



Fisheries and Oceans  
Canada

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**PACIFIC SALMON OUTLOOK  
PACIFIC REGION  
2011**

Canada 

## 2011 SALMON STOCK OUTLOOK

Since 2002, Pacific & Yukon Region, Stock Assessment staff have provided a categorical outlook for the next year's salmon status. The Outlook is intended to provide an objective and consistent context within which to initiate fisheries planning. In particular, it provides a preliminary indication of salmon production and associated fishing opportunities by geographic area and species (a stock group). The Conservation Units covered by each species/stock grouping are listed in Appendix 1.

For each stock group, a status outlook is provided on a categorical scale of 1 to 4 (table below). The category reflects the current interpretation of available quantitative and qualitative information, including pre-season forecasts if available, and the opinion of DFO Area stock assessment staff. Where management targets for stocks have not been formally described, interim targets were either based on historical return levels or, if necessary, opinion of local staff. The Department is currently proceeding on defining methods to determine benchmarks of status under the Wild Salmon Policy and will be consulting on these over the next year.

Status categories may have consequences to fisheries where a stock group is caught directly or incidentally. In the context of this outlook the probable fishery consequences associated with each of the four status categories are identified in the table. Stock groups forecast in category "2" are considered "sensitive" and fisheries should be planned to reduce impacts on these groups.

Status Category	Category Definition	Criteria	Fishery Consequences
1	Stock of concern	Stock is (or is forecast to be) less than 25% of target or is declining rapidly.	Directed fisheries are unlikely and there may be a requirement to avoid indirect catch of the stock.
2	Low	Stock is (or is forecast to be) well below target or below target and declining.	Directed fisheries are uncertain and likely to be small if permitted. Allocation policy will determine harvest opportunities.
3	Near Target	Stock is (or is forecast to be) within 25% of target and stable or increasing.	Directed fisheries subject to allocation policy.
4	Abundant	Stock is (or is forecast to be) well above target.	Directed fisheries subject to allocation policy.
ND	No Data	Insufficient data to determine an outlook category.	

It is important to note that the fishery consequences implied by any of the status categories do not include interactions with other stocks. Consequently, conservation requirements for stocks in status categories 1 and 2 may limit fishing opportunities for stock groups for which there are no concerns. Where possible the comments associated with each stock identify such potential constraints. A range of status categories indicates significant geographic variation in status within the stock group and fisheries may be shaped in response to that variation.

**This 2011 outlook should be regarded as an early scan of salmon production, as very preliminary information, and is subject to change as more information becomes available. The outlook will be periodically up-dated as statistical forecasts and assessments are completed and reviewed.**

## Summary of Pacific Salmon Species/Stock groups for 2011

A total of **93** species/stock groups were considered and status categorized for **87**. Five groups were data deficient (ND), and one pink group was not applicable (NA). Thirty-seven (**37**) stock groups are likely to be at or above target abundance (category 3, 4, 3/4), while **30** are expected to be of some conservation concern (category 1, 2, 1/2). The remaining **20** stock groups had mixed status levels (1/4, 2/3, 2/4). Overall, the outlook for 2011 is improved relative to 2010: 16 stock groups improved in status, while 4 declined in status (Okanagan and Nass sockeye, and Chum in Areas 6, 7 and Johnstone Strait). Please note that assessments for southern BC chum and coho salmon are incomplete, forecasts are not available at this time and these data will be revised later.

Species/Stock	2011 Outlook status	Comments
<b>Sockeye</b>		
1. Okanagan	2	Production of late winter sockeye fry in Osoyoos Lake was estimated at roughly 1 million pre-smolts. Recent smolt-to-adult survival has been highly variable fluctuating between a high of almost 11% in the 2000 sea-entry year to a low of 3% in the 2004 sea-entry year coinciding with either anomalously cold or anomalously warm ocean years. The 2009 sea entry year was close to the all year average for SST so a mid-range smolt-to-adult survival of 5% is expected. This supports a very preliminary forecast that 50,000 Okanagan sockeye adults will return to Wells Dam in 2011, substantially lower than returns in recent years and below the Canadian escapement objective of roughly 60,000 adult sockeye at Wells. An actual forecast will be produced later in the year in collaboration with CRITFC group in Washington State. <i>(2010 Outlook was 3)</i>
<b>Fraser Sockeye</b>	<b>Overview</b>	Fraser Sockeye 2011 forecasts assume that long term average productivity will persist through to 2011. Forecasts will be available later in the year. Currently, however, without leading indicators for Fraser Sockeye productivity and with recent years highly variable productivity (very low stock productivity associated with 2009 returns and generally above average stock productivity associated with the 2010 returns), it is possible that the 2011 returns will fall at either the low or high ends of the forecasted probability distribution.
2. Early Stuart (CU: Takla-Trembleur-Early Stuart)	1	Below average returns are expected in 2011 relative to the cycle return average of 170,000 (1953-2009). The 2007 brood year escapement (2,400 effective female spawners: EFS) was well below this stock's cycle average escapement (29,000 EFS). Productivity (recruits-per-effective female spawner: R/EFS) in recent years, including the 2010 return year, has also been below average. <i>(2010 outlook status was 1).</i>
3. Early Summer – North Thompson (CU: Kamloops-ES)	3	<b>Raft:</b> Above average returns are expected in 2011 relative to the cycle return average of 20,600 (1953-2009). The 2007 brood year escapement for Raft (8,100 EFS) was four times greater than the cycle average (2,000 EFS). <b>Fennell:</b> Average to above average returns are expected for 2011 relative to the cycle return average of 33,400 (1972-2009). The 2007 brood year escapement for Fennell (6,800 EFS) was above the cycle average (4,900 EFS). <i>(For Fennell and Raft combined, the 2010 outlook status was 3).</i>
4. Early Summer South Thompson (CU: Shuswap-ES)	3	<b>Scotch:</b> Above average returns are expected in 2011 relative to the cycle average of 18,500 (1984-2009). The 2007 brood year escapement for Scotch (4,800 EFS) was greater than the cycle average (3,000 EFS).

2011		
Species/Stock	Outlook status	Comments
		<b>Seymour:</b> Below average returns are expected in 2011 relative to the cycle return average of 163,000 (1953-2009). The 2007 brood year escapement for Seymour (5,900 EFS) was below the cycle average (21,000 EFS). (For Scotch and Seymour combined, the 2010 outlook status was 3).
5. Early Summer – Mid/Upper Fraser (CUs: Anderson-ES; Francois-ES; Bowron-ES)	2	<b>Gates:</b> Below average returns are expected in 2011 relative to the cycle average of 24,400 (1973-2009). The 2007 brood year escapement for Gates (1,100 EFS) was below the cycle average (2,900 EFS). <b>Nadina:</b> Below average returns are expected in 2011 relative to the cycle average of 86,700 (1978-2009). The 2007 brood year escapement for Nadina (1,000 EFS) was below the cycle average (13,500 EFS). <b>Bowron:</b> Below average returns are expected in 2011 relative to the cycle average of 79,200 (1953-2009). The 2007 brood year escapement for Bowron (1,100 EFS) was below the cycle average (9,100 EFS) and productivity has been particularly low in recent years. (For Gates, Nadina and Bowron combined, the 2010 outlook status was 2).
6. Early Summer – Lower Fraser (CU: Pitt-ES; Chilliwack-ES; Nahatlach-ES)	4	<b>Pitt:</b> Above average returns are expected in 2011 relative to the average of 70,500 (1953-2009). The brood year escapement for Pitt age-5 (19,900 EFS) and age-4 (21,300 EFS) was above average (13,500 EFS); Pitt has a greater proportion of age-5 recruits (~70%) relative to age-4 recruits. Return data are not available for the remaining two sites in this stock group (Chilliwack Lake/Dolly Varden Creek and Nahatlatch Lake/River); only escapements can be compared to time series averages. <b>Chilliwack Lake/Dolly Varden Creek</b> brood year escapement in 2007 (1,071 EFS) was below the recent time series average (6,900 EFS) across all cycles; the time series for Dolly Varden Creek only commences in 2000. <b>Nahatlatch Lake/River</b> brood year escapement (2,021 EFS) was similar to the cycle average (2,061 EFS). (2010 outlook status was 3).
7. Summer – Chilko (CUs: Chilko-S; Chilko-ES; Taseko-ES)	4	Average returns are expected in 2011 relative to the cycle average of 1,600,000 (1953-2009). The number of outmigrating smolts in the 2007 brood year (2009 outmigration year) (25.2 million sub2 smolts) was above average (19.6 million) for Chilko. The brood year escapement for Taseko (886 EFS) was below the cycle average (3,300 EFS). (2010 outlook status was 4).
8. Summer – Late Stuart (CUs: Takla-Trembleur-S; Stuart-S)	2	Below average returns are expected in 2011 relative to the cycle average of 85,600 (1953-2009). The 2007 brood year escapement for Late Stuart (4,100 EFS) was below the cycle average (10,600 EFS). (2010 outlook status was 2).
9. Summer – Nechako (CU: Fraser-S)	3	Below average returns are expected in 2011 relative to the cycle average of 594,300 (1953-2009). The 2007 brood year escapement for Stellako (19,600 EFS) was below the cycle average (57,400 EFS). (2010 outlook status was 3).
10. Summer – Quesnel (CUs: Quesnel-S; McKinley-S)	3	Above average returns are expected in 2011 relative to the cycle average of 152,700 (1953-2009). The 2007 brood year escapement for Quesnel (33,800 EFS) was above the cycle average (29,300 EFS). (2010 outlook status was 3).
11. Fall – Cultus (CU: Cultus-L)	1/2	Below average returns are expected in 2011 relative to the cycle average of 86,300 (1953-2009). Juvenile production of 340,147 smolts (80% hatchery and 20% wild) was below the cycle average (1.2 million smolts) and productivity has been low in recent years. Wild outlook 1, hatchery outlook 2. (2010 outlook status was 1/2).
12. Fall – Portage (CU: Seton-L)	3	Below average returns are expected in 2011 relative to the cycle average of 26,600 (1958-2009). The 2007 brood year escapement for Portage (800 EFS) was below the cycle average (2,500 EFS). (2010 outlook status was 3).

2011		
Species/Stock	Outlook status	Comments
13. Fall – South Thompson (CU: Shuswap-L)	4	Below average returns are expected in 2011 relative to the cycle average of 1.4 million (1953-2007). The 2007 brood year escapement for Late Shuswap (32,000 EFS) was below the cycle average (191,400 EFS). (2010 outlook status was 4).
14. Fall – Birkenhead (CU: Lillooet-L)	3	Average returns are expected in 2011 relative to the cycle average of 376,100 (1953-2009). The 2007 brood year escapement for Birkenhead (54,000 EFS) was similar to the cycle average (43,000 EFS). (2010 outlook status was 3).
15. Fall – Lower Fraser CUs: Harrison (U/S)-L; Harrison (D/S)-L; Lower Fraser River (River-Type); Widgeon (River-Type)	3	<b>Weaver (including miscellaneous Harrison Lake-rearing stocks):</b> Average returns are expected in 2011 relative to the cycle average of 209,300 (1971-2009). The 2007 brood year escapement for Weaver (15,800 EFS) was similar to the cycle average (18,000 EFS). <b>Harrison:</b> Above average returns are expected in 2010 relative to the cycle average of 71,400 (1953-2009). Escapement for Harrison was 57,400 EFS in the 2007 brood year (age-4 recruits in 2011) and 4,400 EFS in the 2008 brood year (age-3 recruits in 2011) and these brood years are, respectively, above and below the long term average (EFS). Productivity for Harrison has increased in recent years. For the remaining two sites in this stock group (Widgeon Creek and Big Silver Creek), return data are not available, instead escapements only are compared to time series averages. <b>Widgeon Creek</b> brood year escapement (65 EFS) was below the cycle average (300 EFS). <b>Big Silver Creek</b> brood year escapement (2,461 EFS) was above the cycle average (624 EFS). (2010 outlook status was 3).
16. Somass	3	Very preliminary evaluation of available data indicates exceptional survival of 2006 brood (2008 ocean entry year), suggesting large age 5 component in 2011. Expect near average return from the 2007 brood. Overall average to above average return albeit with significant uncertainty based on data to November 1. Quantitative forecast will be produced in February 2011. (2010 outlook status was 3).
17. Henderson	2	Low brood year spawner levels with exceptional survival of 2008 ocean entry year resulted in a good return in 2010. It is assumed at this time that the age 4 component dominated the return in 2010. This suggests a good age 5 return, but high uncertainty in return of younger age classes. Outlook status 2 may be conservative but is based on high uncertainty. (2010 Outlook Status was 2)
18. WCVI-Other	1/2	Assessment data are not available to forecast others systems. However, Hobiton, Kennedy and smaller sockeye CU's such as Jantzen Lake are generally depressed. (2010 Outlook Status was 1/2).
19. Area 11-13	1/2	Survival conditions for sockeye stocks in this area appear improved for the 2010 return. Preliminary information from Nimpkish River has shown a strong return likely 3-4 times the long term average and well above the contributing parental brood years. Other monitored systems such as Heydon Creek and Quatse River demonstrated similar strength in returns. Heydon Creek sockeye returns were 2 times the parental brood returns. Quatse River sockeye escapement was the largest recorded since an intensive monitoring program began in 2006. This improved survival was also apparent in the pink and coho returns in 2009 which out-migrated in 2008, the same year as most of these sockeye stocks, indicating productive marine conditions. Brood year escapements were low for most of the sockeye stocks that will contribute to the 2011 return. It is still early in assessing the outmigration conditions the sockeye encountered in 2009 and whether or not that will equate to another strong return in 2011. Returns of pink and coho in 2010 are showing some improvement in returns but not at the level encountered in 2009, indicating outmigration condition were favorable in 2009 but not as favorable as 2008. Based on the weakness of the brood years our expectations for 2011

Species/Stock	2011 Outlook status	Comments
		continue to be low with some possible continued improving trend in marine survival. (2010 outlook status was the same 1/2).
20. Sakinaw	1	29 sockeye (27 hatchery origin, 2 wild origin) were enumerated in late July 2010, the return from the 2008 smolt production of approximately 12,000 hatchery and 200 wild origin smolts. This is a substantial increase in marine survival over previous years. The 2009 smolt production which is the first main group from the Captive Brood Program, was 62,000 and we expect 50 adults to escape in 2011. This stock essentially exists at Rosewall and Ouilette Hatcheries (captive brood). (2010 Outlook status: 1)
21. Area 7-10	1 / 2	Returns are expected to be low. Area 9 and 10 returns in 2010 were better than recent years, but brood year escapements for 2011 returns were very low. Sockeye returns to Areas 7 and 8 in general continue to be depressed (2010 Outlook status: 1/2)
22. Coastal 3/6	2 / 4	Status is uncertain. Very limited assessment data for evaluation. (2010) Outlook status: 2/4).
23. Babine Lake Enhanced	4	Average abundance forecast for age-4 sockeye based on 2010 jack returns. Very poor age-5 return expected based on age-4 returns in 2010. (2010 Outlook status: 3)
24. Skeena Wild	1 / 4	Strong returns of some middle and lower Skeena sockeye stocks. Babine River sockeye escapement continues to be poor. Generally expect good survival for sockeye that went to sea in 2008 (returning as 5 year olds this year). The survival for sockeye that went to sea in 2009 (returning as 4 year olds this year) is very uncertain. (2010 Outlook status: 1/4)
25. Nass	1 / 4	Below average returns are expected. Concern for stock status of some non-Meziadin sockeye. (2010 Outlook status: 2/4).
26. QCI	2 / 4	Status uncertain for some systems, limited assessment work. (2010 Outlook status: 2/4).
27. Alsek	2 / 3	Based on brood year escapements (which were near the upper end of the goal range) and the historical stock-recruitment relationship, an above average run is expected. Recently, several returns have been well below expectations (record low in 2008) but it appears survivals have improved (2010 return was above expectations). Hence, the outlook has been upgraded to a 2/3 for 2011. (2010 Outlook Status was 2)
28. Stikine-wild	3	Stikine sockeye production has varied widely since 1985. Low production periods occurred in the mid 1980(s) to early 1990(s). From 2003 through 2006 production improved, believed due to improved marine survival. However, runs in 2007-10 were below forecast suggesting a downturn in marine survival. For 2011, the Tahltan Lake component is predicted to be above average due to the above average number of smolts which emigrated from the lake in 2008. The mainstem component is expected to be below average. Based on the poor marine survival of these stocks since 2007, the 2011 return may not meet pre season expectations of traditional forecast models. However, fishing opportunities are expected within the confines of conservation and PST harvest sharing arrangements (2010 Outlook Status was 3)
29. Taku-Wild	3	Although the data are preliminary, the 2010 run appears to have returned below forecast; on the plus side however, there appears to be a relatively high proportion of younger fish. Considering the outlook for 2011, the brood year escapement was above the range associated with maximum production for the dominant cycle run and within this range for the sub-dominant cycle run. Production is expected to be average based on preliminary stock-recruitment analysis. Fishing opportunities are expected within the confines of conservation and PST harvest sharing

2011		
Species/Stock	Outlook status	Comments
		arrangements. Special measures may be needed to achieve the egg-take goal for Tatsamenie enhancement. (2010 Outlook Status was 3)
<b>Chinook</b>		
30. Early spring – upper & mid-Fraser, North Thompson	1	Escapements in 2010 continue to be low. This is the fourth successive year where aggregate escapement has failed to replace parental spawning abundance. Populations of concern continue to include the Cottonwood, and Chilako rivers, although escapements improved over brood at Westroad and Upper Chilcotin.. Expectations are for continued low escapements in 2011, related to persisting unfavorable marine conditions. There is no exploitation rate indicator stock for this group. (2010 Outlook status: 1)
31. Late summer – South Thompson	4	Aggregate escapement in 2010 exceeded brood year escapement levels. Record escapements occurred at Adams (~10,000) and Lower Shuswap (~80,000). Abundance should continue to be favourably affected by marine conditions experienced by the 2011 return. Very poor jack returns at Lower Shuswap, may signal concerns for 2012 and on. Indicator stock is Lower Shuswap (2010 Outlook status: 3/4)
32. Spring – upper & mid-Fraser, North Thompson	1	Escapements in 2010 continue to be low. This is the fourth successive year where aggregate escapement has failed to replace parental spawning abundance. Expectations are for continued low escapements in 2011, related to persisting unfavorable marine conditions. There is no exploitation rate indicator stock for this group. (2010 Outlook status: 1)
33. Summer – upper & mid-Fraser, North Thompson	1	Escapements observed in 2010 continue to be low, although the Nechako and Cariboo exceeded brood abundance. Expectations are for continued low escapements in 2011 related to persisting unfavorable marine conditions. Of particular concern was Clearwater River (~1,100) There is no exploitation rate indicator stock for this group. (2010 Outlook status: 1)
34. Spring – lower Thompson	1	Escapement trends in 2010 were mixed; some stocks improved over brood levels; others, including Spius and Coldwater failed to reach brood levels. Expectations for 2011 are for continued very low abundance levels, the result of low parental escapements in 2007 and continued poor marine survival rates. Exploitation rate indicator for this group is Nicola River. (2010 Outlook status: 1)
35. Fall – lower Fraser natural	3	Average returns expected in 2011. 2010 adult escapements at Harrison were better than expected (~105,000). . Formal forecast will be available in late winter. (2010 Outlook status: 2)
36. Fall – lower Fraser hatchery	3	Although there are significant hatchery releases of Harrison fall-run chinook stock into the Harrison & Stave Rivers, lower Fraser River fall-run hatchery chinook consists mainly of Chilliwack Hatchery releases. 2010 adult spawning escapement estimate at Chilliwack was ~75,000. Average returns expected in 2011. Forecasts will be prepared for late-winter release. (2010 Outlook status: 2/3)
37. Early spring – lower Fraser	2	Preliminary Birkenhead River escapement indicates improved abundance in 2010, similar to brood year (2005) escapement of 1,425 adults. While the brood for the 2011 return was also strong, without an indicator program for this stock group, freshwater and marine survival trends remain uncertain. (2010 Outlook status:1/2)
38. Summer – lower Fraser	1/2	Expectations are for abundance levels in 2011 similar to those seen in 2010, but very little is known about the productivity of these small populations. Maria Slough escapement in 2010 was similar to that seen in recent years, however the escapement to Big Silver was very low. The small size of these populations increases their vulnerability, and without an indicator, their freshwater and marine survival trends remain uncertain. (2010 Outlook status: 1/2)

Species/Stock	2011 Outlook status	Comments
39. WCVI-hatchery	2/3	2010 returns to the Somass were significantly below average, mainly due to lower than expected age 4 returns, which suggests low age 5 return in 2011. Subsequent broods may benefit from ocean entry conditions in 2008 and 2009, although returns in 2010 did not reflect this to the extent expected. Based on limited data available at this time expect improved return in 2011 relative to 2010 but likely still below average to near average. Forecast will be available in March 2011. <i>(2010 Outlook Status: 2/3)</i>
40. WCVI-wild	1	Escapements in recent years were well below target for wild WCVI origin chinook, with some variation between CUs in NWVI and SWVI. In NWVI there are indications of moderate improvements, this trend is not being observed in SWVI. Although final escapement estimates and age composition data are unavailable, expectations are for continued low returns in 2011. <i>(2010 Outlook Status: 1)</i>
41. Johnstone Strait area including mainland inlets	2/3	Preliminary 2010 returns to the Quinsam River hatchery indicator are average, similar to 2009. Escapement monitoring is ongoing and preliminary information suggests a return of approximately 5,500 to 6,000 Chinook to the Campbell/Quinsam River system. Data is sparse for most of the Mainland Inlet Chinook stocks, but most Chinook populations surveyed are well below historic abundances. <i>(Outlook is similar to 2010 with wild stocks at low level (2) and hatchery stocks likely near target (3)).</i>
42. Georgia Strait Fall (wild and small hatchery operations)	1	Spawner levels are still well below goal but appear to be improving from historic lows in 2009. The return in 2010 was better than expected, likely due to improved survival from ocean entry year 2008 as well as other rebuilding actions. Cowichan jack return in 2010 was one of the highest in recent years, suggesting continued improvement in 2011. Returns to Chemainus River are still low. For Nanaimo, a slight improving trend is likely to continue in 2011. <i>(2010 Outlook Status: 1)</i>
43. Georgia Strait Fall (large hatchery operations)	2	Returns in 2010 to rivers with major hatcheries (Big Qualicum, Little Qualicum and Puntledge) are similar to last year's (2009) returns. These last two years have higher escapements than previous years. <i>(2010 Outlook Status: 2)</i>
44. Georgia Strait Spring and Summer	2	2010 returns to Nanaimo River (spring and summer) are similar to near term averages and returns to Puntledge (summer) hatchery are below last year's return, both are below target escapements. Rebuilding efforts are continuing. <i>(2010 Outlook Status: 2)</i>
45. Area 8	3/4	Dean River and Bella Coola returns are expected to be average. <i>(2010 Outlook Status: 3/4).</i>
46. Area 9-10	2/3	Wannock River Chinook returns are expected to be average. The spring-run stocks including the Owikeno tributary stocks and Chuckwalla/Kilbella are expected to be below average as brood year escapements were poor. <i>(2010 Outlook Status: 2/3).</i>
47. Coastal Areas 3 to 6	2/3	Stocks are generally depressed and variable and this pattern is expected to continue. Poor quality assessments. <i>(2010 Outlook Status: 2/3).</i>
48. Nass	3/4	Average return expected (pending detailed review of the 2010 return age structure). <i>(2010 Outlook Status: 3/4).</i>
49. QCI	3/4	The Yakoun chinook stock appears stable at relatively high levels. <i>(2010 Outlook Status: 3/4).</i>
50. Skeena	3/4	Variable ocean survivals for Skeena Chinook in recent years make the outlook uncertain. Average returns similar to recent years are anticipated. <i>(2010 Outlook Status: 3/4).</i>
51. Alsek	3	Brood year escapements were near or below that considered to be the optimal range. Based on the historical stock recruitment relationship, a near average run would be expected. Alsek Chinook have been in a state of poor productivity; runs



Species/Stock	2011 Outlook status	Comments
		in 2006 through 2008 were the three lowest on record. It appears the trend may be reversing as the escapement goals were met in 2009 and 2010. The 2011 outlook has been upgraded slightly to reflect this. <i>(2010 Outlook Status was 2/3)</i> .
52. Stikine	2	A bilaterally developed run outlook is required by December 01. This stock has been subjected to directed commercial fisheries since 2005 as a result of new provisions under the Pacific Salmon Treaty. Renewed arrangements for 2011 allow for directed fisheries if the pre-season forecast is greater than 28,100 large Chinook (Chinook > 659 mm mid-eye to fork length). Inseason projections of total run size must be >24,500 large chinook for directed fisheries to continue. The preliminary pre-season sibling-based forecast is 27,800 large Chinook suggesting production will be below the pre-season trigger for conducting a directed fishery in Canada. A directed Canadian commercial fishery will not occur in 2011 unless the pre-season and inseason run projections exceed the thresholds indicated above. <i>(The 2010 Outlook Status was 2)</i> .
53. Taku	3	Taku Chinook salmon have been managed under a PST fishing regime implemented in 2005 and renewed for the 2009-2018 period with some minor modifications. The Transboundary Technical Committee (TTC) presented an interim revised escapement goal prior to the 2009 season. It is anticipated that the revised goal of 25,500 large Chinook with a range of 19,000 to 36,000 fish will be used for remainder of the 2009-2018 period. The previous goal range was 30,000-55,000 with a point target of 36,000 large Chinook.  A bilaterally developed run outlook for 2011 is not yet available. However, a preliminary look at the 2010 return and historical sibling relationships suggests that the 2011 run will be somewhat below the average of 48,000 large Chinook. Based on the new escapement goal and PST harvest sharing arrangements, a run of this magnitude will permit a small directed chinook fishery in Canada, but not in the U.S.. <i>(The 2010 Outlook Status was 3)</i> .
54. Yukon	2 / 3	A below average run is expected in 2011. The Yukon Chinook salmon database was revised in the spring of 2008 and an Interim Spawning Escapement Goal (IMEG) of >45,000 was adopted for 2008 and 2009. Revised estimates of the total upper Yukon spawning escapements from 2003 to 2005, the three primary brood years contributing to the 2010 run, exceeded the IMEG. However, total production has not yet returned to the levels observed prior to 1998. The 2007, 2008, and 2010 runs were unexpectedly weak and conservation measures were required (i.e. there were no Canadian commercial or domestic fishery openings and Chinook retention was varied to zero in the recreational fishery). The 2009 run was below average and conservation measures were implemented throughout the drainage to meet PST obligations and conservation objectives. If the factors contributing to the weak runs in 2007, 2008 and 2010 and below average run in 2009 persist, fishing opportunities may again be limited in 2011. <i>(2010 Outlook Status was 2 / 3)</i> .
<b>Coho</b>		
55. Mid/upper-Fraser	1	Escapements to most streams in 2010 failed to achieve parental brood levels. Rebuilding will continue to be affected by marine survival conditions. The outlook for 2011 is for continued low abundance, a result of low escapement in 2008 and persistent unfavorable conditions affecting coho survival. Sustained improvement in marine conditions will be required to improve status. <i>(2010 Outlook status: 1)</i>
56. Thompson	1	Escapements to most streams in 2010 failed to achieve parental brood levels. Rebuilding will continue to be affected by marine survival conditions. The outlook for 2011 is for continued low abundance, a result of low escapement in 2008 and

Species/Stock	2011 Outlook status	Comments
		persistent unfavorable conditions affecting coho survival. Sustained improvement in marine conditions will be required to improve status. (2010 Outlook status: 1)
57. Lower Fraser	2	With winter 2010/11 escapement surveys nearly complete, preliminary indications are that escapements were generally above those of the parental brood year. Parental brood escapements in 2008 were moderate. Sustained improvements in marine survival will be required to improve status further. (2010 Outlook status: 1/2)
58. WCVI	3	2010 returns into the Stamp River were well below average. Coho jack returns were near average in 2010 suggesting near average return of adults in 2011. Forecast will be available in March 2011. (2010 Outlook Status: 2)
59. Area-12	2 / 3	It is early in the monitoring of coho in this area. Extensive monitoring of key streams (Keogh) in the area is still ongoing but preliminary data suggest returns are showing some improvement but not at the level encountered in 2009. Expectations for 2011 are tempered by the extremely depressed brood return in 2008, just above average Keogh smolt production in 2010 (indicator), and possible lower marine survival due to warming conditions during the spring and summer of 2010. If marine conditions remain comparable to the 2008 and 2009 out-migration years, we could anticipate similar returns of coho to the area. Expectations are for returns similar to the last 3 years but are highly uncertain. (2010 Outlook Status: 2/3)
60. Area-13 North	2	It is early in the monitoring of returns for these stocks but indications are similar to Area 12 with larger than anticipated returns likely attributed to improved marine conditions during the 2009 out migration. It is uncertain if improved conditions continued for the 2010 (brood 2008) out-migration year which will make up the 2011 return. Stocks will likely remain depressed mainly due to the low numbers of spawners in the 2008 brood year, whether condition have improved or not.. (2010 Outlook Status: 2).
61. Georgia Strait	1/2	The 2009 marine survivals ranged from 0.4% to 1.3% for hatchery stocks and 2.8% - 3.8% for wild stocks. Marine survival rates for 2010 returns are not available. The 2011 expectation is for continuing low returns similar to last year. Forecast will be available in March 2011. (2010 Outlook Status: 1/2)
62. Area-7-10	3/4	2007 and 2008 brood year escapements were generally low. Survivals were relatively good for the 2009 and 2010 after poor returns in 2006 to 2008. Returns are uncertain and depend on the survivals of the juveniles to sea in 2010. (2010 Outlook Status was 2/4)
63. Area 5/6	3/4	Better survivals in 2009 and 2010 returns compared to relatively poor survivals 2006 through 2008. Returns are uncertain and depend on the survivals of the juveniles to sea in 2010. (2010 Outlook Status was 2/4).
64. Area-3	3/4	Strong return is expected, but depends on the survivals of the juveniles to sea in 2010. (2010 Outlook Status was 3/4).
65. QCI-E (Area 2E)	3/4	Assessments limited to two populations since 2002 (Tlell weir and Deena intensive escapement surveys). (2010 Outlook Status was 3/4).
66. QCI-N (Area 1)	ND	No recent assessments. <i>There is no change in the outlook status from 2010</i>
67. QCI-W (Area 2W)	ND	No recent assessments. <i>There is no change in the outlook status from 2010.</i>
68. Skeena	3/4	Returns are uncertain and depend on the survivals of the juveniles to sea in 2010. Outlook for lower Skeena tributaries is less certain, based on poor quality assessments. (2010 Outlook Status was 3/4).
69. Skeena – high Interior	2/3	Returns are uncertain and depend on the survivals of the juveniles to sea in 2010. (2010 Outlook Status: 2/3).

Species/Stock	2011 Outlook status	Comments
70. Alsek	2/3	A below average run is expected based on a low weir count in the Klukshu River for 2007. (2010 Outlook Status was 2/3)
71. Stikine	3	An ABM regime has not yet been developed for this stock. Under the current PST arrangements, Canada is permitted to harvest 5,000 coho in a directed fishery. Reliable brood year escapement data is limited and available information is sometimes contradictory: extrapolated test fishing indices were well above average, yet results from limited aerial surveys were below average. Based on data of limited quality, the 2011 return is expected to be below average. (2010 Outlook Status was 3)
72. Taku	4	For 2011, a below average run is expected based on preliminary estimated smolt abundance in 2010 combined with recent smolt-to-adult survival rates. It should be noted however, that coho exploitation rates have been relatively low over the past two decades and escapements have frequently been 2-3 times the upper end of the escapement goal range. It is anticipated that the run will be sufficient to allow the harvest of 10,000 coho in a directed fishery, plus several times this number in excess to spawning escapement requirements, as identified in the new PST arrangements. (2010 Outlook Status was 3)
73. Yukon	ND	Little is known about the stock status within Canadian portions of the Yukon River drainage. Harvest data from the U.S. portion of the drainage indicate spawning abundance decreased since 1984-91 but has recently been increasing. The general sense in Alaska is that recent exploitation is low and has been influenced by conservation actions to protect co-migrating fall chum particularly since 1998.
<b>Pink</b>		
74. Fraser – Odd (CU: Fraser River)	4	Above average returns are expected in 2011 relative to the cycle average of 12.3 million (1961-2009). The estimated abundance of out-migrating fry from the 2009 return year (1.06 billion) was greater than the long term cycle average of 376 million (1961-2007). The most recent spawning escapement program occurred in 2001; subsequent escapement estimates are based on final in-season run-size estimates minus catch. (2009 Outlook Status: 4; 2010 Outlook Status: n/a (relative to the odd numbered years, insignificant abundance of pink return to the Fraser River in even numbered years)).
75. Squamish - Odd	ND	No qualitative assessment information is available. (2009 Outlook status: ND)
76. WCVI-Odd	ND	No quantitative assessment information is available.(2009 Outlook status: ND)
77. Area-11/13- Odd	2/3	Even year returns in 2010 continued to show a distinction in productivity between the northern and southern portions of the area. Returns of pink to the northern portions demonstrated some minor improvements over the extremely depressed brood return in 2008 stabilizing a declining trend since 2004. Stocks in the southern portion continue to show an improving trend for the even cycle line  The odd-year cycle line of pink salmon has continued to demonstrate an improving trend over the last few generations for all stocks in the area. The strong returns in 2009 indicated improved marine conditions attributing to better survivals for the fry that out-migrated in 2008. Even though returns to the spawning grounds in 2009 were strong, significant rain events in November had a large negative impact on the deposited eggs. This was evident in downstream monitoring at both Glendale and Quinsam Rivers. Expectation for 2011 are low to near target based on the strong parental brood return in 2009, the likelihood of reduced freshwater survival due to the flooding events in 2009 and the indication of lower productivity in the marine waters during the 2010 out migration time period. Historically, pink returns to this

Species/Stock	2011 Outlook status	Comments
		area have been highly variable and expectations are highly uncertain. (2009 outlook status was 2/3).
78. Georgia Strait-west	2/3	Preliminary information suggests returns in 2010 are much higher than average. Seapen returns in 2010 were excellent in Nanaimo and Cowichan. Outlook is for highly variable returns, (natural returns low, seapen returns average to good). (2010 Outlook Status: 2/3)
79. Georgia Strait – east	2	Assessment information on pinks in this area is limited. Enumeration at Lang Creek fence was much higher than average and amongst the highest estimate on record. The expectation is for low returns with the exception of seapen returns which may experience higher survivals. (2009 Outlook Status:2)
80. Area-7/10 Odd	3/4	2009 brood year escapements were generally good. Above average returns are expected. (2009 outlook status was 3).
81. North Coast Areas-3/6 Odd	3/4	2009 brood year escapements were generally good. Above average returns are expected. (2009 outlook status was 3/4).
82. QCI- Odd	NA	
<b>Chum</b>		
83. Fraser River (CU's: Fraser Canyon and Lower Fraser)	2	Quantitative forecasts are not prepared for Fraser River Chums (catch by stock and escapement information is limited). Fraser Chum escapement has been trending downward over the last 12 years (1998-2009). The 2009 escapement was estimated at 0.6M (preliminary); the escapement goal for Fraser Chum is 0.8 M. An estimate of the 2010 escapement is not yet available. (2010 Outlook status: 2/3)
84. WCVI	3	2010 chum returns were very poor across WCVI stocks. Return expectations for 2011 are for some improvement, likely near average. The 2007 brood will be the main contribution in 2011. The production from this brood will be influenced by relatively low hatchery releases in Nitinat but also relatively productive ocean conditions in 2008. (2009 Outlook Status was 2 / 3)
85. Johnstone Strait area and mainland inlets (Area-11-13)	2/3	Returns in 2010 appear to be as anticipated, well below average for the area. This low chum productivity is likely driven by the poor marine conditions encountered by the outmigrating chum fry in 2007. The low marine survival encounter by these chum in the 2007 (2010 return) out migration years was also evident in subsequent returns of coho (2008), pink (2008), and sockeye (2009) salmon. Marine conditions improved for the 2008 outmigration demonstrated by strong recovery of pink and coho stocks in 2009 as well as sockeye returns in 2010. The main year class of chum for the 2011 return also outmigrated in 2008 when condition appear to have been extremely favorable to salmon survival.  Expectations for 2011 are low to near target based on the below average parental brood abundance of the 2007 return, the indications of improved marine survival of the contributing outmigration year of 2008 and the high variability in chum returns. Summer chum stocks in 2007 were mainly average to below average throughout the area and if survivals improve may show average abundance again in 2011. (Expectation in 2010 were near target:3)
86. Georgia Strait	3	Brood year (2007) escapements were below average. Survival rates appear average to low. Preliminary 2010 returns are projecting to be lower than the pre-season forecast for all Strait of Georgia chum stocks. For 2011 a below average return is expected, however, chum forecasts remain highly uncertain. (2010 Outlook Status:3)

Species/Stock	2011 Outlook status	Comments
87. Coastal Areas 5/6	1/4	Very poor chum returns in recent years. Kitimat enhanced return strength uncertain; depends on ocean survivals which have been very poor in recent years. (2010 Outlook Status was 1/4)
88. QCI	2/3	Variable brood year escapements may result in local surpluses. (2010 Outlook Status was: 2/3).
89. Skeena-Nass	1/2	Very poor returns expected. Brood year escapements were relatively poor. Recent survivals have been very poor. (2010 Outlook Status was 1/2).
90. Area-7-10	2/4	Brood year strength was very poor in Areas 6 and 7 and average in Area 8. Survivals have been poor in recent years. (2010 Outlook Status:3).
91. Yukon	2/3	This stock group includes upper Yukon River populations (excluding Porcupine drainage stocks). Spawning escapements have exceeded targets since 2002 although severe conservation measures were required in Alaska and Canada in 2009. Escapements in 2006 and 2007, the principle brood years contributing to the 2011 run, were both over 200,000 fish, well above the minimum goal of 80,000 fish established for a rebuilt stock and the long term average of approximately 100,000 chum salmon. However the return of age-4 chum in 2009 was well below replacement (as predicted by the stock-recruitment model). There is an expectation that this will also be the case for both the age- 4 and age-5 chum returning in 2011. Therefore, a below average run is expected in 2011. (2010 Outlook Status: 2/3)
92. Porcupine (Yukon)	3	An Interim Management Escapement Goal of 22,000 to 49,000 was set for the Fishing Branch River for the 2008-2010 period based on revised analyses. This goal range is substantially less than the longstanding goal of 50,000 to 120,000. The escapements in 2006 and 2007, the principle brood years contributing to the 2010 run, were 30,000 and 32,000 respectively. An average run is expected in 2011. (2010 Outlook Status was 3)
93. Taku	2	This stock appears to have stabilized at a low level since 1991, although little information is available. The in-river run abundance index for the primary brood year was below the recent 10-year average. Non-retention provisions are expected to continue. (2010 Outlook Status was 2)

Appendix 1. Species/stock groups and associated Conservation units.

Outlook Group Number	Outlook Group Name	Conservation Unit
1	Okanagan	SEL::Osoyoos
2	Early Stuart	SEL::Stuart-Early Stuart timing SEL::Takla/Trembleur-Early Stuart timing
3	Early Summer – North Thompson	SEL::Kamloops-Early Summer timing
4	Early Summer South Thompson	SEL::Shuswap Complex-Early Summer timing
5	Early Summer – Mid/Upper Fraser	SEL::Anderson-Early Summer timing SEL::Bowron-Early Summer timing SEL::Chilko-Early Summer timing SEL::Francois-Early Summer timing SEL::Fraser-Early Summer timing SEL::Indian/Kruger-Early Summer timing SEL::Nadina-Early Summer timing SEL::Nahatlatch-Early Summer timing SEL::Taseko-Early Summer timing
6	Early Summer – Lower Fraser	SEL::Chilliwack-Early Summer timing SEL::Pitt-Early Summer timing
7	Summer – Chilko	SEL::Chilko-Summer timing
8	Summer – Late Stuart	SEL::Stuart-Summer timing SEL::Takla/Trembleur-Summer timing
9	Summer – Nechako	SEL::Fraser-Summer timing
10	Summer – Quesnel	SEL::Mckinley-Summer timing SEL::Quesnel-Summer timing
11	Fall – Cultus	SEL::Cultus-Late timing
12	Fall – Portage	SEL::Seton-Late timing
13	Fall – South Thompson	SEL::Kamloops-Late timing SEL::Shuswap Complex-Late timing
14	Fall – Birkenhead	SEL::Lillooet-Late timing
15	Fall – Lower Fraser	SEL::Harrison-downstream migrating-Late timing SEL::Harrison-upstream migrating-Late timing SEL::Hayward-Late timing SEL::Kawkawa-Late timing
16	Somass	SEL::Great Central SEL::Sproat
17	Henderson	SEL::Henderson
18	WCVI-Other	SEL::Alice SEL::Canoe Creek SEL::Cecilia SEL::Cheewat SEL::Clayoquot SEL::Deserted SEL::Fairy SEL::Hesquiat SEL::Hobiton SEL::Jansen SEL::Kanim SEL::Kennedy SEL::Maggie SEL::Megin SEL::Muchalat SEL::Muriel SEL::Nitinat SEL::O'Connell SEL::Owossitsa SEL::Park River SEL::Power SEL::Sooke SEL::William/Brink
19	Area 11-13	SEL::Fulmore SEL::Georgie/Songhees SEL::Heydon SEL::Ida/Bonanza SEL::Kakweiken SEL::Loose SEL::Mackenzie SEL::Nahwitti SEL::Nimpkish SEL::Pack SEL::Phillips SEL::Quatse SEL::Schoen SEL::Shushartie

Outlook Group Number	Outlook Group Name	Conservation Unit
19	Area 11-13	SEL::Tom Browne SEL::Tzoonie SEL::Vernon SEL::Village Bay SEL::Woss
20	Sakinaw	SEL::Sakinaw
21	Area 7-10	SEL::Long SEL::Owikeno SEL::Owikeno-Late timing SEL::South Atnarko Lakes SEL::Wannock(Owikeno)
22	Coastal 3/6	SEL::Backland SEL::Banks SEL::Bloomfield SEL::Bolton Creek SEL::Bonilla SEL::Borrowman Creek SEL::Busey Creek SEL::Canoona SEL::Cartwright Creek SEL::Chic Chic SEL::Citeyats SEL::Club SEL::Curtis Inlet SEL::Dallain Creek SEL::Deer SEL::Devon SEL::Dome SEL::Douglas Creek SEL::Elizabeth SEL::Elsie/Hoy SEL::End Hill Creek SEL::Evelyn SEL::Evinrude Inlet SEL::Fannie Cove SEL::Freeda SEL::Hartley Bay SEL::Hevenor Inlet SEL::Higgins Lagoon SEL::Kadjusdis River SEL::Kainet Creek SEL::Kelmashan Creek SEL::Keecha SEL::Kent Inlet Lagoon Creek SEL::Kenzuwash Creeks SEL::Keswar Creek SEL::Kildidit Creek SEL::Kildidit Lagoon Creek SEL::Kimsquit SEL::Kisameet SEL::Kitkiata SEL::Kitlope SEL::Koeye SEL::Kooryet SEL::Kunsoot River SEL::Kwakwa Creek SEL::Lewis Creek SEL::Limestone Creek SEL::Lowe/Simpson/Weir SEL::Mary Cove Creek SEL::Mcdonald Creek SEL::Mcloughlin SEL::Mikado SEL::Monckton Inlet Creek SEL::Namu SEL::Pine River SEL::Port John SEL::Powles Creek SEL::Price Creek SEL::Prudhomme SEL::Roderick SEL::Ryan Creek

Outlook Group Number	Outlook Group Name	Conservation Unit
22	Coastal 3/6	SEL::Salter SEL::Scoular/Kilpatrick SEL::Shawatlan SEL::Sheneeza Inlet SEL::Ship Point Creek SEL::Sockeye Creek SEL::Soda Creek SEL::Spencer Creek SEL::Stannard Creek SEL::Talamoosa Creek SEL::Tankeeah River SEL::Treneman Creek SEL::Tsimtack/Moore/Roger SEL::Tuno Creek East SEL::Tuno Creek West SEL::Tyler Creek SEL::Wale Creek SEL::Watt Bay SEL::West Creek SEL::Whalen SEL::Yaaklele Lagoon SEL::Yeo
23	Babine Lake Enhanced	SEL::Babine
24	Skeena Wild	SEL::Alastair SEL::Aldrich SEL::Asitika SEL::Atna SEL::Azuklotz SEL::Bear SEL::Clements SEL::Damshilgwit SEL::Dennis SEL::Ecstall/Lower SEL::Footsore SEL::Johanson SEL::Johnston SEL::Kitsumkalum SEL::Kitwancool SEL::Kluatantan SEL::Kluayaz SEL::Lakelse SEL::Leverson SEL::Maxan SEL::Mcdonell SEL::Morice SEL::Motase SEL::Nikitkwa SEL::Sicintine SEL::Slamgeesh SEL::Spawning SEL::Stephens SEL::Sustut SEL::Swan SEL::Tahlo/Morrison
25	Nass	SEL::Bowser SEL::Bulkley SEL::Damdochax SEL::Fred Wright SEL::Kwinageese SEL::Meziadin SEL::Oweegee
26	QCI	SEL::Ain/Skundale/lan SEL::Awun SEL::Fairfax SEL::Jalun SEL::Marian SEL::Marie SEL::Mathers SEL::Mercer SEL::Skidegate SEL::Yakoun



Outlook Group Number	Outlook Group Name	Conservation Unit
27	Alsek	SEL::Blanchard SEL::Klukshu SEL::Neskatahin
28	Stikine-wild	SEL::Christina SEL::Chutine SEL::Tahltan
29	Taku-Wild	SEL::King Salmon SEL::Kuthai SEL::Little Trapper SEL::Tatsamenie
31	Late summer – South Thompson	CK::Shuswap River-summer timing-age 0.3 CK::South Thompson-Bessette Creek CK::South Thompson-summer timing-age 0.3 CK::South Thompson-summer timing-age 1.3
32	Spring – upper & mid-Fraser, North Thompson	CK::Middle Fraser River-spring timing CK::North Thompson-spring timing-age 1.3
33	Summer – upper & mid-Fraser, North Thompson	CK::Middle Fraser River-summer timing CK::North Thompson-summer timing-age 1.3
34	Spring – lower Thompson	CK::Lower Thompson-spring timing-age 1.2
35	Fall – lower Fraser natural	CK::Lower Fraser River-fall timing (white)
37	Early spring – lower Fraser	CK::Lower Fraser River-spring timing CK::Lower Fraser River-Upper Pitt
38	Summer – lower Fraser	CK::Lower Fraser River-summer timing CK::Maria Slough
40	WCVI-wild	CK::Nootka & Kyuquot CK::Northwest Vancouver Island CK::Port San Juan CK::Southwest Vancouver Island
41	Johnstone Strait area including mainland inlets	CK::Homathko CK::Klinaklini CK::Northeast Vancouver Island CK::South Coast-southern fjords
42	Georgia Strait Fall (wild and small hatchery operations)	CK::Boundary Bay CK::East Vancouver Island-Cowichan & Koksilah CK::East Vancouver Island-Goldstream CK::East Vancouver Island-Nanaimo & Chemainus-fall timing CK::South Coast-Georgia Strait
43	Georgia Strait Fall (large hatchery operations)	CK::East Vancouver Island-Qualicum & Puntledge-fall timing
44	Georgia Strait Spring and Summer	CK::East Vancouver Island-Nanaimo-spring timing CK::East Vancouver Island-Nanaimo-summer timing CK::East Vancouver Island-Puntledge-summer timing
45	Area 7-8	CK::Bella Coola-Bentinck CK::Dean River
46	Area 9-10	CK::Docee CK::Rivers Inlet CK::Wannock
47	Coastal Areas 3 to 6	CK::North & Central Coast-early timing CK::North & Central Coast-late timing CK::Portland Sound-Observatory Inlet-Lower Nass CK::Skeena Estuary
48	Nass	CK::Unuk CK::Upper Nass
49	QCI	CK::Haida Gwaii-East CK::Haida Gwaii-North
50	Skeena	CK::Ecstall CK::Gitnadoix CK::Kalum-early timing CK::Kalum-late timing CK::Lakelse CK::Lower Skeena CK::Middle Skeena CK::Middle Skeena-large lakes CK::Middle Skeena-mainstem tributaries CK::Sicintine CK::Upper Bulkley River CK::Upper Skeena CK::Zymoetz
51	Alsek	CK::Alsek
52	Stikine	CK::Stikine-early timing CK::Stikine-late timing

Outlook Group Number	Outlook Group Name	Conservation Unit
53	Taku	CK::Taku-early timing CK::Taku-late timing CK::Taku-mid timing
54	Yukon	CK::Big Salmon CK::Black CK::Middle Mainstem Yukon River CK::Nordenskiöld CK::Northern Yukon River and tributaries CK::Old Crow CK::Pelly CK::Porcupine CK::Stewart CK::Upper Yukon River CK::White and tributaries CK::Yukon River-Teslin headwaters
55	Mid/upper-Fraser	CO::Fraser Canyon CO::Middle Fraser
56	Thompson	CO::Lower Thompson CO::North Thompson CO::South Thompson
57	Lower Fraser	CO::Lillooet CO::Lower Fraser-A CO::Lower Fraser-B
58	WCVI	CO::Clayoquot CO::Juan de Fuca-Pachena CO::West Vancouver Island
59	Area-12	CO::Homathko-Klinaklini Rivers CO::Nahwitti Lowland
60	Area-13 North	CO::East Vancouver Island-Johnstone Strait-Southern Fjords CO::Southern Coastal Streams-Queen Charlotte Strait-Johnstone Strait-Southern Fjords
61	Georgia Strait	CO::Boundary Bay CO::East Vancouver Island-Georgia Strait CO::Georgia Strait Mainland CO::Howe Sound-Burrard Inlet
62	Area-7-10	CO::Bella Coola-Dean Rivers CO::Rivers Inlet CO::Smith Inlet
63	Area 5/6	CO::Brim-Wahoo CO::Douglas Channel-Kitimat Arm CO::Hecate Strait Mainland CO::Mussel-Kynoch CO::Northern Coastal Streams
64	Area-3	CO::Lower Nass CO::Portland Sound-Observatory Inlet-Portland Canal CO::Skeena Estuary CO::Upper Nass
65	QCI-E (Area 2E)	CO::HG-East
66	QCI-N (Area 1)	CO::HG-Graham Island Lowlands
67	QCI-W (Area 2W)	CO::HG-West
68	Skeena	CO::Lower Skeena CO::Middle Skeena
69	Skeena – high Interior	CO::Upper Skeena
70	Alsek	CO::Alsek River
71	Stikine	CO::Lower Stikine
72	Taku	CO::Taku-early timing CO::Taku-late timing CO::Taku-mid timing
73	Yukon	CO::Porcupine
74	Fraser – Odd	PKO::Fraser River
75	Squamish - Odd	PKO::East Howe Sound-Burrard Inlet PKO::Georgia Strait
76	WCVI-Odd	PKE::Northwest Vancouver Island PKE::West Vancouver Island PKO::West Vancouver Island
77	Area-11/13- Even	PKE::Southern Fjords PKO::Nahwitti PKO::Southern Fjords
78	Georgia Strait-west	PKO::East Vancouver Island-Johnstone Strait
79	Georgia Strait – east	PKE::Georgia Strait
80	Area-7/10 Odd	PKE::Hecate Lowlands PKE::Hecate Strait-Fjords PKO::Homathko-Klinaklini-Smith-Rivers-Bella Coola-Dean

Outlook Group Number	Outlook Group Name	Conservation Unit
81	North Coast Areas-3/6 Odd	PKE::Middle-Upper Skeena PKE::Nass-Skeena Estuary PKE::Upper Nass PKO::Hecate Strait-Fjords PKO::Hecate Strait-Lowlands PKO::Lower Skeena PKO::Middle & Upper Skeena PKO::Nass-Portland-Observatory PKO::Nass-Skeena Estuary PKO::Upper Nass
82	QCI- Odd	PKE::East Haida Gwaii PKE::North Haida Gwaii PKE::West Haida Gwaii PKO::East Haida Gwaii PKO::North Haida Gwaii PKO::West Haida Gwaii
83	Fraser River	CM::Fraser Canyon CM::Lower Fraser
84	WCVI	CM::Northwest Vancouver Island CM::Southwest Vancouver Island
85	Johnstone Strait area and mainland inlets (Area-11-14)	CM::Bute Inlet CM::Loughborough CM::Northeast Vancouver Island CM::Southern Coastal Streams CM::Upper Knight
86	Georgia Strait	CM::Georgia Strait CM::Howe Sound-Burrard Inlet
87	Coastal Areas 5/6	CM::Douglas-Gardner CM::Hecate Lowlands CM::Mussel-Kynoch
88	QCI	CM::East HG CM::North Haida Gwaii CM::North Haida Gwaii-Stanley Creek CM::Skidegate CM::West Haida Gwaii
89	Skeena-Nass	CM::Lower Nass CM::Lower Skeena CM::Middle Skeena
90	Area-7-10	CM::Bella Coola River-Late CM::Bella Coola-Dean Rivers CM::Rivers Inlet CM::Smith Inlet CM::Spiller-Fitz Hugh-Burke CM::Wannock
91	Yukon	CM::Donjek-Kluane CM::Middle Yukon River CM::North Yukon River CM::Old Crow CM::Teslin CM::White River
92	Porcupine (Yukon)	CM::Porcupine River
93	Taku	CM::Taku

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