

# **PACIFIC REGION**

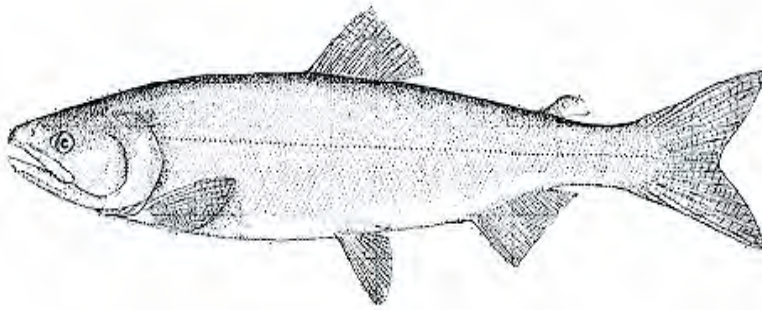
# **INTEGRATED FISHERIES**

# **MANAGEMENT PLAN**

**SALMON**

**NORTHERN B.C.**

**JUNE 1, 2007 - MAY 31, 2008**



*Oncorhynchus sp*



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.



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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](http://www.pac.dfo-mpo.gc.ca/ops/fm/toppages/contacts_e.htm)

24 Hour Recorded Information (Commercial)	Vancouver	(604) 666-2828
	Toll Free	(888) 431-3474

Pacific Salmon Commission (PSC) Office	(604) 684-8081
PSC Test Fisheries (Recorded, In-Season Information)	(604) 666-8200

Recreational Fishing:

[www.pac.dfo-mpo.gc.ca/recfish/default\\_e.htm](http://www.pac.dfo-mpo.gc.ca/recfish/default_e.htm)

Commercial Fishing:

[www.pac.dfo-mpo.gc.ca/ops/fm/Commercial/index\\_e.htm](http://www.pac.dfo-mpo.gc.ca/ops/fm/Commercial/index_e.htm)

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## INDEX OF WEB-BASED INFORMATION

### FISHERIES AND OCEANS CANADA - GENERAL INFORMATION

**Main Page** ([www.dfo-mpo.gc.ca/](http://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](http://www.dfo-mpo.gc.ca/communic/policy/dnload_e.htm))

Examples are: 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](http://www.dfo-mpo.gc.ca/publication_e.htm))

Examples are: 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/about\\_treaty.htm](http://www.psc.org/about_treaty.htm))

Background information; full text of the treaty

### PACIFIC REGION - GENERAL

**Main Page** ([www.pac.dfo-mpo.gc.ca/](http://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](http://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](http://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 MANAGEMENT

**Main Page** ([www.pac.dfo-mpo.gc.ca/ops/fm/fishmgmt\\_e.htm](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://www.pac.dfo-mpo.gc.ca/species/salmon/default_e.htm)) – NEW!!

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/](http://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](http://www.pac.dfo-mpo.gc.ca/northcoast/default.htm))

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

**Yukon/Transboundary Rivers Area Main Page**

([www.pac.dfo-mpo.gc.ca/yukon/default\\_e.htm](http://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](http://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/](http://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](http://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](http://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](http://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](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](http://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:

[www.pac.dfo-mpo.gc.ca/ops/fm/salmon/glossary\\_e.htm](http://www.pac.dfo-mpo.gc.ca/ops/fm/salmon/glossary_e.htm)

AABM	Aggregate Abundance Based Management
AAROM	Aboriginal Aquatic Resource and Oceans Management
AFS	Aboriginal Fisheries Strategy
ATP	Allocation Transfer Program
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
FSC	Food, social and ceremonial
IHPC	Integrated Harvest Planning Committee
ISBM	Individual Stock Based Management
PSARC	Pacific Scientific Advice Review Committee
PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
SARA	Species at Risk Act
SEP	Salmonid Enhancement Program
SFAB	Sport Fishing Advisory Board
TAC	Total allowable catch
WCVI	West Coast Vancouver Island
WSP	Wild Salmon Policy ( <i>Canada's Policy for Conservation of Wild Pacific Salmon</i> )

## **MANAGEMENT CHANGES FOR 2007/2008**

The season will begin with commercial retention of coho in Areas 3 to 6. Non-retention may be introduced if the in-season estimate of run strength warrants.

Commercial net retention of coho is prohibited in Areas 7 to 10. Retention may be allowed if the in-season estimate of run strength warrants.

Troll A-B line pink fishery start moves from July 15 to July 1, with retention of coho permitted starting July 10. General coho opening scheduled for July 25.

Recreational coho fishery in Skeena River downstream of Terrace starts August 15, moved from the last weekend of August.

Recreational bag limit on coho in the Skeena watershed will be increased from one to two in some areas.

Skeena River sockeye commercial target exploitation rates move from a stepped approach to a smoothed line, increasing gradually as the run size increases instead of increasing in steps. The intent of reducing commercial exploitation rates by 10% from the 1982 – 2002 base-line average remains the same.

Cost recovery fishery at Pallant Creek hatchery removed pending legal review.

Freezer trollers are now required to bring in all heads (or snouts) from all Chinook and coho.

Mandatory release of chum in Areas 4 and 5 for both seine and gill net.

Individual Transferable Quota troll Chinook fishery will now be limited to a maximum of 3000 chinook transferred to any licence.

## **1. INTRODUCTION**

This 2007/2008 Northern B.C. Salmon IFMP covers the period from June 1, 2007 to May 31, 2008 for First Nations, recreational and commercial fisheries directed towards Pacific salmon in the north coast and central coast areas of British Columbia (B.C.). The plan encompasses tidal and non-tidal waters from Cape Caution north to the B.C./Alaska boundary. The tidal waters within this area are denoted as Management Areas 1 to 10 inclusive, 101 to 110 inclusive, and 130 and 142. For the purposes of this IFMP, non-tidal waters are defined as the watersheds that contain anadromous salmon and flow into Areas 1 to 10. In this plan, Pacific salmon species include sockeye, coho, pink, chum and Chinook salmon.

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

This plan incorporates the results of consultation and input from North Coast First Nations and north coast recreational and commercial advisors.

DFO will continue to consult with First Nations, recreational, and commercial fishers throughout the season regarding local fishing plans. Further consultations will occur where in-season revisions are required to address specific conservation concerns, or when observed in-season conditions are not covered in the decision guidelines.

Details about on-going policy development and other departmental initiatives can be found on the DFO Website.

## **2. GENERAL CONTEXT**

Salmon have always played a pivotal role in the fabric of Pacific coast life. They are an integral part of the ecosystem providing a source of food and nutrients for a wide variety of flora and fauna. They have been a key food source for First Nations for millennia and more recently, played a very important part in the socio-economic life in the development of Canada's west coast.

Because of their significant importance and the very high level of interest in ensuring these populations can endure, prudent and careful management supported by the broad spectrum of interests is required. Salmon are currently under a variety of threats including changing conditions resulting from environmental uncertainty, habitat modifications and in some cases, overexploitation.

In order to effectively manage these stocks, a series of policies have been adopted to address biological uncertainty, legal requirements and "best use" approaches. This section provides a brief overview of key policies and the legal context for Pacific salmon management. Additional information is accessible on-line and can be easily found through the Index of Web Based Information.

### **2.1. Background**

Departmental policy development related to the management of fisheries is guided by a range of factors that include international and domestic initiatives 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.

### **2.2. Policy Framework for the Management of Pacific Salmon Fisheries**

Salmon management programs in 2007 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 the 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 2.2.1 of this plan or on the internet at [http://www-comm.pac.dfo-mpo.gc.ca/publications/wsp/default\\_e.htm](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. Work has also been initiated with the recreational sector to better understand their place in the future fishery. Pacific Fisheries Reform is entirely consistent with the existing fisheries management policies of the Department and is central to ensuring well integrated, sustainable fisheries for all species.

In January 2001, 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: [www-comm.pac.dfo-mpo.gc.ca/pages/consultations/consult\\_e.htm](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 Integrated Fisheries Management Plans.

In 2002, the Department released 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.

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:

[www-ops2.pac.dfo-mpo.gc.ca/xnet/content/consultations/salmon/sapdefault\\_e.htm](http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/consultations/salmon/sapdefault_e.htm).

### **2.3. 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 only way to ensure long term continuance of these stocks and the social and economic values that are derived from them.

#### **2.3.1. 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 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. In 2006 the Department focused on the identification of Conservation Units which will be completed by mid-2007. Work is currently focused on the process of establishing benchmarks.

#### **2.3.2 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 and Threatened marine species in Pacific region currently protected under Schedule I of SARA are:

- (a) Blue whale - Endangered
- (b) Killer whale southern resident population - Endangered
- (c) Leatherback turtle - Endangered
- (d) North Pacific right whale - Endangered
- (e) Sei whale - Endangered
- (f) Abalone - Threatened
- (g) Fin whale - Threatened
- (h) Humpback whale - Threatened
- (i) Killer whale northern resident population - Threatened



- (j) Killer whale transient population - Threatened
- (k) Sea otter - Threatened

Endangered and Threatened marine species in Pacific region currently under consideration for listing under Schedule I of SARA are:

- (a) Basking shark - Endangered
- (b) Bocaccio - Threatened
- (c) Northern fur seal - Threatened

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 of these animals or any part or derivative of an individual. It is also illegal to damage or destroy a listed species residence. 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.

In 2007, three marine aquatic species, the Basking shark, Bocaccio and Northern fur seal are being proposed for listing as endangered or threatened. The formal SARA legal listing process for 2007 will begin when the Minister of Environment issues a response statement, detailing how he intends to process with the COSEWIC species designations. Please note that Northern fur seal entered the SARA listing process in 2006, but is on an extended listing timeline, to allow for adequate consultations to occur.

COSEWIC also assessed several marine species in addition to those mentioned above. For a full list of the 2007 assessment results, please visit [http://www.cosewic.gc.ca/rpts/Detailed\\_Species\\_Assessments\\_e.html](http://www.cosewic.gc.ca/rpts/Detailed_Species_Assessments_e.html). In 2008, COSEWIC will be assessing the status of additional marine species, including species of rockfish and shark. The assessments produced by COSEWIC help inform the Minister of Environment's decision on whether to list species under Schedule I of SARA.

## 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](http://www.pac.dfo-mpo.gc.ca/species/salmon/InteriorFraserCohoCS/default_e.htm).

Conservation objectives for these and other stocks are laid out in Section 3.

For more information:

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

[www.cosewic.gc.ca/](http://www.cosewic.gc.ca/)  
[www.dfo-mpo.gc.ca/species-especes/home\\_e.asp](http://www.dfo-mpo.gc.ca/species-especes/home_e.asp)  
[www.sararegistry.gc.ca/](http://www.sararegistry.gc.ca/)

## **2.4. 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 principle 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, 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 fisheries of the future have been explored. Similar projects are anticipated again in 2007.

## **2.5. 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 2007 include:

- continuing investigations into climate change and salmon fisheries issues,
- factors influencing variable pink salmon abundance in the Broughton Archipelago
- assessments of specific stocks of concern including Stuart Lake sockeye
- developing an escapement strategy for Fraser River sockeye as part of WSP implementation
- review of selective fishing experiment results for implementation as appropriate.

### **2.5.1. 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. As well, new technologies (e.g., E logs) are being used to facilitate the timely submission of data directly into DFO databases.

## **2.6. 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 with respect to interception salmon fisheries. Annex IV chapters that outline agreements between Canada and the U.S. expire in 2008 for Chinook, coho, chum and transboundary salmon. These chapters are currently under negotiation between the parties.

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, 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.

## **2.7. 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 co-ordinated approaches to improving fishermen’s safety. See Appendix 5 for more information related to Fishing Vessel Safety.

### 3. OBJECTIVES

#### 3.1. Fishery Management Objectives for Stocks of Concern

The Department manages fisheries with the objective of ensuring that stocks are returning at sustainable levels. When returns decline below sustainable levels, management actions are taken which may include reducing the impact of fisheries on specific stocks, strategic enhancement and habitat restoration.

##### 3.1.1. Rivers and Smith Inlets Sockeye

**The objective for Rivers and Smith Inlets sockeye salmon is to continue with rebuilding these stocks to reach escapement goals and achieve a sustainable stock that will support harvest.**

Since the mid-1990's, low survivals for Rivers Inlet sockeye have precluded any fishing opportunities.

Although Smith Inlet sockeye return forecasts are extremely uncertain, the returns from the 2003 brood year escapement of 180,000 could provide sufficient abundance to allow a harvest opportunity. The Docee Fence provides an accurate in-season tally of returns of Smith Inlet sockeye that can be used to provide in-season abundance estimates. Management will remain very conservative given the recent poor escapements and the high variability in the return rates.

Rivers Inlet sockeye return forecasts are very uncertain as well, but the returns from the brood year escapements (2002 – 100,000 and 2003 – 140,000) could provide sufficient abundance to allow a harvest opportunity. The pilot sounding program at the head of Rivers Inlet will operate again in 2007, but the capacity to provide accurate in-season abundance estimates for Rivers Inlet sockeye is still being evaluated. Management will remain very conservative given the recent modest escapements, the high variability in return rates, and the uncertain in-season abundance estimate methods.

##### 3.1.2. Skeena River Sockeye

**The objective for Skeena River sockeye is to harvest a defined amount of the return, based on a graduated scale with the harvest rate increasing with increasing run size.**

Maintaining wild Skeena River sockeye stocks is the key objective while providing a harvest of the abundant enhanced stocks. Management of the aggregate sockeye stock will be conducted in a risk averse manner to ensure the exploitation rate on individual stocks does not exceed sustainable levels. The Canadian commercial exploitation rate will be guided by estimated run size. The graph below illustrates these exploitation rates.

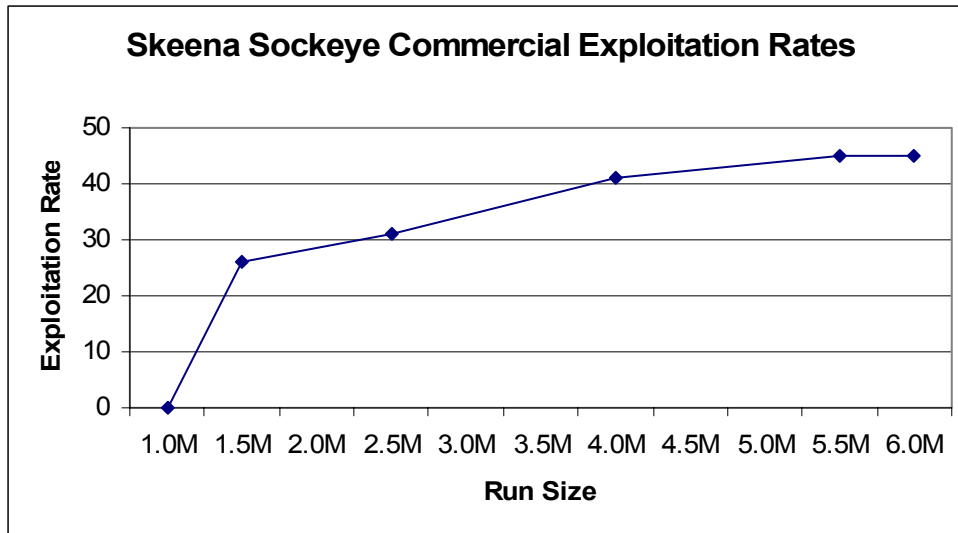


Figure 1. Skeena River commercial sockeye exploitation rate targets.

### 3.1.3. Coho

**The objective for north and central coast coho is to maintain rebuilding success and ensure overall exploitation does not exceed sustainable rates.**

Coho fisheries in Areas 1 to 10 will be managed to maintain or rebuild coho stocks. With the recent relatively good ocean survival rates, sustainable coho rates are estimated to be in the 40% to 60% range. Coho originating from Areas 3 through 10 are subject to significant Alaskan exploitation averaging between 20 percent and 40 percent, reaching as high as 50 percent on some stocks in some years. A special watch will be kept on coho returns in Areas 8, 9, and 10 after a downturn was observed in 2006. In-season abundance indications will play an important role in coho management.

### 3.1.4. North Coast Chum

**The objective for north coast chum is to minimize fishery impacts on these fish to the greatest degree possible while still maintaining fisheries targeting other species.**

While Central Coast, Kitimat hatchery, and QCI chums are reasonably healthy, other north coast chums have been declining in recent years. Management actions will again be taken in Areas 3 to 6 to reduce fishery impacts on wild chum salmon.

### 3.1.5. North Coast Chinook

**The objective for West Coast of Vancouver Island (WCVI) Chinook is to lower the impact of Canadian Pacific fisheries (not including enhanced terminal areas) 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%.**

WCVI Chinook stocks are primarily harvested in fisheries in Alaska, the north coast and on the WCVI. Returns to enhanced systems (Robertson Creek, Conuma River) are anticipated to be strong although only about 60% of the recent 5-year average due mainly to a low forecast for the Age 3 component. The 2007 return of wild stocks is forecast to be similar to 2006, and therefore, low based on an analysis of the brood years and recent jack returns.

The total allowable catch under the PST for 2007 for Areas 1 and 2 recreational and Areas 1 through 5 commercial troll is approximately 178,000. This is considerably reduced from the pre-season allowable catch of 223,000 projected for 2006 and the post-season assessment of 200,000. will be determined in late April. It is estimated that 60,000 Chinook will be caught by the Areas 1 and 2 recreational fisheries.

The Area F troll harvest will be monitored for WCVI Chinook using DNA for in-season management and coded-wire tags for post-season assessments. In-season management will be to a numerical ceiling of WCVI mortalities based on the preseason forecast and the objective of 3.2% of the return to Canada.

#### 3.1.6. Skeena Steelhead

**The objective for Skeena steelhead is to manage the commercial fisheries in Areas 3, 4, & 5 to a harvest rate ceiling of 24% on the aggregated summer run, and 37% on early summer steelhead. In all north coast commercial fisheries, steelhead will be released to the water with the least possible harm.**

In November, 1991, the Department committed to reduce steelhead harvest rates in Skeena River approach water net fisheries. The base period (1985 to 1991) Area 4 steelhead harvest rate was estimated to be 36 percent, and a multi-sector committee negotiated reduction of 42 percent resulting in a target Area 4 harvest rate for aggregate steelhead of 21 percent. In 1997, the target harvest rates were modified to include outer Area 3 and Area 5 as well. The modified target harvest rates became 24 percent for the aggregate steelhead stock and 37 percent for the early steelhead stock. In recent years, the steelhead impact in net fisheries has been well within these bounds, while 2006 saw the closest approach to these goals since 1998. Steelhead harvest rates in Areas 3, 4 and 5 are calculated in-season using the Skeena Management Model, and post season using a run reconstruction with actual run timing as observed by the Tyee test fishery. The results of recent post season analyses are listed in the Skeena River decision guidelines.

#### 3.1.7. 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 impacts on rockfish. 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.

Management actions to address inshore rockfish conservation concerns are developed to achieve the objectives for fishing mortality rates and closed area coverage. The actions taken to address fishing mortality objectives will apply to commercial and recreational fisheries. Not all fishing activity is prohibited in the closed areas; harvesting activities that will not impact on rockfish are permitted.

To evaluate these objectives, biological and catch data will be collected and analysed, and a stock assessment framework will be developed to monitor the effectiveness of management measures over time and to ensure conservation and rebuilding objectives are achieved.

Updates will be posted on the Rockfish Conservation Strategy website at:  
[www-comm.pac.dfo-mpo.gc.ca/pages/consultations/fisheriesmgmt/rockfish/default\\_e.htm](http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/fisheriesmgmt/rockfish/default_e.htm)

### **3.2. First Nations Fisheries Objectives**

**The objective is to manage fisheries to ensure that, subject to conservation needs, first priority is accorded to First Nations for opportunities to harvest fish for food, social and ceremonial purposes and any treaty obligations.**

Feedback from consultation sessions is relied on to measure the performance of providing first priority to First Nations for opportunities to catch fish for food, social and ceremonial purposes and any treaty obligations. The Nisga'a fishery will be implemented as defined in the Nisga'a Final Agreement (NFA), Nisga'a Harvest Agreement and other related documents. The authority to implement the Nisga'a fishery flows from the NFA and Federal Fisheries Act through the Nisga'a Annual Fishing Plan (NAFP) to the Nisga'a Lisims Government. The NAFP defines the escapement goals required to guide management decisions for Nass salmon stocks, calculates Nisga'a allocations for each salmon species and the general regulatory requirements for catches of each fish species on an annual basis.

### **3.3. Recreational and Commercial Fisheries Objectives**

**The objective is to manage fisheries for sustainable benefits, consistent with the Wild Salmon Policy and the Allocation Policy.**

A primary objective in the recreational fishery is maintaining the expectation and opportunity to catch fish. In the commercial fishery, the objective is 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. Both fisheries will be optimized where possible, in accordance with the allocation policy.

### **3.4. International Objectives**



**The objective is to manage Canadian treaty fisheries to ensure that obligations within the PST are achieved.**

Details can be found at the PSC website at:

[www.psc.org](http://www.psc.org)

Review of the performance of the PST provisions occurs annually at bilateral meetings of the Northern Panel of the PSC, and those results are published post-season.

### **3.5. Domestic Allocation Objectives**

**The objective is to manage fisheries in a manner that is consistent with the *Allocation Policy for Pacific Salmon* and the 2007 Pacific Salmon Allocation Implementation Plan.**

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

[www-comm.pac.dfo-mpo.gc.ca/publications/allocation/AllocationPolicyoct201.htm](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 different commercial gear groups. It has been decided, based on CSAB advice, that for 2007, the sharing arrangements will be similar to past years: 40% seine, 38% gill net, and 22% troll based on information (average weights and prices) gathered coastwide. The allocation targets are used as a general guide and may be adjusted in-season to address unexpected conditions.

Catch estimates and pricing surveys are summarized annually and compared with pre-season objectives.

### **3.6. Enforcement Objectives**

A primary Conservation and Protection (C&P) objective is to ensure compliance with Federal acts and regulations associated with the management of Pacific salmon. North Coast C&P staff will be developing comprehensive Operational Plans that will identify and target key compliance and enforcement objectives for North Coast salmon while at the same time reflecting competing Regional and Area priorities such as SARA and CSSP. Strategic planning will focus effort on activities and persons that pose a high degree of risk to the resource. Violators will be prosecuted.

#### **Nisga'a Fisheries**

Enforcement procedures related to Nisga'a fisheries are defined in the Nisga'a Enforcement Agreement. Federal Fishery Officers and B.C. Conservation Officers have the authority to enforce Nisga'a laws and regulations and work together in this approach. A Joint Enforcement Committee (JEC) which meets twice a year was established to facilitate the implementation of the Enforcement Agreement. The JEC reports directly to the JFMC.

#### **General Enforcement**

North Coast Area Compliance and Enforcement operations will be generally applied to:

Enforcement of management actions designed to protect stocks of concern.

Monitoring of mandatory selective fishing measures such as provisions for revival tanks, brailing, catch reporting requirements (i.e. hail-ins and log books), short sets, barbless hooks (recreational and troll) and non-retention of prohibited species.

Illegal sales of salmon in all areas will again be an Area C&P priority .

Directed patrols prior to, during and after fisheries to ensure compliance with licence conditions, closed time/area, and other compliance provisions.

Enforcement of recreational fishing regulations.

In 2007 NC C&P staff will focus salmon compliance and enforcement efforts on:

- the laundering of FSC fish into the Area 3 and 4 commercial salmon fisheries as well as other illegal sales projects,
- increased patrols and monitoring of the commercial gill net and seine fisheries,
- increased patrols and monitoring of the tidal and non tidal recreational fisheries,
- dedicated pre-season inspections and in-season patrols of the recreational sport lodge fisheries,
- continued compliance and enforcement of the Skeena Inland Demonstration fishery.

### **3.7. Enhancement Objectives**

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.

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 target in the following tables. Public Involvement Projects operated by volunteers are not included in the tables. Most public involvement projects are focussed 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 or guidance 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.

**Objective: Enhancement Operations facilities will continue efforts focussed 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 communities under contract to DFO to meet community objectives for public stewardship, community capacity development, habitat conservation and fish production.**

No major changes in production are proposed for the 2007 brood.

### 3.7.1. Chinook

#### Proposed 2007 Brood Production Targets for Chinook

Project	Species	Run	Stock	Release Site	Stage	2006 Brood Targets Eggs (‘000)	2006 Brood Targets Release (‘000)	2007 Brood Proposed Eggs (‘000)	2007 Brood Proposed Release (‘000)	Exp Adults
<b>Enhancement Operations</b>										
Kitimat R	Chinook	Spring	Hirsch Cr	Hirsch Cr	Smolt 0+	225	200	225	200	800
		Spring	Kitimat R	Kitimat R	Smolt 0+	1,700	1,400	1,700	1,400	5,600
Pallant Cr	Chinook	Fall	Pallant Cr	Pallant Cr	Smolt 0+	55	40	55	40	1,600
Snootli Cr	Chinook		Atnarko R							
		Summer	Low	Atnarko R Low	Smolt 0+	1,050	904	1,050	904	3,616
		Summer	Atnarko R Up	Atnarko R Up	Smolt 0+	1,050	904	1,050	904	3,616
		Summer	Noosgulch R	Noosgulch R	Smolt 0+	50	43	50	43	172
		Summer	Nusatsum R	Nusatsum R	Smolt 0+	100	86	100	86	344
		Summer	Salloomt R	Salloomt R	Smolt 0+	100	86	100	86	344
		Summer	Wannock R	Wannock Est	Seapen 0+	200	80	200	80	320
				Wannock R	Smolt 0+		80		80	320
<b>Community Economic Development</b>										
Fort Babine	Chinook	Summer	Babine R	Babine R	Smolt 1+	85	70	85	70	280
Kincolith R	Chinook	Spring	Kincolith R	Kincolith R	Smolt 1+	70	50	70	50	200
Masset	Chinook	Summer	Yakoun R	Yakoun R	Smolt 0+	250	200	250	200	8,000
Terrace	Chinook	Summer	Kitsum Abv Can	Kitsumkalum R	Fed Spr	150	90	150	90	180
					Smolt 1+		25		25	100
			Kitsum Bel Can	Kitsumkalum R	Fed Spr	125	100	125	100	200
					Smolt 1+		15		15	60
Toboggan Cr	Chinook	Spring	Bulkley R Up	Bulkley R Up	Smolt 1+	60	43	60	43	172

### 3.7.2. Coho

#### Proposed 2007 Brood Production Targets for Coho

Project	Species	Run	Stock	Release Site	Stage	2006 Brood Targets Eggs (‘000)	2006 Brood Targets Release (‘000)	2007 Brood Proposed Eggs (‘000)	2007 Brood Proposed Release (‘000)	Exp Adults
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### Enhancement Operations

Kitimat R	Coho	Fall	Kitimat R Braver + Pallant	Kitimat R	Smolts	600	500	600	500	10,000
Pallant Cr	Coho	Fall		Braver+Pallant	Fed Spr Smolts	1,758	378 1,100	1,083	378 540	9,639 27,540
Snootli Cr	Coho	Fall	Salloomt R	Salloomt R	Smolts	50	40	50	40	800
		Fall	Snootli Cr	Snootli Cr	Smolts	50	40	50	40	800

### Community Economic Development

Hartley Bay Cr	Coho	Fall	Hartley Bay Cr	Hartley Bay Cr	Smolts	500	30	500	30	600
				Hartley Bay Lk	Fed Spr		70		70	700
				Red Bluff Lk	Fed Spr		70		70	700
				Whalen Lk	Fed Spr		70		70	700
Heiltsuk	Coho	Fall	McLaugh Bay Cr	McLaughlin Bay	Seapen	90	60	90	60	1,200
Klemtu Cr	Coho	Fall	Kitasoo Cr	Trout Bay	Seapen	90	60	90	60	1,200
Masset	Coho	Fall	Yakoun R Toboggan Cr	Yakoun R	Smolts	50	45	50	45	2,295
Toboggan Cr	Coho	Summer		Toboggan Cr	Smolts	40	30	40	30	2,010

- All eggs for the Hartley Bay Creek project are collected at Hartley Bay Creek, but the fry are released into several hanging lakes as well as back to Hartley Bay Creek.

### 3.7.3. Chum

#### Proposed 2007 Brood Production Targets for Chum

Project	Species	Run	Stock	Release Site	Stage	2006 Brood Targets		2007 Brood Proposed		
						Eggs (‘000)	Release (‘000)	Eggs (‘000)	Release (‘000)	Exp Adults
Enhancement Operations										
Kitimat R	Chum	Summer	Hirsch Cr	Hirsch Cr	Fed FW	1,200	1,000	1,200	1,000	24,200
		Summer	Kitimat R	Kitimat R	Fed FW	4,000	3,500	4,000	3,500	84,700
Pallant Cr	Chum	Fall	Mathers Cr	Mathers Cr	Fed FW	5,000	4,275	0	0	0
		Fall	Pallant Cr	Deer Bay	Seapen Fed	25,000	21,375	25,000	21,375	226,575
Snootli Cr	Chum	Summer	Fish+Airport	Fish+Airport	Fed FW	1,800	1,656	1,800	1,656	23,515
		Summer	Salloomt R	Salloomt R	Fed FW	1,800	1,656	1,800	1,656	23,515
		Summer	Snootli Cr	Snootli Cr	Fed FW	1,800	1,656	1,800	1,656	23,515
		Summer	Thorsen Cr	Thorsen Cr	Fed FW	1,800	1,656	1,800	1,656	23,515
Community Economic Development										
Heiltsuk Kincolith R	Chum	Fall	McLaugh Bay Cr	McLaughlin Bay	Seapen Fed	1,500	1,080	1,500	1,080	31,212
	Chum	Fall	Kincolith R	Kincolith R	FW	30	21	30	21	367
Klemtu Cr	Chum	Fall	Kitasoo Cr	Trout Bay	Seapen	1,250	900	1,250	900	17,010

- There is no proposed 2007 brood chum target for Mathers Creek stock. Due to deteriorating conditions of the fence, it is no longer possible to collect adult brood stock.

### 3.7.4. Sockeye

#### Proposed 2007 Brood Production Targets for Sockeye

Project	Species	Run	Stock	Release Site	Stage	2006 Brood Targets		2007 Brood Proposed		
						Eggs ('000)	Release ('000)	Eggs ('000)	Release ('000)	Exp Adults
Enhancement Operations										
Fulton R	Sockeye	Summer	Fulton Ch#1	Fulton Ch#1	Chan Fry	30,000	15,000	30,000	15,000	286,500
					Chan Fry					1,661,700
		Summer	Fulton Ch#2	Fulton Ch#2	Chan Fry	174,000	87,000	174,000	87,000	0
Pinkut Cr	Sockeye	Summer	Fulton R	Fulton R	Chan Fry	300,000	45,000	300,000	45,000	859,500
					Chan Fry					
		Summer	Pinkut Ch	Pinkut Ch	Fry	87,000	43,500	87,000	43,500	830,850
Snootli Cr	Sockeye	Summer	Atnarko R	Atnarko R	Fed Spr	100	80	100	80	792
			Williams Cr	Williams Cr	Fed Spr	100	80	100	80	792
Community Economic Development										
Heiltsuk Klemtu Cr	Sockeye	Summer	Tankeeah R	Tankeeah R	Fed Spr	100	90	100	90	891
	Sockeye	Summer	Lagoon Cr	Lagoon Cr	Seapen	50	10	50	10	450
				Roderick Lk	Fed Spr		20		20	198
				Vics Cr	Smolts		10		10	450

- A decision was made to enhance the Williams Creek (Lakelse) sockeye stock due to concerns over recent low returns. This enhancement began in 2006 and is proposed to continue for one cycle or until stock improvement is observed.
- Gitanyow First Nation has begun a pilot hatchery program to raise approximately 100,000 Kitwanga River Sockeye fry. In partnership with the Gitksan Watershed Authorities, brood stock was taken in 2006 and the fry were released in 2007 as planned. It is proposed to increase the fry release to 200K in 2008.

## **4. 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 2007 are described in sections 5, 6, and 7.

### **4.1. General Decision Guidelines**

#### **4.1.1. Pre-season Planning**

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

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

#### **4.1.2. 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.

When possible, in-season decisions will follow a pre-season plan. 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. A post-season multi-sector review of run returns, management actions and by-catch levels will occur.

#### **4.1.3. Allocation Guidelines**

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

Table 2 describes a generalized framework by which fishing opportunities are allocated to different fishing sectors at different abundance levels.

**Table 2: Allocation Guidelines**

	Low Abundance		High Abundance		
<b>First Nations Food, Social, Ceremonial</b>	Non-retention / Closed	By-catch Retention	Directed	Directed	Directed
<b>Recreational</b>	Non-retention / Closed	Non-retention	By-catch Retention	Directed	Directed
<b>Commercial</b>	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.

#### 4.1.4. First Nations - Food, Social and Ceremonial

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.

#### 4.1.5. First Nations – Nisga’a Allocations

The Nisga’a Final Agreement defines the catch allocations, fisheries management structures and financial commitments related to Nisga’a fisheries and Nass area stocks. Sales of a specific species of salmon caught in Nisga’a fisheries is permitted if DFO permits other commercial or recreational fisheries to target Nass Area stocks of that species.

Nisga’a Lisims Government is responsible for the internal allocation of catch opportunities between Nisga’a fishers and day to day operation of the Nisga’a fishery. The Nisga’a have distributed their salmon catches between three type of fisheries: domestic fisheries for food, social and ceremonial purposes; communal sale fisheries where proceeds are used to support fisheries management programs, and individual sale fisheries that provide commercial catch opportunities and income for Nisga’a fishers. The portion of the annual Nisga’a salmon catch taken in each of these fisheries varies between years and between species depending on stock abundance and Nisga’a preferences. For example, the Nisga’a have chosen to focus their commercial fisheries

on the abundant sockeye and coho returns and minimize their catch of chum salmon to promote the restoration of these stocks.

#### 4.1.6. First Nations – Economic Opportunities

Following the 2003 decision of the Provincial Court of B.C. in *R. v. Kapp et al.*, the Minister of Fisheries announced that DFO would seek to reach arrangements with First Nations that will support the legitimate desire of First Nation communities to enjoy economic benefits from the fishery. The Aboriginal Transfer Program (ATP), where commercial licences are purchased out of the fleet and transferred to First Nation communities, is one means by which First Nations communities may enjoy economic benefits from the fishery. Similar to 2006, the Skeena Inland Demonstration Fishery is being considered for 2007 (Appendix 8). This would involve the transfer of the salmon allocation of some commercial licences inland to be fished by the First Nations of the Skeena. In 2007, a Nass Inland Demonstration Fishery is being considered and consultations are still ongoing.

#### 4.1.7. Recreational Fisheries

Under the Department's *Allocation Policy for Pacific Salmon*, after food, social and ceremonial purposes 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. The recreational harvest of sockeye, pink and chum will be limited to a maximum average of five percent of the combined recreational and commercial harvest of each species on a coast-wide basis over the period 1999 to 2005. Discussions are on-going regarding updating this provision for 2007 and beyond.

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 food, social and ceremonial purposes fisheries 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 Chinook and coho, the fishing plan will provide for full daily and possession limits in tidal waters. Decision guidelines may also identify considerations for changing the area of the fishery, modifying dates or changing daily limits.

#### 4.1.8. Commercial Fisheries

The *Allocation Policy for Pacific Salmon* provides for at least 95 percent 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 coast-wide sector target allocations are: seine 40 percent, gill net 38 percent, and troll 22 percent expressed on a sockeye equivalent basis. The ability to achieve these targets is often compromised by conservation constraints and other factors.

Low impact fisheries generally occur prior to those having a higher impact, 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 DFO will plan and implement fisheries to harvest fish in accordance with allocation targets, opportunities may be provided that are inconsistent with the allocation targets, due to conservation objectives that have a higher priority than allocation objectives.

#### 4.1.9. 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.

DFO will attempt, wherever practical, to eliminate or minimize ESSR by harvesting in the food, social and ceremonial, recreational and commercial fisheries. It is not the intention of DFO 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 food, social and ceremonial fisheries. 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.

#### 4.1.10. 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. 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.

The continued development of selective fishing techniques has taken on more importance as a result of heightened conservation concerns on identified stocks as well as a stronger focus on protection of small stocks. The Selective Fisheries Program (1998 to 2001) began the widespread exploration of selective gear and methods. Currently, selective gear and methods are widely used and required in all fisheries. More recently development has focused on refining the most promising techniques.

Selective harvesting standards will be set in the context of the *Policy for Selective Fishing in Canada's Pacific Fisheries* and the *Allocation Policy for Pacific Salmon*. In the future, priority will be given to those who have demonstrated the ability to meet or exceed the selective fishing standards. The Department encourages the incorporation of selective fishing experiments into regular fisheries where appropriate in order to realize cost savings.

The Canadian commercial fishing sector has responded positively to this growing conservation consciousness by developing its own Canadian Code of Conduct for Responsible Fishing Operations. Over 80 percent of Canada's fishing organizations have signed on and ratified the Canadian Code of Conduct that is overseen by a Responsible Fishing Board. Similarly, the recreational sector in the Pacific Region, through the Sport Fishing Advisory Board (SFAB), recently developed a Code of Conduct for recreational anglers. First Nations have also 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.

#### 4.1.11. By-catch Management

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. Kitwanga sockeye when harvesting aggregate Skeena River 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 conservation objectives (Section 3.1).

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. Rather the Department considers a number of fishing plan options and attempts to address a range of objectives including minimizing by-catch and incidental catch.

## 4.2. Queen Charlotte Islands Chum and Pink Decision Guidelines

### 4.2.1. Background

Surplus pink salmon opportunities on the QCI occur only during even years; odd year returns are either minimal or non-existent in most streams. Preseason predictions of pink salmon surpluses are not reliable and for the most part harvest opportunities are normally provided only when surpluses are identified in-season.

In the past terminal chum salmon opportunities have occurred in a variety of wild stock locations. However, in recent years returns of chum have declined to levels where surpluses have frequently not been observed. Terminal harvest opportunities will be considered only on identified surpluses.

Chum stocks harvested within Cumsheewa Inlet are enhanced stocks from Pallant Creek. The overall escapement goals for chum are 30,000 to Pallant Creek and 25,000 for hatchery brood stock; and 20,000 to Mathers Creek plus 5,000 for hatchery brood stock. Past enhancement efforts for Mathers Creek chum were to ensure healthy stocks and allow commercial harvests directed on Pallant Creek surpluses. Enhancement of Mathers creek chum have not occurred in recent years due to facility maintenance requirements and funding shortfalls. Fisheries are managed to harvest Pallant Creek surpluses. Due to a low abundance forecast for enhanced chum into Cumsheewa Inlet in 2007, harvest opportunities will be considered only on identified surpluses.

Pallant Creek coho are also enhanced to allow for a recreational fishery, retention of coho in commercial fisheries directed at enhanced chum, and directed harvest by troll. The increased enhancement of coho, and a rearing program with pens in Mosquito Lake, has significantly increased the abundance of coho.

The Pallant Creek Hatchery facility has been under the management and operation of the Haida Fisheries Program (HFP) with program objectives established through the Haida Tribal Society.

#### 4.2.2. General Constraints

Generally the required escapement is secured within the stream(s) and/or behind boundaries near the estuary location(s) before fisheries are allowed to proceed.

Coho by-catch may be a concern and therefore brailing by seines and the use of revival tanks by both gill nets and seines are usually, but not always, required.

All fisheries are during daylight hours, generally 11 or 12 hour days during September reducing to 10 or 11 hour days in October. This reduces the amount of by-catch.

#### 4.2.3. Pre-season Decisions

Initial openings are based on forecasted returns and on fish observed to be schooling in front of the various systems. If a poor run is predicted, such that only enough salmon are expected to return to stock the creek, then no fishing will occur unless an actual surplus is identified in-season. Conversely, if a surplus is forecast, an initial opening may be held to confirm returning stock abundance with subsequent openings as appropriate. The size of the return will be estimated by the CPUE of the first few openings.

#### 4.2.4. In-season Decisions

The Ain and Awun River systems in Masset Inlet are the primary chum salmon producers in Area 1. Catches in early stock assessment fisheries for gill nets in the western portion of McIntyre Bay, outside Masset Sound, are generally a reliable indicator of run size.

In Areas 2 East and 2 West wild chum harvest opportunities for both gill nets and seines are considered only when surpluses have been identified. Streams which support wild stock chum returns which may present surplus harvest opportunities are located in East Skidegate Inlet, Selwyn Inlet, and Darwin Sound in Area 2 East, and West Skidegate Inlet, Englefield Bay and Tasu Sound in Area 2 West. The size of the runs to these systems can usually be determined by observations of fish holding in front of the streams, and the timing in relation to historical run timing for that system.

Cumshewa Inlet will be managed similarly to wild chum systems, with openings only on identified surpluses, due to the poor returns observed in Cumshewa in recent years. Boundaries will be determined depending on fish holding behaviour and the status of Pallant Creek hatchery brood stock collection. When fish are abundant, fisheries have been conducted with inner boundaries being from Beattie Anchorage to the easternmost point of Oliver Island, thence from the westernmost point of Oliver Island to a boundary sign on the Moresby Island shore, or from Barge Point to a boundary sign on the opposite shore.

Cumshewa Inlet opportunities will only be considered if there is reasonable evidence that escapement and hatchery brood stock objectives are at least 75 percent secure behind the inner boundary. The percentage of secured escapement and hatchery brood stock would increase during later weeks such that fisheries considered late in the season (second week of October) would be with the full complement of escapement and brood stock either in-stream, harvested at the fence, protected behind the proposed inner boundary, or a combination of such preferred circumstances.

Alternate seine and gill net opportunities may be considered if the gill net fleet size is greater than 30 vessels. Gill net fleet size will generally be estimated from the size of the fleet during the previous opening.

All net fisheries are managed so that catch may be delivered within two days, as requested by the commercial industry.

#### 4.2.5. Prospects for 2007

Pink surpluses normally do not occur during odd years. Chum surpluses are expected to be limited in 2007. Monitoring to determine incoming runs throughout the season will be concentrated in Masset Inlet, on the east coast between Skidegate Inlet and Darwin Sound, and on the west coast between Tasu Sound and Dawson Inlet. Terminal harvest opportunities will be based on identified surpluses determined through a variety of measures such as fence counts, charter patrol, over flights and gill net test fisheries.

### 4.3. Nass River Decision Guidelines

#### 4.3.1. Background

Seasonal management, assessment of Nass Area salmon stocks, and minimum and production-based salmon escapement goals are all discussed in the Nass Fisheries Operational Guidelines (FOG), developed to aid in the implementation of the Nisga'a Final Agreement. Objectives and goals of managing Nass salmon stocks, as defined in the FOG document, are as follows:

- To provide for conservation and protection of fish stocks and their habitat through the application of scientific management principles applied in a risk averse and precautionary manner based on the best scientific advice available.
- To develop sustainable fisheries through a cooperative joint management process and ensure that the fishery resources of the Nass Area are utilized for the benefit of all Canadians.
- To develop fishing plans and cooperative research programs which will contribute to improving the knowledge base and understanding of the resource.
- To consider the goals of each party with respect to social, cultural and economic values of the fishery.
- To consider health and safety in the development and implementation of management plans, fishery openings and closures.
- To consider opportunity for the development of the aquaculture industry.

#### 4.3.1.1. Sockeye

There are 14 sockeye streams in Area 3, all but two of which are tributaries to the Nass. The major producers are Bowser, Damdochax, Kwinageese, and Meziadin.

In addition to these sockeye stocks, all five salmon species are present throughout the fishing season.

Fisheries are managed to meet commitments in accordance with the Pacific Salmon Treaty (PST) and the Nisga'a Final Agreement (NFA). In the event of a management error, overage/underage provisions in both treaties would apply. The runs entering the Nass River are estimated by a series of fish wheels operated by the Nisga'a Lisims Government (NLG), and a mark-recapture program is conducted on some of the species. Close liaison is maintained throughout the season between Alaskan and NLG fishery managers and DFO staff. Commercial openings are planned keeping these treaty obligations in mind.

The northern part of Chatham Sound in Area 3 is managed in conjunction with the Skeena River fishery because of the large numbers of Skeena sockeye and pink passing through Chatham Sound during the fishing season.

#### 4.3.1.2. Chum

There is no single major chum producer in Area 3, but significant stocks return to Kshwan River, Stagoo River and the Khutzeymateen River. Chum returns start in early July and continue throughout the summer and into October. Chum returns

are expected to be poor in 2007, and additional management restrictions will be in place.

#### 4.3.1.3. Pink

The major stocks return to Kwinamass River, Khutzeymateen River and the Iknouk River (odd years). Most Area 3 pink stocks arrive in the fishing area at approximately the same time, mid-July. The outer coastal stocks are an exception, arriving in August and early September.

#### 4.3.1.4. Coho

Net fisheries will start with retention of coho, and will be managed based on in-season abundance.

### 4.3.2. General Constraints

- The fishery must be managed to meet commitments in accordance with the NFA and the PST.
- Fishing is limited to daylight hours to reduce the incidental catch of coho.
- Non-retention of steelhead is mandatory in all fisheries.
- Brailing and sorting, with the mandatory release of Chinook and chum will be in place for the seine fishery. Exceptions are possible depending on in-season estimation of run strengths or identified surpluses.
- Non-retention of coho for both seine and gill net may be implemented, depending on stock abundances and fishing effort.
- Gill nets have a 137 mm maximum mesh restriction. This restriction is in place so that sockeye is targeted selectively and larger non-target species such as chum and Chinook are impacted to a lesser degree.
- Gill net fishers are requested to release all live chum to the water with the least possible harm. Time and area closures may be required to meet rebuilding initiatives, particularly the ribbon boundary along the Pearce and Wales Islands shore.
- Gill net fishers are requested to release all live Chinook to the water with the least possible harm unless otherwise notified.

### 4.3.3. Pre-season Decisions

Opportunities for a gill net fishery in mid-June are evaluated during the pre-season planning process based on brood year escapements. The fishery is implemented to assess sockeye strength. The fishery has very little impact on other salmon stocks because it occurs early in the sockeye run, and avoids others species due to the early timing and with the use of mesh restrictions. The first fishery is predetermined in the planning process. Other indicators prior to the fishery are not reliable and significant fish harvesting opportunities can be missed in years of large returns if fishing does not start at this time.

Seine fishing usually starts towards the middle of July based on conservation and allocation considerations. Immature Chinook presence and gill net allocation goals preclude an earlier seine opening.

#### 4.3.4. In-season Decisions

The sockeye gill net fishery continues in some years into August depending upon run timing and stock strength. Starting in mid-July, the seine fishery is usually a targeted sockeye and pink fishery with restrictions such as time, area and gear restrictions in place to pass more chums through to the spawning grounds. Terminal chum fisheries could occur in some restricted terminal areas once a surplus has been identified from spawning ground escapement inspections.

Weekly decisions are made from run size predictions based on:

- Catch and effort data from the Area 3 and Alaskan Tree Point commercial net fisheries.
- Escapement information from the Nisga'a Fishwheel Program conducted at test-fishing sites near Gitwinksihlkw on the Nass River and fish counts at the Meziadin fishway, and later from individual stream inspections for chum and pink.

#### 4.3.5. Prospects for 2007

Above average returns are forecast for Nass sockeye. Available commercial fishery surplus after Nisga'a Treaty obligations is 400,000 to 500,000 sockeye.

A good return of pink salmon is forecasted with an expected surplus of 2.5 million. However, pink returns are erratic, and so predictions must be treated with some caution.

Area 3 chum returns are expected to be poor. Fisheries will be managed to avoid and release chum. Terminal fisheries on some systems may be possible if surpluses are identified in-season.

### 4.4. Skeena River Decision Guidelines

#### 4.4.1. Background

The Skeena River is the second largest producer of sockeye in B.C. The major stocks in the Skeena River system are the Babine River and the enhanced runs to Fulton River and Pinkut Creek.

Co-migrating with these strong sockeye stocks are weaker runs of wild sockeye, as well as stocks of all the northern Pacific salmon species. Measures have been taken to reduce the impact of the fishery on Skeena River coho, chum, steelhead, and some sockeye

stocks. These measures include non-retention of some species, gear and fishing modifications, and specific timing closures or sockeye harvest rate reductions when weak stocks are present.

Skeena River returns are harvested in Areas 4 and 5 and upper Chatham Sound in Area 3.

There are 154 recorded coho streams in Management Area 4. Individual stock arrival timing at the test fishery varies, but generally it is the streams of the upper Skeena (Bulkley, Babine, and Interior Skeena stocks) which arrive first (from late July to early August), followed by middle Skeena stocks, then coastal stocks.

In the Skeena River, pinks have returned well in recent years from both odd and even year cycles, although in 2006 poor returns were observed which resulted in significantly lower escapements. 128 systems have a recorded pink salmon presence. Tagging studies were conducted in 1982, 1984 and 1985. These studies were designed primarily to provide information on interception rates, but also provided information on stock abundance, migration and timing. Management stock groupings are upper Skeena, lower Skeena and coastal.

Chums are the least abundant salmon species in the Skeena system, and return to the fewest number of streams. There are 43 chum streams or rivers in Area 4.

The Skeena is the second largest Chinook producer on the B.C. coast. Skeena Chinook are taken in all northern B.C. fishing areas as well as southern Alaskan troll and net fisheries. Returning adults tend to follow a north to south migration pattern. Peak timing of Chinook past the test fishery is in the first and second weeks of July, with escapements continuing into late August.

Skeena salmon are taken in virtually all northern B.C. and southern Alaskan fisheries. In B.C., directed net fisheries on sockeye and pink salmon occur in Areas 3, 4 and 5. Troll fishing effort is directed on pink, Chinook, and coho salmon in Areas 1 and 101. Recreational and First Nations fisheries occur on all these salmon species, with Chinook and coho being the main targeted species for the recreational fisheries, and sockeye being the major target in the First Nations fisheries.

#### 4.4.1.1. Test Fishery

The Tyee Test Fishery is the main in-season stock assessment tool for estimating the relative abundance of Skeena River salmon and steelhead through the use of a multi-panel gill net with varying mesh sizes. In addition, daily in-season escapements and total run size are estimated for sockeye. Estimates are subject to error as the catchability of salmon by the test fishery net varies from year to year due to varying environmental conditions (including water level, clarity and temperature, weather conditions and tide). As 2007 is expecting to be a high water year, the Tyee Test Fishery information will be reviewed with this possibility.



#### 4.4.2. General Constraints

##### 4.4.2.1. Sockeye

Sockeye from various streams migrate up the Skeena throughout the salmon season. These wild stocks are generally less productive and therefore cannot withstand the same exploitation rate as the enhanced stocks of Pinkut Creek and Fulton River. Two wild sockeye stocks have been a specific concern in recent years, the Nanika-Morice and the Kitwanga. These stocks are bracketed by the aggregate Skeena sockeye run timing, with Nanika-Morice sockeye peaking through the fishing area in early July (early timing), and the Kitwanga sockeye stocks peaking through the fishing area in late July (middle timing). Since both these stocks have accurate annual escapement programs they are one of the tools used to evaluate fishery impacts and sockeye stock status.

The objective for 2007 is to ensure exploitation rates are maintained at sustainable levels in order to ensure that the wild stocks of concern do not further decline while attempting to maximize the commercial sockeye harvest. The focus will be on the exploitation rate of the aggregate return in the commercial fishery, and ensuring modest harvest rates of the early and middle timed sockeye stock aggregates. For 2007, exploitation rates allowed in the commercial fishery will have the same average objective, but the large jumps in the exploitation rate at the transition points will be smoothed out. As an example, in 2006, there was a 26% exploitation rate target for runs between 1 and 2 million, 31% between 2 and 3 million, 41% between 3 and 5 million, and 45% over 5 million. These rates have been retained, but instead of a large jump, for instance of 10% when the run size is expected to be just over 3 million, the rates will be smoothed in the following manner. The point that represents the 26% exploitation rate falls at 1.5 million, the point that represents 31% falls at 2.5 million, the point that represents 41% falls at 4 million, and the point that represents 45% falls at 5.5 million. Drawing a line between these points retains the intent of gradually increasing exploitation rates as the run size increases, and yet avoids large “steps”. On this smoothed exploitation rate line, for instance, at a 3 million run size, the exploitation rate allowance would be just over 34%. Figure 1 illustrates these exploitation rate targets.

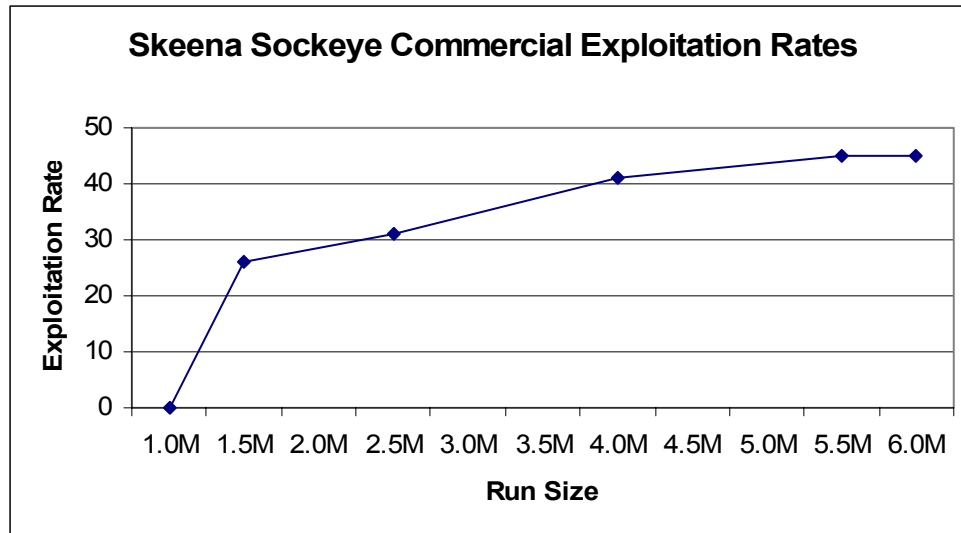


Figure 1. Skeena River commercial sockeye exploitation rate targets.

#### 4.4.2.2. Coho

Upper and middle Skeena coho have shown a significant increase in abundance over the last decade. Status of the lower Skeena (late timing) coho is less certain. Coho harvests in Canada will be divided between First Nations food, social and ceremonial fisheries, recreational, commercial troll, commercial gill net and commercial seine. Coho retention in Area 4 Skeena net fisheries will be allowed initially, but will be managed carefully in-season based on estimates of coho run strength.

#### 4.4.2.3. Chinook

Skeena Chinook in the aggregate are believed to be healthy and abundant but there are some tributaries that have declined over the last few years, most notably the Bear River.

#### 4.4.2.4. Chum

Chum stocks are expected to return below desirable levels in most north coast waters (Areas 3 to 6). Conservation actions such as mandatory release of chum by seine and gill net (in Areas 3, 4, & 5) and mesh restrictions of maximum 137mm by gill net are expected to be implemented. Also, additional time and area closures may be required to meet rebuilding initiatives.

#### 4.4.2.5. Steelhead

In 1991, DFO committed to reduce steelhead harvest rates in Skeena River net fisheries. Negotiations between user groups established this commitment as a 42 percent reduction. This has resulted in a ceiling on the total Areas 3, 4 and 5 harvest rate on steelhead of 37 percent on early-timed steelhead, and 24 percent

on aggregate steelhead. The impact on steelhead is estimated in-season by a variety of means, but the primary method is the Skeena Management Model. Post-season, a run reconstruction method is used to estimate the actual impact. See section 8 for a review of past exploitation rates.

#### 4.4.3. Pre-season Decisions

Initial openings are based on the expected returns for a given year. If a surplus of sockeye is predicted, then gill net openings are planned. If no surpluses are forecast, then fisheries will not take place until it is determined in-season that the run size is sufficient to produce a fishable surplus.

For 2007, due to recent poor Chinook returns to some systems, the Chinook directed gill net fishery in Area 4 will be for one opening, with an option to fish a second opening depending on an analysis of CPUE, Tyee test index, and catches in sport and FSC fisheries. Advice was sought from gill net advisors for suitable dates for this fishery.

Based on the pre-season forecast of 2.5 million, initially a sockeye exploitation rate of about 31% will be targeted (see figure 1). This may change as the season progresses and the actual size of the run becomes clearer. The initial sockeye opening is planned for July 12. This opening date is used to protect the early portion of the Nanika-Morice stocks, which peak the first and second weeks of July.

#### 4.4.4. In-season Decisions

##### 4.4.4.1. Sockeye

Skeena River sockeye migrate up the river in an aggregate of stocks, but the individual stock groupings can be separated to some extent by run timing. At annual escapement levels of 400,000 or less sockeye into the Skeena River, fishing activity on sockeye should cease. If the run is predicted to be 550,000 sockeye or less, then discussions will commence with First Nations on curtailing their food, social and ceremonial fisheries. At escapement levels predicted to be below 650,000, recreational sockeye fisheries in the Skeena River would cease. At escapement levels of 800,000 or less, management actions such as reduced bag limits or area closures would begin on the recreational fishery. To conduct commercial fisheries, the escapement should be predicted to achieve 900,000 for spawning purposes, and 150,000 for food, social and ceremonial purposes, by the end of the year.

##### 4.4.4.2. Food, Social and Ceremonial Fisheries

There is currently a total catch allocation in communal licences issued to First Nations bands to harvest 150,000 sockeye upstream of the Tyee test fishery. Weekly escapement estimates that indicate an annual run size estimate of less than 550,000 (400,000 plus 150,000) would trigger consultations with Skeena

River First Nations to limit their food, social and ceremonial fisheries. There is also a request for First Nations not to fish near the confluence of the Kitwanga River, to protect Kitwanga sockeye that may be holding in that area.

#### 4.4.4.3. First Nations Economic Demonstration Fisheries

A Demonstration Fishery on the Skeena River is being planned with the Skeena Fisheries Commission, similar to what was conducted in 2006. Average Area 4 commercial vessel catches of sockeye and pink salmon will be transferred inland.

The Skeena River Sockeye Inland Fishery Management Plan is described in Appendix 8. This fishery will be managed with the same priority as the marine commercial fishery. A Nass River Sockeye Inland Fishery is proposed as well. This would be similar to the Skeena Inland Fishery where the Average Area # commercial vessel catches of sockeye and pink salmon would be transferred inland.

#### 4.4.4.4. Recreational Fisheries

The normal bag limits for Skeena recreational sockeye are four per day in tidal waters, and two per day in selected non-tidal waters with an escapement in excess of 1,050,000 (escapement of 900,000 and food, social and ceremonial (FSC) requirements of 150,000). These fisheries will be closed prior to any management restrictions on First Nations food, social and ceremonial fisheries. Any bag limit reduction will be based on either FSC needs, conservation needs or the *Allocation Policy for Pacific Salmon*. The following table outlines the guidelines for management actions that may occur.

<b>Skeena Sockeye Escapement Estimate</b>	<b>Management Action for Sockeye</b>
Greater than 1.5 million	Bag limits increase to 4/day
Greater than 800,000 sockeye	Normal bag limits for Recreational Fishery
650,000 – 800,000 sockeye	Bag limits reduced to 1 per day
Less than 650,000 sockeye	Recreational opportunities cease

#### 4.4.4.5. Commercial Sockeye Fisheries

In order to initiate commercial fisheries on Skeena sockeye, an estimated annual escapement in excess of 1,050,000 is required (escapement of 900,000 and food, social and ceremonial requirements of 150,000).

Once a commercial fishery is initiated on the returning Skeena sockeye run, its impact on returning stocks will be estimated in-season by the Skeena Management Model.

Commercial allocation of Skeena sockeye (Areas 3 to 5) is listed in Appendix 1. The management strategy to achieve these allocations are to open the gill net

fishery first in early July, followed by the seine fishery, which usually opens mid-July, depending on estimated run size, current escapement information, and gill net catch to date. The troll allocation of sockeye is usually achieved by incidental catch on fisheries conducted in outside waters directed at other species.

#### 4.4.4.6. Pink

During the second week of August, the target species in the commercial Area 4 fishery switches from sockeye to pink salmon. The management target for pink escapement is one to two million fish. If the escapement was low during the sockeye directed fishery, no management actions would be taken. Once the fishery switches to pink management, if the yearly escapement is not expected to reach one million, the fishery may close. An exception may be made if the sockeye run is still strong at this time. Pink returns between one and two million are managed with a balance between catch and escapement, and this balance depends on escapement distribution and concern for other species.

Coastal Area 4 and Area 5 pink stocks are traditionally managed in accordance with Skeena runs until mid-August when local pink stocks become prevalent. In recent years Area 5 pink fisheries have taken place in August. Care will be taken not to over-harvest local stocks while conducting the Skeena directed fishery. Seine fisheries for coastal pink stocks are then considered based on catch and stream escapement information. There are no major coastal pink stocks in Areas 4 or 5 but a number of small streams which all contribute to this stock.

#### 4.4.4.7. Chinook

The following management actions are planned for Chinook:

- First Nations: Maintain recent year catch levels, as specified in each communal licence.
- Recreational: Maintain bag limits of two per day in tidal waters, one per day (over 65 cm) in specified non-tidal waters.
- Commercial Seine: Mandatory release with the least possible harm.
- Commercial Gill Net: One directed fishery in River/Gap/Slough portion of Area 4, with an option for a second day, depending on an analysis of CPUE during the first fishery. The sockeye fishery will be July 12 to assist in lessening the incidental impact on Chinook. Short net short set fisheries may require the mandatory release of Chinook if later timing stocks return at low levels.
- Commercial Troll: Directed Chinook fisheries occurring in western Dixon Entrance and the West Coast of QCI, managed to a quota. Depending on timing, very few are comprised of North Coast Chinook stocks.

Chinook returns are expected to be variable with some systems having good escapements and some poor to average.

#### 4.4.4.8. ESSR Fishery (Sockeye and Pink)

For Skeena River sockeye and pink salmon, all ESSR fisheries will be by selective means, with live release of all non-target species.

For Skeena River sockeye, a surplus will not be declared in-river below the Babine River confluence due to the mixed stock nature of the sockeye run in the lower and middle reaches of the river. Once the sockeye return has moved into the Babine River, many of the weaker wild stocks have moved into their natal streams to spawn, and an ESSR fishery may be considered. This is still a mixed stock sockeye fishery, but to a much lesser degree than downstream. Surpluses in Babine Lake immediately in front of the two spawning channels at Pinkut Creek and Fulton River are not mixed-stock fisheries, and can be harvested at a much higher exploitation rate if required.

Once a commercial fishery has been conducted at the mouth of the Skeena River, and later a sockeye surplus is determined in the Babine River, then an ESSR opportunity may be declared in the Babine River and Lake. Due to uncertainty in estimating escapements, the surplus amount in the river will be half of the estimated overage. For allocation purposes, this surplus will be split in half again, and half will be available to the Gitksan Watershed Authority, to be harvested in the Babine River, while the other half will be available to the Lake Babine First Nation, to be harvested at the Babine Fence.

If a surplus of sockeye arrives at the Pinkut or Fulton spawning facilities, an additional ESSR opportunity may be available to the Lake Babine First Nation. Amounts specified for harvest will be determined in close liaison with Pinkut Creek and Fulton River hatchery managers to ensure enough sockeye are available to stock the channels.

If the sockeye run is below the requirements to trigger a commercial fishery, then no ESSR fisheries will occur in the Babine River. A lake fishery could still occur in front of the spawning channels if a surplus develops and is identified.

#### 4.4.5. Prospects for 2007

Skeena sockeye returns are expected to be below average with an expected commercial surplus of 31% of 2.5 million return = 775,000 sockeye.

Skeena pink returns are expected to be average with a surplus of approximately 1.5 to 2 million. Coastal pink stocks are expected to be average, with a surplus of 0.5 million.

Area 4 chum returns are expected to be very poor. Fisheries will be managed to avoid and release chum. Terminal fisheries are possible if surpluses are identified in-season.

#### **4.5. Area 6 - Kitimat, Kemano, Quaal Pink and Chum Decision Guidelines**

##### **4.5.1. Background**

Area 6 has been a large pink salmon producer; however, pink production has been modest in recent years. Historically, chum fisheries have been managed along with more abundant pink returns. In recent years the only directed chum fishery has been on stocks returning to the Kitimat Hatchery.

##### **4.5.2. General Constraints**

Gill nets have a 149mm minimum and 165mm maximum mesh restriction. This restriction is in place so that chum is targeted selectively and other non-target species such as sockeye and Chinook are not impacted. Gill net fisheries will be restricted to Douglas Channel. There will be non-retention of steelhead in all fisheries.

Commercial net fishing is limited to daylight hours to reduce by-catch. Other conservation measures are also in effect, including mandatory brailing for all seine sets and non-retention of Chinook, steelhead, and possibly chum by the commercial seine fleet.

Non-retention of a species could change in-season depending on abundance and allocative split.

##### **4.5.3. Pre-season Decisions**

Opportunities for a gill net fishery are evaluated during the pre-season planning process based on Kitimat Hatchery chum production and wild chum stock assessments. Wild chum stocks have declined in recent years. Assessment fisheries will be confined to determining hatchery stock strength. Terminal wild stock chum fisheries may be considered based on in-stream escapement assessments.

Seine fishing opportunities are usually evaluated pre-season for a start in mid-July. The anticipated opening date is determined from brood year escapements, run timing and concurrent openings in other areas.

##### **4.5.4. In-season Decisions**

Gill net fisheries are announced in-season based on catch and escapement information. In mid-July seine fisheries are considered. These fisheries will target pink stocks returning to numerous streams with the Quaal and Kemano Rivers being the main producers. Further fishing opportunities are based on the assessments of the fishery, with good catches indicating a strong return. As the season progresses the focus changes increasingly to an assessment of escapements to determine further fishing opportunities.

##### **4.5.5. Prospects for 2007**

Area 6 pink returns are expected to be above average with a surplus of 2.0 million.

Area 6 chum returns are expected to be very poor with the exception of returns to the Kitimat Hatchery. The forecast hatchery surplus is 100,000 to 200,000 chum. Chum fisheries will be restricted to the Douglas Channel area to avoid catching weaker stocks. Note that returns to Kitimat Hatchery have been highly variable and forecasts unreliable.

#### **4.6. Area 7 Chum Decision Guidelines**

##### **4.6.1. Background**

The major wild chum salmon that are actively managed in Area 7 are the Mussel, Kainet, Neekas, Quartcha and Roscoe stocks. The Kitasoo and McLoughlin Bay Hatcheries contribute to harvests of enhanced stocks. These fisheries occur in terminal areas or the approach areas where timings of these stocks are known. Pink salmon migrate during a similar time period as chum but are not actively targeted and are caught incidentally. Fisheries for Mussel and Kainet chum generally occur in August. Early returns of Roscoe and McLoughlin chum occur in Seaforth Channel in August, while the main return occurs in September. Gill net and seine fleets are normally small for these fisheries with generally no more than two days per week fishing during good returns and one day per week during an average return. Pink salmon migrate during the same time period but are not targeted to the same extent as chum.

##### **4.6.2. General Constraints**

- The half-mile radius boundary around Mary's Cove Creek is in effect year-round to conserve Mary's Cove and Lagoon Creek sockeye.
- Gill nets with 149mm mesh restriction all season to protect sockeye stocks in some of the central coast systems.
- Seines are required to brail and release sockeye, Chinook and steelhead to the water with the least possible harm all season.
- Fishing is limited to daylight hours to reduce by-catch.
- Coho in the North and Central Coast are being managed to an exploitation rate ceiling. Coho will be actively managed during all net fisheries in 2007 with coho retention initially not allowed in gillnet and seine fisheries. Fishery managers will monitor the encounter rates on a weekly basis and will allow retention of coho if abundances warrant.
- Subject to conservation concerns and First Nations food, social and ceremonial fisheries, the Klemtu Pass area may be opened to harvest surplus chum returning to the Kitasoo Creek Hatchery. Openings targeting Kitasoo Creek Hatchery stocks and surplus chum in terminal areas would only be considered after August 22 and would follow the pattern of gill nets fishing first and seines second.
- During periods of high pink salmon catches in Areas 7 or 8, fisheries will be managed so that there is a maximum of two consecutive days of fishing. This action has been recommended by fishers and processors to maximize the value of the pink salmon caught.



- Where possible, openings in Areas 6, 7 and 8 will be co-ordinated.

#### 4.6.3. Pre-season Decisions

Opportunities for one-day gill net and seine assessment fisheries on the last week of July or first week of August are determined pre-season based on recent trends in brood year escapement. If recent escapement estimates indicate an increasing or stable run, the assessment fisheries will very likely go ahead, regardless of other information. Since it occurs early in the run, this fishery has little impact on the overall escapement, and still provides an improved indication of run strength. One-day assessment fisheries are under consideration for lower Finlayson, lower Mathieson, Sheep Pass and the eastern portion of Seaforth Channel.

#### 4.6.4. In-season Decisions

**First Week of August:** One additional day of fishing during daylight hours is considered if the run appears strong on the afternoon of the one-day assessment fisheries. The assessment of run strength and expected escapement is based on a review of hailed catches after 14:00 hours on the fishing day to estimate CPUE, salmon escapements to the Mussel and Kainet Rivers to-date, and total catch of chum salmon to-date.

**Second Week of August until Mid-October:** The results of the past week's fisheries and their implications for the status of target stocks and incidental stocks are reviewed at the in-season advisory meeting with central coast advisors. Recommendations on future fishing opportunities are discussed at this meeting. If stock strength permits, fishing opportunities are considered each week until mid-October. Announcements for the next week's opportunities are made on the Thursday or Friday of the week preceding the proposed fishery. Salmon escapements to the Mussel and Kainet Rivers will be monitored in conjunction with CPUE and total catch of chum salmon to estimate the run strength and the resulting escapement.

Subject to in-season discussions with central coast advisors, Lama Pass (McLoughlin Bay) may be opened on August 13, depending on observed chum abundance. Gill nets and seines alternate their fishing each week.

Subject to in-season discussions with central coast advisors, portions of Spiller Channel may be opened to seines and gill nets on August 27. Openings in that area will depend on chum escapements to the Neekas River.

Subject to in-season discussions with central coast advisors, portions of Johnson Channel and Roscoe Inlet may be opened to seines and gill nets on or after August 27. Openings in that area will depend on chum escapements to the Roscoe, Quartcha and Clatse Rivers.

#### 4.6.5. General Constraints

**First Week of August:** Extra fishing time may depend on other areas in the north coast being open to fishing to reduce gear movement.

**Second Week of August until Mid-October:** A large increase in fleet size could adversely affect small mixed-stock runs in the area, so extra fishing time may depend on openings in other areas in the north coast.

#### 4.6.6. Prospects for 2007

**Pink:** Given the recent poor returns in 2006, there is considerable uncertainty in the forecast for 2007. Based on the 5 year average return rate, there is a forecast surplus of around 160,000 pinks. Some of the streams with predicted surpluses include the Mussel, Kainet, James Bay, Salmon Bay and Carter.

**Chum:** Available surpluses forecast to be approximately 120,000 chums, which should primarily be from the Mussel, Kainet, Neekas, and Quartcha systems.

### 4.7. Area 8 – Atnarko Chinook

#### 4.7.1. Background

The Atnarko Chinook stock is an enhanced Chinook population that supports food, social and ceremonial and recreational fisheries, as well as a limited commercial Chinook gill net fishery. The Nuxalk First Nation's food, social and ceremonial fishery provides the best indication of run strength and is used as a small test fishery to predict run size. Atnarko Chinook are harvested by the commercial gill net fleet in North Bentinck Arm, a portion of South Bentinck Arm, Labouchere Channel and Burke Channel. A fleet of approximately 40 gill net vessels using large mesh nets is normal for recent years.

#### 4.7.2. General Constraints

Gill nets have a 203mm mesh restriction. The restriction is in place so that Chinook are targeted selectively and other non-target species such as sockeye are not impacted.

#### 4.7.3. Pre-season Decisions

Opportunities for a one day gill net assessment fishery on the last week in May or the first week in June is evaluated during the pre-season planning process in November/December. If recent escapement estimates indicate an increasing or stable run, the assessment fishery will very likely go ahead, regardless of other information. This fishery has very little impact on the stock, because it occurs early in the run and the benefits of the stock status information provided by this fishery outweigh the small risks associated with its limited impact. The final decision is made two weeks prior to the actual opening.

#### 4.7.4. In-season Decisions

During June opportunities are evaluated based on in-season data from the previous week, including First Nations FSC fishery catches and gill net catches. The Bella Coola River Chinook Bayesian run size predictor, based on First Nations FSC catches, will be used to determine run strength. A prediction of 15,000 Chinook escaping to the Bella Coola River system will justify another one day fishery the following week. Predictions in excess of 20,000 Chinook may justify fishing two days each week for the rest of June.

#### 4.7.5. Prospects for 2007

The outlook for Atnarko River Chinook remains similar to previous years. The 2007 brood year escapements were above average, and with enhanced production, there should be a good return. The brood year escapements to the Dean River were respectable. The outlook for Dean River Chinook is for an average return.

### 4.8. Area 8 Pink and Chum Decision Guidelines

#### 4.8.1. Background

Chum fisheries in Area 8 target mainly on Kimsquit and Bella Coola River stocks. Fisheries also occur on returns to Lower Dean streams (Elcho, Cascade and Jenny) but to a lesser extent. The Bella Coola River system is enhanced while the Kimsquit River is not. Pink fisheries in Area 8 target mainly on Atnarko River stocks but there is a component of Kwatna River and Koeve River pinks that are fished. The pink fishery on Kwatna stocks occurs at the same time as the Atnarko fishery while Koeve pinks are harvested during the later part of August. Fisheries in North Bentinck Arm, Dean Channel and Burke Channel are gill net only while fisheries in Fisher Channel and Fitz Hugh Sound are open for gill net as well as seine. Conservation measures to protect Rivers Inlet and local sockeye stocks have been put in place in recent years.

#### 4.8.2. General Constraints

- Gill net are under a 158mm mesh restriction until the beginning of August to protect sockeye stocks in some of the central coast systems. Gill nets will be allowed to use nets with 149mm for the remainder of the season.
- Fishing is limited to daylight hours to reduce the catch of coho.
- Coho in the North and Central Coast are being managed to a 60% exploitation rate ceiling. Coho will be actively managed during all net fisheries with coho retention initially not allowed in gillnet and seine fisheries. Fishery managers will monitor the encounter rate on a weekly basis and will allow retention of coho if abundance warrants.
- Seines are required to brail and release sockeye, Chinook and steelhead to the water all season.
- Between July 10 and August 14 weed lines are required for gill nets in Subareas 8-5 north of Bold Point and 8-8 for steelhead conservation.
- If the in-season estimate of the Atnarko River pink salmon stock exceeds two million fish, a portion of Subarea 8-13 south of a line from Kelpa Point due west

to a boundary sign on King Island may be opened for seines. This would only be done after consultation with central coast advisors.

- The seine opening date will be reviewed in conjunction with other seine openings on the north coast.
- During periods of high pink salmon catches in Areas 7 or 8, fisheries will be managed so that there is a maximum of two consecutive days of fishing. This action has been recommended by fishers and processors to maximize the value of the pink salmon caught.
- Where possible, openings in Areas 6 through 10 will be concurrent.

#### 4.8.3. Pre-season Decisions

In November/December during the pre-season planning process, opportunities for two-day gill net assessment fisheries in the first two weeks of July are evaluated. The evaluation is mainly based on brood year escapements. This fishery is implemented to get an early assessment of run strength. It has very little impact on the stocks because it occurs early in the run and the benefits of the stock status information provided by this fishery outweigh the small risks associated with its limited impact. Two weeks of data are required to obtain sufficient information for an updated run-size estimate. The final decision is made the previous week.

#### 4.8.4. In-season Decisions

**Second Week of July:** The assessment openings may be extended for a third day that week if the runs appear strong based on a review of catches to-date. Opportunities for a gill net and seine opening on Monday in the third week in July are considered, based on the results of the assessment fisheries:

- If Atnarko pink stocks are weak but Bella Coola and Kimsquit chum stocks are strong, Subareas 8-3 and a portion of Subarea 8-4 south of a line from Walker Point to Hergest Point will be closed.
- If Kimsquit chum are weak but Bella Coola chum are strong, Subarea 8-5 will be closed.
- If Kimsquit chum are very weak but Bella Coola chum are strong, Subareas 8-5 and 8-4 north of Walker Point will be closed.

#### 4.8.5. Prospects for 2007

Given the recent poor returns on pink salmon in 2006, there is considerable uncertainty in the forecast for 2007. Preliminary information suggests that the 2007 return may provide a harvestable surplus of about 240,000. Streams with predicted surpluses include Atnarko and Kwatna Rivers.

The 2007 forecast for Area 8 chum predicts an available surplus of 775,000 chum. The primary contributors to this surplus include the Bella Coola and Kimsquit Rivers.

## **4.9. Area 9 - Rivers Inlet Sockeye Decision Guidelines**

### **4.9.1. Background**

There has been no gill net fishery in Rivers Inlet since 1995 after the sockeye returns declined dramatically in 1994. This decline was caused by poor marine survival beginning with the 1990 and 1991 brood years. Since 2002, total returns have shown some improvement, although the 2006 return was poorer than expected based on the return rates of the previous 5 years. The pre-1980 average catch of 808,000 sockeye or the 1979 to 1996 average catch of 150,000 sockeye is an indicator of the production of sockeye that came from this system in the past. Sockeye salmon in Rivers Inlet remain in the recovery mode.

### **4.9.2. Pre-season Decisions**

Fishing opportunities for Rivers Inlet sockeye are evaluated pre-season based on brood year stock status and indications of marine survival rates.

For Rivers Inlet sockeye, the updated assessments suggest that optimum spawning escapements are very uncertain, but likely within the 200,000 to 600,000 range. The current management approach allows for small harvests to begin once the 200,000 escapement level has been exceeded.

If indications of ocean survival are poor and Owikeno Lake sockeye stocks continue to be depressed, as in the past five years, no commercial or recreational fisheries will be considered for the year. In 2007, an echo sounding pilot program, combined with a seine sampling program to determine species composition, will be tested for the second year to continue to calibrate it for use in determining run strength in-season.

### **4.9.3. In-season Decisions**

Owikeno Lake sockeye stocks are currently considered to be in the recovery mode, and the forecast indicates they are not abundant enough to support a commercial fishery. However, due to the uncertainty in pre-season forecasts, the in-season sounding and sampling program will be monitored closely. A run clearly in excess of 200,000 sockeye could trigger a small gill net fishery.

### **4.9.4. General Constraints**

If a fishery occurs, a maximum mesh restriction of 150mm would be in place to protect Rivers Inlet Chinook stocks. Commercial gill net boundaries will be developed through consultations with commercial, First Nations, and recreational interests. No coho retention unless abundance warrants.

### **4.9.5. Prospects for 2007**

The pre-season forecast for Owikeno sockeye is very uncertain due to the highly variable return rates in recent years. Brood year escapements of 100,000 in 2002 and 140,000 in 2003 could produce a moderate return, but will most likely be below 200,000. A projected escapement in excess of 200,000 is needed before any fishery would be contemplated. No fishing opportunities are expected with the exception of a small First Nation harvest for food, social, and ceremonial purposes.

#### **4.10. Area 10 - Long Lake Sockeye Decision Guidelines**

##### **4.10.1. Background**

Since 1985, all gill net fishing has occurred inside Smith Inlet with the last fishery occurring in 1996. Sockeye catches in Smith Inlet during the 1995 and 1996 fishing season were unusually low due to poor marine survival of the 1990 and 1991 brood years. Total returns to the tributaries of Long Lake have remained relatively poor since the 1996 fishing closure. Smith Inlet sockeye catches averaged 186,000 for the period 1970 to 1996.

##### **4.10.2. Pre-season Decisions**

Opportunities for a one day assessment fishery on Long Lake sockeye are evaluated pre-season based on brood year stock status and indications of marine survival. In-season decisions are made based on Docee Fence fish counts.

For Smith Inlet sockeye, the updated assessments suggest that optimum escapements for un-fertilized conditions are in the 43,000 to 80,000 range. For fertilized conditions, optimum escapements are in the 155,000 to 300,000 range. As the lake is no longer being fertilized, 100,000 sockeye will be the conservative interim escapement goal for Smith sockeye.

##### **4.10.3. In-season Decisions**

Long Lake sockeye stocks continue to remain in the recovery mode, however, small directed commercial opportunities may exist as individual year returns exceed target escapement goals. Opportunities for Long Lake sockeye directed fisheries are evaluated in-season based on Docee Fence fish counts.

The primary tool available for inseason management of this stock consists of a run-size predictor using historic (1972-2006) daily proportional average sockeye counts observed at the Docee River fence. Normal mean run timing date is July 20.

Any decision on commercial opportunities will be conservative taking into account the poor recent escapements, the extremely poor return rate in 2006, and the uncertainties in the in-season forecast.

##### **4.10.4. General Constraints**

If a fishery takes place, a maximum mesh restriction of 150mm will be in place to protect Docee River Chinook stocks. Boundaries will be more restrictive than in past years. No coho retention unless abundance warrants.

#### 4.10.5. Prospects 2007

Smith Inlet sockeye had shown higher return rates for the period 2001 through 2005, however last year's 4 year old return from the 2002 escapement was extremely poor (92,000 sockeye in 2002 produced only 8,000 4 year olds in 2006). This makes the forecast for the return from the 2003 escapement of 180,000 very uncertain.

### 4.11. Northern Troll Decision Guidelines

#### 4.11.1. Background

In 1999, Canada and the US agreed to implement an abundance-based coast-wide Chinook management regime, under which fishery regimes are classified as aggregate abundance-based management regimes (AABM) or individual stock-based management regimes (ISBM). In northern B.C., troll fisheries in Management Areas 1 to 5 and Queen Charlotte Islands sport fisheries (Areas 1 and 2) are managed under an AABM regime. All other fisheries in the north and central coast are managed under an ISBM regime.

The northern B.C. (and South-East Alaska) AABM allowable catch is constrained by a specified formula agreed to by the two countries. The AABM fishery is managed annually according to an allocation calculated from this formula.

The coho harvest in western Dixon Entrance and around the QCI is from a wide variety of stocks, mostly from north and central coast mainland streams. Coho harvest will be limited to an exploitation rate of 40 to 60 percent if ocean survivals continue to be good. Management adjustments will be made based on assessments of coho abundance in-season.

#### 4.11.2. General Constraints

- WCVI Chinook will be managed in-season to an exploitation rate of 3.2% of the return to Canada.
- Areas with known high abundance of undersized Chinook will remain closed.
- Areas or times where weak Queen Charlotte Islands, Northern mainland and Central coast Chinook, coho and chum stocks are known to be abundant will remain closed.
- Accurate and timely catch reporting is especially important in the Chinook fishery.
- Appropriate biological sampling, particularly for coded-wire tags and DNA will be conducted.

- Coho will be managed in accordance with the overall exploitation rate objective and the indications of in-season abundance.
- Barbless hooks and operating revival boxes are required for all fisheries.
- There will be non-retention of steelhead all year, chum in most areas, and sockeye in some areas.
- Additional measures may be implemented in recognition of weak QCI and Central Coast salmon stocks.

#### 4.11.3. Pre-season Decisions

##### 4.11.3.1. Sockeye

The main producers of sockeye in the north and central coast are the Skeena and Nass Rivers. Rivers and Smith Inlets sockeye are rebuilding and will be protected by restricting sockeye retention to Dixon Entrance. Fraser River sockeye migrating through north coast waters will also be protected by prohibiting sockeye retention in known migration routes.

##### 4.11.3.2. Coho

Coho will be managed to a maximum exploitation rate of 40 to 60 percent if ocean survivals remain at recent levels. Once the allowable exploitation rate is predicted to be reached in any given area for any given stock grouping, trolling will close in that area and possibly adjacent areas. If there is still Chinook quota available for harvest, then some areas may remain open for Chinook.

Areas 4, 5, 103, and portions of 104 will remain closed to trolling to protect migrating Skeena coho.

##### 4.11.3.3. Pink

Canada will manage the Area 1 troll fishery to achieve an annual catch share of 2.57 percent of the annual allowable harvest (AAH) of a portion of south-east Alaska, as agreed to in the Pacific Salmon Treaty (PST). The methodology for AAH calculations is provided in the PST. Canada can carry forward from year to year annual deviations from the prescribed catch. To increase the pink catch, the northern section of Dixon Entrance will open to pink salmon fishing on July 1st. During this fishery, coho and sockeye retention will also be allowed.

##### 4.11.3.4. Chum

Chum is expected to be weak in most mainland systems. There will be non-retention of chum except in some selected cases such as Cumshewa Inlet and during the AB line fishery on July 1. The effort was low to none in 2006 and expected to be the same in 2007. It is expected that DNA samples will be taken from landings.



#### 4.11.3.5. Chinook

For PST purposes, the accounting year runs from October 1 to September 30 of the following year. The allowable northern B.C. troll catch (Management Areas 1 to 5) for the 2007 accounting period is 178,000. A winter troll fishery may occur from October 1, 2007 to May 31, 2008, using a fishing regime similar to the one for the summer 2007 fishery.

Once again there will be two Chinook fishing regimes for northern troll vessels. The first will be a non-competitive individual transferable quota (ITQ) fishery. The second will be a competitive fishery. Vessels will be asked to select which fishery they wish to participate in. The ITQ will be set with equal vessel shares, as in the past. The competitive fishery will have an overall quota of one share times the number of vessels that select that fishery.

Exact dates for the summer fishery openings will be determined by DNA analysis of Chinook present in the fishing area.

If the Chinook fishery opens, and then is closed due to a high incidence of WCVI Chinook, a restart may be possible depending on analysis of test samples and overall catch of WCVI Chinook to date.

#### 4.11.4. In-season Decisions

##### 4.11.4.1. Coho

The coho troll management model and other indicators of in-season abundance will be used in-season to provide estimates of exploitation rates and coho stock abundance. The model includes fisheries in Areas 1 through 10 and stocks for Areas 1 through 12. The basic concept of the model is to use base period (1985 to 1996) relationships between effort and exploitation rates to predict fishery impacts from in-season effort. Areas could be closed to coho on short notice if the exploitation rate on the coho stocks present is estimated to be achieved, or if ocean survival levels are less than recent levels. Special attention will be given to evaluating the impact of the earlier troll opening for coho.

##### 4.11.4.2. Pink

Pink salmon opportunities will begin on July 1 in the northern portions of Dixon Entrance, and are anticipated to remain available throughout the coho fishery. The allowable pink harvest under the provisions of the PST is such that it is very unlikely that the troll fleet will be restricted.

##### 4.11.4.3. Chum

Chum salmon returns are expected to be poor in Areas 3 to 6. Chum salmon opportunities are not expected throughout the coho fishery, except in local areas such as Cumsheewa Inlet where chum surpluses may be identified. Chum retention will be allowed during the AB line fishery.

#### 4.11.4.4. Chinook

The opening date of the summer fishery depends on WCVI presence, as determined through DNA sampling. Fishing times are subject to change in-season due to high incidence of WCVI Chinook. In addition to the opening dates, the fishing areas will also be determined in-season based on DNA analysis.

#### 4.11.5. Prospects for 2007

Sockeye, pink, Chinook and some coho stocks are expected to be in good abundance. Chum abundance will be low. WCVI allowance is 3.2% of the return of WCVI Chinook to Canada. Coho expectations are for an average to good return.

## **5. FIRST NATIONS FISHING PLAN**

After conservation needs are met, First Nations' food, social, and ceremonial (FSC) requirements and treaty obligations to First Nations have first priority in salmon allocation. DFO manages FSC fisheries cooperatively with individual First Nations using Aboriginal Fishing Agreements and communal licences.

Catch Monitoring will be a priority in the management of First Nations fisheries. Monitoring programs and real-time reporting technologies will be examined.

### **5.1. Catch Monitoring and Reporting Initiatives**

#### **5.1.1. 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, with some exceptions. 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 request to retain heads from adipose fin-clipped Chinook and coho when the fisher did not object. This project was quite successful, and will be expanded in 2007, 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.

### **5.2. Specific Conservation Measures**

When a conservation concern comes up for any individual stock that First Nations harvest, then consultation is undertaken and an acceptable fishing plan is reached that will provide the necessary protection to the weak stock.

### **5.3. 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 date, times and locations where harvesting may occur, acceptable gear types, and other conditions are described in these licences. Communal licences can be amended in-season for resource conservation purposes.

DFO seeks to provide for the effective management and regulation of First Nations fisheries through negotiation of mutually acceptable and time-limited Fisheries Agreements. If an

Agreement cannot be mutually concluded, DFO will issue an Aboriginal Communal fishing licence to the group authorizing them to fish for FSC purposes.

Harvest targets for communal licences in the north and central coast of B.C. are outlined below. Note that actual numbers of fish on some communal licences are still in negotiation, and therefore the numbers listed below are subject to change. Actual catches will be dependent on, among other factors, in-season assessments of actual stock strength, management measures taken to ensure conservation of individual stocks, and abundance of other species.

**Table 4:** Communal Licence Harvest Targets (Arranged From North and Inland)

	<b>Sockeye</b>	<b>Coho</b>	<b>Pink</b>	<b>Chum</b>	<b>Chinook</b>
<b>Gitanyow</b> (Nass River)	6,000	250	185	25	620
<b>Yekooche</b> (Babine Area)	2,000	0	0	0	0
<b>Takla</b> (Bear/Sustut)	1,050	0	0	0	550
<b>Lake Babine</b> (Babine Lake and Area)	35,000	500	1,000		100
<b>Gitksan</b> (Skeena River) and <b>Wet'suwet'en</b> (Bulkley River)	100,000	2,500	25,000	500	10,000
<b>Kitselas</b> (Skeena River near Terrace)	14,000	1,000	2,000	200	1,500
<b>Kitsumkalum</b> (Skeena River near Terrace)	12,000	200	1,000	500	1,000
<b>Lax Kw'alaams</b> (Areas 3 and 4)	20,000	500	1,000	700	750
<b>Metlakatla</b> (Area 4)	5,000	100	500	100	100
<b>Kitkatla</b> (Area 5)	5,500	100	600	750	100
<b>Gitga'at</b> (Area 6)	2,200	750	140	200	140
<b>Haisla</b> (Area 6)	2,500	2,500	1,000	2,000	1,000
<b>Haida</b> (Areas 1 and 2)	20,000	5,000	2,500	2,500	3,000
<b>Kitasoo</b> (Areas 6 and 7)	9,000	1,500	1,500	3,000	500
<b>Heiltsuk</b> (Areas 7 and 8)	20,000	3,000	6,000	6,000	2,000
<b>Ulkatcho</b> (Bella Coola/Atnarko Rivers)	500	50	350	50	350
<b>Nuxalk</b> (Area 8)	14,000	3,500	5,000	3,000	5,000
<b>Wui'kinuxv</b> (Area 9)	4,500	400	400	400	100
<b>Gwa'sala-'Nakwaxda'xw</b> (Area 10)	2,000	20	20	70	100

#### 5.4. Anticipated Food, Social and Ceremonial Opportunities

Salmon fishing for FSC purposes is open year round, except closed for nets in the vicinity of commercial net fisheries as described in individual First Nations' communal licences.

#### 5.5. Nisga'a Fisheries

The Nisga'a Annual Fishing Plan (NAFP) is developed by the Fisheries Program of the Nisga'a Lisims Government and governed by the terms of the Nisga'a Final Agreement and the Nisga'a Harvest Agreement. The Nisga'a Harvest Agreement does not form part of the Nisga'a Final Agreement, and includes Nisga'a fish allocations expressed as a percentage of the adjusted total allowable catch of sockeye and pink. The NAFP is developed in accordance with Chapter 8 of the Nisga'a Final Agreement. Once approved by the Minister, the Annual Fishing Plan remains in effect until replaced the following year. The fishing plan applies to persons who harvest fish, other than steelhead, in Nisga'a fisheries.

Notwithstanding that Nisga'a fish entitlements are treaty rights, a Nisga'a fish allocation of sockeye and pink, as defined in the Nisga'a Harvest agreement, is set out as a percentage of the Canadian Total Allowable Catch for Nass Area stocks. Nisga'a commercial fisheries for these or other salmon species have the same priority in fisheries management decisions as other commercial and recreational fisheries that target Nass Area salmon stocks.

The NAFP defines the escapement goals required to guide management decisions for Nass salmon stocks, calculates Nisga'a allocations for each salmon species and provides the general regulatory requirements for catches of each salmon species. The NAFP is reviewed by the Joint Fisheries Management Committee (JFMC) prior to being submitted to the Minister for approval. Nisga'a Lisims Government is responsible for the internal allocation of catch opportunities between Nisga'a fishers and day to day operation of the Nisga'a fishery.

Pre-season estimates of the Nisga'a Allocation for each salmon species in 2007 are:

- a) **136,840** sockeye of a Total Return to Canada (TRTC) of **831,000** based on the 5-year average return (actual entitlement that will be targeted will be approximately 8,000 less (**129,000**) to reduce the overage remaining from 2005);
- b) **248,000** pink of a TRTC of **1,843,000** based on the 5-year average return of odd-year pink (no underage or overage accrued);
- c) **7,560** Chinook of a TRTC of **36,000** based on the 5-year average return (actual entitlement that may be targeted will be approximately 2,000 greater (**9,560**) depending on run strength to account for underages accrued between 2004 and 2006);
- d) **13,600** coho of a TRTC of **170,000** based on the dominant brood year cycle (actual entitlement that may be targeted will be approximately 7,500 greater (**21,000**) depending on run strength to account for underages accrued between 2000 and 2006); and
- e) **11,840** chum of a TRTC of **148,000** based on the dominant brood year cycle (actual entitlement that may be targeted will be approximately 29,000 greater (**41,000**) depending on run strength to account for underages accrued between 2000 and 2003).

## **5.6. 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 effort on the resource, thereby providing Aboriginal groups with much needed employment and income. Since 1994 when the ATP was first launched, over 250 commercial licences have been transferred to Aboriginal groups.

Discussions regarding economic opportunities for First Nations are on-going with First Nations and stakeholders. For 2007, 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. 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](http://www.pac.dfo-mpo.gc.ca/recfish).

Catch Monitoring will be a priority in the management of recreational fisheries. The Department is working with the Sport Fishing Advisory Board to develop catch monitoring standards for use in the recreational fishery.

### 6.1. Catch Monitoring and Reporting Initiatives

The development of an improved catch monitoring regime will continue to be a priority in the management of recreational fisheries. The Department is working with the Sport Fishing Advisory Board to develop catch monitoring standards for the recreational fishery. The standards focus on data collected to estimate catches, releases, and essential biological data for stock assessments and fishery management evaluations.

#### 6.1.1. Initiatives to increase Coded Wire Tag (CWT) submission rates

The CWT system relies on voluntary submissions of heads from adipose fin clipped Chinook and coho salmon to estimate the quantity and composition of CWTs caught by anglers. Over the past several years, submission rates have decreased for both species, but most drastically for coho salmon. Now, recovery rates for coho salmon have become too low to provide sufficiently precise CWT catch estimates for stock assessment purposes; in certain fisheries, recovery rates of Chinook salmon are also too low. Further, the 2005 expert panel review of the CWT system found that an increased proportion of the total catch was occurring in sport fisheries, which are more difficult to sample than commercial fisheries. To increase angler awareness of the program and head submission rates, the department is increasing promotion and advertising efforts, and communicating these concerns to the Sport Fish Advisory Board. In 2007, the Department will explore additional means of improving the certainty of the recreational fishery CWT data.

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 2007, the department will strive to increase the proportion of guiding companies collecting heads to better represent their fishing activity.



## **6.2. Specific Conservation Measures**

There are specific management measures in all management areas of the north and central coast, and these specifics are outlined in the *2007 to 2009 British Columbia Tidal Waters Sport Fishing Guide*. These restrictions are to protect vulnerable salmon from being over-harvested, with many closures occurring at the mouths of streams where salmon school and acclimatize to a fresh water environment prior to entering the stream.

## **6.3. Tidal Waters Fishery**

The following restrictions apply to all North Coast tidal waters, except for specific circumstances listed by Management Area below.

- Chinook salmon open January 1 to December 31. Daily limit is two.
- Sockeye, coho, pink and chum salmon open January 1 to December 31. Daily limit is four.
- The daily limit for coho in the tidal portions of all streams in Areas 1, 2E, and 2W is two.
- The daily limit for coho in the tidal portions of all streams in Area 6 has the same corresponding limit as the non-tidal portion.
- Barbless hooks must be used while angling for salmon.
- Aggregate tidal water bag limit is four salmon, possession limit of eight salmon.
- Rockfish Conservation Areas are not mentioned in the sections below, but are in effect in portions of Areas 1 to 10, where fishing is restricted. Visit [www.pac.dfo-mpo.gc.ca/recfish](http://www.pac.dfo-mpo.gc.ca/recfish) for maps and descriptions.

### **6.3.1. Area 1**

- Coho salmon open January 1 to December 31. Daily limit two in the tidal portions of all streams.
- In tidal portions of all streams, only a single, barbless hook may be used.
- The waters of Masset Inlet and Sound south of a line from a boundary sign at Griffiths Point to a boundary sign due west on the opposite shore are closed to Chinook retention, from May 15 to October 31.
- The waters of Masset Inlet and Sound south of a line from Entry Point to Westacott Point are closed to Chinook retention, from June 15 to October 31.

### **6.3.2. Area 2E**

- Sockeye salmon open January 1 to December 31 except local closure in 2-1 and 2-2, April 1 to June 30. Daily limit four.
- Coho daily limit two in the tidal portions of all streams excluding the Pallant and Braverman system.
- In the tidal portions of all streams, only a single, barbless hook may be used.
- The waters shoreward of a line between two boundary signs on either side of the Copper River estuary and the Pallant Creek estuary, a single barbless hook restriction applies all year.
- The tidal portion of Tlell River is closed to the retention of pink salmon.

- The waters of Skidegate Inlet shoreward of a line between two boundary signs on either side of Sachs Creek estuary are closed to pink and chum salmon from August 15 to October 31.
- The waters of Cumshewa Inlet east of a line from a boundary sign 3.5 km west of Mathers Creek to a boundary sign on McLellan Island and west of a line from this boundary sign to a boundary sign 3.5 km east of Mathers Creek are closed to all finfish (no angling allowed) August 15 to October 31.

#### 6.3.3. Area 2W

- Coho daily limit two in the tidal portions of all streams.
- In the tidal portions of all streams, only a single, barbless hook may be used.
- The waters of Fairfax Inlet shoreward of a line from Magneson Point to Reid Point, non-retention of sockeye May 15 to August 15.

#### 6.3.4. Area 4

- The waters downstream of a tidal boundary sign at the water line crossing on Shawatlan Creek to the fishing boundary signs at the mouth of Shawatlan Bar are closed to all finfish (no angling allowed) July 15 to August 15.
- The waters from a fishing boundary sign at the mouth of Kloiya Creek to the fishing boundary sign at the mouth of Kloiya Bay are closed to all finfish (no angling allowed) August 1 to September 1.

#### 6.3.5. Area 5

- Inside a line drawn from boundary signs located approximately 100 m seaward of the falls at the mouth of the Kumowdah River flowing into Lowe Inlet, closed to all finfish July 1 to October 31. No angling allowed.

#### 6.3.6. Area 6

- Coho in the tidal portion of all streams flowing into tidal waters of Area 6 have the same daily limit as the non-tidal portions.

#### 6.3.7. Area 7

- The waters of McLaughlin Bay shoreward of a line connecting two fishing boundary signs on each side of the entrance to McLaughlin Bay is closed to fishing for all finfish, from July 1 to October 31.

#### 6.3.8. Area 8

- The mouth of Namu River shoreward of a line between two fishing boundary signs located 180 m from a bridge at the mouth of Namu Creek on the west shore and a point on the opposite side of the bay, closed to fishing for all finfish, all year.

#### 6.3.9. Area 9

- Sockeye salmon closed all year. Daily limit zero.

- In those waters of Rivers Inlet shoreward of a line connecting two square white boundary signs off the mouth of the Wannock River is closed to fishing for all finfish, June 1 to September 15.
- In those waters of Rivers Inlet shoreward of a line connecting two square boundary signs off the mouth of the Chuckwalla and Kilbella Rivers is closed to fishing for all finfish, June 1 to September 15.
- In those waters of Rivers Inlet shoreward of a line connecting two square boundary signs located at Rutherford Point and McAllister Point, closed to fishing with a fishing line or downrigger line to which is attached either to a weight that is greater than 168 grams (6 ounces), or an attracting device that is not affixed directly to the hook, from June 1 to September 15.

#### 6.3.10. Area 10

- Sockeye salmon closed all year. Daily limit zero.
- Pink, coho and chum salmon open all year. Daily limit four.
- Smith Inlet, the waters of Wyclees Lagoon lying southerly of the boundary sign near the entrance: non-retention of all salmon, June 20 to November 30.

### 6.4. Non-Tidal Waters Fishery

Non-tidal salmon openings and closures are found in Appendix 6. Specific non-tidal salmon fishing opportunities may be announced in-season based on abundance and the likelihood of achieving escapement targets.

## **7. COMMERCIAL FISHING PLAN**

### **7.1. Catch Monitoring and Reporting Initiative**

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 including consultation regarding mandatory hailout provisions for the net fleets (currently in place in troll fisheries) and a pilot mandatory dockside monitoring program.

#### **7.1.1. 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 concerns with CWT sampling of freezer troll catch which are being addressed in 2007.

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 have increasingly been requested by fishery notice, and/or required by Condition of Licence (Chinook in Area F and H), to retain all heads from Chinook and coho and deliver them to processing plants when landing their catch. However, even where required by Condition of Licence, heads are not always delivered, and many head deliveries contain substantially fewer heads than the body count in the landing, seriously eroding (or even eliminating) the usefulness of the sample.

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 had limited or no sampling usefulness 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 address these two concerns, in 2007 the Department will:

i) standardize the requirement to retain and deliver heads from all retained coho and Chinook in the Conditions of Licence for all troll Licence Areas (F, G and H),

- ii) specify, as a Condition of Licence, the minimum portion of each head that must be retained,
- iii) provide instructions regarding these conditions, in troll logbooks and troll Fishery Notices, and in other communications with trollers (Appendix 7).

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 is considering implementing a program in which bags (or other container) and labels are provided to freezer trollers for use in storing and labelling head samples separately according to the week they were caught in. In 2007, the Department, along with the MRP contractor, is conducting a program to test the strength, ease of use, and general acceptability to fishers of food-safe plastic bags designed to remain pliable at freezer temperatures. The current planning is to include 10 Area F and 2 Area G vessels in this test program.

## **7.2. Implementation**

Due to the 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. Announcements are at least weekly, usually every Thursday afternoon at 14:00 hours and during days when a fishery is in progress, usually prior to 16:00 hours, and occasionally more frequently. Although it is not stated under each week in each area of this fishing plan, management actions planned for any area may change in-season. Fishing Areas, Subareas 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 harvest abundant salmon stocks while minimizing the incidental harvest of those stocks that are at less than abundant levels. For example, boundaries have been adjusted to reduce size of the mixed stock fishing area from historic levels. Stocks of concern for which management actions have been included are Rivers and Smith Inlets sockeye, chum along the outer coast of Areas 3 to 6, Skeena coho and Skeena steelhead. Net fisheries that occur on the north and central coast may be required to release all non-target species with the least possible harm, depending on local stock concerns. Central coast pink and chum fisheries will be monitored to ensure coho harvest does not harmfully impact on local stocks.

In 2007, DFO will continue the development of two 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 fishers. Lessons learned from the demonstration fisheries will be considered for inclusion into fisheries of the future.

Catch Monitoring will be a priority in the management of commercial fisheries. DFO will continue to focus efforts on enforcement of current reporting requirements.

### **7.3. Test Fishing/Use of Fish Arrangements**

DFO uses a range of methodologies to determine in season stock abundance and composition. Historically, test fisheries have played a prominent role in collecting data to both support the setting of user TAC's and to ensure that conservation objectives are met. In the past, test fishing programs were structured to allow fishers assisting with data collection activities to help offset their costs by retaining and selling fish caught in test fisheries. Recent Federal court decisions have affected the department's ability to deliver test fishing programs in this way. DFO is continuing to evaluate the impact of these court decisions, however it is likely that some approaches used in the past will have to be changed. DFO will be working in close consultation with resource users to ensure that the fisheries data collections necessary to set TAC's and to ensure conservation will continue to be undertaken.

### **7.4. Licence Application and Issuance**

The salmon licensing period encompasses April 1 to March 31 of the following year. Applications must be completed and submitted to a Pacific Fishery Licence Unit by March 31 of each year 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 further information contact the Salmon Catch Monitoring Unit at 250-756-7000); and
  - ii. Submission of all fish slips (for further information contact the Regional Data Unit at 604-666-2716).

#### **7.4.1. Fisher Identification Number (FIN)**

Starting in 2006 and continuing in 2007, DFO will be introducing unique Fisher Identification Numbers (FIN) that will be assigned to all Pacific commercial harvesters.

The FIN allows for fast, easy, and reliable on-grounds identification of fishers for data collection, fisheries management and enforcement purposes. Once a FIN has been assigned to a fisher, that individual will reference the FIN when identifying him or herself in subsequent business dealings with both the department and service contractors, e.g. completing the FIN field on logbooks, noting the FIN when hailing, landing catch, etc. As the FIN will now be used during normal business interactions with DFO and contractors fishers will no longer need to provide detailed personal identifying information such as gender or date of birth.

Fishers will not need to apply for a FIN as one will be automatically generated the first time an annual FRC (Fishers Registration Card) licence is issued. Once the FIN is issued to a fisher, it will not change from year to years.

## **7.5. Mandatory Log-Book and Phone-In Program**

Fishers are reminded that there is a mandatory log-book and phone-in program in place for all commercial fisheries. In-season decisions could be directly affected by the level of compliance to the phone-in provisions.

Conditions of Licence require that commercial fishers make service arrangements with an approved service provider in order to fulfil reporting requirements. An approved service provider is a third party company, organisation or individual who meets departmental requirements for impartiality and security, and who will provide services including:

- Provide fishers with harvest logs with the same format and content as the appropriate example in Appendix 3;
- 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 call centre that will receive in-season reports and enter the reported information electronically into the departmental salmon fishery database;
- 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.

Information on contacting currently approved service providers will be included with licence packages mailed to licence holders.

Fishermen should be aware that completion of their previous year's logbook must be completed and submitted before their new licence will be released.

### **7.5.1. Electronic Logbooks (E-Logs)**

Fisheries and Oceans Canada is piloting an Electronic Logbook system in some areas. This computer application has been designed following the current, paper versions of logbooks for the gill net, seine and troll fleets. The ultimate goal of this new initiative is to improve the efficiency and compliance of reporting catch to the Department. Participants will be required to follow the terms as described in their licence conditions.

A selected number of computers will be deployed to each of the three gear types, and will be the primary means used to transfer each vessel's catch and other fishery information to DFO's Fishery Operations System (FOS). Participants in this pilot project 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. A list of Fishers, Vessel Names and associated VRN numbers will be communicated via Fishery Notice once determined.

For more information please contact Carmen McConnell at 250-713-7172 or Ron Goruk at 250-713-1522.

Refer to your conditions of licence for further details regarding the log book and phone-in program.

## **7.6. North Coast Non-Retention Species**

There will be non-retention of steelhead in all commercial fisheries.

### **7.6.1. Seine Fisheries**

Areas 3 through 6: non-retention of chum and Chinook; chum retention may be allowed in certain areas and certain times, depending on stock strength. Coho may be closed based on in-season information of returning runs.

Areas 7 and 8: non-retention of coho, sockeye and Chinook. Coho may be allowed once the incoming run size is assessed.

### **7.6.2. Gill Net Fisheries**

Area 3: A special request is made to release all live chum & Chinook to the water with the least possible harm. Chum non-retention may be implemented in-season. Coho may be closed based on in-season assessment of returning runs.

Areas 4 and 5: non-retention of chum. A special request is made to release all live Chinook (except during directed Chinook fisheries) to the water with the least possible harm. Coho may be closed based on in-season assessment of returning runs.

Area 6: A special request is made to release all live chum to the water with the least possible harm. Chum non-retention may be implemented in-season. Coho may be closed based on in-season assessment of returning runs.

Areas 7 and 8: non-retention of coho. A special request is made to release all live Chinook to the water (except during directed Chinook fisheries). Coho may be allowed once the incoming run size is assessed.

### **7.6.3. Troll Fisheries**

Non-retention of chum. Other species will be non-retention at certain times and areas throughout the season. Fishery notices will be issued whenever fishing regimes change.

Please refer to the Integrated Groundfish Fisheries Management Plan for requirements pertaining to the retention of lingcod by salmon troll.

## **7.7. Net Fishing Times**



All north and central coast net fisheries, with only a few exceptions, will normally be restricted to daylight hours (not longer than 16 hours per day, progressively shorter as the daylight hours get shorter).

The local manager may vary these net fishing times depending on circumstances such as by-catch concerns, strong returns of target species, abundance of prohibited species, weather, or other factors. Times will be specified in fishery notices released prior to each fishery.

### **7.8. Revival Tanks**

Revival tanks conforming to the Conditions of Licence will be required, and all prohibited species captured incidentally must be either revived in the revival tank and released, or released directly to the water with the least possible harm. If in-season indicators show a deterioration of expected stock levels, additional measures may be implemented.

### **7.9. Demonstration Fisheries**

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.

Two demonstration projects proceeded in the north coast in 2006 - Area F Chinook individual transferable quota, and the Skeena inland commercial demonstration fishery. An additional project is planned for 2007 – the Nass River Inland Fishery Demonstration Project. As of late May, consultations regarding the details of this fishery are on-going.

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 improves product quality, increases 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 an individual or 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.

### **7.10. Gill Net Construction and Configuration**

In Management Areas 1 to 10, gill nets of different constructions may be used. Net construction may be either multistrand (30 filaments), or four, five or six filaments (Alaska twist). Specific restrictions such as the specifications for net construction and revival boxes are found in the conditions of the individual licences, which are attached to the licence. Fishers are urged to read

these conditions carefully to ensure that their vessel and fishing techniques are in accordance with their licence.

All gill nets will meet one of the following configurations:

1. Nets may be hung without a weedline (corkline to web distance 0 to 45 cm) to a maximum of 60 meshes deep.
2. In areas 3 to 5, nets may be greater than 60 meshes deep, but must be hung with a weedline (corkline to web distance minimum 1.2 m, maximum 1.5 m) to a maximum of 90 meshes deep. As well, every fifth cork must be red or another distinctive colour (not white).
3. Between July 10 and August 14 weed lines are required for gill nets in Subareas 8-5 north of Bold Point and 8-8.

Specific restrictions for net configuration are found in the Fishery Notice issued prior to every commercial fishery. Fishers are urged to read these carefully to ensure that their fishing gear is in accordance with the opening.

## **7.11. Selective Fishing and other Conservation Measures**

### **7.11.1. Selective Fishing Experiments**

The Department will work with Area Harvest Committee representatives to develop selective fishing experiments aimed at solving by-catch issues. Individual proposals will need to be vetted through Area Harvest Committees for consultation and approval by the Department. Proposals must have professional experimental design and reporting, appropriate observer coverage, and final results that can be independently verified. The Department and Area Harvest Committees will evaluate proposals based on specific criteria (conservation, project design, general manageability, future applicability and budget).

### **7.11.2. Selective Fishing Implementation**

When selective fishing experiments have provided positive evidence for a gear or method that would reduce impacts on non-target species or stocks the next step is implementation. A simple gear or fishing method change may be easy to implement directly into a fishery over a short period of time, while a more complex measure would require time to incorporate. More complex measures would require a greater degree of consultation and a strategy to allow for effective implementation by affected harvesters.

The first step in implementation may be the development of a demonstration fishery to advance a measure beyond the experimental phase. A demonstration fishery using the new gear and/or methods allows the affected harvesters the opportunity to better understand the operational aspects of a selective fishing gear or method by testing the implementation with a sub-sample of the fleet. If the demonstration fishery is successful, further consultation would take place prior to the gear or method potentially being

incorporated as a tool to be used to help solve a conservation issue through full implementation.

#### 7.11.3. Skeena River Selective Gill Net Fisheries

The decision on when to implement this selective gill net fishery will be made in-season based on the level of fishing that has occurred to date and the expected impact on steelhead, upper Skeena coho and chum throughout the year.

For the selective gill net fishery, the following rules will apply:

- Half length nets: Maximum net length will be 100 fathoms, or 187.5 m. It will not be acceptable to have a regular length net on your drum and only set half. It will also not be acceptable to have both halves of the net on your drum. Only one (half-length) net will be allowed on your drum or in the water.
- 20 minute soak times: The maximum amount of time the net is allowed to be in the water from the time it is completely set to the time it begins to be retrieved is 20 minutes. Note that this “soak time” is designed to equal a 40 minute time from when the first portion of the net enters the water to the when the last portion of the net leaves the water. Times will be monitored on the grounds.
- Fish handling: Gill net fishers are encouraged to handle prohibited species with the greatest of care. Operating revival boxes are mandatory as in all gill net fisheries. However, if the salmon is in a vigorous condition, it is best to release it directly to the water rather than put it in the revival box. Fishers are asked to use their judgement on which fish should go into the revival box before they are then released to the water.
- Reduced fishing area. In order to effectively monitor this selective fishery, the fishing area will be reduced. This will be achieved by closing the northern portions of Chatham Sound.

The commercial gill net fleet is reminded that the success of this selective fishery is critical to their future access to Skeena sockeye. In-season decisions on further fishing days will be directly dependant on compliance to the above restrictions.

#### 7.11.4. Experimental Selective Gill Net Pink Fishery

In recent years the Area C gill net fleet has not accessed or attempted to access its allocated portion of the north coast pink salmon harvest. With little interest from the gill net fleet and concerns for non target species such as coho and steelhead, full fleet opportunities have not been provided since 1996.

With the development of selective harvesting techniques and the proper controls placed on the fishery a pink-retention-only fishery may be possible. Therefore, a gill net pink only fishery in the River, Gap, Slough, and the Smith Island area of the Skeena River (Subareas 4-15 and a portion of 4-12) may be conducted. This fishery will take place after the regular sockeye fishery is completed.

A number of selective conditions will be applied to the fishery, including small mesh nets of approximately 121 mm (4 ¾") maximum mesh size, short sets and revival boxes.

The fleet is expected to be small and may fish as a pool (or pools depending on vessel numbers) in close proximity of each other. If the group wants to move, it must be by consensus and the whole pool moves. The fishery will be monitored for handling techniques, observed fish condition at release and short set compliance. The vessel operators will be required to pay for a shared observer provided by a service provider. Pools should be limited to a maximum of 4 to 6 vessels to provide adequate observer coverage. Larger areas and flexible time may result in greater monitoring costs to fishers.

The fishery may be administered under an experimental licence and may close on short notice based on the compliance and observed success of the selective harvest requirements. Fishers desiring to participate in this experimental selective pink fishery should notify the Prince Rupert office prior to August 1.

## **7.12. Seine Fisheries**

All seine fisheries unless otherwise authorized will be conducted with mandatory brailing and sorting of the catch. Specific restrictions such as the specifications of revival boxes are found in the Conditions of Licence. Fishers are urged to read these conditions carefully to ensure that their vessel and fishing techniques are in accordance with their licence. When moving between areas with different non-retention and non-possession rules, seiners must offload prior to fishing in the area they are moving to.

## **7.13. Anticipated Net Opening Dates**

All dates are anticipatory only. Subareas open and hours of fishing will be announced in fishery notices prior to openings.

### **7.13.1. Area 1**

September 17: First anticipated opening for gill nets only. This will be a chum salmon assessment fishery. Gill net mesh size minimum 100 mm.

### **7.13.2. Area 2E & 2W**

No gill net or seine fisheries will be directed on passing stocks.

Mid-September to October: Possible terminal fisheries directed on identified surpluses of local chum stocks.

ESSR fisheries on chum and coho are possible in Pallant Creek. Decisions on ESSR fisheries are made in-season if a surplus is identified.

For commercial net openings in Cumshewa Inlet, coho may be retained and seines will be allowed to ramp due to the hatchery origin of the coho.

#### 7.13.3. Area 3

June 12: First anticipated gill net fishery. Maximum mesh size 137 mm. This fishery will assess the returning Nass River sockeye run.

July 16: First anticipated seine fishery. Minimum bunt mesh size 70 mm. Earlier fishery possible if stocks abundant.

If a surplus of sockeye develops at the Meziadin Fishway, an ESSR fishery will be considered.

#### 7.13.4. Area 4

June 20: First anticipated Chinook gill net fishery. This date was recommended by advisors. Minimum mesh size 203 mm.

July 12: First anticipated sockeye gill net fishery, depending on run strength.

Seine opportunities will be considered for Area 4 in-season depending on run strength and domestic allocation considerations.

#### 7.13.5. Area 5

July 12: First anticipated gill net fishery.

July 16: First anticipated seine fishery. Minimum bunt mesh size 70 mm.

#### 7.13.6. Area 6

July 5: First anticipated gill net opening, Douglas Channel only. Minimum mesh size 149 mm, maximum mesh size 165 mm.

July 16: First anticipated seine opening. Areas open will be determined in-season. Minimum bunt mesh size 70 mm.

#### 7.13.7. Area 7

July 30: First anticipated gill net and seine opening in 7-5, portion of 7-6 (Finlayson), portion of 7-9 (Mathieson), 7-29 (Sheep), and a portion of 7-12 (Seaforth). Minimum mesh size 149 mm.

August 13: Possible opening in 7-17 (McLoughlin Bay). Gear types will alternate each week.

August 20: Consideration for terminal chum harvest on Kitasoo Creek Hatchery stocks; gill nets first and seines second.

August 27: Possible seine and gill net opening in portions of 7-30 (Johnstone Channel), 7-15 (Roscoe Inlet) and 7-13 (Spiller Channel).

#### 7.13.8. Area 8

May 28: First anticipated gill net opening in the Bella Coola gill net area. This will be a directed Chinook fishery. Minimum mesh size 203 mm.

July 2: Anticipated gill net opening in the Bella Coola gill net area and Fisher/Fitz Hugh. Minimum mesh size 158 mm.

July 16: First anticipated seine opening in Fisher/Fitz Hugh. Minimum bunt mesh size 70 mm.

July 10 to August 14: Weedlines are in effect in upper 8-5 (Fisher Ch) and 8-8 (Upper Dean Ch).

#### 7.13.9. Area 9

No anticipated openings.

#### 7.13.10. Area 10

No anticipated openings.

### 7.14. Northern Troll

Once again there will be two management regimes for Chinook harvest. Trollers shall choose whether to participate in a competitive fishery or an Individual Transferable Quota (ITQ) fishery. If no selection is made, then the vessel will be placed in the ITQ fishery.

**Competitive Fishery:** This fishery is scheduled to open in conjunction with the ITQ on June 15. The amount of Chinook available will be dependant on the number of vessels participating in the competitive fishery times one quota (480 Chinook), modified by the abundance of WCVI present in the overall catch.

**ITQ fishery:** This fishery will open on June 15. The quota per vessel will be 480 Chinook. The fishery will close when either the WCVI allowance is reached, or when the WCVI component in the catch rises above 9%.

There is now a ceiling on the number of Chinook that can be transferred to any single licence of 1180 Chinook.

All Areas and Subareas mentioned are subject to change in-season.

There will be a 1.0 nautical mile ribbon boundary in Areas 1 and 101 following the Graham Island and Langara Island shorelines initiating at Langara Island and terminating at Skonun Point. There will be no commercial trolling shoreward of this ribbon boundary.

The Chinook fishery may be closed on short notice if the proportion of WCVI Chinook increases.

July 1 - Open to pink, chum, and sockeye (sockeye only open East of 133 degrees West Longitude) in Subareas 101-3 (northern portion only, refer to Fishery Notice), 101-4, 101-5, 101-8 and 101-9.

July 10 - Open to coho in Subareas 101-3 (northern portion only, refer to Fishery Notice), 101-4, 101-5, 101-8 and 101-9.

July 25 - Normal coho areas open. Chum closed. Refer to Fishery Notice for specific areas.

Trolling is closed in all rockfish conservation areas listed in Appendix 2.

October 1, 2007 to May 31, 2008 - winter and spring Chinook fisheries may occur.

#### 7.14.1. Retention of freezer troll caught Chinook and coho heads

For 2007, Conditions of Licence will be made consistent across all three licence areas (F, G, and H). Please check your conditions of licence for the exact wording.

## 8. 2006 POST-SEASON OBJECTIVES REVIEW

In the June 1, 2006 to May 31, 2007 Northern B.C. Salmon IFMP, a number of objectives were specified. An analysis of whether those objectives were achieved follows.

### 8.1. Conservation Objectives

Conservation of Pacific salmon is the primary objective and will take precedence in managing the resource.

Some of the restrictions in place to attain these goals were area closures, harvest rate and exploitation rate limitations, daylight only fisheries, non-retention of stocks of concern, weedlines, brailing for seines, on-board observers, half-length gill nets, short gill net sets, revival tanks and proper handling of non-target species. On-going assessment programs monitor the health of north coast salmon stocks, and if declines are noted, management actions are taken.

#### 8.1.1. Rivers Inlet Sockeye

**The objective for Rivers Inlet sockeye is to continue with rebuilding these stocks to reach escapement goals and achieve a sustainable stock that will support harvest.**

There were no commercial or sport fisheries targeting on Rivers Inlet sockeye in 2006. An estimated escapement of 108,000 spawners reached the tributaries of Owikeeno Lake in 2006. This was below the forecasted return of 190,000. As in previous years, trawl surveys were conducted to estimate the abundance and condition of juvenile sockeye and other limnetic fish that use the lake as a nursery area.

#### 8.1.2. Skeena River Sockeye

**The objective for Skeena River sockeye is to ensure exploitation rates are maintained at sustainable levels.**

Throughout the season, the estimated run size was under 3 million, leading to a target exploitation rate of 31%. Near the latter part of the season, the estimate increased to over 3 million, triggering an increase in the target exploitation rate to 41%. The actual commercial net exploitation rate achieved was 34.1%, and the actual run size was just over 3.0 million. For comparison, the 1982 – 2002 mean exploitation rates of run sizes from 2 – 3M is 34.1%, and for runs from 3-4M is 46.9%. The target is a 10% reduction from past years averages, and this was achieved in 2006.

#### 8.1.3. Coho

**The objective for north and central coast coho is to operate Canadian fisheries within a sustainable range of 40% to 60%.**

Coho stocks throughout the north and central coast, including upper Skeena coho, saw a total exploitation rate that fell either within or below this range. However, coho stocks originating in Areas 8 to 10 returned at low levels, and so the management action of closing the central coast commercial fisheries to coho was taken in-season.

#### 8.1.4. North Coast Chum

**The objective for North Coast chum is to minimize fishery impacts on these fish to the greatest degree possible while still maintaining fisheries targeting other species.**

In 2006, chum remained a concern. Troll fisheries maintained a non-possession regulation throughout the season.

Seine fisheries were mostly non-possession of chum. Chum retention was allowed occasionally in Area 3 due to mortality concerns of sorting during times of high chum abundance. On these weeks, fishing time was reduced to compensate for the retention of chum.

Gill net fisheries have a voluntary release of chum, due to a high mortality. Due to high retention in recent years, a 0.5 nautical mile ribbon boundary was established along the shorelines of Pearce and Wales Island to allow a chum migration corridor.

#### 8.1.5. West Coast Vancouver Island Chinook

**The objective for West Coast of Vancouver Island (WCVI) Chinook is to manage Canadian Pacific fisheries (not including terminal areas) to an exploitation rate of 10%. For North Coast troll, the objective is to catch the amount of Chinook allowed under the PST, while managing WCVI Chinook to a 3.2% harvest rate on the total return to Canada.**

The PST allocation to northern troll in 2006 was 151,975, and 150,569 were caught. The WCVI allowance was 6344 mortalities, and in-season mortalities were estimated at 6465



based on DNA analysis. Post-season exploitation rates estimates based on coded-wire tag recoveries were not available in time to include with this plan.

#### 8.1.6. Skeena Steelhead

**The objective for Skeena steelhead, as well as all north coast steelhead, is to release to the water with the least possible harm all steelhead caught incidentally in fisheries targeting other species.**

By estimating steelhead impact in-season by the Skeena Management Model, managers determined in 2006 that the 24% steelhead incidental harvest had been reached. The commercial fishery was promptly closed, for an eight day period, with a further fishery only allowed after further analysis and after the majority of the summer run steelhead had already entered the river. Post-season, DFO and their provincial colleagues have used a run-reconstruction method to estimate the actual impact. While there is a lot of uncertainty involved, estimates put the actual impact between 18.4% and 29.7%, with the most probable impact around 24%, as estimated in-season. The following table lists the impacts since the agreement was reached calculated post season.

	<b>Steelhead</b>	<b>Early Steelhead</b>
1985 – 91 Base Period	36%	42%
Areas 3, 4 and 5 ceiling	24%	37%
1994 Actual	29%	33%
1995 Actual	25%	34%
1996 Actual	39%	49%
1997 Actual	31%	39%
1998 Actual	1%	2%
1999 Actual	0	0
2000 Actual	5%	11%
2001 Actual	9%	15%
2002 Actual	12%	18%
2003 Actual	6%	9%
2004 Actual	6%	8%
2005 Actual	1%	2%

#### 8.1.7. 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.

## **8.2. First Nations Fisheries Objectives**

**The objective is to manage fisheries to ensure that, subject to conservation needs, first priority is accorded to First Nations for opportunities to harvest fish for food, social, and ceremonial purposes and any treaty obligations.**

Opportunities for First Nations FSC fisheries were average in B.C.'s north coast. Fishing for all species of salmon was permitted. One exception was the concern expressed by the Wet'suwet'en over sockeye and Chinook abundance at Moricetown.

The 2006 season was the seventh year of successful implementation of the Nisga'a Final Agreement and Harvest Agreement. The success of implementing the Nisga'a agreements was the strong working relationships between Nisga'a, DFO and B.C. No disputes occurred between the parties.

The Nisga'a Fisheries Program provided DFO and Nisga'a stock assessment managers all the information (e.g., run size and Nisga'a catch) required to manage the Nisga'a fishery and assess Nass area stocks in 2006.

## **8.3. Recreational and Commercial Fisheries Objectives**

**The objective is to manage fisheries for sustainable benefits, consistent with the Wild Salmon Policy.**

Recreational opportunities were maintained, and commercial opportunities expanded in accordance with the Wild Salmon Policy. An example of this was the expanded economic opportunity provided by the inland demonstration fishery on the Skeena River, while still maintaining our goal of reducing the long term average commercial exploitation rate by 10%. In addition, despite the difficult time commercial fishers had in 2006 with catching the run of small sized sockeye, enough time was provided to ensure that their target exploitation rate was met.

## **8.4. International Objectives**

**The objective is to manage Canadian treaty fisheries to ensure that obligations within the PST are achieved.**

Obligations within the PST were met this year with all species under catch quotas. The Area 3-1 to 3-4 net fishery catch of pink salmon was within the annual catch share of 2.49 percent of the AAH of Alaskan Districts 101, 102 and 103.

The Area 1 troll catch of pink salmon was within the annual catch share of 2.57 percent of the AAH of Alaskan Districts 101, 102 and 103.

Review of the performance of the PST provisions occurs annually at two bilateral meetings of the northern Panel of the PSC, and these results are published and available from the PSC.

## **8.5. Domestic Allocation Objectives**

**The objective is to manage fisheries in a manner that is consistent with the *Allocation Policy for Pacific Salmon* and the 2005 Pacific Salmon Allocation Implementation Plan.**

Fisheries were managed in accordance with the Allocation Policy for Pacific Salmon and in accordance with the 2006 IFMP Appendix 1.

## **8.6. Enforcement Objectives**

The objective is to ensure compliance with acts and regulations associated with the management of Pacific salmon.

A post-season enforcement review highlighted several enforcement issues as follows:

- Continued laundering of FSC and illegally caught fish into commercial fisheries,
- Compliance problems with the use of revival boxes and the release of by-catch (non-retainable) in a manner that causes the fish the least harm,
- Closed Area compliance problems in the salmon troll fishery.

These issues will be considered priorities for Conservation and Protection in the future.

## **8.7. Enhancement Objectives**

Egg targets are determined pre-season for each stock. Difficulties in capturing broodstock 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. Hatcheries may collect additional eggs to supply to other programs. These are not included in the hatchery egg target in the following tables but are included in the actual eggs taken.

### **8.7.1. Chinook**

Enhancement of Chinook at Kitimat and Snootli Hatcheries is primarily undertaken to supplement runs for commercial and recreational fisheries. Wannock Chinook are enhanced in partnership with the Rivers Inlet North Coast Salmon Enhancement Association and the Wui'Kinuxv First Nation. In addition, two small runs of central coast Chinook are enhanced opportunistically at Snootli hatchery; the number of eggs collected is dependent on brood stock availability and staff requirements. Remnants of Pallant Creek Chinook from past transplant efforts (1986-88 broods) are also enhanced opportunistically.



## Enhanced Chinook Production from DFO Operated Hatcheries and Managed Channels and Pallant Cost Recovery Hatchery

					2005 Brood		2006 Brood		
Project	Run	Stock	Release Site	Stage	Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
CHINOOK									
Enhancement Operations									
Kitimat R	Spring	Hirsch Cr	Hirsch Cr	Smolt 0+	200,000	239,524	200,000	225,000	237,889
	Spring	Kitimat R	Kitimat R	Smolt 0+	1,400,000	1,395,271	1,400,000	1,600,000	1,692,430
Snootli Cr	Summer	Atnarko R Low	Atnarko R Low	Smolt 0+	904,000	785,115	904,000	1,050,000	1,051,228
	Summer	Atnarko R Up	Atnarko R Up	Smolt 0+	904,000	983,587	904,000	1,050,000	1,105,062
	Summer	Noosgulch R	Noosgulch R	Smolt 0+	43,000	no eggs taken	43,000	50,000	7,650
	Summer	Nusatsum R	Nusatsum R	Smolt 0+	86,000	32,495	86,000	100,000	107,510
	Summer	Salloomt R	Salloomt R	Smolt 0+	86,000	119,723	86,000	100,000	160,997
	Summer	Wannock R	Wannock R	Smolt 0+	80,000	44,810	80,000	200,000	396,528
				Seapen	80,000	45,838	80,000		
Community Economic Development									
Fort Babine	Summer	Babine R	Babine R	Fed Spr	0	26,708	0	50,000	92,400
				Smolt 1+	70,000	60,647 on hand	40,000	????	????
Kincolith R	Spring	Kincolith R	Kincolith R	Smolt 1+	101,250	45,561 on hand	70,000	50,000	65,290
Masset	Summer	Yakoun R	Yakoun R	Smolt	250,000	0	200,000	250,000	0
				Fry	0	243,000	0	0	289,459
Pallant Cr	Fall	Pallant Cr	Pallant Cr	Smolt 0+	40,000	no eggs taken	40,000	55,000	5600
Terrace	Summer	Kitsum Abv Can	Kitsum Abv Can	Fed Spr	90,000	131,734	90,000	150,000	69,370
				Smolt 1+	25,000	15,911 on hand	25,000		
	Summer	Kitsum Bel Can	Kitsum Bel Can	Fed Spr	100,000	69,360	100,000	125,000	121,444
				Smolt 1+	15,000	15,890 on hand	15,000		
Toboggan Cr	Spring	Bulkley R Up	Bulkley R Up	Smolt 1+	43,000	56,580 on hand	43,000	60,000	52,000

- Noosgulch Chinook (Snootli Creek Hatchery) experienced escapement numbers that were well below anticipated. As a result, 2006 brood egg targets were not met.
- The number of 2006 brood eggs attained exceeded Wannock Chinook (Snootli Creek Hatchery) egg targets due to provision of extra funding by the Rivers Inlet Hakai Pass Sport Fish Association. Adult escapement was higher than in previous years, making it easier to collect brood stock.

- The 2005 brood smolt program at Masset was cut short due to a diesel spill that occurred in Marie Lake. All fish were released as fry from the net pen facility.
- The Terrace Salmon Enhancement Society experienced difficulty in catching Chinook from Kitsumkalum (Above Canyon) in 2006. The majority of the upper river was inaccessible due to low water conditions and escapements were lower than in recent years.

#### 8.7.2. Coho

Most coho production from northern and central hatcheries is from facilities operated by communities and volunteers. Coho smolts are released from Kitimat Hatchery and from Snootli Hatchery to support an in-river sport fishery and to support educational and assessment programs, as well as to supplement runs for First Nations and commercial fisheries. Pallant Creek Hatchery is operated by the Haida Tribal Society as a cost recovery pilot hatchery, with production also contributing to North Coast commercial and recreational marine fisheries.

#### **Enhanced Coho Production from DFO Operated Hatcheries and Managed Channels and Pallant Cost Recovery Hatchery**

Project	Run	Stock	Release Site	Stage	2005 Brood		2006 Brood		
					Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
<b>COHO</b>									
<b>Enhancement Operations</b>									
Kitimat R	Fall	Kitimat R	Kitimat R	Smolts	500,000	450,000 on hand	500,000	720,000	780,558
Snootli Cr	Fall	Snootli Cr	Snootli Cr	Smolts	40,000	50,958 on hand	40,000	50,000	27,530
<b>Community Economic Development</b>									
Fort Babine	Fall	Babine R	Babine R	Smolts	40,000	47,077 on hand	0	0	0
Hartley Bay Cr	Fall	Hartley Bay Cr	Hartley Bay Lk	Fed Spr	70,000	50,000	70,000	500,000	358,000
			Red Bluff Lk	Fed Spr	70,000	50,000	70,000		
			Whalen Lk	Fed Spr	70,000	50,000	70,000		
			Hartley Bay Cr	Smolts	30,000	30,000	30,000		
Heiltsuk	Fall	McLaugh Bay Cr	McLaughlin Bay	Seapen	60,000	20,563 on hand	60,000	90,000	120,000
			McLaughlin Lk	Fed Spr		20,563			
Klemtu Cr	Fall	Kitasoo Cr	Trout Bay	Seapen	60,000	55,551 on hand	60,000	90,000	83,729
Masset	Fall	Yakoun R	Yakoun R	Smolt	45,000	0	45,000	50,000	59,742
				Fry	0	43,000	0	0	0
Pallant Cr	Fall	Braver+Pallant	Braver+Pallant	Fed Spr	378,000	620,000	378,000	1,758,000	1,242,500
				Smolts	540,000		1,100,000		
Toboggan Cr	Summer	Toboggan Cr	Canyon Cr/SKNA	Fed Fall	10,000	5,167	0	0	0
			Toboggan Cr	Smolts	30,000	30,526 on hand	30,000	40,000	40,000

- Snootli Creek Hatchery experienced poor returns in 2006. As a result, egg targets were not achieved.
- 2005 brood release numbers for Hartley Bay Creek were below the suggested targets due to poor egg to fry survivals (soft shell during incubation). All eggs are collected at Hartley Bay Creek and released at several sites, accounting for the 500k Hartley Bay Creek egg target.
- The 2005 brood smolt program at Masset was cut short due to a diesel spill that occurred in Marie Lake. All fish were released as fry from the net pen facility.
- Fall fry releases from Toboggan Creek Hatchery to Canyon Creek have been discontinued.

### 8.7.3. Chum

Enhancement of chum is undertaken to supplement runs for First Nations, commercial and recreational fisheries. Pallant Creek Hatchery is operated by the Haida Tribal Society as a cost recovery pilot hatchery.

#### Enhanced Chum Production from DFO Operated Hatcheries and Managed Channels and Pallant Cost Recovery Hatchery

Project	Run	Stock	Release Site	Stage	2005 Brood		2006 Brood		
					Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
<b>CHUM</b>									
<b>Enhancement Operations</b>									
Kitimat R	Summer	Hirsch Cr	Hirsch Cr	Fed FW	1,000,000	1,112,264	1,000,000	1,100,000	1,103,550
	Summer	Kitimat R	Kitimat R	Fed FW	3,500,000	3,697,156	3,500,000	4,100,000	4,340,555
Snootli Cr	Summer	FishAirport	FishAirport	Fed FW	1,656,000	1,763,205	1,656,000	1,800,000	1,841,016
	Summer	Salloomt R	Salloomt R	Fed FW	1,656,000	1,893,340	1,656,000	1,800,000	1,823,323
	Summer	Snootli Cr	Snootli Cr	Fed FW	1,656,000	1,840,122	1,656,000	1,800,000	1,793,063
	Summer	Thorsen C/CCST	Thorsen C/CCST	Fed FW	1,656,000	1,831,050	1,656,000	1,800,000	1,805,849
<b>Community Economic Development</b>									
Heiltsuk	Fall	McLaugh Bay Cr	McLaughlin Bay	Seapen	1,080,000	1,015,000	1,080,000	1,500,000	1,656,477
Klemtu Cr	Fall	Kitasoo Cr	Trout Bay	Seapen	900,000	1,218,779	900,000	1,250,000	1,501,485
Kincolith R	Fall	Kincolith R	Kincolith R	Fed FW	21,600	15,581	21,600	30,000	no eggs taken
Pallant Cr	Fall	Mathers Cr	Mathers Cr	Fed FW	4,275,000	no eggs taken	4,275,000	5,000,000	no eggs taken
	Fall	Pallant Cr	Deer Bay	Seapen	21,375,000	14,057,952	21,375,000	25,000,000	17,032,861

- Kincolith chum broodstock were not taken in 2006 due to poor adult returns.
- No chum eggs were taken for Mathers Creek stock. Due to deteriorating conditions of the fence, it is no longer possible to collect adult brood stock.

#### 8.7.4. Pinks

There is no hatchery or managed channel production of pinks from North Coast facilities. Atnarko channel, though not managed, is kept open for pink salmon spawning. The habitat was also modified to support rearing opportunities for other species.

#### 8.7.5. Sockeye

Enhancement of sockeye from the Babine Lake Development Project (Pinkut and Fulton channels) is undertaken to supplement runs for First Nations, commercial and recreational fisheries. The project operates as a complex of manned spawning channels and controlled river flows. Enhancement is part of the recovery plan for Rivers and Smith inlet sockeye stocks. The original plan called for enhancement for one cycle, which concluded in 2004. Enhancement continued for 2005 to aid rebuilding of the weak 2000 brood cycle. Egg targets are adjusted in-season based on the abundance of returning adults. Due to recent declines, a small number of 2005 brood Atnarko sockeye eggs were collected in partnership with the Nuxalk First Nation. These fry will be marked and the returning adults will be used to assess fisheries management and escapement numbers. A target of 100k was developed for 2006 brood, but was not achieved.

### **Enhanced Sockeye Production from DFO Operated Hatcheries and Managed Channels**



Project	Run	Stock	Release Site	Stage	2005 Brood		2006 Brood		
					Release Target	Actual Release	Release Target	Egg Target	Eggs Attained
<b>SOCKEYE</b>									
<b>Enhancement Operations</b>									
Fulton R	Summer	Fulton Ch#1	Fulton Ch#1	Chan Fry	15,000,00	3,700,000	15,000,00	30,000,000	21,600,000
	Summer	Fulton Ch#2	Fulton Ch#2	Chan Fry	87,000,00	71,000,00	87,000,00	174,000,000	144,700,000
	Summer	Fulton R	Fulton R	Chan Fry	45,000,00	44,600,00	45,000,00	300,000,000	356,900,000
Pinkut Cr	Summer	Pinkut Ch	Pinkut Ch	Chan Fry	43,500,00	53,353,02	43,500,00	87,000,000	71,974,000
	Summer	Atnarko	Atnarko	Fed Spr	80,000	29,634	80,000	100,000	38,756
Snootli Cr	Summer	Williams Cr	Williams Cr	Fed Spr	0	0	80,000	100,000	112,087
	Summer	Amback Cr	Amback Cr	Fed Spr	52,000	54,719	0	0	0
	Summer	Canoe Cr/CCST	Canoe Cr/CCST	Fed Spr	40,000	54,482	0	0	0
	Summer	Genesee R	Genesee R	Fed Spr	40,000	45,523	0	0	0
	Summer	Inziana R	Inziana R	Fed Spr	40,000	54,959	0	0	0
	Summer	Neechanze R	Neechanze R	Fed Spr	40,000	58,071	0	0	0
	Summer	Sheemahant R	Sheemahant R	Fed Spr	108,000	117,142	0	0	0
	Summer	Smokehouse Cr	Smokehouse Cr	Fed Spr	120,000	138,569	0	0	0
	Summer	Wannock R	Wannock R	Unfed	108,000	115,855	0	0	0
	Summer	Washwash R	Washwash R	Fed Spr	52,000	48,944	0	0	0
<b>Community Economic Development</b>									
Heiltsuk	Summer	Tankeeah R	Tankeeah R	Fed Spr	90,000	0	90,000	100,000	98,037
				Unfed		129,532			
Klemtu Cr	Fall	Lagoon Cr/CCST	Roderick Lk	Fed Spr	20,000	28,413 on hand	20,000	75,000	76,210
			Lagoon Cr Est	Seapen	10,000		10,000		
			Victor Cr	Smolt	10,000		10,000		

- Low flows in late fall in the Babine System may result in poor incubation survival of sockeye at Fulton and Pinkut channels.
- The Skeena sockeye stocks of Lakelse and Ktwanga were enhanced beginning with the 2006 brood, due to concerns over recent low returns.
- 2006 brood egg targets were not achieved for the Atnarko River stock due to low escapement.

## **9. ATTACHMENTS**

- Appendix 1: Advisory Board Memberships
- Appendix 2: Fishing Vessel Safety
- Appendix 3: Rockfish Conservation Areas
- Appendix 4: 2007 Pacific Salmon Allocation Implementation
- Appendix 5: Maps of Commercial Salmon Licence Areas
- Appendix 6: Freshwater Salmon Sport Fishing Regulations
- Appendix 7: Chinook and coho head retention and delivery requirements
- Appendix 8: 2007 Demonstration Project - Skeena River Sockeye Inland Fishery Management
- Appendix 9: Salmon Logbook Examples

## 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](http://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, protect the vessel from damage and protect the environment. All fishing vessels must be in a seaworthy condition and maintained as required by Transport Canada (TC), Workers Compensation Board of British Columbia (WCB) and other applicable agencies. Vessels subject to inspection should ensure that the certificate of inspection is valid for the area of intended operation.

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.

Useful publications include Transport Canada Publication TP 10038 '*Small Fishing Vessel Safety Manual*' which can be obtained from Transport Canada or printed from the Internet at:

[www.tc.gc.ca/MarineSafety/Tp/Tp10038/tp10038e.htm](http://www.tc.gc.ca/MarineSafety/Tp/Tp10038/tp10038e.htm).

On July 30, 2003 all crew with more than 6 months at sea will be required to have taken minimum Marine Emergency Duties (MED) training or be registered for such training. MED provides a basic understanding of the hazards associated with the marine environment; the prevention of shipboard incidents (including fires); raising and reacting to alarms; fire and abandonment situations; and the skills necessary for survival and rescue.

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 on the Internet at:  
[www.weatheroffice.ec.gc.ca/marine/region\\_03\\_e.html](http://www.weatheroffice.ec.gc.ca/marine/region_03_e.html).

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. Fishers 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 marine surveyor or the local Transport Canada Marine Safety office.

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 fishers 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.

Fishers 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.

As of 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.

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 Internet at:

[www.pacific.ccg-gcc.gc.ca](http://www.pacific.ccg-gcc.gc.ca).

Fishers 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, fishers 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 the Internet at:

[www.pacific.ccg-gcc.gc.ca/mcts-sctm/index\\_e.htm](http://www.pacific.ccg-gcc.gc.ca/mcts-sctm/index_e.htm).

Fishers 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 fisher 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.

### **WorkSafe BC**

In B.C., WorkSafeBC administers some regulations concerning health and safety issues in commercial fishing, which includes the health and safety of the crew and the design, construction and use of fishing equipment on the vessel. Matters of shipping and navigation fall to the federal government and are administered by Transport Canada, Marine Safety (TCMS).

WorkSafeBC and TCMS entered into a Memorandum of Understanding (MOU) on fishing vessel safety that addresses jurisdiction. The MOU states that each party will work co-operatively to ensure vessels and their crews remain healthy and safe.

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](http://www.worksafebc.com)

WorkSafeBC is presently focusing on issues pertaining to fishing vessel stability, emergency drills and cold water immersion.

### **Fishing Vessel Stability**

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.

### **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.

### **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 at [www.worksafebc.com](http://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](mailto:Ellen.Hanson@worksafebc.com).

### **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 fishermen. The Fish Safe Stability Education Course is available to all fishermen 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.

### 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: [www-comm.pac.dfo-mpo.gc.ca/pages/consultations/fisheriesmgmt/rockfish/default\\_e.htm](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 Euphausiid (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: 2007 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 2007 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.
- Harvest from experimental or selective fisheries, designed to test (new or modified) more selective fishing gear and methods, in most cases will be considered part of the five percent allocation set aside to encourage selective fishing. This will be determined preseason based on approved selective fishing proposals.
- 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	1.2 M	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	4.2 M	80%	18%	2%
6 to 10	2.4 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	1.0 M	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.
- Anticipate seine non-retention of chums in Areas 3 to 6 except when fishing hatchery chums in Area 6.



#### 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	300K	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. While retention of coho in net fisheries for Skeena salmon has been recommended. Other areas except for Areas 7 and 8 are likely to allow coho retention. Check weekly Fishery Notices for details.

#### 1.5. North Coast Chinook

Areas	Potential Harvest (Pieces)	Seine A	Gill Net C	Troll F
1 to 5, 101, 102, 130, 142	108K	0%	6%	94%
6 to 10	6K	0%	95%	5%

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 108K. 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	1.0 M	47.5%	18.5%	22%	0%	12%

Notes on sockeye allocations:

- Fraser River sockeye: Based upon only the spawning escapement requirements, the preliminary Fraser River sockeye TAC is estimated to be one million sockeye. However, protective measures will be implemented to address statistical variations, environmental conditions as well as conservation concerns for Sakinaw Lake, Cultus Lake and Early Stuart sockeye. These factors will substantially reduce opportunities to harvest the full TAC.
- Barkley sockeye: Current estimate of catch is based on a pre-season estimate of a 210K return. Sockeye abundance will be reforecast in-season and as a result actual catch targets are likely to change.

## 2.2. South Coast Pink

Areas	Potential Harvest (Pieces)	Seine B	Gill Net D	Gill Net E	Troll G	Troll H
Fraser River	700 K	70%	4%	1%	12%	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	1.2M	63%	19%	12%	0%	6%
21 to 22	800K	70%		29%	1%	
23 to 27	80K	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 1M with an addition 200K estimated in the terminal areas.
- Nitinat Chum (Area 21 and 22) sharing arrangements provide an opportunity for Area G licence holders to harvest stocks produced in the geographical area for

which they are licensed. For the 2007 season, Area G trollers will continue to be allocated a small portion of these local stocks.

- The allocation guideline for “early season” Nitinat chum is 50 percent gill net and 50 percent seine with a cap of 200,000 chums for gill nets during the early part of the season. In the “clean-up” phase, fishing will be opened to both gears simultaneously.
- For the West Coast Vancouver Island (WCVI) chums (i.e. Nootka Sound) seine opportunities will be considered when large surpluses are identified.
- 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	4K	40%	10%	0%	50%	0%

Notes on coho allocations:

- Inside coho - no coho retention fisheries planned.
- WCVI coho - it is anticipated that retention of incidental catches of coho will be allowed in terminal fisheries in Area 23 and 25. As well, retention of adipose clipped coho will be permitted in offshore troll fisheries in the fall period only.

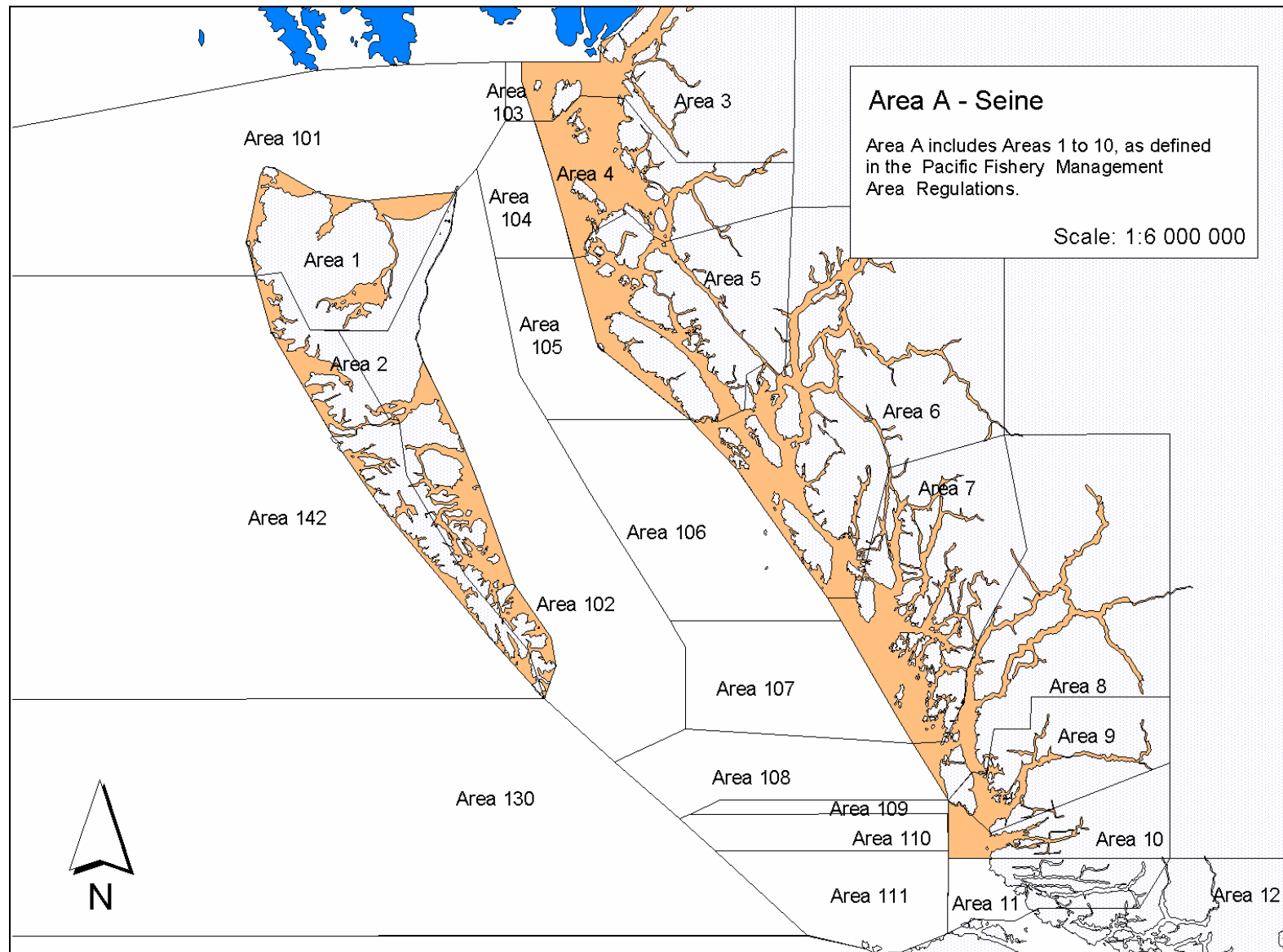
#### 2.5. South Coast Chinook

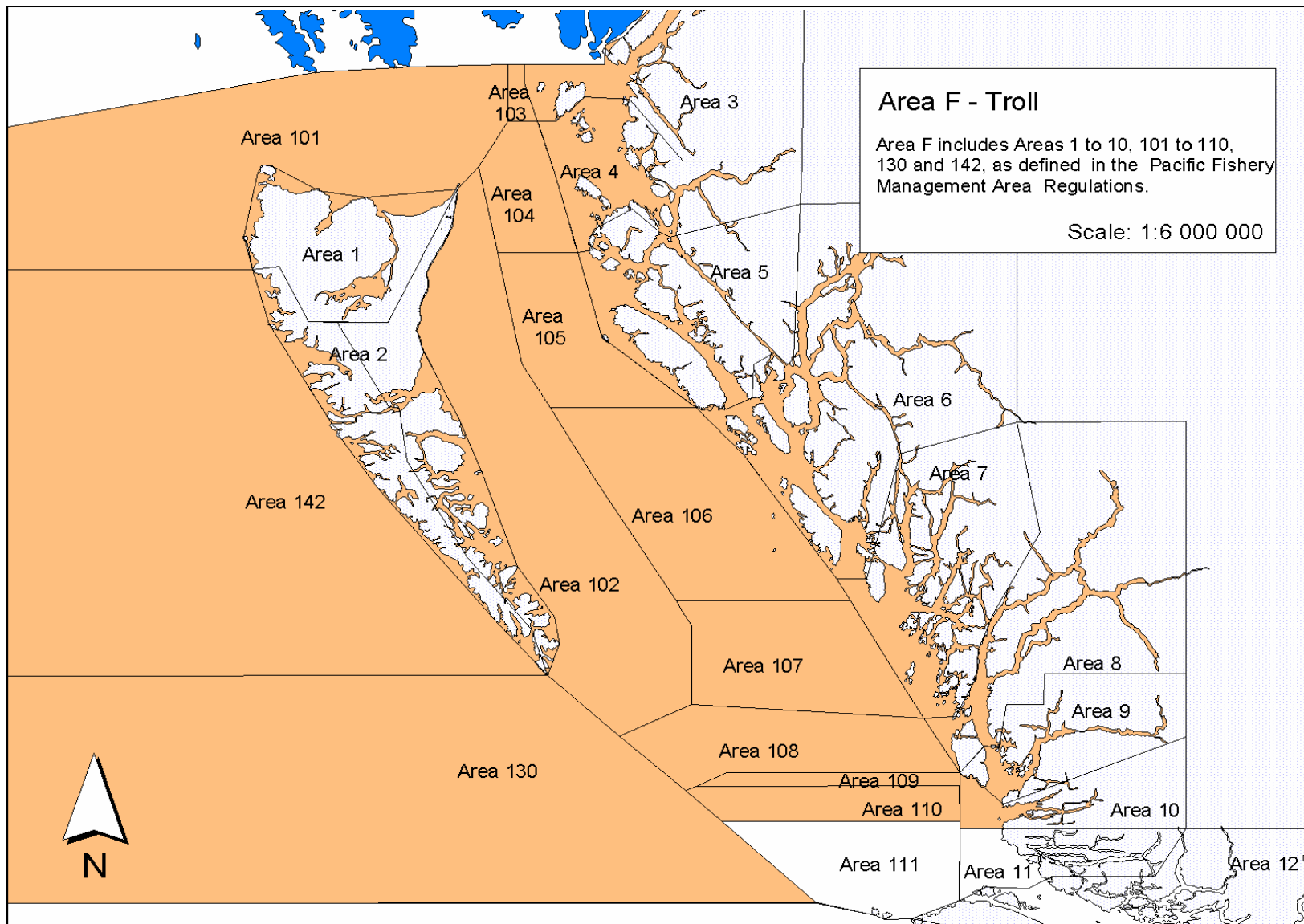
Areas	Harvest Forecast (Pieces)	Seine B	Gill Net D	Gill Net E	Troll G	Troll H
11 to 20, 29	6K		1 %	99 %		0%
21 to 27, 121 to 127	100K	8%	17%	0%	75%	0%

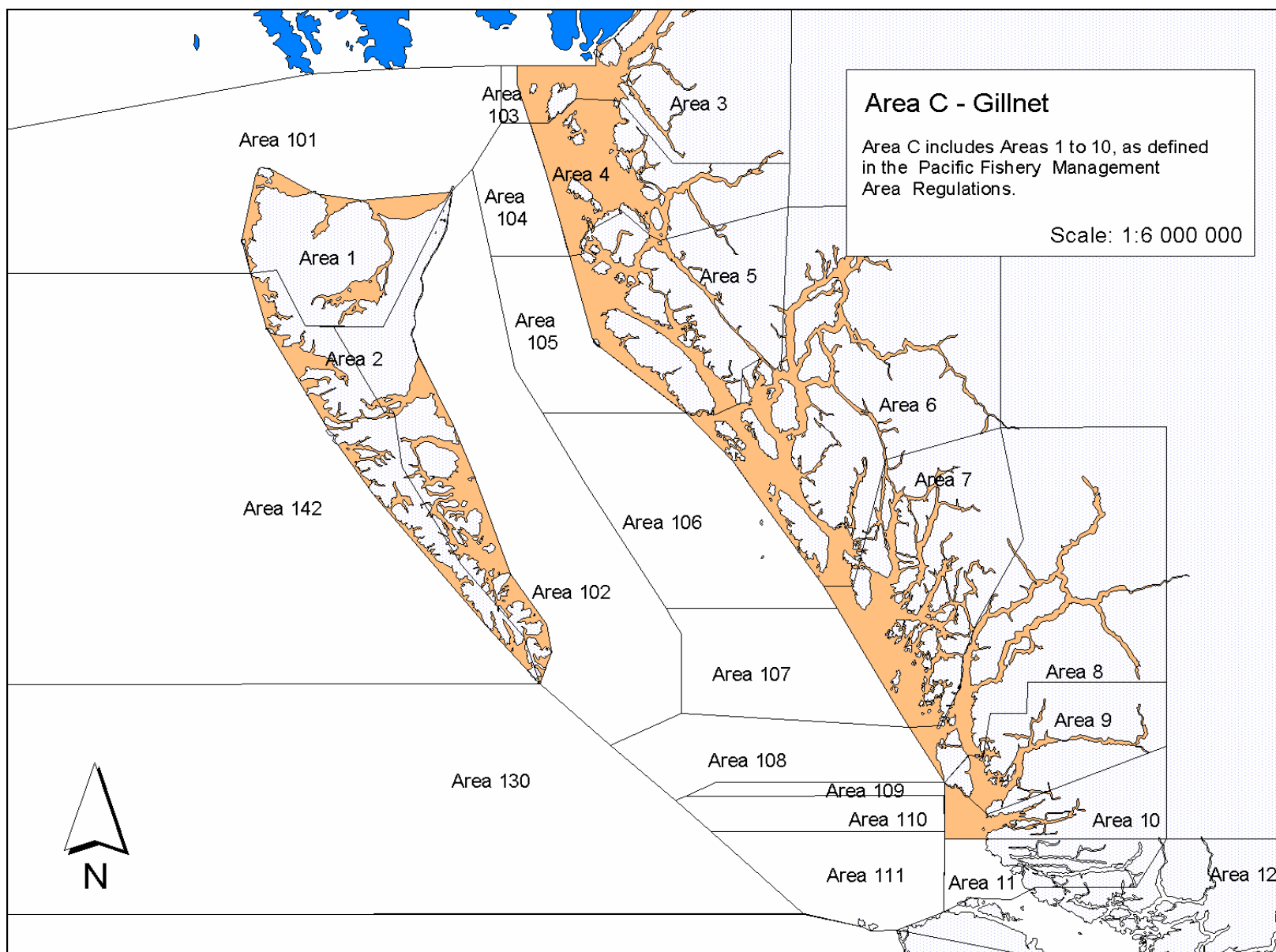
Notes on chinook allocations:

- Inside chinook - 50 chinook bycatch in Area D gill net fisheries in Johnstone Strait, remainder from Area E fisheries in Area 29
- AABM Chinook - A troll catch of 70K is estimated. The commercial target may be adjusted in-season if observed First Nation and recreational catches differ from anticipated levels.
- WCVI Terminal Chinook - Anticipate a total catch of 15K chinook in terminal net fisheries in Area 23 and 25.
- All catch during the calendar year of 2007 will be accounted for in the 2007 allocation plan.

## Appendix 5: Maps of Commercial Salmon Licence Areas







## Appendix 6: Freshwater Salmon Sport Fishing Regulations

### REGION 5: CARIBOO (PART B: Coastal Watershed - Management Units 5-6 to 5-11)

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 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, sockeye, pink, coho, and chum 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 5.
5. There is an annual limit of 10 adult chinook from non-tidal waters. All retained adult chinook must be recorded on the back of your freshwater angling licence. An "adult chinook" is defined as being over 65 cm in the Bella Coola/Atnarko River.
6. An adult coho salmon in Region 6 is defined as being greater than 50 cm measured from the tip of the nose to the fork in the tail (fork length). "Jack" coho salmon is defined as being a coho between 30-50 cm fork length.

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS/GEAR
Any lake or stream or part thereof in Management Units 5-6 to 5-11 in Region 5B, unless otherwise stated below (i.e. Region 5 not including the Fraser River watershed)		Chinook	Jan 01-Dec 31	4 per day, only 1 over 50cm.
		Coho	Jan 01-Dec 31	4 per day only 2 over 50cm.
Atnarko River	Including tributaries	Chinook	Jan 01-Jul 22	4 per day, only 1 over 65cm.
			Jul 23-Dec 31	No fishing for chinook.
		Coho	Jan 01-Dec 31	No fishing for coho. (see exception below)
		Sockeye	Jan 01-Dec 31	No fishing for sockeye.
		Pink	Jan 01-Dec 31	2 per day.
		Chum	Jan 01-Dec 31	1 per day.
	Below signs located approx. 50m below Corbould Bridge	Coho	Jan 01-Oct 15 Oct 16-Dec 31	4 per day, only 2 over 50cm. No fishing for coho.
Bella Coola River	Including tributaries (not including Atnarko River)	Chinook	Jan 01-Dec 31	4 per day, only 1 over 65cm. (See exception below)
		Coho	Jan 01-Dec 31	4 per day, only 2 over 50cm.
		Pink	Jan 01-Dec 31	2 per day.
		Chum	Jan 01-Dec 31	1 per day.
		Sockeye	Jan 01-Dec 31	No fishing for sockeye.
	All tributaries to the Bella Coola River.	Chinook	July 16 - Dec 31	No fishing for chinook.
Chuckwalla River		Chinook	Jan 01-Dec 31	No fishing for chinook.
		Coho	Jan 01-Oct 31	4 per day only 2 over 50cm
			Nov 01-Dec 31	No fishing for coho.
		Sockeye	Jan 01-Dec 31	No fishing for sockeye.
		Pink	Jan 01-Dec 31	No fishing for pink.
Docee River		Chum	Jan 01-Dec 31	No fishing for chum.
		All	Jan 01-Dec 31	No fishing for salmon.

<b>WATERS</b>	<b>SPECIFIC AREA</b>	<b>SPECIES</b>	<b>DATES</b>	<b>LIMITS/GEAR</b>
Kilbella River		Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
		Coho	Jan 01-Oct 31	4 per day only 2 over 50cm.
			Nov 01-Dec 31	<i>No fishing for coho.</i>
		Sockeye	Jan 01-Dec 31	<i>No fishing for sockeye.</i>
		Pink	Jan 01-Dec 31	<i>No fishing for pink.</i>
		Chum	Jan 01-Dec 31	<i>No fishing for chum.</i>
Long Lake	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Wannock River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>



## REGION 6: SKEENA

Please read these regulations in conjunction with the *Freshwater Fishing Regulations Synopsis*.

7. Unless otherwise stated in the table, the daily limit in all waters of Region 6 is zero (0).
8. The aggregate daily limit for all species of Pacific salmon (other than kokanee) from tidal and non-tidal waters combined is four (4).
9. All retained chinook, sockeye, pink, coho, and chum must measure 30 cm or more from tip of nose to tail fork.
10. A single, barbless hook is in effect year round for all streams in Region 6.
11. There is an annual limit of 10 adult chinook from non-tidal waters. All retained adult chinook must be recorded on the back of your freshwater angling licence. An "adult chinook" in Region 6 (other than Fraser River Watershed) is defined as being over 65 cm measured from the tip of the nose to tail fork.
12. An adult coho salmon in Region 6 is defined as being greater than 50 cm measured from the tip of the nose to the fork in the tail (fork length). "Jack" coho salmon is defined as being a coho between 30-50 cm fork length.

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS/GEAR
A. All Region 6 Waters	Any lake or stream or part thereof in Region 6, unless otherwise stated below. Please review sections B, C, D, and E carefully.	Chinook	Jan 01-Dec 31	4 per day, only 1 over 65cm. (1 over 50cm in Fraser River Watershed)
		Coho	Jan 01-Dec 31	4 per day, only 1 over 50cm.
B. Skeena River Watershed- Section "A" applies if stream, specific area, time period, quotas or other species restrictions are not listed in the following sections:				
B. Part (i): Skeena River Watershed-Waters upstream of CNR Railway Bridge at Terrace				
All waters in section "B(i)" - Skeena River Watershed upstream of the CNR Railway Bridge at Terrace, unless otherwise stated below		All	Jan 01-Jun 15	No fishing for salmon.
		Coho	Jan 01-Dec 31	No fishing for coho.
		Sockeye	Jan 01-Dec 31	No fishing for sockeye.
		Chum	Jan 01-Dec 31	No fishing for chum.
Babine Lake	Including tributaries	Chinook	Jan 01-Dec 31	No fishing for chinook.
Babine Lake	Not including tributaries	Sockeye	Aug 01-Sep 15	2 per day. No fishing for sockeye within a 400 m radial boundary of the following tributaries: Morrison Cr., Pierre Cr., Hazelwood Cr., Four Mile Cr., Six Mile Cr., Pendleton Cr., Twain Cr., Sockeye Cr., Five Mile Cr., Tsezakwa Cr., Tachek Cr., and Big Loon Cr.
Babine Lake	Within a 400 metre radius of the mouth of Pinkut Creek	All	Aug 15-Sep 15	No angling.
Babine River		Chinook	Jun 16-Dec 31	4 per day, only 1 over 65cm. No fishing for chinook from a point 100m above Fort Babine bridge to Nichyeskwa Creek.
		Sockeye	Aug 01-Aug 31	2 per day.
	Upstream of the logging bridge located near Sam Green Creek.	Coho	July 15-Sep 30	4 per day, only 2 over 50 cm
Bear River	Including tributaries	Chinook	Jan 01-Dec 31	No fishing for chinook.
		Coho	Jan 01-Dec 31	No fishing for coho.
Bulkley River	Downstream of the Morice River	Chinook	Jun 16-Dec 31	4 per day, only 1 over 65cm.

<b>WATERS</b>	<b>SPECIFIC AREA</b>	<b>SPECIES</b>	<b>DATES</b>	<b>LIMITS/GEAR</b>
	confluence.	Pink	Jun 16-Dec 31	2 per day.
		Coho	July 15-Sep 30	4 per day, only 2 over 50 cm
Fulton River		Sockeye	Aug 01-Aug 14	2 per day.
Kispiox River (including tributaries)		Chinook	Jun 16-Jul 31	4 per day, only 1 over 65cm. Monthly quota = 1 over 65 cm.
			Aug 01-Aug 31	4 per day, none over 65cm.
		Coho	July 15-Sep 30	4 per day, only 2 over 50 cm
	Downstream of boundary signs near Kispiox River Resort	Pink	Jun 16-Aug 31	2 per day. Open downstream of boundary signs located approx. 25 m downstream of fish counting fence.
Kitsequecla River	Including tributaries	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Kitwanga River	Including tributaries	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Morice Lake	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Morice River (including tributaries)	Upstream of Lamprey Creek	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
	From boundary signs located approximately 100 metres downstream of Gosnell Creek to Lamprey Creek	Chinook	Jun 16-July 31	4 per day, only 1 over 65cm.
	Below Lamprey Creek	Chinook	Jun 16-Aug 31	4 per day, only 1 over 65cm.
			Sep 01-Dec 31	<i>No fishing for chinook.</i>
		Coho	July 15-Sep 30	4 per day, only 2 over 50 cm.
	From Gosnell Creek to Lamprey Creek	Coho	Sep 01-Sep 30	4 per day, only 2 over 50 cm. Flyfishing only.
	From the confluence of the Bulkley and Morice Rivers upstream to the Bymac Bridge on Walcott Road	Pink	Jun 16-Aug 31	2 per day.
	Upstream of the Bymac Bridge on Walcott Road	Pink	Jan 01-Dec 31	<i>No fishing for pink.</i>
Nilkitkwa Lake		Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Pinkut Creek	Downstream of boundary signs located approx. 25 m downstream of fish counting fence.	Sockeye	Aug 01-Aug 14	2 per day.
		All	Aug 15-Sep 15	<i>No Angling</i>
Shegunia River	Between signs located above and below logging road bridge	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS/GEAR
Skeena River	Mainstem waters only, between Cedarvale and the CNR Railway Bridge at Terrace	Chinook	Apr 01-Dec 31	4 per day, only 1 over 65cm.
		Coho	July 15-Sep 30	4 per day, only 2 over 50cm
	Mainstem waters only, upstream of Cedarvale.	All	Jan 01-May 31	<i>No fishing for salmon.</i>
		Chinook	Jun 01-Dec 31	4 per day, only 1 over 65cm.
	Mainstem waters only.	Pink	Jun 16-Dec 31	2 per day.
	downstream of confluence with Kispiox River to the CNR Railway Bridge at Terrace.	Sockeye	Jun 16-Sep 15	2 per day. 0 per day from a boundary sign on the north bank of the Skeena R, 100 m upstream of the confluence with the Kitwanga River downstream to Mill Creek.
	mainstem waters within 3 white boundary signs located at the confluence of the Skeena River and Kispiox River	Chinook	Jun 01-Jul 31	4 per day, only 1 over 65cm. Monthly limit=1 over 65cm. Adult chinook caught and retained from these waters must be recorded on your licence as having been caught from the Kispiox River.
			Aug 01-Aug 31	4 per day, none over 65cm.
	Between boundary signs located at the confluence with the Bulkley River and 500 m downstream.	Coho	July 15-Sep 30	4 per day, only 2 over 50 cm.
	Between boundary signs located approx. 100 m either side of the confluence with the Kitwanga R.	Coho	July 15-Sep 30	4 per day, only 2 over 50 cm.
	From a point 100m above the confluence with Burdick Creek downstream to the CNR bridge at Terrace	Coho	July 15-Sep 30	4 per day, only 2 over 50 cm
Suskwa (Bear) River		Chinook	Jun 16-Dec 31	4 per day, only 1 over 65cm.
Sustut River	Including tributaries	Chinook	Jun 16-Dec 31	4 per day, only 1 over 65cm.
Telkwa River	Downstream of Howson Creek	Coho	Aug 15-Sep 30	4 per day, only 2 over 50cm.
Zymoetz (Copper) River		Chinook	Apr 01-Dec 31	4 per day, only 1 over 65cm.
	Upstream of Highway # 16 bridge	Chinook	Jul 23-Dec 31	<i>No fishing for chinook.</i>
<b>B(ii). Skeena River Watershed-Waters downstream of CNR Railway Bridge at Terrace</b>				
<i>All waters in section "B(ii)" - Skeena River Watershed downstream of the CNR Railway Bridge at Terrace, unless otherwise stated below</i>		Sockeye	Jan 01-Dec 31	<i>No fishing for sockeye.</i>
		Coho	Jan 01-Dec 31	<i>No fishing for coho.</i>
Ecstall River (including tributaries)		Coho	Sep 01-Oct 31	4 per day, only 1 over 50cm.
		Chinook	Apr 01-Jul 31	4 per day, only 1 over 65cm.
			Aug 01-Mar 31	4 per day, none over 65cm.
	Upstream of signs near confluence with Johnston Creek	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Exchamsiks River		Coho	Sep 01-Oct 31	4 per day, only 1 over 50cm.

<b>WATERS</b>	<b>SPECIFIC AREA</b>	<b>SPECIES</b>	<b>DATES</b>	<b>LIMITS/GEAR</b>
(including tributaries)	Upstream of Highway # 16 bridge	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Exstew River (including tributaries)		Coho	Sep 01-Oct 31	4 per day, only 1 over 50cm.
	Upstream of Hwy # 16 bridge	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Gitnadoix River (including tributaries)		Coho	Sep 01-Oct 31	4 per day, only 1 over 50cm.
	Upstream of powerline crossing near river mouth	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Kasiks River (including tributaries)		Coho	Sep 01-Oct 31	4 per day, only 1 over 50cm.
	Upstream of Hwy # 16 bridge	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Khyex River (including tributaries)	Upstream of Hwy # 16 bridge	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Kitsumkalum River (including tributaries) Note: The mouth of the Kisumkalum River is designated by boundary signs located approx. 1.25 km downstream of the CNR bridge and approx. 200 m east of the CNR bridge.		Coho	Sep 01-Oct 31	4 per day, only 1 over 50cm.
	upstream of signs below lower canyon	Chinook	Jan 01-May 24 May 25-Dec 31	4 per day, none over 65cm. <i>No fishing for chinook.</i>
	downstream of signs below lower canyon	Chinook	Jan 01-Jun 30 Jul 01-Aug 06 Aug 07-Dec 31	4 per day, none over 65cm. 4 per day, only 1 over 65cm. <i>No fishing for chinook.</i>
	downstream of railway bridge	Pink	Jan 01-Dec 31	2 per day.
Kitsumkalum Lake	including tributaries	Coho	Sep 01-Oct 31	4 per day, only 1 over 50cm.
		Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Lakelse River (including tributaries)		Coho	Sep 01-Oct 31	4 per day, only 1 over 50cm.
	Below logging road bridge near the mouth	Chinook	Jan 01-Dec 31	4 per day, only 1 over 65cm.
	Above logging road bridge near the mouth	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Redsand Lake	Including tributaries	Coho	Sep 01-Oct 31	4 per day, only 1 over 50 cm.
		Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Scotia River	including tributaries	Coho	Sep 01-Oct 31	4 per day, only 1 over 50 cm.
		Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Skeena River	mainstem waters downstream of CNR Railway Bridge at Terrace	Coho	July 15-Nov 30	4 per day, only 2 over 50 cm.
		Chinook	Jan 01-Dec 31	4 per day, only 1 over 65cm.
		Sockeye	Apr 01-Sep 15	2 per day.
		Pink	Jan 01-Dec 31	2 per day.
		Chum	Jan 01-Dec 31	<i>No fishing for chum.</i>
	from Lakelse River mouth upstream to the Skeena River Overpass (New Hwy Bridge) at Ferry Island.	Chinook	Aug 07-Dec 31	<i>No fishing for chinook.</i>
Treston Lake		Coho	Sep 01-Oct 31	4 per day, only 1 over 50 cm.
		Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Zymagotitz River (including tributaries)		Coho	Sep 01-Oct 31	1 per day.
	upstream of Highway # 16 bridge	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS/GEAR
<b>C. Nass River Watershed- Section "A" applies if stream, specific area, time period, quotas or other species restrictions are not listed in the following sections:</b>				
<i>All waters in section "C" - Nass River Watershed unless otherwise stated below</i>		Coho	Jan 01-Oct 31	4 per day, only 2 over 50 cm.
		Coho	Nov 01-Dec 31	<i>No fishing for coho.</i>
		Chinook	Jan 01-Dec 31	4 per day, only 1 over 65 cm.
Cranberry River	including tributaries NOTE: the section of river from Cranberry-Kiteen junction to Nass R. is part of the Cranberry R.	Chinook	Apr 01-Jul 31	4 per day, only 1 over 65 cm. Monthly Quota = 1 over 65cm.
Iknouk River		Chinook	Jan 01-Dec 31	<i>No fishing for Chinook</i>
Kiteen River	including tributaries	Chinook	Apr 01-Jul 31	4 per day only 1 over 65 cm. Monthly Quota = 1 over 65cm.
Meziadin Lake	Including tributaries	Coho	Jan 01-Dec 31	<i>No fishing for coho.</i>
	Excluding tributaries	Sockeye	Jul 1-Sep 06	2 per day.
		Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Meziadin River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Nass River		Coho	Jan 01-Dec 31	4 per day, only 2 over 50 cm.
	mainstem waters downstream of the confluence with the Meziadin River	Sockeye	Jul 1-Sep 15	2 per day.
	mainstem waters upstream of the confluence with the Meziadin River	Pink	Jan 01-Dec 31	2 per day.
Oweegee Creek		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Oweegee Lake		All	Jan 01-Dec 31	<i>No fishing for salmon</i>
Tseax River (including tributaries) Note: The mouth of the Tseax river is designated by boundary signs located where what was formerly known as the Nass Back Channel enters the Nass R.	upstream of Nisga'a Hwy Bridge	All	Aug 01-Dec 31	<i>No fishing for salmon.</i>
	downstream of Nisga'a Hwy Bridge	Coho	Jan 01-Nov 30	4 per day, only 2 over 50 cm.
		Chinook	Jul 01-Sep 15	4 per day only 1 over 65 cm. Monthly Quota = 1 over 65cm.
			Sep 16-Mar 31	4 per day, none over 65cm
Ishkheenickh River	including tributaries	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
<b>D. Queen Charlotte Islands Watersheds- Section "A" applies if stream, specific area, time period, quotas or other species restrictions are not listed in the following sections:</b>				
<i>All waters in section "D" - Queen Charlotte Islands Watersheds unless otherwise stated below</i>		Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
		Coho	Apr 01 - Oct 31	4 per day, only 1 over 50cm.
			Nov 01-Mar31	<i>No fishing for coho.</i>
		All	Jan 01-Dec 31	Single, barbless hook in tidal and non tidal portions of all streams.
Braverman River		Coho	Apr 01-Oct 31	4 per day, only 2 over 50 cm.

<b>WATERS</b>	<b>SPECIFIC AREA</b>	<b>SPECIES</b>	<b>DATES</b>	<b>LIMITS/GEAR</b>
Pallant Creek		All	Aug 01-Oct 31	<i>No fishing for salmon.</i>
	upstream of signs located 100m above fish counting fence	Coho	Apr 01-Oct 31	4 per day, only 2 over 50 cm.
Sheldens Creek	Upstream of boundary signs located at the Spur 19 Bridge site.	Coho	Jan 01-Dec 31	0 per day
Tlell River	Anglers should note that tidal water regulations apply to waters below tidal boundary sign located approx. 1.5km above Hwy. 16 Bridge. Refer to Section 6 of the IFMP.			
Yakoun River	Downstream of the 6 mile Bridge	Pink	Aug 01-Sep 30	2 per day
<b>E. Other Mainland Watersheds- Section "A" applies if stream, specific area, time period, quotas or other species restrictions are not listed in the following sections:</b>				
<i>All waters in section "E" - Other Mainland Watersheds unless otherwise stated below</i>		Coho	Nov 01-Dec 31	<i>No fishing for coho.</i>
<i>All streams flowing into tidal water Area 5 (refer to the BC Tidal Waters Sport Fishing Guide for Area 5 description)</i>		Coho	Jan 01- Dec 31	<i>No fishing for coho.</i>
		Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
<i>All streams flowing into tidal water Area 6 unless stated below (refer to BC Tidal Waters Sport Fishing Guide for Area 6 description)</i>		Coho	Jan 01- Oct 31	<i>Non-retention of coho.</i>
Bish Creek	Including tributaries	Coho	Jan 01- Dec 31	<i>No fishing for coho.</i>
Brim River	Including tributaries	Chinook	Jan 01-Dec 31	<i>No fishing for chinook</i>
Dala River	Including tributaries	All	Jan 01-Aug 15	<i>No fishing for salmon.</i>
			Oct 01-Dec 31	<i>No fishing for salmon.</i>
		Chinook, Sockeye, Pink, Chum	Aug 16-Sep 30	<i>No fishing for chinook, sockeye, pink, chum</i>
		Coho	Aug 16-Sep 30	4 per day only 1 over 50 cm.
Endako River		All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Giltoyes Creek		Coho	Aug 01-Sep 30	4 per day only 1 over 50 cm.
Illiance River (including tributaries)	Upstream of signs located near mouth of river	Coho	Sep 21-Dec 31	<i>No fishing for coho.</i>
Kemano River		Coho	Aug 01-Sep 30	4 per day only 2 over 50 cm
Khutze	Including tributaries	Chinook	Jan 01-Dec 31	<i>No fishing for chinook</i>
Khutzymateen River	Including tributaries	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
Kildala River		Coho	Aug 01-Sep 30	4 per day only 1 over 50 cm. Monthly quota = 1 over 65cm
Kiltuish River	Including tributaries	Chinook	Jan 01-Dec 31	<i>No fishing for chinook</i>
Kincolith River	Upstream of white triangle boundary signs located at the Kincolith River Bridge.	Coho	Jan 01-Dec 31	4 per day, only 2 over 50 cm.
		Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>

WATERS	SPECIFIC AREA	SPECIES	DATES	LIMITS/GEAR
Kitimat River (including tributaries)	On west bank between signs at Kitimat hatchery outfall	All	Jan 01-Dec 31	<i>No fishing for salmon.</i>
	Downstream of Highway # 37 bridge	Chinook	Apr 01-July 31	4 per day, only 1 over 65 cm.
			Aug 01-Dec 31	<i>No fishing for chinook.</i>
		Coho	Apr 01- Oct 31	4 per day, only 2 over 50 cm.
			Nov 01-Dec 31	<i>No fishing for coho.</i>
		Chum	Apr 01-Aug 31	2 per day
		Pink	Apr 01-Aug 31	2 per day
	Upstream of Highway # 37 bridge	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
		Coho	Jan 01-Dec 31	<i>No fishing for coho.</i>
Kitlope River		Coho	Aug 01-Sep 30	4 per day only 2 over 50 cm.
Kitsault River (including tributaries)		Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
	Upstream of signs located near mouth of river	Coho	Oct 01-Dec 31	<i>No fishing for coho.</i>
Kloiya River	Including tributaries	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
Kwinimass River (including tributaries)	upstream of lower bridge abutments	Chinook	Jan 01-Dec 31	<i>No fishing for chinook.</i>
	downstream of lower bridge abutments	Coho	Jan 01-Dec 31	4 per day, only 2 over 50 cm.
		Chinook	Apr 01-Jul 09	4 per day, none over 65cm.
			Jul 10-Dec 31	<i>No fishing for chinook.</i>
Nakina River		Chinook	Jan 01-Dec 31	4 per day, only 2 over 65cm.
		Coho	Jan 01-Dec 31	4 per day, only 2 over 50cm.
Quaal River	Including tributaries	Chinook	Jan 01-Dec 31	<i>No fishing for chinook</i>
Rainy Creek		Chinook	Aug 15-Mar 31	<i>No fishing for chinook.</i>
		Coho	Aug 15-Mar 31	<i>No fishing for coho.</i>
Stikine River	Including tributaries	Chinook	Jan 01-Dec 31	4 per day, only 2 over 65cm.
		Coho	Jan 01-Dec 31	4 per day, only 2 over 50cm.
Swift River	including tributaries	Chinook	Jan 01-Dec 31	2 per day, only 1 over 65cm. Anglers may now fish this river with either a Yukon or BC angling licence.
Tahltan River	including tributaries	Chinook	Jan 01-Dec 31	4 per day, only 2 over 65cm.
Taku River	including tributaries	Chinook	Jan 01-Dec 31	4 per day, only 2 over 65cm.
		Coho	Jan 01-Dec 31	4 per day, only 2 over 50cm.
Tatsamenie Lake's outlet streams	between Tatsamenie L. and Tatsatua Creek	Chinook	Jan 01-Dec 31	4 per day, only 2 over 65cm.
		Coho	Jan 01-Dec 31	4 per day, only 2 over 50cm.
Tatshenshini River (downstream of the BC/Yukon border)	including tributaries	Chinook	Jan 01-Dec 31	2 per day, single barbless hook
		Coho	Jan 01-Dec 31	2 per day, single barbless hook
		Sockeye	Jan 01-Dec 31	2 per day, , single barbless hook

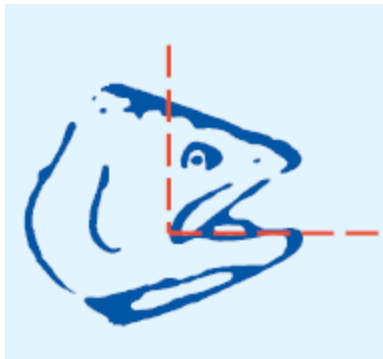
<b>WATERS</b>	<b>SPECIFIC AREA</b>	<b>SPECIES</b>	<b>DATES</b>	<b>LIMITS/GEAR</b>
Tatshenshini River (upstream of the BC/Yukon border – along the Haines Hwy.)	Blanchard River	Chinook	Jan 01-Jul 23	2 per day, , single barbless hook
			Jul 24-Dec 31	<i>No fishing for chinook.</i>
		Coho	Jan 01-Dec 31	2 per day, , single barbless hook
		Sockeye	Jan 01-Dec 31	2 per day, , single barbless hook
	Kwatini Creek, Stanley Creek and Goat Creek	Chinook, Coho, Sockeye	Jan 01-Dec 31	<i>No Fishing for chinook, coho or sockeye.</i>
	Tatshenshini mainstem and all other tributaries	Chinook	Jan 01-Dec 31	2 per day, single barbless hook
		Coho	Jan 01-Dec 31	2 per day, single barbless hook
		Sockeye	Jan 01-Dec 31	2 per day, single barbless hook
Wahoo River	Including tributaries	Chinook	Jan 01-Dec 31	<i>No fishing for chinook</i>
Weeanie River		Coho	Jan 01-Dec 31	<i>No fishing for coho.</i>
Wilauks Creek (including tributaries)	Upstream of signs located near mouth of creek	Coho	Sep 20-Dec 31	<i>No fishing for coho.</i>



## Appendix 7. Chinook and coho head retention and delivery requirements.

### 1. Chinook and coho head retention requirements

Troll vessel masters that are freezing their catch at sea must retain all heads from all Chinook and Coho kept. As an alternative, the "snouts" from the heads of all Chinook and Coho that are kept must be retained. At minimum, the retained portion of each head 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 one centimetre posterior (behind) the eye, and ending at the back corner of the mouth. There is no need to retain the lower jaw, or gill plates.



OR



### 2. Head delivery requirements

The vessel master shall ensure that all retained heads on board are offloaded at the first designated fish landing station at which Chinook and/or coho catch is offloaded. These heads must be enclosed in one or more closed containers each labelled with vessel name and VRN, the date heads delivered, the date of the first and last day of fishing on which the salmon represented by the delivered heads 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.

## **Appendix 8: 2007 Demonstration Project - Skeena River Sockeye Inland Fishery Management**

Skeena River sockeye stocks are managed using an annual aggregate exploitation rate target. This target changes with changing run sizes. For the predicted return of 2.5 million in 2007, the target exploitation rate will be 31%. This annual exploitation rate is then broken down to a weekly harvest rate, based on the run timing of the aggregate run and the strengths of individual sockeye stocks. The Skeena Management Model is used to estimate the weekly harvest rate in-season, and a post-season run reconstruction is used to truth this in-season estimate, and help further refine the model for future years.

The concept of the 2007 Inland Fishery Demonstration Project is to transfer the catch of a number of commercial gill net or seine licences to the inland portion of the Skeena River. DFO may contribute licences from the Allocation Transfer Program, but industry commercial licences may also be solicited through a Fisheries Notice and will be an arrangement between the First Nations and the licence holder.

The sockeye swim time from the commercial fishery to the Terrace area is approximately 1 week; from the commercial fishery to the mid-river area around Hazelton is 2 weeks; and from the commercial fishery to the Babine River weir is 3 weeks. This also roughly coincides with the interested First Nation groupings on the Skeena, with the Tsimshian at Terrace, the Gitksan in the mid-river area, and the Lake Babine Nation at the Babine weir.

The shares allowed to be caught by the various groups would depend on the number of licences transferred to each area, and the average gill net catch in the commercial fishery, as determined from the Prince Rupert office in-season, based on hail and phone-in information. An annual licence will be issued to each First Nation to authorize fishing, but the quota will be issued by DFO in a weekly letter.

The existing commercial gill net fishery can keep sockeye and pink in Area 4. Coho and steelhead are mandatory release, and a request is made to all gill net fishers to release all live chum and chinook to the water with the least possible harm.

For the demonstration project, the intent would be to continue the selective methods that have been developed since the 1990s pilot sales fisheries. These include beach seine, fishwheel, dip net, and the Babine weir. Gill nets will not be allowed. Sockeye and pink may be retained, based on the weekly allocation issued by Prince Rupert DFO, and all other species would be returned to the water with the least possible harm.

Another part of this project is to demonstrate the avoidance of incidentally caught weak stocks. Stocks such as the Kitwanga and Nanika Sockeye can be avoided by fishing upstream of the river confluence during times of high abundance. Also in 2006, a plan was implemented that resulted in regular closed times to allow for weak sockeye migration. Measures such as these will be implemented again in 2007.

All inland commercial sockeye and pink salmon will have to be checked through a compulsory landing station. All appropriate records are to be kept for proper monitoring and enforcement. No FSC fishing or retention will be allowed while participating in the Inland fishery.

This project is facilitated through the Skeena Fisheries Commission. The DFO contact for more information is Jim Steward at (250) 627-3421.

## **Management Scenarios**

### **Week 1**

This is the week of the first commercial fisheries targeting Skeena sockeye. In 2007, July 12 is the proposed first gill net day.

An allowable sockeye harvest rate will be set for this week. On average, 13% of the aggregate sockeye escapement enters the river during this week. Therefore, the weekly exploitation rate (ER) will be 3.4% (13% of the annual ER, which currently is expected to be 31%). Actual exploitation rate achieved will be estimated on a daily basis using the Skeena Management Model. Input into the Model is number of vessels fishing, the location they are fishing, and the date they are fishing. In 2007, this input will be number of vessels fishing in Area 4 plus number of licences transferred inland, to model the catch as if those licences were to be fishing on the coast. Put another way, the fish that would have been caught by the inland licences will be allowed to enter the river, to be available to that fishery in due course. Extra gill net days are possible this week depending on actual exploitation rate achieved after the one gill net day.

In the commercial fishing area, this is the peak week of Pinkut and Early Non-Babine stocks. In fish abundance, Pinkut stocks should be dominating.

Weekly allowable harvest rates are expected to be met, so no ESSR would be expected yet. However, abundance of Pinkut stocks could trigger an ESSR opportunity in later weeks in the Babine River. No ESSR opportunities will occur downstream of the Babine River confluence.

### **Week 2**

There is expected to be at least one gill net day this week. Allowable weekly harvest rate will be calculated using the method described above.

### **Demonstration Project**

A communal commercial licence will be issued by DFO to the appropriate First Nation (e.g. Kitselas Band) to administrate. This communal commercial licence will be valid for the week, and the catch allowed will be specified on the licence. This amount will be determined in the following manner: Average catch in Area 4 of sockeye and pink during the previous week (Week 1) as determined in-season by the commercial fishery manager,

times the number of licences that have been transferred to the Terrace area. This amount will be valid only for Week 2. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

In the commercial fishing area, this is normally the peak week of Pinkut and Fulton stocks.

Weekly allowable harvest rates are expected to be met, so no ESSR would be expected yet. However, abundance of Pinkut stocks could trigger an ESSR opportunity in later weeks in the Babine River. There will be no ESSR fishery downstream of the Babine River confluence.

### **Week 3**

There is expected to be at least one gill net day this week. This is also expected to be the first week of seine fishing on the north coast. Allowable weekly harvest rate will be calculated using the method described above.

This is normally the second peak week of the Fulton stock. Other stocks prevalent in the fishing area are Lower Non-Babine and Babine River stocks.

A communal commercial licence will be issued to the appropriate First Nation to administrate the Demonstration Project licences in the mid-river area. This communal commercial licence will be valid for all year, but the amounts allowed will be determined by DFO on a weekly basis. A letter of amendment will be issued every week from the Prince Rupert office, to specify the amount of sockeye and pink salmon allowed.

This amount will be determined in the following manner:

#### **Demonstration Project**

**Terrace:** Average catch in Area 4 of sockeye and pink in previous week, times the number of licences that have been transferred to the Terrace area. This amount will be valid only for Week 3. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**Mid-River:** Average catch in Area 4 of sockeye and pink in Week 1, times the number of licences that have been transferred to the mid-river area. This amount will be valid only for Week 3. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

This is the earliest week that an ESSR could be considered in the Babine River upstream of the confluence with the Skeena (by the Gitksan at Gisgegas). The sockeye entering the Babine will be the same stocks that were fished in the commercial fishing area during Week 1. Once these sockeye enter the Babine, certain weak stocks such as the Bulkley / Morice and Kitwanga sockeye will no longer be present, and a slightly higher

exploitation rate can be exerted on the remaining population, which will have a high Pinkut component.

#### **Week 4**

Allowable weekly harvest rate will be calculated and tracked using the method described above.

Total Canadian upper Skeena coho exploitation rate will be considered in any management decisions. In-season indications of coho abundance and calculations of expected escapement based on Alaskan catches should be known this week.

At least one day of a special selective gillnet fishery may take place this week. This fishery will be conducted in a smaller area than previously during the season, and will be intensively monitored. It will be limited to half length nets and short sets. Exploitation rates of this fishery on both sockeye and upper Skeena coho will be calculated on a daily basis.

A special selective seine fishery may take place this week. This fishery will be conducted in a smaller area than previously during the season, and will be intensively monitored. The special selective seine fishery will likely take place on a different day than the special selective gillnet fishery, to ensure adequate resources are available for monitoring and controlling both fisheries.

Additional fishing days could take place, depending on coho and sockeye exploitation rate calculations.

In fisheries this week, the intent is to harvest the tail end of the Fulton, and the second peak week of the Babine River sockeye stocks.

Of concern this week is upper Skeena coho, which will be increasing in abundance in the fishing area. Also of concern is the Late Non-Babine sockeye stock group, which are comprised of Kitsumkalum, Kitwanga, Bear and Zymoetz stocks.

In big pink years, very large catches can occur this week, especially by seine. Pinks are not a major consideration to determining fishing patterns until the first week of August. Pink test fish results normally show significant increases in escapements this week in odd years.

Chums are beginning to enter the Skeena River, as shown by a few being caught at the test fishery. The number of chum escaping to date is generally small. Coho indices to date are generally small and it is too early for them to give meaningful interpretation of the total run. This is the peak week of early timed steelhead stocks entering the Skeena River.

#### **Demonstration Project:**

**Terrace:** Average catch in Area 4 of sockeye and pink in previous week, times the number of licences that have been transferred to the Terrace area. This amount will be valid only for Week 4. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**Mid-River:** Average catch in Area 4 of sockeye and pink in Week 2, times the number of licences that have been transferred to the mid-river area. This amount will be valid only for Week 4. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**Babine Weir:** Average catch in Area 4 of sockeye and pink in Week 1, times the number of licences that have been transferred to the Babine weir area. This amount will be valid only for Week 4. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

This week there may be an ESSR fishery conducted in the Babine River, for the fish that were fished in the commercial fishing areas during Week 2 (Gitxsan at Gisgegas), and possibly an ESSR fishery at the Babine River weir for fish that were in the commercial fishing areas during Week 1 (Babine Lake First Nation).

## **Week 5**

Allowable weekly harvest rate will be calculated and tracked using the method described above.

Total Canadian upper Skeena coho exploitation rate will be considered in any management decisions. In-season indications of coho abundance and calculations of expected escapement based on Alaskan catches should be known.

One day of a special selective gillnet fishery is possible this week. This fishery will be conducted in a small area, and will be intensively monitored. It will be limited to half length nets and short sets. Exploitation rates of this fishery on both sockeye and upper Skeena coho will be calculated on a daily basis.

A special selective seine fishery will likely take place this week. This fishery will be conducted in a smaller area than previously during the season, and will be intensively monitored. The special selective seine fishery will likely take place on a different day than the special selective gillnet fishery, to ensure adequate resources are available for monitoring and controlling both fisheries.

Additional fishing days could take place, depending on coho and sockeye exploitation rate calculations.

In fisheries this week, the intent is to harvest the last of the peak weeks of Fulton stocks. This is also the peak week of the Babine River sockeye stock. Significant numbers of pink salmon can also be harvested this week, particularly with seines.

Of concern this week is upper Skeena coho, which will be increasing in abundance in the fishing area. Also of concern is the Late Non-Babine sockeye stock group, which are comprised of Kitsumkalum, Kitwanga, Bear and Zymoetz stocks.

Chums continue to enter the Skeena River in low numbers, as shown by a few being caught at the test fishery. Coho escapements to date generally remain low but may begin to indicate the relative strength of the early timed stocks. This is the peak timing of the aggregate steelhead stocks entering the Skeena River.

**Demonstration Project:**

**Terrace:** Average catch in Area 4 of sockeye and pink in previous week, times the number of licences that have been transferred to the Terrace area. This amount will be valid only for Week 5. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**Mid-River:** Average catch in Area 4 of sockeye and pink in Week 3, times the number of licences that have been transferred to the mid-river area. This amount will be valid only for Week 5. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**Babine Weir:** Average catches in Area 4 of sockeye and pink in Week 2, times the number of licences that have been transferred to the Babine weir area. This amount will be valid only for Week 5. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**ESSR:**

This week could see ESSR fisheries in the Babine River and Weir, depending on weekly exploitation rates. This is the first week that fish start to show up at the Pinkut Creek facility, and an early ESSR is possible. Any ESSR fishery at both Pinkut and Fulton River facilities would be calculated in close consultation with the facility managers, and be based on observed surpluses.

**Week 6**

Allowable weekly harvest rate will be calculated and tracked using the method described above.

Total Canadian upper Skeena coho exploitation rate will be considered in any management decisions.

A special selective seine fishery will likely take place this week. This fishery will be conducted in a smaller area than previously during the season, and will be intensively monitored. The special selective seine fishery will likely take place on a different day than the special selective gillnet fishery, to ensure adequate resources are available for monitoring and controlling both fisheries.

A gillnet fishery may occur this week, depending on stock strength.

Additional fishing days could take place, depending on coho and sockeye exploitation rate calculations.

In fisheries this week, the intent is to harvest Babine River stocks. This is also a peak week of pink salmon harvest. Pink stocks should be the upper and middle Skeena stocks.

Of concern this week is upper Skeena coho. This is the peak week of these stocks migrating through the fishing area.

Chum test fish indices normally increase this week; however, the numbers are generally small. Coho escapements to date give an indication of the strength of the upper Skeena stocks. This week and the previous week are normally the peak weeks of summer run steelhead escapement.

**Demonstration Project:**

**Terrace:** Average catch in Area 4 of sockeye and pink, times the number of licences that have been transferred to the Terrace area. This amount will be valid only for Week 6. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**Mid-River:** Average catch in Area 4 of sockeye and pink in Week 4, times the number of licences that have been transferred to the mid-river area. This amount will be valid only for Week 6. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**Babine Weir:** Average catch in Area 4 of sockeye and pink in Week 3, times the number of licences that have been transferred to the Babine weir area. This amount will be valid only for Week 6. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**ESSR**

This week could see ESSR fisheries in the Babine River and at the weir, depending on weekly exploitation rates. This week could see significant harvests at Pinkut Creek and Fulton River spawning facilities. Surpluses at the spawning channels will be determined in close consultation with the facility managers, and be based on observed surpluses only.

**Week 7**

The intent of any fisheries this week would be to harvest Skeena River pink salmon.

A special selective seine fishery could take place this week. This fishery will be conducted in a small area, and will be intensively monitored.



Gillnet fisheries are unlikely for the remainder of the season.

Of concern this week is upper Skeena coho.

**Demonstration Project:**

**Terrace:** Average catch in Area 4 of sockeye and pink in previous week, times the number of licences that have been transferred to the Terrace area. This amount will be valid only for Week 7. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**Mid-River:** Average catch in Area 4 of sockeye and pink in Week 5, times the number of licences that have been transferred to the mid-river area. This amount will be valid only for Week 7. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**Babine Weir:** Average catches in Area 4 of sockeye and pink in Week 4, times the number of licences that have been transferred to the Babine weir area. This amount will be valid only for Week 7. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**ESSR**

Pinkut Creek harvest will likely be curtailed by mid-week due to quality concerns.

**Week 8**

The intent of any fisheries this week would be to harvest lower Skeena River pink salmon and to a lesser extent coastal pink stocks.

A special selective seine fishery could take place this week. This fishery will be conducted in a small area, and will be intensively monitored.

Of concern this week are upper Skeena coho, coastal pinks in some years, steelhead and chum.

**Demonstration Project**

**Terrace:** Demonstration fishery expected to be complete.

**Mid-River:** Average catch in Area 4 of sockeye and pink in Week 6, times the number of licences that have been transferred to the mid-river area. This amount will be valid only for Week 8. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**Babine Weir:** Average catch in Area 4 of sockeye and pink in Week 5, times the number of licences that have been transferred to the Babine weir area. This amount will be valid

only for Week 8. If any of this amount is not caught in this week, then they will be forgone catch – they will not be available in the following week.

**ESSR**

This week could see significant harvests at Fulton River spawning facility. Fulton River harvest will likely be curtailed by the end of this week.

**Week 9**

Commercial fishery is expected to be closed.

**Demonstration Project**

**Terrace:** Demonstration fishery expected to be complete.

**Mid-River:** Demonstration Project expected to be complete.

**Babine Weir:** Although some fish may be available (based on the commercial catch of Week 6), quality concerns will likely spell the end of the Demonstration Project fishery.

**ESSR:** Although some fish may be available, quality concerns will likely spell the end of the fishery.

# 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:			<sup>1</sup> FIN:						
Net Details		Type <sup>2</sup> :	# Strands <sup>3</sup> :	Length:	(fathoms)	Weedline Depth <sup>4</sup> :	Hang Ratio:	:1	Mesh Size <sup>4</sup> :	# Meshes:					
Date	Mgmt. Area	Hours fished	# of sets	Sub-area(s)	<sup>5</sup> Kept or Released	Sockeye	Coho	Pink	Chum	Chinook	Steel-head	Atlantic Dogfish	Sturgeon	Birds	<sup>6</sup> Other Species
Day	Mon														
					Kept										
					Rel.										
Comments:											Observer on board? Y or N		Confirmation #:		
					Kept										
					Rel.										
Comments:											Observer on board? Y or N		Confirmation #:		
					Kept										
					Rel.										
Comments:											Observer on board? Y or N		Confirmation #:		
					Kept										
					Rel.										
Comments:											Observer on board? Y or N		Confirmation #:		
					Kept										
					Rel.										
Comments:											Observer on board? Y or N		Confirmation #:		
					Kept										
					Rel.										
Comments:											Observer on board? Y or N		Confirmation #:		

1. Enter the vessel master's Fisher Identification Number.

2. **Net Types**: enter 'A' for Alaska Twist, 'M' for Multi Strand or 'C' for Combination.

3. Enter number of strands if net is 'Alaska Twist' type mesh.

4. Give measurement units ( *in* or *"* = inches, *cm* = centimeters, *mm* = millimeters ).

5. **Kept** are species retained on board; **Released** are species returned to the ocean.

6. **Other Species**: M= Mackerel, L= Lingcod, H= Halibut, R= Rockfish. Identify marine mammals by species.

2006

Vessel Name:				VRN (CFV#):				Vessel Master Name:				<sup>1</sup> FIN:				
Date		Mgmt. Area	Hours fished	# of sets	Sub-area(s)	<sup>2</sup> Kept or Released	Sockeye	Coho	Pink	Chum	Adult Chinook	<sup>1</sup> Jack Chinook	Steel-head	Atlantic	Birds	<sup>3</sup> Other Species
Day	Mon.															
						Kept										
						Rel.										
Comments:												Observer on board? <b>Y</b> or		Confirmation #:		
						Kept										
						Rel.										
Comments:												Observer on board? <b>Y</b> or		Confirmation #:		
						Kept										
						Rel.										
Comments:												Observer on board? <b>Y</b> or		Confirmation #:		
						Kept										
						Rel.										
Comments:												Observer on board? <b>Y</b> or		Confirmation #:		
						Kept										
						Rel.										
Comments:												Observer on board? <b>Y</b> or		Confirmation #:		

Offloading Information										Sockeye		Coho		Pink		Chum		Chinook		(Other)						
Dates Fished				# Days fished	Date offloaded		<input type="checkbox"/> Pieces		<input type="checkbox"/> Pcs		<input type="checkbox"/> Pieces		<input type="checkbox"/> Pcs		<input type="checkbox"/> Pieces		<input type="checkbox"/> Pcs		<input type="checkbox"/> Pcs		Complete if catch pooled with that of another vessel:					
First day		Last day					<input type="checkbox"/> Lbs		<input type="checkbox"/> Lbs		<input type="checkbox"/> Lbs		<input type="checkbox"/> Lbs		<input type="checkbox"/> Lbs		<input type="checkbox"/> Lbs		<input type="checkbox"/> Lbs							
Day	Month	Day	Month				<input type="checkbox"/> Kgs		<input type="checkbox"/> Kgs		<input type="checkbox"/> Kgs		<input type="checkbox"/> Kgs		<input type="checkbox"/> Kgs		<input type="checkbox"/> Kgs		<input type="checkbox"/> Kgs							
Business and port offloaded to:							Fish slip #:							Offload #:							<input type="checkbox"/>		<input type="checkbox"/>		Name:	
Business and port offloaded to:							Fish slip #:							Offload #:							<input type="checkbox"/>		<input type="checkbox"/>		Name:	
Business and port offloaded to:							Fish slip #:							Offload #:							<input type="checkbox"/>		<input type="checkbox"/>		Name:	
Business and port offloaded to:							Fish slip #:							Offload #:							<input type="checkbox"/>		<input type="checkbox"/>		Name:	
Business and port offloaded to:							Fish slip #:							Offload #:							<input type="checkbox"/>		<input type="checkbox"/>		Name:	

1. Enter the vessel master's Fisher Identification Number.

2. **Jack Chinook** are all chinook smaller than 67 cm fork length. Note that 67cm is approximately 26 inches.3. **Kept** are species retained on board; **Released** are species returned to the ocean.4. **Other Species:** M= Mackerel, L= Lingcod, H= Halibut, D= Dogfish, R=Rockfish. Identify marine mammals to species.

2006

Date		Mgmt. Area	Hours fished	Zone or Subarea	Catch frozen or iced?	2 Kept or Released	Sockeye	Coho	Pink	Chum	3 Legal Sized Chinook	3 Sublegal Sized Chinook	4 Grilse	Atlantic	5 Rockfish	6 Other Species
Day	Mon															
					F or I	Kept										
Trip ID #:						Rel.										
Comments:												Observer on board? Y or N		Confirmation #:		
					F or I	Kept										
Trip ID #:						Rel.										
Comments:												Observer on board? Y or N		Confirmation #:		
					F or I	Kept										
Trip ID #:						Rel.										
Comments:												Observer on board? Y or N		Confirmation #:		
					F or I	Kept										
Trip ID #:						Rel.										
Comments:												Observer on board? Y or N		Confirmation #:		
					F or I	Kept										
Trip ID #:						Rel.										
Comments:												Observer on board? Y or N		Confirmation #:		
					F or I	Kept										
Trip ID #:						Rel.										
Comments:												Observer on board? Y or N		Confirmation #:		

1. Enter the vessel master's Fisher Identification Number.

2. **Kept** are species retained on board; **Released** are species returned to the ocean.

3. As defined in the applicable Fishery Notice.

4. **Grilse** are juvenile salmon under 30 cm.

5. If possible, rockfish are to be identified by species (using names in accompanying guide); if unsure of species, record as Unknown Rockfish.

6. Other Species: L=Lingcod, H=Halibut, D=Dogfish, M= Mackerel, S= Steelhead, B=Bird.