



Surveillance Report
British Columbia Commercial Pink Salmon Fisheries

Certificate Nos.:
MML-F-109 North Central Coast
MML-F-110 Inner South Coast
MML-F-111 Fraser River

Intertek Moody Marine
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Authors:
Karl English, Dana Schmidt, Greg Ruggerone, Steve Devitt

Intertek Moody Marine
99 Wyse Road
Dartmouth
Nova Scotia
Canada
B3A 4S5
(902) 422-4511

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1.0 GENERAL INFORMATION

Scope against which the surveillance is undertaken: MSC Principles and Criteria for Sustainable Fishing as applied to the British Columbia Commercial Pink Salmon Fisheries managed by Fisheries and Oceans Canada within the follow three units of certification:

1. North Central Coast
2. Inner South Coast
3. Fraser River

Species: Pink Salmon (*Oncorhynchus gorbuscha*)

Area: British Columbia, Canada

Method of capture: Seine, gillnet, troll, beach seine, fish wheels, weirs, dipnets

Date of Surveillance Visit:	14 – 18 May 2012			
Initial Certification	Date: 28 July 2011		Certificate Ref: MML-F-109, MML-F-110, MML-F-111	
Surveillance stage	1 st	2 nd	3 rd	4 th
Surveillance team:	Lead Auditor: Steve Devitt Assessor(s): Karl English Dana Schmidt Greg Ruggerone			
Company Name: Address:	Canadian Pacific Sustainability Fisheries Society 1100-1200 West 73 Avenue Vancouver British Columbia V6P 6G5			
Contact 1	Christina Burridge			
Tel No: E-mail address:	1 604 377 9213 cburridge@telus.net			

2.0 SUMMARY OF THE 2011 PINK SALMON FISHING SEASON

The units of certification for the British Columbia pink salmon are the non-First Nation commercial pink fisheries and the First Nation Excess Salmon to Spawning Requirement (FN ESSR) fisheries and FN Economic Opportunity (EO) fisheries targeting pink returning to the three following watershed systems:

North Coast and Central Coast Pink - This certification unit assesses pink salmon spawning in watershed in Areas 1 and 2 (Queen Charlotte Islands), Area 3 to 6 (North Coast), and Areas 7 to 10 (Central Coast).

Inner South Coast Pink Salmon (Excluding Fraser River) - This certification unit assesses the Inner South Coast pink salmon fishery. This includes all pink salmon spawning in watersheds in Johnstone Strait and the Strait of Georgia (i.e. statistical areas 11 to 19), except for Fraser River pink salmon. Pink salmon distribution throughout the Inner South Coast can be summarized by statistical area: Area 11 (Northeast Vancouver Island), Areas 12 and 13 (Main inlets, Johnstone Strait, and mid-Vancouver Island), Area 14 (Mid-Vancouver Island), Areas 15 and 16 (Toba Inlet and Jervis Inlet), Area 17, 18, and 19 (No major pink salmon runs originate here, but the Nanaimo River supports a small persistent run of pink salmon), and Area 28 (Fraser approach areas)

Fraser River Pink - This certification assesses the pink salmon fishery in statistical Area 29, which includes the Fraser River mainstream and Fraser River tributaries below the Mission Bridge.

These fisheries are defined by geographic area and gear targeting pink however management measures are in place to distribute the harvest on stocks that can better withstand higher rates of harvest or distribute the harvest amongst different users. These fisheries represent the majority of the BC commercial fisheries that harvested pink salmon in recent years. Fishery openings and closings are managed and reported based on defined management areas A – H for the three primary harvest methods, seine (Areas A, B), gillnet (Areas C, D, E) and troll (Areas F, G, H), as displayed below. Management summaries are provided within the context of these management areas.

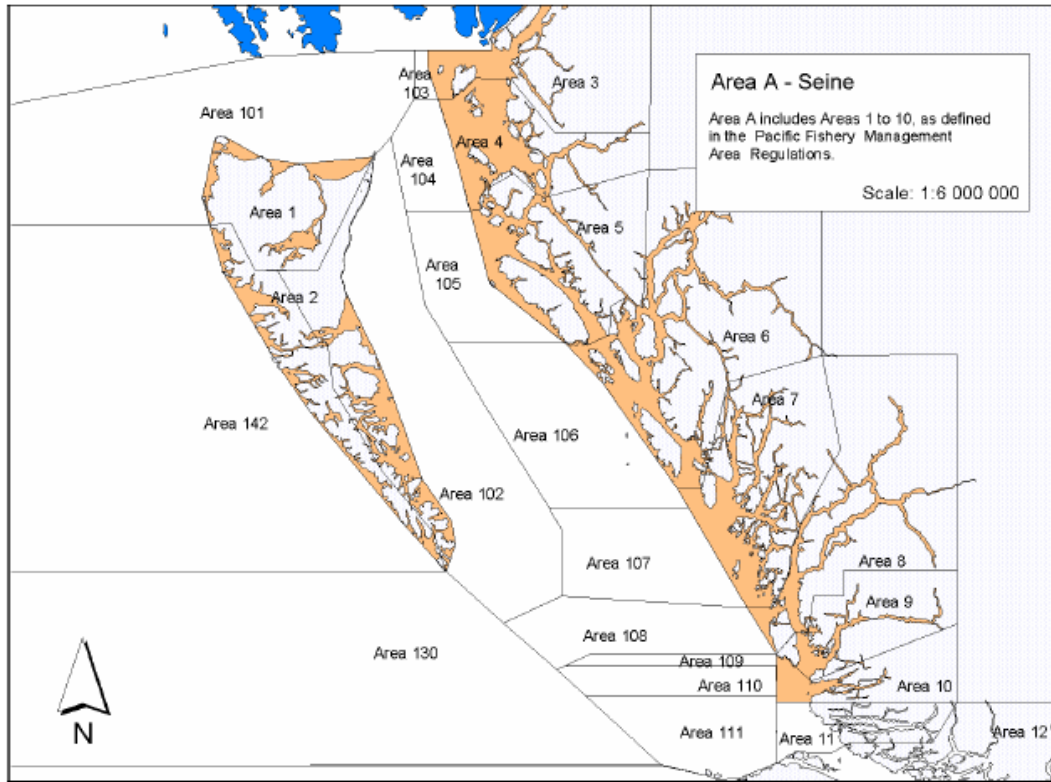


Figure 1: Area A, northern seine fishing management area for salmon

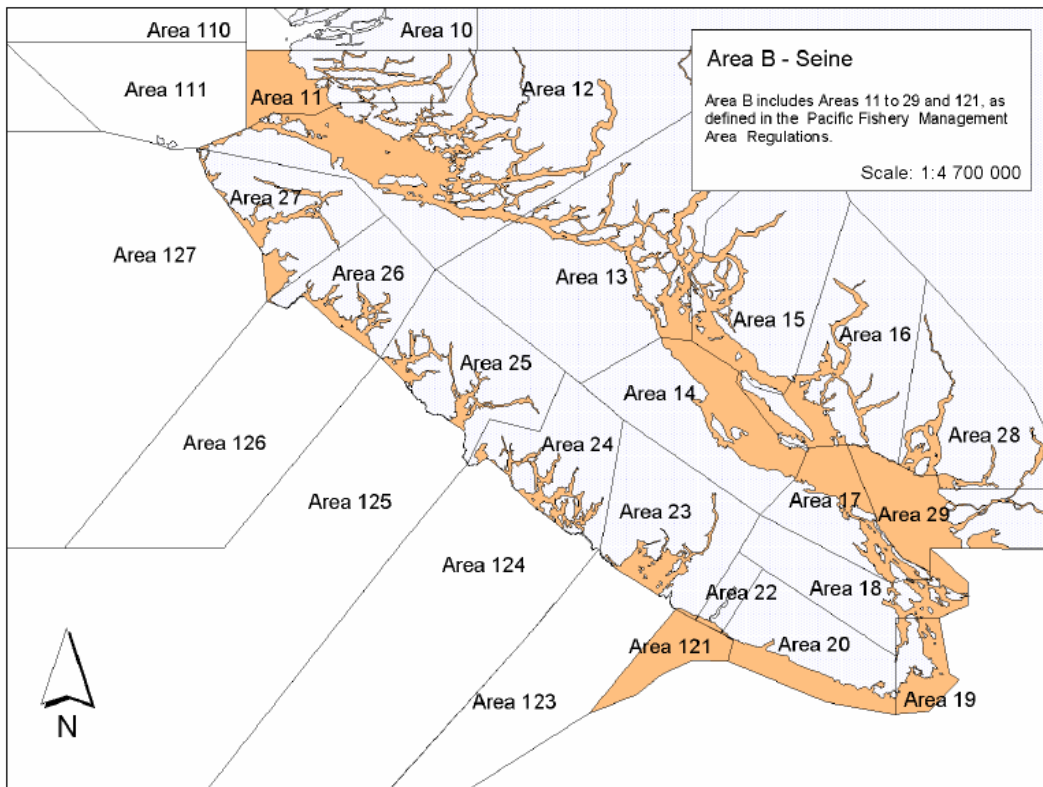


Figure 2: Area B, southern seine fishing management areas for salmon

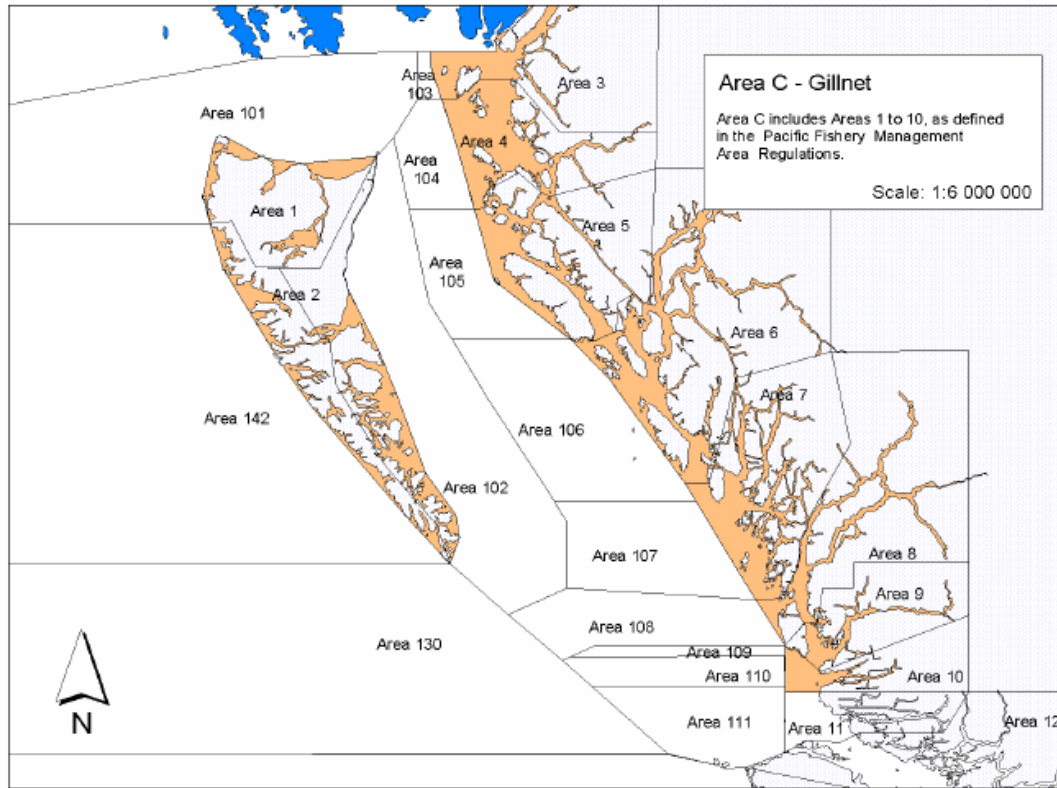


Figure 3: Area C, northern gillnet salmon fishing management areas.

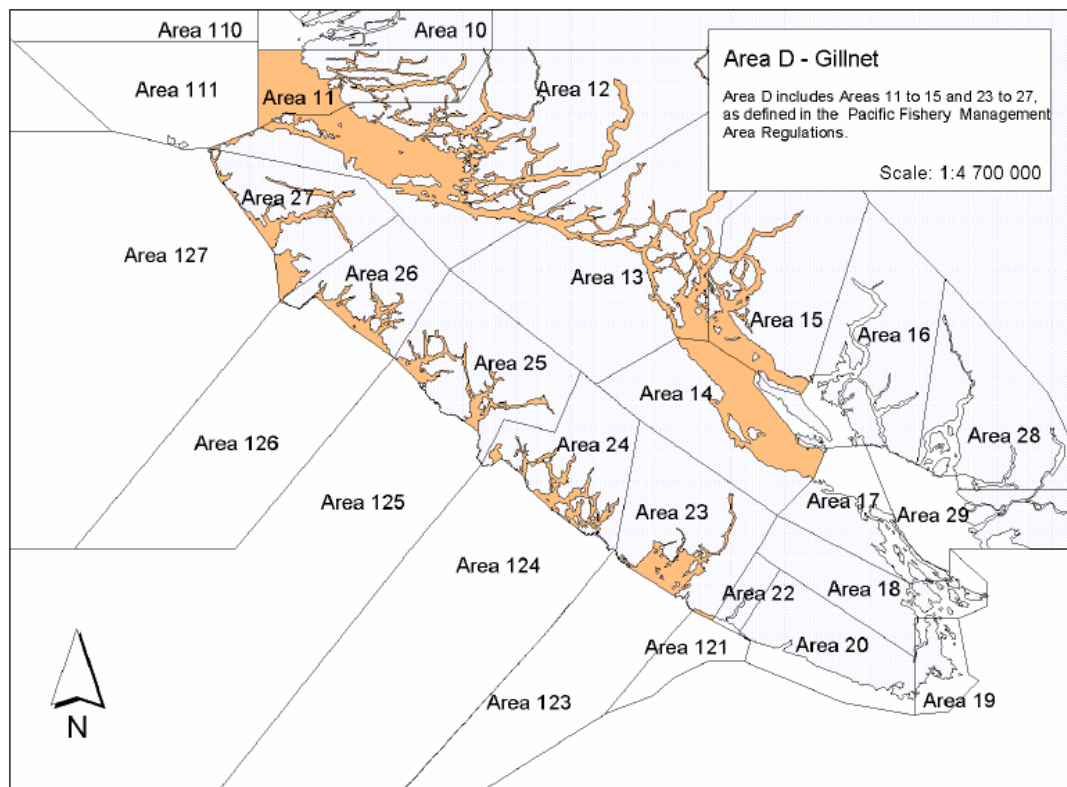


Figure 4: Area D, southern gillnet salmon fishing management areas.

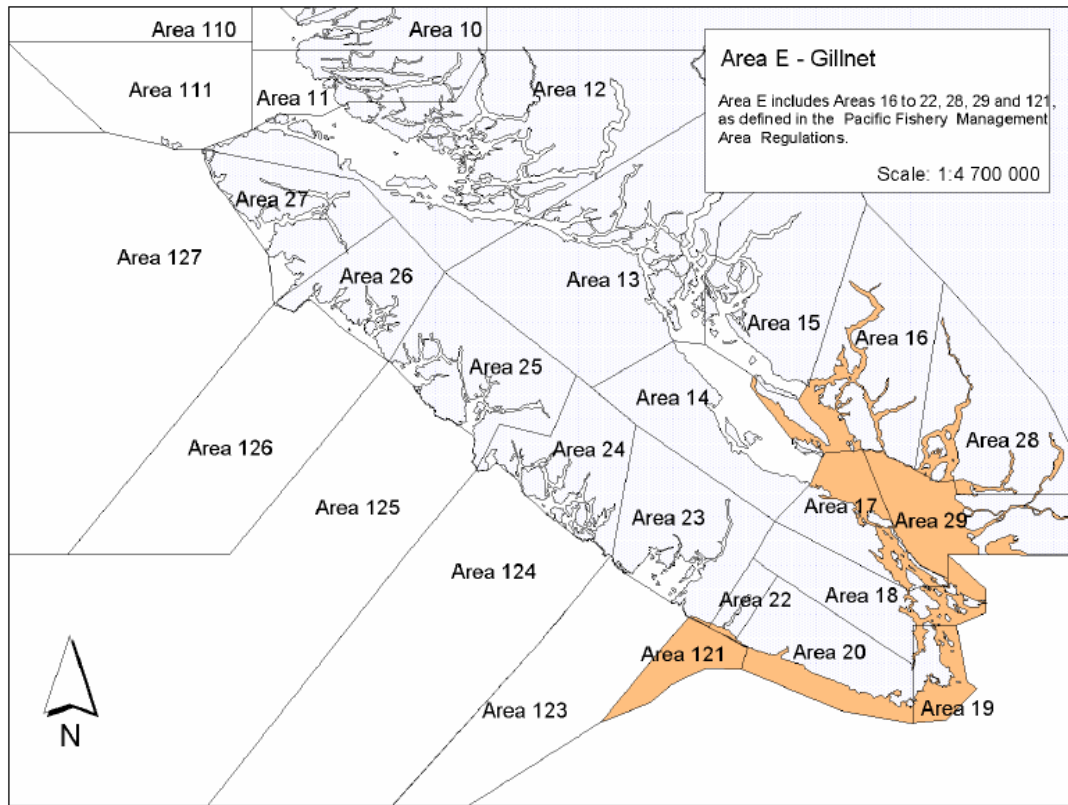


Figure 5: Area E, southern gillnet salmon fishing management areas.

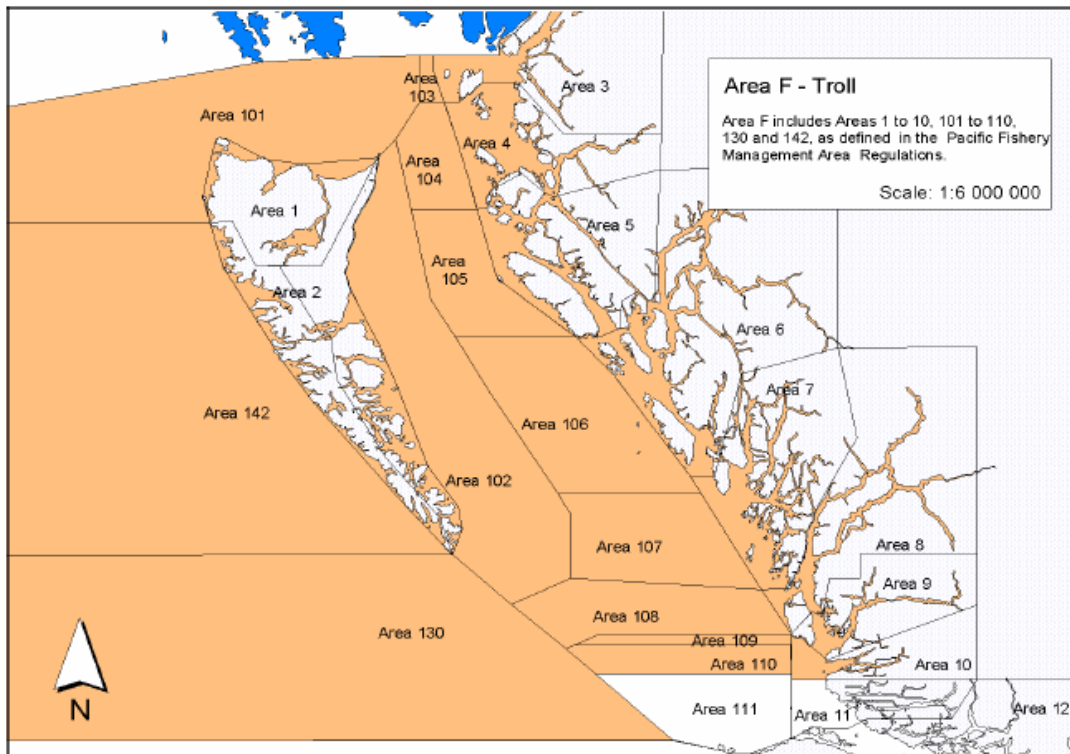


Figure 6: Area F, northern troll salmon fishing management areas.

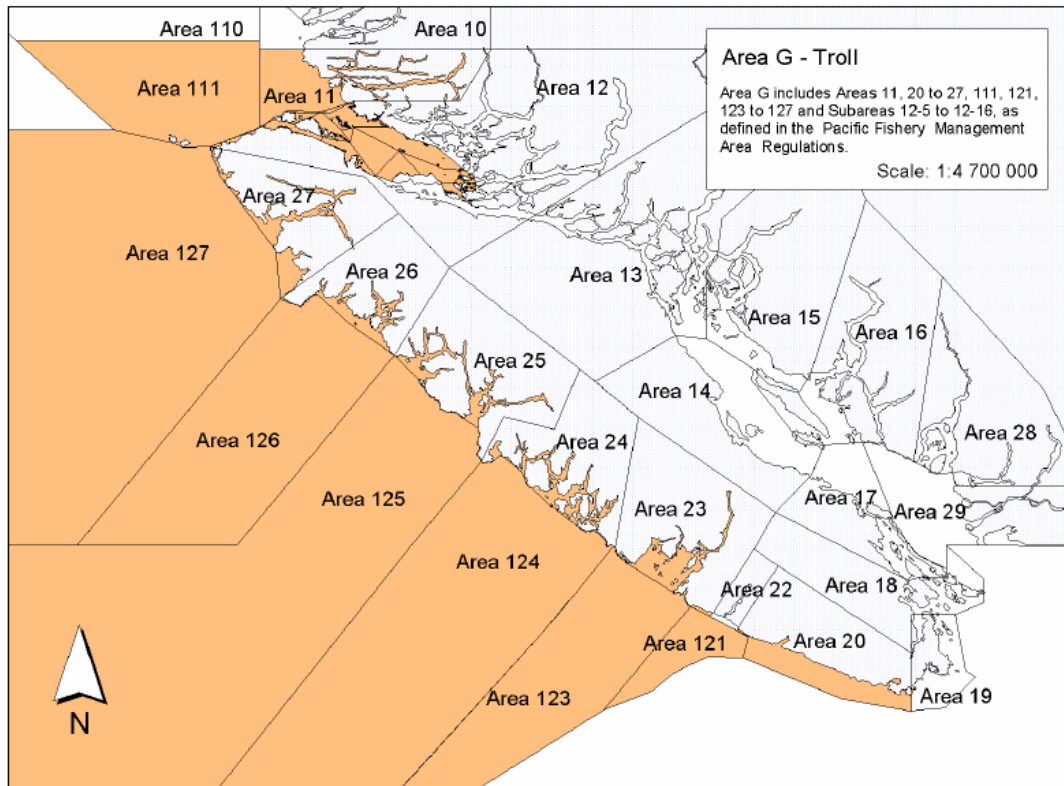


Figure 7: Area G, West coast Vancouver Island troll fishing management areas.

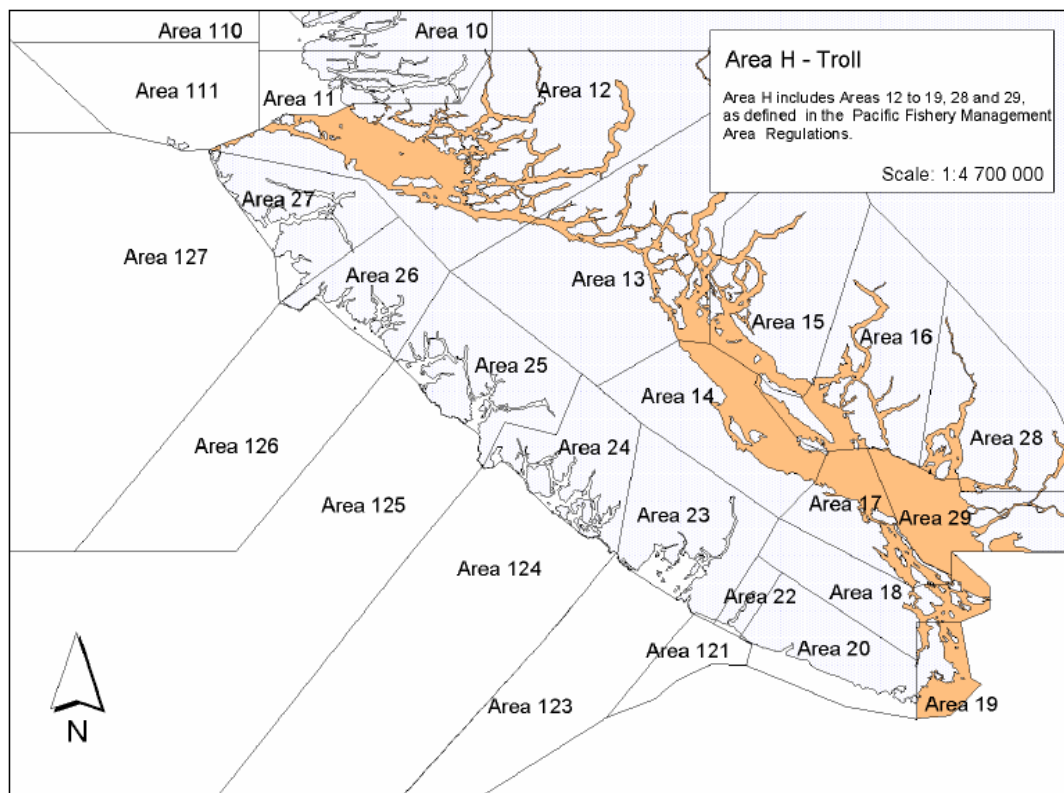


Figure 8: Inside troll salmon fishing management areas.

Table 1 provides a summary of the total number of pink salmon retained by commercial fisheries for the period of April 1, 2011 to March 31, 2012.

Table 1: 2011 British Columbia total commercial pink salmon retained catch to date (pieces), April 1, 2011 - March 30, 2012.

Area	Commercial Pink Salmon Catch (Pieces)	Estimates
Seine		
Area A	1,108,461	Complete
Area B	4,439,130	Complete
	Seine Total – 5,547,591	
Gill Net		
Area C	132,907	Complete
Area D	26,987	Complete
Area E	80,842	Complete
	Gill Net Total – 240,736	
Troll		
Area F	57,983	Complete
Area G	177	Incomplete
Area H	50,250	Incomplete
	Troll Total – 108,410	
Total Commercial Pink Harvest – 5,896,737		
Notes 1. Data does not include test fishing, recreational or First Nations data 2. Data considered preliminary 3. All catch estimates are reported in pieces and included both adults and jacks 4. Estimates column includes either “complete”, meaning catch estimates are available for all days fished, or “incomplete” means that at least one catch estimate is missing.		

Source: Fisheries and Oceans Canada Fisheries Operations System Report. (http://www-ops2.pac.dfo-mpo.gc.ca/Fos2_Internet/pdfs/2011SalmonSummary.pdf)

Table 2 provides reported catch weight (kg) and number (pieces) of pink salmon for the three units of certification by the corresponding salmon fishery management areas.

Table 2: Reported catch weight (kg) and number (pieces) of pink salmon for certified management areas

DISTRICT	MANAGE- MENT AREA	WEIGHT (Kg)	NUMBER (Pieces)
NORTH COAST	1	99,172	56,618
	2E		
	2W	31	17
	3	624,224	428,709
	4	391,038	245,088
	5	318	172
	6	971,956	666,299
	7	15,179	9,601
	8	10,839	6,565
	10	143,384	47,179
NORTH COAST Total		2,256,141	1,460,248
SOUTH COAST	11	163	116
	12	5,525,604	2,915,300
	13	86,032	51,860
	14	725	382
SOUTH COAST Total		5,612,524	2,967,658
FRASER RIVER	29AB	1,438,637	743,170
	29C	2,452	920
	29D	19,367	8,728
FRASER RIVER Total		1,460,456	752,818
Grand Total		9,329,121	5,180,724

2.1 North and Central Coast – Salmon Fishing Areas 1 – 10

Area 1 (As summarized from the 2011 Salmon Post Season Review)

2011 Commercial Fishing Efforts

According to the 2011 Post Season Review, there were no Excess Salmon to Spawning Requirements (ESSR) licenses issued in Area 1 for the 2011 season. There was no reported food, social, ceremonial (FSC) harvest of pink salmon in Haida Gwaii/Queen Charlotte Islands in 2011.

No gillnet or seine fisheries were directed on passing stocks. Commercial net openings to harvest terminal pink salmon and chum salmon are determined in season on identified surpluses of local stocks. There were no surplus terminal pink or chum salmon harvest opportunities identified in Area 1 during the 2011 season.

The majority of troll catch and effort was reported in Areas 1/101. A total of just over 2,802 boat days were recorded in these Areas with 477(17%) in Area 1. A harvest of 6,292 sockeye, 229,293 coho, 52,221 pink and 10 chum were reported.

Escapement Monitoring

According to the 2011 North and Central Coast Post Season Review (NCC PSR), there was no reported escapement monitoring for Area 1 pink salmon streams.

Area 2 East (As summarized from the 2011 Salmon Post Season Review)

2011 Commercial Fishing Efforts

There were no ESSR licenses issued for pink salmon in 2011. There were no FSC harvests of pink salmon in Area 2E in 2011.

No gillnet or seine fisheries were directed on passing stocks. Commercial net openings to harvest terminal pink salmon and chum salmon are determined in season on identified surpluses of local stocks.

No surplus terminal pink and chum salmon net fishing harvest opportunities were identified in Area 2 East during the 2011 season.

A total of 77 boat days were utilized in Area 102 (2E) in 2011. Most of the catch and effort was concentrated in Subarea 102-1 with 6,003 coho and 180 pink salmon reported. A total of 88 sockeye were reported from those areas permitting the by-catch of same.

Escapement Monitoring

The vast majority of pink streams in Area 2E were not inspected in 2011. Pink salmon escapement was conducted in the following rivers and streams, with the noted escapement and surrogate target escapement goals.

Table 3: 2011 Pink Salmon Escapement Monitoring Results for Area 2 East.

Stream	Pink Escapement	Surrogate Target
Tlell River	20,000	25,000
Copper River	50,000	75,000
Anna Inlet Creek	None observed	3,000
Crescent Creek	450	20,000
Echo Harbour Creek	11,600	10,000
Salmon River	280,000	25,000
Bag Harbour Creek	Adults present	1,500

Area 2 West (As summarized from the 2011 Salmon Post Season Review)

2011 Commercial Fishing Efforts

There were no ESSR licences issued for Area 2 West during 2011. There was no reported harvesting of terminal stocks for food fish in Area 2 West during the 2011 season. No attempts to harvest passing sockeye salmon stocks were attempted by seine in Area 2W.

No gillnet or seine fisheries were directed on passing stocks. Commercial net openings to harvest terminal pink salmon and chum salmon are determined in season on identified surpluses of local stocks.

A total harvest of 802 coho, 41 pink salmon and 10,483 Chinook utilizing 155 boat days were reported caught from Area 142. There was also a total of 30 boat days reported in harvesting 1,437 Chinook inside Area 2W for a total Chinook harvest of 11,920 pieces. A total of 92 sockeye were reported harvested from the areas.

Escapement Monitoring

According to the 2011 NCC PSR, there was no reported escapement monitoring for Area 2W pink salmon streams.

Area 3 (As summarized from the 2011 Salmon Post Season Review)

2011 Commercial Fishing Efforts

Pink salmon catches at the Nass fish wheels in 2011 were reported at 10,719 and were below average for odd year Pink salmon when compared to mean catches from 1992 to 2011 (18,231). Note that only five fish wheels operated after 23 July compared to six in past years.

Alaskan gillnet fisheries in Districts 101 (Tree Point) and 106 (Sumner and Upper Clarence) started on 19 June and 13 June, respectively. Alaskan seine fisheries started as follows: Districts 101 (Lower Clarence/Revilla) on 3 July, 102 (Middle Clarence) on 19 June, 103 (Cordova) on 31 July, and 104 (Noyes/Dall) on 3 July. In-season catches were below average for pink salmon with a cumulative total of 8,176,000 pinks caught (as of 17 September 2011), versus a

Commercial fishery openings in Area 3 for 2011 were: 10 gillnet and 6 seine. DFO closed Area 3 on 22 August to any further gillnet and seine fisheries for 2011. Commercial gillnet and seine harvest and release data for Nass salmon and Steelhead in Area 3.

Preliminary harvest estimates of Nass salmon in Areas 1-5 commercial fisheries for 2011 are approximately: 110,700 Sockeye, 13,000 Pink, 900 Chinook, 19,000 Coho and 450 Chum based on commercial catch data from DFO Prince Rupert and methods developed by the Nass Joint Technical Committee.

Preliminary harvest estimates of Nass pink salmon in Nisga'a fisheries in 2011 were 45,719. Selective harvesting of Pink entitlement in Area 3 by two Nisga'a seiners began on 20 July. Dates of fishing by one or two seine boats were: 20-27 July, 30 July to 1 August, 3-7 August and 9-10 August. A total of 40,454 Pink were harvested by the two seine boats to 19 August. The Nisga'a 2011 pink salmon catch was above the 2000 – 2010 average of 14,805.

The preliminary TRTC estimates used by the Nisga'a Fisheries and Wildlife Department for tracking Nisga'a salmon entitlements for 2011 were 201,000 pink. The preliminary TRTC salmon estimates were lower than the pre-season estimates for pink (201,000 vs 2,169,000).

No ESSR sockeye opportunities were identified in the Nass River for the 2011 season.

The total number of openings for 2011 was 6 for 164 vessel operating days compared to the 10 year average of 16.1 openings and 350.8 vessel operating days.

The total Area 3 hauled commercial net catch for 2011 was 318,885 pink. This compares to the five

odd year average of 1,983,879 pink.

Nisga'a Fisheries did a remarkable job in regards to Nass in-river assessment throughout the 2011 season. Fish-wheels were monitored and moved constantly throughout the season to maximize catch rates during fluctuating water conditions. Nisga'a fisheries were also successful in locating and correcting the natural barrier in the Kwinageese River allowing sockeye and Chinook to access upper spawning habitat.

Escapement Monitoring

Lower Nass chum and pink ground surveys were conducted between 31 July and 22 September 2011. Eight surveys were conducted on Ksemamaith Creek with Chum salmon counted on five (31 July; 7, 14, 25 and 28 August). Preliminary AUC estimates of 64 Chum and 2512 Pink salmon were calculated using residence times of 7 and 12 days respectively. Eight surveys were conducted on a groundwater-fed tributary of the Tseax Slough (locally known as the Tseax second mouth) with Chum salmon counted on seven days (31 July; 7, 14, 25, 28 August; 4 and 15 September). Preliminary AUC estimates of 152 Chum and 381 Pink salmon were calculated using residence times of 7 and 12 days respectively. Exploratory surveys also occurred on the Kincolith River, Zolzap Creek and the Tseax River mainstem but very few Chum salmon were seen and no formal counts were conducted.

Aggregate pink salmon adult escapement estimates are not calculated for the Gitwinksihkw fish wheels. Net escapement estimates for Nass pink salmon, including the coastal, lower, middle and upper Nass were 142,087, significantly below the 2000 – 2010 mean of 757,414 pinks.

Area 4 (As summarized from the 2011 Salmon Post Season Review)

2011 Commercial Fishing Efforts

Low pink returns to the Skeena in 2011 did not permit opportunities for ESSR or Economic Opportunities to proceed with the exception of a small ESSR harvest at Moricetown.

The Area 4 net fishery was planned in anticipation of a commercial sockeye surplus of 218,000 and an above average pink return. The fishing plan had to be consistent with goals for, rebuilding coho, chum & wild sockeye stocks, limited steelhead exploitation, Chinook escapements and sector allocations. Some of the restrictions in place to attain these goals were non-retention chum & steelhead for seines and gill nets, time and area closures, harvest rate limitations, daylight only fisheries, mandatory brailing for seines, non-retention Chinook for seines, half-length gill nets and 20 minute sets.

The ITQ seine fishery was opened in Area 4 July 15 – July 20, August 5 – August 14 achieving a final pink catch (not quota) of 97,970, compared to the last five year odd average of 509,186 pinks. Area 4 was open to a targeted seine pink fishery daylight hours only from 06:00 hours Saturday, Aug 13 to 22:00 hours Sunday.

Troll Harvest areas were adjusted in 2011 and included Subareas 104-1, 104-4 and 104-5, which opened from July 15th until September 30th. A total of 299 boat days were reported from this Area, which is adjacent to the Two Peaks. A total of 2,506 pink salmon were harvested in the Area.

Escapement Monitoring

There was no reported escapement monitoring in the 2011 NCC PSR for Area 4 pink salmon streams.

Area 5 (As summarized from the 2011 Salmon Post Season Review)**2011 Commercial Fishing Efforts**

Area 5 is largely managed as an extension of the Area 4 fishery with a potential late fishery on local pink stocks. The forecasted surplus of local pinks was for an average return. Low chum escapements remain a concern and fisheries continue to be managed to rebuild these stocks. All fisheries were conducted with non-retention chum. Area 5 was opened to gill nets in conjunction with Area 4 to harvest Skeena River sockeye migrating through Ogden channel.

Peak gill net fleet in Area 5 occurred July 18 with 8 vessels participating in the fishery. Area 5 gill nets fished a total of 8 openings (3 regular fisheries & 5 selective gill net openings in conjunction with Area 4) with 11 vessel operating days compared to the ten year average of 9 openings and 54.1 vessel operating days.

Due to indications of low abundance from charter patrol pink stream inspection reports, Area 5 was not opened to seines for 2011.

Total pink catch for 2011 in Area 5 was recorded at 1,181 pinks.

Portions of Subareas 105-1 and 105-2 were opened to the troll fishery on July 15th as per the IFMP. The Rockfish Protection Area closure in Subarea 105-1 was in effect. A total of 16 boat days were reported in Subarea 105-1 with 20 pinks harvested.

Escapement Monitoring

There was no reported escapement monitoring in the 2011 NCC PSR for Area 5 pink salmon streams.

Area 6 (As summarized from the 2011 Salmon Post Season Review)

Area 6 had strong pink escapements in the brood year for 2011 however the forecasted return remained uncertain because of considerable flooding in the fall of 2009 and other related factors.

No gill net fishery was anticipated in 2011 and the first seine fishery was scheduled for July 11th. The following restrictions remained in place to conserve wild chum, steelhead, coho and Chinook. These restrictions involved, non-retention steelhead and coho for both gear types, mandatory brailing for seines, non-retention chum for seines at the Gil Island fishery, non-retention Chinook for seines, closure of the Gil Island fishery to gill net and daylight only fisheries.

On July 11th only 6 seines participated in the opening. The catch was moderate but it was early and the fishery reopened on the following week. Pink catches in the fishery remained moderate and the fishery proceeded at only one day a week with the last fishery on August 15. Coho returned better than expected and retention was allowed for the later portion of the fishery. Chum catches in the seine fishery were strong suggesting high chum survival.

Total number of seine fishing days was 6 for 179 vessel operating days compared to the 5 odd year average of 15 openings and 425 vessel operating days. The total Area 6 seine net catch was 706,000 pink compared to the 5 odd year average of 3.9 million.

No troll fishery in Subarea 106 was prosecuted with exception of a portion of Subarea 106-1 west of 130 degrees 30 minutes west longitude starting July 15 for coho and pink.

The troll fishery closed for the balance of the season at 23:59h Friday, September 30th. Total Effort/Catch for Area 6 was 186 boat days for a catch of 77 sockeye, 13,849 coho and 2,810 pink. Total Effort/Catch for Area 106 was 17 boat days for a catch of 48 pink.

Escapement Monitoring

There was escapement monitoring conducted and reported in the 2011 NCC PSR for Area 6 pink salmon streams. The monitoring results can be seen in detail on pages 74 to 76 of the NCC PSR.

AREAS 7 - 10

2011 Commercial Fishing Efforts

There were no pink salmon fisheries results reported for Areas 7 – 10 in the 2011 NCC PSR.

Escapement Monitoring

There was no escapement monitoring reported in the 2011 NCC PSR for Areas 7 - 10 pink salmon streams.

2.2 Fraser River Salmon Fishing Areas

2011 Commercial Fishing Efforts

The following information was summarized or copied from the “*Post-Season Report for 2011 Canadian Treaty Limit Fisheries*”, dated January 4, 2012, prepared for the Pacific Salmon Commission by Fisheries and Oceans Canada.

There were directed pink harvest opportunities for First Nations FSC fisheries, and commercial fisheries (including First Nations demonstration and economic opportunities) during the 2011 season. The majority of First Nation FSC harvesting occurred from early to mid-August. The majority of the catch and fishing effort was in Johnstone Strait. Table 4 presents the preliminary 2011 Fraser pink salmon catch estimates for Canada and the U.S.

Commercial fisheries occurred from early August to late September. In marine waters, Canada managed the majority of the Fraser River pink fisheries as an Area B Seine and Area H Troll sockeye and pink Individual Transferable Quota (ITQ) Demonstration Fishery. Fraser River pink salmon accounting included retained catch and Fraser River sockeye salmon accounting was based on total mortalities, including retained catch and assessed release mortalities.

For any pink or sockeye retained, catches were attributed to available vessel ITQ. Sockeye release

mortalities were attributed to available vessel ITQ based on the sockeye to pink salmon encounters (as determined by independent observer data by area and gear), the validated pink catch, and the number of sockeye retained.

Area D and E Gill net fisheries also harvested Fraser pink salmon during sockeye directed fisheries. Area D and E Gill net fisheries were both managed as competitive, derby-style fisheries. These commercial fisheries occurred in Johnstone Strait, Strait of Georgia, and in the lower Fraser River.

First Nations economic opportunity and demonstration fisheries occurred at various locations in the Fraser watershed in 2011.

Table 4: Preliminary Fraser Pink Salmon Catch Estimates in Canada and U.S. in 2011.

Total Fraser Pink Salmon Caught	7,883,300
Test Fisheries (Incl. Albion and Qualark)	18,700
Canadian Catch	4,956,200
Canadian commercial fisheries (includes commercial selective and First Nation economic and demonstration fisheries)	4,751,800
Canadian First Nation Food, Social and Ceremonial Fisheries	85,200
Canadian Recreational Fisheries	119,200
United States Catch	2,908,400

Escapement Monitoring

The 50% run size probability forecast for Fraser River pink salmon was 17.5 million, with 25% and 75% probability levels of 12.6 million and 25.1 million respectively. The DFO forecast 50% date (peak timing) for Fraser pink salmon arriving to Area 20 was August 25 and the pre-season diversion rate estimate through Johnstone Strait was predicted to be 59%. The escapement goal for Fraser River pink salmon was 6 million. Table 5 below, outlines total allowable mortality rules for various Fraser pink run sizes.

Table 5: 2011 Fraser River Pink Escapement Plan – Pre-Season Run Size Estimates

Stock Group	Run Size Estimate of forecasted stocks	Run Size Reference Points		Total Mortality Rate Guidelines	Total Allowable Mortality at Run Size	Escapement Target at Run Size
Fraser Pink		-	7,059	0% - 15%		
		7,059	17,143	15% - 65%		
	17,495	17,143		65% - 70%	66%	6,000

Since 2003, the final estimate of escapement has been calculated as the final run size minus catch (spawning ground estimates for pink salmon have not been undertaken since 2001). The preliminary net escapement for the 2011 return is 10,416,700 pink salmon.

2.3 Inner South Coast Pink Salmon Fishing Areas

This certification unit assesses the Inner South Coast pink salmon fishery, excluding the Fraser River pink salmon fishery (Area 29). This includes all pink salmon spawning in watersheds in Johnstone Strait and the Strait of Georgia (i.e. statistical areas 11 to 19), except for Fraser River pink salmon. Pink salmon distribution throughout the Inner South Coast can be summarized by statistical area: Area 11 (Northeast Vancouver Island), Areas 12 and 13 (Main inlets, Johnstone Strait, and mid-Vancouver Island), Area 14 (Mid-Vancouver Island), Areas 15 and 16 (Toba Inlet and Jervis Inlet), Area 17, 18, and 19 (No major pink salmon runs originate here, but the Nanaimo River supports a small persistent run of pink salmon), and Area 28 (Fraser approach areas).

2011 Commercial Fishing Efforts

The following information was summarized or copied from the “*Post-Season Report for 2011 Southern BC Fisheries*”, dated January 6, 2012, prepared by Fisheries and Oceans Canada. The information is extracted from Section 5, entitled “*Southern BC Mainland Inlet Pink*”, found on page 28 of the document.

The 2011 odd-year return of pink salmon is typically the sub-dominant cycle year for most Mainland Inlet pink salmon systems. Since 2003, odd year returns have demonstrated an improving trend in abundance opposite of what has been occurring in the even year pink populations for this area. Expectations for 2011 were highly uncertain due to extremely variable returns throughout the historic time series.

First Nations fishing opportunities for pink salmon were not restricted; however, there was little to no directed pink harvest in terminal areas in 2011. Normally, there is very little effort on Mainland Inlet pinks in terminal areas due to the availability of fishing opportunities in other more desirable locations such as Johnstone Strait.

There were no targeted commercial pink fisheries on Mainland Inlet pink stocks. Retention of pink salmon was permitted during commercial sockeye and chum fisheries in Johnstone Strait. The total commercial catch of pink salmon in Johnstone Strait from mixed pink stocks is estimated as 196,321 pieces; this includes catch estimates from both commercial directed sockeye and chum fisheries. Table 6 presents an estimate of pink salmon catch in the South Coast commercial, First Nation economic opportunity (EO) and excess salmon to spawning requirements (ESSR) fisheries.

Table 6: Preliminary 2011 South Coast Pink Salmon Catch by Fishery and Area

Fishery	Gear	Fishery (Area)	Numbers **	
			Kept	Released
Commercial	Area G Troll	WCVI AABM Chinook (23 - 27, 123 - 127)	175	787
	Area H Troll	Fraser Chum (29)	0	0
	Area H Troll	JST Chum (12,13) Fraser	144	47
	Area H Troll	Sockeye (12,13) Fraser	48,825	928
	Area H Troll	Sockeye (18, 29) MVI	1281	245
	Area H Troll	Chum (14)	0	0
	Area B Seine	Barkley Sockeye (23)	7,200	0
	Area B Seine	Nitinat Chum (21, 121)	0	0
	Area B Seine	JST Chum (12,13)	435	17
	Area B Seine	Fraser Sockeye/Pink (12,13)	3,722,467	87
	Area B Seine	Fraser Sockeye (20)	0	0
	Area B Seine	Fraser Sockeye/Pink (29)	716,227	19
	Area B Seine	MVI Chum (14)	0	0
	Area B Seine	Fraser Pink (29)	0	0
	Area D Gillnet	Barkley Sockeye (23)	14	11
	Area D Gillnet	Barkley Chum (23) Somass	0	1
	Area D Gillnet	Chinook (23) Clayoquot	0	0
	Area D Gillnet	Chum (24) Tlupana	0	0
	Area D Gillnet	Chinook (25) Nootka-	0	0
	Area D Gillnet	Esperanza Chum JST Chum	0	8
	Area D Gillnet	(12,13)	381	12
	Area D Gillnet	Fraser Sockeye (11,12,13)	26,587	489
	Area D Gillnet	MVI Chum (14)*	0	0
	Area E Gillnet	Fraser Sockeye	80,664	285
	Area E Gillnet	Fraser Chum (29) Nitinat	2	6
	Area E Gillnet	Chum (21, 121)	0	0
	Area E Gillnet	Chinook Demonstration Fishery	626	0
Total Commercial Catch			4,605,028	2,942
First Nations EO		Johnstone Strait		
		Strait of Georgia		
		WCVI	0	0
		Fraser River	991,263	8,063
Total First Nations EO Catch			991,263	8,063
First Nations ESSR		Johnstone Strait		
		Strait of Georgia		
		WCVI		
		Fraser River	3,353	0
Total First Nations ESSR Catch			3,353	0
TOTAL - ALL FISHERIES (including Recreational & FN FSC, not shown above)			5,849,366	196,628

Escapement Monitoring

Assessments of the 2011 returns to the area demonstrated reduced survivals of the strong 2009 brood returns. Reductions in freshwater survival due to heavy flooding in the fall and winter 2009 (encountered at both Glendale and Quinsam rivers) as well as reduced marine survival likely attributed to this reduction in pink abundance.

The 2011 assessment plan entailed extensive visual coverage of the key Area 12 Mainland Pink systems with a focus on improved escapement and smolt studies. Flights over the Phillips River in Area 13 were also conducted in 2011.

Preliminary 2011 pink escapement estimates for some key systems in the Statistical Area 12 Mainland Inlets are: Kakweiken 69,000 (354,000 brood), Glendale 143,000 (489,000 brood), Ahnuhati 6,000

(13,000 brood), Kingcome (index clear tributaries) 620 (530 brood) and Wakeman (index clear tributaries) 370 (1,800 brood). These estimates are subject to change pending further post-season analyses.

2.4 Changes in the Fishery and Fishery Management

The following summary is adapted from the 2011 Integrated Fisheries Management Plan for Salmon in Southern B.C.

Salmon management programs in 2011 were guided by policy and operational initiatives adopted over the past several years. These include; *Canada's Policy for Conservation of Wild Pacific Salmon* (WSP), *An Allocation Policy for Pacific Salmon*, Pacific Fisheries Reform, *A Policy for Selective Fishing*, *A Framework for Improved Decision Making in the Pacific Salmon Fishery*, the Integrated Harvest Planning Committee and Pacific Region Fishery Monitoring and Reporting Framework.

Canada's Policy for Conservation of Wild Pacific Salmon (also called the Wild Salmon Policy) sets out the vision regarding the importance and role of Pacific Wild salmon as well as a strategy for their protection.

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 the IFM 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 to FSC and commercial access and involvement in management.

In February 2009, the British Columbia Supreme Court (BCSC) ruled that the activity of aquaculture is a fishery which falls under exclusive federal jurisdiction pursuant to sub-section 91(12) of the Constitution Act, 1867 - Sea Coast and Inland Fisheries and, in effect, struck down substantial portions of the provincial regulatory regime governing aquaculture.

In light of the BCSC decision, it was clear that only the federal government has the authority to establish the comprehensive regulatory regime needed to ensure that the industry in British Columbia is appropriately regulated and managed.

In response to the BCSC decision, the Minister of Fisheries and Oceans has confirmed the commitment of the Government of Canada to establish a federal regulatory regime governing aquaculture pursuant to the Fisheries Act in the geographic area of British Columbia. As part of developing a new regulation, there will be consultations with sector stakeholders and, following pre-publication in Canada Gazette Part I, a 30 to 60-day review period during which further feedback from stakeholders will be taken into account. The BCSC gave DFO until December 18, 2010 to develop and implement a federal aquaculture regulation for BC.

Changes to Northern Salmon Fisheries Management

Identified management changes in the 2012 Northern Salmon IFMP included a number of changes related to other salmon fisheries, pertinent changes related to pink salmon are as follows.

Haida Gwaii Pinks

Surplus pink salmon opportunities on Haida Gwaii occur only during even years; odd year returns are either minimal or non-existent in most streams. Pre-season 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

Nass River Pinks (Area 3)

The major pink stocks return to the Kwinamass, Khutzeymateen, and the Iknouk Rivers (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. Area 3 pink returns are expected to be poor with limited harvesting opportunities anticipated in 2012.

Kwinageese sockeye and Area 3 chum are stocks of concern and will require focused management planning.

- 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 by-catch of coho.
- Non-retention of steelhead is mandatory in all fisheries.
- If development of a chum fishing plan (as reference above) cannot be devised, there will be non-retention of chum salmon in all net fisheries in Area 3 except to obtain samples to determine the viability of using otoliths as a stock identification technique to determine the presence of US hatchery chum.
- Brailing and sorting, with the mandatory release of chinook and chum will be in place for the seine fishery. Non-retention of coho for both seine and gill net will be in place initially, but may be modified depending on stock abundances and fishing effort. Potential fishery impacts will be considered prior to any retention fisheries.
- Gill nets have a 137 mm (5.39 in) maximum mesh restriction.
- Pink fishing opportunities will be managed to conserve weak stocks.
- Net fisheries will start with non-retention of coho, and will be managed based on in-season abundance. A late season troll fishery in the inner portions of Area 3 will be considered if stock strength permits

Skeena River Pinks (Area 4)

In the Skeena River, 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.

- Fishing is limited to daylight hours to reduce the by-catch of coho, except during directed chinook gill net fisheries when mesh size and run timing are used to target chinook only.
- Non-retention of steelhead and chum is mandatory in all fisheries.
- Net fisheries will begin with non-retention of coho, but the requirement to release of coho will be reviewed in-season.

- In addition, brailing and sorting with the mandatory release of chinook will be in place for the seine fishery.
- Gill nets have a 137 mm (5.39 in) maximum mesh restriction during the sockeye fishery.
- Similar to the last few years, DFO will continue with management measures that have reduced chum fishing impacts from historical averages. Management measures required to meet the chum rebuilding plan are still under development for 2012. It is expected that chum will be managed to a 10% exploitation rate.
- The fishery will be managed to avoid high weekly harvest rates in late July and August.

For the inland demonstration fishery, the intent will be to continue the selective methods that have been developed during the 1990s pilot sales fisheries. These could include beach seine, fishwheel, dip net, and the Babine weir. Only selective harvest methods will be allowed. Sockeye and pink may be retained, based on the weekly allocation issued by Prince Rupert DFO, and all other species will be returned to the water with the least possible harm. All inland demonstration sockeye and pink salmon harvest shall 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 demonstration fishery.

Area 5 Pinks

Fisheries in Area 5 are traditionally managed in conjunction with Area 4 until mid-August when local pink stocks become prevalent. In recent years Area 5 pink fisheries have taken place in August. There is no one major pink stock in Area 5 but a number of small streams which all contribute to this stock.

Identified management constraints for Area 5 pink salmon fisheries include

- Area 5 will open in conjunction with Area 4 openings until mid-August.
- Seine fisheries for Area 5 pink stocks are considered starting in mid-August based on catch and stream escapement information.
- A targeted selective gill net fishery for pinks in Area 5 is possible while Skeena Pinks are transiting the area and before the terminal stocks in Ogden Channel appear.
- By-catch encounters would need to be confirmed by monitoring the fishery and the fishery would be terminated if by-catch encounters are high.

Area 6 Pinks

Pink returns for even years have been poor in recent years. The commercial catch has varied from a low of 1000 to a high of 60,000 pieces. In 2010, (particularly in the southern portions), Area 6 experienced severe flooding which will have negatively impacted pink egg survival for this years return.

Seine pink 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. Seine fisheries will target pink stocks near Gil Island 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. Local surpluses for pink and chum fisheries may be considered based on in-stream escapement assessments.

Identified management constraints for Area 6 pink salmon fisheries include:

- Commercial net fishing is limited to daylight hours to reduce by-catch.
- Other management measures are also in effect, including mandatory brailing for all seine sets and non-retention of chinook, steelhead and coho in all fisheries and non-retention of chum at the Gil Island fishery by the commercial seine fleet.
- There will be non-retention of steelhead in all fisheries. Coho non-retention may be changed in-season depending on coho stock abundance.

Area 8 Pinks

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.

Identified management constraints for Area 8 pink salmon fisheries include:

- Gill net fisheries have a 158mm minimum mesh restriction until the beginning of August to protect weak sockeye stocks. Gill nets with 149mm mesh will be allowed for the remainder of the season. Gill net fishermen are requested to release all live sockeye to the water with the least possible harm, all season long.
- Fishing is limited to daylight hours to reduce the catch of coho.
- Net fisheries will be managed to both avoid coho and with a non-retention restriction in place. Easing of restrictions in-season could occur if abundance in 2012 is high.
- Seines are required to brail and release sockeye, coho, chinook and steelhead to the water all season. Gill nets are required to release coho and steelhead.
- If salmon stocks surplus to escapement requirements are identified, fisheries could occur in areas where incidental catch or by-catch concerns do not preclude harvest activities.
- 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

Changes to Southern Salmon Fisheries Management

Identified management changes 2012 Southern Salmon IFMP included a number of changes related to other salmon fisheries, pertinent changes related to pink salmon are as follows.

Fraser Pinks

Pink salmon returns to the Fraser system on a two year cycle, with returns almost entirely in odd calendar years. No fisheries are expected to be directed on Fraser pink salmon in 2012 as it is an off-cycle year.

Mainland Inland Pinks

Identified constraints to the Mainland Inland Pink (i.e. fishery operations for the 2011 season are identified in the Integrated Fishery Management plans. Key changes were as follows.

1. Directed Mainland Inlet pink fisheries are restricted to terminal areas.
2. Daylight fishing only.
3. Fishing boundaries are established to minimize encounters of chinook, coho, sockeye and chum, and to ensure escapement targets are reached.
4. Upper Knight Inlet boundary is implemented to conserve weaker stocks of pink.
5. Kakweiken, Glendale and Phillips pink stocks are managed separately in terminal areas
6. In 2012 a cautious approach to managing these stocks will continue due to continued uncertainties on return rates.
7. Directed limited fleet commercial fisheries may occur in 2012 and will be confirmed inseason based on in-season assessment.

3.0 RESULTS, CONCLUSIONS AND RECOMMENDATIONS

This report contains the findings of the first surveillance cycle in relation to these fisheries.

Intertek Moody Marine conducted this surveillance audit in accordance with the MSC Certification Requirements version 1.2. Specifically, Section 27.22 Surveillance was the directive used in conducting the audit.

The client's response to the Conditions of Certification was set out in an Action Plan, which was appended to the final certification report (FCR). Auditors confirmed the progress of all client defined or alternative actions in relation to fulfilling all conditions identified in the FCR. For each condition listed below, the report sets out progress to date. This progress has now been evaluated by the Intertek Moody Marine assessment team against the commitments made. This assessment includes a re-evaluation of the scoring allocated to the relevant Performance Indicators in the original MSC assessment where a condition has been completed. Where the requirements of a condition are met, the Performance Indicators are re-scored and if the score is 80 or more, then the condition is closed. Table 7 provides a summary of the status of the 22 conditions at the conclusion of the first annual surveillance audit.

Table 7: Summary of First Annual Surveillance Audit Results

Condition	Deliverable Due (Surveillance Audit No.)	Interim Milestones Prescribed?	Progress Evaluation	Status
Principle 1				
1-1 - All UoCs	2	None	NCC – Progress confirmed. ISC, Fraser – No progress evident.	To be verified at 2 nd Surveillance Audit.
1-2 - All UoCs	2	None	NCC, Fraser – Progress confirmed. ISC – No progress evident.	To be verified at 2 nd Surveillance Audit.
1-3 - All UoCs	2	None	NCC – Progress confirmed. ISC, Fraser – No progress evident.	To be verified at 2 nd Surveillance Audit.
1-3a - NCC, ISC UoC	3	Y – 2 nd SA	NCC – Progress confirmed. ISC – No progress evident.	To be verified at 2 nd Surveillance Audit.
1-4 - All UoCs	2	None	All UoCs – some progress confirmed.	To be verified at 2 nd Surveillance Audit.
1-5 - All UoCs	2	None	All UoCs – some progress confirmed.	To be verified at 2 nd Surveillance Audit.
1-6 - All UoCs	4	Y – 2 nd SA	All UoCs – some progress confirmed.	To be verified at 2 nd Surveillance Audit.
1-7 - All UoCs	2	None	All UoCs – some progress confirmed.	To be verified at 2 nd Surveillance Audit.
Principle 2				
2-1 - NCC, Fraser UoCs	2	None	NCC – Progress confirmed, Fraser – Little progress evident.	To be verified at 2 nd Surveillance Audit.
2-2 - NCC UoC	2	None	NCC – Progress confirmed.	To be verified at 2 nd Surveillance Audit.
2-3 - All UoCs	2	None	All UoCs – no progress evident.	To be verified at 2 nd Surveillance Audit.
Principle 3				
3-1 - All UoCs	2	None	NCC – Progress confirmed. ISC, Fraser – No progress evident.	To be verified at 2 nd Surveillance Audit.
3-2 - NCC UoC	1	None	NCC – Progress evident, 1 st year	To be verified at 2 nd

			deliverable provided.	Surveillance Audit.
3-3 - Fraser UoC	1	None	Fraser – Progress evident, 1 st year deliverable provided.	To be verified at 2 nd Surveillance Audit.
3-4 – NCC UoC	2	None	NCC – Progress confirmed.	To be verified at 2 nd Surveillance Audit.
3-5 – NCC UoC	2	None	NCC – Progress confirmed.	To be verified at 2 nd Surveillance Audit.
3-6 – All UoCs	2	None	All UoCs – Some progress confirmed.	To be verified at 2 nd Surveillance Audit.
3-6a – NCC UoC	2	None	NCC – Progress confirmed.	To be verified at 2 nd Surveillance Audit.
3-7 – All UoCs	2	None	All UoCs – No progress evident.	To be verified at 2 nd Surveillance Audit.
3-7a – NCC UoC	2	None	NCC – Progress confirmed.	To be verified at 2 nd Surveillance Audit.
3-8 – NCC UoC	1	None	NCC – Progress confirmed, 1 st year deliverable provided.	To be verified at 2 nd Surveillance Audit.
3-9 – Fraser UoC	1	None	Fraser – Progress evident, 1 st year deliverable provided.	To be verified at 2 nd Surveillance Audit.

3.1 Conditions – Principle 1

Condition 1-1	For all pink salmon units of certifications (UoC) - The reliability of the catch estimates derived from the catch monitoring systems shall be evaluated by the second surveillance audit and the client or management agency shall commit to conducting similar catch monitoring reporting evaluations at a period of not more than every 5 years in order to meet the performance requirement identified by the third scoring element in the 80 scoring guidepost. The management agency must implement catch monitoring systems that will produce scientifically defensible estimates of catch for non target stocks and species in Area 3-6 pink salmon fisheries by the second surveillance audit. The rationale for the monitoring program must be described and demonstrate the adequacy of the monitoring is sufficient to meet the management needs in relation to the level of harvest.
PI 1.1.2.1	Estimates exist of the removals for each stock unit.
SG 60	<ul style="list-style-type: none"> Catch estimates for the majority of target stocks are available. Catch estimates are available for non-target stocks where the catch of the non-target stocks may represent a significant component of that stock. Mechanisms exist to ensure accurate catch reporting and these mechanisms are evaluated at least once every 10 years.
SG 80	<ul style="list-style-type: none"> Catch estimates are available for all target stocks harvested in the fishery. Catch estimates are available for non-target stocks where the catch of the non-target stock may represent a significant component of the harvest of that stock. Mechanisms exist to ensure accurate catch reporting and these mechanisms are evaluated at least once every 5 years.
SG 100	<ul style="list-style-type: none"> Catch estimates are available for all fisheries in Canadian waters that harvest the target and non-target stocks harvested in the fishery being evaluated. Mortality rates are available for the fish released or discarded during the fishery. Catch estimates are available for fisheries outside Canadian waters that harvest the stocks that are the target of the fishery being evaluated.
Score	NCCC Pink: 73 Inner SC Pink: 77 Fraser Pink: 77
Scoring Rationale	The team is satisfied that there are accurate, mandatory catch reporting mechanisms that meet the 60 scoring guideposts and provide estimates of catch for target and non-target stocks. All certification units meet the first 80 scoring guidepost, there are catch estimates for all target stocks harvested in the fishery. The score for NCCC second 80 scoring guidepost was reduced as a result of further considerations which resulted from stakeholder submissions during the PCDR review phase. The second scoring guidepost was revised to indicate only being partially met and the score changed from 77 to 73. The basis of changing the score was the uncertainty about the confidence of the non-target stock reporting of discards, as evidenced in information provided in DFO post season reports and J.O. Thomas (2010) review of Skeena (NCCC) observer program. All pink fisheries were given a partial score for the third criteria at the 80 guidepost because there is no program of systematic review of the effectiveness of the catch monitoring system to ensure accurate catch reporting, this resulted in scores of 77 for ISC and Fraser. None of the 100 scoring guideposts were considered to have been partially or fully met.

Client Action Plan	<p>Under DFO's Pacific Integrated Commercial Fisheries Initiative (PICFI) the Enhanced Accountability element has provided further focus and resources to develop and implement a framework to improve the monitoring and catch reporting in Pacific fisheries. Under this framework fisheries information requirements are categorized as requiring low, moderate or enhanced levels of information according to consistent criteria, largely based on evaluating risk to conservation.</p> <p>The current and desired monitoring levels for all Pacific salmon fisheries are currently being evaluated utilizing this consistent framework and a report being prepared for release. This strategy calls for subsequent updates of the regional evaluation of all salmon fishery monitoring programs every two years.</p> <p>DFO will report on the current program to monitor the catch and associated by-catch in Area 3-6 pink fisheries. The utility of this bycatch data for stock assessment of management applications will be evaluated and be the basis for determining the adequacy of the bycatch monitoring programs.</p> <p>The Skeena Model was developed in the 1990's as a joint effort between MOE and DFO to estimate harvest impacts on steelhead. The 3 recent CSAP papers on Nass sockeye, Skeena chum and Nass chum all provided accepted recommendations to review and expand the Skeena model, and to develop an equivalent for the Nass. These models will be the basis for evaluating bycatch harvest impacts for Nass and Skeena sockeye and pink fisheries. Review and expansion of the Skeena model and the creation of an equivalent version for the Nass will be developed over the next two years.</p>
Client Progress at 1st Surveillance Audit	<p>ISC – DFO is currently reviewing their catch estimation programs for these fisheries. No bycatch estimates were provided for ISC fisheries during the 1st audit.</p> <p>NCCC – weekly catch and bycatch estimates based on sale slip and log book data for all NCCC gillnet and seine fisheries for 2007-11 were provided (Peacock Memo dated 7 May 2012). The AT requested a comparison of logbook and observer program bycatch ratios (steelhead: sockeye) for 2010 and 2011.</p> <p>Fraser – Sturgeon and steelhead bycatch estimates were provided for 2011 pink salmon fisheries conducted within the Fraser River (Matthew Parslow 2012). First Nation Economic Opportunity fisheries were the only in-river fisheries that targeted Fraser pink salmon in 2011 and these fisheries reported small catches of sturgeon and steelhead. However, there was not on-site verification of these catch estimates and no estimates of steelhead caught in marine fisheries were provided.</p> <p>DFO (Carole Eros) provided a presentation of their work related to a “Strategic Framework for Fishery Monitoring and Catch Monitoring.</p> <p>Catch monitoring framework – implementation of mechanisms (observer programs, dockside verification). The AT would like DFO to define the level of catch sampling (e.g. % of the catch to be independently verified) for each of the UoCs.</p>
Observations from 1st Surveillance Audit	<p>NCCC - Good progress has been made towards addressing this condition. The 7 May 2012 memorandum on bycatch estimates prepared by Dave Peacock, provides species-specific annual estimates of the number of salmon kept as reported on sale slips and the number of each salmon and steelhead released derived from logbook data. The Assessment Team (AT) raised concerns regarding the potential for underestimation bias in the logbook data and recommended that the logbook and Ecotrust observer data be compared for 2010 and 2011 to determine if there is evidence for any bias in the logbook data. If a bias is detected, the logbook estimates should be corrected for any bias that can be quantified.</p> <p>ISC and Fraser - No bycatch estimates for marine fisheries were provided. DFO has indicated that some on-board observer data is available for pink salmon fisheries conducted</p>

	in Johnstone Strait. This information needs to be provided to the AT.
Conclusion at 1st Surveillance Audit	<p>Good progress has been made towards meeting the condition for NCCC pink fisheries. No progress is evident for ISC and Fraser pink salmon fisheries.</p> <p>During the second surveillance audit, the team will verify whether the reliability of the catch estimates derived from the catch monitoring systems have been evaluated and that the client or management agency has committed to conducting similar catch monitoring reporting evaluations at a period of not more than every 5 years in order to meet the performance requirement identified by the third scoring element in the 80 scoring guidepost.</p> <p>The audit team will also verify that the management agency has implemented catch monitoring systems that produce scientifically defensible estimates of catch for non target stocks and species in Area 3-6 pink salmon fisheries by the second surveillance audit. The rationale for the monitoring program must be described and demonstrate the adequacy of the monitoring is sufficient to meet the management needs in relation to the level of harvest.</p> <p>Progress is confirmed for the NCC UoC, there is no progress evident for the ISC and Fraser UoCs. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 1-2	For all pink salmon UoCs - An escapement monitoring program that is adequate to estimate the status of target stocks harvested in the NCCC, ISC and Fraser pink salmon fisheries must be implemented within two year. Fishery independent indicators of abundance for non-target species harvested in these fisheries (e.g. improved escapement monitoring for lower Skeena chum) must be available for each year and area where fisheries are permitted to target pink salmon. The rationale for the monitoring program must be described and demonstrate the adequacy of the monitoring is sufficient to meet the management needs in relation to the level of harvest. A publically available, externally reviewed report on escapement monitoring programs should be available for review within 2 years.
PI 1.1.2.2	Estimates exist of the spawning escapement for each stock unit.
SG 60	<ul style="list-style-type: none"> Escapement estimates for target stocks are available, where escapement estimates are necessary to protect the target stock from overexploitation. Fishery independent indicators of abundance are available for non-target stocks where the fishery harvests may represent a significant component of the harvest of that stock.
SG 80	<ul style="list-style-type: none"> Estimates are available for the annual escapement of each target stock harvested in the fishery. Fishery independent indicators of abundance are available for the non-target species harvested in the fishery. In season indicators of escapement are available for the target stocks and are used to regulate the fishery.
SG 100	<ul style="list-style-type: none"> Estimates are available for the annual escapement for each stock unit harvested in the fishery. In season indicators of escapement are available for all stock units (e.g. target stocks and non-target stocks) and are used to regulate the fishery.
Score	NCCC Pink: 70 Inner SC Pink: 70 Fraser Pink: 70

Scoring Rationale	<p>The escapement monitoring system relies primarily on stream inspections, augmented in some places with weirs. As a general concern, the number of streams visited and the frequency of visits has been declining due to budgetary limitations, and there is no documentation of what level of coverage (% of streams, number of visits) is adequate.</p> <p>All certification units meet the 60 scoring guideposts. The assessment team was aware that a number of indicator streams were not enumerated each year. However, it is unclear what number and at what frequency indicator streams are being monitored in NCCC. Using assessment data received from DFO, the assessment team evaluated the NCCC indicator streams that have been monitored in recent years. The analysis confirms the number of indicator streams surveyed in 2005 or 2007 for odd years and 2006 or 2008 for even years versus the total number of indicator streams identified. The coverage of indicator streams based on the team's analysis was 78% for even years and 83% for odd years but the coverage for the two major Skeena pink CUs is poor (42% even, 66% odd). It should be noted that these analyses are just the indicator streams (i.e. not all pink stream). The number of indicator streams in these 2009 tables for NCCC is larger than the number identified in the 2006 Core Stock Assessment Review.</p> <p>All units of certification score 70 for this performance indicator. The rationale for partial score for the first 80 scoring guidepost is the poor monitoring coverage of escapement in the Skeena area pink salmon CUs. The second 80 scoring guidepost for the NCCC is only awarded partial value because of the poor monitoring coverage of Skeena chum CUs and the third 80 SG get a partial score because test fisheries only provide useful in-season information for some of the target stocks. For similar reasons, including significant gaps in the escapement data for pink salmon stocks harvested in ISC and Fraser fisheries, these fisheries only partially met the criteria at the 80 guidepost and did not pass any of the criteria at the 100 guidepost.</p>
Client Action Plan	<p>The current assessment framework for inner south coast pink stocks relies heavily of visual surveys in a variety of key indicator stocks. In recent years the focus in regards to the mainland inlet pink returns of Statistical area 12 have increased and the level of assessment activity has improved relative to historic coverage. Majority of the fisheries directly targeting these stocks are typically terminal in nature and the management is driven by the escapement program providing information relative to the Management Escapement Goal (MEG) that is in place for that specific system.</p> <p>Since 2001 there has not been a system wide escapement monitoring program undertaken for Fraser River pink salmon. The system-wide survey was discontinued in 2001 given large returns, heavily curtailed fisheries, and the balance of assessment priorities on the Fraser across all salmon species.</p> <p>Through 2003, the final estimate of total Fraser River pink salmon abundance is based upon in-season estimates as determined by test fisheries and commercial fishery data. Since 2003 the spawning escapement has been estimated as the total return minus total catch. We think this is low risk for the following reasons:</p> <ul style="list-style-type: none"> • in-season test fisheries exists to estimate Fraser Pink run size; • system estimates of Fraser pink juvenile abundance are conducted annually as an index of spawning escapement; • the estimated run size in the last decade has been well above the escapement goal of 6 million (see Figure I in DFO 2008 report on Fraser River pink salmon Certification unit profile); and • directed Fraser pink fisheries are limited by co-migrating stocks of concerns (i.e. Fraser Sockeye Late Run and Interior Fraser Coho); exploitation rates have dropped below 10% in recent years (see Table 4 & Figure 1 in DFO 2008 report on Fraser River pink salmon Certification unit profile) due to these constraints on pink fisheries.

	<p>A report outlining the rationale for the pink salmon escapement monitoring will be developed and it will include how it meets the management needs for NCCC, Inner South Coast Pink and Fraser River pink salmon stocks in relation to the level of harvest by second surveillance audit. The DFO report for pink salmon escapement monitoring will include a clear description of how the escapement estimates for NCCC, Fraser and ISC pink salmon are derived.</p>
Client Progress at 1st Surveillance Audit	<p>NCCC – DFO has defined the indicator streams for each NCCC statistical area and CU and estimates of annual escapement have been prepared. The associated document (English et al, 2012) is currently under review. DFO has plans to review the escapement monitoring framework outlined in the 2006 Core Stock Assessment Program for Salmon (English et al. 2006).</p> <p>Fraser – DFO has provided details on how escapement estimates were currently derived for Fraser pink salmon using test fishery data and a description of the recent attempts to provide a direct estimate of pink escapement using the Mission hydroacoustic data.</p> <p>ISC – no evidence was provided on the status of the report outlining the rationale for the pink salmon escapement monitoring for ISC pink salmon.</p>
Observations from 1st Surveillance Audit	<p>DFO has committed to providing their escapement monitoring plans for 2012 along with their Stock Assessment Framework for 2012-13 by July 2012. Recent reviews of escapement data for NCCC streams and indicator streams has provided a basis for determining escapement monitoring priorities and methods for NCCC stock management units (SMUs) and Conservation Units (CUs).</p>
Conclusion at 1st Surveillance Audit	<p>Good progress has been made towards meeting the condition for NCCC and Fraser pink fisheries. No progress is evident for ISC pink salmon fisheries.</p> <p>During the second surveillance audit, the team will verify an escapement monitoring program that is adequate to estimate the status of target stocks harvested in the NCCC, ISC and Fraser pink salmon fisheries has been implemented.</p> <p>The team will also verify that fishery independent indicators of abundance for non-target species harvested in these fisheries (e.g. improved escapement monitoring for lower Skeena chum) are available for each year and area where fisheries are permitted to target pink salmon. The rationale for the monitoring program must be described and demonstrate the adequacy of the monitoring is sufficient to meet the management needs in relation to the level of harvest. A publically available, externally reviewed report on escapement monitoring programs should be available for review within 2 years.</p> <p>Progress is confirmed for the NCC and Fraser UoCs, there is no progress evident for the ISC UoC. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 1-3	For all pink salmon UoCs - By the second surveillance audit, the client or management agency must meet the requirements of the 80 scoring guideposts. This shall include scientific analysis supporting justification of the existing sampling program.
PI 1.1.2.3	The age and size of catch and escapement have been considered, especially for the target stocks.
SG 60	<ul style="list-style-type: none"> The information on age and size of catch and escapement is adequate, where there is general scientific agreement that these data are important to assess the status of the stocks or adjust fisheries management decisions.
SG 80	<ul style="list-style-type: none"> Periodic monitoring programs collect data on the age and size of the catch and escapement for target stocks, and for non-target stocks where the fishery harvests may represent a significant component of the harvest of those non-target stocks. There is a scientific basis for the frequency of the sampling program to collect age and size data where there is a clear scientific basis for collecting these data.
SG 100	<ul style="list-style-type: none"> Annual monitoring programs collect data on the age and size of the catch and escapement for target and non-target stocks where there is a clear scientific basis for collecting these data.
Score	NCCC Pink: 70 Inner SC Pink: 70 Fraser Pink: 70
Scoring Rationale	Age monitoring is of no concern for pink salmon because all fish return at 2 years of age. The size sampling program is largely opportunistic and does not appear to be designed or evaluated. The opportunistic sampling program in test fisheries, for example, is sufficient to pass each certification unit at 60, and the sampling programs meet the first 80 criteria. However the lack of documented scientific design for the programs means that no certification units pass the second 80 criteria.
Client Action Plan	<p>Sampling in the test fisheries is specifically designed to attempt to capture the stock structure of the pink salmon populations moving through Skeena River, Johnstone Strait and the Fraser River at any given time. These test fisheries have been designed to not only provide information on abundance but frequently collect data on stock composition and size distribution.</p> <p>The visual nature of escapement programs does not lend themselves to direct sampling. We rely heavily on fence programs such as the Keogh River and hatchery programs such as those on the Quinsam River to provide indications of trends in size distribution over time for these pink stocks.</p> <p>Baseline collections for pink system specific DNA is conducted based on the requirement to fulfil the total South Coast.</p> <p>Additional details and justification of the sampling program will be provided by the second surveillance audit.</p>
Client Progress at 1st Surveillance Audit	Jeanette LaPointe provided the team with a spreadsheet of North Coast pink salmon weights on 27 July, 2012.
Observations from 1st Surveillance Audit	The average weights used by fish processors to estimate the total number of fish caught could be used to assess the trend in the size of pinks salmon harvested in each fishery. All UoCs – This information on size should be summarized over time to assess trend in fish size. The scientific basis for the frequency of weight sampling should be provided. Information was provided for the average weights of North Coast pink salmon fisheries by area.
Conclusion at 1st Surveillance	Average weight summaries were provided for the North Coast pink salmon fisheries by district. There is no evidence for any of the other pink salmon fisheries included in the

Audit	<p>UoCs being provided.</p> <p>During the second surveillance audit, the team will verify that the client or management agency meets the requirements of the 80 scoring guideposts. This shall include scientific analysis supporting justification of the existing sampling program.</p> <p>Progress is confirmed for the NCC UoC. There is no progress evident for the ISC and Fraser UoCs. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>
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Condition 1-3a	For NCCC and ISC pink salmon UoCs - By the third surveillance audit, for the NCCC and ISC UoCs, the client or management agency must document that they have sufficient information to estimate the relative productivity of the non-target stocks where the fishery harvests may represent a significant component of those non-target stocks. The management agency must indicate how the impacts on non-target stocks, and the uncertainty surrounding the productivity of these stocks, are taken into account when planning pink fisheries, by the second surveillance audit.
PI 1.1.2.4	The information collected from catch monitoring and stock assessment programs is used to compute productivity estimates for the target stocks and management guidelines for both target and non-target stocks.
SG 60	<ul style="list-style-type: none"> The available information and analyses are adequate to identify the harvest limitations and production strategies required to maintain the productivity of the majority of target stocks. The relative productivity of the non-target stocks is considered in the management strategy, where the fishery harvests may represent a significant component of those non-target stocks.
SG 80	<ul style="list-style-type: none"> There is adequate information to identify the harvest limitations and production strategies required to maintain the high productivity of the target stocks. There is adequate information to estimate the relative productivity of the non-target stocks where the fishery harvests may represent a significant component of those non-target stocks. The harvest limitations for target stocks take into consideration the impacts on non-target stocks and the uncertainty of the productivity for these stocks.
SG 100	<ul style="list-style-type: none"> Scientifically defensible productivity estimates (e.g. stock/recruitment relationships) have been derived for all target stocks and the relative productivity of non-target stocks is known. Risk assessment has been conducted to determine the impact of alternative harvest strategies on non-target stocks. The risk assessment should include an assessment of the uncertainties with estimates of stock productivity for both the target and non-target stocks.
Score	<p>NCCC Pink: 73</p> <p>Inner SC Pink: 73</p> <p>Fraser Pink: 80</p>

Scoring Rationale	<p>The MEG's combine with the in-season regulation to restrict harvest so that MEGs are obtained is a system that will assure stocks maintain any potential productivity. While there is little formal analysis of spawner-recruit data, the high variability in pink salmon rates of return will generally mean that there is a considerable range of stock sizes that assure productivity. Escapement targets should be robust to environmentally induced changes in survival (productivity) and given the diversity of pink salmon streams and the high natural variability it would appear that the method used to establish MEGs is as good a system as practical.</p> <p>All certification units meet the 60 scoring criteria and the Fraser also meets the 80 scoring criteria.</p> <p>The Assessment Team agrees that there are not productivity estimates which are reliable for chum salmon. Available information is not adequate to estimate the productivity of the chum stocks harvested in NCCC pink fisheries. Area 4 does not have adequate escapement monitoring for chum, Area 3 is only marginally better. All fisheries in Area 3 and 4 have mixed stock separation issues due to significant numbers of AK fish caught in the marine fishery.</p> <p>In the ISC, DFO is able to conduct reconstruction which will separate out Fraser chum from other chum stock, but this method is unable to separate the smaller inside chum stocks. The Assessment Team is suggesting the second 80 scoring guidepost is not met for the NCC and ISC, thus both receive scores of 73.</p>
Client Action Plan	<p>DFO has ongoing assessment initiatives to derive benchmarks and evaluate escapement goals. These initiatives include evaluations of the relative productivity of stocks.</p> <p>By the third surveillance audit a report detailing that there is sufficient information to estimate the relative productivity of the non-target stocks where the fishery harvests may represent a significant component of those non-target stocks and the uncertainty surrounding the productivity of these stocks, are taken into account when planning pink fisheries will be provided. BY the second surveillance audit a report will be provide that documents how when planning pink salmon fisheries the uncertainty in non-target stock productivity is taken into account.</p>
Client Progress at 1st Surveillance Audit	<p>NCCC – Draft papers provided on sockeye productivity (Cox-Rogers 2012; Cox-Rogers and Spilsted 2012). DFO (Peacock) presented information on the composition of steelhead in the catch, however, the AT needs to verify the steelhead escapement estimates for Nass and Skeena in order to determine whether bycatch in pink fisheries is a significant component of the returns to these steelhead stocks.</p> <p>NCCC - Area 3 and 4 chum reports were presented in Draft to CSAS for review in 2010. These reports can not be cited until finalize through the CSAS process. Progress on finalizing these chum reports was not evident.</p> <p>NCCC - Escapement, catch, and exploitation rate estimates have been compiled for each stock management unit (SMU) and conservation unit (CU) (English et al. 2012). These estimates are currently under review by DFO.</p> <p>ISC – No specific response was provided to the condition, however, run reconstruction was conducted as part of the MSC certification process for BC chum fisheries. However, these results have not been used in stock-recruitment analysis to estimate productivity for any ISC chum stocks.</p>
Observations from 1st Surveillance Audit	<p>Most of the information available to estimate the productivity of NCCC target stocks has been compiled in a recent review of the escapement, catch and exploitation rate estimates for NCCC pink salmon CUs.</p> <p>The information needed to assess the productivity for ISC pink salmon has not been compiled.</p>
Conclusion at	Some progress has been made towards meeting the condition for NCCC pink fisheries. No

1st Surveillance Audit	<p>progress is evident for ISC pink salmon fisheries.</p> <p>During the second surveillance audit, the team will verify progress toward meeting the requirements of the condition in both UoC.</p> <p>Progress is confirmed for the NCC UoC. There is no progress evident for the ISC UoC. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>
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Condition 1-4	For all pink salmon UoCs. - By the second surveillance audit, the client or management agency must formally establish target and limit reference points for the appropriate assessment units within each unit of certification through a scientific process, and this process must be peer-reviewed through PSARC to ensure scientific agreement regarding the LRPs chosen to formulate management decisions for the fisheries.
PI 1.1.3.1	Limit Reference Points or operational equivalents have been set and are appropriate to protect the stocks harvested in the fishery.
SG 60	<ul style="list-style-type: none"> There is general agreement among regional fisheries scientist within the management agency that the LRP's or equivalent are appropriate to achieve the management goals for target stocks.
SG 80	<ul style="list-style-type: none"> There is some scientific basis for the LRP's for target stocks and these LRP's are defined to protect the stocks harvested by the fisheries. There is no significant scientific disagreement regarding the LRP's used by the management agency to formulate management decision for the fishery.
SG 100	<ul style="list-style-type: none"> The Limit Reference Point for target stocks have been reviewed and found to be scientifically defensible and appropriate by the PSARC or the appropriate PSC technical committee. There is general agreement among regional fisheries scientist outside the management agency that the LRP's are appropriate. There is general scientific agreement regarding the LRP's for non-target species.
Score	NCCC Pink: 70 Inner SC Pink: 70 Fraser Pink: 70
Scoring Rationale	Our interpretation of the existing BC pink management system in the context of the MSC target and limit criteria is that the management escapement goal is the target, and 25% of the MEG is the effective limit. The text of the outlook document indicates that management actions around the target and 25% of the target act much as other fisheries do with respect to targets and limits. This interpretation was confirmed by DFO staff. Thus the managers and biologists have agreed on MEG's and thus LRPs. There is some scientific basis for both the MEG's as escapement levels that have produced sustainable production and the LRPs at 25% are justifiable based upon general salmon biology. Thus the LRP's meet the first 80 scoring guidepost. However, it is not accurate to say that there is no scientific disagreement about the levels chosen for LRPs and thus the certification units fail to meet the 2 nd 80 scoring guidepost. None of the 100 SG elements are met.

Client Action Plan	There are several conditions common to all four fishery units that require definition of reference points. The MSC Evaluation Team conditions 1-4, 1-5, 1-6 and 1-7 all make reference to defining either target reference points (TRPs) or Limit Reference Points (LRPs). To be clear when TRPs and LRPs are requested by the MSC Evaluation Team, DFOs response will be to define lower and upper benchmarks for conservation units.																	
	Upper and lower benchmarks as defined in the Wild Salmon Policy (2005) delimit red, amber, and green status zones for fish populations (and may also be used to delimit habitat and ecosystem status zones). The benchmark between amber and green zones identifies whether harvests are less than or greater than the level expected to provide the maximum sustainable catch of the Conservation Unit (CU). CUs in the amber zone are at a low risk of extinction, but there is lost production. CUs in the green zone are biologically secure. Social and economic considerations will tend to be the primary drivers for management of the CUs in the green zone, though ecosystem or other non- consumptive use values could also be considered.																	
	It is the intent of the Wild Salmon Policy to initiate management actions before the lower benchmark is reached and the extent of the actions will likely increase the closer CU is to the lower benchmark. While there are a number of definitions for management reference points the paper “A Harvest Strategy Compliant with the Precautionary Approach. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2006/023” provides an explanation of how the precautionary approach would be implemented and definition of management reference points.																	
	The following table describes milestones for implementing Strategy 1 of the WSP. DFO will provide a progress report on Strategy I implementation to the MSC certifying body by late 2010.																	
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Client Progress at 1st Surveillance Audit	All UoCs – the interim LRP used in the Certification report of 25% of MEG. DFO has not provided a schedule of when LRPs for pinks will be provided. The Canadian Science Advisory Secretariat (CSAS) process (which replaced the PSARC scientific review process) is the mechanism for scientific peer review and defining the biological basis for setting LRPs. DFO has an extensive consultation process with First																	

	Nations, recreational and commercial fishers and NGOs that will need to be engaged in establishing the LRPs for pink and other salmon CUs.
Observations from 1st Surveillance Audit	DFO and the Pacific Salmon Foundation (PSF) have several pilot projects underway to define the Lower and Upper Benchmarks for Fraser sockeye, Barkley Sound sockeye and all salmon CUs within the Skeena watershed. The data and estimates needed to define these benchmarks for NCCC pink salmon CUs were compiled late in 2011 and is currently under review by DFO and NGOs.
Conclusion at 1st Surveillance Audit	<p>Some progress has been made but the majority of the task remains to be done. During the second surveillance audit, the team will verify that the client or management agency has formally establish target and limit reference points for the appropriate assessment units within each unit of certification through a scientific process, and that the process has been peer-reviewed through PSARC (now CSAS) to ensure scientific agreement regarding the LRPs chosen to formulate management decisions for the fisheries.</p> <p>Progress is confirmed for all UoCs; however, much work remains to complete the condition. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 1-5	For all pink salmon UoCs. - By the second surveillance audit, the client or management agency must formally establish target and limit reference points for the appropriate assessment units within each unit of certification through a scientific process, and this process must be peer-reviewed through PSARC to ensure scientific agreement regarding the LRPs chosen to formulate management decisions for the fisheries.
PI 1.1.3.2	Target Reference Points (TRPs) or operational equivalent have been set.
SG 60	<ul style="list-style-type: none"> There is general agreement among fisheries scientist within the management agency that the TRP's are appropriate for the target stocks. Target reference points have been defined for the majority of target stocks harvested in the fishery and these target reference points are not scientifically disputed. The management agency has taken into account the relative productivity of the non-target stocks when setting the TRP's for the majority of target stocks.
SG 80	<ul style="list-style-type: none"> There is no significant scientific disagreement regarding the TRP's used by the management agency to formulate management decision for the fishery. The TRP's for the target stocks take into account variability in the productivity of each component of the target stock and the productivity of non-target stocks.
SG 100	<ul style="list-style-type: none"> The Target Reference Point (TRP) for target stocks have been reviewed and found to be defensible and appropriate by the PSARC or the appropriate PSC technical committee. There is general agreement among regional fisheries scientist outside the management agency that the TRP's are appropriate. The TRP's for the target stocks take into account variability in the productivity of each component of the target stock and productivity of non-target stocks.
Score	NCCC Pink: 70 Inner SC Pink: 70 Fraser Pink: 70

Scoring Rationale	Within the DFO Pacific system the MEGs are the operational equivalent of TRPs but these have not been formally reviewed either internally or externally. All certification units pass at 60 and meet the first scoring criterion for 80, but do not meet the second 80 scoring criterion.																	
Client Action Plan	<p>There are several conditions common to all four fishery units that require definition of reference points. The MSC Evaluation Team conditions 1-4, 1-5, 1-6 and 1-7 all make reference to defining either target reference points (TRPs) or Limit Reference Points (LRPs). To be clear when TRPs and LRPs are requested by the MSC Evaluation Team, DFOs response will be to define lower and upper benchmarks for conservation units.¹</p> <p>Upper and lower benchmarks as defined in the Wild Salmon Policy (2005) delimit red, amber, and green status zones for fish populations (and may also be used to delimit habitat and ecosystem status zones). The benchmark between amber and green zones identifies whether harvests are less than or greater than the level expected to provide the maximum sustainable catch of the Conservation Unit (CU). CUs in the amber zone are at a low risk of extinction, but there is lost production. CUs in the green zone are biologically secure. Social and economic considerations will tend to be the primary drivers for management of the CUs in the green zone, though ecosystem or other non- consumptive use values could also be considered.</p> <p>It is the intent of the Wild Salmon Policy to initiate management actions before the lower benchmark is reached and the extent of the actions will likely increase the closer CU is to the lower benchmark. While there are a number of definitions for management reference points the paper “A Harvest Strategy Compliant with the Precautionary Approach. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2006/023” provides an explanation of how the precautionary approach would be implemented and definition of management reference points.</p> <p>The following table describes milestones for implementing Strategy 1 of the WSP. DFO will provide a progress report on Strategy I implementation to the MSC certifying body by late 2010.</p> <table><tr><th>Action</th><th>Description</th><th>Timeline</th></tr><tr><td>Identify Conservation Units</td><td>Paper defining conservation units regionally for all salmon species based on biological criteria (Holtby and Ciruna, 2007)</td><td>Paper reviewed and approved by PSARC, published 2008</td></tr><tr><td>Develop standardized assessment criteria</td><td>Paper defining general methodology for determining reference points for salmon populations and assessment criteria (Holt et al., <i>in prep</i>) Workshop to facilitate application of methods in Holt et al.</td><td>PSARC Workshop, January 2009 Finalized methodology: October, 2009</td></tr><tr><td>Define lower benchmarks for each target stock (CU)</td><td>Apply criteria and methods of Holt et al. (<i>in prep</i>) to specific CUs.</td><td>by second surveillance audit</td></tr><tr><td>Define Upper benchmarks for each target stock (CU) and corresponding harvest strategy</td><td>Recognizing Target Benchmarks inherently involve trade-offs, determine Target Benchmarks through participatory decision-making (co-management) – see below.</td><td>by second surveillance audit</td></tr></table>			Action	Description	Timeline	Identify Conservation Units	Paper defining conservation units regionally for all salmon species based on biological criteria (Holtby and Ciruna, 2007)	Paper reviewed and approved by PSARC, published 2008	Develop standardized assessment criteria	Paper defining general methodology for determining reference points for salmon populations and assessment criteria (Holt et al., <i>in prep</i>) Workshop to facilitate application of methods in Holt et al.	PSARC Workshop, January 2009 Finalized methodology: October, 2009	Define lower benchmarks for each target stock (CU)	Apply criteria and methods of Holt et al. (<i>in prep</i>) to specific CUs.	by second surveillance audit	Define Upper benchmarks for each target stock (CU) and corresponding harvest strategy	Recognizing Target Benchmarks inherently involve trade-offs, determine Target Benchmarks through participatory decision-making (co-management) – see below.	by second surveillance audit
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Client	Same progress noted as Condition 1-4, no schedule has been provided for when formalized																	

Progress at 1st Surveillance Audit	<p>TRPs will be established.</p> <p>Fraser – There is only one target stock in the Fraser UoC, so the focus will be on the productivity of non-target stocks harvested in the Fraser pink salmon fishery. These include ISC pink, chum and sockeye CUs and Fraser sockeye and steelhead. Good progress has been made regarding the assessment of productivity for Fraser sockeye. Management plans have been consistent with protecting Fraser sockeye caught in pink salmon fisheries.</p> <p>NCCC and ISC – Area/ CU based management – multiple CUs in a single UoC, do not have TRPs. DFO has interim management escapement goals (MEGs) and SEGs but further scientific review is required to determine if these are appropriate Upper Benchmarks or TRPs for the CUs or SMUs.</p>
Observations from 1st Surveillance Audit	<p>DFO and the PSF have several pilot projects underway to define the Lower and Upper Benchmarks for Fraser sockeye, Barkley Sound sockeye and all salmon CUs within the Skeena watershed. The data and estimates needed to define these benchmarks for NCCC pink salmon CUs was compiled late in 2011 and is currently under review by DFO and NGOs.</p>
Conclusion at 1st Surveillance Audit	<p>Some progress has been made for this condition in all UoCs, but the majority of the task remains to be done.</p> <p>During the second surveillance audit, the team will verify that the client or management agency has formally establish target and limit reference points for the appropriate assessment units within each unit of certification through a scientific process, and this process must be peer-reviewed through PSARC (now CSAS) to ensure scientific agreement regarding the LRPs chosen to formulate management decisions for the fisheries.</p> <p>Progress is confirmed for all UoCs; however, much work remains to complete the condition. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 1-6	For all pink salmon UoCs. - To achieve a score of 80 over the five year period of the certification, the client or management agency must develop and implement (in the event of severe depletion) recovery plans to facilitate the recovery of depleted stocks to the MEG within three cycles given average rate of productivity. It is recognized that if stocks encounter a series of poor productivity years, even with little, if any, exploitation stocks may not recover in three cycles. The recovery plans must be defined to allow the stocks to recover more than 150% of the defined limit reference point prior to allowing any fishery to target the depleted stocks and the stock should be expected to recover to the MEG under the rebuilding plan. A recovery plan template must be developed and submitted for review and approval by the second annual surveillance audit.
PI 1.2.1	There is a well-defined and effective strategy, and a specific recovery plan in place, to promote recovery of the target stock within reasonable time frames.
SG 60	<ul style="list-style-type: none"> In the event of severe depletion, recovery plans are developed and implemented to facilitate the recovery of the depleted stocks within 5 reproductive cycles. Stocks are allowed to recover to more than 125% of the LRP for abundance before any fisheries are permitted that target these stocks.
SG 80	<ul style="list-style-type: none"> In the event of severe depletion, recovery plans are developed and implemented to facilitate the recovery of the depleted stocks within 3 reproductive cycles. Stocks are allowed to recover to more than 150% of the LRP for abundance before any fisheries are permitted that target these stocks.
SG 100	<ul style="list-style-type: none"> There are comprehensive and pre-agreed responses to low stock size that utilize a range of management measures to ensure rapid recovery. Stocks are allowed to recover to the TRP before commercial fisheries are permitted that target these stocks. The management agency does not use artificial propagation as a substitute for maintaining or recovering wild stocks.
Score	NCCC Pink: 70 Inner SC Pink: 70 Fraser Pink: 70
Scoring Rationale	<p>This criterion is only applicable when stocks have been depleted. On the assumption that some stocks within each certification unit have experienced depletion in the last 10 years, we have scored MSC Criteria 1.2 for all certification units.</p> <p>The management system focused on the MEG provides the basic system, and as seen in the outlook document cited earlier, fisheries are reduced when stocks fall below MEGs and dramatically reduced when the fall well below MEGs. The team has accepted that a system built around an escapement target has a natural rebuilding plan. Thus all certification units pass at 60. None fully meet the 80 criteria because the recovery strategy is not well formulated and described. In practice, it appears that the strategy is generally preventing stocks from severe depletion. The third scoring criterion of the 100 SG has also been met as there is no evidence of significant pink salmon enhancement to substitute wild stocks.</p>
Client Action Plan	The newly standardized MSC assessment trees (2008) provide much needed guidance regarding the assessment of species fished as stock complexes, such as Pacific salmon. Specifically, species fished as stock complexes “may be considered analogous to multi-target species considered under the guidance of performance indicator 2.3.1.” This distinction is important because it allows for a pragmatic approach to the central problem of weak stock management, recognizing that factors other than harvest may cause a stock to decline. A non-target stock within the fishery may be below the point at which recruitment is impaired. <i>The critical factor for certification is whether or not the fishery is ‘hindering’ recovery of the stock.</i>

	<p>Our WSP prescribes a systematic approach to salmon management, essentially moving DFO from a reactive to a pro-active approach for maintaining the biodiversity of salmon populations within Canada.</p> <p>To ensure that fisheries have acceptable harvest limits on non-target stocks and that the management system allows for rebuilding of depleted non-target stocks, DFO will:</p> <ul style="list-style-type: none"> • Implement ‘Strategy 1’ of the WSP: Define lower and upper benchmarks for non- target stocks (CUs) and monitor their status. The objective for fishery management shall be to maintain CUs above their lower benchmarks unless otherwise determined by the Minister. Not meeting this objective would occur only in exceptional circumstances where management actions are assessed to be ineffective, or the social and economic costs will be extreme (p.29 WSP). • Implement ‘Strategy 4’ of the WSP: Create a regional framework for integrated planning that will be used to articulate salmon management choices that consider social, economic and biological consequences. Consensus based advisory processes will be used to assist in defining these trade-offs and also to assist in developing strategic plans for the management of salmon conservation units; including harvest strategies designed to maintain the biodiversity of stocks within the CU. • Benchmarks will be used to guide management response. For example, if a CU is below its lower benchmark and in the ‘Red Zone’ this will trigger consideration for ways to protect the fish, increase their abundance and reduce the risk for loss. Biological considerations will be the primary consideration for CU below the lower benchmark and in the ‘Red Zone’. Page 17 of the WSP identifies additional guidance on how response would be taken for CU between the lower and higher benchmark. • Implement Strategy 5 of the WSP. Review annual performance against measurable objectives, particularly with regards to stock status and rebuilding objectives. <p>Specifically, DFO will also define lower benchmarks or their equivalent for NCCC, ISC and Fraser River, pink salmon CUs. A rebuilding plan consistent with the WSP will have been developed and implementation initiated within 2 years for stocks harvested in fisheries targeting NCCC, ISC, and Fraser River pink salmon that are below their lower benchmarks. On the Skeena and Nass Rivers the proposed rebuilding plan will include measures to rebuild chum salmon stocks that are below their lower benchmark contingent upon determining whether harvest pressure is found to have a significant risk for chum rebuilding. The rebuilding plan will include a stated objective and rebuilding target and timeline for rebuilding. This rebuilding plan will demonstrate how the fisheries management strategy will assist in ensuring rebuilding objectives are met. Fishery actions may only be one component of a rebuilding plan and could include enhancement, habitat and other measures to enable rebuilding objectives being met. It must recognize though, that there will be instances that rebuilding is not possible even where the appropriate management actions are implemented. Rebuilding may not be possible due to a variety of events that are beyond our control (e.g. low marine survival, habitat changes, environmental conditions, etc.)</p> <p>The following table describes milestones for implementing elements of the WSP required to meet the Rebuilding Plan Conditions of Principle 1 and Principle 2 conditions for MSC certification of BC pink fisheries.</p>
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	Action	Description	Timeline
	Define lower benchmarks for each target stock (CU)	Apply criteria and methods of Holt et al. (<i>in prep</i>) to specific CUs.	by second surveillance audit
	Develop fishery-specific integrated management plans.	Initiate planning processes to develop integrated management plans for salmon CUs that will: - Define lower benchmarks for target and non-target stocks - Define precautionary harvest strategies and decision rules - Determine rebuilding strategies - Define performance measures	NCCC (complete by second surveillance audit) ISC (complete by second surveillance audit) Fraser River Pink (complete by second surveillance audit)
	Implement Annual Performance review	Annually review and report on performance of fishery and management system against defined performance measures for salmon conservation.	Starting third surveillance audit .
Client Progress at 1st Surveillance Audit	DFO provided a PowerPoint presentation entitled: "Precautionary Approach (PA) Framework Rebuilding Plan Guidelines" which clearly indicates that rebuilding plans are required for all stocks that are below their LRP (Critical Zone). This document provides guidance on the timeframe for growing the stock out of the Critical Zone (e.g., 1.5-2 generations but possibly longer for long-lived species). Since salmon are not a long-lived species, the AT assumes that the 1.5-2 generation time period would apply to all salmon stocks that are in the Critical Zone and this would be consistent with the requirements under the first scoring issue of the SG80. However, no evidence has been provided that these guidelines have been implemented for any pink salmon CU and there are clearly some CUs that are below their LRP (e.g. Hecate Strait Fjords even year pinks), thus the requirements of the second scoring issue under SG80 remain unmet.		
Observations from 1st Surveillance Audit	The AT was not provided with any evidence that a recovery plan template was being developed for application to pink salmon stock management units (SMUs) or CUs that are below their LRPs. Stock status summaries (1960-2008) provided by DFO for the Final Certification Report indicated that several pink salmon SMUs were near or below their interim LRPs in recent years. For even years these include returns to: Area 2W, Areas 3 to 9, Upper Vancouver Island, and Kingcome, Bond and Knight inlets. For odd years these include returns to: Kingcome, Loughborough, Bute, Toba and Jarvis inlets (the majority of ISC pink salmon stocks).		
Conclusion at 1st Surveillance Audit	Some progress has been made for this condition in all UoCs, but the majority of the task remains to be done. During the second surveillance audit, the team will verify that a recovery plan template has been developed and submitted for review through the scientific review process. Progress is confirmed for all UoCs; however, much work remains to complete		

	the condition. This condition will be evaluated at the next surveillance audit when it is due for completion.
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Condition 1-7	For all pink salmon UoCs. By the second annual surveillance audit, the client or management agency must attain general agreement that the methods of estimating escapement and exploitation rates for all target stocks are scientifically defensible and the management agency must formally establish the LRPs, as required under condition 1-3. The status of each target stock should be reviewed, and where the stock is approaching the defined LRP, the exploitation rate on the stock should be estimated. The management agency must report what actions have been taken to reduce fishing as the target stocks approach the LRP and must demonstrate that fisheries have only resulted in escapements that approach or are below the LRP escapement goal in one year in a period of the most recent 5 consecutive years.
PI 1.2.2	Target stocks are not depleted and recent stock sizes are assessed to be above appropriate limit reference points (or equivalents) for the target stocks.
SG 60	<ul style="list-style-type: none"> There is general agreement among regional fisheries scientist inside the management agency that the methods of estimating escapements and exploitation rates for the majority of target stocks are scientifically defensible. Management actions have reduced fishing as the target stocks approach the LRP and fisheries have only resulted in escapements that approach or are below the LRP escapement goal in no more than two years in a period of the most recent 5 consecutive years, for the majority of the target stocks.
SG 80	<ul style="list-style-type: none"> There is general agreement among regional fisheries scientist inside the management agency that the methods of estimating escapements and exploitation rates for the target stocks are scientifically defensible. Management actions have reduced fishing as the target stocks approach the LRP and fisheries have only resulted in escapements that approach or are below the LRP escapement goal in one year in a period of the most recent 5 consecutive years, for any of the target stocks.
SG 100	<ul style="list-style-type: none"> There is general agreement among regional fisheries scientist outside the management agency that the methods of estimating escapements and exploitation rates for the target stocks are scientifically defensible. Management actions have reduced fishing as the target stocks approach the LRP and fisheries have only resulted in escapements that approach or are below the LRP escapement goal in one year in a period of the most recent 10 consecutive years, for any of the target stocks.
Score	NCCC Pink: 70 Inner SC Pink: 70 Fraser Pink: 70

Scoring Rationale	<p>Information on stock status for the three units of certification can be found in Section 5 above and trend summary graphs are located in Appendix A. Data from the indicator stream assessment programs in all certification units indicate that the escapement and exploitation rate estimation methodologies are scientifically defensible for the majority of target pink stocks.</p> <p>The majority of North and Central coast target stocks, pink salmon escapements have been above their interim LRP (25% of MEG) for most years since 1980. There are a few management areas (Areas 2W, 4, 7 and 10 for even-year returns) that have dropped below the 25% line in the last two of the most recent 5 years. In three of these instances (Area 2W, 7 and 10), estimated harvest rates have been very low (<10%) and no fisheries were permitted to target these pink stocks in these years.</p> <p>Inner South Coast management areas, pink salmon escapements have been above their interim LRP (25% of MEG) for at least 3 of the 5 most recent odd-year returns. Only one of the Inner South Coast management areas (Upper Vancouver Island) has been near or below the 25% line for the past 5 years and estimated harvest rates for this area have been consistently less than 10% in these years.</p> <p>Escapement trends for odd-year returns indicate that, for 5 of the 9 Inner South Coast management areas, pink salmon escapements have been above their interim LRP (25% of MEG) for at least 3 of the 5 most recent odd-year returns. Four of the management areas (Kingcome, Loughborough-Bute, Toba and Jervis) have been consistently below their 25% lines for the past 10 odd-year returns. Harvest rates estimates for these areas were low (<10%) in 2005 and 2007, however, the roughly 40% harvest rate in 2003 for three of these areas indicates that fisheries were a significant factor in the failure to meet the interim LRPs for these areas in that year</p> <p>The total escapement estimate for Fraser River pink stocks has been consistently above the 6,000,000 MEG line for odd-year returns since 2001 and above the 25% MEG line since 1977. Reductions in fishing pressure in the mid-1990's has resulted in estimated escapements exceeding 20 M pink in 2001 and 2003 (Figure 36). Even-year returns of pink salmon to the Fraser River are very small and thus not targeted by any fisheries. Consequently, DFO has not conducted surveys to estimate escapement for Fraser pink in even-years.</p> <p>Management actions have clearly reduced fishing effort as LRPs are approached, thus 60 scoring guideposts are met. However in each certification unit there are questions about individual stocks ,which results in the first and second scoring elements of the 80SG only being partially met.</p>
Client Action Plan	<p>There are several conditions common to all four fishery units that require definition of reference points. The MSC Evaluation Team conditions 1-4, 1-5, 1-6 and 1-7 all make reference to defining either target reference points (TRPs) or Limit Reference Points (LRPs). To be clear when TRPs and LRPs are requested by the MSC Evaluation Team, DFOs response will be to define lower and upper benchmarks for conservation units.¹</p> <p>Upper and lower benchmarks as defined in the Wild Salmon Policy (2005) delimit red, amber, and green status zones for fish populations (and may also be used to delimit habitat and ecosystem status zones). The benchmark between amber and green zones identifies whether harvests are less than or greater than the level expected to provide the maximum sustainable catch of the Conservation Unit (CU). CUs in the amber zone are at a low risk of extinction, but there is lost production. CUs in the green zone are biologically secure. Social and economic considerations will tend to be the primary drivers for management of the CUs in the green zone, though ecosystem or other non- consumptive</p>

	<p>use values could also be considered.</p> <p>It is the intent of the Wild Salmon Policy to initiate management actions before the lower benchmark is reached and the extent of the actions will likely increase the closer CU is to the lower benchmark. While there are a number of definitions for management reference points the paper “A Harvest Strategy Compliant with the Precautionary Approach. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2006/023” provides an explanation of how the precautionary approach would be implemented and definition of management reference points.</p> <p>The following table describes milestones for implementing Strategy 1 of the WSP. DFO will provide a progress report on Strategy I implementation to the MSC certifying body by late 2010.</p> <table><tr><th>Action</th><th>Description</th><th>Timeline</th></tr><tr><td>Identify Conservation Units</td><td>Paper defining conservation units regionally for all salmon species based on biological criteria (Holtby and Ciruna, 2007)</td><td>Paper reviewed and approved by PSARC, published 2008</td></tr><tr><td>Develop standardized assessment criteria</td><td>Paper defining general methodology for determining reference points for salmon populations and assessment criteria (Holt et al., <i>in prep</i>) Workshop to facilitate application of methods in Holt et al.</td><td>PSARC Workshop, January 2009 Finalized methodology: October, 2009</td></tr><tr><td>Define lower benchmarks for each target stock (CU)</td><td>Apply criteria and methods of Holt et al. (<i>in prep</i>) to specific CUs.</td><td>by second surveillance audit</td></tr><tr><td>Define Upper benchmarks for each target stock (CU) and corresponding harvest strategy</td><td>Recognizing Target Benchmarks inherently involve trade-offs, determine Target Benchmarks through participatory decision-making (co-management) – see below.</td><td>by second surveillance audit</td></tr></table>	Action	Description	Timeline	Identify Conservation Units	Paper defining conservation units regionally for all salmon species based on biological criteria (Holtby and Ciruna, 2007)	Paper reviewed and approved by PSARC, published 2008	Develop standardized assessment criteria	Paper defining general methodology for determining reference points for salmon populations and assessment criteria (Holt et al., <i>in prep</i>) Workshop to facilitate application of methods in Holt et al.	PSARC Workshop, January 2009 Finalized methodology: October, 2009	Define lower benchmarks for each target stock (CU)	Apply criteria and methods of Holt et al. (<i>in prep</i>) to specific CUs.	by second surveillance audit	Define Upper benchmarks for each target stock (CU) and corresponding harvest strategy	Recognizing Target Benchmarks inherently involve trade-offs, determine Target Benchmarks through participatory decision-making (co-management) – see below.	by second surveillance audit
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Define Upper benchmarks for each target stock (CU) and corresponding harvest strategy	Recognizing Target Benchmarks inherently involve trade-offs, determine Target Benchmarks through participatory decision-making (co-management) – see below.	by second surveillance audit														
Client Progress at 1st Surveillance Audit	<p>NCCC – Some evidence has been provided that exploitation rates have been low (<20%) when stocks are near or below their LRPs (English et al. 2012). There are plans for an internal/ peer review of this document and the monitoring framework defined in the 2006 NCCC Core Stock Assessment Program for Salmon (English et al, 2006).</p> <p>ISC and Fraser UoC – No evidence was provided that the method for estimating escapement and exploitation rates are scientifically defensible for target stocks harvested in ISC and Fraser UoC fisheries (1st scoring issue under SG80). Post season report for 2011 Southern BC salmon fisheries indicate that fisheries were managed in compliance with the expectations of this condition (2nd scoring issue under SG80).</p>															
Observations from 1st Surveillance Audit	<p>Stock status summaries (1960-2008) provided by DFO for the Final Certification Report indicated that several pink salmon SMUs were near or below their interim LRPs in recent years. For even years these include returns to: Area 2W, Areas 3-9, Upper Vancouver Island, and Kingcome, Bond and Knight inlets. For odd years these include returns to: Kingcome, Loughborough, Bute, Toba and Jarvis inlets (the majority of ISC pink salmon stocks).</p>															
Conclusion at 1st Surveillance Audit	<p>Some progress is confirmed for all UoCs. Substantial work remains to be done to address this condition. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>															

3.2 Conditions – Principle 2

Condition 2-1	For the NCC and Fraser pink salmon UoCs. Certification of North-Central Coast and Fraser pink fisheries will be conditional until reliable estimates of non-target species bycatch are obtained annually in North-Central Coast and in the Fraser River pink salmon fisheries. The certification of these fisheries requires the successful completion of a bycatch monitoring program that meets the requirements of the scoring elements under the 80SG scoring guidepost by the second annual surveillance audit. The rationale for the monitoring program must be described and demonstrate the adequacy of the monitoring is sufficient to meet the management needs in relation to the level of harvest. The client or management agency shall present a publically available report on bycatch estimation by the second surveillance audit.
PI 2.1.1	The management plan for the prosecution of the fisheries provides a high confidence that direct impacts on non-target species are identified.
SG 60	<ul style="list-style-type: none"> Data on bycatch in the majority of the fisheries are available to determine impacts on non-target species.
SG 80	<ul style="list-style-type: none"> A monitoring program exists that provides estimates of bycatch. In known problem areas of high bycatch, there is an ongoing monitoring program.
SG 100	<ul style="list-style-type: none"> A monitoring program exists that provides estimates of bycatch that meet statistical criteria acceptable to external reviewers. All historic monitoring data is readily available to stakeholder groups and external reviewers. Quantities of gear lost are recorded, and the impacts of lost gear on target and non-target species have been researched and accurate projections of impacts have been completed.
Score	NCCC Pink: 70 Inner SC Pink: 90 Fraser Pink: 75
Scoring Rationale	<p>Based on the client submittal, there are extensive monitoring programs and reporting requirements, by log books, for all of the fisheries. Consequently all three fisheries passed the one 60 scoring guidepost. ISC was deemed to have passed both 80 scoring guideposts. Under the 100 scoring guideposts, the first was not met. All catch data is readily available and summarized for stakeholder groups and external reviewers, therefore the second 100 SG scoring element was met. Gear loss was not considered relevant for pink fisheries as it has not been an issue identified to date, we have considered it not to be applicable and have not used this criteria in assigning scores.</p> <p>The team was of the opinion that the Area 3 and 4 North Coast Pink salmon fishery did not have a scientifically defensible monitoring program for non-target bycatch, particularly steelhead and chum salmon. The definition of bycatch is the harvest of non-target species or stocks. The Team's opinion is that the data do not include statistics for non-target species which are released as part of the condition of license. Where logbooks are required, the rigor and verification of commercial catch data is limited with test fisheries or other observer programs essential to provide reliable estimates of fish caught and discarded. The second 80 SGs was considered met, hence a score of 70 was awarded.</p> <p>Similarly, although the Fraser pink salmon fishery has a monitoring program, the Team's opinion is that the reliability of non target (particularly steelhead and white sturgeon) bycatch recording is questionable and assigned the score of 75 based on a partial score for the first 80 SG and a full score for the second 80 SG.</p>

Client Action Plan	<p>Under DFO's Pacific Integrated Commercial Fisheries Initiative (PICFI) the Enhanced Accountability element has provided further focus and resources to develop and implement a framework to improve the monitoring and catch reporting in Pacific fisheries. Under this framework fisheries information requirements are categorized as requiring low, moderate or enhanced levels of information according to consistent criteria, largely based on evaluating risk to conservation.</p> <p>The current and desired monitoring levels for all Pacific salmon fisheries are currently being evaluated utilizing this consistent framework and a report being prepared for release. This strategy calls for subsequent updates of the regional evaluation of all salmon fishery monitoring programs every two years.</p> <p>DFO will report on the current program to monitor the catch and associated by-catch in Area 3-6 pink fisheries. The utility of this bycatch data for stock assessment of management applications will be evaluated and be the basis for determining the adequacy of the bycatch monitoring programs.</p> <p>The Skeena Model was developed in the 1990's as a joint effort between MOE and DFO to estimate harvest impacts on steelhead. The 3 recent CSAP papers on Nass sockeye, Skeena chum and Nass chum all provided accepted recommendations to review and expand the Skeena model, and to develop an equivalent for the Nass. These models will be the basis for evaluating bycatch harvest impacts for Nass and Skeena sockeye and pink fisheries. Review and expansion of the Skeena model and the creation of an equivalent version for the Nass will be developed over the next two years.</p>
Client Progress at 1st Surveillance Audit	<p>NCCC – DFO provided evidence that monitoring program exists to provide estimates of bycatch. Need confirmation of level of bias (i.e. head to head comparison of observer vs logbook ratios).</p> <p>Fraser – Evidence of monitoring program exists (logbook, phone in, dockside) but there is little independent catch verification of caught and released bycatch species (Matthew Parslow memo).</p>
Observations from 1st Surveillance Audit	<p>NCCC - Observer programs conducted by Ecotrust provide an opportunity to evaluate potential biases in the logbook report process that is the basis for current catch estimates for released salmon species and steelhead.</p> <p>Fraser – On-water patrols collect some data on the catch of non-retention species but these data have not been provided for our review.</p>
Conclusion at 1st Surveillance Audit	<p>NCCC - Some progress has been made but some key analyses remain to be done.</p> <p>Fraser - Little progress has been made to obtain reliable estimates of the number of steelhead and sturgeon caught in fisheries targeting Fraser pink salmon.</p> <p>Progress is confirmed for the NCC UoC. There is little progress evident for the Fraser UoC. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 2-2	For NCCC pink salmon UoC. See Condition 2-1 which will be applied to address performance improvement requirements for this indicator for the North Central Coast UoC. Results to be provided by the second surveillance audit.
PI 2.1.3	Research efforts are on-going to identify new problems and define the magnitude of existing problems, and fisheries managers have a process to incorporate this understanding into their management decisions.
SG 60	<ul style="list-style-type: none"> The management agency collects or plans to collect data on bycatch problems or ecosystem concerns. There are procedures established to incorporate any knowledge obtained about bycatch problems into management actions. The management agency responds to data provided on bycatch problems by entities outside of their agency.
SG 80	<ul style="list-style-type: none"> There is ongoing research of previously identified problem areas to determine if bycatch reduction measures are effective. When new problems are identified, the management plans require a new monitoring program be instituted to determine the effectiveness of bycatch reduction measures. The management plan allows for between season assessment and institution of new controls on the fishery or stakeholder consultation following the identification of bycatch problems or ecosystem related impacts.
SG 100	<ul style="list-style-type: none"> There is detailed knowledge of the relationship between the fishery and the marine ecosystem impacts or ongoing research is attempting to identify if such problems exist. The management agency has a proven history of incorporating new research findings into management plans. The management agency has a proven history of closing fisheries when bycatch mortality problems arise. The management agency has supported the development of more selective fishing practices.
Score	NCCC Pink: 77 Inner SC Pink: 95 Fraser Pink: 95
Scoring Rationale	<p>The agency has a very lengthy history and reputation as a research organization that have addressed ecosystem related problems related to salmon fisheries. DFO has a history and procedures as identified in their submittal of collecting data on bycatch, incorporating this information into management actions and responding to data provided outside of their agency. Consequently all of the 60 scoring guideposts were judged to have been met. The identification of new problems, such as the coho fishery, have resulted in major changes and responses in management and there are active ongoing between-season processes addressing new findings and altering fisheries management plans, hence all of the 80 scoring guideposts were met except for the NCC area 4 pink salmon fishery where there is limited evidence of a successful monitoring program and associated bycatch control program.. The partial score under the first 80 scoring guidepost resulted in the North Central Coast pink fishery receiving a score of 77.</p> <p>At the 100 guidepost, there does not appear to be a detailed understanding or ongoing research on the impacts of the fishery on marine ecosystem impacts, although this is driven by lack of any apparent problem or viable hypotheses where ecosystem impacts are considered to be likely. The agency has a history of actions related to new information, including mandating selective fisheries and fisheries closures, resulting in the last three of the four elements at the 100 scoring guidepost being met with a resulting score of 95 for the other two pink salmon fisheries.</p>
Client Action Plan	Under DFO's Pacific Integrated Commercial Fisheries Initiative (PICFI) the Enhanced Accountability element has provided further focus and resources to develop and implement a framework to improve the monitoring and catch reporting in Pacific fisheries. Under this framework fisheries information requirements are categorized as

	<p>requiring low, moderate or enhanced levels of information according to consistent criteria, largely based on evaluating risk to conservation.</p> <p>The current and desired monitoring levels for all Pacific salmon fisheries are currently being evaluated utilizing this consistent framework and a report being prepared for release. This strategy calls for subsequent updates of the regional evaluation of all salmon fishery monitoring programs every two years.</p> <p>DFO will report on the current program to monitor the catch and associated by-catch in Area 3-6 pink fisheries. The utility of this bycatch data for stock assessment of management applications will be evaluated and be the basis for determining the adequacy of the bycatch monitoring programs.</p> <p>The Skeena Model was developed in the 1990's as a joint effort between MOE and DFO to estimate harvest impacts on steelhead. The 3 recent CSAP papers on Nass sockeye, Skeena chum and Nass chum all provided accepted recommendations to review and expand the Skeena model, and to develop an equivalent for the Nass. These models will be the basis for evaluating bycatch harvest impacts for Nass and Skeena sockeye and pink fisheries. Review and expansion of the Skeena model and the creation of an equivalent version for the Nass will be developed over the next two years.</p>
Client Progress at 1st Surveillance Audit	<p>NCCC – A report on the 2011 observer program conducted by Ecotrust for Area 3 and 4 fisheries was provided (Ecotrust 2012). According to report, bycatch reduction measures were being implemented. The AT cannot make any statement about post-release survivorship without a Post-release Mortality study for chum.</p> <p>Bycatch reduction measures include timing of fisheries to not impact the non-target stocks. Avoiding the steelhead and chum run timing can be effective bycatch reduction.</p> <p>Annual estimates of range of harvest rates for steelhead and chum returning to Area 3 and 4 are needed to assess whether the bycatch reduction measures are being effective. These harvest rate calculations are derived from the weekly harvest rates for sockeye during the migration period for steelhead and chum returns to Area 3 and 4. Since commercial fisheries are not permitted to retain steelhead, a range of post-release survival rates have been applied to estimate steelhead mortalities in these fisheries. A similar approach has been used to estimate chum mortalities in fisheries that are not permitted to retain chum.</p> <p>There are plans in 2012 to implement a fishery in Area 3 that will target the enhanced Alaska chum stock in early July. Otolith sampling from the Area 3 targeted chum fishery is required in order to determine percentage of Alaskan fish in the catch. See Davies, 2011 (Doc ZA).</p>
Observations from 1st Surveillance Audit	<p>NCCC – The implementation of an observer program in Area 3 and 4 in 2010 and 2011 was a good first step. The report on the 2010 observe program should be provided to the AT and the bycatch ratios from these observer programs need to be compared with the ratios derived from commercial logbook data, as indicated above.</p> <p>NCCC – Estimates of encounter rates derive from models based on run timing assumptions for steelhead should be compared with estimates derived by combining catch and escapement estimates for steelhead. A range of assumptions regarding post-release survival for steelhead could be used to assess the relative impact of the commercial catch of steelhead on these stocks. A similar approach could be used for Area 3 and 4 chum stocks.</p>
Conclusion at 1st Surveillance Audit	<p>Progress is confirmed for the NCC UoC. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 2-3	For all pink salmon UoCs. Certification of the pink fisheries requires development of recovery plans for all non-target stocks that are consistently below the LRP. Implicit in this condition is that all non-target stocks have LRP's developed. The proposed recovery plans, including a commitment to stock monitoring and assessment must be developed and implemented by the second surveillance audit. These recovery plans must meet the requirements of the scoring elements under the 80SG scoring guidepost.
PI 2.3.1	Management strategies include provision for restrictions to the fishery to enable recovery of non-target stocks to levels above established LRPs (Limit Reference Points)
SG 60	<ul style="list-style-type: none"> The management system attempts to prevent extirpation of non-target stocks and does have rebuilding strategies for the majority of the stocks. The management system ensures that the fishery is executed such that the recovery of depleted non-target stocks is likely to occur in a reasonable time period. The management system has a strategy for periodic revisiting escapement goals to respond to new data on recovery success or failure for the majority of the stocks.
SG 80	<ul style="list-style-type: none"> The management system includes assessment of plans for the recovery of non-target stocks to levels above established LRPs. Objectives for recovery consider historic stock abundance information. The management system ensures that the fishery is executed such that recovery of depleted non-target stocks is highly likely to occur in a reasonable time period. Monitoring and assessment programs are established to determine with a high degree of confidence and in a timely manner whether recovery is occurring. Escapement goals will be revised periodically to accommodate new data indicating success or failure of existing recovery plans. The management system considers the impact of non-fishing related human activity in the development of recovery plans for non-target stocks.
SG 100	<ul style="list-style-type: none"> The management plans and escapement goals have been shown to have a high degree of certainty of achieving a long-term recovery of depleted non-target stocks using risk analysis. Historic data have been thoroughly examined to ensure fisheries restoration objectives are based on the likely habitat capacity, rather than on trends that cover only the most recent decades, thus avoiding the "moving baseline" syndrome. Monitoring and assessment programs are established to determine with a high degree of confidence and in a timely manner whether recovery is occurring. Proposed management strategies have been reviewed and found to be scientifically defensible and appropriate by the PSARC or the appropriate PSC technical committee. The management system supports the collection of data on non-fishing related human activity in the development of recovery plans for non-target stocks.
Score	NCCC Pink: 63 Inner SC Pink: 70 Fraser Pink: 63
Scoring Rationale	<p>The state of many of the chum fisheries in British Columbia has been in decline and there are conservation issues with a variety of other species such as the late Fraser sockeye, (including Cultus sockeye), Sakinaw sockeye, interior Fraser coho, steelhead, WCVI Chinook, Lower Georgia Strait chinook, and coho.</p> <p>The current non-target chum stocks of the North Coast are of concern and directed fisheries have been terminated. This criteria requires a significant investment by the management agency to enable the recovery of depleted non-targeted fish stocks to the LRP's. Although the management system has provisions for recovery of the stocks through the Wild Salmon Policy and passes the 60SG scoring elements, the more stringent provisions of the scoring elements of 80SG and 100SG have not been met based on information provided.</p> <p>The client submittal lacks evidence of recovery plans for depleted species that have been identified by DFO as impacted by the pink fisheries in the various districts. Specifically,</p>

	<p>the management system lacks elements of a recovery plan such as; the objectives for recovery consider historic stock abundance information, and analysis to ensure that the fishery is executed such that recovery of depleted non-target stocks is highly likely to occur in a reasonable time period. Also lacking is assurances that would be contained in a recovery plan that monitoring and assessment programs have been established to determine, with a high degree of confidence and in a timely manner that recovery is occurring. A recovery plan is specifically needed for the Skeena and the Nass for chum recovery.</p> <p>The Inner South Coast chum fisheries were given partial credit due to low exploitation rates having been established. All of the fisheries have been given partial credit for existing monitoring programs but we note the trend of monitoring has been consistently downward over the past decade. All of the other scoring elements refer to recovery plans that are non-existent for most of the stocks that are well below the LRP's for non target stocks that are intercepted in the pink fisheries.</p> <p>An additional pink salmon fishery issue that has received a lot of attention is the impact of salmon farming and associated sea lice on the pink salmon stocks of the Broughton Archipelago in the Inner South Coast (Krkosek et al. 2007). Although the targeted pink fishery has not been linked to the decline of stocks in these areas, the submittal by DFO does not address what, if any, management activities and regulatory functions associated with managing the fishery are planned although there have been low exploitation rates on these stocks as previously mentioned. We acknowledge that even the status of the stocks has been debated (Riddell et al 2008; Krkosek et al. 2008), however, as part of providing a response to the following condition, DFO should explain what the current status of these stocks are including determining if they are a targeted or non-targeted stock, and if they are below the LRP, they should be subject to a recovery plan.</p> <p>Consequently continued certification requires development of recovery plans that meet the scoring evaluation criteria listed under the 80 SG. Scoring elements 1,2,4 and 5 of the 80 SG were not met because of the absence of a management plan; the third scoring element was partially met because of the existence of escapement surveys and other stock assessment programs as address under the 80SG.</p>
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Client Action Plan	<p>The newly standardized MSC assessment trees (2008) provide much needed guidance regarding the assessment of species fished as stock complexes, such as Pacific salmon. Specifically, species fished as stock complexes “may be considered analogous to multi-target species considered under the guidance of performance indicator 2.3.1.” This distinction is important because it allows for a pragmatic approach to the central problem of weak stock management, recognizing that factors other than harvest may cause a stock to decline. A non-target stock within the fishery may be below the point at which recruitment is impaired. <i>The critical factor for certification is whether or not the fishery is ‘hindering’ recovery of the stock.</i></p> <p>Our WSP prescribes a systematic approach to salmon management, essentially moving DFO from a reactive to a pro-active approach for maintaining the biodiversity of salmon populations within Canada.</p> <p>To ensure that fisheries have acceptable harvest limits on non-target stocks and that the management system allows for rebuilding of depleted non-target stocks, DFO will:</p> <ul style="list-style-type: none"> • Implement ‘Strategy 1’ of the WSP: Define lower and upper benchmarks for non- target stocks (CUs) and monitor their status. The objective for fishery management shall be to maintain CUs above their lower benchmarks unless otherwise determined by the Minister. Not meeting this objective would occur only in exceptional circumstances where management actions are assessed to be ineffective, or the social and economic costs will be extreme (p.29 WSP). • Implement ‘Strategy 4’ of the WSP: Create a regional framework for integrated planning that will be used to articulate salmon management choices that consider social, economic and biological consequences. Consensus based advisory processes will be used to assist in defining these trade-offs and also to assist in developing strategic plans for the management of salmon conservation units; including harvest strategies designed to maintain the biodiversity of stocks within the CU. • Benchmarks will be used to guide management response. For example, if a CU is below its lower benchmark and in the ‘Red Zone’ this will trigger consideration for ways to protect the fish, increase their abundance and reduce the risk for loss. Biological considerations will be the primary consideration for CU below the lower benchmark and in the ‘Red Zone’. Page 17 of the WSP identifies additional guidance on how response would be taken for CU between the lower and higher benchmark. • Implement Strategy 5 of the WSP. Review annual performance against measurable objectives, particularly with regards to stock status and rebuilding objectives. <p>Specifically, DFO will also define lower benchmarks or their equivalent for NCCC, ISC and Fraser River, pink salmon CUs. A rebuilding plan consistent with the WSP will have been developed and implementation initiated within 2 years for stocks harvested in fisheries targeting NCCC, ISC, and Fraser River pink salmon that are below their lower benchmarks. On the Skeena and Nass Rivers the proposed rebuilding plan will include measures to rebuild chum salmon stocks that are below their lower benchmark contingent upon determining whether harvest pressure is found to have a significant risk for chum rebuilding. The rebuilding plan will include a stated objective and rebuilding target and timeline for rebuilding. This rebuilding plan will demonstrate how the fisheries management strategy will assist in ensuring rebuilding objectives are met. Fishery actions may only be one component of a rebuilding plan and could include enhancement, habitat and other measures to enable rebuilding objectives being met. It must recognize though, that there will be instances that rebuilding is not possible even where the appropriate management actions are implemented. Rebuilding may not be possible due to a variety of events that are beyond our control (e.g. low marine survival, habitat changes, environmental conditions, etc.)</p>
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	The following table describes milestones for implementing elements of the WSP required to meet the Rebuilding Plan Conditions of Principle 1 and Principle 2 conditions for MSC certification of BC pink fisheries.		
	Action	Description	Timeline
	Define lower benchmarks for each target stock (CU)	Apply criteria and methods of Holt et al. (<i>in prep</i>) to specific CUs.	by second surveillance audit
	Develop fishery-specific integrated management plans.	Initiate planning processes to develop integrated management plans for salmon CUs that will: <ul style="list-style-type: none"> - Define lower benchmarks for target and non-target stocks - Define precautionary harvest strategies and decision rules - Determine rebuilding strategies - Define performance measures 	NCCC (complete by second surveillance audit) ISC (complete by second surveillance audit)) Fraser River Pink (complete by second surveillance audit))
	Implement Annual Performance review	Annually review and report on performance of fishery and management system against defined performance measures for salmon conservation.	Starting third surveillance audit .
Client Progress at 1st Surveillance Audit	<p>All UoCs – DFO provided a PowerPoint presentation entitled: “Precautionary Approach (PA) Framework Rebuilding Plan Guidelines” which clearly indicates DFO’s policy that rebuilding plans are required for all stocks that are below their LRP (Critical Zone). This document provides guidance on the timeframe for the stock growing out of the Critical Zone (e.g., 1.5-2 generations but possibly longer for long-lived species). Since salmon are not a long-lived species, the AT assumes that the 1.5-2 generation time period would apply to all salmon stocks that are in the Critical Zone.</p> <p>NCCC and ISC - No evidence has been provided that these guidelines have been implemented for any non-target salmon CU and there are clearly some CUs that are below their LRP (e.g. Area 3 and 4 chum and several ISC Chum CUs).</p>		
Observations from 1st Surveillance Audit	<p>NCCC – Rebuilding plans are needed for Area 3 and 4 chum stocks/CUs that are below LRPs.</p> <p>ISC – Rebuilding plans are needed for ISC chum stocks/CUs that are below LRPs.</p> <p>Fraser – DFO needs to determine if there are any non-target stocks harvested in Fraser pink salmon fisheries that are below their LRPs that don’t already have a rebuilding plan.</p>		
Conclusion at 1st Surveillance Audit	<p>There has been some discussion of the contents of the rebuilding plans required for Area 3, Area 4 and ISC chum stocks that are below their LRPs but no plans have been drafted to date.</p> <p>DFO’s policy regarding stocks in the critical zone is clearly defined. However, specific progress towards development of rebuilding plans for stocks below LRPs was not evident. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>		

3.2 Conditions – Principle 3

Condition 3-1	For all pink salmon UoCs - Certification of all pink fisheries will be conditional until management objectives, (e.g. maximum harvest rates, escapement goals, LRPs) are clearly defined for most of the target pink stocks harvested in these fisheries. Objectives will be provided to the Certification Body by the second surveillance audit.
PI 3.1.1	The management system has a clear and defensible set of objectives for the harvest and escapement for target species and accounts for the non-target species captured in association with, or as a consequence of, fishing for target species.
SG 60	<ul style="list-style-type: none"> • Management objectives are clearly defined and consistent with MSC criteria for a well-managed fishery for the majority of target stocks. • Harvest controls are effective for the majority of the fisheries on target stocks. • The management system provides for the estimation of catch, landing, and bycatch for the majority of the fisheries.
SG 80	<ul style="list-style-type: none"> • Management objectives are clearly defined for most of the target stocks and are consistent with the MSC criteria for a well-managed fishery. • Harvest rates and escapement goals are set for target stocks or target species in the fishery, as qualified by relevant environmental factors. • Harvest controls are precise and effective for major target stocks or target species in the fishery. • The management system provides estimates for all major catches, landings, and bycatch.
SG 100	<ul style="list-style-type: none"> • Management objectives are clearly defined for all of the target stocks and are consistent with the MSC criteria for a well-managed fishery. • Harvest rates and escapement goals are precisely set for each target stock unit in the fishery, as qualified by relevant environmental factors. • Target Reference Points and Limit Reference Points are clearly defined and documented for each target stock unit in the fishery. • Harvest controls are effective with respect to the attainment of management objectives for each target stock unit in the fishery. • The management system provides estimates for all catches, landings and bycatch.
Score	NCCC Pink: 70 Inner SC Pink: 72 Fraser Pink: 70
Scoring Rationale	The lack of clearly defined LRPs for most target stocks harvested in pink fisheries resulted in the partial scoring of three of the four criteria at the 80 scoring guidepost level for all pink fisheries. North-Central Coast and Fraser pink fisheries also received partial rating for the fourth criteria at the 80 scoring guidepost level because estimates of bycatch for Skeena steelhead and chum and Fraser steelhead and sturgeon are lacking for these fisheries. The ISC received full credit for the fourth 80 SG criteria.

Client Action Plan	There are several conditions common to all four fishery units that require definition of reference points. The MSC Evaluation Team conditions 1-4, 1-5, 1-6 and 1-7 all make reference to defining either target reference points (TRPs) or Limit Reference Points (LRPs). To be clear when TRPs and LRPs are requested by the MSC Evaluation Team, DFOs response will be to define lower and upper benchmarks for conservation units. ¹		
	Upper and lower benchmarks as defined in the Wild Salmon Policy (2005) delimit red, amber, and green status zones for fish populations (and may also be used to delimit habitat and ecosystem status zones). The benchmark between amber and green zones identifies whether harvests are less than or greater than the level expected to provide the maximum sustainable catch of the Conservation Unit (CU). CUs in the amber zone are at a low risk of extinction, but there is lost production. CUs in the green zone are biologically secure. Social and economic considerations will tend to be the primary drivers for management of the CUs in the green zone, though ecosystem or other non- consumptive use values could also be considered.		
	It is the intent of the Wild Salmon Policy to initiate management actions before the lower benchmark is reached and the extent of the actions will likely increase the closer CU is to the lower benchmark. While there are a number of definitions for management reference points the paper “A Harvest Strategy Compliant with the Precautionary Approach. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2006/023” provides an explanation of how the precautionary approach would be implemented and definition of management reference points.		
	The following table describes milestones for implementing Strategy 1 of the WSP. DFO will provide a progress report on Strategy I implementation to the MSC certifying body by late 2010.		
	Action	Description	Timeline
	Identify Conservation Units	Paper defining conservation units regionally for all salmon species based on biological criteria (Holtby and Ciruna, 2007)	Paper reviewed and approved by PSARC, published 2008
Develop standardized assessment criteria	Paper defining general methodology for determining reference points for salmon populations and assessment criteria (Holt et al., <i>in prep</i>) Workshop to facilitate application of methods in Holt et al.	PSARC Workshop, January 2009 Finalized methodology: October, 2009	
Define lower benchmarks for each target stock (CU)	Apply criteria and methods of Holt et al. (<i>in prep</i>) to specific CUs.	by second surveillance audit	
Define Upper benchmarks for each target stock (CU) and corresponding harvest strategy	Recognizing Target Benchmarks inherently involve trade-offs, determine Target Benchmarks through participatory decision-making (co-management) – see below.	by second surveillance audit	
Client Progress at 1st Surveillance Audit	All UoCs - Require definition of LRP/ TRPs for target pink salmon stocks to address 1 st and 2 nd scoring issues of SG80. IFMP’s and post-season reports for salmon fisheries provide sufficient evidence that harvest controls are precise and effective for major target stocks (3 rd SI for SG80), however, some concerns have been raise regarding the bycatch estimates for each pink salmon UoC as discussed above (4 th SG80 SI).		

Observations from 1st Surveillance Audit	<p>As indicated for Conditions 1-4 and 1-5 above, DFO and the PSF has several pilot projects underway to define the Lower and Upper Benchmarks for Fraser sockeye, Barkley Sound sockeye and all salmon CUs within the Skeena watershed. The data and estimates needed to define these benchmarks for NCCC pink salmon CUs was compiled late in 2011 and is currently under review by DFO and NGOs.</p> <p>Some progress has been made to improve the bycatch estimates for fisheries targeting NCCC pink salmon. There is no evidence and any improvement in the bycatch estimates for fisheries targeting Fraser or ISC pink salmon.</p>
Conclusion at 1st Surveillance Audit	<p>Some progress has been made but substantial work remains to be done.</p> <p>Progress is confirmed for the NCC UoC. There is no evidence of progress for either the Fraser or ISC UoCs. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 3-2	For NCCC pink salmon UoC. - Certification of North-Central Coast pink salmon fisheries will be conditional until scientifically defensible estimates of non-target species bycatch are obtained annually for North-Central Coast pink salmon fisheries. Bycatch estimates will be reported to the certification body by the first surveillance audit.
PI 3.1.1	The management system has a clear and defensible set of objectives for the harvest and escapement for target species and accounts for the non-target species captured in association with, or as a consequence of, fishing for target species.
SG 60	<ul style="list-style-type: none"> Management objectives are clearly defined and consistent with MSC criteria for a well-managed fishery for the majority of target stocks. Harvest controls are effective for the majority of the fisheries on target stocks. The management system provides for the estimation of catch, landing, and bycatch for the majority of the fisheries.
SG 80	<ul style="list-style-type: none"> Management objectives are clearly defined for most of the target stocks and are consistent with the MSC criteria for a well-managed fishery. Harvest rates and escapement goals are set for target stocks or target species in the fishery, as qualified by relevant environmental factors. Harvest controls are precise and effective for major target stocks or target species in the fishery. The management system provides estimates for all major catches, landings, and bycatch.
SG 100	<ul style="list-style-type: none"> Management objectives are clearly defined for all of the target stocks and are consistent with the MSC criteria for a well-managed fishery. Harvest rates and escapement goals are precisely set for each target stock unit in the fishery, as qualified by relevant environmental factors. Target Reference Points and Limit Reference Points are clearly defined and documented for each target stock unit in the fishery. Harvest controls are effective with respect to the attainment of management objectives for each target stock unit in the fishery. The management system provides estimates for all catches, landings and bycatch.
Score	<p>NCCC Pink: 70</p> <p>Inner SC Pink: 72</p> <p>Fraser Pink: 70</p>

Scoring Rationale	The lack of clearly defined LRPs for most target stocks harvested in pink fisheries resulted in the partial scoring of three of the four criteria at the 80 scoring guidepost level for all pink fisheries. North-Central Coast and Fraser pink fisheries also received partial rating for the forth criteria at the 80 scoring guidepost level because estimates of bycatch for Skeena steelhead and chum and Fraser steelhead and sturgeon are lacking for these fisheries. The ISC received full credit for the fourth 80 SG criteria.
Client Action Plan	A report will be provided to the certifier on by-catch estimates for NCCC.
Client Progress at 1st Surveillance Audit	NCCC – weekly catch and bycatch estimates based on sale slip and log book data for all NCCC gillnet and seine fisheries for 2007-11 were provided (Peacock Memo dated 7 May 2012). The AT requested a comparison of logbook and observer program bycatch ratios (steelhead: sockeye) for 2010 and 2011.
Observations from 1st Surveillance Audit	NCCC – As indicated for Condition 1-2 above, good progress has been made towards addressing this condition. The 7 May 2012 memorandum on bycatch estimates prepared by Dave Peacock, provides species-specific annual estimates of the number of salmon kept as reported on sale slips and the number of each salmon and steelhead released derived from logbook data. The Assessment Team (AT) raised concerns regarding the potential for underestimation bias in the logbook data and recommended that the logbook and Ecotrust observer data be compared for 2010 and 2011 to determine if there is evidence for any bias in the logbook data. If a bias is detected, the logbook estimates should be corrected for any bias that can be quantified.
Conclusion at 1st Surveillance Audit	Most of the requirements for Condition 3-2 have been met. The additional assessment of bias in the logbook data for all bycatch species is required to fulfil this condition. Bycatch estimates were provided, thus fulfilling the deliverable requirement for the first surveillance audit. However, analysis of logbook data bias is required to confirm that estimates are scientifically defensible for all bycatch species. This condition will be evaluated at the next surveillance audit when it is due for completion.

Condition 3-3	For Fraser pink salmon UoC. - Certification of Fraser pink salmon fisheries will be conditional until scientifically defensible estimates of non-target species bycatch are obtained annually for Fraser pink salmon fisheries bycatch estimates will be reported to the certification body by the first surveillance audit.
PI 3.1.1	The management system has a clear and defensible set of objectives for the harvest and escapement for target species and accounts for the non-target species captured in association with, or as a consequence of, fishing for target species.
SG 60	<ul style="list-style-type: none"> Management objectives are clearly defined and consistent with MSC criteria for a well-managed fishery for the majority of target stocks. Harvest controls are effective for the majority of the fisheries on target stocks. The management system provides for the estimation of catch, landing, and bycatch for the majority of the fisheries.
SG 80	<ul style="list-style-type: none"> Management objectives are clearly defined for most of the target stocks and are consistent with the MSC criteria for a well-managed fishery. Harvest rates and escapement goals are set for target stocks or target species in the fishery, as qualified by relevant environmental factors. Harvest controls are precise and effective for major target stocks or target species in the fishery. The management system provides estimates for all major catches, landings, and bycatch.
SG 100	<ul style="list-style-type: none"> Management objectives are clearly defined for all of the target stocks and are consistent with the MSC criteria for a well-managed fishery. Harvest rates and escapement goals are precisely set for each target stock unit in the fishery, as qualified by relevant environmental factors. Target Reference Points and Limit Reference Points are clearly defined and documented for each target stock unit in the fishery. Harvest controls are effective with respect to the attainment of management objectives for each target stock unit in the fishery. The management system provides estimates for all catches, landings and bycatch.
Score	NCCC Pink: 70 Inner SC Pink: 72 Fraser Pink: 70
Scoring Rationale	The lack of clearly defined LRPs for most target stocks harvested in pink fisheries resulted in the partial scoring of three of the four criteria at the 80 scoring guidepost level for all pink fisheries. North-Central Coast and Fraser pink fisheries also received partial rating for the fourth criteria at the 80 scoring guidepost level because estimates of bycatch for Skeena steelhead and chum and Fraser steelhead and sturgeon are lacking for these fisheries. The ISC received full credit for the fourth 80 SG criteria.
Client Action Plan	<p>Programs are in place to estimate the number of sturgeon and steelhead encountered in fisheries directed at Fraser River pink salmon. A mandatory release requirement for both of these species is in effect, therefore, estimates of releases are currently based on unverified reports of releases from fishery participants</p> <p>To satisfy this condition DFO will develop a program to estimate the impact of Fraser River pink fisheries on steelhead and sturgeon. The need for further work will be assessed according to the results of this program. A report summarizing the work will be completed by the first surveillance audit.</p>
Client Progress at 1st Surveillance Audit	<p>Fraser – Sturgeon and steelhead bycatch estimates were provided for 2011 pink salmon fisheries conducted within the Fraser River (Matthew Parslow 2012). First Nation Economic Opportunity fisheries were the only in-river fisheries that targeted Fraser pink salmon in 2011 and these fisheries reported small catches of sturgeon and steelhead. However, there was not on-site verification of these catch estimates and no estimates of steelhead caught in marine fisheries were provided.</p> <p>DFO reported that on-board observer data was collected for Johnstone Strait and Area 29</p>

	seine fisheries that targeted Fraser pink salmon in 2011 but these data have not been provided to the AT.
Observations from 1st Surveillance Audit	Fraser – The post-season report for South Coast fisheries provides estimates of the number of salmon released for all pink fisheries in marine waters, except the Area 29 seine fisheries that targeted Fraser pink salmon. The bycatch estimates for this later fishery appear to have been included under the Area 29 sockeye seine fishery.
Conclusion at 1st Surveillance Audit	<p>This condition has been partially met but catch estimates for Fraser steelhead in marine fisheries and any on-board observer data available for marine fisheries that target Fraser pink salmon need to be provided to the AT.</p> <p>Bycatch estimates were provided, thus fulfilling the deliverable requirement for the first surveillance audit. However, catch estimates for Fraser steelhead in marine fisheries and any on-board observer data available for marine fisheries that target Fraser pink salmon need to be provided during the next surveillance audit. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 3-4	For the NCCC pink salmon UoC. - By the second surveillance audit, DFO must document how it has responded to management and conservation concerns such as estimation of bycatch and development of recovery plans for Area 3 to 6 chum stocks. DFO should provide evidence that they have established an effective process for responding to new information and making necessary changes within 12 months of the information becoming available.
PI 3.1.5	Management response to new information on the fishery and the fish populations is timely and adaptive.
SG 60	<ul style="list-style-type: none"> For the majority of cases there are provisions for making timely adjustments to the management program, and when they are made the lag time is not so great as to result in the adjustments being ineffectual.
SG 80	<ul style="list-style-type: none"> The management system provides a mechanism for responding to unexpected changes in the fishery. When new information or findings support altering the management and conservation programs, adjustments are made within 12 months of obtaining the new information.
SG 100	<ul style="list-style-type: none"> The management system provides a mechanism for rapid adjustments to be made to its management programs. When new information or findings support altering the management and conservation programs (such as stock recovery plans), there is evidence to demonstrate that such adjustments are made within 6 months of obtaining the new information.
Score	NCCC Pink: 75 Inner SC Pink: 95 Fraser Pink: 95

Scoring Rationale	<p>The in-season monitoring systems for pink were found to be adequate for all fisheries to meet the single scoring criteria at the 60 SG and the first criteria at the 80SG. The NCCC pink fishery only partially met the second criteria at the 80 SG because management adjustments clearly needed for the conservation of Area 3 and 4 chum salmon were not implemented within 12 months of the information being available. The second criteria at the 100 SG was partially met for all fisheries because some, but not all, adjustments are made within 6 months.</p>
Client Action Plan	<p>The newly standardized MSC assessment trees (2008) provide much needed guidance regarding the assessment of species fished as stock complexes, such as Pacific salmon. Specifically, species fished as stock complexes “may be considered analogous to multi-target species considered under the guidance of performance indicator 2.3.1.” This distinction is important because it allows for a pragmatic approach to the central problem of weak stock management, recognizing that factors other than harvest may cause a stock to decline. A non-target stock within the fishery may be below the point at which recruitment is impaired. <i>The critical factor for certification is whether or not the fishery is ‘hindering’ recovery of the stock.</i></p> <p>Our WSP prescribes a systematic approach to salmon management, essentially moving DFO from a reactive to a pro-active approach for maintaining the biodiversity of salmon populations within Canada.</p> <p>To ensure that fisheries have acceptable harvest limits on non-target stocks and that the management system allows for rebuilding of depleted non-target stocks, DFO will:</p> <ul style="list-style-type: none"> • Implement ‘Strategy 1’ of the WSP: Define lower and upper benchmarks for non-target stocks (CUs) and monitor their status. The objective for fishery management shall be to maintain CUs above their lower benchmarks unless otherwise determined by the Minister. Not meeting this objective would occur only in exceptional circumstances where management actions are assessed to be ineffective, or the social and economic costs will be extreme (p.29 WSP). • Implement ‘Strategy 4’ of the WSP: Create a regional framework for integrated planning that will be used to articulate salmon management choices that consider social, economic and biological consequences. Consensus based advisory processes will be used to assist in defining these trade-offs and also to assist in developing strategic plans for the management of salmon conservation units; including harvest strategies designed to maintain the biodiversity of stocks within the CU. • Benchmarks will be used to guide management response. For example, if a CU is below its lower benchmark and in the ‘Red Zone’ this will trigger consideration for ways to protect the fish, increase their abundance and reduce the risk for loss. Biological considerations will be the primary consideration for CU below the lower benchmark and in the ‘Red Zone’. Page 17 of the WSP identifies additional guidance on how response would be taken for CU between the lower and higher benchmark. • Implement Strategy 5 of the WSP. Review annual performance against measurable objectives, particularly with regards to stock status and rebuilding objectives. <p>Specifically, DFO will also define lower benchmarks or their equivalent for NCCC, ISC and Fraser River, pink salmon CUs. A rebuilding plan consistent with the WSP will have been developed and implementation initiated within 2 years for stocks harvested in fisheries targeting NCCC, ISC, and Fraser River pink salmon that are below their lower benchmarks. On the Skeena and Nass Rivers the proposed rebuilding plan will include measures to rebuild chum salmon stocks that are below their lower benchmark contingent upon determining whether harvest pressure is found to have a significant risk for chum</p>

	<p>rebuilding. The rebuilding plan will include a stated objective and rebuilding target and timeline for rebuilding. This rebuilding plan will demonstrate how the fisheries management strategy will assist in ensuring rebuilding objectives are met. Fishery actions may only be one component of a rebuilding plan and could include enhancement, habitat and other measures to enable rebuilding objectives being met. It must recognize though, that there will be instances that rebuilding is not possible even where the appropriate management actions are implemented. Rebuilding may not be possible due to a variety of events that are beyond our control (e.g. low marine survival, habitat changes, environmental conditions, etc.)</p> <p>The following table describes milestones for implementing elements of the WSP required to meet the Rebuilding Plan Conditions of Principle 1 and Principle 2 conditions for MSC certification of BC pink fisheries.</p>		
	Action	Description	Timeline
	Define lower benchmarks for each target stock (CU)	Apply criteria and methods of Holt et al. (<i>in prep</i>) to specific CUs.	by second surveillance audit
	Develop fishery-specific integrated management plans.	<p>Initiate planning processes to develop integrated management plans for salmon CUs that will:</p> <ul style="list-style-type: none"> - Define lower benchmarks for target and non-target stocks - Define precautionary harvest strategies and decision rules - Determine rebuilding strategies - Define performance measures 	<p>NCCC (complete by second surveillance audit)</p> <p>ISC (complete by second surveillance audit))</p> <p>Fraser River Pink (complete by second surveillance audit))</p>
	Implement Annual Performance review	Annually review and report on performance of fishery and management system against defined performance measures for salmon conservation.	Starting third surveillance audit .
Client Progress at 1st Surveillance Audit	NCCC – Concerns regarding the reliability of bycatch estimates for sockeye and pink salmon fisheries in Area 3 and 4 have resulted in the collection of additional data through an on-board observer program conducted by Ecotrust in 2010 and 2011. Preliminary analyses of these data suggest that bycatch estimates derived from logbook data may be biased low.		
Observations from 1st Surveillance Audit	<p>DFO needs to analyse the 2010 and 2011 observer data and provide evidence that the results from these analyses have been integrated into the annual bycatch estimates and any deficiencies in the observer program are identified and addressed in 2012.</p> <p>DFO has been aware of the need for a rebuilding plan for Area 3 and 4 chum stocks for more than a year. Some work has been initiated regarding these rebuilding plans but an approved plan clearly needs to be in place by the next audit in order to meet the</p>		

	requirements of this condition.
Conclusion at 1st Surveillance Audit	Good progress has been made but substantial work remains to be done. Progress is confirmed for the NCC UoC. This condition will be evaluated at the next surveillance audit when it is due for completion.

Condition 3-5	For NCC pink salmon UoC. Certification of North-Central Coast pink fisheries will be conditional until DFO provides evidence that DFO has implemented programs in the North-Central coast that create incentives for harvesters not to exceed target catches in pink fisheries and that these incentives are working. If DFO has evidence of implementing these types of fisheries in the past, this evidence should be provided within 1 year. Evidence of new incentives or initiatives implemented on the North-Central coast should be provided within 2 years.
PI 3.1.8	The management system provides for socioeconomic incentives for sustainable fishing.
SG 60	<ul style="list-style-type: none"> The management system provides for the use of social or economic incentives to ensure sustainable fishing. The management system attempts to understand the impact of its decisions on social and economic factors affecting the stakeholders in the fishery and is responsive to requests to reduce these impacts.
SG 80	<ul style="list-style-type: none"> The management system regularly considers the use of social and economic incentives to the stakeholders in the fishery, which are designed to facilitate the development of fishing gear and practices that can lead to sustainable fishing. The management system includes a program to create incentives for harvesters to not exceed target catches or exploitation rates. Evidence demonstrates that the stakeholders in the fishery have used such incentives. The management system attempts to understand the impact of their management decisions on social and economic factors affecting the major stakeholders in the fishery and takes action to lessen the major impacts on stakeholders.
SG 100	<ul style="list-style-type: none"> The management system has formal procedure for providing social and economic incentives to stakeholders in the fishery to develop and utilize sustainable fishing practices, particularly the development of selective fishing gear and practices that lead to improved conservation. The management system creates strong incentives for harvesters to not exceed target catches or exploitation rates The stakeholders in the fishery regularly avail themselves of the opportunity to utilize these incentives. Evidence provided by the management system demonstrates that such incentives have contributed to improved conservation. The management system continually attempts to understand the impact of their decisions on social and economic factors affecting the stakeholders in the fishery and regularly takes action to mitigate the impacts on stakeholders.
Score	NCCC Pink: 70 Inner SC Pink: 94 Fraser Pink: 94

Scoring Rationale	<p>Evidence provided for some socioeconomic incentives for sustainable fishing was sufficient for all pink fisheries to pass the criteria at the 60 SG and the first and last criteria at the 80 and 100 guideposts.</p> <p>The Inner South Coast and Fraser pink fisheries passed all criteria at the 80 SG due to the recent implementation of small bite fisheries. The NCCC pink fisheries did not pass the second and third criteria at the 80 SG because no evidence of small bite fisheries or similar incentives to encourage harvesters not to exceed target catches or exploitation rates was provided.</p>
Client Action Plan	<p>DFO has been experimenting with new approaches to manage fisheries more efficiently. To contribute to the Pacific Fisheries Reform vision demonstration fishery proposals have been solicited that:</p> <ul style="list-style-type: none"> • Maintains or improves management control and conservation performance in the fishery; • Promotes the use of clearly defined shares to improve manageability and industry viability; and • Increases the ability of harvesters to work cooperatively to harvest available surpluses and to take on greater responsibility for control and monitoring of their fishery. <p>If there are pink fisheries that exceed target catches a report on these programs as they pertain to the North-Central coast fisheries will be developed.</p>
Client Progress at 1st Surveillance Audit	<p>The implementation of ITQ seine fisheries for pink salmon in 2011 has created a clear incentive for fishers not to exceed target catches in Area 3 and 4 seine fisheries. The transfer of a portion of the TAC to in-land demonstration fisheries has also created a similar incentive for these fisheries. Based on the information provided in the post-season report, it appears that the ITQ seine fisheries are an effective way to slow down the fishery and ensure that pink catch targets are not exceeded.</p>
Observations from 1st Surveillance Audit	<p>Based on the information provided in the post-season report, it appears that the implementation of ITQ seine fisheries in Area 3 and 4 is an effective way to slow down these fisheries and ensure that pink catch targets are not exceeded.</p>
Conclusion at 1st Surveillance Audit	<p>Good progress has been made regarding this condition, and the AT will be looking for evidence of a continued commitment to the use of incentives to minimize the potential for exceeding target catch levels.</p> <p>Progress is confirmed for the NCC UoC. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 3-6	For all pink salmon UoCs. - Certification of all pink fisheries will be conditional until DFO develops a research plan for pink fisheries which incorporates the existing elements under 80SG and addresses impacts of the fishery on the ecosystem, socioeconomic issues that result from management decisions and is responsive to changes in the fishery. The research plan must also include an evaluation of alternative management approaches to reduce bycatch or determine the survival rate of discarded non-target species for non-retention fisheries. For example: the research and assessment plans should describe how Fraser pink salmon escapement estimates will be derived in the future when harvesting pressure increases. This research plan must be provided to certification body by the second surveillance audit.
PI 3.2.1	The research plan covers the scope of the fishery, includes all target species, accounts for the non-target species captured in association with, or as a consequence of fishing for target species, and considers the impact of fishing on the ecosystem and socioeconomic factors affected by the management program.
SG 60	<ul style="list-style-type: none"> Research provides for the collection of catch statistical and biological data for the target species. There has been useful research on the impact of fishing on target and non-target species taken in the fishery, and on the ecosystem in general.
SG 80	<ul style="list-style-type: none"> The management system incorporates a research component that provides for the collection and analysis of information necessary for formulating management strategies and decisions for both target and non-target species. The research plan addresses concerns related to the impact of the fishery on the ecosystem. The research plan addresses socioeconomic issues that result from the implementation of management. The research plan is responsive to changes in the fishery. Funding is adequate to support short-term research needs. There is progress in understanding the impact of the fishery on target and non-target species. Research results are utilized in forming management strategies. Research is reviewed by PSARC or PSC, or other appropriate and technically qualified entities.
SG 100	<ul style="list-style-type: none"> The management system incorporates a research component that considers relevant data and information needs for formulating management strategies for all target species, and also information leading to an understanding of the dynamics of the ecosystem including data on the catch, landings and discards of non-target species. The framework for research includes investigations dealing with socioeconomic impacts of the fishery. The research plan responds in a timely fashion to unexpected changes in the fishery. Funding is secure and sufficient to meet long-term research needs. There is significant continuing progress in understanding the impact of the fishery on target and non-target species, and the ecosystem in general. Research results form the basis for formulating management strategies and decisions. Research is regularly published in peer review journals and/or is reviewed by PSARC or the PSC.
Score	NCCC Pink: 73 Inner SC Pink: 73 Fraser Pink: 73
Scoring Rationale	Current research is adequate to meet the criteria at the 60 guidepost and 5 of the 8 criteria at the 80 guidepost. Three of the 80 guidepost criteria including scoring elements 3, 4, 5, were not passed because the research plan does not address impacts of the fishery on the ecosystem, socioeconomic issues that result from management decisions and has not been responsive to changes in the fishery.

Client Action Plan	<p>The requirement to include ecosystem values and objectives in planning process is an element of the WSP. Over the next two-three years, DFO will be implementing the revised format for Integrated Fisheries Management Plans (IFMPs). The revised IFMP template is much more fishery specific and requires elements not included in past IFMPs, such as stock status, a socio-economic overview and summary of management issues.</p> <p>Implementation of the new IFMP template will require many of the gaps identified in the conditions to be addressed.</p> <p>To addresses the need to include other objectives (ecosystem, socio-economic) in the planning process and assess performance against these objectives, we will need to re-align our current reporting and/or re-allocate research resources. DFO has developed a Resource Assessment Framework (RAF) for Fraser River sockeye (PSARC review in May 2008) to help guide assessment priorities based on the biological status and knowledge gaps for each CU. Over the next year DFO will be developing a comprehensive salmon RAF. The RAF will serve as a template for all salmon research and stock assessment planning in the Pacific Region.</p>
Client Progress at 1st Surveillance Audit	<p>Mark Saunders provided a presentation on the Resource Assessment Framework (RAF). DFO committed to providing its RAF for all salmon stocks and fisheries by mid-July 2012. This RAF should provide most of the details required to evaluate the 80 level SG for this condition. Core stock assessment review (NCCC) and stock assessment framework for all fisheries.</p>
Observations from 1st Surveillance Audit	<p>The timely completion of the 2012-13 RAF for all UoCs and review of the Core Stock Assessment Program for the NCCC UoC are critical component need to address this condition.</p>
Conclusion at 1st Surveillance Audit	<p>Good progress has been made but more work remains to be done.</p> <p>Progress is confirmed for this condition for all UoCs, however, the 2012-13 RAF was not available at the time of reporting. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 3-6a	For the NCC pink salmon UoC. - For the NCCC, to meet the requirements of the first 80 scoring guidepost DFO must document and implement changes to the existing compliance provisions in order to increase the level effectiveness of the current program to reduce non compliance with fishery regulations and Conditions of License. A report must be provided to the certification body by the second surveillance audit detailing changes and effectiveness.
PI 3.4.2.1	The management system includes compliance provisions.
SG 60	<ul style="list-style-type: none"> The management system includes compliance provisions that are effective for the majority of the fisheries.
SG 80	<ul style="list-style-type: none"> The management system includes compliance provisions that are effective for the fisheries. Infractions, which result in adverse impacts on the status of the stocks or on the ecosystem, are rare.
SG 100	<ul style="list-style-type: none"> The management system provides for a formal arrangement, such as a compliance committee or a staff review team on compliance, to review the effectiveness of enforcement. Education and enforcement procedures are implemented and applicable rules are consistently applied. Enforcement actions are effective in achieving the objectives of management. There are no infractions being consistently committed in the fishery.
Score	NCCC Pink: 75 Inner SC Pink: 100 Fraser Pink: 100
Scoring Rationale	All pink fisheries passed the 60 and ISC and Fraser passed the 80 and first scoring criteria at the 100 guidepost. There is evidence of compliance concerns with regarding to the reporting of steelhead catch in Area 3 and 4 fisheries, ramping for seine vessels and the use of revival boxes. Rules are appropriate but evidence from the C&P reports indicates inadequate resources to enforce selective fishing rules. There is clear evidence in the C&P reports of similar violations year on year, suggesting that sanctions are not effective enough. There is also evidence that harvest management rules for Area 3 and 4 pink fisheries have not been consistently applied and enforcement actions have not been effective in some years (e.g. 2006). The assessment team suggests that first 80 scoring guidepost for the NCCC is only partially met and score awarded is 75.
Client Action Plan	A report will be completed and provided by the second surveillance audit documenting any modifications undertaken to improve compliance with fishery regulations.
Client Progress at 1st Surveillance Audit	NCCC – Post Season Review indicate increase in non-conformance in 2011. This may be due to initiation of the short set/ short net fishery in August.
Observations from 1st Surveillance Audit	NCCC – The AT will look for reduction in non-conformance for the 2012 season.
Conclusion at 1st Surveillance Audit	<p>NCCC - Some progress has been made regarding monitoring compliance but more work remains to be done to ensure a higher level of compliance.</p> <p>Progress is confirmed for NCC UoC. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 3-7	For all pink salmon UoCs. – Certification of all pink fisheries will be conditional until an external review of pink salmon fisheries management performance is completed and there is commitment to conducting a similar review at least once every five years. The results of the first external review will be provided to the certification body by the second surveillance audit.
PI 3.5.2	There is an effective and timely system for external review of the management system.
SG 60	<ul style="list-style-type: none"> The management system is open to external review at least once every 10 years.
SG 80	<ul style="list-style-type: none"> The management system provides for a review of management performance by one or more independent experts at least once every five years. The format and standards of the review are established within the management system. Review results are made available to the public.
SG 100	<ul style="list-style-type: none"> The management system provides for one or more independent experts to review at least bi-annually all of the important components of management performance. The format and standards of the review are established with input from outside the management system. Provision is made for making public the review results.
Score	NCCC Pink: 70 Inner SC Pink: 70 Fraser Pink: 70
Scoring Rationale	All pink fisheries passed the 60 guidepost because the management system is “open to external review”. However, none of the pink fisheries passed the first criteria at the 80 guidepost and only partially passed the second criteria at the 80 guidepost because the external review processes described in the DFO submission (PFRCC, COSEWIC, Auditor General of Canada) have not been specifically or consistently engaged in the review of pink salmon fisheries, and certainly not once every 5 years.
Client Action Plan	<p>External reviews are conducted on an annual basis through the department’s Integrated Harvest Planning Committee. This Committee is comprised of representatives from First Nations, and commercial, recreational and environmental organizations. The Terms of Reference for this Committee require a post-season evaluation be conducted and reported on an annual basis.</p> <p>In addition, the client agrees to contract a recognized salmon fisheries management expert who will provide a report on pink salmon fisheries management performance. The report will focus on providing an assessment of management performance in meeting stated objectives and will highlight areas or issues of concern and possible opportunities for improved management performance. This contracted expert will provide a presentation on the report to the IHPC during the IHPCs post-season evaluation process.</p>
Client Progress at 1st Surveillance Audit	No progress has been made regarding this condition.
Observations from 1st Surveillance Audit	<p>NCCC - Independent expert review of management system is currently undertaken for Nass watershed by the Nisga’a-DFO-BC Joint Fisheries Management Committee (JFMC); and for the Skeena watershed by Tsimshian Aquatic Resources Committee (TARC) and the Skeena Fisheries Commission (SFC).</p> <p>Fraser - Independent expert review of management system is currently undertaken for the Fraser UoC by the Fraser River Panel of the Pacific Salmon Commission.</p> <p>ISC - We are not aware of any independent expert review of the management system for the ISC UoC.</p>
Conclusion at 1st	No evidence was provided that a “salmon fisheries management expert” has been contracted to provide a report on pink salmon fisheries management performance.

Surveillance Audit	There was no evidence provided to demonstrate progress on this condition. This condition will be evaluated at the next surveillance audit when it is due for completion.
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Condition 3-7a	For the NCC pink salmon UoC. - For the NCCC, to meet the requirements of the second and third 80 scoring guidepost, the fishery in Area 3 to 6 must demonstrate that there have been measures taken to ensure that fishing activity is conducted in a manner that is consistent with the goal of reducing the catch (mortality) of non-target species of conservation concern. DFO must provide clear evidence of either a downward trend in the capture and discard of non-target species in the Area 3 and 4 net fisheries or that exploitation level of those species has been determined by management to be acceptable. This evidence shall be provided by the second annual surveillance audit.
PI 3.7.1	Utilization of gear and fishing practices that minimize both the catch of non-target species, and the mortality of this catch.
SG 60	<ul style="list-style-type: none"> The majority of fisheries are conducted in a manner that is consistent with the goal of reducing the catch of non-target species or undersized individuals of target species.
SG 80	<ul style="list-style-type: none"> Through educational programs for members of the fishing industry and other relevant stakeholders, the management system discourages the use of gear types and fishing practices that result in high catches of non-target species or undersized individuals of target species, and encourages them to avoid fishing in areas identified to have high concentrations of non-target species or undersized individuals of target species. Taking into consideration natural variability in population abundance, there is evidence that the capture and discard of non-target species or undersized individuals of target species is trending downward, or is at a level of exploitation that has been determined by management to be acceptable. Fishers generally conduct their fishing activity in a manner that is consistent with the goal of reducing the catch of non-target species or undersized individuals of target species.
SG 100	<ul style="list-style-type: none"> There are requirements in the management system to reduce the capture of non-target species, which include: <ul style="list-style-type: none"> Controlling the use of gear types and fishing practices that result in significant catches of non-target species or undersized individuals of target species, and/or Implementing closed seasons and no-fishing zones during times and in areas where the probability of making significant catches of non-target species or undersized individuals of target species is high, and Holding education programs for the fishing industry and other relevant stakeholders to make them aware of the benefits of using fishing techniques and gear that minimize the catch of non-target species or undersized individuals of target species. Taking into consideration natural variability in population abundance and the possibility of declining abundance resulting from heavy exploitation, the management system can demonstrate the effective use of these methods by fishers by the existence of downward trends in the catches of non-target species. The management system creates incentives to decrease the catch of non-target species (e.g. by providing more fishing time for vessels achieving certain standards for reducing such catches).
Score	NCCC Pink: 73 Inner SC Pink: 100 Fraser Pink: 90

Scoring Rationale	The information provide was sufficient for all pink fisheries to pass the scoring criteria at the 60 and for the ISC and Fraser to pass the 80 SG. Fraser pink fisheries did not pass the second criteria at the 100 guidepost and partially passed the third criteria because estimates of bycatch for Skeena steelhead and Fraser steelhead and sturgeon are lacking for these fisheries. For the NCC, the assessment team agrees with stakeholders that there are documented concerns regarding some Area 3 and 4 commercial net fishers that conduct their fishing activity in a manner that is not consistent with the goal of reducing the catch (mortality) of non-target species. Also, DFO has not been able to provide evidence that selective fishing or other initiatives have resulted in a downward trend in the capture and discard of non-target species in the Area 3 and 4 net fisheries. Therefore, the second and third scoring guideposts of the 80 SG are only partially met and the score has been revised to 73.
Client Action Plan	<p>See proposed client action plan for condition 1-1 above</p> <p>Under DFO's Pacific Integrated Commercial Fisheries Initiative (PICFI) the Enhanced Accountability element has provided further focus and resources to develop and implement a framework to improve the monitoring and catch reporting in Pacific fisheries. Under this framework fisheries information requirements are categorized as requiring low, moderate or enhanced levels of information according to consistent criteria, largely based on evaluating risk to conservation.</p> <p>The current and desired monitoring levels for all Pacific salmon fisheries are currently being evaluated utilizing this consistent framework and a report being prepared for release. This strategy calls for subsequent updates of the regional evaluation of all salmon fishery monitoring programs every two years.</p> <p>DFO will report on the current program to monitor the catch and associated by-catch in Area 3-6 pink fisheries. The utility of this bycatch data for stock assessment of management applications will be evaluated and be the basis for determining the adequacy of the bycatch monitoring programs.</p> <p>The Skeena Model was developed in the 1990's as a joint effort between MOE and DFO to estimate harvest impacts on steelhead. The 3 recent CSAP papers on Nass sockeye, Skeena chum and Nass chum all provided accepted recommendations to review and expand the Skeena model, and to develop an equivalent for the Nass. These models will be the basis for evaluating bycatch harvest impacts for Nass and Skeena sockeye and pink fisheries. Review and expansion of the Skeena model and the creation of an equivalent version for the Nass will be developed over the next two years.</p>
Client Progress at 1st Surveillance Audit	<p>NCCC – DFO has provided some evidence that capture and discard of non-target species or undersized individuals of target species is at a level of exploitation that has been determined by management to be acceptable.</p> <p>NCCC – DFO has provided some evidence that fishers generally conduct their fishing activity in a manner that is consistent with the goal of reducing the catch of non-target species or undersized individuals of target species.</p>
Observations from 1st Surveillance Audit	NCCC – As indicated above, the degree to which logbook data underestimate the catch of non-target species needs to be assessed using the available on-board observer program data. Estimates of the escapement of steelhead to the Skeena watershed are needed to confirm that exploitation rates are as low as DFO has suggested.
Conclusion at 1st Surveillance Audit	<p>Some progress has been made but more work remains to be done.</p> <p>Progress is confirmed for the NCC UoC. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 3-8	For NCCC pink salmon UoC. Same as Condition 3-2. Certification of North-Central Coast pink fisheries will be conditional until scientifically defensible estimates of non-target species bycatch are obtained annually for North-Central Coast pink fisheries. To be provide by the first annual surveillance audit
PI 3.7.4	The management system solicits the cooperation of the fishing industry and other relevant stakeholders in the collection of data on the catch and discard of non-target species and undersized individuals of target species.
SG 60	<ul style="list-style-type: none"> Catch and discard data provided by the fishing industry and other relevant stakeholders are sufficient to manage the harvests from the majority of the non-target species and undersized individuals from the majority of the target species.
SG 80	<ul style="list-style-type: none"> Sufficient numbers of fish harvesters and processors comply with requests for data on catches and discards of non-target species and undersized individuals of target species to ensure that reliable estimates of total catches and discards for the fishery can be obtained.
SG 100	<ul style="list-style-type: none"> The majority of fish harvesters and processors are in compliance with management requests for the collection of data on catches and discards of non-target species and undersized individuals of target species. Continued improvement in the quality and quantity of catch and discard data is evident.
Score	NCCC Pink: 70 Inner SC Pink: 90 Fraser Pink: 70
Scoring Rationale	The information provided for Inner SC pink fisheries did not identify any bycatch issues for these fisheries. North-Central Coast and Fraser pink fisheries received a partial rating for the sole criteria at the 80 scoring guidepost because estimates of bycatch for Skeena steelhead and Fraser steelhead and sturgeon are lacking for these fisheries. As stated previously for Indicator 3.1.1. No evidence of the quality and quantity of catch and discard data has been provided.
Client Action Plan	A report will be provided to the certifier on by-catch estimates for NCCC.
Client Progress at 1st Surveillance Audit	NCCC – The Ecotrust report for 2011 provides some evidence that harvesters comply with requests for data on catches and discards of non-target species and undersized individuals of target species to ensure that reliable estimates of total catches and discards for the fishery can be obtained.
Observations from 1st Surveillance Audit	NCCC – The AT expressed concerns regarding the adequacy of the Ecotrust sampling program for assessing the degree of compliance for pink fisheries conducted in Area 3 and 4.
Conclusion at 1st Surveillance Audit	<p>Some progress has been made but more work remains to be done.</p> <p>Bycatch estimates were provided, thus fulfilling the deliverable requirement for the first surveillance audit. However, analysis of logbook data bias is required to confirm that estimates are scientifically defensible. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>

Condition 3-9	For Fraser Pink Salmon UoC. - Same as Condition 3-3. Certification of Fraser pink fisheries will be conditional until scientifically defensible annual estimates of non-target species bycatch are obtained for Fraser pink fisheries. To be provide by the first annual surveillance audit.
PI 3.7.4	The management system solicits the cooperation of the fishing industry and other relevant stakeholders in the collection of data on the catch and discard of non-target species and undersized individuals of target species.
SG 60	<ul style="list-style-type: none"> Catch and discard data provided by the fishing industry and other relevant stakeholders are sufficient to manage the harvests from the majority of the non-target species and undersized individuals from the majority of the target species.
SG 80	<ul style="list-style-type: none"> Sufficient numbers of fish harvesters and processors comply with requests for data on catches and discards of non-target species and undersized individuals of target species to ensure that reliable estimates of total catches and discards for the fishery can be obtained.
SG 100	<ul style="list-style-type: none"> The majority of fish harvesters and processors are in compliance with management requests for the collection of data on catches and discards of non-target species and undersized individuals of target species. Continued improvement in the quality and quantity of catch and discard data is evident.
Score	NCCC Pink: 70 Inner SC Pink: 90 Fraser Pink: 70
Scoring Rationale	The information provided for Inner SC pink fisheries did not identify any bycatch issues for these fisheries. North-Central Coast and Fraser pink fisheries received a partial rating for the sole criteria at the 80 scoring guidepost because estimates of bycatch for Skeena steelhead and Fraser steelhead and sturgeon are lacking for these fisheries. As stated previously for Indicator 3.1.1. No evidence of the quality and quantity of catch and discard data has been provided.
Client Action Plan	<p>Programs are in place to estimate the number of sturgeon and steelhead encountered in fisheries directed at Fraser River pink salmon. A mandatory release requirement for both of these species is in effect, therefore, estimates of releases are currently based on unverified reports of releases from fishery participants</p> <p>To satisfy this condition DFO will develop a program to estimate the impact of Fraser River pink fisheries on steelhead and sturgeon. The need for further work will be assessed according to the results of this program. A report summarizing the work will be completed by the first surveillance audit.</p>
Client Progress at 1st Surveillance Audit	<p>As indicated above for Condition 3.3:</p> <p>Fraser – Sturgeon and steelhead bycatch estimates were provided for 2011 pink salmon fisheries conducted within the Fraser River (Matthew Parslow 2012). First Nation Economic Opportunity fisheries were the only in-river fisheries that targeted Fraser pink salmon in 2011 and these fisheries reported small catches of sturgeon and steelhead. However, there was not on-site verification of these catch estimates and no estimates of steelhead caught in marine fisheries were provided.</p> <p>DFO reported that on-board observer data was collected for Johnstone Strait and Area 29 seine fisheries that targeted Fraser pink salmon in 2011 but these data have not been provided to the AT.</p>
Observations from 1st Surveillance Audit	Fraser – The post-season report for South Coast fisheries provides estimates of the number of salmon released for all pink fisheries in marine waters, except the Area 29 seine fisheries that targeted Fraser pink salmon. The bycatch estimates for this later fishery appear to have been included under the Area 29 sockeye seine fishery.

Conclusion at 1st Surveillance Audit	<p>This condition has been partially met but catch estimates for Fraser steelhead in marine fisheries and any on-board observer data available for available for marine fisheries that target Fraser pink salmon need to be provided to the AT.</p> <p>Bycatch estimates were provided, thus fulfilling the deliverable requirement for the first surveillance audit. However, catch estimates for Fraser steelhead in marine fisheries and any on-board observer data available for marine fisheries that target Fraser pink salmon need to be provided during the next surveillance audit. This condition will be evaluated at the next surveillance audit when it is due for completion.</p>
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3	Any complaints against the certified operation; recorded, reviewed and actioned.
	There were no complaints received in relation to the certified operation.
4	Any relevant changes to legislation or regulation.
	There were no relevant changes in legislation found during the course of the first year of MSC certification.
5	Any relevant changes to management regime.
	There were a number of annual changes to the management regime for the fishery. These changes were fully described in the Integrated Fishery Management plans for both northern and southern regions. Most of the relevant changes refer to additional measures implemented to provide clear regulation of salmon fisheries in British Columbia.
8	Overall Conclusions
	<p>The first surveillance audit for the MSC Certified British Columbia pink salmon fishery concluded that there was significant progress made on most conditions. There were no conditions closed out during this first audit.</p> <p>There were 4 conditions in total due to be completed by the first surveillance audit. Of these, significant progress was confirmed on all however the team did not close out any of these and will revisit these during the second annual surveillance audit.</p> <p>There are 16 conditions due at the second annual surveillance audit (not including the postponed conditions from year 1). Of these, the team evaluated progress on all and determined that there progress in all but 5 of these conditions. All conditions will be evaluated at the second surveillance audit as per the requirements of the MSC Certification Requirements Version 1.2.</p> <p>The surveillance audit team reviewed the progress on two surveillance audit conditions, one due by the third surveillance audit and one due by the fourth audit. The team d confirmed adequate progress on these conditions.</p> <p>The assessment team concludes that the MSC certification should continue.</p>

4.0 Stakeholder Comments

The surveillance audit for the certified BC Pink Salmon fishery was conducted in conjunction with the audit for the certified BC Sockeye Salmon fishery. There were no specific comments received in relation to the certified pink salmon fisheries.

Information Sources:

The following information sources were provided in relation to both the MSC certified BC Sockeye and BC Pink Salmon Fisheries. Some of the information sources quoted below are specific to the sockeye audit, however, are listed here so as to be inclusive of all sources.

Meetings

Stakeholder meetings were conducted May 15 - 18, 2012. Information sessions were organized by the Units of Certification. The sessions, dates and participants are listed below.

May 15, 2012**North Central Coast Update**

Intertek Moody Marine/ Assessors: Steve Devitt, Chair; Karl English, Greg Ruggerone, Dana Schmidt

DFO: Paul Ryall, Arlene Tompkins, Dave Peacock, Mark Saunders, Steven Groves, Peter Hall, Dale Gueret, Jeanette LaPointe,

Canadian Pacific Sustainable Fisheries Society: Christina Burrridge, Rob Morley

Notetaker: Dawn Steele

May 16, 2012**Barkley Sound and Fraser Updates**

Moody Marine/ Assessors: Steve Devitt, Chair; Karl English, Greg Ruggerone, Dana Schmidt

DFO: Paul Ryall, Arlene Tompkins, Jeff Grout, Diana Dobson, Michael Folkes, Ann-Marie Huang, Matthew Parslow, Sue Grant (by conference call).

Canadian Pacific Sustainable Fisheries Society: Christina Burrridge, Rob Morley

Notetaker: Dawn Steele

May 17, 2012**Close out Meeting**

Moody Marine/ Assessors: Steve Devitt, Chair; Karl English, Greg Ruggerone, Dana Schmidt

DFO: Paul Ryall, Arlene Tompkins, Jeff Grout

Canadian Pacific Sustainable Fisheries Society: Christina Burrridge, Rob Morley

Notetaker: Dawn Steele

May 18, 2012

Moody Marine/ Assessors: Steve Devitt, Chair; Karl English, Greg Ruggerone, Dana Schmidt

08:45 – 10:30 – **Pacific Salmon Foundation:** Greg Taylor

10:45 – 12:15 - **Upper Fraser Fisheries Conservation Alliance:** Brian Toth

13:00 – 14:20 – **Skeena Wild Conservation Trust:** Greg Knox, Michael Price (via telephone)

14:45 – 16:00 – **Secwepemc Fisheries Commission:** Pat Matthew

Documentation Provided During Surveillance Audit

Cox-Rogers, S. April 2012. Skeena Habitat Benchmarks workshop 2 writeup Cox-rogers. (Doc M – pdf)

Cox-Rogers, S. April 2012. Steve PP Presentation Skeena Sockeye Juvenile Assessments and Possible Status Benchmarks PSF Workshop 2. (Doc J – pdf)

Cox-Rogers S. and B. Spilsted. 2011. Update Assessment of Sockeye Salmon Production from Babine Lake, British Columbia. Can. Tech. Rep. Fish. Aquat. Sci. 2956: viii + 65 p. (Doc W – pdf).

Cox-Rogers, S., Hume, J.M.B., Shortreed, K.S., and Spilsted, B. A risk assessment model for Skeena River sockeye salmon. Can. Manuscr. Rep. Fish. Aquat. Sci. 2920: viii + 60 p. (Doc ZE – pdf).

Davies, S. 2011. Weekly Catch Proportion Of Hatchery Chum In Tree Point Driftnet Fisheries. Unclassified DFO Memo, 14 April 2011. (Doc ZA – pdf).

Davies, S. 2012. Chum Stock ID Assessment (Canadian Area 3 Commercial fishery otoliths). Area 3 Chum otolith sampling program NFund 2012. (Doc ZB – pdf).

DFO. 2011. Guidelines for applying updated methods for assessing harvest rules for Fraser River sockeye salmon (*Oncorhynchus nerka*). DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2010/070.

DFO 2011. Pacific Region Integrated Fisheries Management Plan Salmon - Northern B.C. June 1, 2011 - May 31, 2012. PDF Doc. 159 p.

DFO 2011. Pacific Region Integrated Fisheries Management Plan Salmon – Southern B.C. June 1, 2011 - May 31, 2012. PDF Doc. 268 p.

DFO. 2011. Preliminary Salmon Outlook for 2012. Powerpoint Presentation. 13p.

DFO. 2011. Skeena Management Planning 2011 Powerpoint Presentation. 12p. (Doc ZL – pdf).

DFO. 2011. Skeena Nass Salmon IFMP Issues for 2011. Powerpoint Presentation. 19p. (Doc ZM – pdf).

DFO. 2012. 2011 Commercial SALMON Retained Catch-to-Date (Pieces) for Period 01-Apr-2011 to 30-Mar-2012. Pdf Doc. 1p.

DFO. 2012. 2011 Post Season Review And 2012 Planning Framework Salmon – Central Coast Areas 7 – 10. (Doc ZN – pdf).

DFO. 2012. 2011 Post Season Review – Salmon – Areas 1 – 10. (Doc ZG – pdf).

DFO. 2012. 2011 Post Season Review STAD Power Point. (Doc V – pdf).

- DFO. 2012. Addendum to Fraser sockeye inseason management performance tables.xls. Word Doc. 3p.
- DFO. 2012. Area 3 + 4 Bycatch Comparison.xlsx Spreadsheet.
- DFO. 2012. Assessment of Area 23 Sockeye and 2010 Forecast (Barkley Sound and Alberni Inlet). DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2012/033.
- DFO. 2012. Commercial and First Nations Inland Demonstration Fisheries: 2011 Technical Summary Report. Pdf Doc. 87p.
- DFO. 2012. Data Files in support of LGL PSF Report (Catch, Escapement and Abundance Salmon Areas 1 to 10). (Doc B1 – zip file)
- DFO. 2012. Fraser sockeye inseason management performance tables (final). Excel Spreadsheet.
- DFO. 2012. Guidance for the Development of Rebuilding Plans under the Precautionary Approach (PA) Framework: Growing Stocks out of the Critical Zone. 32p.
- DFO. 2012. New Initiatives under the Sustainable Fisheries Framework (SFF). Powerpoint Presentation. 48p.
- DFO. 2012. North Central Management Planning 2012 Powerpoint Presentation. 13p. (Doc ZK – pdf).
- DFO. 2012. Participant list PSF Skeena Workshop 2. (Doc H – pdf)
- DFO. 2012. Post-Season Report For 2011 Canadian Treaty Limit Fisheries. Pdf Doc. 98p.
- DFO. 2012. Post-Season Report For 2011 Southern BC Fisheries. Pdf Doc. 88p.
- DFO. May 2012. PSF Workshop 1 Backgrounder. (Doc C – pdf).
- DFO. 2012. PSF Workplan PSF Skeena workshop 2. (Doc K – pdf)
- DFO. 2012. Sakinaw Sockeye Workshop Agenda_May 3-12. 6p.
- DFO. 2012. Strategic Framework for Fishery Monitoring and Catch Reporting in the Pacific Fisheries. Powerpoint Presentation. 22p.
- DFO. 2012. Strategic Framework for Fishery Monitoring and Catch Reporting in the Pacific Fisheries. Pdf Doc. 39p.
- DFO. 18 May 2012. Summary of Estimated Lower Fraser Area First Nations Sturgeon Encounters (Harvested and Released), 2011 (Includes FSC and EO fisheries). Excel Spreadsheet. 1p.
- DFO. 2012. Summary of Key MSC Certification Deliverables and their Status for Sockeye. PDF doc., 6p.
- DFO. May 2012. Summary Notes PSF Skeena Workshop 1 (Doc D – pdf)
- DFO. 2012. Summary Notes PSF Skeena workshop 2. (Doc I – pdf)
- Dickson, A.K. 2011. Morrison Watershed Salmon Spawning Report 2011. 62 p. (Doc ZO – pdf).
- Dobson, D.L. and D.S. O'Brien. 2011. Assessment of Henderson Lake sockeye salmon (*Oncorhynchus nerka*). Draft PSARC Working Paper. Fisheries & Oceans Canada. Nanaimo, B.C. (Final report expected in late 2011)

- Dobson, D.L. 2012. May 2012 MSC Audit - Barkley (Area 23) Sockeye Fishery. 27p. Powerpoint Presentation.
- English, K.K., T. Mochizuki, and D. Robichaud. 2011. Review of North and Central Coast Salmon Indicator Streams and Estimating Escapement, Catch and Run Size for each Salmon Conservation Unit. Prepared for Pacific Salmon and Fisheries and Oceans Canada. (Doc A).
- English, K.K., T. Mochizuki, and D. Robichaud. 2012. Appendix D. Model Assumptions and Uncertainties (Draft – 27 March 2012). (Doc B2 - pdf)
- English, K.K. 2012. ENGLISH Core Data for CU assessment PSF Skeena Workshop 1 power point. (Doc G – pdf)
- Ecotrust Canada. 2011. 2011 Area 3 & 4 Seine And Gillnet Biological Sampling And Catch Monitoring Program. Prepared for Fisheries and Oceans Canada. (Doc Z – pdf).
- Folkes, M. Estimation, By Run Reconstruction, of Fishery Exploitation Rates On Sakinaw Sockeye During 2010 & 2011.
- Gottesfeld, A. and D. Latremouille. 2011. The Sockeye Salmon (*Oncorhynchus nerka*) of Morrison and Tahlo Lakes British Columbia, and Their Importance to the Salmon Fisheries of the Skeena Watershed. Prepared for the Skeena Fisheries Commission. (Doc ZF – pdf).
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- Groves, S. 2011. 2011 Post Season Review Fish Management Power Point. (Doc T – pdf).
- Gueret, D. 2012. 1 May 2012. North Coast Area Conditions 35C and 36B MSC Certification for Skeena Sockeye. Powerpoint Presentation.
- Hall, P. 2011. 2011 Post Season Review Fish Management Northern Panel Power Point. (Doc U – pdf).
- Hall, P. 4 May 2012. 2011 Nass and Skeena Sockeye Fisheries Summary. Unclassified DFO Memo
- Hall, P. 30 April 2012. Estimating Released Bycatch in North Coast Net Fisheries from Observer Data – 2006 Example. Unclassified DFO Memo. 18p. (Doc ZJ – pdf).
- Hall, P. 25 April 2012. Submission In Response To Fulfill Conditions 35c And 36b Of The MSC Certification Of The BC Commercial Sockeye Salmon Fishery. Unclassified DFO Memo. 24p.
- Holt, C. A. 2009. Evaluation of benchmarks for conservation units in Canada's Wild Salmon Policy: Technical Documentation. DFO Can. Sci. Advis. Sec. Res. Doc. 2009/059. x + 50 p. (Doc P – pdf)
- Holt, C., Cass, A., Holtby, B., and Riddell, B. 2009. Indicators of status and benchmarks for conservation units in Canada's Wild Salmon Policy. DFO Can. Sci. Advis. Sec. Res. Doc. 2009/058. viii + 74 p. (Doc Q – pdf)
- Huang, A. 2012. Cultus Sockeye: Updated on 2010 and 2011. Powerpoint Presentation. 12p.
- J.O. Thomas and Associates Ltd. 2010. Steelhead Bycatch and Mortalities in the Commercial Skeena Net Fisheries of British Columbia from Observer Data: 1989 to 2009. Prepared for PSF and BC Ministry of Environment. (Doc ZD – pdf).
- Korman, J. 2012. Korman PP Presentation Preliminary Benchmark Analysis for Sockeye CU PSF Skeena Workshop 1. (Doc F – pdf)

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1. MSC Principles and Criteria for Sustainable Fishing
2. MSC Certification Requirements, version 1.2. January 2012.
3. MSC Guidance to the MSC Certification Requirements, version 1.1. January 2012.

Annex 1: Determination of surveillance level

A surveillance audit may be conducted as either an “on-site” or “offsite audit”. This is determined by using criteria set out by the MSC:

Criteria	Surveillance Score	BC Pink Salmon
1. Default Assessment Tree		
Yes	0	0
No	2	2
2. Number of Conditions		
Zero Conditions	0	0
1-5 Conditions	1	0
>5 Conditions	2	2
3. Principle Level Scores		
≥ 85	0	0
<85	2	2
4. Conditions on outcome PIs?		
Yes	2	2
No	0	0
Total		8

The score for the fishery is used to determine the surveillance level appropriate to the fishery using the table below:

Surveillance score	Surveillance level		Years after certification or re-certification			
			Year 1	Year 2	Year 3	Year 4
2 or more	Normal surveillance		On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & recertification visit
1	Remote surveillance	Option 1	Off-site surveillance audit	On-site surveillance audit	Off-site surveillance audit	On-site surveillance audit & recertification visit
		Option 2	On-site surveillance audit	Off-site surveillance audit	On-site surveillance audit	
0	Reduced surveillance		Review new information	On-site surveillance audit	Review new information	On-site surveillance audit & recertification visit

The BC Pink Salmon scores 8, because the Default Assessment tree was not used, >5 conditions remain open, some Principle level scores were <85 and there were conditions on outcome PIs, and so will require an on-site audit next year.