



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

**PACIFIC SALMON OUTLOOK  
PACIFIC REGION  
2015**

Canada 

## PRELIMINARY 2015 SALMON OUTLOOK

Since 2002, Pacific Region (BC & Yukon) Stock Assessment staff has provided a categorical outlook for the next year's salmon returns. 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 stock groups called an Outlook Unit. The Conservation Units covered by each Outlook Unit are listed in Appendix 1.

For each Outlook Unit, an Outlook Category is provided on a 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 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 developing benchmarks of status under the Wild Salmon Policy.

Outlook Categories may have consequences to fisheries where an Outlook Unit is caught directly or incidentally. In the context of this outlook the probable fishery consequences associated with each of the four Outlook Categories are identified in the table. Outlook Units forecast in category "2" are considered "sensitive" and fisheries should be planned to reduce impacts on these groups.

Outlook 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.

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

**This version of the 2015 outlook should be regarded as an early scan of salmon production, and as subject to change as more information becomes available. This preliminary version of the document will be replaced by a final version, planned for release in May 2015. However, individual outlooks may be periodically updated as statistical forecasts and assessments are completed and reviewed.**

## Summary of Pacific Salmon Outlook Units for 2015

A total of **91** Outlook Units were considered and outlooks categorized for **84**. Six units were data deficient (ND), and one pink unit was not applicable (NA). Thirty eight (**38**) Outlook Units are likely to be at or above target abundance (categories 3, 4, 3/4), while **28** are expected to be of some conservation concern (categories 1, 2, 1/2). The remaining **18** Outlook Units have mixed outlook levels (categories 1/3, 1/4, 2/3, 2/4). Overall, the outlook for 2015 has improved relative to the previous outlook (2014 for most species but 2013 for pink). Fourteen (**14**) Outlook Units improved in category (Areas 7 to 10 sockeye; Fraser Spring 4<sub>2</sub>, Fraser Spring 5<sub>2</sub> and Fraser Summer 5<sub>2</sub> chinook; Area 3, Area 12, Haida Gwaii East, Skeena and Skeena High Interior coho; Areas 11 to 13 and Areas 3 to 6 pink; Areas 11 to 13, Georgia Strait and Areas 7 to 10 chum). Eight units declined in category (Early Stuart, Early Summer North Thompson, Fall Portage and Fall South Thompson sockeye; WCVI Hatchery chinook; WCVI coho; Georgia Strait West pink; WCVI chum). For the following table, the 2014 Outlook category has been retained for reference.

Outlook Unit	2015 Outlook Category	Comments (2014 Outlook category has been retained for reference)
<b>Sockeye</b>		
1. Okanagan	3	<p>The 2011 brood year escapement of 24,000 (peak live plus dead terminal count) was only 68% of the Canadian domestic target for this CU. This is in keeping with the relatively depressed state of the 2011 cycle line exhibiting a series of sub-average escapements in 2007, 2003, 1999, and 1995. Returns of Okanagan sockeye adults to the Columbia and Okanagan rivers in 2015 will be derived from smolt cohorts that migrated seaward in spring 2012 (returning as 5-year-olds), 2013 (returning as 4-year-olds) and 2014 (returning as 3-year old “jacks” or “jills”). Although year-specific smolt-to-adult survival values for these specific cohorts are not available as yet, Okanagan sockeye marine survival variations are known to be similar to Barkley Sound sockeye in that above and below average survivals occur in association with either cold-ocean (La Nina) or warm ocean (El Nino) events respectively. The three sea entry years noted above were all ENSO neutral (i.e. not especially cold or warm). Consequently, an all-year average smolt-to-adult survival rate of approximately 5% has been applied to annual smolt production values derived from fall fry surveys such that production expected originating from the 2010, 2011 and 2012 brood years is estimated to be about 800,000 adults contributing to the 2012-2017 return years. Allocation of this production to specific return years based on average age-at-return values for Okanagan sockeye suggests a total return in 2015 on the order of 45,000 jacks and jills (i.e. small age-3 fish) plus 131,000 larger and older (ages 4, 5 and 6) fish. Given a domestic escapement objective of roughly 60,000 adults through Wells Dam and an associated terminal escapement of 35,000 sockeye at Oliver may leave around 40,000 large adults and possibly an equivalent number of jacks or jills surplus to the current domestic escapement objective.</p> <p><i>(2014 Outlook Category was 3.)</i></p>

Outlook Unit	2015 Outlook Category	Comments (2014 Outlook category has been retained for reference)
Fraser Sockeye	Overview	<p>Quantitative forecasts for Fraser sockeye stocks are published annually through the Canadian Science Advisory Secretariat (CSAS) process. The 2015 forecasts are published as a Science Response at the following link:  <a href="http://www.isdm-gdsi.gc.ca/csas-sccs/applications/Publications/index-eng.asp#ScR">http://www.isdm-gdsi.gc.ca/csas-sccs/applications/Publications/index-eng.asp#ScR</a></p> <p>The results of the November 2011 workshop to develop guidelines for integration of WSP biological status indicators and their application to Fraser River Sockeye CUs have been published. The Science Advisory Report is available at the following link:  <a href="http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2012/2012_056-eng.html">http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2012/2012_056-eng.html</a> and the Research Document is available at the following link:  <a href="http://www.dfo-mpo.gc.ca/csas-sccs/Publications/ResDocs-DocRech/2012/2012_106-eng.html">http://www.dfo-mpo.gc.ca/csas-sccs/Publications/ResDocs-DocRech/2012/2012_106-eng.html</a>.</p> <p>Indicators of survival explored to date have not reduced uncertainty in Fraser sockeye return forecasts and remain an active area of research. The uncertainty in survival mechanisms for Fraser sockeye stocks is attributed to the broad range of environments (freshwater &amp; marine) these stocks occupy throughout their life-history. A supplement to the Fraser sockeye forecasts was produced as part of the 2015 forecast process and is published as a second Science Response on the following website:  <a href="http://www.isdm-gdsi.gc.ca/csas-sccs/applications/Publications/index-eng.asp#ScR">http://www.isdm-gdsi.gc.ca/csas-sccs/applications/Publications/index-eng.asp#ScR</a></p> <p>This supplement provides additional information on the condition and abundance of various stocks from the 2011 brood year escapement through to 2014 jack returns.</p>
2. Early Stuart (CU: Takla-Trembleur-Early Stuart)	1	<p>Below average returns are expected in 2015 relative to the cycle average of 162,000 (1955-2011). The 2011 brood year escapement for Early Stuart (200 effective female spawners: EFS) was the smallest escapement on record for this stock, falling well below the cycle average (25,200 EFS). In contrast, the 2010 brood year escapement (34,200 EFS) was the second largest on record. As a result, five year olds are expected to contribute a particularly high proportion to the total returns in 2015. (2014 Outlook Category was 2)</p>
3. Early Summer – North Thompson (CU: North Barriere-ES)	2	<p><b>North Barriere River</b> (previously identified as Fennell Creek): Average returns are expected in 2015 relative to the cycle average of 30,000 (1971-2011). The 2011 brood year escapement for Fennell (4,500 EFS) was similar to the cycle average (5,000 EFS).  <u>Note change to CU composition in last two years; Raft has been moved into the Summer Run.</u> (2014 Outlook Category was 3.)</p>

Outlook Unit	2015 Outlook Category	Comments (2014 Outlook category has been retained for reference)
<p>4. Early Summer South Thompson  (CU: Shuswap-ES)</p>	3	<p><b>Scotch:</b> Above average returns are expected in 2015 relative to the cycle average of 20,000 (1983-2011). The 2011 brood year escapement for Scotch (12,500 EFS) was the largest escapement on this cycle, almost tripling the cycle average (4,400 EFS). Additionally, the 2010 escapement (273,900 EFS), which will contribute the five-year old component of the 2015 return, was the largest on record for this stock. Although productivity (recruits/spawner) from the 2010 brood year was lower for Scotch than other Fraser Sockeye stocks, the exceptional escapements will likely still contribute to larger returns in 2015.</p> <p><b>Seymour:</b> Average returns are expected in 2015 relative to the cycle average of 155,000 (1955-2011). The 2011 brood year escapement for Seymour (including McNomee) (8,000 EFS) was smaller than the cycle average (19,300 EFS). However, the escapement in 2010 stock (including McNomee) (287,500 EFS), which will contribute the five-year old component of the 2015 return, was the largest on record for this stock. Although productivity from the 2010 brood year for Seymour was lower than other Fraser Sockeye stocks, the exceptional escapements will likely contribute to larger returns in 2015. Given the exceptional 2010 brood year escapement for this, forecasts are extremely uncertain. (2014 Outlook Category was 3.)</p>
<p>5. Early Summer – Mid &amp; Upper Fraser  (CUs: Anderson-Seton-ES; Nadina-Francois-ES (new mixed); Bowron-ES; Taseko-ES)</p>	1/3	<p><b>Gates (Anderson-Seton-ES):</b> Above average returns are expected in 2015 relative to the cycle average of 31,000 (1971-2011). The 2011 brood year escapement for Gates (26,400 EFS) was the largest escapement on record for this stock, and was five times larger than the cycle average (4,900 EFS). The individual 2015 Outlook Category is 3.</p> <p><b>Nadina (Nadina-Francois-ES):</b> Below average returns are expected in 2015 relative to the cycle average of 81,000 (1979-2011). The 2011 brood year escapement for Nadina (1,200 EFS) was well below the cycle average (11,200 EFS). The 2010 brood year escapement (11,900 EFS), in contrast, was greater than five times the cycle average. As a result, five year olds are expected to contribute a particularly high proportion to the total returns in 2015. The individual 2015 Outlook Category is 1.</p> <p><b>Bowron (Bowron-ES):</b> Below average returns are expected in 2015 relative to the cycle average of 75,000 (1955-2011). The 2011 brood year escapement for Bowron (2,000 EFS) was one quarter the cycle average (8,200 EFS). The individual 2015 Outlook Category is 1.</p> <p><b>Taseko (Taseko-ES):</b> Return data are not available for this Outlook Unit; only escapements can be compared to the time series average. Note that Taseko escapement assessments are an index of abundance only. The brood year escapement index for Taseko (450 EFS) was much smaller than the cycle average of 2,900 EFS (1951-1975, 1983-1987, 1995-2011). The individual 2015 Outlook Category is 1. (2014 Outlook Category was 1/3.)</p>

Outlook Unit	2015 Outlook Category	Comments (2014 Outlook category has been retained for reference)
6. Early Summer – Lower Fraser  (CU: Pitt-ES; Chilliwack-ES; Nahatlach-ES)	1/3	<p><b>Pitt:</b> Average returns are expected in 2015 relative to the average across cycles of 71,000 (1954-2011). The 2011 (five year old) brood year escapement for Pitt (8,800 EFS) was similar to average, while the 2010 (four year old) brood year escapement (30,400 EFS) was double the average across all cycles (14,100 EFS). Pitt has a higher proportion of five year old recruits (~70%) relative to four year old recruits. The individual 2015 Outlook Category is 3.</p> <p><b>Chilliwack Lake/Dolly Varden Creek and Nahatlatch Lake/River: Return data are not available for the two CUs in this Outlook Unit; only escapements can be compared to time series averages.</b></p> <p><b>Chilliwack Lake/Dolly Varden Creek</b> brood year escapement in 2011 (2,500 EFS) was well below the recent time series average (11,600 EFS from 2002-2013 when both sites were assessed) across all cycles. The individual 2015 Outlook Category is 1.</p> <p><b>Nahatlatch Lake/River</b> brood year escapement (3,500 EFS) was larger than the cycle average (2,200 EFS). The individual 2015 Outlook Category is 1. (2014 Outlook Category was 1/3.)</p>
7. Summer – Chilko  (CUs: Chilko-S; Chilko-ES)	4	<p>Above average returns are expected in 2015 relative to the cycle average of 1.55 million (1955-2011). Escapement in the 2011 brood year (457,700 EFS) was double the cycle average (230,700 EFS) for Chilko. Chilko freshwater survival was below average in the 2011 brood year; however the smolt abundance (used to generate the 2015 forecast) was still above average, due to the large escapement. (2014 Outlook Category was 4.)</p>
8. Summer – Late Stuart  (CUs: Takla-Trembleur-Stuart-S)	2	<p>Average returns are expected in 2015 relative to the cycle average of 81,000 (1955-2011). The 2011 brood year escapement for Late Stuart (800 EFS) was the smallest on this cycle since 1971, falling well below the cycle average (9,600 EFS). However, the 2010 brood year escapement (43,500 EFS), which will contribute the five-year old component of the 2015 return, was almost double the average for that cycle (22,000 EFS). As a result, five year olds are expected to contribute a particularly high proportion to the total returns in 2015. (2014 Outlook Category was 2)</p>
9. Summer – Nechako  (CU: Francois-Fraser-S)	3	<p>Average returns are expected in 2015 relative to the cycle average of 568,000 (1955-2011). The 2011 brood year escapement for Stellako (26,000 EFS) was much smaller than the cycle average (53,100 EFS). However, the 2010 brood year escapement (110,300 EFS), which will contribute the five-year old component of the 2015 return, was well above the average for that cycle (65,900 EFS). As a result, five year olds are expected to contribute a particularly high proportion to the total returns in 2015. (2014 Outlook Category was 3.)</p>
10. Summer – Quesnel  (CU: Quesnel-S)	3	<p>Above average returns are expected in 2015 relative to the cycle average of 151,000 (1955-2011). The 2011 brood year escapement for Quesnel (17,000 EFS) was smaller than the cycle average (28,800 EFS), though still within the average range. In contrast to other Fraser Sockeye stocks, Quesnel Sockeye have recently exhibited poor survival; however, supplemental information on their early life-history indicates that freshwater survival was above average for the 2011 brood year. Additionally, the 2010 brood year escapement (133,000 EFS), which will contribute the five-year old component of the 2015 return, was similar to the average for that cycle (175,700 EFS). (2014 Outlook Category was 3.)</p>

Outlook Unit	2015 Outlook Category	Comments (2014 Outlook category has been retained for reference)
94. Summer-Harrison  (CU: Harrison-River Type)	4	This CU moved from the Fall to Summer management group in 2012. Above average returns are expected in 2015 relative to the average across cycles of 105,000 (1953-2011). However, given the exceptional escapements for this stock in recent years, and the increases in productivity, predictions of returns are extremely uncertain. Escapement for Harrison was 387,100 EFS in the 2011 brood year (age-4 recruits in 2015), falling well above the long term average for this stock (25,400 EFS), while the escapement of 32,900 EFS in the 2012 brood year (age-3 recruits in 2015), was similar to average (25,400 EFS). <i>(2014 Outlook Category was 4.)</i>
95. Summer-Raft  (CU: Kamloops-ES)	2	This CU moved from the Early Summer to the Summer management group in 2012. Above average returns are expected in 2015 relative to the cycle average of 20,000 (1955-2011). The 2011 brood year escapement for Raft (4,400 EFS) was larger than the cycle average (2,600 EFS). <i>(2014 Outlook Category was 2)</i>
11. Fall – Cultus  (CU: Cultus-L)	1	Well below average returns are expected in 2015 relative to the cycle average of 81,000 (1955-2011). Juvenile production of 120,000 smolts (92% hatchery marked) fell well below the cycle average (977,000 smolts). <i>(2014 Outlook Category was 1)</i>
12. Fall – Portage  (CU: Seton-L)	1	Below average returns are expected in 2015 relative to the cycle average of 25,000 (1959-2011). The 2011 brood year escapement for Portage (300 EFS) was much smaller than the cycle average (2,300 EFS); however, the brood year escapement in 2010 (26,700 EFS), which will contribute the five-year old component of the 2015 return, was three times the average on that cycle (8,300 EFS). As a result, five year olds are expected to contribute a particularly high proportion to the total returns in 2015. <i>(2014 Outlook Category was 4)</i>
13. Fall – South Thompson  (CU: Shuswap-L)	3	Below average returns are expected in 2015 relative to the cycle average of 1.36 million (1955-2011). The 2011 brood year escapement for Late Shuswap (46,000) was the third smallest on record, falling well below the cycle average (172,400). However, the 2010 brood year escapement for Late Shuswap (3.07 million EFS), which will contribute the five-year old component of the 2015 return, was unprecedented and well above the cycle average (1.21 million EFS). However, five year olds contribute a very small percentage to total recruits on the 2010 cycle line, so five year olds are not expected to dominate the forecast in this case. <i>(2014 Outlook Category was 4)</i>
14. Fall – Birkenhead  (CU: Lillooet-Harrison-L)	3	Average returns are expected in 2015 relative to the cycle average of 376,000 (1955-2011). The 2011 brood year escapement for Birkenhead (92,400 EFS) was larger than the cycle average (46,800 EFS). <i>(2014 Outlook Category was 3.)</i>
15. Fall – Lower Fraser  CUs: Harrison (U/S)-L; Harrison (D/S)-L; Harrison (River-Type); Widgeon (River-Type)	1/3	<b>Weaver (including miscellaneous Harrison Lake-rearing stocks):</b> Above average returns are expected in 2015 relative to the cycle average of 222,000 (1971-2011); though when compared to all cycles (average: 346,000) the expected return is average. The 2011 brood year escapement for Weaver (24,500 EFS) was larger than the cycle average (18,300 EFS). Individual 2015 Outlook Category is 3.  <b>Widgeon Creek:</b> CU return data are not available, instead only escapements are compared to time series averages. Brood year escapement (730 EFS) was larger than the cycle average (320 EFS). Individual 2015 Outlook Category is 1. <i>(2014 Outlook Category was 1/3.)</i>

<b>Outlook Unit</b>	<b>2015 Outlook Category</b>	<b>Comments (2014 Outlook category has been retained for reference)</b>
16. Somass	4	For the two main contributing brood years (2010 and 2011) both spawners and the resulting smolt production were very high. Ocean conditions for the two main smolt years (2012 and 2013) were variable. Overall, the survival rate in 2012 was slightly below average, although the survival of Sproat Lake sockeye was apparently about three times higher than Great Central sockeye. Ocean indicators suggest survival rate condition for the 2013 smolt year were very favourable, although it is uncertain whether or not the worrisome pattern of differing productivity between the two stocks will continue. Forecasts will be available March 2015. <i>(2014 Outlook Status was 4.)</i>
17. Henderson	2	Returns are expected to be about average based on high expectations of the 2011 brood that return as 4 year olds in 2015, although there is still concern about the apparent failure of the 2010 brood year. (2010 brood year spawners were near average, but the resulting smolt production was apparently very low.) The situation will be more certain once 2014 age data have been processed and that observation can be confirmed. Outlook could be as high as 3. <i>(2014 Outlook Category was 2.)</i>
18. WCVI - Other	2	Detailed assessment data are not available to forecast most others systems. However, limited assessments suggest moderate increases in abundance in recent years have continued. Some lakes could have outlook status 3. <i>(2014 Outlook Category was 2.)</i>
19. Areas 11 to 13	2/3	Preliminary sockeye returns in Area 13, specifically the Phillips River, were well below average. The resulting outlook for sockeye in Area 13 is continued low; individual 2015 Outlook Category is 2. In contrast, the preliminary 2014 sockeye escapement estimate farther north in Area 12 continues to see improvement. Above average escapement to the Nimpkish River suggests continued positive trend in survival over the last five years relative to the previously low and stable returns. The Quatse River had the highest sockeye escapement since the inception of the intensive program in 2006. This type of improved return is indicative of other monitored systems in the north Island area. The 2011 brood year sockeye escapements in this general area, which will contribute to the 2015 return, were strong. The only indication of marine survival comes from improved returns of pink and coho in 2014 (all from the same outmigration year as the sockeye 2013). Consequently, the strong brood and potential for good marine conditions result in an outlook for Area 12 sockeye in 2015 that is near target; individual 2015 Outlook Category is 3. <i>(2014 Outlook Category was 2/3).</i>
20. Sakinaw	1	457 adult and 7 jack sockeye were enumerated in 2014, coming from a smolt count of 163,000 in 2012 (only 0.3% marine survival is a concern). This group is mostly comprised of progeny from captive brood, held at Rosewall and Ouilette hatcheries, and an unknown but small number of wild origin sockeye. The expectation for 2015 is for a greater number of adults due to a larger number of smolts (253,000). <i>(2014 Outlook Category was 1.)</i>
21. Areas 7 to 10	1/4	Area 8 sockeye returns are expected to be very poor based on very low brood year escapements and continuing poor return rates. Area 10 four year old returns from the strong 2011 escapement could be good depending on ocean survivals. Rivers Inlet sockeye returns were very poor in 2014 after recent year improvements in escapement. The 2011 brood year escapements were relatively strong, but expectations for 2015 are tempered by the poor 2014 returns. <i>(2014 Outlook Category was 1/2.)</i>
22. Coastal Areas 3 to 6	2/4	Status is uncertain. Indications are escapements are improving in the last cycle. Limited assessment data for evaluation. <i>(2014 Outlook Category was 2/4.)</i>



<b>Outlook Unit</b>	<b>2015 Outlook Category</b>	<b>Comments (2014 Outlook category has been retained for reference)</b>
23. Babine Lake - Enhanced	4	Above average abundance forecast for age-5 sockeye based on 2014 age 4 returns. Modest age 4 returns expected based on age-3 returns in 2014. <i>(2014 Outlook Category was 4.)</i>
24. Skeena - Wild	1/4	Expect above average survival for sockeye that went to sea in 2012 (returning as 5 year olds in 2015). The survival for sockeye that went to sea in 2013 (returning as 4 year olds in 2015) is expected to be near recent averages based on the modest 2014 Babine jack sockeye return. Returns of middle and lower Skeena sockeye stocks had improved over the last cycle; declined in 2013 and generally improved in 2014. <i>(2014 Outlook Category was 1/4.)</i>
25. Nass	1/4	Above average returns are expected. Kwinageese had poor brood year escapements. <i>(2014 Outlook Category was 1/4.)</i>
26. Haida Gwaii	2/4	Status uncertain for some systems; limited assessment work indicates improved returns over the last cycle. <i>(2014 Outlook Category was 2/4.)</i>
27. Alsek	2/3	Based on brood year escapements outside (above) of the MSY target range and stock-recruitment relations from historical records, an average to above average run is expected. However the 2014 run was slightly above expectations. <i>(2014 Outlook Category was 2/3.)</i>
28. Stikine - Wild	3	Stikine sockeye production has varied widely since 1985. Low production periods occurred in the mid 1980s to early 1990s. From 2003 through 2006 production improved, believed due to improved marine survival. Returns since 2007, however, were below forecast suggesting a downturn in marine survival. The 2014 return was weak. For 2015, the Tahltan Lake component is predicted to be slightly below average due to the below average number of smolts which emigrated from the lake in 2012. The main stem component is expected to be slightly above average. Fishing opportunities are expected within the confines of conservation and PST harvest sharing arrangements. <i>(2014 Outlook Category was 3.)</i>
29. Taku - Wild	3	The 2014 run was lower than forecast. Regarding the outlook for 2015, the dominant and sub-dominant brood year escapements were within the range associated with good production. Taking into account both information sources an average return is expected in 2015. Fishing opportunities are expected within those of conservation levels and PST harvest sharing arrangements. <i>(2014 Outlook Category was 3.)</i>
<b>Chinook</b>		
96. Fraser River Spring Run 4 <sub>2</sub>	2	Escapement in 2014 improved considerably, both over the 2013 escapements and over those of the parent brood in 2010. Spius and Coldwater escapements both exceeded 1000, and Bonaparte exceeded 10,000. Expectations for 2015 are for continued modest improvements over the 2011 parental brood escapements, however as escapements in 2011 were poorer than those in 2010, abundance is expected to remain fairly low due to ongoing unfavorable marine conditions. <i>(2014 Outlook Category was 1.)</i>
97. Fraser River Spring Run 5 <sub>2</sub>	2	Escapements in 2014 continued to be poor, although escapements for the aggregate did exceed the levels of the parent brood, and those of 2013. Individual system escapements varied dramatically from as little as 60% of brood escapement to well over 200% of parent brood. Escapements to Lower Chilcotin and Westroad improved dramatically, however, Birkenhead declined compared to brood level. Expectations are for modest improvements in 2015 but continued overall low escapements related to depressed parental abundance and continuing unfavorable marine conditions. <i>(2014 Outlook Category was 1.)</i>

Outlook Unit	2015 Outlook Category	Comments (2014 Outlook category has been retained for reference)
98. Fraser River Summer Run 5 <sub>2</sub>	2	Escapements in 2014 were highly variable when compared to the parental escapements. Returns to the Clearwater system were poor and roughly 50% of parent brood levels, but other summer populations met or exceeded parent levels; Quesnel River escapement was roughly equal to that of the parent brood, whereas Chilko and Nechako exceeded brood levels. Expectations are for modest improvements over parental brood levels again, but overall continued low escapements in 2014, related to ongoing depressed parental abundance and unfavorable marine conditions. <i>(2014 Outlook Category was 1.)</i>
99. Fraser River Summer Run 4 <sub>1</sub>	3	Aggregate escapement in 2014 declined sharply compared to brood levels for all stocks. It is unclear if this decline relates to harvest pressure or marine conditions. Uncertainty associated with smolt to adult survival continues to temper the outlook for this aggregate: If favorable marine conditions experienced by the 2009 brood return, abundance in 2015 should be high based on parental levels; however, if the conditions that resulted in the 2012 and 2014 declines return, escapement could trend lower again. <i>(2014 Outlook Category was 3.)</i>
100. Fraser River Fall Run 4 <sub>1</sub>	2/3	Average returns are expected in 2015, based on improved parental escapement levels in 2011. 2014 adult escapement surveys at Harrison are underway currently, and indications are for a poor-modest return. A formal forecast for 2015 will be available in late winter. <i>(2014 Outlook Category was 2/3.)</i>  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. 2014 adult escapement surveys at Chilliwack are underway currently and preliminary results indicate only modest returns. Forecasts will be prepared for late-winter release. <i>(2014 Outlook Category was 2/3.)</i>
39. WCVI - Hatchery	3	Overall, returns in 2015 will likely decline relative to the last few years due to very low apparent survival of the 2011 brood and low observed survival of the 2010 brood (returning as 4 and 5 year old fish in 2015). In contrast, ocean indicators suggest the 2012 brood may have experienced a relatively high survival rate. However, fish that return at 3 years of age are dominantly male and therefore make a lower contribution to egg-based brood and escapement targets. Forecasts will be available in March 2015. <i>(2014 Outlook Category was 3/4.)</i>
40. WCVI-Wild	1	Wild populations have either been well below target and/or declining for several generations. In recent years, stocks in the NWVI CU showed moderate improvements; however this trend is not generally observed in SWVI wild populations in Clayoquot. Expectations are for continued low abundance in 2015 and probable declines relative to recent years. <i>(2014 Outlook Category was 1)</i>
41. Johnstone Strait Area (including mainland inlets)	2/3	Data are sparse for many of the wild chinook populations in the area, but those surveyed in 2014 are below historic abundances. Escapement monitoring on the Campbell/Quinsam system is still underway, however early information suggests a return lower than the past two years, at approximately 3,000-3,500 chinook. This is a continuation of the below average trend for this hatchery indicator. In contrast the enhanced population of the Phillips River produced another strong return, similar to the past two years and well above the historic average. Outlook is similar to 2013 with wild stocks at low level (category 2) and hatchery stocks likely near target (category 3). <i>(2014 Outlook Category was 2/3.)</i>

<b>Outlook Unit</b>	<b>2015 Outlook Category</b>	<b>Comments (2014 Outlook category has been retained for reference)</b>
42. Georgia Strait Fall (wild and small hatchery operations)	2	The 2014 return to Cowichan was slightly higher than the previous year suggesting that the rebuilding seen recently is continuing; however, water conditions increase uncertainty. The Cowichan return remains below target. For Nanaimo, returns were again similar to 2013; there is less evidence for an improving trend in the Nanaimo, more low and stable. <i>(2014 Outlook Category was 2.)</i>
43. Georgia Strait Fall (large hatchery operations)	2	Returns in 2014 to rivers with major hatcheries (Big Qualicum, Little Qualicum and Puntledge) are similar to last year's (2013) returns and are low and stable over last 10 years. <i>(2014 Outlook Category was 2.)</i>
44. Georgia Strait Spring and Summer	2	Nanaimo spring run chinook were not monitored in 2014. Returns of summer run chinook to the Puntledge hatchery are similar to near term average and below target escapements. Rebuilding efforts are continuing. <i>(2014 Outlook Category was 2.)</i>
45. Areas 7 and 8	3/4	2015 Bella Coola returns in are expected to be average based on the recent returns. <i>(2014 Outlook Category was 3/4.)</i>
46. Areas 9 and 10	2/4	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 based on recent trends. <i>(2014 Outlook Category was 2/4.)</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>(2014 Outlook Category was 2/3.)</i>
48. Nass	3/4	Recent average return expected (pending detailed review of the 2014 return age structure). <i>(2014 Outlook Category was 3/4.)</i>
49. Haida Gwaii	ND	No recent assessments of Yakoun chinook. <i>(2014 Outlook Category was ND.)</i>
50. Skeena	3/4	Recent average returns expected, subject to adjustment once the 2014 age structure is understood. <i>(2014 Outlook Category was 3/4.)</i>
51. Alsek	2/3	Brood year escapements were outside (above and below) the established optimal range. Based on stock recruitment relation using historical records, an average run will be expected. <i>(2014 Outlook Category was 2/3.)</i>
52. Stikine	1	A bilaterally developed run outlook is not yet available but is required by December 01. This stock has been subjected to directed commercial fisheries since 2005 due to new provisions under the Pacific Salmon Treaty (PST). Under the Treaty, directed fisheries are allowed if the pre-season forecast is greater than 28,100 large chinook (chinook > 659 mm MEF) and in-season projections are >24,500 large chinook. Similar to 2014, the preliminary pre-season sibling-based forecast suggests production will be below the pre-season trigger for conducting a directed fishery in Canada. Since 2011 the run sizes were well below predictions. This outlook will be updated after the Trans-boundary Technical Committee (TTC) analysis is done (by December 01). <i>(2014 Outlook Category was 1.)</i>
53. Taku	2	Taku chinook salmon have been managed under a PST fishing regime implemented in 2005 and renewed for 2009 to 2018 with minor modifications. In 2009 the escapement goal was revised to 25,500 large Chinook (range: 19,000-36,000). The previous goal was 36,000 (range: 30,000-55,000). A bilaterally developed run outlook (based on preliminary estimates of the 2014 return and historical sibling relationships) was discounted by 30% to account for forecast error over the past five years. Based on this the 2015 run will be well below the average of 41,500 large Chinook and will not support directed fishing in Canada or the US. <i>(2014 Outlook Category was 2.)</i>

Outlook Unit	2015 Outlook Category	Comments (2014 Outlook category has been retained for reference)
54. Yukon	2	The Canadian-origin return of Yukon River Chinook salmon in 2015 is anticipated to be below the long-term average of ~80,000 fish. The current international interim border escapement goal endorsed by the U.S. / Canada Yukon River Panel is 42,500 to 55,000 adult fish. With a dominant 6 year-life cycle, the production resulting from strong spawning escapement in 2009 is anticipated to be offset by the very poor spawning escapement observed in 2010 (which will likely lead to underrepresentation of the age 5 year-class in 2015). Total production observed in Canadian-origin Yukon River Chinook salmon stocks is well below levels observed pre-1998 and since 2007 returns and resulting escapement has been weak. If conditions contributing to the recent poor production observed continue, fishing opportunities may be limited in 2015. (2014 Outlook Category was 2.)
<b>Coho</b>		
55. Mid and Upper - Fraser	2	Fall 2014 escapement surveys are now underway; and early information suggests a continued rebuilding trend. Escapements to most streams in 2013 exceeded parental brood levels. Rebuilding will continue to be affected by freshwater and marine conditions. The outlook for 2015 is for improving abundance, a result of improved escapement in 2012 and a trend toward moderating the unfavorable conditions affecting Coho survival. Sustained improvement in marine conditions will be required to improve outlook. A formal forecast will be presented in spring 2015. (2014 Outlook Category was 2.)
56. Thompson	2	Fall 2014 escapement surveys are now underway; and early information suggests a continued rebuilding trend. Escapements to most streams in 2013 exceeded parental brood levels. Rebuilding will continue to be affected by freshwater and marine conditions. The outlook for 2015 is for improving abundance, a result of improved escapement in 2012 and a trend toward moderating the unfavorable conditions affecting Coho survival. Sustained improvement in marine conditions will be required to improve outlook. A formal forecast will be presented in spring 2015. (2014 Outlook Category was 2.)
57. Lower Fraser	2	Fall/winter 2014/2015 escapement surveys are now underway; however, it is too early to determine trends. Escapements last fall were again marginally above those of the parental brood year. Parental brood escapements in 2012 were moderate. Sustained improvements in smolt to adult survival will be required to improve outlook further. A formal forecast will be presented in spring 2015. (2014 Outlook Category was 2.)
58. WCVI	3	For 2015, most of the return will be coho originating from the 2012 brood year that smolted in 2014. Ocean indicators suggest conditions affecting early marine survival deteriorated in 2014. Therefore, a decline in abundance relative to recent years is expected in 2015. (2014 Outlook Category was 4.)
59. Area 12	3	Monitoring of key indicator streams (e.g. Keogh) is still ongoing, but preliminary data suggest returns are showing continued improved survival for 2014. Return levels in 2015 will be influenced by: 1) above average brood year escapement in 2012, 2) average freshwater survival (based on the Keogh River indicator), and 3) apparent good marine conditions in much of the inside south coast marine waters. Expect continued improvement over the last 3 years but with high uncertainty. (2014 Outlook Category was 2/3.)

<b>Outlook Unit</b>	<b>2015 Outlook Category</b>	<b>Comments (2014 Outlook category has been retained for reference)</b>
60. Area 13 - North	2/3	Escapement monitoring for 2014 is ongoing and to this point has indicated variable returns to the area, with some indication of improvement in wild stocks but still not at levels seen historically when there was significant directed harvest. Early estimates for the Quinsam River hatchery indicator are again strong with over 10,000 adult Coho returning, comparable to the run size in 2013. Improved marine survival was evident in both pink and Coho returns to the area in 2014, based on a 2013 outmigration. If marine conditions continue to improve in 2014, 2015 returns will benefit. 2015 expectations are for returns similar to the last 3 years but are highly uncertain with wild stocks at category 2 and hatchery stocks at category 3 <i>(2014 Outlook Category was 2/3.)</i>
61. Georgia Strait	3	2014 escapements are not complete and so uncertainty is high. Preliminary surveys suggest strong returns to Cowichan and Black Creek but some others have less than expected abundance. Marine survival continues to be below the long term average suggesting that GST coho remain in a low productivity regime. With greater uncertainty, and with recognition of targets appropriate with a low productivity regime, the outlook remains at 3. <i>(2014 Outlook Category was 3.)</i>
62. Areas 7 to 10	3/4	Survivals have been modest in recent years. Returns are uncertain and depend on the survivals of the juveniles to sea in 2014. <i>(2014 Outlook Category was 3/4.)</i>
63. Areas 5 and 6	3/4	Survivals have been relatively good in recent years. Returns are uncertain and depend on the survivals of the juveniles to sea in 2014. <i>(2014 Outlook Category was 3/4.)</i>
64. Area 3	4	Abundant returns are expected, but depend on the survivals of the juveniles to sea in 2014. <i>(2014 Outlook Category was 3/4.)</i>
65. Haida Gwaii -E (Area 2 East)	4	Limited assessments since 2002. Recent returns have been good. <i>(2014 Outlook Category was 3/4.)</i>
66. Haida Gwaii -N (Area 1)	ND	No recent assessments. <i>(2014 Outlook Category was ND.)</i>
67. Haida Gwaii -W (Area 2 West)	ND	No recent assessments. <i>(2014 Outlook Category was ND.)</i>
68. Skeena	4	Recent returns have been good. Returns are uncertain and depend on the survivals of the juveniles to sea in 2014. <i>(2014 Outlook Category was 3/4.)</i>
69. Skeena – High Interior	4	Recent returns have been good. Returns are uncertain and depend on the survivals of the juveniles to sea in 2014. <i>(2014 Outlook Category was 3/4.)</i>
70. Alsek	3	An above average run is expected based on an average weir count in the Klukshu River for the 2011 brood year. <i>(2014 Outlook Category was 3.)</i>
71. Stikine	3	Reliable brood year escapement data are limited and ancillary observations are sometimes contradictory: extrapolated test fishing indices were average but results from limited aerial surveys were below average for brood years contributing to the 2015 return as in 2014. Based on data of limited quality, the 2015 return is expected to be below average. <i>(2014 Outlook Category was 3.)</i>
72. Taku	3	Based on preliminary smolt abundance in 2014 combined with recent smolt-to-adult survival rates, an average run is expected for 2015. It is anticipated that the run will be sufficient for directed harvest levels comparable to recent years. <i>(2014 Outlook Category was 3.)</i>

<b>Outlook Unit</b>	<b>2015 Outlook Category</b>	<b>Comments (2014 Outlook category has been retained for reference)</b>
73. Yukon	ND	Very little is known about coho salmon stock status within Canadian portions of the Yukon River drainage. Data from the U.S. portion of the drainage indicate returns to the drainage in the last five years have been near the long term average. Coho salmon exploitation rates are directly influenced by actions implemented in Alaska to manage co-migrating fall chum. Although reduced spawning escapement was observed drainage-wide in 2014, no assessment programs are currently undertaken in Canada and the current stock status is unknown. <i>(2014 Outlook Category was ND.)</i>
<b>Pink</b>		
74. Fraser - Odd only(CU: Fraser River)	4	Above average returns are expected in 2015 relative to the average of 13.4 million (1959-2013). The 2013 brood year fry abundance for Fraser Pink Salmon (609 million) was above average of 443 million fry (1975-2011). <i>(2013 Outlook Category was 4; 2014 Outlook Category was NA)</i>
75. Squamish - Odd only	ND	Squamish Pink salmon are rebuilding; however, no target run size has been developed and available quantitative assessment information is currently being collated. <i>(2014 Outlook Category was ND.)</i>
76. WCVI - Odd & Even	ND	No quantitative assessment information is available. <i>(2014 Outlook Category was ND.)</i>
77. Areas 11 to 13 - Odd & Even	3	Returns in 2013 showed an increase in abundance for this cycle line over the 2011 brood year. Strong even year pink returns in 2014 indicate improved marine conditions which will hopefully continue for the anticipated odd year returns in 2015. There has been a steadily improving trend in abundance of the odd year cycle since 2003 with a slight drop in the 2011 return and a resurgence in 2013. With possible improved marine conditions, demonstrated by the strong survivals seen in 2014 and the near average brood year returns in 2013, expectations are for average return in 2015. Historically pink returns to this area have been highly variable and expectations are highly uncertain. <i>(2013 Outlook Category was 2/3; 2014 Outlook Category was 2/3.)</i>
78. Georgia Strait - West - Odd & Even	2	Preliminary information suggests returns in 2014 are less than or equal to the 2012 brood year but are still above average. Seapen returns in 2014 were good in Nanaimo and natural spawning returns to Cowichan were good. Outlook is for highly variable returns, (natural returns low, seapen returns average to good). The expectation for 2015 is for below average escapements to natural stocks in this cycle year. <i>(2013 Outlook Category was 2/3; 2014 Outlook Category was 2.)</i>
79. Georgia Strait - East - Odd & Even	2	Assessment information on pink salmon in this area is limited. Generally, pink salmon have been reported in small numbers across a broad range of systems. Enhancement is limited to Chapman and Lang Creeks. The expectation for 2015 is for low escapements. <i>(2013 Outlook Category was 2; 2014 Outlook Category was 2.)</i>
80. Areas 7 to 10 - Odd & Even	3/4	Above average returns are expected based on better 2013 brood year escapements for areas 7 and 8. Returns are highly dependent on pink return rates. <i>(2013 Outlook Category was 3/4; 2014 Outlook Category was 2/3.)</i>
81. North Coast Areas 3 to 6 - Odd & Even	4	Brood year escapements were good in Areas 3 through 6. Returns are highly dependent on pink return rates. <i>(2013 Outlook Category was 2/4; 2014 Outlook Category was 3/4.)</i>
82. Haida Gwaii - Odd & Even	NA	Even year pink stock. <i>(2013 Outlook Category was NA; 2014 Outlook Category was 3/4.)</i>

Outlook Unit	2015 Outlook Category	Comments (2014 Outlook category has been retained for reference)
<b>Chum</b>		
83. Fraser River (CUs: Fraser Canyon and Lower Fraser)	3	Fraser Chum salmon escapement trended downward from 1998 to 2010. The escapement decline was halted and reversed with an estimated 1.1 million spawners reported in 2011. The increasing trend continued in 2012 with an estimated 1.4 million spawners. In 2013, spawner escapement was estimated at 980K. The escapement goal for Fraser Chum is 800K. The in-season estimate of the terminal return (provided on Oct.20, 2014) was approximately 1.3 million Chum salmon. Escapement assessments in 2014 are ongoing; an estimate of the 2014 escapement will be available by March 2015. <i>(2014 Outlook Category was 3.)</i>
84. WCVI	2	WCVI chum abundance has been declining. Spawner and smolt releases for two of the main contributing brood years were low or very low. Survival rates for the three main contributing brood years are variable (likely low, very low and potentially above average for 2011, 2012 and 2013, respectively). For the 2011 brood year spawner abundances and smolt releases were higher, however the ocean conditions during the smolt ocean entry year (2012) were generally unfavourable. <i>(2014 Outlook Category was 2/3.)</i>
85. Johnstone Strait Area and Mainland Inlets (Areas 11 to 13)	3	Returns in 2014 are still being assessed; however abundance appears to have improved over the dominant brood year return of 2010 which encountered one of the lowest chum returns on record. The main contributing brood year (2011) to the 2015 return was considered an average return but fish size was significantly smaller than average. It is unknown at this time what impact that will have to the 2015 return (lower fecundity, smaller eggs, possible lower freshwater survival) but it will be considered. Expectations for 2015 are near target. This is based on the average parental brood abundance of the 2011 return; the indications of improved marine survival conditions in 2012 (strong pink and coho returns in 2013) the contributing outmigration year of 2011 brood, the significantly smaller average fish size encountered in 2011 and the high variability in chum returns. Summer chum stocks in 2011 were mainly below average throughout the area and will likely stay the same in 2015. <i>(2014 Outlook Category was 2/3.)</i>
86. Georgia Strait	3	Survival rates, although variable, appear average for most stocks. 2014 returns were mixed with northern systems below the forecast range and southern system were at the top of the forecast range. For 2015, an above average return is expected for most systems based on the strong returns in 2011, notwithstanding apparent divergence of productivity in the northern part of the Strait. <i>(2014 Outlook Category was 2.)</i>
87. Coastal Areas 5 & 6	1/4	Poor 2011 brood year escapement. Very poor chum returns in recent years. Kitimat enhanced return strength uncertain; depends on ocean survivals which have been poor in recent years. <i>(2014 Outlook Category was 1/4.)</i>
88. Haida Gwaii	2/4	Generally poor brood year escapements indicate poor returns. <i>(2014 Outlook Category was 2/4.)</i>
89. Skeena-Nass	1/2	Very poor returns expected from very poor brood year escapements. Recent survivals have been poor. <i>(2014 Outlook Category was 1/2.)</i>
90. Areas 7 to 10	3/4	Wild brood year escapements were generally good. Returns of enhanced stocks are dependent upon ocean survival which has been highly variable in recent years. <i>(2014 Outlook Category was 2/4.)</i>

Outlook Unit	2015 Outlook Category	Comments (2014 Outlook category has been retained for reference)
91. Yukon (mainstem)	3	The Yukon River (Mainstem) chum salmon stock group includes all (Canadian) upper Yukon River populations excluding the Porcupine River drainage stocks. Spawning escapements have generally exceeded targets since 2002, although significant conservation measures were required to be implemented in 2010, both in the U.S. and Canada, as a result of poor adult return. Escapements in 2010-11, the principle brood years contributing to the 2014 run, were well over the minimum goal of 80,000 established to rebuild the stock to the long term average of approximately 100,000 chum salmon. Consequently, an above average run is expected in 2015. <i>(2014 Outlook Category was 3.)</i>
92. Yukon (Porcupine)	2	An Interim Management Escapement Goal of 22,000 to 49,000 has been in place for Canadian-origin chum salmon stock in the Porcupine River (at Fishing Branch River) since 2008. Returns over the last five years have been well below expected and the minimum escapement goal was not achieved in three of these years. Escapements in 2010 and 2011, the principle brood years contributing to the 2014 run, were very weak at 13,773 and 13,085 respectively. If conditions contributing to the weak returns persist, a poor run is again expected in 2015 and fishing opportunities could be restricted. <i>(2014 Outlook Category was 2.)</i>
93. Taku	2	Ancillary observations suggest that escapements have been relatively low since 1991, but no scientifically defensible estimates are 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. <i>(2014 Outlook Category was 2.)</i>



Appendix 1. Outlook Units and associated Conservation Units. Where the WSP Status column is blank, a Wild Salmon Policy status classification is not available for that Conservation Unit.

No.	Outlook Unit Name	Conservation Unit
<b>Sockeye</b> (sockeye CU types: SEL = lake type, SER = river type)		
1	Okanagan	SEL::Osoyoos
2	Early Stuart	SEL::Takla/Trembleur-Early Stuart timing
3	Early Summer - North Thompson	SEL::North Barriere-Early Summer timing
4	Early Summer - South Thompson	SEL::Shuswap-Early Summer timing
5	Early Summer - Mid and Upper Fraser	SEL::Anderson/Seton-Early Summer timing
		SEL::Bowron-Early Summer timing
		SEL::Chilko-Early Summer timing
		SEL::Francois-First Run-Early Summer timing
		SEL::Francois-Second Run-Early Summer timing
		SEL::Indian/Kruger-Early Summer timing
		SEL::Nadina/Francois-Early Summer timing
6	Early Summer - Lower Fraser	SEL::Taseko-Early Summer timing
		SEL::Chilliwack-Early Summer timing
		SEL::Nahatlatch-Early Summer timing
7	Summer - Chilko	SEL::Pitt-Early Summer timing
8	Summer - Late Stuart	SEL::Chilko-Summer timing
9	Summer - Nechako	SEL::Takla/Trembleur/Stuart-Summer timing
10	Summer - Quesnel	SEL::Francois/Fraser-Summer timing
94	(new) Summer - Harrison	SEL::Quesnel-Summer timing
95	(new) Summer - Raft	SER::Harrison River
11	Fall - Cultus	SEL::Kamloops-Early Summer timing
12	Fall - Portage	SEL::Cultus-Late timing
13	Fall - South Thompson	SEL::Seton-Late timing
14	Fall - Birkenhead	SEL::Shuswap Complex-Late timing
15	Fall - Lower Fraser	SEL::Lillooet/Harrison-Late timing
		SEL::Harrison-downstream migrating-Late timing
16	Somass	SEL::Harrison-upstream migrating-Late timing
		SEL::Great Central
17	Henderson	SEL::Sproat
18	WCVI - Other	SEL::Henderson
		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		

No.	Outlook Unit Name	Conservation Unit
		SEL::Muchalat SEL::Muriel SEL::Nitinat SEL::O'Connell SEL::Owossitsa SEL::Park River SEL::Power SEL::William/Brink
19	Areas 11 to 13	SEL::Fulmore 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 SEL::Tzoonie SEL::Vernon SEL::Village Bay SEL::Woss
20	Sakinaw	SEL::Sakinaw
21	Areas 7 to 10	SEL::Long SEL::Owikeno SEL::Owikeno-Late timing SEL::South Atnarko Lakes SEL::Wannock[Owikeno]
22	Coastal Areas 3 to 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::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

No.	Outlook Unit Name	Conservation Unit
		SEL::Fannie Cove
		SEL::Freeda/Brodie
		SEL::Hartley Bay
		SEL::Hevenor Inlet
		SEL::Higgins Lagoon
		SEL::Kadjusdis River
		SEL::Kainet Creek
		SEL::Kdelmashan Creek
		SEL::Keecha
		SEL::Kent Inlet Lagoon Creek
		SEL::Kenzuwash Creeks
		SEL::Keswar Creek
		SEL::Kildidt Creek
		SEL::Kildidt 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/Weare
		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
		SEL::Salter
		SEL::Scouler/Kilpatrick
		SEL::Shawatlan
		SEL::Sheneeza Inlet
		SEL::Ship Point Creek
		SEL::Sockeye Creek
		SEL::Spencer Creek
		SEL::Stannard Creek
		SEL::Talamoosa Creek
		SEL::Tankeeah River
		SEL::Treneman Creek
		SEL::Tsimtack Lakes
		SEL::Tuno Creek East
		SEL::Tuno Creek West

No.	Outlook Unit Name	Conservation Unit
		SEL::Tuwartz 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/Hodder SEL::Johanson SEL::Johnston SEL::Kitsumkalum SEL::Kitwancool SEL::Kluatantan SEL::Kluayaz SEL::Lakelse SEL::Maxan SEL::Mcdonell SEL::Morice SEL::Motase SEL::Nilkitkwa SEL::Sicintine SEL::Slangeesh SEL::Spawning SEL::Split Mountain/Leverson SEL::Stephens SEL::Sustut SEL::Swan SEL::Tahlo/Morrison
25	Nass	SEL::Bowser SEL::Bulkley SEL::Damdochax/Wiminasik SEL::Fred Wright SEL::Kwinageese SEL::Meziadin SEL::Oweege
26	Haida Gwaii	SEL::Ain/Skundale/Ian SEL::Awun SEL::Fairfax SEL::Jalun SEL::Marian/Eden

No.	Outlook Unit Name	Conservation Unit
		SEL::Marie
		SEL::Mathers
		SEL::Mercer
		SEL::Skidegate
		SEL::Yakoun
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
<b>Chinook</b>		
96	Fraser River Spring Run 42	CK::South Thompson-Bessette Creek
		CK::Lower Thompson-spring timing-age 1.2
97	Fraser River Spring Run 52	CK::Lower Fraser River-spring timing
		CK::Lower Fraser River-Upper Pitt
		CK::Fraser Canyon-Nahatlatch
		CK::Middle Fraser River-spring timing
		CK::Upper Fraser River-spring timing
		CK::North Thompson-spring timing-age 1.3
98	Fraser River Summer Run 52	CK::Lower Fraser River-summer timing
		CK::Middle Fraser River-Portage
		CK::Middle Fraser River-summer timing
		CK::South Thompson-summer timing-age 1.3
		CK::North Thompson-summer timing-age 1.3
99	Fraser River Summer Run 41	CK::Maria Slough
		CK::South Thompson-summer timing-age 0.3
		CK::Shuswap River-summer timing-age 0.3
		CK::Upper Adams River_su_1.x
100	Fraser River Fall Run 41	CK::Lower Fraser River-fall timing (white)
		(P)Hatchery Exclusion-Lower Fraser River
39	WCVI - Hatchery	includes production from major hatchery facilities at Conuma, Stamp, and Nitinat rivers
40	WCVI - Wild	CK::Nootka and Kyuquot
		CK::Northwest Vancouver Island
		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 and Koksilah
		CK::East Vancouver Island-Goldstream
		CK::East Vancouver Island-Nanaimo and Chemainus-fall timing
		CK::South Coast-Georgia Strait
43	Georgia Strait Fall (large hatchery operations)	CK::East Vancouver Island-Qualicum and Puntledge-fall timing

<b>No.</b>	<b>Outlook Unit Name</b>	<b>Conservation Unit</b>
44	Georgia Strait Spring and Summer	CK::Vancouver Island-Georgia Strait_su_0.3
		CK::East Vancouver Island-Nanaimo-spring timing
45	Areas 7 and 8	CK::Bella Coola-Bentinck
		CK::Dean River
46	Areas 9 and 10	CK::Docee
		CK::Rivers Inlet
		CK::Wannock
47	Coastal Areas 3 to 6	CK::North and Central Coast-early timing
		CK::North and Central Coast-late timing
		CK::Portland Sound-Observatory Inlet-Lower Nass
		CK::Skeena Estuary
48	Nass	CK::Upper Nass
49	Haida Gwaii	CK::Haida Gwaii-East
		CK::Haida Gwaii-North
50	Skeena	CK::Ecstall
		CK::Kalum-early timing
		CK::Kalum-late timing
		CK::Lakelse
		CK::Lower 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
53	Taku	CK::Taku-early timing
		CK::Taku-late timing
		CK::Taku-mid timing
54	Yukon	CK::Big Salmon
		CK::Middle Yukon River and tributaries
		CK::Nordenskiold
		CK::Northern Yukon River and tributaries
		CK::Old Crow
		CK::Pelly
		CK::Porcupine
		CK::Salmon Fork
		CK::Stewart
		CK::Upper Yukon River
		CK::White and tributaries
CK::Yukon River-Teslin headwaters		
<b>Coho</b>		
55	Mid and 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

No.	Outlook Unit Name	Conservation Unit
		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	Areas 7 to 10	CO::Bella Coola-Dean Rivers
		CO::Rivers Inlet
		CO::Smith Inlet
63	Areas 5 and 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	Haida Gwaii - East (Area 2 East)	CO::Haida Gwaii-East
66	Haida Gwaii - North (Area 1)	CO::Haida Gwaii-Graham Island Lowlands
67	Haida Gwaii - West (Area 2 West)	CO::Haida Gwaii-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
<b>Pink</b> (pink CU types: PKO = odd year, PKE = even year)		
74	Fraser - Odd only	PKO::Fraser River
75	Squamish - Odd only	PKO::East Howe Sound-Burrard Inlet
76	WCVI - Odd & Even	PKE::Northwest Vancouver Island
		PKE::West Vancouver Island
		PKO::West Vancouver Island
77	Areas 11 to 13 - Odd & Even	PKE::Southern Fjords
		PKO::Nahwitti
		PKO::Southern Fjords
		PKO::East Vancouver Island-Johnstone Strait
78	Georgia Strait - West - Odd & Even	not yet defined; includes some seapen releases

No.	Outlook Unit Name	Conservation Unit
79	Georgia Strait - East - Odd & Even	PKE::Georgia Strait
		PKO::Georgia Strait
80	Areas 7 to 10 - Odd & Even	PKE::Hecate Lowlands
		PKE::Hecate Strait-Fjords
		PKO::Hecate Strait-Fjords
		PKO::Hecate Strait-Lowlands
		PKO::Homathko-Klinaklini-Smith-Rivers-Bella Coola-Dean
81	North Coast Areas 3 to 6 - Odd & Even	PKE::Hecate Lowlands
		PKE::Hecate Strait-Fjords
		PKE::Middle-Upper Skeena
		PKE::Nass-Skeena Estuary
		PKE::Upper Nass
		PKO::Hecate Strait-Fjords
		PKO::Hecate Strait-Lowlands
		PKO::Lower Skeena
		PKO::Middle and Upper Skeena
		PKO::Nass-Portland-Observatory
		PKO::Nass-Skeena Estuary
		PKO::Upper Nass
		82
PKE::North Haida Gwaii		
PKE::West Haida Gwaii		
PKO::East Haida Gwaii		
PKO::North Haida Gwaii		
PKO::West Haida Gwaii		
<b>Chum</b>		
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 (Areas 11 to 13)	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	Haida Gwaii	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	Areas 7 to 10	CM::Bella Coola River-Late
		CM::Bella Coola-Dean Rivers



No.	Outlook Unit Name	Conservation Unit
		CM::Rivers Inlet
		CM::Smith Inlet
		CM::Spiller-Fitz Hugh-Burke
		CM::Wannock
91	Yukon (mainstem)	CM::Donjek-Kluane
		CM::Middle Yukon River
		CM::North Yukon River
		CM::Old Crow
		CM::Stewart
		CM::Teslin
		CM::White River
92	Yukon (Porcupine)	CM::Porcupine River
93	Taku	CM::Taku

Appendix 2. Expansion of acronyms used in this document.

Acronym	Expanded Form
A/G	Amber / Green (WSP Status classification)
CK	Chinook salmon
CM	Chum salmon
CO	Coho salmon
CSAS	Canadian Science Advisory Secretariat
CU	Conservation Unit
DD	Data Deficient (WSP Status classification)
EFS	Effective Female Spawners
ENSO	El Niño – Southern Oscillation
IMEG	Interim Management Escapement Goal
MEF	Mid-Eye to Fork (length measurement)
MSY	Maximum Sustainable Yield
NA	Not Applicable
ND	No Data (i.e. data deficient)
OU	Outlook Unit
PKE	Pink salmon – Even year (Conservation Unit type)
PKO	Pink salmon – Odd year (Conservation Unit type)
PST	Pacific Salmon Treaty
R/A	Red / Amber (WSP Status classification)
SEL	Sockeye salmon – Lake (Conservation Unit type)
SER	Sockeye salmon – River (Conservation Unit type)
TTC	Trans-boundary Technical Committee
WCVI	West Coast Vancouver Island

# CITATION

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