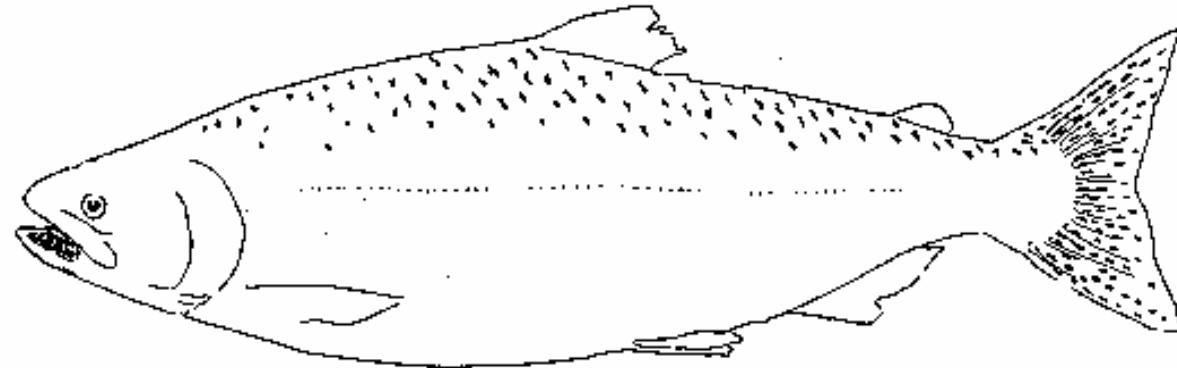




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# 2012 OUTLOOK and PRE-SEASON PLANNING FOR FRASER SALMON and STOCKS OF CONCERN



Forum on Conservation and Harvest Planning for  
Fraser Salmon  
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## Outline

- Southern BC Chinook
  - 2012 Outlook Status and recent trends
  - Southern BC Chinook Management Framework
- Fraser Sockeye
- Southern BC Coho
- Southern BC Pink
- Southern Chum
- Discussion



## Southern BC Chinook

- 2012 Outlook:
  - Fraser stream-type populations (Spring 4<sub>2</sub>, Spring 5<sub>2</sub>, Summer 5<sub>2</sub>): **stock of concern to low**
  - Fraser Summer 41 (South Thompson): **near target/abundant**
  - Fraser Late (Harrison): **low to near target**
  - WCVI wild: **stock of concern**
  - Cowichan chinook: **low**



## Fraser Chinook Spring 4<sub>2</sub> Return Scenarios

Return Yr	Recent Average (last 4 returns: R/S = ~ 0.62)	2000-2009 Average (R/S =~ 2.16)	1988-1999 Average (R/S=~3.37)
2010	6,626	22,969	35,837
2011	1,648	5,713	8,914
2012	7,080	24,542	38,290
2013	1,510	5,234	8,166

- Projections are total chinook returns before fisheries; preliminary information suggests R/S >1 in 2010 based on spawner comparisons with brood year.
- Based on R/S calculated for Spring 4<sub>2</sub> for ocean entry years 1991 to 2007 and parental brood spawner abundance.
- **Continued low abundance expected in 2012.**



## Fraser Chinook of Spring/Summer 5<sub>2</sub> Return Scenarios

Return Yr	Like 4 <sub>2</sub> in 2009 (R/S =~ 0.37)	Recent Average (last 3 returns; R/S =~ 0.64)	2000-2009 Average (R/S =~ 1.23)	1988-1999 Average (R/S =~ 2.0)
2010	19,286	33,307	64,269	103,206
2011	20,044	34,617	66,796	107,264
2012	10,462	18,069	34,865	55,987
2013	15,853	27,378	52,828	84,833

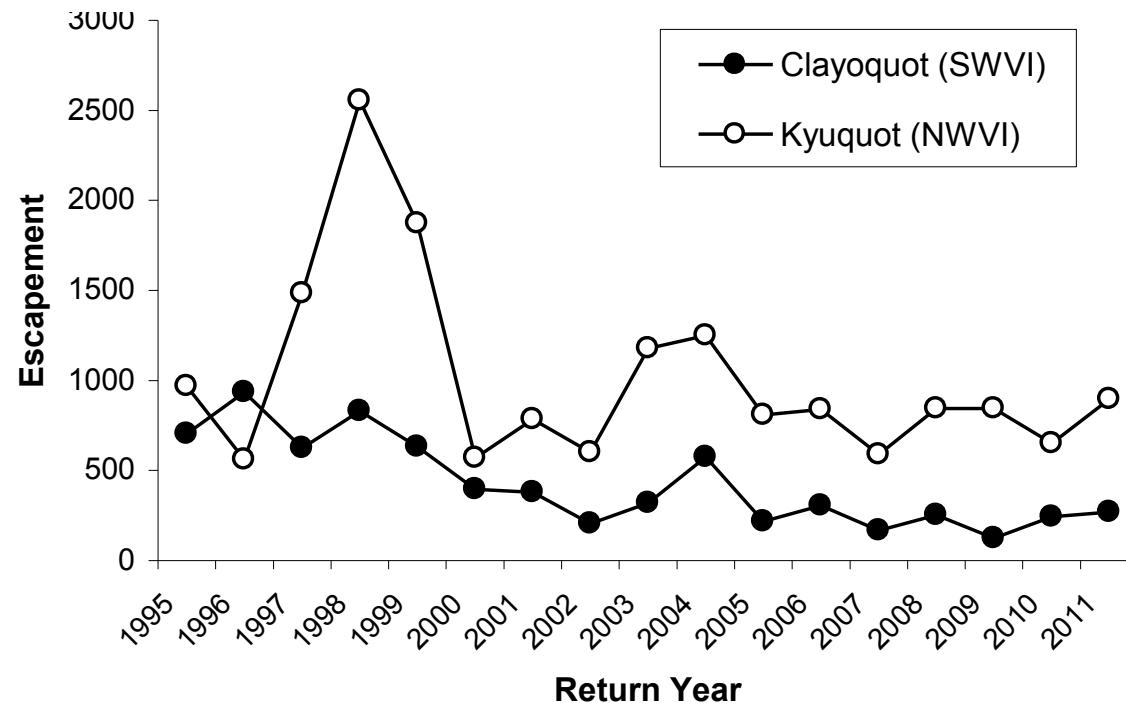
- Returns in 2012 could be below 60,000 management reference point identified in the IFMP.



## Cowichan Chinook

- 3,500 total adult escapement in 2011 (spawners plus broodstock). This was much better than expected (800 in 2009, 2700 in 2010). Improvement likely due to improved survival from ocean entry year 2008 and rebuilding activities.
- 2,800 adults spawned naturally and about 700 adults were taken for hatchery brood.
- 1,700 jacks were also estimated to spawn naturally. This is one of the best jack returns in the last 10 years; suggesting continued improvement in 2012.

## WCVI wild Chinook



Clayoquot (Area 24)=Bedwell, Megin, Moyeha

Kyuquot (Area 26)=Artlish, Kaouk, Tashish

Outlook status = 1, stock of concern (last year = 1)

- WCVI wild chinook status remains low with particular concern for Clayoquot (SWVI CU)
- Continued expectation for very low returns in 2012.



## 2012 Fishery Planning

- Restrictions and/or closures developed and implemented in recent years fisheries will continue to be required in 2012.
  - Summary table of 2011 management actions and 2012 proposed management actions for Fraser chinook (handout)
- Management plans may be adjusted to account for new information and to improve catch monitoring.
- Plans to be included in draft Integrated Fisheries Management Plans (IFMPs)



# Catch Monitoring Improvements

- **Coded Wire Tag (CWT) data from adipose fin clipped chinook is the primary source of fishery information for coast wide assessment of Chinook.**

## Catch Monitoring Program Requirements:

- produces accurate and precise estimates of encounters (kept and released).
- representatively samples at least 20% of the catch for CWT information
  - Sampling must represent fishery over duration and geographic area of fishery
- recovers at least 10 CWTs for the main brood year for each indicator stock
- Need to improve submission rates of coded wire tags in many fisheries and areas.



# Southern BC Chinook Management Framework

- Work progressing with First Nations and stakeholders on the development of a management framework for southern BC Chinook.
- ***Purpose/Objectives***
  - Develop a comprehensive Strategic Plan to address the decline in productivity of Southern B.C. Chinook salmon.
  - The Strategic Plan will specify conservation objectives with timelines for Southern BC Chinook conservation units, as well as fisheries, enhancement and habitat actions required to achieve the objectives.



## Southern BC Chinook Management Framework

- Process (Terms of Reference being finalized):
  - initial ***Technical Scoping Phase*** to assess status of southern BC Chinook Conservation Units (34 CU's), determine potential bottlenecks and identify potential actions to improve status.
  - followed by a ***Planning Phase*** plan where options will be evaluated and actions recommended
  - An ***Interim Bilateral Steering Committee*** to oversee the overall development of the plan, the establishment of a ***Technical Working Group*** and ***Planning Committees***.



# Southern BC Chinook Management Framework

- Proposed Timelines:
  - July 2011 – preliminary discussions on process
  - December 15, 2011 – first meeting of Interim Steering Committee.
  - January 20, 2012 – first meeting of Technical Working Group to plan Technical Scoping phase.
  - February 2012 – second meeting of the Interim Steering Committee.
  - April 2012 - Planning Committee(s) structure identified.
  - December 2012 -Technical Scoping Phase complete.
  - November 2012 to May 2013 – Planning Phase in progress.
  - June 2013 - overall Southern BC Chinook Strategic Plan complete.



## Southern BC Chinook Management Framework

- Next steps:
  - Revision of TOR
  - Technical Working Group to complete design of Scoping process
  - Development of business plan



## Fraser River Sockeye

- The 2012 Fraser Sockeye pre-season forecast will be reviewed at February 1, 2012 CSAP meeting.
- 2012 return is coming from one of the lowest effective female spawner numbers on record.
- Escapement plan for each management unit to be developed following the Fraser Sockeye Spawning Initiative (FRSSI) workshops in late January and early February for inclusion in draft SC IFMP.
- Actual fishing opportunities will depend on assessments of in-season information including test fisheries, hydroacoustics, and stock identification sampling.



## South Coast Coho

- Interior Fraser, Georgia Strait and Lower Fraser coho continue to be stocks of concern or low abundance (Outlook Status 1/2)
- Interior Fraser coho brood year (2009) spawner abundance of approximately 24 thousand.
- Plan for a similar management approach to recent years – Canadian fishery exploitation rates not to exceed 3%.
- Window closure in the Fraser River to protect coho starting in the Fraser River after Labour Day (Sept. 4, 2012). Selective fishing techniques required.



## Southern Chum

- Returns to WCVI, Johnstone Strait and Strait of Georgia generally *low to near target*
- Issues:
  - 2011 inseason assessment in Johnstone Strait indicated strong migration in JS but fish were approx. 1-1.5 kg smaller than average. Low returns to Fraser
  - High uncertainty associated with chum returns
- Management plan based on conservative 20% exploitation rate in mixed stock Johnstone Strait fishery, or
- In other areas, harvest opportunities primarily in terminal areas based on decision rules and escapement targets.



## Fraser Chum

- Fraser chum have an outlook status of 2 (*low*) for 2012 based on recent trend of low escapements.
  - Fraser chum escapement trending downward over last 13 years
- Management approach for 2012 likely to be similar to recent years using information from Johnston Straits and Albion test fisheries to estimate in-season return abundance.
  - 800 thousand escapement target for the Fraser River



## South Coast Pink Salmon

- Off-cycle year for most pink salmon populations in Southern areas:
  - Insignificant abundance of Fraser pink salmon return in even years
  - Johnstone Strait even year returns expected to below average due to flood events in the brood year. Returns generally highly variably and uncertain.
  - Strait of Georgia natural populations generally off cycle year. Terminal opportunities expected from seapen reared pink salmon (e.g. Nanaimo, Cowichan)



## Overview for 2012 and fishery planning considerations by time period

### **March to July:**

- Fraser chinook **Spring 4<sub>2</sub>**, **Spring 5<sub>2</sub>** and **Summer 5<sub>2</sub>** stocks of concern migrating; peak in Fraser River in June for Spring groups and July for Summer (**stocks of concern**)
  - In season run size assessment of Spring 5<sub>2</sub> and Summer 5<sub>2</sub> chinook at Albion test fishery in mid June
- Fraser River sockeye in season assessment of abundance, escapement objectives and environmental conditions.
  - Early July peak migration of **Early Stuart sockeye**; 3 wk window closure in recent years likely to continue in 2012 (**stock of concern**)
  - Late July-August **Early Summer sockeye** (**range: low to near target**); one week window closure similar to last 2 years to continue to address poor returns of the earliest stocks in this run timing group.



## Overview (continued)

### **August to September:**

- Early August **Summer sockeye** (**range: low to near-target**) Average to above average returns expected for Late Stuart and Stellako; Chilko and Quesnel expected to be below cycle average.
- Mid to late August **Late run** (**range: stock of concern to near-target**) Harrison only stock expected to be returning above cycle average.
- **Summer 4, chinook** (Shuswap/South Thompson) chinook peak migration into Fraser in late August (**near target / abundant**)
- **Fraser Late chinook** (e.g. Harrison) peak migration into Fraser in late September (**low to near target**) Average return expected for 2012.
- Window closure early September to October to conserve **Interior Fraser Coho**; selective fisheries. (**stock of concern / low**)



## Overview (continued)

### October to November:

- **Fraser chum** returns (outlook is *low*) beginning in October. In season run size assessment at Albion test fishery after mid-October. Fishing opportunities based on inseason assessment of run size and decision rules in the IFMP
  - <800K – First Nations FSC harvest limited to <10% exploitation
  - >916K – Commercial/Recreational fishery openings on mainstem
- **Interior Fraser steelhead** conservation measures during chum fisheries (*stock of concern*).



## IFMP Timelines:

- 1<sup>st</sup> Draft released: **March 1, 2012**
- Comments until: **March 30, 2012**
- 2<sup>nd</sup> Draft released: **April 18, 2012**
- IHPC Meeting: **May 2-3, 2012**
- Target Public Release of IFMP: **June/July 2012**