 management actions, and to guide the planning of future chinook fisheries given the ongoing need to protect Early-timed Fraser chinook, the Department committed to producing a post-season review of these management measures. This document is currently being developed, with an estimated completion date of late February, 2009. However, preliminary analysis shows substantial reductions in catch in most fisheries during the peak migration periods for Early-timed Fraser chinook. Additionally, the initial in-river run reconstruction indicates that in-river harvest rates were reduced by approximately 50% on all Early-timed Fraser chinook stocks (i.e. Spius, Coldwater, upper Chilcotin, Louis, Chilako, Cottonwood, and Birkenhead) when compared to 2007 harvest rates. Similarly, returns to the mouth of the Fraser (as estimated through the Run Reconstruction model), as well as spawning escapements, increased relative to 2007 values for most of these stocks. (The exception to this trend is Birkenhead, which had a significant reduction in escapement, relative to 2007).

Based on the information currently available, it appears that the exploitation rate on Early-timed Fraser chinook in 2008 will be less than observed in 2007, thus meeting the 2008 management objective.

9.1.10. Spring and Summer Fraser Chinook

In May 2008, new research identified a relationship between the cumulative CPUE of chinook caught in the Albion chinook test fishery to spawning escapements of 5₂ Spring and Summer Fraser chinook. Given that the escapement abundance of 5₂ Fraser Spring and Summer chinook were showing sharp declines from 2003 to 2007 and that the cumulative catch rate in the Albion test fishery was the lowest on record since 1981, a decision was made to take in-season actions aimed to reduce fishery impacts on these stocks.

Wild Salmon Policy benchmarks have yet to be set for these stocks. In the absence of those benchmarks, the chinook escapement goal outlined in the 1985 Pacific Salmon Treaty (PST) was used. The PST goal is to have a spawning escapement at twice the level observed in the 1979 to 1982 base period. The average estimated escapement of Fraser River 5₂ Spring and Summer run chinook during the 1979-1982 base period was 30 050. Using this as a starting value, three management zones with proposed management actions were established.

Zone	Predicted Spawner Abundance	Rationale
1	Above 30,050	1979-1982 base period escapement level; rebuilding required
2	24,040 to 30,050	20% below rebuilding level; stabilize escapement at 2007 level

Zone	Predicted Spawner Abundance	Rationale
3	Below 24,040	Escapement below 3 decade lows

The predicted spawning escapement estimate to the end of May was 23.8K (95% CI: 16.3 to 34.8K). A second prediction of spawning escapements using Albion catch to mid-June was 26.0 K (95% C.I.20.1 to 32.4K). The actual spawning escapement as enumerated using various stock assessment techniques was 32.3 K.

Given in-season estimates, a zone 2 management approach was implemented. Under a zone 2 management approach the following management actions were taken:

First Nations – directed fishing opportunities. Similar chinook directed harvest opportunities as in 2006-2007 from June 1 to August 8, 2008.

Recreational – No change to regulations in marine waters. A slot limit was imposed in the Fraser River and tributaries (including Subareas 29-6 to 29-10). Anglers were allowed to retain one chinook per day greater than 30 cm but less than 77 cm in length.

Commercial – Full fleet Area G harvest opportunities ended in mid-June. A limited harvest large plug demonstration fishery in offshore areas was delayed until August.

9.1.11. Inshore Rockfish

The management objective for inshore rockfish is to introduce conservation strategies that will reverse declines and ensure stock rebuilding over time. A fishing mortality rate of less than 2.0 percent (all Pacific Region fisheries) will be required to achieve this objective.

Rockfish Conservation Areas, (RCA's, no fishing zones for gear that impact on rockfish), have been implemented within the Strait of Georgia and in all outside waters including the Queen Charlotte Islands. The conservation strategy for rockfish along the coast of British Columbia is long term. Rockfish are a long-lived species with a low level of productivity and therefore rebuilding will take several decades.

9.2. First Nation Objectives

The objective is to manage fisheries to ensure that, subject to conservation needs, first priority is accorded to First Nations harvest opportunities for FSC purposes and treaty obligations in accordance with the *Allocation Policy for Pacific Salmon*.

There were opportunities for FSC fisheries for First Nations throughout the South Coast and Fraser River in 2008 for most salmon stocks. However, for Fraser River sockeye, fishing restrictions were implemented in order to protect Early Stuart sockeye stocks which continue to return at levels lower than that deemed acceptable for directed harvest. Restrictions were also in place to protect Spring and Summer run Fraser chinook, Thompson River coho, Sakinaw Lake sockeye, Interior Fraser steelhead and to minimize impacts upon WCVI chinook and Early-Timed Fraser chinook.

In total First Nations food, social, & ceremonial fisheries (FSC) harvested approximately 415,000 sockeye in the Fraser River watershed and 31,600 Fraser River sockeye in marine waters (Johnstone Strait, Strait of Georgia and Area 20).

In addition to sockeye, First Nations had opportunities to harvest chinook and coho as well as chum salmon (utilizing both gill nets and selective gear in the Fraser River). In the Fraser River watershed there were approximately 25,700 chinook, 31,500 chum and 300 coho harvested for FSC purposes. In marine waters there were approximately 17,000 chinook, 24,500 chum, 3,000 pink and 3,600 coho harvested.

9.3. International Objectives

The objective is to manage Canadian treaty fisheries to ensure that obligations within the Pacific Salmon Treaty (PST) are achieved.

Obligations within the PST were met in 2008 for sockeye, coho, chum and chinook salmon.

Review and performance of the PST provisions occurs annually at bilateral meetings of the PST, and these results are published and available from the Pacific Salmon Commission (PSC). More information is available on the PSC website at:

<http://www.psc.org/index.htm>

9.4. Domestic Allocation Objectives

The objective is to manage fisheries in a manner that is consistent with the *Allocation Policy for Pacific Salmon* and the 2008 Pacific Salmon Allocation Implementation Plan.

While fisheries were managed to address conservation objectives, they were generally conducted in a manner consistent with the Allocation Policy for Pacific Salmon. However, inconsistencies (and significant levels of disagreement) exist regarding the allocation of by-catch.

The Allocation Plan for 2008 resulted in projected coast-wide salmon shares as follows: seine 31%, gill net 26% and 43% troll. Analyses indicate that what was achieved was 18.4% seine, 34.1% gill net and 47.5% troll. The main reason was the very good catches of chinook by Areas F and G relative to the much smaller abundance of pink, chum and coho in the North Coast and Fraser River sockeye in the South Coast compared to the pre-season forecasts.

The other objective was an equitable sharing arrangement between the southern gill net fleets and the southern inside troll fleet. At the end of the season, the southern gill net sharing was Area D 420 sockeye equivalents per vessel (seq/v), compared to Area E 150 seq/v. The troll sharing was Area G 3,860 seq/v, compared to Area H 219 seq/v.

9.5. Compliance Management Objectives

At the end of each season, statistics are compiled on the numbers of checks conducted from various platforms (vessel, vehicle and foot), and the number of charges resulting from these checks and others. Using this information, staff can evaluate whether compliance management objectives were met and whether the activities undertaken were effective. Overall compliance

rates for each area and fishery are calculated to help identify priority areas for enforcement in subsequent seasons. In addition, valuable narrative data is collected to ensure problem areas are identified and addressed.

Reports generated from C&P's Fisheries Enforcement Activity Tracking System (FEATS) are tracked and analyzed against business plan projections to see if patrol effort is taking place in areas where increased compliance is needed.

Table 1 (below) presents a summary of the compliance management program statistics for the Pacific salmon fisheries in the south coast management area.

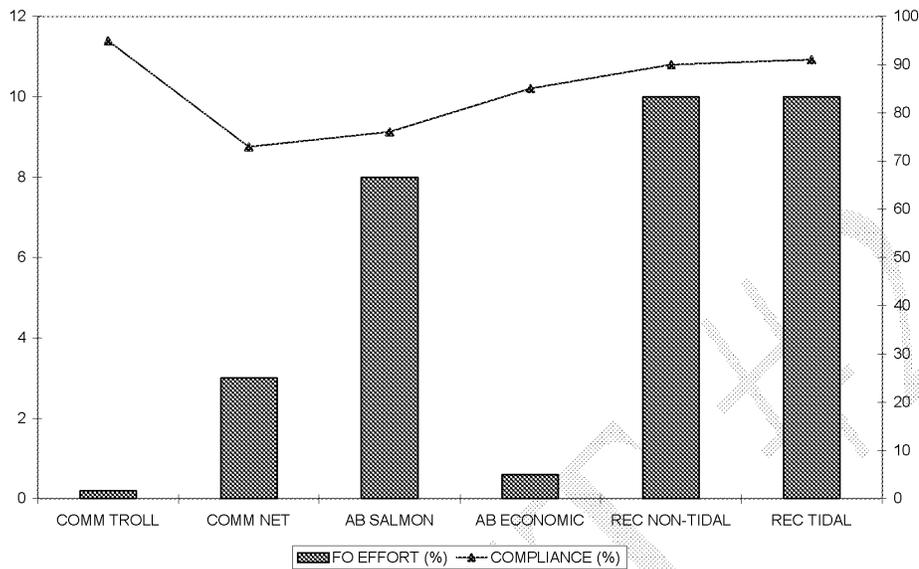
TABLE 1:

SOUTH COAST + LOWER FRASER SALMON FISHERIES – APRIL 1, 2008 TO DATE					
FISHERY CATEGORY	F.O. EFFORT HOURS	PERCENT OF TOTAL EFFORT	CHECKS *	VIOLATIONS	COMPLIANCE RATE **
COMM SALMON (TROLL)	40	0.2%	61	1	95%
COMM SALMON (NET)	735	3%	844	76	73%
AB SALMON	2088	8%	2344	167	76%
AB SALMON (ECONOMIC)	152	0.6%	477	26	85%
REC SALMON (NON-TIDAL)	2512	10%	5912	276	90%
REC SALMON (TIDAL)	2618	10%	7496	328	91%
NOTES:					
* Number of checks = sum of vessels, vehicles, persons, gear, and sites checked					
** Compliance rate (of portion checked) = 100% - (number of violations/persons checked x 100)					

Table 2 provides a graphic presentation of compliance information (by sector), correlated to proportional effort by DFO Fishery Officers with respect to Pacific salmon in the south coast management area.

TABLE 2:

SOUTH COAST + LOWER FRASER AREA SALMON FISHERIES – APRIL 1, 2008 TO DATE



9.6. Commercial and Recreational Objectives

The objective is to manage fisheries for sustainable benefits consistent with the Wild Salmon Policy.

The primary objective in the recreational fishery to maintain the expectation and opportunity to catch fish in a stable manner was achieved, however returns were generally lower than forecast in 2008. In the commercial fishery, the objective to improve the economic performance of fisheries so that they can reach their full potential, to provide certainty to participants, and to optimize harvest opportunities was limited due to generally lower than forecast levels in 2008. Stocks of concern also impacted on available fishing opportunities in 2008.

9.7. Salmon Enhancement Objectives

Egg targets are determined pre-season for each stock. Actual egg take numbers in these tables are preliminary. Difficulties in capturing brood stock because of environmental conditions or poor returns can limit success in achieving targets. Actual fecundity and in-hatchery survival rates will determine the number of juveniles released. If there are excess fry due to higher than usual fecundity and in-hatchery survival, they are usually released as unfed or small fed fry. Hatcheries may collect additional eggs for other programs for education, research or stock re-establishment. These additional eggs are not included in the hatchery targets in the following tables, but are included in the actual eggs taken. For the 2008 brood year, in addition to major DFO operations and contract hatcheries (Community Economic Development Program, or CEDP), larger or more complex Public Involvement Projects (Designated Public Involvement, or DPI), operated by volunteers, are included in these tables. The smaller Public Involvement projects that are not included are focussed towards stewardship, stock rebuilding or educational activities, and do not release large numbers of fish. Facilities may also enhance steelhead and cutthroat under the

direction of the Province of BC. Targets and actual numbers for these species are not included. SEP also works with First Nations, industry, community groups and other government agencies to design and implement habitat restoration projects. Habitat-related activities are not addressed in this report.

9.7.1. Chinook

Chinook in the South Coast are largely enhanced to support important recreational fishery opportunities in marine and freshwater areas. The “Eggs Attained” for the most recent brood year will be released as indicated under Release Target.

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Table 1a) Production of Chinook – DFO Enhancement facilities

Project	Run	Stock	Release Site	Release Stage	2007 Brood		2008 Brood		
					Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
Big Qualicum R	fall	Big Qualicum R	Big Qualicum R	Smolt 0+	3,735,000	3,451,278	3,500,000	4,200,000	3,600,000
	fall	Big Qualicum R	Big Qualicum R	Fed Spr		286,379			
	fall	Big Qualicum R	Horne Lk	Unfed		279,260			
Capilano R	fall	Capilano R	Capilano R	Smolt 0+	560,000	587,020	560,000	900,000	682,133
			CapilanoEst	Seapen0+	50,000	99,674	100,000		
Chehalis R	sum	Chehalis R & Chilliwack R	Chehalis R	Smolt 0+	390,000	484,867	390,000	500,000	752,845
	fall	Harrison R	Harrison R	Smolt 0+	300,000	209,633	300,000	420,000	409,375
	fall	Harrison R	Chehalis R	Fed Spr		69,589			
Chemainus R	fall	Chemainus R	Chemainus R	Smolt 0+	180,000	22,818	160,000	175,000	50,163
Chilliwack R	spr	Chilliwack R	Chilliwack R	Smolt 0+	50,000	0	50,000	62,500	0
	sum	Chilliwack R	Chilliwack R	Smolt 0+	410,000	431,941	410,000	512,500	572,755
	fall	Chilliwack R ²	Chilliwack R	Smolt 0+	1,200,000	1,292,456	1,000,000	1,250,000	2,171,696
Conuma R	fall	Burman R	Burman R Est	Seapen0+	400,000	400,634	400,000	500,000	453,258
	fall	Conuma R	Conuma R Est	Seapen0+	1,700,000	1,927,557	1,700,000	2,100,000	2,430,023
	fall	Gold R	Gold R	Smolt 0+	40,000	0	0	0	232,690
	fall	Gold R	Muchalat R	Smolt 0+	120,000	0			
	fall	Sucwoa R	Sucwoa R	Smolt 0+	40,000	45,003	40,000	50,000	19,331
	fall	Tlupana R	Tlupana Est	Seapen0+	40,000	38,508	40,000	50,000	40,915
Inch Cr	sum	Maria Sl	Hope Sl	Smolt 0+	50,000	107,121	100,000	150,000	115,905
	fall	Stave R	Stave R	Smolt 0+	210,000	214,002	210,000	275,000	0
L Qualicum R	fall	L Qualicum R	L Qualicum R	Unfed		144,220			
	fall	L Qualicum R	L Qualicum R	Smolt 0+	2,500,000	2,477,170	2,250,000	3,150,000	2,740,000
Nitinat R	fall	Nitinat R ²	Nitinat Lk	Seapen0+	2,000,000	1,915,765	2,000,000	2,500,000	3,701,248
	fall	Nitinat R ²	Nitinat R	Smolt 0+		144			
	fall	Nitinat R ²	Sooke Hbr	Seapen0+		79,379			
	fall	Sarita R	Poett Nook	Seapen0+	300,000	398,571	300,000	450,000	556,788
	fall	Sarita R	Sarita R	Smolt 0+	100,000	0	100,000		
Puntledge R	sum	Puntledge R	Courtenay Est	Seapen 0+	200,000	207,511	200,000	2,400,000	485,056
	sum	Puntledge R	Puntledge R	Smolt 0+	1,800,000	456,558	1,600,000		
	fall	Puntledge R	Puntledge R	Smolt 0+	1,550,000	1,530,277	1,500,000	2,000,000	1,613,378

Quinsam R	fall	Quinsam R	Campbell R	Unfed	1,000,000	377,403	1,000,000	4,400,000	4,368,013
	fall	Quinsam R	Elk Falls Ch 1	Unfed		568,916			
	fall	Quinsam R	Discovery Pass	Seapen0+	1,000,000	1,102,616	1,000,000		
	fall	Quinsam R	Quinsam R	Smolt 0+	2,150,000	1,979,670	1,900,000		
	fall	Quinsam R	Quinsam R	Egg Plnt		0			
	fall	Salmon R/JNST	Salmon R/JNST	Smolt 0+		80,645			92,167
Robertson Cr	fall	Nahmint R	Nahmint R	Smolt 0+	165,000	0	165,000	250,000	37,320
	fall	Nahmint R	Nahmint Est	Seapen 0+	60,000	0	60,000		
	fall	Robertson Cr ²	Robertson Cr	Smolt 0+	6,000,000	6,242,997	6,000,000	7,200,000	6,939,234
Shuswap R	sum	Shuswap R Low ²	Shuswap R Low	Smolt 0+	500,000	508,900	500,000	550,000	591,380
	sum	Shuswap R Mid	Shuswap R Mid	Smolt 0+	200,000	206,200	200,000	250,000	289,940
Spilus Cr	spr	Coldwater R	Coldwater R	Smolt 1 ⁺¹	50,000	33,610	50,000	90,000	111,339
	spr	Coldwater R	Coldwater R	Fed Spr		9,837			
	spr	Nicola R	Nicola R	Smolt 1 ⁺¹	140,000	149,955	140,000	220,000	213,336
	spr	Nicola R	Nicola R	Unfed		5,447			
	spr	Nicola R	Nicola R	Fed Spr		62,268			
	spr	Salmon R/TOMF	Salmon R/TOMF	Smolt 1 ⁺¹	70,000	81,130	70,000	120,000	124,234
	spr	Salmon R/TOMF	Salmon R/TOMF	Fed Spr		4,199			
	spr	Salmon R/TOMF	Salmon R/TOMF	Fed Fall		5,500			
	spr	Spilus Cr	Spilus Cr	Smolt 1 ⁺¹	50,000	33,610	50,000	90,000	124,516
	spr	Spilus Cr	Spilus Cr	Fed Spr		0			
Tenderfoot Cr	sum	Porteau Cv	Porteau Cv	Seapen0+	800,000	619,168	800,000	1,400,000	649,261
	sum	Porteau Cv	Squamish Est	Seapen0+	400,000	0	400,000		
	sum	Cheakamus R	Cheakamus R	Smolt 0+	100,000	36,790	100,000	117,000	78,813
	fall	Cheakamus R	Cheakamus R	Smolt 0+		30,839			32,358

¹ Yearling smolts, to be released in 2009, are listed as number of fry on hand.

² Extra eggs are taken for transplants to other projects.

Table 1b) Production of Chinook – Community Economic Development Projects & Designated Public Involvement Projects

Project	Run	Stock	Release Site	Release Stage	2007 Brood		2008 Brood		
					Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
Alouette R	fall	Chilliwack R	Alouette R S	Smolt 0+	200,000	205,000	200,000		

Chapman Cr	fall	Lang Cr	Chapman Cr	Smolt 0+	100,000	9,820	100,000		
	fall	Big Qualicum	Chapman Cr	Smolt 0+		100,000			
Clayoquot	fall	Kennedy R Low	Kennedy R Low	Smolt 0+	360,000	499,000	380,000	300,000	284,000
Cowichan R	fall	Cowichan R	Cowichan Bay	Seapen 0+	100,000	50,740	100,000	2,000,000	1,800,000
	fall	Cowichan R	Cowichan R	Smolt 0+	700,000	409,101	1,000,000		
	fall	Cowichan R	Cowichan R Up	Fed Spr	1,000,000	0	700,000		
Englishman Enh	fall	L Qualicum R	Englishman R	Smolt 0+	210,000	195,000	210,000		
Esquimalt Hb	fall	Nitinat R	Esquimalt Hb	Seapen 0+	172,000	0	172,000		
Gillard Pass	fall	Phillips R	Fanny Bay/JNST	Seapen 0+	90,000	69,000	90,000	200,000	175,150
	fall	Phillips R	Phillips R	Smolt 0+	90,000	129,000	90,000		
Goldstream R	fall	Goldstream R	Goldstream R	Smolt 0+	36,000	0	36,000	50,000	250,000
Gwa'ni	fall	Woss R	Wagidis Ch	Smolt 0+		57,477			
	fall	Woss R	Anutz Lk	Smolt 0+	20,000	0	20,000	200,000	56,010
	fall	Woss R	Nimkish Lk	Smolt0+	90,000	0	90,000		
	fall	Woss R	Vernon Lk	Smolt0+	30,000	0	30,000		
	fall	Woss R	Woss Lk	Smolt0+	40,000	0	40,000		
Kingfisher /TOMF	sum	Shuswap R Low	Shuswap R Low	Smolt0+	144,000	70,000	144,000	200,000	108,000
L Campbell R	fall	L Campbell R	L Campbell R	Smolt0+	75,000	33,000	75,000	100,000	51,000
Nanaimo R	sum	First L/GSVI	First L/GSVI	Smolt +	180,000	229,551	180,000	250,000	257,603
	fall	Nanaimo R	Nanaimo R	Smolt0+	350,000	134,552	350,000	450,000	436,207
Nicomekl R	fall	Serpentine R	Nicomekl R	Smolt0+	50,000	30,000	50,000		
Oyster R	fall	Oyster R	Oyster R	Smolt0+	45,000	80,000	45,000	60,000	77,000
P Hardy / Marble	fall	Marble R	Marble R	Smolt0+	900,000	0	900,000	1,100,000	603,511
	fall	Marble R	Marble R	Unfed		0			
	fall	Marble R	Benson R	Smolt 0+		0			
	fall	Marble R	Quatsino Sd	Seapen 0+	90,000	0	90,000		
Powell R	fall	Lang Cr ²	Duck Lk	Smolt 0+	500,000	566,680	500,000	800,000	1,124,545
	fall	Lang Cr ²	Lang Cr	Smolt 0+	100,000	182,000	100,000		
	fall	Lang Cr ²	Willingdon Est	Seapen 0+	100,000	40,000	100,000		
San Juan R	fall	San Juan R	San Juan R	Smolt 0+	720,000	500,000	720,000	1,000,000	1,001,000
Sayward	fall	Salmon R /	Salmon R /	Smolt	120,000	80,645	120,000	150,000	92,250

F&G		JNST	JNST	0+					
Sechelt	fall	Lang Cr	Maclean Bay	Seapen 0+	150,000	77,569	150,000		
Serpentine R	fall	Serpentine R	Serpentine R	Smolt 0+	57,600	95,000	57,600	80,000	100,000
Sliammon R	fall	Sliammon R	Sliammon R	Smolt 0+	150,000	32,709	150,000	0	100,500
Sooke R	fall	Nitinat R	Sooke R	Smolt 0+	212,500	70,000	212,500		
	fall	Sooke R	Sooke R	Fed Spr	180,000		180,000	250,000	500,000
	fall	Sooke R	Sooke R	Smolt 0+		31,000			
Tahsis R	fall	Leiner R	Leiner R	Smolt 0+	72,000	60,000	72,000	100,000	103,626
	fall	Tahsis R	Tahsis R	Smolt 0+	200,000	0	200,000	250,000	168,222
Thornton Cr	fall	Thornton Cr	Thornton Cr	Smolt 0+	216,000	285,989	216,000	300,000	300,000
	fall	Toquart R	Toquart R	Smolt 0+	252,000	205,298	252,000	350,000	210,000
Tofino	fall	Cypre R	Cypre R	Smolt 0+	160,000	57,749	160,000	225,000	185,860
	fall	Cypre R	Cypre Est	Seapen 0+	36,000	121,543	36,000		

¹ Yearling smolts, to be released in 2009, are listed as number of fry on hand.

² Extra eggs are taken for transplants to other projects.

- Big Qualicum Hatchery had very good egg-to-fry survival and released extra fry early to Big Qualicum River and Horne Lake.
- Chehalis River Hatchery released some excess fall run Harrison chinook as fry to the Chehalis River. They obtained summer run chinook eggs from returns to the river combined with a transplant from Chilliwack River, which has the same original upper Fraser River stock.
- In 2007 and 2008, Chilliwack Hatchery was unable to capture any spring run chinook, which are in very low abundance. 2008 brood hatchery summer and fall run egg targets were easily achieved. Fall eggs taken include transplants for Alouette, Coquitlam, and two small seapens in Burrard Inlet.
- For Conuma Hatchery, enhancement for Gold R stock ceased in 2007 while DFO reviewed information regarding strays from Robertson Creek. Enhancement of the Gold stock resumed in 2008 and brood was taken in the fall. Conuma also incubates and rears Tahsis/Leiner chinook, reported under Tahsis R project in Table 1b.
- Little Qualicum Hatchery released some 2007 brood excess production as unfed fry. Little Qualicum provides the Englishman Enhancement project with fry.
- The return to Maria Slough (Inch Creek Hatchery) was good enough that all 2007 brood fish were released into Hope Slough. The egg target for Stave River was cut during discussions last year due to good numbers returning and low interest from the fishing community. The space will be used to produce more Norrish Creek coho.
- At Nitinat Hatchery, the release strategy for Sarita River was changed in 2007 to emphasize

the use of seapens. Survival is higher from the seapens, so the total egg and release numbers have been scaled back. Nitinat provides eggs for Esquimalt Harbour seapen release (incubation and rearing takes place at Goldstream Hatchery).

- Puntledge summer chinook are the focus of a concerted effort at rebuilding, having been badly depressed in the 1990s. Progeny from captive brood began returning in 2004 and are now contributing to the escapement. In addition, there has been a variety of habitat improvements in the system to reduce stress-related pre-spawn mortality and improve access up river for returning fish. A portion of the brood stock is being held on cooler water at Rosewall Creek Hatchery which greatly increases holding survival, fertility and incubation survival. However, the 2007 and 2008 returns to the river were low, adversely affecting 2007 brood releases and 2008 brood eggtakes.
- Quinsam Hatchery is working on rebuilding the chinook run in Campbell R. In 2008, the intended eyed egg plants to Campbell River sites were mainly incubated to unfed fry. This release strategy has a higher survival, which will help increase adult returns more quickly.
- Due to low escapement numbers and high water, no eggs were collected by Robertson Creek Hatchery for Nahmint chinook in 2007, resulting in no 2007 brood releases. The 2008 return was also low, resulting in few eggs taken.
- Spius Creek Hatchery takes more eggs than their target due to occasional high incidences of BKD. When BKD is low, they release excess production as small fry.
- A broodstock collection program was initiated with Tenderfoot Creek Hatchery to collect eggs from Cheakamus River chinook in the fall of 2005. This program was partially funded by CN Rail and was a response to the caustic soda spill into the Cheakamus River that occurred in August 2005. 2008 brood eggs were collected as the program continued. There are both summer and fall runs in the Cheakamus and some years the hatchery has taken eggs from both. A poor return of Porteau Cove chinook resulted in about half of the egg target being attained in both 2007 and 2008. As a result, the 2007 brood fish were all released from the seapen.
- The Sunshine Coast Salmonid Enhancement Society (Chapman Creek) receives eggs from Powell River Salmon Enhancement Society (Lang Creek or Big Qualicum stock).
- At Cowichan Hatchery, the number of eggs attained in 2007 was lower than the target as a result of low escapement into the Cowichan River combined with high water. The Cowichan River hatchery is operated as a “stock rebuilding” hatchery. As such, the percentage of total escapement removed for broodstock is limited to 33% under enhancement guidelines. A decision was made to release all the resulting juveniles as smolts or seapen smolts, which have higher survivals than the fed fry release strategy. The hatchery came close to attaining their target in 2008.
- The target for Goldstream Hatchery is incidental as chinook is a minor stock in the Goldstream R. They usually incubate and rear Nitinat River chinook for transfer to seapens at Esquimalt Harbour (included here), and Saanichton (too small to be included), but Nitinat was unable to achieve their 2007 brood egg target due to low escapement, therefore no eggs were transferred to Goldstream for these releases. 100,000 Nitinat chinook eggs (2008 brood) were transferred in this year.

- Kingfisher was unable to obtain enough Lower Shuswap chinook to meet their 2007 brood egg target, adversely affecting the number of 2007 brood releases.
- Nanaimo River Hatchery had a low return of fall chinook in 2007. High water during broodstock collection also contributed to the 2007 brood eggs attained being lower than target, resulting in about half of the targeted releases in 2008.
- Port Hardy/Marble was unable to collect brood stock due to high water levels in 2007, so no 2007 brood Marble R chinook were released.
- There were insufficient 2007 brood eggs available from Lang Creek (Powell River Hatchery), to allow for a transfer to Sliammon River Hatchery or to the seapen at Theodosia River, however, Powell River Hatchery was able to supply Chapman Creek (a combination of Lang Creek and Big Qualicum R stock) and Sechelt.

9.7.2. Coho

Enhancement of coho is largely undertaken to support hatchery mark-selective recreational fishery opportunities in South Coast marine areas and terminal marine and freshwater areas adjacent to hatchery facilities. South coastal and lower Fraser systems experienced improved returns of coho in 2007, compared to the previous two years. Although the adult returns were generally somewhat lower again in 2008, most egg targets were achieved, including those for hatchery mark-selective fishery opportunities. Several hatcheries noted that fish size was much bigger than usual. There is an ongoing experimental early release of smolts from Quinsam River and Inch Creek hatcheries to test the theory that plankton blooms of species on which young coho prey are now occurring earlier than in the past. At Quinsam, this is integrated with plankton surveys in the near-shore area.

Table 2a) Production of Coho – DFO Enhancement facilities

Project	Run	Stock	Release Site	Stage	2007 Brood		2008 Brood		
					Release Target	Actual Release ¹	Release Target	Egg Target	Eggs Attained
Big Qualicum R	fall	Big Qualicum ²	Big Qualicum R	Smolts	1,000,000	996,755	1,000,000	1,200,000	1,264,000
Capilano R	fall	Capilano R ²	Capilano R	Smolts	525,000	671,100	525,000	1,500,000	1,518,018
		Capilano R	Capilano R	Fed		32,787			
Chehalis R	fall	Chehalis R ²	Chehalis R	Smolts	800,000	943,062	800,000	1,001,000	1,152,063
	fall	Chehalis R ²	Cogburn Cr	Smolts	0	0	0	0	0
Chilliwack R	fall	Chilliwack R ²	Chilliwack R	Smolts	1,200,000	1,344,744	1,200,000	1,400,000	1,302,030
	fall	Chilliwack R ²	Chilliwack R (various sites)	Unfed		85,629			
	fall	Elk Cr/LWFR	Elk Cr/LWFR	Smolts	0	0	0	0	0
Conuma R	fall	Conuma R ²	Conuma R	Fed fry	52,000	46,646	100,000	200,000	171,833
	fall	Conuma R ²	Conuma R	Smolts		147,597			
Inch Cr	fall	Inch Cr ²	Inch Cr	Smolts	150,000	165,059	150,000	200,000	304,736
	fall	Norrish Cr ²	Norrish Cr	Smolts	75,000	81,472	150,000	200,000	207,946
	fall	Stave R ²	Stave R	Smolts	225,000	243,021	225,000	275,000	287,705
Nitinat R	fall	Nitinat R ²	Nitinat R	Smolts	100,000	145,535	100,000	300,000	324,702
	fall	Nitinat R ²	Darlington Lk	Fed Spr	25,000	45,529	25,000		
	fall	Nitinat R ²	Flora Lk	Fed Spr	25,000	22,765	25,000		
	fall	Nitinat R ²	Francis L/SWVI	Fed Spr	50,000	22,764	50,000		
Puntledge R	fall	Puntledge R ²	Puntledge R	Smolts	600,000	500,831	600,000	1,300,000	1,328,387
		Puntledge R	Brooklyn Cr & Comox Lk	Fed Spr	200,000	99,719	200,000		
Quinsam R	fall	Quinsam R ²	Quinsam R	Smolts	800,000	870,391	800,000	1,100,000	1,433,929
	fall	Quinsam R	Quinsam R	Fed Spr	100,000	104,149	100,000		
	fall	Quinsam R	Quinsam R	Egg Plnt		210,585			
Robertson Cr	fall	Robertson Cr ²	Robertson Cr	Smolts	400,000	420,625	400,000	475,000	1,018,485
	fall	Robertson Cr	Robertson Cr	Unfed		226,663			
Shuswap R	fall	Duteau Cr	Duteau Cr	Fed Spr	60,000	0	60,000	74,000	44,150
Spilus Cr	fall	Coldwater R	Coldwater R	Fed Spr	20,000	43,286	20,000	150,000	47,500
	fall	Coldwater	Coldwater	Smolts	70,000	75,737	70,000		

		R	R						
	fall	Deadman R	Deadman R	Fed Spr		8,000			
	fall	Deadman R	Deadman R	Smolts	30,000	34,994	30,000	40,000	44,000
	fall	Salmon R/TOMF	Salmon R/TOMF	Fed Spr	60,000	54,394	60,000		
	fall	Salmon R/TOMF	Salmon R/TOMF	Smolts	70,000	75,064	70,000	170,000	154,000
Tenderfoot Cr	fall	Cheakamus R2	Cheakamus R	Unfed		4,995			
	fall	Cheakamus R ²	Cheakamus R	Smolts	90,000	76,835	90,000	100,000	138,600
	fall	Mamquam ²	Mamquam R	Unfed		8,445			
	fall	Mamquam ²	Mamquam R	Fed Spr		10,306			
	fall	Mamquam ²	Mamquam R	Smolts	45,000	50,643	45,000	50,000	46,200
	fall	Tenderfoot ²	Tenderfoot Cr	Unfed		19,411			
	fall	Tenderfoot ²	Tenderfoot Cr	Fed Spr		144,120			
	fall	Tenderfoot ²	Tenderfoot Cr	Smolts	130,000	149,967	130,000	160,000	232,160

¹ Smolts to be released in 2009 are listed as number of fry on hand.

² Some or all are mass marked with an adipose clip for Mark Selective Fishery opportunities.

Table 2b) Production of Coho – Community Economic Development Projects & Designated Public Involvement Projects

Project	Run	Stock	Release Site	Stage	2007 Brood		2008 Brood		
					Release Target	Actual Release ¹	Release Target	Egg Target	Eggs Attained
Alouette R	fall	Alouette R S ²	Alouette R S	Smolts	80,000	79,841	80,000	270,000	124,800
		Alouette R S ²	Alouette R S	Fed Spr	100,000	115,159	100,000		
Chapman Cr	fall	Chapman Cr ²	Chapman Cr	Smolts	80,000	50,000	80,000	110,000	300,000
	fall	Chapman Cr ²	Halfmoon Bay	Seapen	20,000	20,000			
Fanny Bay / GSVI	fall	Coal Cr	Coal Cr	Smolts	16,875	4,700	16,875	25,000	17,100
	fall	Cook Cr	Cook Cr	Smolts	6,750	0	6,750	10,000	0
	fall	Rosewall Cr ²	Rosewall Cr	Smolts	67,500	80,000	67,500	100,000	12,577
Gillard Pass	fall	Ito Cr	Stuart Is Str	Fed Spr	20,000	0	20,000	25,000	
Goldstream R	fall	Goldstream R ²	Goldstream R	Smolts	90,000	58,814	90,000	100,000	45,000
Gwa'ni	fall	Nimpkish R Low	Pink Cr	Fed Spr	85,000	32,089	85,000	100,000	140,018
Halalt Band	fall	Bonsall Cr	Bonsall Cr	Fed Spr	45,000	8,000	45,000	50,000	4,500
Kanaka Cr	fall	Kanaka Cr ²	Kanaka Cr	Smolts	50,000	71,000	50,000	200,000	99,000

	fall	Kanaka Cr	Kanaka Cr	Fed Spr	80,000		80,000		
	fall	Kanaka Cr	Byrne Cr	Smolts					
L Campbell R	fall	L Campbell R ²	L Campbell R	Smolts	30,000	45,000	30,000	75,000	51,000
	fall	L Campbell R ²	L Campbell R	Fed Spr	24,300		24,300		
Little R / GSVI	fall	Little R / GSVI ²	Little R / GSVI	Smolts	20,250	30,000	30,000	50,000	52,000
	fall	Little R / GSVI ²	Little R / GSVI	Fed Spr	56,700		15,000		
Nanaimo R	fall	Nanaimo R	Nanaimo R	Fed Spr	50,000	26,754	50,000	200,000	253,013
	fall	Nanaimo R	Nanaimo R	Smolts	45,000	78,138	45,000		
	fall	Nanaimo R	First L/GSVI	Fed Spr		26,643			
	fall	Nanaimo R	Napoleon Cr	Fed Spr		17,590			
	fall	Nanaimo R	Second Lk/GSVI	Fed Spr		25,711	60,000		
	fall	Nanaimo	Brannen Lk	Fed Fall		10,198			
Nicomekl R	fall	Nicomekl R ²	Nicomekl R	Smolts	50,625	76,228	50,625	75,000	96,314
Oyster R	fall	Oyster R	Oyster R	Fed Spr	100,000	143,000	100,000	150,000	176,800
	fall	Oyster R	Oyster R	Smolts	40,000	45,000	40,000		
P Hardy / Marble	fall	Stephens Cr	Coal Hb/NWVI	Fed Spr	162,000	0	200,000	0	0
	fall	Washlawlis R	Washlawlis R	Unfed	70,000	0	70,000	86,000	127,500
	fall	Waukwaas Cr	Waukwaas Cr	Unfed		7,687			
	fall	Waukwaas Cr	Waukwaas Cr	Fed Spr	22,500	20,000	22,500	165,000	167,130
	fall	Waukwaas	Waukwaas	Smolts	90,000	84,222	90,000		
	fall	Link R	Link R	Fed Spr	162,000	0	162,000	200,000	60,000
	fall	Marble R	Marble R	Fed Spr					22,265
P Hardy/ Quatse	fall	Cluxewe R	Cluxewe R	Fed Spr		42,287	45,000	165,000	182,060
	fall	Cluxewe R ²	Cluxewe R	Smolts	90,000	101,083	90,000		
	fall	Quatse R	Quatse Lk	Fed Spr	22,500	26,659	22,500		206,733
	fall	Quatse R	Quatse R	Smolts		98,149			
Powell R	sum	Lang Cr	Haslam Lk	Fed Spr	200,000	232,115	200,000	320,000	341,501
	sum	Lang Cr ²	Haslam Cr	Smolts		55,085	80,000		
	sum	Lang Cr	Anderson/ Lang	Fed Spr		18,424			
	sum	Lang Cr	Blackwater / GSMN	Fed Spr		20,000			
San Juan R	fall	San Juan R	San Juan R	Fed Spr	175,000	0	175,000	200,000	170,000
Sechelt	fall	Capilano R	Maclean Bay	Seapen	100,000	100,000	100,000		
Serpentine R	fall	Serpentine R ²	Serpentine R	Smolts	64,000	76,228	64,000	90,000	146,964

Seymour R/GSMN	fall	Seymour R ²	Hurry Cr	Smolts	75,000	80,326	75,000	165,000	150,000
	fall	Seymour R	Seymour R/GSMN	Fed Spr	40,000		40,000		
Sliammon R	fall	Sliammon R	Appleton Cr	Fed Spr	50,000	23,962	50,000	60,000	31,261
Sooke R	fall	Demamiel Cr	Young Lk	Fed Spr	35,000	11,000	35,000	150,000	90,000
	fall	Demamiel Cr	Young Lk	Smolt 0+	80,000	0	80,000		
Thompson R N	fall	Dunn Cr	Dunn Cr	Smolts	20,250	22,671	20,250	30,000	0
	fall	Lemieux Cr	Ianson Ch	Smolts	20,250	29,567	20,250	30,000	35,000
	fall	Louis Cr	Louis Cr	Smolts	20,250	13,898	20,250	30,000	0
Thornton Cr	fall	Kennedy R Up	Kennedy R Up	Fed Spr	0	60,831	40,000	50,000	
	fall	Lost Shoe Cr	Lost Shoe Cr	Fed Spr					50,000
	fall	Thornton Cr	Thornton Cr	Smolts	40,000	27,841	40,000	60,000	50,000
Tofino	fall	Cypre R	Cypre R	Fed Spr	81,000	80,000		100,000	99,500
	fall	Kootowis Cr	Kootowis Cr	Fed Spr	81,000	63,966		100,000	49,100
	fall	Tranquil Cr	Tranquil Cr	Fed Spr	60,000	28,000	60,000	74,000	27,000

¹ Smolts to be released in 2009 are listed as number of fry on hand.

² Some or all are mass marked with an adipose clip for Mark Selective Fishery opportunities

- Capilano Hatchery also rears 100K smolts for the Sechelt seapens.
- The Conuma River coho program consists of a fed fry release unless community partnership funding is found to rear them to smolt. Some 2007 brood coho were released as fry in 2008, while the rest are being reared for smolt release in 2009.
- Inch Creek Hatchery supports community programs on Nicomekl and Serpentine rivers by incubating and rearing coho to smolt stage. The numbers are now available in Table 2b. The target for Norrish Creek was doubled for the 2008 brood. More Inch Cr eggs were taken than targeted because they took the usual number of females, but they were much larger than average and contained more eggs.
- Nitinat Hatchery obtained 2008 brood eggs well above target because they expected a very high BKD incidence, which did occur. The eggs attained listed here include only the eggs left after culling for BKD.
- Robertson Creek Hatchery was instructed to take an extra 200k eggs from 2007 brood with funding to come from First Nations. The funding fell through, so the extra eggs were released as unfed fry. In 2008, a higher fecundity than usual was observed in females, and an over-collection of broodstock occurred. The surplus eggs were outplanted as eyed eggs.
- Shuswap Hatchery takes Duteau Creek eggs only when the run is poor. 2007 had a strong return, so no eggs were taken. 2008 brood eggs were taken because the run was low.
- Salmon River (Spius Creek Hatchery) is a stock of conservation concern, however, 2007

escapement to the Interior was high and egg targets were nearly reached.

- Tenderfoot Hatchery takes extra eggs for transfer to several small Public Involvement Projects.
- Fanny Bay was unable to attain 2007 or 2008 brood stock for Cook Cr stock. Rosewall run was poor in 2008, therefore few adults were collected for broodstock.
- Gillard Pass attempts to take eggs from Ito Creek on Stuart Island, but has transplant approval for Quinsam stock if necessary. 2008 brood eggs were obtained from Quinsam.
- The capture of Halalt Band, Bonsall Creek coho is shared by the Halalt Band, other local tribes, Ladysmith Sportsmen and Nanaimo Hatchery. The return to Bonsall Creek was extremely low, resulting in a low number of eggs collected. These eggs are being incubated at Nanaimo River Hatchery.
- Nanaimo Hatchery is now taking eggs to allow for a 60K fry release to the Millstone River system (Second Lk & Brannen Lk). The access fishway to the upper Millstone was completed.
- With the exception of Waukwaas stock (which are on hand to smolt at the Port Hardy/Quatse facility), Port Hardy/Marble was unable to collect 2007 brood stock due to high water levels.
- San Juan was unable to capture any 2007 brood coho due to a storm that took out one of their water systems.
- The Sechelt project receives 100K pre-smolts for their seapen project from Capilano Hatchery in most years. 2007 brood coho, which are from MacLean Bay returns, are being reared at Chapman creek for smolt release in 2009.
- Seymour River Hatchery will release all coho as smolts due to poor recent returns.
- There were low returns to Sliammon River in 2007.
- Sooke River was unable to attain their 2007 egg targets due to low returns, resulting in fewer releases than targeted.
- Thompson River North will enhance only Lemieux Creek stock in 2008 and it will be done at Spius Creek Hatchery while a new manager is being trained. For 2009 brood it is possible that all three stocks will be done again at North Thompson.
- Some other community hatcheries collect broodstock to provide potential opportunities for small hatchery mark-selective fisheries on local streams: Courtenay Fish and Game (Trent River), Millard Piercy Watershed Stewards and Parksville Fish and Game (French Creek) on Vancouver Island; and Brunette River, Coquitlam River, Mossom Creek and Noons Creek in the Lower Mainland.

9.7.3. Chum

Chum returns for the South Coast and Fraser area were generally lower than average as they have been for a few years now, although a few stocks showed improvement. Chum salmon are mainly produced for fisheries.

Table 3a) Production of Chum – DFO Enhancement facilities

Project	Run	Stock	Release Site	Stage	2007 Brood		2008 Brood		
					Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
Big Qualicum R	fall	Big Qualicum R	Big Qualicum R	Chan Fry	54,000,000	30,700,000	54,000,000	125,000,000	17,532,396
Capilano R	fall	Capilano R	Capilano R	Fed FW		4,684			53,026
Chehalis R	fall	Chehalis R	Chehalis R	Unfed		4,953,634			
	fall	Chehalis R	Chehalis R	Fed FW	6,000,000	1,133,682	6,000,000	6,400,000	6,704,555
Chilliwack R	fall	Chilliwack R	Chilliwack R	Unfed	1,400,000	1,493,816	2,000,000	2,500,000	3,620,874
	fall	Chilliwack R	Atchelitz Cr	Fed FW	200,000	0			
	fall	Chilliwack R	Luckakuck Cr	Fed FW	200,000	0			
	fall	Chilliwack R	L Chilliwack Cr	Fed FW	200,000	0			
Conuma R	fall	Canton Cr	Canton Cr	Fed FW	1,000,000	47,846	1,000,000	1,200,000	447,232
	fall	Conuma R	Conuma Est	Seapen	1,500,000	271,820	1,500,000	2,000,000	1,112,804
	fall	Sucwoa R	Sucwoa R	Fed FW	1,000,000	15,701	1,000,000	1,200,000	294,372
	fall	Tlupana R	Tlupana R	Fed FW	1,000,000	109,922	1,000,000	1,200,000	275,812
Inch Cr	fall	Inch Cr	Inch Cr	Fed FW	800,000	955,850	800,000	1,200,000	2,013,700
	fall	Inch Cr	Nicomens Sl	Fed FW	200,000	150,000	200,000		
L Qualicum R	fall	L Qualicum R	L Qualicum R	Chan Fry	38,000,000	21,720,120	38,000,000	62,000,000	28,969,676
Nitinat R	fall	Nitinat R	Nitinat Lk	Fed FW	10,000,000	13,004,139	10,000,000	37,000,000	9,403,641
	fall	Nitinat R	Nitinat R	Fed FW	23,000,000	0	23,000,000		
	fall	Nitinat R	Klanawa R	Fed FW	3,000,000	0	3,000,000		
Puntledge R	fall	Puntledge R	Puntledge R	Fed FW	3,600,000	2,842,105	2,700,000	3,000,000	3,411,032
Quinsam R ¹	fall	Campbell R	Area Streams	Fed FW		69,711		320,000	112,095
Tenderfoot Cr ¹	fall	Mamquam R							19,787
	fall	Tenderfoot Cr	Tenderfoot Cr	Fed FW	75,000	120,111	75,000	85,000	628,945
Weaver Sp Ch	fall	Weaver Sp Ch	Weaver Sp Ch	Chan Fry	2,700,000	3,435,397	2,700,000	4,125,000	8,427,667

¹ Hatchery is incubating chum eggs for transfer to volunteer projects

Table 3b) Production of Chum – Community Economic Development Projects & Designated Public Involvement Projects

Project	Run	Stock	Release Site	Stage	2007 Brood		2008 Brood		
					Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
Alouette R ¹	fall	Alouette R S	Alouette R N	Fed FW	216,000	257,049	216,000	270,000	391,600
Chapman Cr	fall	Chapman Cr	Chapman Cr	Unfed	200,000	0	200,000	250,000	70,000
Fanny Bay / GSVI	fall	Rosewall Cr	Rosewall Cr	Fed FW	225,000	191,700	225,000	250,000	279,958
Goldstream R	fall	Goldstream R	Chalet Cr	Fed FW	75,000	40,000	75,000	104,000	427,000
	fall	Goldstream R	Galiano Isl	Fed FW		23,331			
	fall	Goldstream R	Mt Douglas Cr	Fed FW		50,000			
	fall	Goldstream R	Tseycum Cr	Fed FW		40,000			
Gwa'ni	fall	Nimpkish R Low	Nimpkish R Low	Fed FW	9,000,000	0	1,800,000	2,000,000	1,581,535
	fall	Nimpkish R Low	New Channel	Fed FW		0			
Halalt Band	fall	Chemainus R	Westholme Ch	Unfed	576,000	106,355	425,000	500,000	207,400
	fall	Bonsall Cr	Bonsall Cr	Unfed	41,000	0	41,000	45,000	12,000
Kanaka Cr	fall	Kanaka Cr	Byrne Cr	Unfed	25,000	30,000	25,000	250,000	198,000
	fall	Kanaka Cr	Kanaka Cr	Unfed		12,000			
	fall	Kanaka Cr	Kanaka Cr	Fed FW	150,000	86,000	150,000		
Nanaimo R	fall	Nanaimo R	Nanaimo R	Unfed	1,062,500	470,459	1,062,500	1,250,000	534,292
Nicomekl R	fall	Chehalis R	Nicomekl R	Unfed	95,000	95,000	95,000		
Oyster R	fall	Oyster R	Oyster R	Fed FW	320,000	301,500	320,000	350,000	26,000
P Hardy/Quatse	fall	Quatse R	Quatse R	Fed FW	101,250	37,384	101,250	125,000	113,552
Powell R	fall	Lang Cr	Lang Cr	Fed FW	750,000	662,685	750,000	800,000	816,016
	fall	Lang Cr	Willingdon Cr	Fed FW		70,000			
San Juan R	fall	San Juan R	San Juan R	Fed FW	36,000	0	36,000	50,000	0
Sechelt	fall	Maclean Bay	Maclean Bay	Seapen	750,000	0	750,000	800,000	89,439
Serpentine R	fall	Chehalis R	Serpentine R	Fed FW	150,000	36,000	150,000		
Seymour R/GSMN	fall	Alouette R S	Seymour R/GSMN	Fed FW	400,000	32,124	100,000	150,000	595,089
	fall	Alouette R S	Maplewood Cr	Fed FW	20,000	25,000	20,000		
Sliammon R	fall	Sliammon R	Sliammon R	Unfed	1,500,000	300,000	1,700,000	3,000,000	1,525,800

	fall	Sliammon R	Sliammon R	Fed FW	500,000	592,635	900,000		
Thornton Cr	fall	Salmon Cr/SWVI	Salmon Cr/SWVI	Fed FW	500,000	16,689	500,000	600,000	220,000
	fall	Mercer Cr	Mercer Cr	Fed FW	50,000	0	50,000	60,000	0
	fall	Twin Rivers	Twin Rivers	Fed FW	50,000	0	50,000	60,000	0

¹ Hatchery is incubating chum eggs for transfer to volunteer projects

- Big Qualicum had very poor adult returns in both 2007 and 2008, resulting in low egg deposition in the channel.
- Capilano Hatchery has not had a directed program to enhance chum, but they have decided to make more effort to obtain eggs and start to build the run back up. There is still no specific target for this program.
- Supplemental funding or manpower is provided in some years by the First Nation to maintain chum production at Chehalis Hatchery to provide an ESSR opportunity. In 2007 & 2008, the Chehalis Band provided manpower to assist with egg takes.
- 2007 brood chum eggs collected at Chilliwack were all released to the Chilliwack mainstem because adult returns have been low for a few years. No chum were released to the lower creeks of Atchelitz, Luckakuck and Little Chilliwack. When the 2008 return came in very low, a decision was made to take more eggs than targeted. They will all be released back to the Chilliwack River.
- Conuma Hatchery fell short of their egg targets in 2007 & 2008 due to adverse river conditions, low escapement levels and limited resources.
- Inch Creek Hatchery takes extra eggs and transfers 50K fry each to West Slough and Yorkson Creek PIP.
- Little Qualicum River experienced poor returns in both 2007 & 2008, adversely affecting the number of 2007 brood releases and the number of eggs deposited to the channel in 2008.
- Nitinat Hatchery did not attain their 2007 egg target due to shortage of staff and a lower proportion of swim-ins to the hatchery than usual. Therefore, there were only releases to Nitinat Lake. Nitinat fell short of their egg target in 2008 due to poor returns and escapement.
- The Puntledge River Hatchery target was reduced in 2007 due to strong returns and for budget reasons. They take an extra 300K eggs for Little River and Oyster River.
- Quinsam Hatchery takes Campbell River stock for transfer to several small Public Involvement projects.
- Tenderfoot Creek Hatchery takes eggs primarily for transfer to Public Involvement projects.
- Alouette Hatchery started taking chum eggs for other projects in 2007. They take 420k for others and 270k for themselves.
- Chapman Creek Hatchery was unable to obtain 2007 broodstock due to low escapement numbers.

- Goldstream Hatchery takes extra eggs for transplants to several small creeks around the Victoria area and on the San Juan Islands.
- Gwa'ni Hatchery was unable to take eggs in 2007 due to a very poor return.
- Halalt Band did not obtain any 2007 brood stock in Bonsall Creek and there was a very low return to the Chemainus in 2007.
- The number of brood eggs attained for Nanaimo River stock includes regular production and eggs taken for the Gently Down the Stream program.
- Port Hardy/Quatse Hatchery was unable to reach their 2007 egg target due to low returns, resulting in a low number of 2007 brood releases.
- Powell River also transfers 100K eyed eggs to a PIP group on Texada Island.
- San Juan River Hatchery does not have a directed program to enhance chum. They are enhanced in years when brood stock is easily obtainable.
- Sechelt Hatchery is experiencing water and other infrastructure problems. Enhancement projects will be satellited from Chapman Creek for the near future. They took eggs from MacLean Bay returns in 2008.
- The Seymour River Hatchery chum targets vary. In odd years it is lower to allow for production of pinks. They are now obtaining broodstock from Alouette River rather than Indian River, but were unable to acquire enough broodstock in 2007 to achieve their 2007 brood release target.
- Returns to Sliammon River have been low for several years and they could not reach their egg target in 2007, resulting in releases lower than targeted. They also experienced higher than average mortalities from eggtake to hatching and were unable to determine the cause.
- Thornton Creek stocks experienced very poor returns in 2007, adversely affecting the number of eggs collected and 2007 brood released.

9.7.4. Pink

Pink returns to the east coast of Vancouver Island were good in 2007 & 2008, so Quinsam Hatchery was able to obtain all the eggs needed for themselves and other projects. Returns to the Lower Fraser were also quite good in 2007, but there is no even-year run in the Fraser.

Table 4a) Production of Pinks – DFO Enhancement facilities

Project	Run	Stock	Release Site	Stage	2007 Brood		2008 Brood		
					Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
Big Qualicum	Fall	Big Qualicum	Big Qualicum	Unfed	67,500	63,250	0	0	0
Chehalis R ¹	Fall	Chehalis R	Harrison R	Unfed		706,452	0	0	0
Chilliwack R ¹	fall	Chilliwack R	Chilliwack R	Unfed		8,588	0	0	0
Puntledge R	fall	Quinsam R	Puntledge R	Unfed	2,400,000	2,340,177	2,400,000		
Quinsam R	fall	Quinsam R	Quinsam R	Unfed	5,400,000	5,283,049	5,400,000	6,800,000	15,473,727
	fall	Quinsam R	Discovery Pass	Seapen	1,000,000	999,600	1,000,000		
Tenderfoot Cr ¹	fall	Cheakamus R	Cheakamus R	Unfed		61,625	0	0	0
	fall	Mamquam R	Gorbuscha Ch	Egg Plant		3,136			
	fall	Mamquam R	Cheakamus R	Unfed		195,570			
Weaver Sp Ch ¹	fall	Weaver Sp Ch	Weaver Sp Ch	Chan Fry		1,741,808	0	0	0

¹ Pinks are present on the Fraser River during odd years only

Table 4b) Production of Pinks – Community Economic Development Projects & Designated Public Involvement Projects

Project	Run	Stock	Release Site	Stage	2007 Brood		2008 Brood		
					Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
Chapman Cr	fall	Chapman Cr	Chapman Cr	Unfed	250,000	658,768	250,000	400,000	0
	fall	Chapman Cr	Gibsons	Seapen			100,000		
Cowichan R	fall	Quinsam R	Cowichan Bay	Seapen			200,000		253,502
Englishman Enh	fall	Quinsam R	Englishman Enh	Unfed	1,000,000	950,000	1,000,000		
Fanny Bay	fall	Quinsam R	Coal Cr	Unfed	1,000,000	950,000	1,000,000		
Kanaka Cr ¹	fall	Harrison R	Kanaka Cr	Unfed		396,000	0		0
Nanaimo R	fall	Nanaimo R					1,000,000	1,200,000	58,782
	fall	Quinsam R	Brandon Is	Seapen	1,000,000	396,954			
	fall	Quinsam R	Gallows Pt	Seapen		411,205			
	fall	Quinsam R	Nanaimo R	Unfed		75,996			
	fall	Quinsam R	Newcastle Is	Seapen		200,195			
Nile Cr	fall	Big Qualicum	Deep Bay	Seapen	450,000	427,973	450,000		
	fall	Quinsam R	Deep Bay	Seapen			450,000		
		Quinsam R	Nile Cr	Unfed	1,000,000	950,000	1,000,000		
Oyster R	fall	Oyster R	Oyster R	Unfed	900,000	800,000	900,000	1,000,000	213,700

P Hardy/Quatse	fall	Cluxewe R	Cluxewe R	Unfed	800,000	1,000,148	800,000	1,000,000	0
	fall	Quatse R	Quatse R	Unfed	1,350,000	987,382	1,350,000	1,500,000	733,647
Sechelt	fall	Maclean Bay	Maclean Bay	Seapen	300,000	272,574	300,000	350,000	0
Seymour R/GSMN ¹	fall	Chilliwack R	Seymour R/GSMN	Unfed	1,140,000	1,179,287	0	0	0
Tsolum R	fall	Quinsam R	Tsolum R	Unfed	1,000,000	980,000	1,000,000		

¹ Pinks are present on the Fraser River during odd years only

Big Qualicum usually takes eggs for Nile Creek, Deep Bay seapen, however, Quinsam was able to provide Nile Creek with enough eggs this year.

Chehalis River has a target of about 1.7M eggs for other lower Fraser River projects from Weaver Spawning Channel and Chehalis River (Harrison River system), in odd years only.

Puntledge River Hatchery acquires eggs from Quinsam River Hatchery. Returns of previous transfers were left to spawn naturally in the Puntledge River.

In 2008, Quinsam Hatchery obtained eggs for other projects, as follows: 2.5M for Puntledge, 250K for Cowichan, 1M for Englishman, 1M for Fanny Bay, 1M for Nanaimo, 1M for Nile Creek, 250K for Deep Bay and 1M for Tsolum.

In 2007, pink eggs were collected from Cheakamus River (Tenderfoot Creek Hatchery) to help mitigate for the 2005 caustic soda spill into the river. They were able to obtain only a small proportion of the 2007 brood egg target and will supplement the release with a transplant from Mamquam River. This stock is odd-year only.

At Chapman Creek, beginning in 2007, a seapen at Gibson's Landing was added to increase returns for a sport fishery. They also took extra eggs for a transplant to Sechelt in 2007. In 2008, no eggs were taken due to low water levels in the creek, preventing return of adults.

Cowichan River began a pink seapen project in 2007, using Quinsam River stock.

Kanaka Creek obtains pink eggs (Harrison River system) from Chehalis Hatchery in odd years only.

Nanaimo River Hatchery is starting to take Nanaimo Creek broodstock as the stock rebuilds. Few broodstock were obtained in 2008 due to a low return, so the remaining balance was obtained from Quinsam. 2009 will be the first large return of pinks, so the plan is to use only Nanaimo Creek stock, but Quinsam stock will still be used if required.

Nile Creek operates a pink seapen in Deep Bay. They were able to obtain enough eggs from Quinsam so that they did not require eggs from Big Qualicum.

The Oyster River target was increased for 2007.

Port Hardy/Quatse was unable to obtain any 2008 brood eggs from the Cluxewe River stock due to a poor return of adults.

Sechelt received a transplant from Chapman Creek in 2007. 2008 was an off-year, therefore no pinks were collected.

Seymour River project will take all eggs from Chilliwack River beginning in 2007. There was some difficulty in obtaining brood stock. This stock is odd-year only.

9.7.5. Sockeye

Sockeye production continued to focus efforts on maintaining production supporting stock conservation and sustainable fisheries. Sockeye returns to the Fraser River were generally lower than expected in both 2007 & 2008. There was approximately 30% pre-season mortality experienced at Weaver Spawning Channel in 2008.

Table 5a) Production of Sockeye – DFO Enhancement facilities

Project	Run	Stock	Release Site	Stage	2007 Brood		2008 Brood		
					Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
Gates Sp Ch	sum	Gates R	Gates R	Chan Fry	4,500,000	not enumerated	4,500,000	9,000,000	3,000,000
Horsefly Sp Ch	sum	Horsefly Ch	Horsefly Ch	Chan Fry	17,500,000	not enumerated	17,500,000	35,000,000	0
Inch Sock Sat	sum	Pitt R Up	Pitt R Up	Fed Spr	2,000,000	2,035,352	2,000,000	2,500,000	1,978,093
	fall	Cultus Lk	Cultus Lk ¹	Smolts	50,000	51,570	50,000	1,000,000	978,000
	fall	Cultus Lk	Cultus Lk	Fed Spr	550,000	748,630	550,000		
	fall	Cultus Lk	Cultus Lk	Fed Fall	150,000	150,572	150,000		
Nadina Sp Ch	sum	Nadina R	Nadina R	Chan Fry	3,500,000	1,090,000	3,500,000	30,000,000	20,840,000
Shuswap R	sum	Adams R Up	Adams R Up	Fed Spr				0	0
	sum	Okanagan L	Okanagan L	Fed Spr	1,450,000	885,500	900,000	1,000,000	1,827,000
Weaver Sp Ch	fall	Weaver Sp Ch	Weaver Sp Ch	Chan Fry	46,800,000	28,493,605	46,800,000	65,000,000	2,250,000

¹ Smolts to be released in 2009 are listed as number of fry on hand

² With an additional 1,090,260 unfed released from Alvin Patterson Channel.

Table 5b) Production of Sockeye – Community Economic Development Projects & Designated Public Involvement Projects

Project	Run	Stock	Release Site	Stage	2007 Brood		2008 Brood		
					Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
Gwa'ni	fall	Sebalhall Cr	Vernon Lk	Unfed	400,000	0	400,000	500,000	
	fall	Woss R	Woss Lk	Fed Spr		837,567			
	fall	Woss R	Woss Lk	Unfed	800,000	0	800,000	1,000,000	999,310
	fall	Vernon Lk	Vernon Lk			73,372			616,985
Sakinaw L	fall	Sakinaw Lk	Sakinaw Lk	Fed Spr	175,000	386,446	200,000	250,000	750,000

- The Gates Creek Spawning Channel egg deposition was low due to low escapement.
- 2008 brood egg take numbers for Inch Sockeye Satellite, Cultus Lake stock, includes

preliminary estimates of Cultus Lake (262,000 eggs taken) and Rosewall captive brood (716,000 eggs taken).

- The Horsefly Spawning Channel was not operated in 2008.
- The 2008 brood year for Nadina Spawning Channel is a dominant year, therefore the egg target has been adjusted accordingly (from 7,000,000 to 30,000,000).
- The upper Adams River sockeye stock (Shuswap Hatchery) was expected to have very low escapements in 2007 & 2008, therefore no eggtakes were planned.
- Weaver Creek sockeye experienced approximately 30% pre-spawn mortality in 2008, along with low escapement, so the channel was well short of its egg target.
- Sakinaw Lake stock has had extremely low adult returns in 2007 and 2008, with no brood stock collected. Captives from broods 2004 and 2005 are currently holding at Rosewall Creek facility. Eggs were taken in 2007 & 2008 from captive brood stock.

Appendix 1: Advisory Board Memberships

Meeting dates and records of consultation can be found at:

www-ops2.pac.dfo-mpo.gc.ca/xnet/content/consultations/salmon/sapdefault_e.htm

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Appendix 2: Fishing Vessel Safety

Vessel owners and masters have a duty to ensure the safety of their crew and vessel. Adherence to safety regulations and good practices by owners, masters and crew of fishing vessels will help save lives, prevent vessel damage and protect the environment. All fishing vessels must be in a seaworthy condition and maintained as required by Transport Canada (TC), WorkSafeBC, and other applicable agencies. Vessels subject to inspection should ensure that the certificate of inspection is valid for the area of intended operation.

In the federal government, responsibility for shipping, navigation, and vessel safety regulations and inspections lies with Transport Canada (TC); emergency response with the Canadian Coast Guard (CCG) and DFO has responsibility for management of the fisheries resources. In B.C., WorkSafeBC also regulates health and safety issues in commercial fishing. This includes requirements to ensure the health and safety of the crew and safe operation of the vessel. DFO (Fisheries and Aquaculture Management (FAM) and CCG) and TC through an MOU have formalized cooperation to establish, maintain and promote a safety culture within the fishing industry.

Before leaving on a voyage the owner, master or operator must ensure that the fishing vessel is capable of safely making the passage. Critical factors for a safe voyage include the seaworthiness of the vessel, vessel stability, having the required safety equipment in good working order, crew training, and knowledge of current and forecasted weather conditions. As safety requirements and guidelines may change, the vessel owner, crew, and other workers must be aware of the latest legislation, policies and guidelines prior to each trip.

There are many useful tools available for ensuring a safe voyage. These include:

- Education and Training Programs
- Marine Emergency Duties
- Fish Safe Stability Education
- First Aid
- Radio Operators Course
- Fishing Masters Certificates
- Small Vessel Operators Certificate

Publications:

- Transport Canada Publication TP 10038 '*Small Fishing Vessel Safety Manual*' (can be obtained at Transport Canada Offices from their website at www.tc.gc.ca/MarineSafety/Tp/Tp10038/tp10038e.htm),
- Gearing Up for Safety – WorkSafeBC
- Safe At Sea DVD Series – Fish Safe
- Stability Handbook – Fish Safe and Measuring Stability –DVD

For further information see: <http://www.tc.gc.ca/marine/menu.htm>

Important Priorities for Vessel Safety

There are three areas of fishing vessel safety that should be considered a priority. These are: vessel stability, emergency drills, and cold water immersion.

1.1. Fishing Vessel Stability

Vessel stability is paramount for safety. Care must be given to the stowage and securing of all cargo, skiffs, equipment, fuel containers and supplies, and also to correct ballasting. Fish

harvesters must be familiar with their vessel's centre of gravity, the effect of liquid free surfaces on stability, loose water or fish on deck, loading and unloading operations and the vessel's freeboard. Know the limitations of your vessel; if you are unsure contact a reputable naval architect, marine surveyor or the local Transport Canada Marine Safety Office.

Fishing vessel owners are required to develop detailed instructions addressing the limits of stability for each of their vessels. The instructions need to be based on a formal assessment of the vessel by a qualified naval architect and include detailed safe operation documentation kept on board the vessel. Examples of detailed documentation include engine room procedures, maintenance schedules to ensure watertight integrity, and instructions for regular practice of emergency drills.

1.2. Emergency Drill Requirements

The master must establish procedures and assign responsibilities to each crew member for emergencies such as crew member overboard, fire, flooding, abandoning ship and calling for help.

The Crewing Regulation under the Canada Shipping Act (CSA) states that as of July 30th 2002 all seafarers, including fish harvesters, must have a Basic Safety Certificate (MED A1 or A3 depending upon vessel and operating waters) within 6 months of becoming a crewmember, regardless of time at sea. The MED A1 is a three day course, and must be taken by all crew regardless of duty station.

MED provides a basic understanding of the hazards associated with the marine environment; the prevention of shipboard incidents; raising and reacting to alarms; fire and abandonment situations; and the skills necessary for survival and rescue.

1.3. Cold Water Immersion

Drowning is the number one cause of death in B.C.'s fishing industry. Cold water is defined as water below 25 degrees Celsius, but the greatest effects occur below 15 degrees. BC waters are usually below 15 degrees. The effects of cold water on the body occur in four stages: cold shock, swimming failure, hypothermia and post-rescue collapse. Know what to do to prevent you or your crew from falling into the water and what to do if that occurs. More information is available in the WorkSafe Bulletin *Cold Water Immersion* (available from the WorkSafe BC website).

1.4. Other Issues

1.4.1. Weather

Vessel owners and masters are reminded of the importance of paying close attention to current weather trends and forecasts during the voyage. Marine weather information and forecasts can be obtained on VHF channels 21B, Wx1, Wx2, Wx3, or Wx4. Weather information is also available from Environment Canada website at:

www.weatheroffice.ec.gc.ca/marine/region_03_e.html

1.4.2. Emergency Radio Procedures

Vessel owners and masters should ensure that all crew are able to activate the Search and Rescue (SAR) system early rather than later by contacting the Canadian Coast Guard (CCG). It is strongly recommended that all fish harvesters carry a registered 406 MHz Emergency Position Indicating Radio Beacon (EPIRB). These beacons should be registered with the National Search

and Rescue secretariat. When activated, an EPIRB transmits a distress call that is picked up or relayed by satellites and transmitted via land earth stations to the Joint Rescue Co-ordination Centre (JRCC), which will task and co-ordinate rescue resources.

Fish harvesters should monitor VHF channel 16 or MF 2182 Khz and make themselves and their crews familiar with other radio frequencies. All crew should know how to make a distress call and should obtain their restricted operator certificate from Industry Canada. However, whenever possible, masters should contact the nearest Canadian Coast Guard (CCG) Marine Communications and Traffic Services (MCTS) station (on VHF channel 16 or MF 2182 kHz) prior to a distress situation developing. Correct radio procedures are important for communications in an emergency. Incorrect or misunderstood communications may hinder a rescue response.

Since August 1, 2003 all commercial vessels greater than 20 metres in length are required to carry a Class D VHF Digital Selective Calling (DSC) radio. A registered DSC VHF radio has the capability to alert other DSC equipped vessels in your immediate area and MCTS that your vessel is in distress. Masters should be aware that they should register their DSC radios with Industry Canada to obtain a Marine Mobile Services Identity (MMSI) number or the automatic distress calling feature of the radio may not work. For further information see the Industry Canada site at: http://www.ic.gc.ca/eic/site/ic1.nsf/eng/h_00014.html

A DSC radio that is connected to a GPS unit will also automatically include your vessel's current position in the distress message. More detailed information on MCTS and DSC can be obtained by contacting a local Coast Guard MCTS centre (located in Vancouver, Victoria, Prince Rupert, Comox and Tofino) or from the Coast Guard website:

www.pacific.ccg-gcc.gc.ca

1.4.3. Collision Regulations

Fish harvesters must be knowledgeable of the *Collision Regulations* and the responsibilities between vessels where risk of collision exists. Navigation lights must be kept in good working order and must be displayed from sunset to sunrise and during all times of restricted visibility. To help reduce the potential for collision or close quarters situations which may also result in the loss of fishing gear, fish harvesters are encouraged to monitor the appropriate local Vessel Traffic Services (VTS) VHF channel, when travelling or fishing near shipping lanes or other areas frequented by large commercial vessels. Vessels required to participate in VTS include:

- a) every ship twenty metres or more in length,
- b) every ship engaged in towing or pushing any vessel or object, other than fishing gear,
- c) where the combined length of the ship and any vessel or object towed or pushed by the ship is forty five metres or more in length; or
- d) where the length of the vessel or object being towed or pushed by the ship is twenty metres or more in length.

Exceptions include:

- a) a ship towing or pushing inside a log booming ground,
- b) a pleasure yacht *less than* 30 metres in length, and
- c) a fishing vessel that is *less than* 24 metres in length and not *more than* 150 tons gross.

More detailed information on VTS can be obtained by calling (604) 775-8862 or from Coast Guard website:

www.pacific.ccg-gcc.gc.ca/mcts-sctm/index_e.htm

1.4.4. Buddy System

Fish harvesters are encouraged to use the buddy system when transiting, and fishing as this allows for the ability to provide mutual aid. An important trip consideration is the use of a sail plan which includes the particulars of the vessel, crew and voyage. The sail plan should be left with a responsible person on shore or filed with the local MCTS. After leaving port the fish harvester should contact the holder of the sail plan daily or as per another schedule. The sail plan should ensure notification to JRCC when communication is not maintained which might indicate your vessel is in distress. Be sure to cancel the sail plan upon completion of the voyage.

2. WORKSAFE BC

Commercial fishing is legislated by the requirements for diving, fishing and other marine operations found in Part 24 of the Occupational Health and Safety Regulation (OHSR). Many general hazard sections of the OHSR also apply. For example, Part 8: Personal Protective Clothing and Equipment addresses issues related to safety headgear, safety foot wear and personal floatation devices. Part 15 addresses issues on rigging, Part 5 addresses issues of exposure to chemical and biological substances, and Part 3 addresses training of young and new workers, first aid, and accident investigation issues. Part 3 of the Workers Compensation Act (WCA) defines the roles and responsibilities of owners, employers, supervisors and workers. The OHSR and the WCA are available from the Provincial Crown Printers or by visiting the WorkSafeBC website:

www.worksafebc.com

For further information, contact an Occupational Safety Officer (Shane Neifer, Terrace, (250) 615-6640), Pat Olsen, Richmond (604) 244-6477 or Mark Lunny, Courtney (250) 334-8732 or the Focus Sector Manager for fishing Bruce Clarke, Prince George, (250) 612-3708).

For information on projects related to commercial fishing contact Ellen Hanson (604) 233-4008 or Toll Free 1-888 621-7233 ext. 4008 or by email: Ellen.Hanson@worksafebc.com.

3. FISH SAFE

Fish Safe is coordinated by Gina Johansen and directed by the Fish Safe Advisory Committee (membership is open to all interested in improving safety on board). The advisory committee meets quarterly to discuss safety issues and give direction to Fish Safe in the development of education and tools for fish harvesters.

Vessel masters and crew are encouraged to become more knowledgeable regarding vessel stability. FishSafe BC developed the Fish Safe Stability Education Course, which is available to all fish harvesters who want to improve their understanding of stability and find practical application to their vessel's operation.

Fish Safe also works closely with WorkSafeBC to improve the fishing claims process. For further information:

Gina Johansen, Safety Coordinator
Fish Safe
2-11771 Horseshoe Way
Richmond, BC V7A 4V4

Phone: 604-261-9700
Email : fishsafe@telus.net
Website: www.fishsafebc.com

Appendix 3: Rockfish Conservation Areas

A total of 164 Rockfish Conservation Areas (RCAs) have been implemented coastwide. With the onset of the Rockfish Conservation Strategy, the Department announced that it would create closed areas that encompassed up to 50% of the rockfish habitat within the Strait of Georgia and up to 20% on the West Coast of Vancouver Island, Central Coast, North Coast and the Queen Charlotte Islands.

Beginning in September 2005, Fisheries and Oceans Canada carried out further consultation to identify potential rockfish conservation areas within the Strait of Georgia. Additional RCAs have now been established within the Strait of Georgia. Upon completion of the closed area component of the strategy, 20% of outside rockfish habitat will have been described as RCA's. The goal for the Strait of Georgia is 30%.

Descriptions including maps of the RCAs can be found online at:

<http://www-comm.pac.dfo->

mpo.gc.ca/pages/consultations/fisheriesmgmt/rockfish/default_e.htm

or check with your local Fisheries and Oceans Canada office for more information.

Permitted Fishing Activity in Rockfish Conservation Areas

The following fishing activities **will be permitted** in RCAs:

RECREATIONAL	COMMERCIAL
Invertebrates by hand picking or dive Crab by trap Prawn by trap Smelt by gillnet	Invertebrates by hand picking or dive Crab by trap Prawn by trap Scallops by trawl Salmon by seine or gillnet Herring by gillnet, seine and spawn-on-kelp Sardine by gillnet, seine and trap Smelt by gillnet Euphausid (krill) by mid-water trawl Opal Squid by seine Groundfish by mid-water trawl

Recreational and commercial fishing activities not listed in the tables above are *not* permitted.

First Nations are encouraged to employ fishing methods or fish in locations to avoid the harvest of inshore rockfish. First Nations fishing for food, social and ceremonial purposes is permitted in RCAs.

Appendix 4: 2009 Pacific Salmon Allocation Implementation Plan

This document describes anticipated licence area allocations for each gear type and for each species of salmon. These anticipated licence area allocations are intended to guide fishing arrangements at the local level and are not fixed entitlements. Application of these sharing arrangements is subject to meeting all conservation objectives, First Nations obligations, international commitments, deliverability and manageability constraints and other management considerations including all conservation measures currently in effect. Where appropriate the potential harvest identified is a range that reflects the most recent PSARC approved forecasts for each stock grouping at a 50 percent and 75 percent probability level. In other cases, the potential harvest represents the informed point estimate of fisheries managers based upon historic average return rates and available PSARC approved analysis.

Although best efforts will be made to achieve these coast-wide allocation targets, no guarantees are offered that target allocations will actually be achieved in any given year. The achievement of these targets will depend upon the ability to fish selectively and the conservation needs of the resource. In the event that target allocations are not achieved, no compensatory adjustments will be made to future allocations. Specifically, as in 2005, "catch up/make up" adjustments to future target allocations will not be considered in the event that a gear type does not meet its target allocation.

The following specific operational guidelines for 2009 are noted:

- Individual licence holders and groups of licence holders will not be permitted to make their own allocation transfer arrangements unless agreed to by DFO under Demonstration Fisheries arrangements.
- As in recent years, there will be no directed commercial fisheries for Fraser River sockeye or Fraser River pink salmon in the north (i.e. area licence categories A, C and F).
- Harvest from both full and limited fleet exploratory and assessment fisheries intended to obtain information that will benefit a specific fleet will be considered part of the allocation of the fleet conducting the exploratory fishery.
- The target allocations for gill net D and gill net E area licences will attempt to equalize the relative average catch per licence in sockeye equivalents.
- The target allocations for troll G and troll H area licences will attempt to equalize the relative average catch per licence in sockeye equivalents.
- If after spawning escapement objectives are met, and despite best efforts, it becomes apparent that an area licence group is unable to achieve its target allocation, subject to conservation requirements, uncaught balances will be given first to the same gear type in a different licence area and, second to different gear types in a manner that reflects their relative target allocations.

It is noted that these are not fixed entitlements but are a projection of available fishing opportunities given present forecasts of stock abundance and best efforts to achieve coast-wide target allocations by gear type. These represent the intentions of fisheries

management if abundance is as expected and all other things are equal. However, in many cases in-season adjustments will be necessary to address conservation concerns or other unforeseen events.

1. NORTH COAST

1.1. North Coast Sockeye

Areas	Potential Harvest (Pieces)	Seine A	Gill Net C	Troll F
1, 3 to 5, 101 to 105	700K	25%	74.8%	0.2%
6 to 10	-	25%	75%	0%

1.2. North Coast Pink

Areas	Potential Harvest (pieces)	Seine A	Gill Net C	Troll F
1 to 5, and 101 to 105	3 M	80%	18%	2%
6 to 10	3 M	90%	10%	0%

1.3. North Coast Chum

Areas	Potential Harvest (pieces)	Seine A	Gill Net C	Troll F
1,2,101 to 111,130,142	-	55%	45%	0%
3 to 5	-	0%	100%	0%
6 to 10	100K	55%	45%	0%

Notes on chum allocations:

- Catch shares in Areas 6 to 10 have been highly variable in recent years and depends on amount of gear fishing.

1.4. North Coast Coho

Areas	Potential Harvest (Pieces)	Seine A	Gill Net C	Troll F
1 to 10, 101, 102, 105-107, 130, 142	100K	20%	5%	75%

Notes on coho allocations:

- There will be opportunities for directed coho harvest in troll fisheries on the north coast of B.C. Non-retention of coho in net fisheries for Skeena salmon is planned.

1.5. North Coast Chinook

Areas	Potential Harvest (Pieces)	Seine A	Gill Net C	Troll F
1 to 5, 101, 102, 130, 142	97K	0%	3.9%	96.1%
6 to 10	5K	0%	99%	1%

Notes on chinook allocations:

- There are no directed chinook fisheries on the north coast of B.C. for the seine fleet. Directed gill net fisheries occur in Areas 4 and 8 and there is some by-catch in other north coast fisheries.
- Areas 1-5 troll, the TAC is determined by the PST chinook model. The PST allocation for the Area F troll fleet is preliminarily set at 93K. However, due to conservation concerns for other stocks the expected harvest may be less than this level.

2. SOUTH COAST

2.1. South Coast Sockeye

Areas	Potential Harvest (Pieces)	Seine B	Gill Net D	Gill Net E	Troll G	Troll H
Area 23	-	60%	40%		0%	
Fraser River Sockeye	2.0 M	47.5%	21.5%	25%	0%	6%

Notes on sockeye allocations:

- Fraser River sockeye: Based on pre-season information, the potential commercial harvest of Fraser River sockeye has been set at 2 million. However, protective measures will be implemented to address statistical variations, environmental conditions as well as conservation concerns for Sakinaw Lake, Cultus Lake and Late Run sockeye. These factors could substantially reduce opportunities to harvest the full TAC. The Fraser River sockeye TAC will be established based on in-season information
- Barkley sockeye: The current estimate of potential harvest is based on a pre-season estimate of a 350K return. Sockeye abundance will be reforecast in-season and as a result actual catch available could change.

2.2. South Coast Pink

Areas	Potential Harvest (Pieces)	Seine B	Gill Net D	Gill Net E	Troll G	Troll H
Fraser River	1M	70%	4%	6.5%	6.5%	13%
Mainland Inlets (A12)	0	73%	9%	0%	0%	18%

Notes on pink allocations:

- Significant return of Fraser pinks anticipated however constraints resulting from Late run concerns will limit catch
- No directed Mainland Pink fishery anticipated, to be confirmed in-season

2.3. South Coast Chum

Areas	Potential Harvest (Pieces)	Seine B	Gill Net D	Gill Net E	Troll G	Troll H
11 to 19, 28 to 29	485K	63%	19%	12%	0%	6%
21 to 22	35K	70%		29%	1%	
23 to 27	10K	0%	98%	0%	2%	0%

Notes on chum allocations:

- Commercial allocation sharing arrangements in Johnstone Strait are; seine Area B – 77 percent; gill net Area D – 17 percent; and troll Area H – 6 percent. Anticipated catch in Johnstone Strait is approximately 400K with an addition 85K estimated in the terminal areas.
- For Fraser River chum, harvest opportunities will be constrained by conservation concerns for Interior Fraser River steelhead.

2.4. South Coast Coho

Areas	Potential Harvest (Pieces)	Seine B	Gill Net D	Gill Net E	Troll G	Troll H
11 to 20, 29	0K	55%	15%	15%	0%	15%
21 to 27, 121, 123 to 127	0.5K	0%	0%	0%	100%	0%

Notes on coho allocations:

- Inside coho - no coho retention fisheries planned.

- WCVI coho - It is anticipated that retention of adipose clipped coho will be permitted in offshore troll fisheries in the latter half of September.

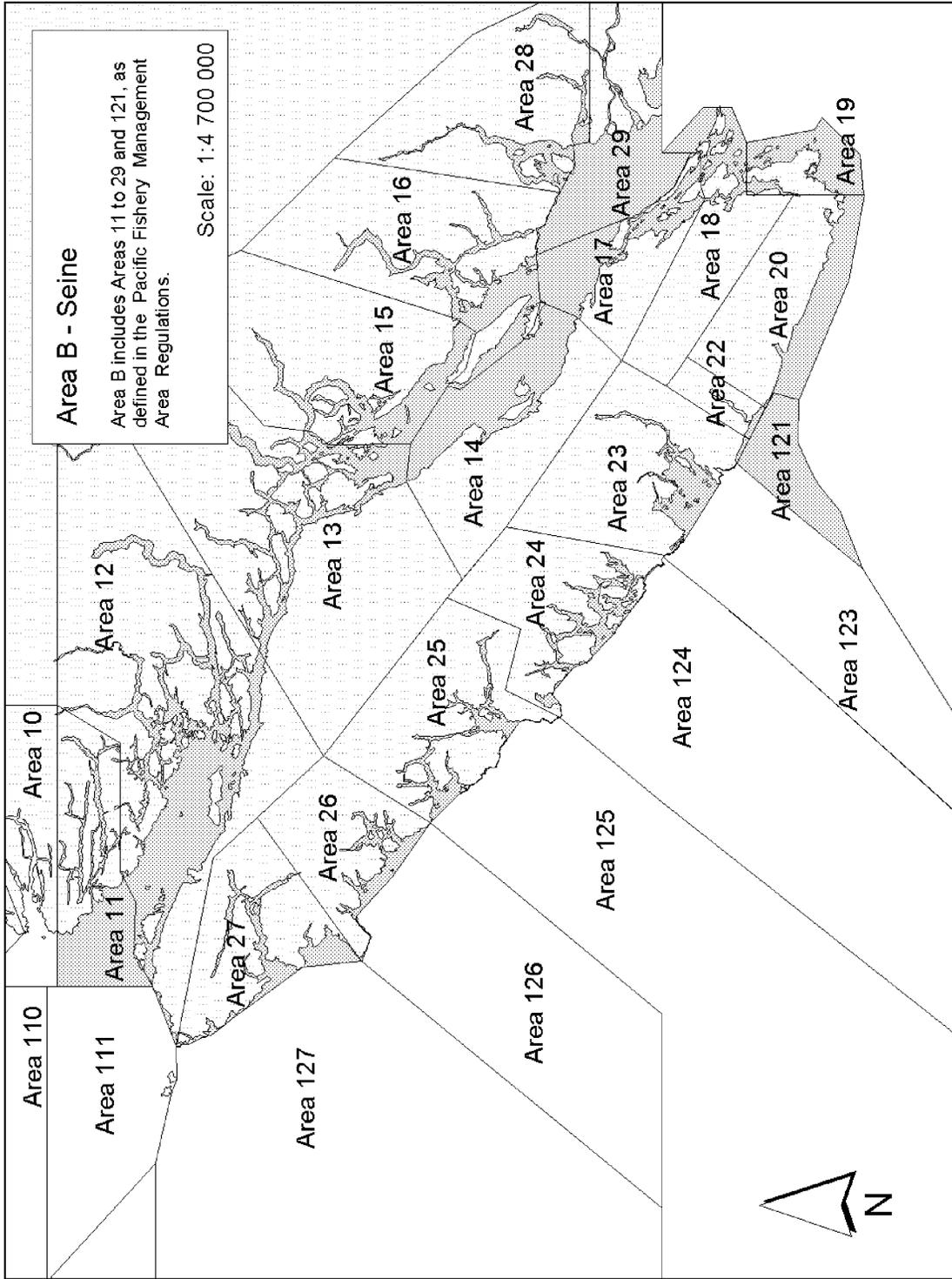
2.5. South Coast Chinook

Areas	Harvest Forecast (Pieces)	Seine B	Gill Net D	Gill Net E	Troll G	Troll H
11 to 20, 29	2.5K	0%	0%	100 %	0%	0%
21 to 27, 121 to 127	52.8K	0%	0%	0%	100%	0%

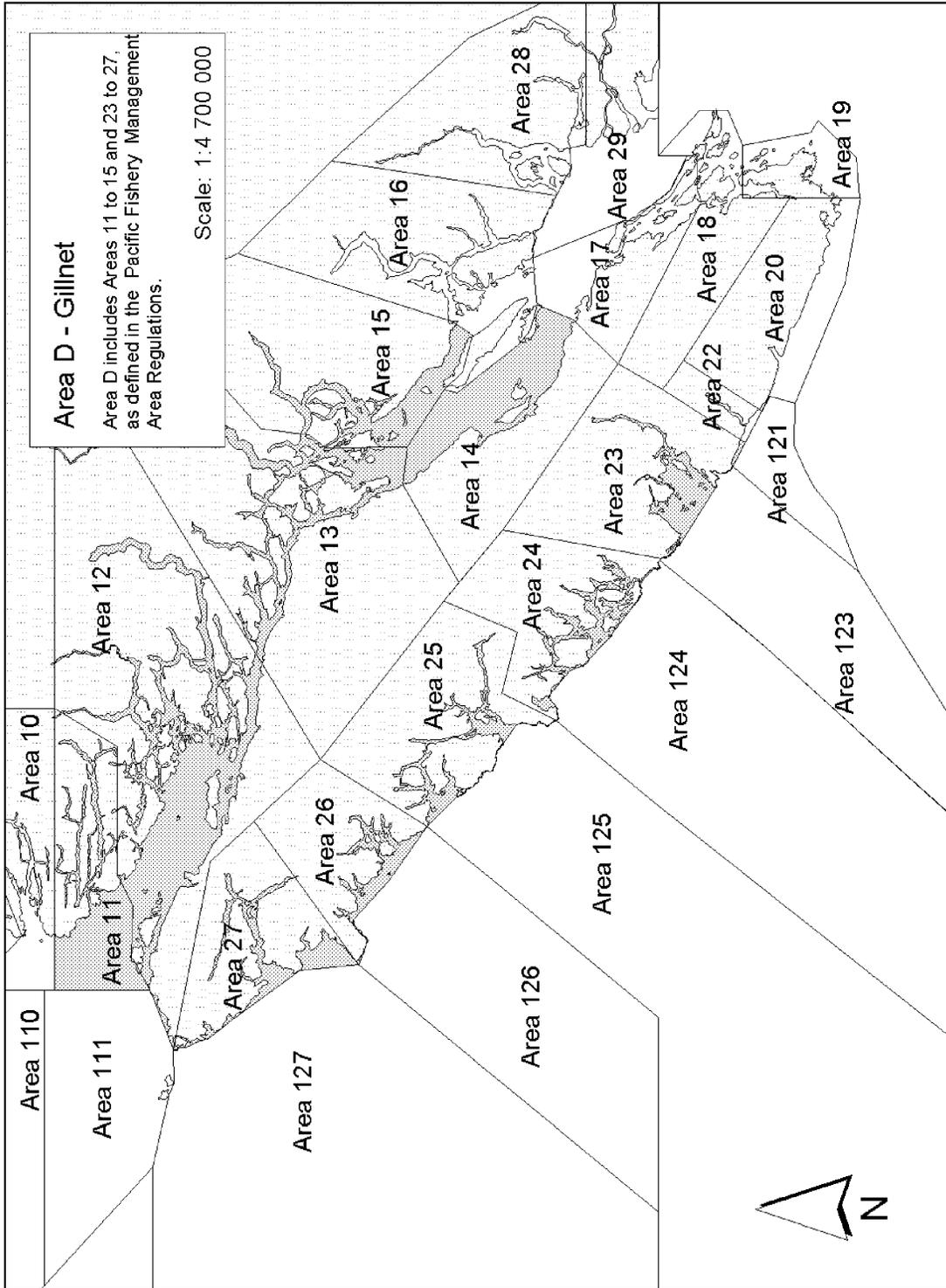
Notes on chinook allocations:

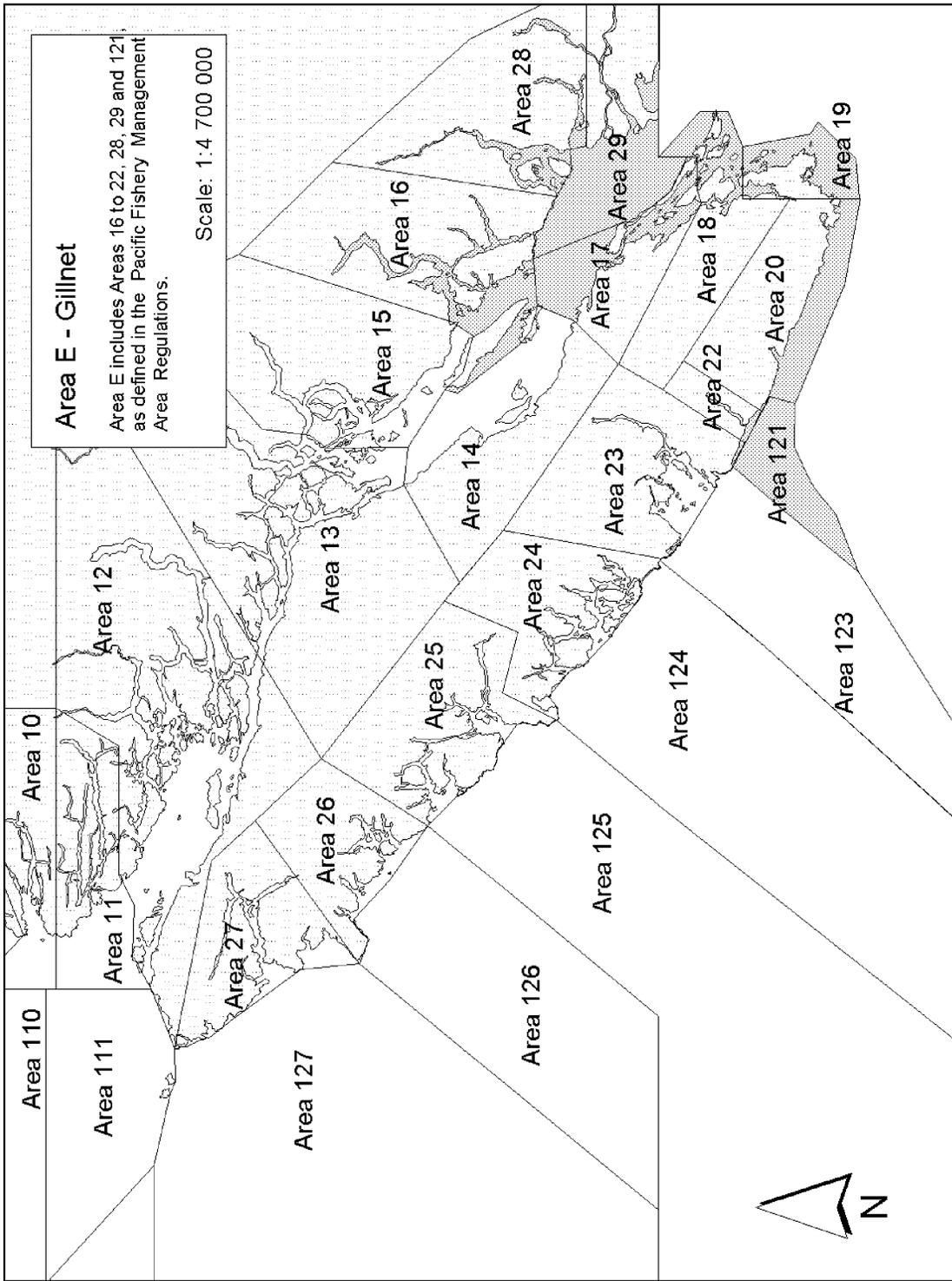
- Inside chinook - chinook by-catch during Area E sockeye directed fisheries in Area 29. Discussions are also occurring about a possible Chinook demonstration fishery in area 29.
- AABM Chinook - A troll catch of 52.8K is estimated. The commercial target may be adjusted in-season if observed First Nation and recreational catches differ from anticipated levels.

Appendix 5: Maps of Commercial Salmon Licence Areas

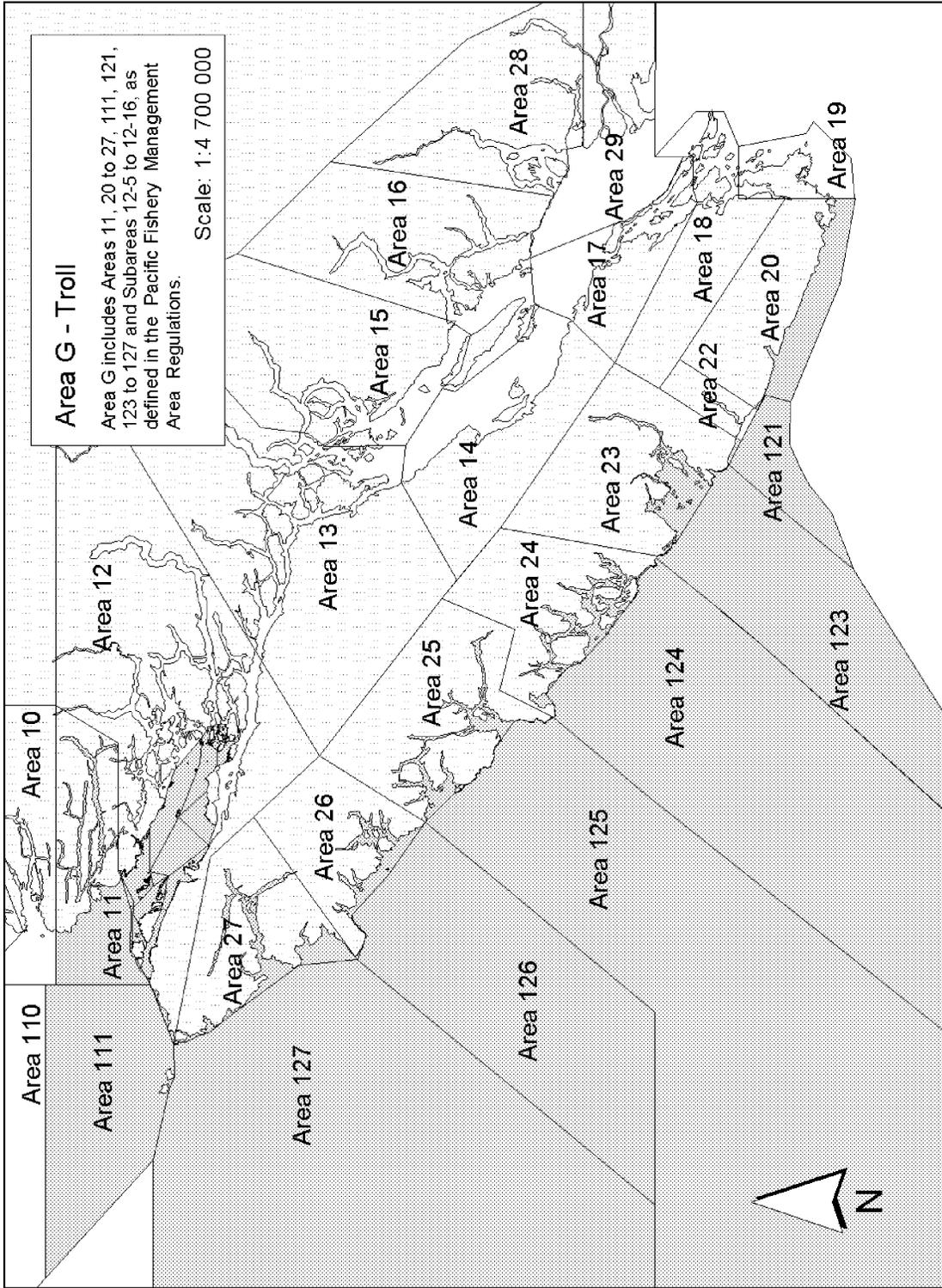


Appendix 5: Maps of Commercial Salmon Licence Areas





Appendix 5: Maps of Commercial Salmon Licence Areas



Appendix 6: Tidal Salmon Sport Fishing Guidelines

SOUTH COAST WATERS - AREAS 11 TO 29, 121 AND 123 TO 127 ---

1. The aggregate daily limit for all species of Pacific salmon (other than kokanee) from tidal and non-tidal waters combined is four (4).
2. Unless otherwise specified in the table below, the daily limit for chinook is 2 per day and all retained chinook must measure 45 cm or more from tip of nose to tail fork. All coho, sockeye, pink and chum must measure 30 cm or more.
3. A barbless hook is in effect year-round.
4. There is an annual limit of 30 adult Chinook, in the aggregate, from any tidal waters, of which at most, 10 may be caught in the tidal waters of the Fraser River, 15 may be caught in the waters of Areas 12 to 18, 28 and 29 and that portion of Area 19 north of Cadboro Point, and 20 may be caught in the waters of Area 20 and that portion of Area 19 south of Cadboro Point. For the remainder of the West coast of Vancouver Island (that portion of Area 20 West of Sheringham Point to Area 27, 121 to 127) and Area 1 to 11, 101 to 111, 130, and 142 the annual aggregate limit is 30 chinook.
5. Coho non retention is in effect in all areas from Jan 01-May 31. For those areas where the daily limit is specified for coho at 2 or 4 per day, you may retain both hatchery marked coho and unmarked coho in all other areas you may retain 2 hatchery marked coho per day from Jun 01-Dec 31. A hatchery marked fish is defined as one which has a healed scar in place of the adipose fin.
6. All Area/Subarea descriptions provided in square brackets are approximations. For more exact information, please see the *Pacific Fishery Management Area Regulations*.
7. Rockfish Conservation Areas (RCA's) are currently in effect throughout the south coast. These areas are closed to all fin fishing. Descriptions of these closures can be found on the Internet at: www.pac.dfo-mpo.gc.ca/recfish.
8. **IT IS IMPORTANT TO NOTE THAT CHANGES TO THE TABLE BELOW MAY OCCUR IN-SEASON AND TO CHECK WITH YOUR LOCAL DFO OFFICE BEFORE FISHING TO BECOME AWARE OF ANY IN SEASON CHANGES.**

WATERS	SPECIES	DATES	LIMITS / GEAR
All Areas (Areas 11 to 29 and 111), unless otherwise specified below.	Chinook	Jan 01-Dec 31	2 per day.
	Coho	Jun 01-Dec 31	2 hatchery marked fish per day.
	Sockeye	Jan 01-Dec. 31	Special restrictions may be introduced to protect specific stocks. Check with your local DFO office prior to fishing.
	Pink	Jan 01-Dec 31	4 per day.
	Chum	Jan 01-Dec 31	4 per day.
Areas 121 and 123 to 127	Coho	Jun 01-Aug 31	2 hatchery marked fish per day.
		Sep 01- Dec 31	4 hatchery marked fish per day.
	Chinook	Jan 01-Dec 31	2 per day.
	Sockeye	Jan 01-Dec. 31	Special restrictions may be introduced to protect specific stocks. Check with your local DFO office prior to fishing.
	Pink	Jan 01-Dec 31	4 per day.
	Chum	Jan 01-Dec 31	4 per day.
Area 11 and 111			
Subareas 11-1 and 11-2, 12-14 and 111	Coho	Jun 01 - Jul 31	2 per day

WATERS	SPECIES	DATES	LIMITS / GEAR
		Aug 01-Dec 31	2 per day, one of which may be wild (unmarked). Additional opportunities are being considered and evaluated.
Subareas 11-3 to 11-10 (Inside of Nakwakto Rapids)	Coho	Apr 01- Dec 31	2 per day.
Area 12			
Entire Area	Chinook	Jan 01- Dec 31	Minimum size limit is 62 cm
Subareas 12-3 to 12-13, 12-15 to 12-19 and 12-21 to 12-48 Where salmon fishing is permitted	Coho	Jun 01-July 31	2 per day, one of which maybe wild (unmarked)
That portion of Subarea 12-4 shoreward of a line running from Lewis Point to 50°32.839' north latitude and 126°50.122 west longitude near the southwest entrance to Telegraph Cove commonly known as Beaver Cove.	Coho	Aug 01-Dec 31	2 per day, one of which maybe wild (unmarked)
That portion of Subarea 12-19, the waters of McNeill Bay inside a line from Ledge Point to the BC Ferry Terminal	Coho	Aug 01-Dec 31	2 per day, one of which maybe wild (unmarked)
Subareas 12-26 to 12-48	Coho	Aug 01-Dec 31	2 per day, one of which maybe wild (unmarked)
In Subarea 12-16, those waters of Hardy Bay inside a line from Daphne Point to Duval Point where salmon fishing is permitted.	Coho	Aug 01-Dec 31	4 hatchery marked fish per day
In Subarea 12-16, the waters of Hardy Bay shoreward of a line from a boundary sign on the Keltic Seafoods wharf to a boundary sign on the opposite shore. (inner portion of Hardy Bay)	All	Aug 01-Sep 30	You may only use a single-pointed hook that measures no more than 15 mm between the point and shank when fishing.
In Subarea 12-16, the mouth of the Keogh River within a 400 m radius of the shore.	All	Aug 01-Sep 30	You may only use a single-pointed hook that measures no more than 15 mm between the point and shank when fishing.
In Subarea 12-17, those waters inside a line that starts at a boundary sign approx. 1.9 km northwest of the Cluxewe river mouth, then to 50°37.53' N and 127°12.21'W, then to 50°36.98'N and 127°09.53'W, then 200° true to a boundary sign on the shore.	Pink	Aug 01-Sep 30	1 per day
	All		You may only use a single-pointed hook that measures no more than 15 mm between the point and shank when fishing.
Subarea 12-19 [Broughton Strait southerly of a line from Ledge Point to the light on the southern end of Haddington Is, then to the light on Yellow Bluff on Cormorant Is, then following the southerly shoreline to a marker on Gordon Bluff, then to Lewis Point on Vancouver Is]	Chinook	Aug 01-Oct 31	<i>You may not retain chinook.</i>
Area 13			

WATERS	SPECIES	DATES	LIMITS / GEAR
Entire Area	Chinook	Jan 01- Dec 31	Minimum size limit is 62 cm
In Subarea 13-5, those waters bounded on the south by a line from the boat ramp on Tyee Spit 185 m east in line with Shag Rock on Quadra Island, on the north by a line from the tip of Tyee Spit 185 m east in line with April Point and on the west by a line from the low water mark between the north and south boundaries.	All	Jul 15-Sep 15	Vessels under motor power are prohibited, under regulations of the <i>Canada Shipping Act</i> .
In Subareas 13-3 and 13-5, those waters of Discovery Passage and the Campbell River inside a line true east of the fishing boundary sign at Orange Point to the middle of the channel, then southeasterly down the middle of the channel to the intersection of a line running from a boundary sign on the southern end of Hidden Harbour breakwater, then true east to Quadra Island.	All	July 15-Sep 30	Only a single-pointed hook may be used. The use of natural bait is prohibited. No person shall angle with a fishing line or downrigger line to which is attached a) a weight that is greater than 168 grams/6 ounces; or b) an attracting device that is not affixed directly to the hook [Licence Condition].
Subarea 13-20 to 13-21 and that portion of Subarea 13-22 described as those waters in Bute Inlet from the RCA boundary sign at Littleton Point across to the opposite shore at 50 49.9° west latitude and 124 51.63° north longitude.	Coho	Aug 15-Sep 15	2 per day, one of which maybe wild (unmarked)
Sub Area 13-22 commonly known and described as those waters of Bute Inlet lying Northerly inside of a line running from a marker at Alpha Bluff to a marker on the opposite shore to the RCA boundary at the head of Bute Inlet.	Chinook	May 01- Sep 30	<i>You may not retain Chinook.</i>
Area 14			
Entire Area	Chinook	Jan 01- Dec 31	Minimum size limit is 62 cm
Subarea 14-11. [Baynes Sound inside a line from the Cape Lazo Light, then to the P-54 Bell Buoy on Comox Bar, then to Longbeak Point, then to the mouth of Hart (Washer) Creek]	Chinook	May 01-Aug 31	<i>You may not retain chinook.</i>
	Coho	Sep 01-Dec 31	2 per day, only one of which may be wild.
Those waters of Lambert channel bounded from a marker off Nile Creek, north along Vancouver shoreline to Mapleguard Point, thence along the Harbour limit boundary to southern point of Chrome Island, then to southern tip of Denman Island, thence north along shore to Whalebone Point, thence to <i>Shingle Spit</i> on Hornby Island, thence along the shore to Norman Point, thence south from Norman Point 2.4Nm to a position (49 28.25°N and 124 36.54°W), and back to Nile Creek marker.	Chinook	Jun 15-Aug 15	<i>You may not retain Chinook.</i>
Those waters, inside a line from 49 46.74°N and 124 59.06°W near the boat launch at Kitty Coleman Provincial Park, thence north-easterly to 49 47.35°N and 124 57.68°W, thence southerly to	Chinook	Jun 01–Jun 30	<i>You may not retain Chinook.</i>

WATERS	SPECIES	DATES	LIMITS / GEAR
49 45.14'N and 124 54.32'W, thence southwest to the navigation light at the Little River Ferry Dock.			
Those waters of Sentry Shoals within a 1.50Nm radius of the Sentry Shoal Marker Buoy.	Chinook	Jun 01 – Jun 30	<i>You may not retain Chinook.</i>
Subareas 14-14. [Comox Harbour]	Chinook	Jan 01-Dec 31	<i>You may not retain Chinook.</i>
The waters of Puntledge River mouth and the shoreline.	All Species	Aug 1-Oct 15	A single barbless hook restriction applies.
Area 15			
Entire Area	Chinook	Jan 01- Dec 31	Minimum size limit is 62 cm
Those waters of Algerine and Shearwater Passages bounded by a line from the southern most point of Harwood Island southerly to the navigational light on Rebecca Rocks hence northwest to the easterly most point to Vivian Island then northerly to the navigational marker at Mystery Reef hence west to the navigational marker on Atrevida Reef then southerly to the northern most point of Harwood Island then hence along the western shore of Harwood Island back to the point of commencement at the most southerly tip of Harwood Island.	Chinook	Jun 15-Aug 15	<i>You may not retain Chinook.</i>
That portion of Subarea 15-6 [Toba Inlet] easterly of a line from a boundary sign at Snout Point to a boundary sign on the opposite shore.	Chinook	Jan 01 – Sep 30	<i>You may not retain Chinook.</i>
Area 16			
Entire Area	Chinook	Jan 01- Dec 31	Minimum size limit is 62 cm
Sechelt Inlet and Porpoise Bay, southerly of a line from Nine Mile Point to a boundary sign on the opposite shore.	Coho	Jun 01-Dec 31	4 hatchery marked fish per day , minimum size limit is 30 cm.
	Chinook	July 1 – Dec 31	2 per day, minimum size limit is 41 cm
Area 17			
Entire Area	Chinook	Jan 01- Dec 31	Minimum size limit is 62 cm
In Subarea 17-4, except for those waters southeasterly of a line from Shingle Point to Pilkey Point and Subareas 17-5 to 17-7, 17-9, 17-13 to 17-17.[Northumberland Channel, Pylades Channel, Stuart Channel], thence a portion of Subarea 17-12 inside a line from Tinson Point to Snake Island Light (RCA Boundary) to the southern Five Finger Island group to the RCA boundary starting Horswell Channel Buoy (49 12.93N, 123 56.03W) to north of Horswell Bluff (49 12.93N, 123 56.47W).	Chinook	Aug 01-Oct 15	<i>You may not retain Chinook.</i>

WATERS	SPECIES	DATES	LIMITS / GEAR
In Subareas 17-18 to 17-20 and a portion of 17-12 those waters inside a line from Icarus Point on Vancouver Island true north 2 nm, thence northwesterly to the Navy buoy in Ballenas Channel, thence to Nankivell Point at the entrance to Schooner Cove on Vancouver Island	Chinook	Aug 01-Oct 15	<i>You may not retain Chinook.</i>
Area 18			
Entire Area	Chinook	Jan 01- Dec 31	Minimum size limit is 62 cm
In Subareas 18-7 and 18-8, that portion of Subarea 18-7 that lies northerly of a line from a square white boundary sign on Vancouver Island, near 48°46.179'N and 123°34.654'W, to a square white boundary sign on Saltspring Island SE of Burial Islet, near 48°45.992'N and 123°33.777'W, and southerly of a line from a square white boundary sign on Saltspring Island approximately 1.5 nautical miles ESE of Musgrave Point, near 48°43.982'N and 123°31.418'W, to a square white boundary sign on Vancouver Island approximately 0.5 nautical miles NW of Cherry Point, near 48°43.197'N and 123°33.708'W.	Chinook	Aug 01-Oct 15	<i>You may not retain Chinook.</i>
In Subareas 18-6 to 18-8, 18-10 [Fulford Harbour, Satellite Channel, Shute Passage, Sansum Narrows]	Chinook	Aug 01-Oct 15	<i>You may not retain Chinook.</i>
In Subarea 18-10, the waters of Fulford Harbour inside or NW of a line between a fishing boundary sign located near the navigation light and Jackson Rock on the north shore of Fulford Harbour across the Harbour to a boundary sign on the opposite shore.	All	Oct 10-Jan 15	Only a single-pointed hook may be used.
Subarea 18- 8, inside of a line between Separation Point and Cherry Point.	Coho	Nov 1-Dec 31	2 per day.
Area 19			
Subareas 19-1 to 19-4 [south of Cadboro Point]	Chinook	Jan 01- Mar 1 and May 15 – Dec 31	Minimum size limit is 45 cm
Subareas 19-1 to 19-4 [south of Cadboro Point]	Chinook	Mar 2 – May 14	2 per day between 45 and 67 cm or hatchery marked Chinook salmon only that are greater than 67 cm in length.
Subareas 19-5 to 19-12 [north of Cadboro Point]	Chinook	Jan 01- Dec 31	Minimum size limit is 62 cm
In Subareas 19-7 to 19-10 [Saanich Inlet].	Chinook	Aug 01-Oct 15	<i>You may not retain Chinook.</i>
Area 19	Coho	Oct 01-Dec 31	2 per day, only one of which maybe wild
Area 20			
Those waters of Subareas 20-1 and 20-2 inside or northerly of a line from Owen Point to the Port San Juan Light and Whistle Buoy then to Woods	Chinook	Jul 15-Oct 25	<i>You may not retain Chinook.</i>

WATERS	SPECIES	DATES	LIMITS / GEAR
Nose.			
Those waters in Subarea 20-2 and a portion of Subarea 20-1 shoreward of a line between a square white boundary sign at Owen Point, the Port San Juan Light and Whistle Buoy, and San Juan Point (after Labour Day)	Coho	Sep 08- Dec 31	4 per day, only two of which may be wild.
Those waters in a portion of Subareas 20-1 (seaward of a line between a square white boundary sign at Owen Point, the Port San Juan Light and Whistle Buoy, and San Juan Point and 20-3, 20-6 & 20-7.	Coho	Oct 01- Dec 31	4 per day, only one of which may be wild.
Subarea 20-5	Chinook	Jan 01- Mar 1 and May 15 – Dec 31	Minimum size limit is 45 cm
Subarea 20-5	Chinook	Mar 2- May 14	2 per day between 45 and 67 cm or hatchery marked Chinook salmon only that are greater than 67 cm in length
Subareas 20-6 and 20-7 [Sooke Inlet, Sooke Harbour and Sooke Basin, northerly of a line from Muir Point to Possession Point]	Chinook	Aug 01-Oct 15	<i>You may not retain Chinook.</i>
Area 21 and 121			
Area 21, seaward of a line from the boundary sign about 1 mile southeast of Tsusiat Falls, then to the marker buoy off Clo-oose, then to Dare Point.	Chinook	Aug 01- Oct 15	2 per day, only one of which may be greater than 77 cm.
Area 121, shoreward of a line 1 nautical mile seaward of a line from Pachena Point to Bonilla Point light.			
Area 21	Coho	Jun 01–Aug 31	2 hatchery marked fish per day
		Sep 01 – Dec 31	4 hatchery marked fish per day
Area 22 [Nitinat Lake]			
Entire Area	Sockeye	Jan 01-Dec 31	<i>No fishing for sockeye</i>
	All	Aug 01-Oct 31	Only a single-pointed hook may be used.
Southerly of a line from Windy Point to a boundary sign on the opposite shore.	Coho	Jun 1 – July 31	2 hatchery marked fish per day
		Aug 01-Dec 31	4 hatchery marked fish per day.
Northeasterly of a line from Windy Point to a boundary sign on the opposite shore.	All	Aug 01-Oct 31	<i>No fishing for salmon</i>
Area 23 and 123			
Area 23	Sockeye	Closed until further notice	Possible opportunities in July depends on run size forecast
In Subarea 23-1, the waters of Port Alberni Harbour northerly of a line from a boundary sign in upper Alberni Harbour situated at 49°14.19 north latitude and 124°50.23 west longitude then	All	Jan 01-Dec 31	Only a single-pointed hook may be used.

WATERS	SPECIES	DATES	LIMITS / GEAR
through the southern most point of Hoik Island thence to the flashing green light at the mouth of the Somass River thence due east to a boundary sign on the opposite shore to the tidal boundary markers at Paper Mill Dam on the Somass River			
In Subareas 23-1 and 23-2, those waters southerly of a line from a tidal boundary marker at Paper Mill Dam to a boundary marker on the opposite shore and northerly of a line from Hocking Point 66° true to a boundary marker on the opposite shore of Alberni Inlet.	Chinook	Jan 01-Dec 31	2 per day
	Coho	Aug 01-Dec 31	4 per day
In Subareas 23-2 and 23-3, those waters southerly of a line from a square, white fishing boundary sign at the mouth of Chesnucknuw Creek to a square, white fishing boundary sign on the western shore of Alberni Inlet, and northeasterly of a line from Star Point to a square, white fishing boundary sign at the mouth of Handy Creek.	Chinook	Aug 01-Sep 30	<i>You may not retain Chinook.</i>
	Coho	Aug 01-Dec 31	4 per day
Subareas 23-4 to 23-11 [Barkley Sound seaward of a line from a boundary sign on Vancouver Island at Mutine Point through Chup Point, to a boundary sign on Seddall Island south of Ecoole.	Chinook	Aug 01-Oct 15	2 per day, only 1 of which may be greater than 77 cm.
Those portions of Subareas 23-4 to 23-11 bounded in the south by a line from Amphitrite Point Light to the Chow Island Light, then to the Benson Island Light, then to the Coaster Channel Light, then to the southwestern tip of Sanford Island, then to Aguilar Point and in the north by a line from a boundary sign on Vancouver Island just north of Assits Island Light through a boundary marker at Fullerton Point on Tzartus Island, to a boundary sign on Seddall Island south of Ecoole.	Coho	Jun 01 – Aug 31	2 per day
		Sep 1-Dec 31	4 per day
Area 123 and those portions of Subareas 23-7, 23-8, and 23-11, seaward of a line from Amphitrite Point to the Chow Island Light, then to the Benson Island Light, then to the Coaster Channel Light, then to the southwestern tip of Sanford Island, then to Aguilar Point	Coho	Jun 01 – Aug 31	2 hatchery marked fish per day
		Sep 1-Dec 31	4 hatchery marked fish per day
That portion of Area 123, shoreward of a line drawn one nautical mile seaward of the surfline and southeasterly of a line commencing at 48 55.853 N, 125 33.001 W near Ucluelet on Vancouver Island. and intersecting the conservation corridor at 48 54.877 N, 125 34.259 W	Chinook	Aug 01- Oct 15	2 fish per day, only 1 of which may be greater than 77 cm
			2 per day Maximum size limit of 77 cm
Area 24 and 124			

WATERS	SPECIES	DATES	LIMITS / GEAR
That portion of Subarea 24-2 northerly of Starling Point [Sydney Inlet], that portion of Subareas 24-3 southwesterly of a line commencing at 49 24.640N, 126 08.646W on Vancouver Island to 49 24.562N, 126 07.480 on Obstruction Island, that portion of , Subarea 24-4 northerly of a line commencing on Flores Island at 49 18.005 N, 126 04.141 W then to 49 18.250 N, 126 03.132 W on McKay Island then following the McKay Island shoreline to 49 18.404 N, 126 01.939 W then to 49 19.279 N, 126 01.399 W on Vancouver Island and 24-14 [Miller Channel],	All	Aug 01-Oct 31	<i>You may not retain salmon.</i>
	Coho	Jan 1 – July 31	<i>You may not retain coho</i>
	Chinook	Jan 01-Jul 31	2 per day Minimum size limit of 45 cm
Subarea 24-6, bounded in the north by a line commencing at Kutcous Point (49 14.961N, 126 04.817W) on Flores Island to 49 14.637 N, 126 00.825 W on Vancouver Island near the Chetarpe I.R. and northeasterly of a line from Siwash Cove to the NW tip of Blunden Is and from the SW tip of Blunden Is to Ahous Point.	Chinook	Aug 01-Oct 15	2 per day Maximum size limit of 77 cm
	Coho	Jun 01-Aug 31	2 per day
		Sep 01–Dec 31	4 per day, only 2 of which may be wild
Subarea 24-7 [Bedwell Sound]	All	Aug 01-Oct 31	<i>You may not retain salmon.</i>
	Coho	Jan 01 – July 31	<i>You may not retain coho</i>
Subarea 24-8, northeasterly of a line from Moser Point on Vargas Is, to the NW tip of Wickaninish Is, then from the S tip of Wickaninish Is to the SE tip of Echachis Is, then to Lennard Is Light, then to Cox Point.	Chinook	Aug 01-Oct 31	2 per day Maximum size limit of 77 cm
	Coho	Jun 01- Aug 31	2 per day
		Sep 01 –Dec 31	4 per day, only 2 of which may be wild
Subarea 24-8, southwesterly of the line described above.	Chinook	Aug 01-Oct 15	2 per day Maximum size limit of 77 cm
	Coho	Sep 01–Dec 31	4 hatchery marked fish per day
Subarea 24-9 that portion of subarea 24-9 westerly of a line commencing at Ginnard Point on Meares Island then to a point on the Vancouver Island shoreline on the opposite shore of Browning Passage at 49° 7.48'N, 125° 51.81'W	Chinook	Aug 01-Oct 31	2 per day Maximum size limit of 77 cm
	Coho	Jun 01- Aug 31	2 per day
		Sep 01–Dec 31	4 per day, only 2 of which may be wild
Subarea 24-9 easterly of the line described above	Coho	Jun 01-July 31	2 per day
		Nov 01 –Dec 31	Fin Fish Closure
	Chinook	Aug 01– Dec 31	Finfish Closure
Subarea 24-10, NW of boundary signs on opposite sides of the entrance to Warn Bay	All	Aug 01-Dec 31	<i>You may not retain salmon</i>
	Coho	Jan 01 – July 31	<i>You may not retain coho</i>
Subarea 24-10 [Fortune Channel], except for Warn Bay	Chinook	Aug 01-Dec 31	<i>You may not retain Chinook.</i>
	Coho	Jun 01- Aug 31	2 per day
		Sep 1–Dec 31	4 per day, only 2 of which may be wild
Subarea 24-11, [Indian Bay, Windy Bay, lower Tofino Inlet] except for Grice Bay	Chinook	Aug 01-Dec31	<i>You may not retain Chinook.</i>
	Coho	Jun 01- Aug 31	2 per day
		Sep 01–Dec 31	4 per day, only 2 of which may be wild
Subarea 24-11, southerly of a line between	All	Aug 01-Dec 31	<i>You may not retain salmon</i>

WATERS	SPECIES	DATES	LIMITS / GEAR
boundary signs approx. half way to the head of Grice Bay.	Coho	Jan 01 – July 31	<i>You may not retain coho</i>
Subarea 24-12 [Tofino Inlet, northerly of boundary signs just south of Warne Is]	All	Aug 01-Dec31	<i>You may not retain salmon</i>
	Coho	Jan 01 – July 31	<i>You may not retain coho</i>
That portion of Area 124, shoreward of a line drawn approximately one nautical mile seaward of the surfline.	Chinook	Aug 01-Oct 15	2 per day Maximum size limit of 77 cm
Area 124 and that portion of Subareas 24-2 seaward of a line from Starling Point on Flores Island true west to a boundary sign on Vancouver Island and those portions of sub-areas 24-6 and 24-8 seaward of a line from Cox Point to the Lennard Island Light, then to Echachis Island, then to Wickaninnish Island, then to Moser Point on Vargas Island, then from the northwest tip of Ahous Point on Vargas Island to the southwest tip of Blunden Island, then from the northwest tip of Blunden Island to Siwash Cove on Flores Island,	Coho	Jun 01 – Aug 31	2 hatchery marked fish per day
	Coho	Sep 1-Dec 31	4 hatchery marked fish per day
	Chinook	Aug 1 to Oct 15	2 per day Maximum size limit of 77 cm
Area 25 and 125			
Nootka Sound			
Subareas 25-1 to 25-3 [Muchalat Inlet]	All	Jul 15-Oct 15	<i>You may not retain salmon.</i>
	Coho	Jun 01-Jul 14	2 per day
		Oct 16-Dec 31	4 per day
Subarea 25-4, northwesterly of a line from Salter Point to Hoiss Point	All	Jul 15-Oct 15	<i>Fin-fishing closure.</i>
	Coho	Jun 01-Jul 14	2 per day
		Oct 16-Dec 31	4 per day
Subarea 25-4, northerly of a line from Hoiss Point to San Carlos Pt on Bligh Island then following the Bligh Island shoreline easterly to a point at or near 49°40.77' north latitude and 126°30.20' west longitude then to a boundary sign on the opposite shore of Hana Channel excluding Hisnit Inlet, Head Bay and Nesook Bay.	Coho	Jun 01-Jul 31	2 per day
		Aug 01-Dec 31	4 per day
	Chinook	Jan 01 – Dec31	2 per day
That portion of Subarea 25-4, southwesterly of a line from Hoiss Point to San Carlos Point	Chinook	Jul 15-Oct 01	2 per day, only 1 of which may be greater than 77 cm
	Coho	Jun 01- Aug 31	2 per day
		Sep 1- Dec 31	4 per day
That portion of Subarea 25-4, southeasterly of a line from a boundary sign located on Bligh Island at or near 49°40.77' north latitude and 126°30.20' west longitude to a boundary sign on the opposite shore of Hana Channel .	All	Jul 15-Oct 15	<i>You may not retain salmon.</i>
	Coho	Jun 01-Jul 14	2 per day
		Oct 16-Dec 31	4 per day
Subarea 25-5 [Tlupana Inlet north of Princess Royal Point], excluding Nesook Bay and Head Bay	Chinook	Jan 01 –Dec 31	2 per day
	Coho	Jun 01 – Jul 31	2 per day
		Aug 01-Dec 31	4 per day
That portion of Subarea 25-6 NE of a line from the southern entrance to San Gertrudis Cove to the southern tip of the Pantoja Islands to Clerke	Coho		
		Jun 01- Aug 31	2 per day
		Sep 01- Dec 31	4 per day

WATERS	SPECIES	DATES	LIMITS / GEAR
Peninsula Light, excluding Kendrick Inlet. That portion of sub area 25-6 SE of the line described above	Coho	Jun 01-Aug31	2 hatchery marked fish per day
		Sep 01- Dec 31	4 per day
That portion of Subarea 25-6 NW of a line from Boston Point to Salter Point [Kendrick Inlet]	All	Jul 15-Oct 15	<i>Fin Fishing Closure</i>
	Coho	Jun 01-Jul 14	2 per day
		Oct16-Dec 31	4 per day
That portion of Subarea 25-6 NW of a line commencing at a point on the Nootka Island shoreline located north of Friendly Cove, at 49° 35.946 N. , 126° 36.848 W. to Discovery Point on the opposite shore of Nootka Sound.	Chinook	Jul 15-Oct 15	2 fish per day, only 1 of which may be greater than 77 cm
That portion of 25-6 SW of the line described above	Chinook	Jul 15-Oct 15	2 per day Maximum size limit of 77 cm
Sub area 25-7	Chinook	Jul 15-Oct 15	2 per day Maximum size limit of 77 cm
	Coho	Jun 01-Aug 31 Sep 01-Dec31	2 per day hatchery marked only 2 per day
That portion of Subarea 25-8 (Tahsis Inlet) from a boundary line commencing at Mozino Point to a boundary sign on the opposite shore of Tahsis Inlet south to a boundary line from the northerly tip of Strange Island to a boundary sign on the opposite shore of Tahsis Inlet	<i>All</i>	<i>July 15 – Oct 15</i>	<i>Salmon non-retention</i>
That portion of Subarea 25-8 (Tahsis Inlet) south of a line from a boundary sign near the northerly tip of Strange Island to a boundary sign on the opposite shore of Tahsis Inlet.	<i>All</i>	<i>July 15 – Oct 15</i>	<i>Fin fish Closure</i>
Subarea 25-15 [Zuciarte Channel]	All	Jul 15-Oct 15	<i>You may not retain salmon.</i>
Subarea 25-16 and that portion of Sub area 25-8 northerly of a line commencing at Mozino Point to a boundary sign on the opposite shore of Tahsis Inlet	All	Jul 15-Oct 15	Fin Fish Closure
	Coho	Jun 01-Jul14	2 per day
		Oct 16-Dec 31	4 per day
Esperanza Inlet			
Subareas 25-9 [Hecate Channel], 25-11[Port Eliza] and 25-12 [Espinoza Inlet]	All	Jul 15-Oct 15	<i>You may not retain salmon.</i>
	Coho	Jun 01-Jul 14	2 per day
		Oct 16-Dec 31	4 per day
That portion of Subarea 25-13 easterly of a line commencing at Tatchu Point to the Middle Reef Light buoy, then to Ferrer Point.	Chinook	Jul 15-Oct 15	2 per day Maximum size limit of 77 cm
	Coho	Jun 01- Aug 31	2 per day
		Sep -1-Dec 31	4 per day
That portion of Subarea 25-13 westerly (seaward) of a line commencing at Tatchu Point to the Middle Reef Light buoy, then to Ferrer Point	Coho	Jun 01-Aug 31	2 per day hatchery marked only
		Sep 1 – Dec 31	4 per day
	Chinook	July 15-Oct 15	2 per day Maximum size limit of 77 cm
Subarea 25-14 [Nutchatlitz Inlet]	Chinook	Jul 15-Oct 15	2 per day Maximum size limit of 77 cm
	Coho	Jun 01- Aug 31	2 per day
		Sep 1-Dec 31	4 per day

WATERS	SPECIES	DATES	LIMITS / GEAR
Area 125, shoreward of a line drawn approximately one nautical mile seaward of the surfline.	Chinook	Jul 15-Oct 15	2 per day Maximum size limit of 77 cm
Area 125, seaward of the surfline.	Coho	Jun 01- Aug 31	2 hatchery marked fish per day
		Sep 01-Dec 31	4 hatchery marked fish per day
Area 26 and 126			
Subarea 26-1, seaward of a line from White Cliff Head to a marker Rugged Point.	Chinook	Jul 15-Oct 15	2 per day Maximum size limit of 77 cm
	Coho	Jun 1 – Aug 31	2 hatchery marked fish per day
		Sep 01-Dec 31	4 hatchery marked fish per day
Subarea 26-1, shoreward of line described above.	All	Jul 15-Oct 15	<i>You may not retain salmon</i>
Subareas 26-2 to 26-5 and 26-9	All	Jul 15-Oct 15	<i>You may not retain salmon</i>
Subarea 26-6, seaward of the line from the most westerly point of Union Island to a boundary marker on the opposite shore of Vancouver Island.	Chinook	Jul 15-Oct 15	2 per day Maximum size limit of 77 cm
	Coho	Jun 01- Aug 31	2 hatchery marked fish per day
		Sep 01-Dec 31	4 hatchery marked fish per day
Subarea 26-6, shoreward of line described above.	All	Jul 15-Oct 15	<i>You may not retain salmon.</i>
Subareas 26-7 and 26-11	Chinook	Jul 15-Oct 15	2 per day Maximum size limit of 77 cm
	Coho	Jun 01- Aug 31	2 hatchery marked fish per day.
		Sep 01-Dec 31	4 hatchery marked fish per day
Subarea 26-8 (Malksope Inlet) and Subareas 26-9 (Ouokinish Inlet) seaward of a line from boundary signs on opposite sides of the entrance to the inlets.	Chinook	Jul 15-Oct 15	2 per day Maximum size limit of 77 cm
	Coho	Jun 01- Aug 31	2 hatchery marked fish per day.
		Sep 01-Dec 31	4 hatchery marked fish per day
Subareas 26-8 and 26-9, shoreward of line described above	All	Jul 15-Oct 15	<i>You may not retain salmon.</i>
Subarea 26-10, easterly of the Rockfish Conservation Area boundary.	Chinook	Jul 15-Oct 15	2 per day Maximum size limit of 77 cm
	Coho	Jun 01- Aug 31	2 hatchery marked fish per day.
		Sep 01-Dec 31	4 hatchery marked fish per day
Area 126, shoreward of a line drawn approximately one nautical mile seaward of the surfline. [surfline is a line from Solandar Island to Clerke Point, to Jacobson Point, to Lookout Island to Tatchu Point]	Chinook	July 15- Oct 15	2 per day Maximum size limit of 77 cm
	Coho	Jun 01- Aug 31	2 hatchery marked fish per day.
		Sep 01-Dec 31	4 hatchery marked fish per day
Area 27 and 127			
Portion of Subarea 27-1 excluding the portion lying inside the Topknot RCA	Chinook	Jul 15-Sep 30	2 per day, only 1 of which may be greater than 77 cm
	Coho	Jun 01-Aug 31	2 per day
		Sept 01-Dec 31	4 per day, only 2 of which may be unmarked

WATERS	SPECIES	DATES	LIMITS / GEAR
Portion of Subarea 27-2 excluding the portion lying inside the Topknot RCA and Subarea 27-3	Chinook	Jul 15 -Sep 30	2 per day, only 1 of which may be greater than 77 cm
	Coho	Jun 01- Aug 31 ----- Sept 01-Dec 31	2 per day ----- 4 per day, only 2 of which may be unmarked
Subarea 27-4 [waters inside a line from Lawn Point to Solandar Island, then to Cape Cook]	Chinook	Jul 15-Sep 30	2 per day Maximum size limit of 77 cm
Subareas 27-7 to 27-11 [Quatsino Sound east of the Cliffe Point Light, Holberg Inlet and Neroutsos Inlet].	Chinook	Aug 01-Sep 30	<i>You may not retain Chinook.</i>
	Coho	Jun 01- Aug 31 ----- Sept 01-Dec 31	2 per day ----- 4 per day, only 2 of which may be unmarked
Area 127, shoreward of a line drawn approximately one nautical mile seaward of the surfline from Lawn point to Cape Scott.	Chinook	Jul 15-Sep 30	2 per day Maximum size limit of 77 cm
Area 127, seaward of the surfline.	Coho	Jun 01-Aug 31	2 hatchery marked fish per day.
		Sep 01- Dec 31	4 hatchery marked fish per day.
Area 28			
Entire Area	Chinook	Jan 01-Dec 31	Minimum size limit is 62 cm
	Sockeye	TBA	Opportunities anticipated. Check with your local DFO office.
Subareas 28-1 to 28-7 and 28-9	Coho	Jan 01-Dec 31	2 hatchery marked fish per day
Subareas 28-11 to 28-14.[Burrard Inlet east of Second Narrows/ Iron Workers Memorial Bridge, Indian Arm and Port Moody Arm]	Coho	Apr 01-Sep 30	2 hatchery marked fish per day
Subareas 28-11 to 28-14.[Burrard Inlet east of Second Narrows/ Iron Workers Memorial Bridge, Indian Arm and Port Moody Arm]	Coho	Oct 01-Mar 31	<i>You may not retain coho.</i>
Area 29			
Entire Area	Sockeye	TBA	Opportunities anticipated. Check with your local DFO office.
Subareas 29-1 to 29-5 & 29-8	Chinook	Jan 01-Dec 31	Minimum size limit is 62 cm
Subareas 29-6, 29-7, 27-9 & 29-10	Chinook	Jan 01-Mar 31 & June 1-Dec 31	Minimum size limit is 62 cm
Subareas 29-6, 29-7, 27-9 & 29-10	Chinook	Apr 01-May 30	<i>You may not retain Chinook.</i>
Tidal waters of the Fraser	Chinook	Jan 01-Apr 30	<i>No fishing for Chinook.</i>
		May 01-June 30	<i>You may not retain Chinook.</i>
	Chinook	July 1 to July 31	1 per day over 30cm and under 77cm Subject to in-season changes.

WATERS	SPECIES	DATES	LIMITS / GEAR
			Contact your local DFO office for details.
	Chinook	August 1 to August 31	4 per day, only 1 over 50cm Subject to in-season changes. Contact your local DFO office for details.
	Chinook	September 1 to Dec 31	4 per day, only 1 over 62cm Subject to in-season changes. Contact your local DFO office for details.
That portion of Subarea 29-3 easterly of a line from Gower Point to the Tango 10 Light Buoy, then to the northern tip of Lulu Island.	Coho	Jan 01-Dec 31	2 hatchery marked fish per day

FINFISH CLOSURES

There is no fishing for finfish in the following waters.

Finfish includes salmon, rockfish, lingcod, herring, halibut and any other fish with fins. Finfish does not mean crustaceans, echinoderms, molluscs, shellfish and marine mammals.

Note that this table does not include the Rockfish Conservation Areas (RCA). For information on the location of the RCA's please see Appendix 2.

WATERS	DATES
Area 11 and 111	
No finfish closures, check for RCA's.	
Area 12	
In Area 12, the waters of Port McNeill Bay westerly of a line from a boundary sign at the north end of the Western Forest Products jetty, true north to a boundary sign on the opposite shore of Ledge Point Peninsula.	Aug 15-Dec 31
In Area 12, the mouth of Scott Cove Creek and Viner Sound shoreward of a line between fishing boundary signs located at King Point and on the point 1 km south from the mouth of Scott Cove Creek.	Aug 15-Sep 30
In Area 12, the waters of the mouth of Klinaklini River (Knight Inlet) shoreward of a line from a fishing boundary sign at the southern entrance to Wahshihlas Bay to a fishing boundary sign at Rubble Point.	Jan 01-Dec 31
In Area 12, the mouth of Kingcome River shoreward of a line from a fishing boundary sign on Petley Point to a fishing boundary sign on a point on the opposite shore of Kingcome Inlet.	Jan 01-Dec 31
In Area 12, the mouth of Wakeman River north of a line connecting two fishing boundary signs located on opposite shores approximately 6 km from the head of Wakeman Sound.	Jan 01-Dec 31
In Area 12, the mouth of Nimpkish River inside a line from a fishing boundary sign at a point on the shore of Vancouver Island approximately 1.5 km east of Broad Point, then to a navigational aid in the middle of Haddington Passage, then to a fishing boundary sign at a point approximately 1 km east of Willow Creek, then to the tidal water boundary signs approximately 100 m upstream of the Highway 19 bridge.	June 01-Nov 30
Subarea 12-20 [Those waters of Parson Bay bounded inside a line from Red Point on Harbledown Island to a marker on the most northwest point of Parson Island, from there following the northern shore to the most easterly point and from there true east to Harbledown Island]	Jun 15-Sep 30
Area 13	
Those waters of Discovery Passage and the Campbell River inside a line true east of the fishing boundary sign at Orange Point to the middle of the channel, then southeasterly down the middle of the channel to the intersection of a line running from a boundary sign on the southern end of Hidden Harbour breakwater, then true east to Quadra Island, is closed to fishing for all finfish, except for the Campbell River Discovery Pier. The area around the Discovery Pier will remain open inside a line running true east 50 meters into Discovery Passage at the north end of the pier, then southeasterly down the Discovery Passage to the intersection of a line running true east 50 meters at the south end of the Discovery Pier.	Oct 01-Oct 31
In Area 13, those waters inside a line from the float at Yaculta Indian Village on Quadra Island true west one nautical mile, thence southeast 160 ⁰ true to the intersection with a line drawn from the fishing boundary sign on Willow Point to the Wilby Shoal light buoy, thence to the Cape Mudge light on Quadra Island.	Jul 15 - Aug 31

WATERS	DATES
In Area 13, the waters of Village Bay inside a line from a fishing boundary sign at the north entrance of Village Bay, Quadra Island, to a boundary sign at the south entrance of Village Bay.	Jun 30-Oct 31
Subarea 13-24 [The waters of Phillips Arm northerly of a line from Hewitt Point north easterly to Shirley Creek on the opposite shore].	Jan 01-Dec 31
Subarea 13-34 [The waters of Salmon Bay, bounded on the north by a line from Graveyard Point to the ferry landing on the opposite shore, and on the south by the downstream side of the first bridge upstream on the Salmon River].	Jun 01-Dec31
Area 14	
In Area 14, Comox Harbour - inside a line from a fishing boundary sign near Trent River to a light at the tip of Goose Spit, except the shallow shore line defined as the waters inside and shoreward of the 2 m depth contour measured below the chart datum (0 tide). You may fish from the shoreline but not for chinook.	May 01-Aug 31
In Area 14, the tidal waters within a 75 m radius of the mouth of the Trent River, the mouth of Hart (Washer) Creek and the mouth of Mallard Creek.	Sep 01-Nov 30
Area 15	
No finfish closures, check for RCA's.	
Area 16	
In Area 16, the waters at the mouth of Sakinaw Creek, east of a line between boundary signs on the north and south sides of Sakinaw Bay.	Jun 15-Sep 15
Area 17	
A portion of Subarea 17-14 southerly from a line from Shaft Point on Newcastle Island to Pimbury Point on Vancouver Island and including a portion of Subarea 17-15 southwesterly of a line from Duke Point to Gallows Point on Protection Island	Jul 15-Oct 25
In Area 17, that portion of the Nanaimo River from the Cedar Bridge to the white square boundary signs approximately 400 m downstream of the Cedar Bridge.	Oct 25-Nov 30
In Area 17, the tidal waters of the Chemainus River and off the Chemainus River mouth, inside a line commencing at Bare Point on Vancouver Island to the light on North Reef, to Sherard Point on Vancouver Island, thence following the shoreline northerly to a boundary sign on the Chemainus River near the Bald Eagle Campground, thence across the river to the opposite bank, thence following the Vancouver Island shoreline northerly to the beginning point.	Jul 15-Oct 31
Area 18	
In Area 18, the waters of Cowichan Bay inside a line from a fishing boundary sign near Separation Point on Vancouver Island to Wilcuma Wharf.	Aug 01-Oct 31
In Subareas 18-7 and 18-8, that portion of Subarea 18-8 that lies easterly of a line from a square white boundary sign at Separation Point to a square white boundary sign at Wilcuma Wharf in Cowichan Bay; and that portion of Subarea 18-7 that lies southerly of a line from a square white boundary sign on Vancouver Island, near 48°46.179'N and 123°34.654'W, to a square white boundary sign on Saltspring Island SE of Burial Islet, near 48°45.992'N and 123°33.777'W, and northerly of a line from a square white boundary sign on Saltspring Island approximately 1.5 nautical miles ESE of Musgrave Point, near 48°43.982'N and 123°31.418'W, to a square white boundary sign on Vancouver Island approximately 0.5 nautical miles NW of Cherry Point, near 48°43.197'N and 123°33.708'W.	Aug 01-Oct 15
Area 19	
In Area 19, the waters of Saanich Inlet inside a line from Whiskey Point to Verdier Point.	Sep 15-Nov 30
Subarea 19-12. [Saanich Inlet, south of Christmas Point]	Sep 01-Nov 30

WATERS	DATES
Area 20	
In Area 20, those waters that are inside a line that begins at a white square boundary sign located approximately 0.8 nautical miles west of Owen Point, then to 48°32.45' north latitude and 124°32.05' west longitude, then to the Port San Juan Light and Whistle Buoy, then to Woods Nose, then across Port San Juan to a white square boundary sign at 48°33.23' north latitude and 124°28.55' west longitude.	Aug 15-Sep 03
Area 21 and 121	
Those portions of Subareas 121-1 and 121-2 inside a line from 48°34.00' north latitude and 125°06.00' west longitude, thence to 48°34.00' north latitude and 124°54.20' west longitude, thence to 48°29.62' north latitude and 124°43.40' west longitude, thence following the International Boundary between Canada and the United States of America to 48°29.55' north latitude and 124°56.20' west longitude, thence in a straight line to the point of commencement [Swiftsure Bank]	Jan 01-Dec 31
Area 22 [Nitinat Lake]	
In Area 22, those waters of Nitinat Lake that lie inside or northeasterly of a line from boundary signs at the northeastern and northwestern tips of land at the head of the lake including the tidal portion of the Nitinat River..	Aug 01-Oct 31
Area 23 and 123	
In Subarea 23-1 the lower Somass River from a line commencing at a boundary sign in upper Alberni Harbour situated at 49°14.19 north latitude and 124°50.23 west longitude thence through the southern most point of Hoik Island thence to the flashing green light at the mouth of the Somass River thence due east to a boundary sign on the opposite shore and to a line at the tidal boundary markers at Paper Mill Dam on the Somass River.	Jul 24-Sep 30
That portion of Subarea 23-3 bounded by a line west of Brooksby Point to Burrough Point at the mouth of Uchucklesit Inlet.	Jun 30 – Oct 31
That portion of Subarea 23-2 bounded on the north by line drawn 66° true from Hocking Point to a square, white fishing boundary sign on the eastern shore of Alberni Inlet, and on the south by a line from a square, white fishing boundary sign at Chesnucknuw Creek to a square, white fishing boundary sign on the western shore of Alberni Inlet.	Aug 01-Sep 30
Those portions of Subarea 23-3 bounded on the north by a line from Star Point to a white square fishing boundary sign at the mouth of Handy Creek and on the south by a line from a Mutine Point to the navigation light at Chup Point. (in Area 23).	Aug 01-Sep 30
In Subarea 23-4 that portion of Rainy Bay inside a line commencing at a boundary sign on Seddall Island south of Ecoole to a boundary sign on Chup Point	Aug 01-Sep 30
That portion of Subarea 23-4 inside a line from a square, white fishing boundary sign at the eastern side of the entrance to Poett Nook to San Jose Islet Light, thence to a square, white fishing boundary sign at the southern tip of Congreve Island, thence northeastward to a square, white fishing boundary sign on Vancouver Island.	Aug 01-Sep 30
Area 24 and 124	
In Area 24, the waters of Kennedy Cove, inside a line between fishing boundary signs on the outer southwest corner and the outer northeast corner of the Cove.	Jan 01-Dec 31
That portion of Sub area 24-4 southerly of a line commencing on Flores Island at 49 18.005 N, 126 04.141 W then to 49 18.250 N, 126 03.132 W on McKay Island then following the McKay Island shoreline to 49 18.404 N, 126 01.939 W then to 49 19.279 N, 126 01.399 W on Vancouver Island,	Aug 01-Oct 31
Sub-area 24-5,	Aug 01-Oct 31
That portion of Sub area 24-6 northly of a line commencing at Kutcouc Point (49 14.961N, 126 04.817W) on Flores Island to 49 14.637 N, 126 00.825 W on Vancouver Island near the Chetarpe I.R.	Aug 01-Oct 31

WATERS	DATES
That portion of Sub area 24-9 easterly of a line commencing at Ginnard Point (49 08.069N, 125 51.169) on Meares Island to 49 07.483 N, 125 51.811 W on Vancouver Island to the subarea boundary at Auseth Point.	Aug 01-Oct 31
Sub area 24-13 and that portion of Sub area 24-3 northerly of a line commencing at 49 24.640N, 126 08.646W on Vancouver Island to 49 24.562N, 126 07.480 on Obstruction Island then to the sub area boundary (commencing at 49 25.419 N, 126 07.347 W on Vancouver Island to 49 24.990 N, 126 06.655 W on Obstruction Island)	Aug 01-Oct 31
Area 25 and 125	
Subarea 25-1 [Those waters of Muchalat Inlet lying easterly of the Gold River Harbour Limit].	Jul 15-Oct 15
That portion of Subarea 25-4 inside a line drawn between square white fishing boundary signs on opposite sides of the entrance to Hisnit Inlet.	Jul 15-Oct 15
That portion of Subarea 25-4 northwesterly of a line from Salter Point to Hoiss Point.	Jul 15-Oct 15
That portion of Subarea 25-5 inside a line drawn between square white fishing boundary signs on opposite sides of the entrance to Nesook bay.	Jul 15-Oct 15
That portion of Subarea 25-5 inside a line drawn between square white fishing boundary signs on the opposite sides of the entrance to Head Bay.	Jul 15-Oct 15
That portion of Subarea 25-6 northwesterly of a line from Boston Point to Salter Point(Kendrick Inlet)..	Jul 15-Oct 15
That portion of Subarea 25-8 northerly of a line from Mozino Point to a fishing boundary sign on the opposite shore.	Jul 15-Oct 15
The portion of Subarea 25-8 southeasterly of a line from the most northerly tip of Strange Island to a square white boundary sign on the opposite shore of Tahsis Inlet.	Jul 15-Oct 15
Subarea 25-10 [Zeballos Inlet northerly of boundary signs near Little Zeballos River]	Jul 15-Oct 15
Subarea 25-16 [Tahsis].	Jul 15-Oct 15
Area 26 and 126	
No fishfish closures, check for RCA's.	
Area 27 and 127	
In Area 27, the portion of Varney Bay from the Marble River tidal boundary downstream to the fishing boundary signs at the entrance of Varney Bay.	Jul 01-Dec 31
Area 28	
In Area 28, the waters of Howe Sound easterly of a line drawn from a fishing boundary sign 300 m north of the mouth of Britannia Creek to the southern tip of Minaty Bay.	May 30-Sep 30
In Area 28, the waters of Mannion Bay (Deep Bay) on Bowen Island, lying westerly of a line between two fishing boundary signs near the entrance to Mannion Bay.	Sep 01-Dec 31
That portion of Subarea 28-2 bounded by a line commencing from the southernmost point of Whytecliff Park, thence in a straight line to a point located 100 m east of the most south easterly point of Whyte Islet, thence following the southern shoreline of Whyte Islet at a distance of 100 m to a point lying 100 m from the most south westerly point of Whyte Islet, thence in a straight line to a point lying 100 m west of White Cliff Point, thence following the shoreline at a distance of 100 m in a northerly direction to a point 100 m north of Lookout Point, thence following the shoreline at a distance of 100 m in an easterly direction to a point 100 m perpendicular to the most northerly point of Whytecliff Park, thence to the northernmost point of Whytecliff Park on the mainland [Whytecliff Park].	Jan 01-Dec 31
That portion of Subarea 28-4 east of a line drawn from the white fishing boundary sign located at the south shore of Porteau Cove, northerly in a straight line to the white fishing boundary sign located on the north shore of Porteau Cove [Porteau Cove].	Jan 01-Dec 31

WATERS	DATES
That portion of Subarea 28-6 bounded by a line commencing at the southwest entrance to Starboat Cove, thence seaward in a southwest direction for 85 m, thence westerly following the shoreline for 100 m, thence to the southernmost tip of Point Atkinson (125 m east of the lighthouse) [Point Atkinson].	Jan 01-Dec 31
Area 29	
No fishfish closures, check for RCA's.	

Appendix 7: Freshwater Salmon Sport Fishing Guidelines

REGION 1: VANCOUVER ISLAND

Please read these guidelines in conjunction with the *Freshwater Fishing Regulations Synopsis*.

1. Unless otherwise stated in the table, the daily limit in all waters of Region 1 is zero (0).
2. The aggregate daily limit for all species of Pacific salmon (other than kokanee) from tidal and non-tidal waters combined is four (4).
3. All retained Chinook and sockeye must measure 30 cm or more from tip of nose to tail fork, and all coho must measure 25 cm or more.
4. A single, barbless hook is in effect year round for all streams in Region 1.
5. There is an annual limit of 10 adult Chinook from all non-tidal waters. All retained adult Chinook must be recorded immediately on the back of your Provincial Non-tidal Angling Licence. An "adult Chinook" in Region 1 is defined as being over 50 cm.
6. **IT IS IMPORTANT TO NOTE THAT CHANGES TO THE TABLE BELOW MAY OCCUR IN-SEASON AND TO CHECK WITH YOUR LOCAL DFO OFFICE BEFORE FISHING TO BECOME AWARE OF ANY IN SEASON CHANGES.**

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
Campbell River	Downstream of the confluence with the Quinsam River.	Pink	Aug 15-Sept 15	4 per day.
		Coho	Oct 01-Dec 31	4 per day, only 2 over 35 cm, both of which must be hatchery marked.
Cayeghle River	Including Colonial River	Coho	Jan 01-Dec 31	1 per day.
Cluxewe River		Coho	Jan 01-Dec 31	2 hatchery marked fish per day.
Colonial River	See Cayeghle River	Coho	Jan 01-Dec 31	1 per day.
Conuma River		Chinook	Aug 25-Dec 31	2 per day, only 1 over 77 cm
		Coho	Aug 25-Dec 31	2 per day
Cowichan River	Downstream from Skutz Falls to the Highway No. 1 bridge.	Chinook	Jan 01-Dec 31	non retention.
		Coho	Jan 01-Dec 31	1 per day, none over 35cm.
		Coho	Oct 29- Nov 30	Opportunities on coho over 35 cm may become available. Contact your local DFO office.
	Lower Marie Canyon (described as 50 metres below the confluence with the unnamed creek which drains Mayo Lake) downstream to the tidal water boundary	All	Aug 1 – Nov. 15	No Fishing
	Fly Fishing only Downstream of the weir at Cowichan Lake, to lower Marie Canyon (described as 50 metres below the confluence with the unnamed creek which drains Mayo)	All	Aug 1 – Nov. 15	Fly Fishing Only
Goldstream River		All	Jan 01-Dec 31	No fishing for salmon.

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
Koksilah River	Including tributaries.	Chinook	Jan 01-Dec 31	non retention.
		Coho	Jan 01-Dec 31	1 per day, none over 35 cm.
Nahwitti River		Coho	Jan 01-Dec 31	1 per day.
Nanaimo River	Including tributaries, except in the area described below	Coho	Oct 15-Mar 31	1 per day, none over 35 cm.
	Cedar Road Bridge upstream for approximately 400 meters to square white boundary signs located near the Hwy 19 bridge crossing.	All	Sep 15-Oct 30	<i>No fishing for salmon.</i>
	Upstream side of the Cedar Bridge, upstream to the end of Boswell Rd (commonly known as "Firehall Pool".	Coho	Nov 01-Mar 31	1 per day, none over 35 cm.
Chum		Nov 01-Nov 30	2 per day.	
Nitinat River	Upstream of Parker Creek	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
	Downstream of Parker Creek, except in the areas and times described below.	Chinook	Aug 15-Sep 30	2 per day, only 1 over 77 cm
		Coho	Oct 15-Dec 31	2 per day
		Chum	Oct 15-Dec 31	2 per day.
	Within 100 meter radius of the Nitinat River hatchery water intake and fishway.	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
	Between fishing boundary signs located approximately 100 meters above and below Red Rock Pool.	All	Aug 25-Dec 31	<i>No fishing for salmon.</i>
From 50 meters upstream to 50 meters downstream of the Nitinat River Bridge.	All	Aug 25-Dec 31	<i>No fishing for salmon.</i>	
Puntledge and Courtenay Rivers	Between boundary signs located 100 meters upstream and downstream of the confluence with Morrison Creek.	All	Oct 01-Nov 30	<i>No fishing for salmon.</i>
	Downstream from a boundary marker located 75 meters downstream of the Puntledge River Hatchery counting fence.	Chinook	Oct 01-Nov 30	1 per day.
		Coho	Oct 01-Nov 30	4 per day, only 2 over 35cm.
		Chum	Oct 01-Nov 30	2 per day.
Qualicum River		Chinook	Aug 01-Oct 15	4 per day, none over 62 cm
			Oct 16-Dec 31	4 per day, only 2 over 62cm.
		Coho	Jan 01-Dec 31	4 per day, only 2 over 35cm.
		Chum	Oct 01- Nov 30	1 per day.
	From the Reserve boundary below the Big Qualicum hatchery downstream to the Highway 19 A Bridge.	All	Nov 1-Dec 31	<i>No fishing for salmon.</i>

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
Little Qualicum River		Chinook	Oct 01-Nov 30	1 per day.
		Chum	Oct 01-Nov 30	1 per day.
		Coho	Oct 01-Nov 30	2 per day.
Quatse River		Coho	Jun 15-Mar 31	2 hatchery marked fish per day.
Quinsam River		Coho	Oct 01-Mar 31	4 per day, only 2 over 35 cm, both of which must be hatchery marked
		Pink	Aug 15-Sep 15	4 per day, none less than 30 cm.
Reay Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
San Juan River		Coho	Oct 01-Dec 31	1 per day.
Seymour River		Coho	Jan 01-Dec 31	2 per day.
Shawnigan Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
Somass River	Including Stamp River and tributaries, except in those areas and times listed below	Chinook	Aug 25-Dec 31	2 per day, only 1 over 77 cm.
		Coho	Aug.25-Dec 31	2 per day
	Tidal boundary at Papermill Dam on the Somass River to boundary signs approximately 1.0 km upstream (Falls Road Gravel Pit and the southernmost end of Collins Farm/Arrow Vale Campground-Hector Road)	All	Aug 25-Nov 15	<i>No fishing</i>
	Upstream of boundary signs located approx 500 meters downstream of Stamp River Falls to boundary signs located approximately 200 m. upstream (above) Stamp River Falls.	All	Jun 15-Nov 15	<i>No fishing.</i>
	From boundary signs on either side of the Stamp River located at the inlet to the Stamp River (hatchery) lagoon downstream approximately 750 meters to boundary signs on either side of the Stamp River	All	Aug 25-Oct 31	<i>No fishing.</i>
From boundary signs on either side of the Stamp River at the Powerline Crossing downstream approximately 500 meters to boundary signs on either side of the Stamp River at the inlet to the Stamp River (hatchery) lagoon.	All	October 01 until October 14	<i>No fishing</i>	
Stamp River - see Somass River				
Washlawlis River		Coho	Jan 01-Dec 31	1 per day.
Waukwaas River		Coho	Jan 01 Dec 31	1 per day.

FRESHWATER SALMON SPORT FISHING REGULATIONS REGION 2: LOWER MAINLAND

1. Unless otherwise stated in the table, the daily limit in all waters of Region 2 is zero (0).
2. The aggregate daily limit for all species of Pacific salmon (other than kokanee) from tidal and non-tidal waters combined is four (4).
3. All retained coho must measure 25 cm or more from tip of nose to tail fork, and all retained Chinook, chum, pink, and sockeye must measure 30 cm or more from tip of nose to tail fork.
4. A single, barbless hook is in effect year round for all streams in Region 2.

5. There is an annual limit of 10 adult Chinook from all non-tidal waters. All retained adult Chinook must be recorded immediately on the back of your Provincial Non-tidal Angling Licence. An "adult Chinook" in Region 2 is defined as being over 50 cm except in the following areas where an "adult Chinook" is defined as being over 62 cm:
- the Fraser River downstream of the powerline crossing approximately 1 km upstream of the Aggasiz/Rosedale bridge from Sep 01 - Dec 31,
 - the Chilliwack/Vedder River (including Sumas River); the Harrison River and the Capilano River.

6. IT IS IMPORTANT TO NOTE THAT CHANGES TO THE TABLE BELOW MAY OCCUR IN-SEASON AND TO CHECK WITH YOUR LOCAL DFO OFFICE BEFORE FISHING TO BECOME AWARE OF ANY IN SEASON CHANGES.

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
Alouette River and tributaries	Upstream of 216th St. including the North Alouette River and tributaries to that part	Chinook	Apr 01-June 30	<i>No fishing for Chinook.</i>
			July 01-Mar 31	1 fish per day
	Coho	Apr 01-Aug 31	<i>No fishing for coho.</i>	
		Downstream of a line between two triangular white fishing boundary signs in Allco Park	Coho	Oct 01-Dec 31
Ashlu River - See Squamish River				
Birkenhead River		All	Apr 2 – Sep 15	<i>No fishing for salmon.</i>
Booth Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Brunette River	Downstream of Cariboo Rd.	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Little Campbell River	Downstream of 12 th Ave. including tributaries to that part	Chinook	Aug 01-Sep 30	1 hatchery marked fish per day.
			Oct 1-Dec 31	<i>No fishing for Chinook.</i>
		Coho	Oct 01-Dec 31	1 hatchery marked fish per day.
Capilano River	Including tributaries	Coho	Jan 01-Aug 31	4 hatchery marked fish per day, only 2 over 30 cm.
			Sep 01-Dec 31	4 hatchery marked fish per day.
		Chinook	Jan 01-Dec 31	4 per day, only 1 over 62 cm.
Chapman Creek	Upstream of tidal water boundary signs located below the Highway 101 Bridge	Coho	Jul 01-Mar 31	4 hatchery marked fish per day, only 2 over 35 cm.
		Chinook	Jul 01-Mar 31	4 per day, only 2 over 50 cm.
Cheakamus River	Upstream of the Bailey Bridge approx. 2 km north of where the Squamish Valley Rd crosses the Cheakamus	Coho	Sep 15-Dec 31	1 hatchery mark fish per day
		Chinook	Jan 01-Dec 31	<i>No fishing for Chinook.</i>
	Downstream of the Bailey Bridge approx. 2 km north of where the Squamish Valley Rd crosses the Cheakamus	Chinook	Jan 01-Dec 31	<i>No fishing for Chinook.</i>
		Coho	Sep 15-Dec 31	1 hatchery mark fish per day
		Chum	Sep 15-Dec 31	2 per day.

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
Chehalis River	Downstream of the logging bridge 2.4 km downstream of Chehalis Lake, including tributaries to that part	All	Sep 01-Dec 31	Daylight hours only.
		Coho	Jul 01-Mar 31	4 hatchery marked fish per day.
		Chinook	Jan 01-May 31	No fishing for Chinook.
			Jun 01-Aug 10	4 per day, only 1 over 50 cm.
			Aug 11-Sep 15	No fishing for Chinook.
			Sep 16-Dec 31	4 per day, only 1 over 62 cm.
Chum	Nov 1-Nov 30	2 per day.		
Chilliwack/Vedder River (including Sumas River)	Downstream from Slesse Creek including that portion of the Sumas River from the Barrow Town Pump Station downstream to boundary signs near the confluence with the Fraser River	All	Sep 01-Dec 31	Daylight hours only.
		Coho	Jul 01-Mar 31	4 hatchery marked fish per day.
		Chinook	Jul 01-Dec 31	4 per day, only 1 over 62 cm.
		Pink	Jul 01-Dec 31	2 per day.
		Chum	Jul 01-Mar 31	1 per day.
Cogburn Creek		Coho	Sep 01-Mar 31	2 hatchery marked fish per day.
Coquitlam River		Chinook	Apr 01-June 30	No fishing for Chinook
			July 1-Mar 31	1 fish per day
		Coho	Oct 01-Dec 31	1 hatchery marked fish per day.
Dewdney Slough - See Nicomen Slough				
Elaho River - See Squamish River				
Fraser River	Salmon closures may occur from early September to mid-October to protect co-migrating Upper Fraser and Thompson River coho. Please contact your local DFO office for details.			
	From the downstream side of the CPR Bridge at Mission upstream to the Alexandra Bridge, except Landstrom Bar (described below) which is closed to all angling from May 1 to Oct. 31.	All	Jul 01-Dec 31	Daylight hours only.
		Coho	Mid Oct-Dec 31	Opportunities expected.
		Chinook	May 1-June 30	0 per day
			July 1 - 31	1 per day over 30cm and under 77cm Subject to in-season changes. Contact your local DFO office for details.
			August 1 -Aug 31	4 per day, only 1 over 50cm Subject to in-season changes. Contact your local DFO office for details.
			Sep 01-Dec 31	4 per day, only 1 over 62 cm.
		Chum	Jan 01-Dec 31	2 per day.
		Pink	Jan 01-Dec 31	2 per day.
		Sockeye	August	Opportunities expected.
Landstrom Bar is those waters of the Fraser River inside a line beginning at a fishing boundary sign on the eastern end of Landstrom Bar, then to a fishing boundary sign on the opposite bank, then to a fishing boundary sign at the southern end of Croft Island, then westerly to a fishing boundary sign on the nearest bank of the river, then following the river bank to the beginning point.				
Harrison River	From the outlet of Harrison Lake downstream to the	All	Jul 01-Dec 31	Daylight hours only.
		Coho	Sep 01-Mar 31	4 hatchery marked fish per day.

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
	Highway 7 bridge	Chum	Jan 01-Dec 31	2 per day.
	From the Highway 7 bridge downstream to the confluence with the Fraser River	All	Jul 01-Dec 31	Daylight hours only.
		Coho	Sep 01-Mar 31	4 hatchery marked fish per day.
		Chinook	Sep 01-Dec 31	4 per day, 1 over 62 cm
		Chum	Jan 01-Dec 31	2 per day.
		Pink	Jan 01-Dec 31	2 per day.
		Sockeye	August	Opportunities expected.
Hope Slough		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Indian River		Chinook	Jan 01-Dec 31	<i>No fishing for Chinook.</i>
Kanaka Creek	Upstream of the 112th Ave. bridge	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
	Downstream of the 112th Ave. bridge	Coho	Nov 1-Nov 30	1 hatchery marked fish per day.
Khartoum Lake		All	Jan 01-Dec 31	Single barbless hook.
		Chinook	Jan 01-Dec 31	4 per day.
		Coho	Jan 01-Dec 31	4 per day.
Lillooet River		All	Apr 2-Jul 31	<i>No fishing for salmon.</i>
Lois Lake		All	Jan 01-Dec 31	Single barbless hook.
		Chinook	Jan 01-Dec 31	4 per day.
		Coho	Jan 01-Dec 31	4 per day.
Mamquam River		Coho	Sep 15-Dec 31	1 hatchery marked fish per day
McLennan Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Nicomel River	Downstream of 208th Street	Chinook	Sep 01-Dec 31	1 per day
		Coho	Oct 01-Dec 31	1 hatchery marked fish per day.
Nicomel (including Dewdney) Slough	From the confluence of Siddle (Bell's) Creek downstream to the Fraser River	Coho	Jan 01-Dec 31	4 hatchery marked fish per day, only 2 over 35 cm.
		Chum	Jan 01-Dec 31	2 per day.
Norrish (Suicide) Creek		Coho	Jan 01-Dec 31	4 hatchery marked fish per day, only 2 over 35 cm.
Pitt River	Upper and Lower, including tributaries	Chinook	Jan 01-Dec 31	<i>No fishing for Chinook.</i>
Sakinaw Lake	East of a line from a boundary sign north of the Sakinaw boat launch, southwesterly to a boundary sign at 49°11.50'N and 123°58.45'W (this encompasses the bay at Haskins Creek and the unnamed bay southwest of the boat launch); and the body of water known as Bear Bay, east of 124°02.13'W (marked by boundary signs)	All	Nov 1-Dec 31	<i>No fishing for salmon.</i>
Scott (Hoy) Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Serpentine River	Downstream of 168 th Street	Chinook	Aug 1-Dec. 31	1 per day.
		Coho	Oct 01-Dec 31	1 hatchery marked fish per day.
		Chum	Oct 01-Oct 31	1 per day.

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
Seymour River		Chinook	Sep 01-Dec 31	2 per day, none over 62 cm.
		Coho	Jan 01-Dec 31	1 hatchery marked fish per day.
Silverdale Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Squamish River (Including Ashlu, Elaho, and Powerhouse Channel) See also Cheakamus River and Mamquam River.	Downstream of the boundary signs at the powerline crossing approx. 1.5 km upstream of the confluence with the Cheakamus	Coho	Sep 15-Dec 31	1 hatchery marked fish per day.
Stave River	Downstream of B.C. Hydro Dam to the CPR Railway Bridge	Coho	Jan 01-Dec 31	4 hatchery marked fish per day, only 2 over 35 cm.
		Chinook	Jan 01-Dec 31	1 per day.
		Chum	Jan 01-Dec 31	2 per day.
		Pink	Jan 01-Dec 31	2 per day.
Sumas River - See Chilliwack River				
Vedder River - See Chilliwack River				

FRESHWATER SALMON SPORT FISHING OPPORTUNITIES REGION 3: THOMPSON-NICOLA

Please read these regulations in conjunction with the *Freshwater Fishing Regulations Synopsis*.

1. Unless otherwise stated in the table, the daily limit in all waters of Region 3 is zero (0).
2. The aggregate daily limit for all species of Pacific salmon (other than kokanee) from tidal and non-tidal waters combined is four (4).
3. All retained Chinook and sockeye must measure 30cm or more from tip of nose to tail fork.
4. A single, barbless hook is in effect year round for all streams in Region 3.
5. There is an annual limit of 10 adult Chinook from all non tidal waters. All retained adult Chinook must be recorded immediately on the back of your Provincial Non-tidal Angling licence. An "adult Chinook" in Region 3 is defined as being over 50 cm.
6. **IT IS IMPORTANT TO NOTE THAT CHANGES TO THE TABLE BELOW MAY OCCUR IN-SEASON AND TO CHECK WITH YOUR LOCAL DFO OFFICE BEFORE FISHING TO BECOME AWARE OF ANY IN SEASON CHANGES.**

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
All	Any lake or stream or part thereof in Region 3, unless otherwise stated below	Coho, sockeye, pink and chum	Jan 01-Dec 31	<i>No fishing for coho, sockeye, pink or chum.</i>
Adams Lake	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Adams River	Upstream and downstream of Adams Lake	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Albred River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Anstey River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Barriere River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Bonaparte River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Bridge River	downstream from Road 40 bridge to the confluence of the Fraser R. (see also Fraser R. opportunity)	Chinook	Jun 22- Jul 15 Sunday through Thursday only 0600-2100 hrs daily	1 per day over 30cm and under 77cm <i>No fishing for Chinook on Friday or Saturday.</i> Subject to in-season changes. Contact your local DFO office for details.
		All	Jan 01-Jun 20 Jul 17-Dec 31	<i>No fishing for salmon.</i>
Cayoosh Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Clearwater River	from Clearwater Lake downstream to the confluence of the North Thompson R. (except CLOSED from Murtle R downstream to 35km post from Aug 16 - 31 to protect Mahood R. Chinook)	Chinook	Aug 01-Aug 31	1 per day over 30cm and under 77cm Monthly quota is 4 over 50cm, including adult Chinook caught and retained from North Thompson R. Subject to in-season changes. Contact your local DFO office for details.
		All	Sep 01-Dec 31	<i>No fishing for salmon.</i>

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
Coldwater River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Deadman River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Dunn Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Eagle River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Finn Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Fraser River	mainstem of the Fraser R. in Region 3 except for that portion of the Fraser R. described below	Chinook	August 01-Sep 17	4 per day, none over 50 cm.
	from the confluence of the Fraser/Seton River downstream to fishing boundary signs located on both sides of the river approximately 4 km downstream of the town of Lillooet.	Chinook	Jul 01-Sep 10	1 per day over 30cm and under 77cm Subject to in-season changes. Contact your local DFO office for details.
		Sockeye	2008	No opportunities anticipated.
	from the confluence with the Bridge R. downstream to the BC Railway bridge, 2km north of Lillooet (<i>see also Bridge River opportunity</i>)	Chinook	Jun 22- Jul 15 Sunday through Thursday only 0600-2100 hrs daily	1 per day over 30cm and under 77cm <i>No fishing for Chinook on Friday or Saturday.</i> Subject to in-season changes. Contact your local DFO office for details.
	Upstream of Thompson River confluence	All	Sep 28-Dec 31	<i>No fishing for salmon.</i>
	Downstream of Thompson River confluence	All	Sep 21-Dec 31	<i>No fishing for salmon.</i>
Lemieux Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Little Shuswap Lake – See Shuswap Lake				
Louis Creek	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Mahood River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Maka Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Mara Lake – See Shuswap Lake				
Nahatlatch River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Nicola River	Upstream and downstream of Nicola Lake	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
North Thompson River	downstream of Station Road Bridge in Clearwater to the Ferry crossing at Little Fort.	Chinook	Aug 01-Aug 31	1 per day over 30cm and under 77cm Monthly quota is 4 over 50 cm, including adult Chinook caught and retained from Clearwater R. Subject to in-season changes. Contact your local DFO office for details.
	Mainstem river	All	Sep 23-Dec 31	<i>No fishing for salmon.</i>
Salmon River	Upstream of CPR Bridge	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Seymour River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
Shuswap Lake	Including Little Shuswap and Mara Lakes (see exception under South Thompson River and for Little Shuswap Lake)	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
South Thompson River	Between Little Shuswap Lake and Hwy 5 Bridge at Kamloops	All	Jan 01-Dec 31	<i>No fishing for salmon. (See Chinook exception below).</i>
	From the green can buoy near outlet of Little River to 100m downstream of Campbell Creek	Chinook	Aug 05-Sep 22	4 per day, only 2 over 50 cm. Monthly quota is 6 over 50 cm.
		All	Sep 23-Dec 31	<i>No fishing for salmon.</i>
Thompson River	From Kamloops Lake downstream to the confluence with the Fraser River	All	Jan 01-May 31 Sep 18-Dec 31	<i>No fishing for salmon.</i>
	from inlet of Kamloops Lake downstream to the confluence with the Fraser River	Chinook	Aug 01-Sep 17	4 per day, none over 50 cm (See exceptions below).
	from the upstream side of the mouth of the Nicola R. downstream to the Hwy 8 bridge at Spences Bridge	Chinook	July 18-Aug 11 Sat- Mon 06:00-21:00 only	4 per day, only 1 over 50 cm. Environmental conditions in Nicola River may result in closure. Check with your local DFO office for updates.
	from confluence with Bonaparte River to boundary sign approx. 1 km downstream. North Bank of the river only	Chinook	To be determined	Opening dependent on in-season Chinook run size to Bonaparte fishway by July 25. Check with your local DFO office for updates.
	from Hwy 8 bridge at Spences Bridge upstream to a fishing boundary sign located approx. 1 km downstream of Martel (west side of river only). NOTE: These waters open to fishing are subject to change.	Chinook	Aug 22-Sept 03	4 per day, only 1 over 50 cm. Check with your local DFO office for updates.
	e) 3 locations: i.) outlet of Kamloops Lake to 500m d/s of the Hwy 1 bridge ii.) Boundary signs at the upstream end of Juniper Beach provincial park campground to approx 1km downstream of Juniper Beach provincial park campground. iii.) from the upstream side of the mouth of the Nicola R to Bighorn.	Sockeye	2008	No opportunities anticipated.

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
	Five locations i) Savona – Lake outlet to 1 km downstream of the Hwy bridge. ii) Walhachin bridge – 1km upstream and downstream iii) Juniper Beach park upstream boundary to approx 1.5 km downstream. iv) Ashcroft – 1km upstream of mouth of Bonaparte R. v) Existing Martel Chinook fishery boundary to Goldpan Provincial Park.	Chinook	Aug 21– Sep 20	4 per day, 1 over 50 cm.

FRESHWATER SALMON SPORT FISHING OPPORTUNITIES
REGION 5A: CARIBOO
(Part A, Fraser River Watershed, Management Units 5-1 to 5-5 and 5-12 to 5-16)

Please read these regulations in conjunction with the *Freshwater Fishing Regulations Synopsis*.

1. Unless otherwise stated in the table, the daily limit for salmon in all waters of Region 5 is zero (0).
2. The aggregate daily limit for all species of Pacific salmon (other than kokanee) from tidal and non-tidal waters combined is four (4).
3. All retained Chinook must measure 30 cm or more from tip of nose to fork in tail (fork length).
4. A single, barbless hook is in effect year round for all streams in Region 5.
5. There is an annual limit of 10 adult Chinook from all non-tidal waters. All retained adult Chinook must be recorded immediately on the back of your Provincial Non-tidal Angling Licence. An "adult Chinook" in Region 5 is defined as being over 50 cm (fork length).
6. **IT IS IMPORTANT TO NOTE THAT CHANGES TO THE TABLE BELOW MAY OCCUR IN-SEASON AND TO CHECK WITH YOUR LOCAL DFO OFFICE BEFORE FISHING TO BECOME AWARE OF ANY IN SEASON CHANGES.**

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
All	Any lake or stream or part thereof in Region 5A unless otherwise stated below	Sockeye, Pink, Coho and Chum	Jan 01-Dec 31	<i>No fishing for sockeye, pink, coho or chum.</i>
Baker Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Cariboo River	From confluence of the Quesnel River to the confluence of Seller Creek.	Chinook	Jul 27-Aug 18	Opportunities expected.
Chilcotin Lake		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Chilcotin River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Chilko River	From Chilko Lake downstream to boundary signs 1.5 km upstream of Siwash Bridge (12 km upstream from Chilcotin River junction).	Chinook	Jul 25-Aug 16	Opportunities expected.
Elkin Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Fraser River	Including tributaries	All	Sep 21-Dec 31	<i>No fishing for salmon.</i>
Horsefly River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
McKinley Creek	Downstream of McKinley Lake	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Mitchell River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Quesnel Lake		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
	Horsefly Bay located on Quesnel Lake inside a line connecting fishing boundary signs located on opposite shorelines at the entrance to the bay.	Sockeye	August	Opportunities expected.
Quesnel River	Downstream of Poquette Creek	Chinook	Jul 15-Sep 1	Opportunities expected.

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
	Downstream from boundary signs at the mouth of Quesnel Canyon to the Johnston Subdivision bridge near Quesnel, BC	Sockeye	August	Opportunities expected.
Taseko River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Westroad (Blackwater) River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>

FRESHWATER SALMON SPORT FISHING OPPORTUNITIES REGION 7: OMINECA-PEACE

Please read these regulations in conjunction with the *Freshwater Fishing Regulations Synopsis*.

1. Unless otherwise stated in the table, the daily limit in all waters of Region 7 is zero (0).
2. The aggregate daily limit for all species of Pacific salmon (other than kokanee) from tidal and non-tidal waters combined is four (4).
3. All retained Chinook must measure 30 cm or more from tip of nose to fork in tail (fork length).
4. A single, barbless hook is in effect year round for all streams in Region 7.
5. There is an annual limit of 10 adult Chinook from all non-tidal waters. All retained adult Chinook must be recorded immediately on the back of your Provincial Non-tidal Angling Licence. An "adult Chinook" in Region 7 is defined as being over 50 cm (fork length).
6. **IT IS IMPORTANT TO NOTE THAT CHANGES TO THE TABLE BELOW MAY OCCUR IN-SEASON AND TO CHECK WITH YOUR LOCAL DFO OFFICE BEFORE FISHING TO BECOME AWARE OF ANY IN SEASON CHANGES.**

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
All	Any lake or stream or part thereof in Region 7 unless otherwise stated below.	Sockeye, Pink, Coho and Chum	Jan 01-Dec 31	<i>No fishing for sockeye, pink, coho or chum.</i>
Bowron River	From the Forestry Road bridge nearest to the Fraser River, upstream to the Bowron Forest Road Bridge crossing near Haggen Creek.	Chinook	Jul 15-Aug 15	Opportunities expected.
Endako River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Fraser River	From power lines crossing near College Heights upstream to the Northwoods Bridge	Chinook	Jul 10-Jul 25	Opportunities expected.
	Above McLennan River	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
	Mainstem river	All	Sep 30-Dec 31	<i>No fishing for salmon.</i>
Goat River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Holmes River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
McGregor River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Nechako River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
	Upstream from the boundary signs at the confluence with the Fraser river to the Highway 97 Bridge.	Sockeye	August	Opportunities anticipated.
Salmon River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Slim Creek	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Stuart River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Swift Creek	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Westroad (Blackwater) River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>

FRESHWATER SALMON SPORT FISHING OPPORTUNITIES REGION 8: OKANAGAN

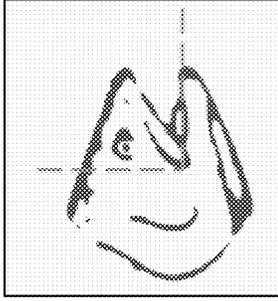
Please read these regulations in conjunction with the *Freshwater Fishing Regulations Synopsis*.

1. Unless otherwise stated in the table, the daily limit in all waters of Region 8 is zero (0).
2. The aggregate daily limit for all species of Pacific salmon (other than kokanee) from tidal and non-tidal waters combined is four (4).
3. All retained Chinook must measure 30 cm or more from tip of nose to fork in tail (fork length).
4. A single, barbless hook is in effect year round for all streams in Region 8.
5. There is an annual limit of 10 adult Chinook from all Non-tidal waters. All retained adult Chinook must be recorded immediately on the back of your Provincial Non-tidal angling licence. An "adult Chinook" in Region 7 is defined as being over 50 cm (fork length).
6. **IT IS IMPORTANT TO NOTE THAT CHANGES TO THE TABLE BELOW MAY OCCUR IN-SEASON AND TO CHECK WITH YOUR LOCAL DFO OFFICE BEFORE FISHING TO BECOME AWARE OF ANY IN SEASON CHANGES.**

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS / GEAR
All	Any lake or stream or part thereof in Region 8, unless otherwise stated below	Sockeye, pink, coho and chum	Jan 01-Dec 31	<i>No fishing for sockeye, pink, coho or chum.</i>
Bessette Creek	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Mabel Lake	South of fishing boundary signs located on opposite shores approximately 1 km from Wap Creek.	Chinook	12:00 Jul 25- 12:00 Sep 12	4 per day, only 2 over 50 cm. Monthly quota is 4 over 50cm, including all Shuswap River and Mabel Lake Chinook.
Shuswap River	Between Shuswap Falls and Mabel Lake.	Chinook	12:00 Jul 25 - 12:00 Aug 15	4 per day, only 2 over 50 cm. Monthly quota is 4 over 50cm, including all Shuswap River and Mabel Lake Chinook.
	Upstream from signs above Mara Bridge to Mabel Lake.	Chinook	12:00 Jul 25 - 12:00 Sep 12 05:00-22:00 hours only	4 per day, only 2 over 50 cm. Monthly quota is 4 over 50cm, including all Shuswap River and Mabel Lake Chinook.
	All sections	Chinook	12:00 Sep 12 – Dec 31	<i>No fishing for Chinook</i>
Wap Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>

Appendix 8. Chinook and coho head retention, storage and delivery requirements.

1. Head Retention: Troll vessel masters that are freezing their catch at sea must retain all heads from all Chinook and coho kept. At a minimum, the portion of each head retained must include the upper portion of the head extending from the tip of the snout to a cut travelling from the top of the head, passing 1 centimetre behind the eye, and ending at the back corner of the mouth. The figure to the right indicates the minimum portion of each head that must be retained.



2. Head Storage: Heads must be stored using special purpose bags and labels available free of charge from the Department. These bags and labels are supplied free of charge by the Department and can be obtained in three ways:

- a) Pick them up at Pacific Fishery Licencing Unit offices in Nanaimo, Prince Rupert, and Vancouver.
- b) Make arrangements for delivery by contacting the Department toll-free at 1-866-483-9994.
- c) Get them from coded-wire tag samplers at fish plants.

Each bag must contain only the heads from a single week of fishing (where weeks run from Sunday to Saturday). This requirement had been added to maximize the run timing information obtained through coded wire tag sampling of the heads.

Finally, heads must be kept frozen until delivery.

3. Head delivery: The vessel master shall ensure that all bags containing heads are offloaded at the first designated fish landing station at which Chinook and/or coho catch is offloaded. All bags must be securely closed, and labelled with vessel name and V.R.N., the first and last day of fishing on which the heads contained in the bag were caught, and the Management Area(s) in which those salmon were caught. Contact J O Thomas & Assoc. for sampling and collection details: phone toll-free 1-800-663-3344. Please call one day in advance of offload.

For exact head retention requirements, trollers freezing their catch should refer to their Conditions of Licence.

Appendix 9: Salmon Logbook Examples

SALMON GILLNET Logbook I.D. # G Report Catch to: 1-(888) 387-0007 Record all catch in pieces Page #

Vessel Name: VRN (CFV#): Vessel Master Name: FIN:

Net Details Type ¹ :		# Strands ² :	Length:	(fathoms)	Weedline Depth ³ :	Hang Ratio:	.1	Mesh Size ³ :	# Meshes:
Date	Mgmt. Area	Sub-area(s)	Hours fished	# of sets	4 Kept or Released	Chum	Pink	Coho	5 Other Fish
Day	Mon								6 Non fish
					Kept				
					Rel.				
Comments:									
					Kept				
					Rel.				
Comments:									
					Kept				
					Rel.				
Comments:									
					Kept				
					Rel.				
Comments:									
					Kept				
					Rel.				
Comments:									

1. Net Types: enter 'A' for Alaska Twist, 'M' for Multi Strand or 'C' for Combination.
 2. Enter number of strands if net is 'Alaska Twist' type mesh.
 3. Give measurement units (in or " = inches, cm = centimeters, mm = millimeters).
 4. Kept are species retained on board; Released are species returned to the ocean.
 5. Other Species: M= Mackerel, L= Lingcod, H= Halibut, R= Rockfish. Give full name for other species.
 6. Circle Yes or No as appropriate if any birds, marine mammals, or turtles were encountered. Give time of capture and species details in comments.
- 2009

Appendix 9: Salmon Logbook Examples

SALMON SEINE Logbook I.D. # **S** Report Catch to: 1-(888) 387-0007 Record daily catch in pieces Page # **2009**

Vessel Name: _____ Vessel Master Name: _____
 VRN (CFV#): _____¹ FIN: _____

Date		Mgmt. Area	Sub-areas(s)	Hours fished	# of sets	² Kept or Released	Sockeye	Coho	Pink	Chinook	Jack Chinook	Steel-head	Atlantic	⁴ Non-fish	⁵ Other Fish
Day	Mon.					Kept Rel.								Yes No	
Comments: _____															
Comments: _____															
Comments: _____															

DCR Confirmation # ⁶ _____

Dates Fished		# Days	Date offloaded	Business and port offloaded to:
First day	Last day	Days fished	Day	Month
Day	Month	Day	Day	Month
Business and port offloaded to: _____				
Business and port offloaded to: _____				

DCR Confirmation # ⁶ _____

Sockeye		Coho		Chinook		Other	
Received	Offloaded	Received	Offloaded	Received	Offloaded	Received	Offloaded
Pcs	Lbs	Pcs	Lbs	Pcs	Lbs	Pcs	Lbs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complete if catch pooled with that of another vessel: _____							
Vessel Name: _____							
VRN (CFV#): _____							
Name: _____							
VRN (CFV#): _____							
Name: _____							
VRN (CFV#): _____							

DCR Confirmation # ⁶ _____

1. Enter the vessel master's Fisher Identification Number.
2. Kept are species retained on board; Released are species returned to the ocean.
3. Jack Chinook are all chinook smaller than 67 cm fork length. Note that 67cm is approximately 26 inches.
4. Circle Yes or No as appropriate if any birds, marine mammals, or turtles were encountered. Give time of capture and species details in comments.
5. Other Species: M= Mackerel, L= Lingcod, H= Halibut, D= Dogfish, R=Rockfish. Give full name for other species.
6. DCR Confirmation # is the confirmation number received upon completion of the Daily Catch Report. OCR Confirmation # is the confirmation number received upon completion of the Offload Catch Report.

Appendix 10: Commercial (including First Nations inland) Demonstration Fisheries

The Department is interested in continuing to explore innovative ways to access TAC more efficiently, to increase market value of the product, or to access TAC that may be unavailable due to conservation concerns or that a full fleet fishery is unable to access.

To contribute to the Pacific Fisheries Reform vision, the Department requested concept proposals to develop demonstration fishery projects that support alternative management strategies that:

- Maintains or improves management control and conservation performance in the fishery;
- Promotes the use of clearly defined shares to improve manageability and industry viability; and,
- Increases the ability of harvesters to work cooperatively to harvest available surpluses and to take on greater responsibility for control and monitoring of their fishery.

Interested First Nations and Area Harvest Committees submitted statements of intent for developing demonstration fishery projects outlining the licence area and/or specific location of the project, proposed management approach including the target species and potential catch involved, harvest methodology and how the expected benefits from the project will be shared.

For concept proposals that met the conditions outlined above, the Department will be working with First Nations and Area Harvest Committees to develop detailed proposals for implementing demonstration fishery projects for the 2009 season. Demonstration projects must improve management control and conservation performance in the fishery and be consistent with objectives outlined in the 2009/10 Salmon South Integrated Fishery Management Plans. Demonstration fishery projects must also be consistent with conservation measures required to protect stocks of concern that may be prevalent during the time and area proposed for the demonstration; is contingent on a commercial allocation being identified for the stock or species proposed in the project; and must be consistent with allocation priorities. Projects will not proceed where there is no commercial allocation identified or a mechanism to implement the project cannot be agreed on between the Harvest Committee or First Nation and the Department.

The Department has received the following demonstration fishery concept proposals that are under consideration for implementation in 2009:

Area B proposals

- Individual transferable quota (ITQ) demonstration for project for Fraser River sockeye (as in 2008) and pinks (new for 2009). These projects could include the possibility of inter-fleet transfers with other fleets with ITQ shares identified,

- The Area B Harvest Committee has not provided a specific proposal for Johnstone Strait chum but have indicated an interest in continuing to explore whether there are options to implement an ITQ demonstration based on an a total allowable catch .

Area E proposals

The area E harvest committee has put forward a range of proposals for further consideration:

- Potential reduced fleet small-bite gillnet fisheries for sockeye (July-September), chinook (July to September) or chum (October-November) in the Fraser River. Large (8") mesh proposed for chinook directed fishery.
- Potential non-transferrable individual vessel share quota for Fraser River Chinook demonstration (July-September)
- Potential test of individual transferable quotas for Fraser Chinook on a small scale during the July to September period.
- Proposed beach seine fishery to harvest Fraser River pink or chum salmon to harvest a specific quantum of salmon. Fishery location, timing and fishery parameters to be determined.

Area H proposals

- Individual transferable quota (ITQ) demonstration for project for Fraser River sockeye (as in 2008) and pinks (new for 2009). These projects could include the possibility of inter-fleet transfers with other fleets with ITQ shares identified.
- Individual transferable effort shares (e.g. boat days) demonstration fishery for mixed stocks of chum in Johnstone Strait as in 2008.

Secwepemc Fisheries Commission

- Kamloops Lake Selective Gillnet Fishery: gillnetting for South Thompson chinook at various trial locations in western end of Kamloops Lake near outlet
- Thompson River Beach Seining - beach seining for pink and chinook on Thompson River at Steelhead Park near Savona (approx. 1 km downstream of Kamloops Lake) – boat launch site

Siska Indian Band

- Harvest of Fraser River chinook, sockeye, and pink salmon by fishwheel and dip-netting in the mid-Fraser south of Lytton. The proposal includes collaboration with other First Nations and the use of a processing plant at Siska.

Northern Shuswap Tribal Council

- Harvest of Fraser sockeye, specifically Summer run sockeye using a fishwheel in the Fraser mainstem as well as other selective harvest techniques in the Fraser

River, Quesnel River and possibly the Horsefly River. Additional harvest methods to be tested in 2009 may include: beach seine, Fyke trap net, tangle net, dip net, and fence trap system (similar to the method employed in the Horsefly River in 2002).

Lheidli T'enneh

- Harvest of Fraser Summer run sockeye and chinook in the mainstem Fraser River south of Prince George using gillnets (hot picked).

Carrier Sekani Tribal Council

- Harvest of Early summer and summer run Fraser sockeye in the Nechako and Stuart systems using beach seine, weirs and "hot picked" gillnets.

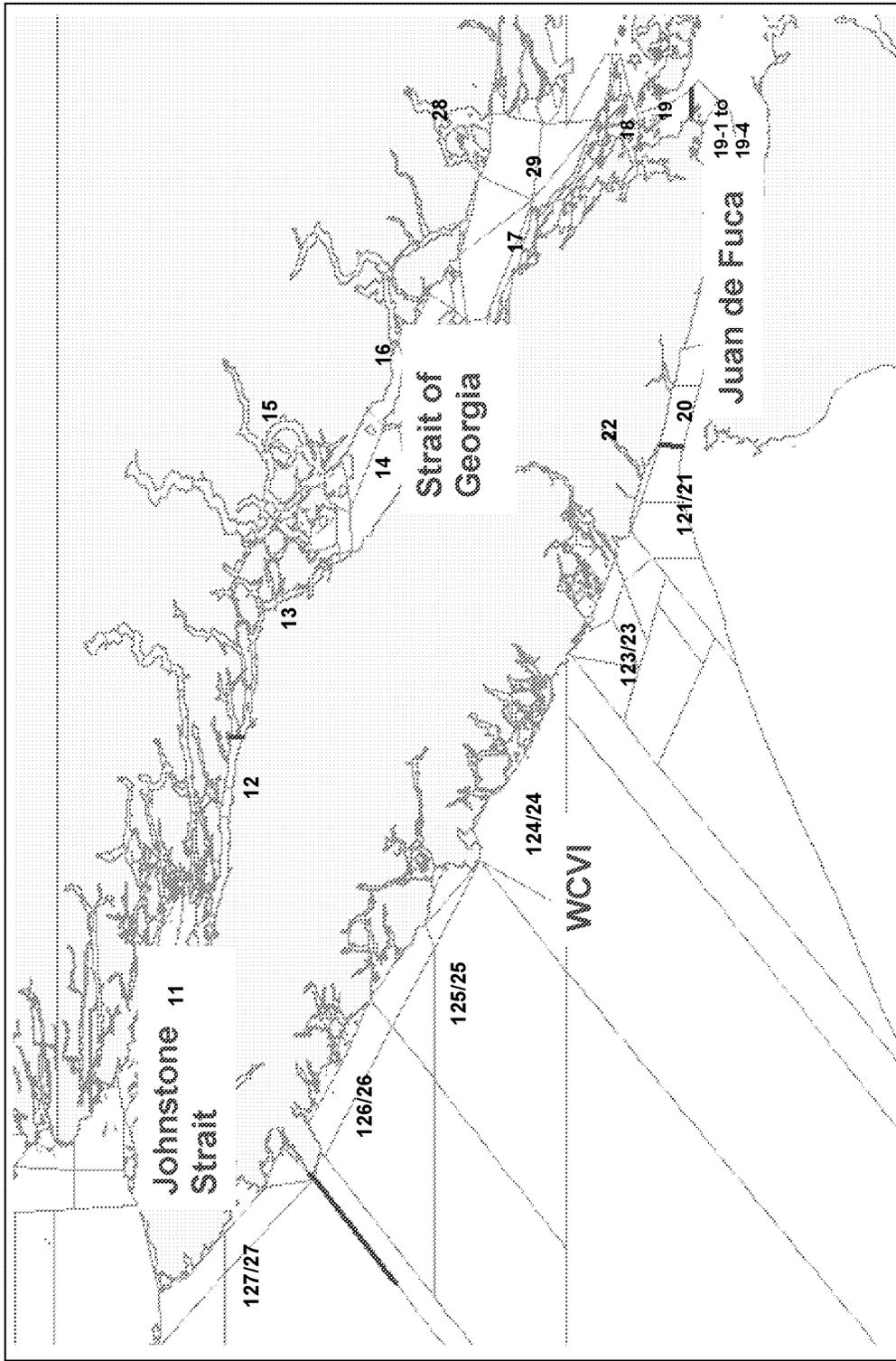
Chehalis and Scowlitz First Nations

- Demonstration fishery for pink, sockeye, chum and chinook salmon using beach seine, tangle nets or gill-nets (Chinook) in the Harrison or Fraser Rivers.

Tsilhqot'in National Government

- Demonstration fishery to harvest mid-summer sockeye from the Chilcotin watershed, specifically the Chilko River mainstem and the Chilcotin River mainstem from the confluence with the Fraser River to the Chilko River confluence. The fishery will be timed to be implemented during the peak of the Chilko sockeye migration through the area to maximize harvest efficiency and minimize harvesting costs. Fish will be harvested via beach seine and dipnet.

Appendix 11: Map of South Coast Creel Survey Areas



\\SVBCVANFP01\Cohen-Comm\Regional Salmon Drive\IFMPs\2009 IFMP\South Coast\Draft 2 for Public Release - April 30_09\PDF Files\SC IFMP 2nd Draft plus appendices.pdf

Appendix 12: Tsawwassen Fisheries

The Tsawwassen First Nations domestic (Food, Social and Ceremonial) fishery will be implemented on April 3rd 2009 as per the Tsawwassen First Nation Final Agreement. The Tsawwassen Fisheries Operation Guidelines (TFOG) sets out the operational principles, procedures and guidelines needed to assist Canada, B.C. and Tsawwassen in implementing Fisheries Chapter 9 and managing the Tsawwassen salmon fishery on an annual basis. The TFOG provides guidance on how management decisions with respect to the Tsawwassen fishery will be made via the Joint Fisheries Committee, how abundance is estimated, biological and harvesting considerations, catch monitoring and reporting requirements, etc. Each year the Joint Fisheries Committee will make recommendations to the Minister on the issuance of specific 'Harvest Documents' to licence the salmon fishery for food, social and ceremonial harvests.

More information on the Treaty can be found at: <http://www.bctreaty.net/>

Tsawwassen Fisheries (Domestic)

As per the Tsawwassen Fisheries Operation Guidelines (TFOG), each year the Tsawwassen First Nation will develop a Tsawwassen Annual Fishing Plan (TAFP) for the harvest of salmon as per the Tsawwassen First Nation Final Agreement. The TAFP will include the Tsawwassen preference for stocks and species to be harvested, locations, timing, access to specific runs, method of harvest, catch monitoring and reporting, enforcement, etc. The TAFP is then presented to the Joint Fisheries Committee (JFC) for their review. The JFC is made up of representatives of Canada (DFO), Province of B.C. and the Tsawwassen First Nation. The Joint Fisheries Committee considers the TAFP in making its recommendations to the Minister of Fisheries and Oceans about the issuance of Harvest Document(s) which in effect license the fishing of FSC salmon during the season. Multiple harvest documents will be issued over the course of a season for each salmon species. Harvest Documents may include: species and quantity, use of fish, gear type, dates and times, area, designations, monitoring and reporting, etc.

The FSC allocation for salmon under the Tsawwassen First Nations Final Agreement is as follows:

Sockeye Salmon

In any year, the Tsawwassen Fishing Right Allocation for sockeye salmon will be:

- a) when the Canadian Total Allowable Catch for Fraser River sockeye salmon is 500,000 or less, 1.0% of the Canadian Total Allowable Catch for Fraser River sockeye salmon;
- b) when the Canadian Total Allowable Catch for Fraser River sockeye salmon is greater than 500,000 and less than 3.0 million, then 5,000 Fraser River sockeye salmon plus 0.40904% of that portion of the Canadian Total Allowable Catch for Fraser River sockeye that is greater than 500,000 and less than 3.0 million; and

c) when the Canadian Total Allowable Catch for Fraser River sockeye salmon is equal to or greater than 3.0 million, then 15,226 Fraser River sockeye salmon.

Chum Salmon

In any year, the Tsawwassen Fishing Right Allocation for chum salmon will be 2.58% of the Terminal Surplus of Fraser River chum salmon to a maximum of 2,576 Fraser River chum salmon.

Pink Salmon

In any year, the Tsawwassen Fishing Right Allocation for pink salmon will be that number of fish caught incidentally in the harvest of Tsawwassen Allocation for sockeye salmon, up to a maximum of 2,500 Fraser River pink salmon.

Chinook Salmon

In any year, the Tsawwassen Fishing Right Allocation for chinook salmon will be determined by an abundance based formula, based on Canadian Total Allowable Catch that produces an average annual harvest of 625 Fraser River chinook salmon based on Fraser River chinook salmon returns for the 1982 to 2004 time period.

Coho Salmon

In any year, the Tsawwassen Allocation for coho salmon is an amount of Fraser River coho salmon that will result in an annual average harvest of 500 Fraser River coho salmon and will be harvested:

- a. incidentally in fisheries that target other species; or
- b. using selective harvesting techniques to capture specific coho stocks.

Tsawwassen Fisheries (Commercial)

In addition to the allocation of salmon for FSC, TFN have an allocation for commercial catch outside of the Treaty as identified via the "Tsawwassen First Nation Harvest Agreement". The allocation in the Harvest Agreement does not affirm aboriginal or Treaty rights. Fishing undertaken via the Harvest Agreement will be comparable to the requirements of the current Fraser River Commercial Fishery (Economic Opportunity First Nation fishery), or a General Commercial Fishery (Area E). For 2009, the HA will be comparable to the Economic Opportunity First Nation fishery. Tsawwassen fishers will be expected to operate under the same rules that apply to other fishers taking part in that Fraser River Commercial fishery. TFN may also prepare a Harvest Agreement Fishing Plan and give to the JFC for review prior to the seasons commencement. Each year that the Minister authorizes a Fraser River Commercial Fishery in the Tsawwassen fishing area, or a General Commercial Fishery the Minister will issue a Communal Commercial fishing licence for the Tsawwassen First Nation. The Joint Fisheries Committee set up by the Tsawwassen Final Agreement will conduct a post season review.

Salmon allocation under the Harvest Agreement:

Sockeye: 0.78% of the Commercial Allowable Catch for Fraser River Sockeye Salmon for that year.

Chum: 3.27% of the Commercial Allowable Catch for Fraser River Chum Salmon for that year.

Pink: 0.78% of the Commercial Allowable Catch for Fraser River Pink Salmon for that year.