

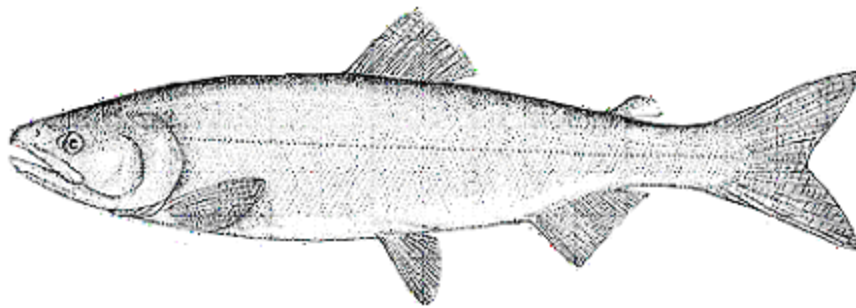


Southern Pacific Salmon Integrated Fisheries Management Plan Summary

*Genus Oncorhynchus*

The IFMP covers fisheries in tidal and non-tidal waters from Cape Caution south to the BC/Washington border, including the Fraser River watershed

As of 2016



The purpose of this Integrated Fisheries Management Plan (IFMP) summary is to provide a brief overview of the information found in the full IFMP. This document also serves to communicate the basic information on the fishery and its management to DFO staff, legislated co-management boards and other stakeholders. This IFMP provides a common understanding of the basic “rules” for the sustainable management of the fisheries resource. The full IFMP is available on request.

This IFMP summary is not a legally binding instrument which can form the basis of a legal challenge. The IFMP can be modified at any time and does not fetter the Minister's discretionary powers set out in the *Fisheries Act*. The Minister can, for reasons of conservation or for any other valid reasons, modify any provision of the IFMP in accordance with the powers granted pursuant to the *Fisheries Act*.

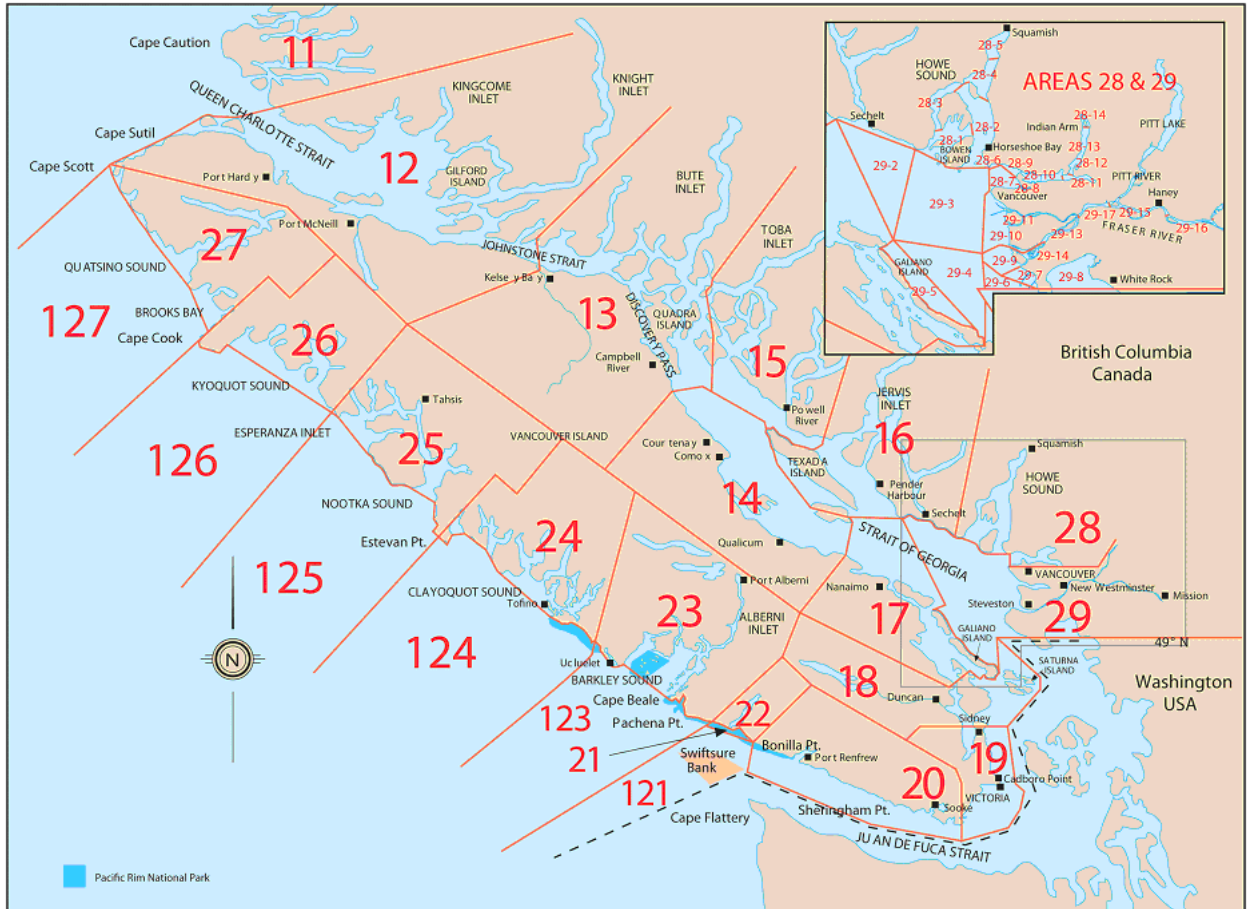
Where DFO is responsible for implementing obligations under land claims agreements, the IFMP will be implemented in a manner consistent with these obligations. In the event that an IFMP is inconsistent with obligations under land claims agreements, the provisions of the land claims agreements will prevail to the extent of the inconsistency.

## General Overview/Introduction, including map

This 2016/2017 Southern B.C. Salmon Integrated Fisheries Management Plan (IFMP) covers the period June 1, 2016 to May 31, 2017.

The IFMP provides a broad context to the management of the Pacific salmon fishery and the interrelationships of all fishing sectors involved in this fishery.

This IFMP covers fisheries in tidal and non-tidal waters from Cape Caution south to the BC/Washington border, including the Fraser River watershed (Figure 1). Fishing plans for First Nation, Recreational and Commercial fisheries are included in Section 13 of the IFMP.



## Stock Assessment, Science & Traditional Knowledge

### Biology

Pacific salmon include five species belonging to the genus *Oncorhynchus* family Salmonidae: pink (*O. gorbuscha*), chum (*O. keta*), sockeye (*O. nerka*), coho (*O. kisutch*) and chinook (*O. tshawytscha*). The native range of Pacific Salmon includes the north Pacific Ocean, Bering Strait, south-western Beaufort Sea and surrounding fresh waters. They occur in an estimated 1300-1500 rivers and streams in BC and Yukon; notably, the Skeena River and Nass River in the north and the Fraser River in the south that accounts for about 75% of the total salmon numbers.

Pacific salmon complete their life cycle by returning to their natal stream to spawn, in many cases to the particular gravel bed where they were hatched. Homing of Pacific salmon to their natal stream is an important biological characteristic of salmon stocks. Each stock is genetically adapted to the environment in which it resides, and exhibits unique characteristics such as life history, migration route, migration timing, and productivity. Sockeye and chinook travel the farthest upstream to spawn, as far as 1,500 kilometers. Chum, coho and pink usually spawn closer to the sea.

The numbers of Pacific salmon returning to BC waters varies greatly from year to year and decade to decade, often with pronounced population cycles. For example, many sockeye salmon populations are very abundant every third or fourth year. This is seen most dramatically in the Fraser River, where the abundance of some populations in abundant years is many times larger than that of other years. Longer term cycles are also apparent but less regular and seem to be associated with changes in ocean conditions that affect survival during the feeding migration.

#### Aboriginal Traditional Knowledge (ATK)/Traditional Ecological Knowledge (TEK)

Both Traditional Ecological Knowledge (TEK) and Aboriginal Traditional Knowledge are cumulative knowledge gathered over generations and encompass regional, local and spiritual connections to ecosystems and all forms of plant and animal life. ATK is knowledge held by Aboriginal communities while TEK is local knowledge held by Non-Aboriginal communities, including industry, academia, and public sectors. While qualitatively different both are cumulative knowledge gathered over generations and are regionally and locally specific. Both forms of knowledge can often be utilized to improve the management process. The growing awareness of the value of TEK/ATK is reflected in the increasing requirements for it to be included in environmental assessments, co-management arrangements, species at risk recovery plans, and all coastal management decision-making processes. Both are needed to inform and fill knowledge gaps related to the health of salmon stocks and to aid decision making related to development and resource use. Government and the scientific community acknowledge the need to access and consider ATK/TEK in meaningful and respectful ways. However, the challenge for resource managers is how to engage knowledge holders and how to ensure that the information can be accessed and considered in a mutually acceptable manner, by both knowledge holders, and the broader community of First Nations, stakeholders, managers, and policy makers involved in the fisheries.

#### Stock Assessment

Salmon stock assessment is primarily concerned with providing scientific information for conservation and management of salmon resources. Stock assessment describes the past and present status of salmon stocks and forecasts future status of stocks under different scenarios. Stock assessment programs contribute information to the fisheries management process, from the initial setting of objectives (and policies) to providing expert advice in the implementation of management plans. Stock assessment information also supports First Nation and Treaty obligations, integrated ocean management planning, development of marine protected areas, protection and recovery of species at risk, and international Treaty obligations and negotiations.

External partners and clients play an increasing role in delivery of the stock assessment activities. Some First Nations, recreational and commercial harvesters contribute directly through data collection and reporting. First Nations and community groups conduct field data collection projects. Universities and non-government organizations (NGOs) are active in the analytical and peer review elements. Stock assessment staff collaborates with other regional, national and international organizations and conduct numerous cooperative and/or joint programs.

Section 2 outlines the salmon ecosystem overview and interactions.

## **Shared Stewardship Arrangements**

As outlined in Section 3, in Pacific Region, DFO consults with and engages First Nations and other interests through a wide range of processes. For salmon, the focal point for DFO's engagement with First Nations, the harvest sectors and environmental interests is around the development and implementation of the annual IFMP. At a broad, Province-wide level, the Integrated Harvest Planning Committee (IHPC) brings together First Nations, commercial and recreational harvesters, and environmental interests to review and provide input on the draft IFMP, as well as coordinate fishing plans and (where possible) resolve potential issues between the sectors.

Other processes, such as the First Nations Salmon Coordinating Committee (SCC) and the Forum on Conservation and Harvest Planning, are being developed in order to facilitate dialogue between First Nations and DFO. Engagement between DFO and First Nations also takes place through a number of bilateral and "integrated" (multi-interest) advisory processes, management boards, technical groups and roundtable forums.

In addition to integrated dialogue through the IHPC, the Department also works directly with the commercial and recreational sectors, largely through the Commercial Salmon Advisory Board (CSAB) and Sport Fishing Advisory Board (SFAB), respectively. The Department also officially consults with the Marine Conservation Caucus, an umbrella group representing eight core environment groups.

## **Economic, Social, Cultural Importance**

Section 4 of the IFMP provides a socio-economic review of the salmon fishery in British Columbia. In future years, information on the social and cultural context of the various fisheries can be added, where available. This section addresses salmon in the context of the Aboriginal food, social, and ceremonial fishery, the Aboriginal communal commercial fishery, the recreational and commercial fishing sectors, the processing sector and the export market. DFO recognizes the unique values of each of the fisheries described here. The overview provided in this profile is intended to help build a common understanding of the socio-economic dimensions of each fishery rather than compare the fisheries. Where possible this summary highlights information specific to the South Coast.

## **Governance Process**

Departmental policy development related to the management of fisheries is guided by a range of considerations that include legislated mandates, judicial guidance and international and domestic commitments that promote biodiversity and a precautionary, ecosystem-based approach to the management of marine resources. Section 1.6 outlines the policies that were developed with considerable consultation from those with an interest in salmon management. While the policies themselves are not subject to annual changes, implementation details are continually refined as appropriate.

Please see the salmon consultation website for more information:

<http://www.pac.dfo-mpo.gc.ca/consultation/index-eng.html>

## **Access and Allocations**

The Minister can, for reasons of conservation or for any other any other valid reasons, modify access, allocations and sharing arrangements outlined in this IFMP in accordance with the powers granted pursuant to the *Fisheries Act*.

### International

Details can be found at the Pacific Salmon Commission (PSC) website at: <http://www.psc.org/Index.htm>.

Allocation Guidelines

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

<http://www.dfo-mpo.gc.ca/Library/240366.pdf>

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

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

Figure 2: Allocation guidelines

	Low Abundance		High Abundance		
<b>First Nations FSC</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.

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

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

Section 7 of the IFMP outlines the detailed information on the First Nation, Recreational and Commercial fisheries.

**Commercial Salmon Allocation Framework**

In September 2013, the First Nations Salmon Coordinating Committee (SCC) and the Commercial Salmon Advisory Board (CSAB) were engaged by the Department in a process to provide advice on updating the Commercial Salmon Allocation Framework (CSAF). Specifically, this work focused on the part of *Allocation Policy for Pacific Salmon* which outlines how the commercial salmon allowable harvest is shared among commercial salmon fisheries after accounting for conservation, First Nations food, social and ceremonial requirements and recreational sharing arrangements.

Since then, a series of productive meetings were held with the SCC, CSAB and interested First Nations to develop potential updates to the CSAF, guided by a Terms of Reference to address shortcomings in the CSAF identified by commercial harvesters and First Nations. Based on recommendations and feedback

received through the draft IFMP process, the Department has determined changes which are outlined in the sections below.

Section 12.4 outlines the commercial allocation plan with shares by species, fleet and fishery production area and Appendix 6 outlines a description of other changes.

For background information on this initiative, including the Departments' Terms of Reference for the work and links to the independent facilitator's reports (which provide a summary from meetings held with the SCC and the CSAB, analysis completed and detailed proposals received and considered), please go to: <http://www.pac.dfo-mpo.gc.ca/consultation/smon/saf-crrs/index-eng.html>.

### Management of the Fishery

Section 6 of the IFMP outlines the fishery management objectives for stocks of concerns. The decision guidelines, specific management measures for each fishery and Specific fishing plans are described in Section 13.

#	Management Issue	Objectives	Management Measure
1	Lower Strait of Georgia (LGS) chinook	- Continue rebuilding through a comprehensive set of fishery, hatchery, and habitat related actions.	LGS chinook are harvested in terminal First Nations fisheries, mixed stock commercial troll fisheries off the west coast of Vancouver Island and recreational fisheries off the west coast of Vancouver Island, in the Strait of Juan de Fuca, in the Strait of Georgia and in Johnstone Strait. Restrictions introduced in recent years include PST reductions to the WCVI allowable harvest, restrictions in Victoria sport, spot closures in the Strait of Georgia, and terminal area sport closures from Nanaimo to Sannich. The development of a management framework that considers abundance levels, triggers and associated management measures consistent with the Southern BC Chinook strategic planning and the Wild Salmon Policy is being initiated.
2	West Coast of Vancouver Island (WCVI) chinook	- Manage Canadian ocean fisheries (specified below) to an exploitation rate of 10%. - For North Coast chinook the objective 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%.	DFO will manage commercial troll fisheries in the North Coast to a 3.2% exploitation rate ceiling on total WCVI chinook return to Canada. The allowance for mortalities of WCVI chinook in the Area F troll fishery is calculated based on 3.2% of the total WCVI return to Canada as an in-season proxy for exploitation rate. The in-season exploitation rate will be estimated using the mean effort-harvest rate relationship developed from historical DNA analysis. The fishery will be further constrained by remaining closed during the first three weeks of June and the month of August as these periods are known to have higher proportions of WCVI chinook in the total catch. DNA analysis and coded-wire tag analysis of catch will be used to assess the 3.2% exploitation rate objective post season.
3	Fraser Spring 4 <sub>2</sub> chinook	- Conserve these populations by continuing to minimize incidental harvests in Canadian ocean fisheries and to continue fisheries management measures in the Fraser River to limit overall impacts and support rebuilding.	In the 2016 Salmon Outlook, Spring 4 <sub>2</sub> chinook has been classified as <i>low abundance</i> given depressed parental abundance and unfavorable marine conditions in recent years.  Based on CWT recoveries from fisheries, Fraser Spring 4 <sub>2</sub> chinook have historically been encountered in Fraser River First Nation net fisheries, Fraser River and tributary recreational fisheries, marine troll fisheries (e.g. WCVI and North Coast), and recreational fisheries in the Strait of Juan de Fuca and Strait of Georgia, with lower rates in other marine recreational fisheries.

4	Fraser Spring and Summer (age 5 <sub>2</sub> ) chinook	<p>- Conserve these populations consistent with the management zones outlined in Section 13 Southern Chinook Salmon Fishing Plan under the Southern ISBM Chinook section.</p>	<p>In the 2016 Salmon Outlook, Spring 5<sub>2</sub> and Summer 5<sub>2</sub> chinook stocks have been classified as low abundance given depressed parental abundance and unfavourable marine conditions in recent years. The Southern BC Chinook strategic planning initiative will likely inform future management approaches for Fraser River Spring and Summer 5<sub>2</sub> chinook.</p>
5	Interior Fraser River coho (including Thompson River coho)	<p>To achieve the overall Canadian exploitation rate within the 3-5% range.</p>	<p>For fishery planning purposes, Interior Fraser coho fishing mortality is estimated pre-season using a series of models that integrate assumptions about anticipated coho encounters, fishing effort levels, an estimate of the proportion of Interior Fraser River coho stocks within the total encounters based on past data, and an average release mortality rate. A post-season estimate of exploitation rate is developed from the same models but using any actual information on encounter rates and fishing effort collected during the fishing season.</p> <p>Management measures for Interior Fraser River coho are generally in place from May to September when these populations are expected to be encountered in southern BC waters. These measures are also expected to limit impacts on other coho populations in Southern BC, including Lower Fraser River coho and Strait of Georgia coho populations.</p> <p>Fisheries in the following areas and times will likely continue to be managed to limit overall impacts on Interior Fraser coho consistent with the annual management objectives:</p> <ul style="list-style-type: none"> <li>• West Coast Vancouver Island (WCVI) troll (commercial and First Nations) and recreational fisheries in offshore areas from late May until early September,</li> <li>• Commercial net and recreational fisheries in the Straits of Juan de Fuca from June until early October,</li> <li>• Commercial, recreational and First Nations fisheries in Johnstone and Queen Charlotte Straits from early June until late August,</li> <li>• Commercial, recreational and First Nations fisheries in the Strait of Georgia from June until early October,</li> <li>• Commercial, recreational and First Nations fisheries both off the mouth of, and in, the Fraser River from early September until mid-October, and</li> <li>• Commercial, recreational and First Nations fisheries in the Fraser River upstream of Sawmill Creek from mid- to late September until late October.</li> </ul>
6	Cultus Lake Sockeye	<p>- Cultus Lake Sockeye will be managed within the constraints of the exploitation rate identified for the Late Run aggregate. The maximum allowable exploitation rate for Cultus Lake Sockeye will be the greater of a) the low abundance exploitation rate identified for Late Run Sockeye, or b) the exploitation rate that is consistent with continued rebuilding of the population based on in-season information on returns and potential numbers of effective spawners.</p>	<p>Cultus Lake sockeye is a component of the Late Run Fraser River sockeye aggregate which is typically harvested in southern B.C. waters in August and September.</p> <p>The returns of sockeye salmon to Cultus Lake have been particularly low relative to historic averages. To work toward rebuilding this population, Late Run sockeye fishery management actions have been implemented to reduce fishery exploitation levels on this stock. Enhancement measures have included fry and smolt releases as well as a captive brood program. Freshwater measures in the past have included: predator control (removal of adult northern pikeminnow in Cultus Lake), removal of Eurasian watermilfoil and contaminant studies. An overview on the recovery activities and the current status of Cultus Sockeye can be found in the <i>Status of Cultus Lake Sockeye Salmon</i> (Bradford et al., 2010), available on-line at: <a href="http://www.dfo-mpo.gc.ca/CSAS/Csas/publications/resdocs-docrech/2010/2010_123_e.pdf">http://www.dfo-mpo.gc.ca/CSAS/Csas/publications/resdocs-docrech/2010/2010_123_e.pdf</a> The conservation strategy can be found online at: <a href="http://www.dfo-mpo.gc.ca/Library/337479.pdf">http://www.dfo-mpo.gc.ca/Library/337479.pdf</a></p> <p>All Canadian fisheries that could harvest Cultus Lake sockeye will be impacted by the need to limit exploitation on this stock. This includes:</p>

			<ul style="list-style-type: none"> <li>Closures in all fisheries with the possibility of impacting Cultus or Late Run fish when harvest limits for this stock group have been reached.</li> <li>Restrictions to First Nations fisheries in Queen Charlotte and Johnstone Straits, Strait of Georgia, Strait of Juan de Fuca, west coast of Vancouver Island and the lower Fraser River downstream of the Vedder River. However, where surpluses are identified, first priority will be accorded to First Nations for opportunities to harvest fish for FSC purposes.</li> <li>Restrictions to recreational salmon fisheries in southern BC. This will include sockeye non-retention in specific locations when Cultus Lake sockeye are present and allowable harvest limits have been reached.</li> <li>Closures to commercial salmon fisheries in southern BC when Late Run sockeye are present, or expected to be present in the area as it will not likely be possible to identify Cultus Lake sockeye in-season due to relative low abundances of Cultus Lake sockeye compared to other co-migrating sockeye stocks. These closures will come into effect when allowable harvest limits for this stock group have been reached. Fisheries directed at other stocks or species of salmon will be subject to Late Run/Cultus constraints.</li> </ul> <p>Within the Fraser River upstream of the Fraser/Vedder confluence, recreational and First Nations fisheries for Fraser Sockeye during Cultus migration timing will be managed based on Late Run constraints as Cultus Lake sockeye have exited the Fraser River.</p>
7	<b>Sakinaw Lake sockeye</b>	<b>- To stop their decline and re-establish a self-sustaining, naturally spawning population.</b>	<p>Most fisheries that have potential to intercept Sakinaw Lake sockeye will continue to be delayed prior to the last week of July to ensure a significant portion of the return has passed through major fisheries in Johnstone Strait. The plan will provide for:</p> <ul style="list-style-type: none"> <li>Restrictions in First Nations FSC fisheries prior to the last week of July.</li> <li>Recreational fisheries in Queen Charlotte Strait, Johnstone Strait, and upper Strait of Georgia will be closed to sockeye retention prior to the last week of July. The waters near the mouth of Sakinaw Creek in Area 16 will be closed to fishing all season. In addition, there will be sockeye non-retention restrictions in Area 16 until early to mid-August at which time sockeye retention opportunities are expected to be available in Sabine Channel.</li> <li>Commercial fisheries in Queen Charlotte Strait and Johnstone Strait will be closed prior to the last week of July, and upper Strait of Georgia (including Sabine Channel) until early to mid-August.</li> </ul>
8	<b>Nimkish Sockeye</b>	<b>Minimize the impact of Canadian fisheries during periods of low abundance.</b>	<p>Nimkish sockeye are encountered in Queen Charlotte Strait and Queen Charlotte Sound typically during June and July. In order to protect this stock, time and area closures may be implemented for First Nation, commercial, and recreational fisheries in the approach waters to the Nimkish River (including the river). Marine waters north of Lewis Point on Vancouver Island (Subareas 11-1, 11-2 &amp; 12-5 to 12-19) are scheduled to be closed to sockeye retention in all fisheries until late July. However, marine waters north of Lewis Point may open to sockeye retention in marine FSC fisheries prior to late July if in-season abundance of Nimkish sockeye is higher than expected and no other weak stock constraints exist. If in-season abundance permits, some First Nations FSC harvest may also occur within the Nimkish River.</p>
9	<b>Interior Fraser River steelhead</b>	<b>- Minimize the impact of Canadian fisheries and to increase spawner abundance.</b>	<p>Selective commercial fisheries will be considered consistent with <i>Policy for Selective Fishing in Canada's Pacific Fisheries</i>. In addition, other commercial south coast fisheries are to release to the water with the least possible harm all steelhead caught incidentally in fisheries targeting other species.</p> <p>For Fraser River commercial gill net fisheries, the strategy is to protect 80% of the Interior Fraser River steelhead run with a high degree of certainty. The Department will continue to engage with the Province on the strategy for addressing steelhead impacts in fisheries.</p>



## **Compliance Plan**

Specific objectives for the salmon fishery will be to focus compliance management efforts on:

- Support development and implementation of the Strategic Framework for Fishery Monitoring and Catch Reporting in the Pacific Fisheries.
- Monitoring in-river and in marine approach waters by intelligence to target priority fisheries and compliance issues.
- Work with stakeholders to improve regulatory compliance.

As outlined in Section 8, salmon fishery compliance continues to be a priority for C&P. There are, however, other competing priorities such as habitat management, the Canadian Shellfish Sanitation Program, and the protection of Species at Risk.

In order to balance multiple program demands, C&P applies a risk-based integrated work planning process at the Regional and Area levels. This process ensures that resources are allocated appropriately. Resource utilization is dependent on availability of program funding.

**For additional information on this IFMP Summary or to request an electronic version of the full IFMP, please contact the Regional Salmon Officer via email at: [Kelly.Binning@dfo-mpo.gc.ca](mailto:Kelly.Binning@dfo-mpo.gc.ca) or at 604-666-3935.**