



Fisheries and Oceans  
Canada

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Canada

**PACIFIC SALMON OUTLOOK**  
**PACIFIC REGION**  
**2002**

**Canada**

## 2002 SALMON STOCK OUTLOOK

DFO Stock Assessment has developed a categorical outlook for salmon stock status in 2002. For each stock grouping an outlook is provided on a categorical scale of 1 to 4. The category assigned to a stock group reflects expert opinion of its status.

The outlook was based on a variety of methods, from quantifiable relationships such as stock-recruitment for Fraser River sockeye to expert opinion where information is incomplete or insufficient to prepare statistical forecasts. Stock status implies consequences to fisheries where that 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 is identified in the following table.

**The outlook should be regarded as very preliminary and is subject to change as more information becomes available and statistical forecasts and assessments are completed and reviewed.**

Outlook Scale:

| Status Category | Category Definition      | Fishery Consequences  |
|-----------------|--------------------------|---|
| 1               | Conservation concern     | This is a stock of concern. No directed fisheries and possible requirement to avoid stock.        |
| 2               | Poor – below average     | Fisheries are uncertain and likely small. Allocation policy will determine harvest opportunities. |
| 3               | Normal – near average    | Normal fisheries are probable.  |
| 4               | Abundant – above average | Fisheries are highly probable.  |

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 with a better outlook. Where possible the comments associated with each stock should identify such potential constraints. A range in the outlook category indicates that there is geographic variation within the stock group.

The intent of providing such an outlook is to provide an objective and consistent context within which to initiate fisheries planning. In particular, the broad outlook provides a preliminary indication of potential fishing opportunities and the stocks of concerns around which fisheries would have to be shaped. Annual provision of this outlook is part of a comprehensive proposal now being developed for effective, objective and timely salmon fisheries planning in Pacific Region.

| Stock   | Outlook | Comments   |
|---|---------|--|
| <b>COHO</b>                                   |         |  |
| Stikine coho                                  | 2 to 3  | Below average to average run expected based on brood year escapement.  |
| Alsek coho                                    | 3       | Average return based on escapement in 1998-99.   |
| Taku coho                                     | 3       | Average return based on favorable smolt outmigration in 2001.  |
| QCI coho                                      | 2 to 4  | Strong 4 year old component expected. Strong 3 year old return expected from improved 1999 escapements. High uncertainty on WQCI (Area 2W).  |
| NC coho                                       | 2 to 4  | Strong brood year escapements in 1999. Very strong 4 year-old returns expected from 1998 brood. Uncertainty remains for high-interior Skeena coho (e.g. Sustut).   |
| CC coho                                       | 2 - 3   | Areas 7-11: Robust escapements in many areas suggest good ocean survival. Continued good survivals coupled with a strong brood year suggest that returns may be above average to more productive streams. Areas 12-13: Coho smolt abundance in Keogh was average but ocean survival there continues very low (<3%). Brood year escapements at Kliniklini and Heydon were probably below average with the Heydon escapement probably well below system capacity. Fry densities in this region are consistently below densities seen in other areas such as Georgia Basin. Knowledge base in this area is poor and outlook is highly uncertain.  |
| WCVI coho                                     | 3       | If survivals don't change next year, we may be getting about 80% of this year's wild return, based on monitored smolts this year averaging about 80% of 2000 levels in SWVI. A qualitative estimate of euphausiid densities in Barkley Sound, which appear to be similar to last year, suggests continued good marine survival in this area.   |
| Strait of Georgia coho including lower Fraser | 2-3     | Run and ocean survival data are changing rapidly at this time. Marine survivals have certainly increased substantially in all areas except perhaps Areas 15-16 and may have recovered on Vancouver Island to about 8% for wild coho. This survival is less than 1980's (>12%) but comparable to survivals seen in the early 1990's. Monitored smolt abundances in 2001 were about 60% of 2000 levels. We don't have sufficient escapement data this early in the spawning season but if the Black Cr. Indicator escapement is indicative, there should be fishable surpluses in many areas. It is most likely at this point that coho in Areas 15-16 may require continued low exploitation. |
| Thompson coho                                 | 1-2     | The improved marine survivals seen in many areas of the Georgia Basin have apparently led to improved escapements to the Thompson of approximately 3 to 4-times levels seen in the recent past. Continued caution is likely warranted to insure recovery. Improved escapement in the brood year and the expected continuation of better marine survival offer considerable optimism for  |

| Stock                     | Outlook       | Comments   |
|---------------------------|---------------|--|
|                           |               | rapid recovery.  |
| <b>CHINOOK</b>            |               |  |
| Yukon Chinook             | 2             | Below average returns based on a recent trend, since 1998, towards decreased production and continued uncertainty with respect to marine survival.   |
| Stikine chinook           | 3             | Expect average run based on brood year escapements; Little Tahltan brood year escapements were in the upper part of the target range, or slightly above the range. No directed commercial fishery permitted under the PST  |
| Alsek chinook             | 3             | Average return based on brood year escapements being near or above optimum range.  |
| Taku chinook              | 3             | Average return based on escapements above optimum escapement goal range. No directed commercial fishery permitted under PST.   |
| Nass chinook              | 4             | Based on strength this year and continuation of strong returns.  |
| NC chinook                | 4             | Continuation of strong returns is expected.  |
| CC chinook                | 4 & 3         | Bella Coola River returns are good, result of probable good marine survival. Other stocks (Wannock) have very high uncertainty.  |
| WCVI chinook              | 2             | Improved returns of age 2 jacks and age 3 adults in 2001 suggests improved outlook for this stock. Age 5 returns in 2002 will be very poor. Some restrictions still likely to ensure escapement in wild systems. Outlook for hatchery systems may be as high as level 3.                                     |
| Lower Fraser chinook      | 4             | Strong brood year escapements suggest a continuing trend of good returns to the Harrison and Chilliwack River systems.   |
| Strait of Georgia chinook | 3             | No change is expected from current status which has seen escapements that are relatively stable at below average to average levels   |
| upper Fraser chinook      | 2<br>3<br>3-4 | Earliest timed springs (into lower Fraser by May) expected to be fair.<br>Upper Fraser springs poor to fair. Thompson springs fair to good.<br>Upper Fraser Summers patchy but generally good. Late summers were very good, with near record escapements for late South Thompson complex.                    |
| <b>SOCKEYE</b>            |               |  |
| Stikine sockeye           | 2 to 3        | Smolt production from Tahltan Lake in 1999 was below average, but approximately 40% better than 1998. Management actions to address conservation concerns possible during first half of season. Mainstem escapement in primary brood year (1997) achieved goal suggesting this run will be at least average. |

| Stock                                     | Outlook | Comments   |
|---|---------|--|
| Alsek sockeye                             | 3       | Average run expected based on brood year production.   |
| Taku sockeye                              | 3       | Average return based on average brood year escapements.  |
| Nass sockeye                              | 3       | Average returns are expected   |
| enhanced (BLDP) sockeye (Pinkut & Fulton) | 1 to 2  | Very poor 5-year old returns, and a poor 4-year old return forecast. Anticipate FSC fisheries only.  |
| Skeena wild sockeye                       | 1 to 2  | Very poor return expected. Highly variable returns among stocks. Anticipate FSC fisheries only.  |
| WCVI sockeye                              | 3       | Returns to Alberni Inlet continue to improve gradually as marine survival returns to average levels. Expect average to above average returns in 2001.  |
| CC sockeye                                | 1       | Brood year escapements and no indication that marine survival improved significantly in 1999 ocean entry motivate continued and deepening conservation concern for Smith and Rivers Inlet sockeye. Other CC stocks poor.   |
| Fraser sockeye – Early Stuart             | 2       | Forecast of 105,000, 80% of cycle-mean. Forecast is highly uncertain.  |
| Fraser sockeye – Early Summer             | 2       | Forecast of 493,000, 66% of cycle-mean, largely due to poor forecast for Seymour. Forecast is highly uncertain.  |
| Fraser sockeye – summer                   | 3 to 4  | Forecast of 8.8M considerably greater than cycle-mean of 5.3M, largely due to large run forecast for Quesnel stock and despite poor forecast for Chilko. Forecast is highly uncertain.   |
| Fraser sockeye – fall                     | 1 to 2  | Forecast of 3.3M is considerably below cycle-mean of 9.3M, largely due to very poor forecast for the late Shuswap complex. Early entry of this run timing group to river has continued and is associated with very high pre-spawn mortality exceeding 90% in some stocks. Forecast is highly uncertain. The possible effects of early entry and pre-spawn mortality compound uncertainty but are likely to constrain fisheries on summer component.. |
| Fraser sockeye – special concerns         | 1       | Cultus Lake stock continues very depressed with a forecast of 6,700 compared to a cycle average of 26,000. Forecast is highly uncertain.   |
| NC pinks                                  | 1 to 4  | Average Nass, very poor Skeena, very good Area 6 forecasts for pink.   |

| Stock                    | Outlook | Comments  |
|--------------------------|---------|---|
| QCI pinks                | 2 to 3  | Outlook is based on brood year escapement, which was variable in this area.   |
| CC pinks                 | 1 to 3  | Most stocks are expected to be normal except Smith Inlet and Rivers Inlet, which are expected to continue well below average.         |
| CC Mainland Inlets pinks | 3       | Good brood year spawn (2000), pink survival is highly variable resulting in large uncertainty in 2002 expectations.                   |
| Fraser pink              | N/A     | Not applicable in 2002.   |
| Yukon Chum               | 1 to 2  | Below average returns based on a recent trend towards decreased production and continued uncertainty with respect to marine survival. |
| NC chum                  | 1 to 4  | Poor Skeena, moderate Area 3, and strong Area 6 returns expected. General long-term decline in abundance.                             |
| QCI chum                 | 2 to 4  | Brood year escapements variable but generally above average.  |
| CC chum                  | 1 to 3  | Returning stocks appear to be normal except Rivers and Smith Inlets, which continue to be well below average.                         |
| Georgia Basin chum       | 3 to 4  | Very good spawning brood year (1998), average to above average returns to 2001, suggest above average returns in 2002.                |
| WCVI chum                | 3 to 4  | Very good spawning brood year (1998) and moderate survival rates may result in average to above average returns.                      |

## CITATION

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