Interior Fraser Coho Potential for Change to Allowable Exploitation Rate for 2014

Forum on Conservation and Harvest Planning Meeting, January 2014

Background

- During the 1990's, declines in the abundance of southern British Columbia Coho Salmon populations prompted the production of a PSARC paper by Dr. Mike Bradford (1998) on Interior Fraser Coho (IFC) which identified low marine survival rates and fishery impacts as being the key factors in the decline of spawning populations.
- DFO subsequently implemented a number of fishery management measures to reduce the harvest impacts on these stocks.

Background cont.

- In May 2002 COSEWIC designated IFC as endangered.
- The Coho recovery team (joint DFO and external group established to respond to COSEWIC listing) established a minimum aggregate spawning requirement of 20,000 to 25,000 to meet minimum requirements for the five individual management groups (North Thompson, South Thompson, lower Thompson, upper Fraser and Fraser canyon) of the IFC.

Background cont.

- Prior to the late 1990's IFC were annually subjected to exploitation rates in the 70 to 80% range in fisheries conducted both within Canada and the United States.
- During this time period escapements declined from an average of 60,000 in the 1975-90 time period to a low of 8,600 in 1996. To date the lowest escapement for IFC was 7,700 in 2006.

Background cont.

- Total returns during the 1975 to 1990 time period were in the order of 200,000 while in the 2000 to 2013 time period the total return has ranged from 8,700 to 70,000, most of which has been permitted to escape to terminal areas.
- Since 1998 Canada has been managing domestic fisheries to have no greater than a 3% impact (exploitation rate) on IFC.

Background cont.

- In recent years there have been improvements in escapements of southern British Columbia Coho Salmon with IFC having 4 consecutive years of escapements at or well above the 20,000 to 25,000 minimum escapement objective identified in the 2006 IFC Conservation Strategy (2010-35,587, 2011-25,490, 2012-55,000, 3013-55,000).
- As a result of the improved escapements and an interest for increased exploitation rate on IFC a CSAS paper updating the status for IFC was prepared and reviewed on January 23 and 24, 2014.

IFC CSAS review

The specific objectives of this paper were:

1. Describe the fishery management actions have been taken since 2006 to meet the 2006 Conservation Strategy Recovery objectives.
2. Quantify aggregate, population and sub-population metrics for abundance, distribution and productivity.
3. Compare current population metrics to those outlined the 2006 Conservation Strategy recovery objectives.
4. Quantify annual exploitation rates and the level of uncertainty in these estimates.
5. Estimate the probability of achieving the 2006 Conservation Strategy Recovery objectives at a range of potential exploitation rates.

IFC CSAS review - outcome

- Objective 1 was achieved subject to more details being provided.
- Objective 2 was partially achieved with the exception of the productivity information for the sub-populations of the IFC.
- Objective 3 was achieved for objectives 1 and 2 of the IFC 2006 Conservation Strategy subject to addition of some additional figures and verbage.

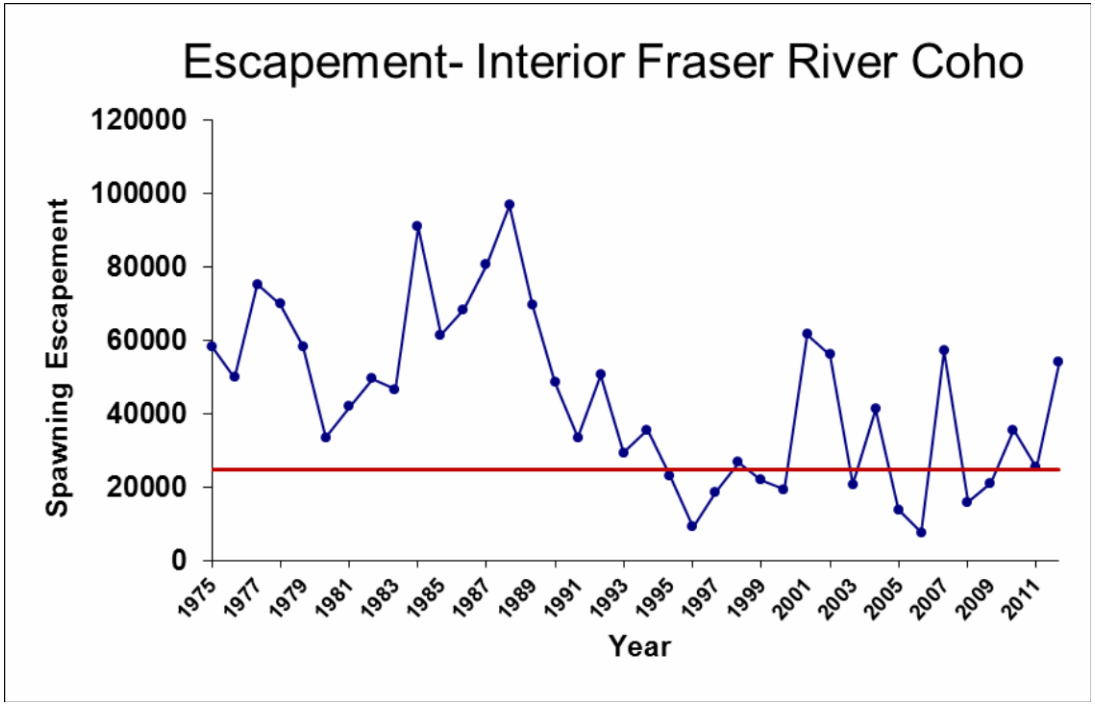
IFC CSAS review - outcome

- Objective 4 was partially met with the exception of the uncertainty calculations of the exploitation rates provided. May occur in a future document.
- Objective 5 requires additional work to be done comparing the results from alternate productivity models (Ricker, Beverton-Holt, Hockey stick and Power). Could result in changes to the ER's recommended in the document.
- Revisions to the document to be done for February 7th and a follow up conference call on the 14th to review the modifications and accept or reject the paper.

IFC Conservation Strategy Objectives

- Objective 1: The 3-year average escapement in at least half of the sub-populations within each of the five populations is to exceed 1,000 wild-origin spawning coho salmon, excluding hatchery fish spawning in the wild. This represents a total Interior Fraser Coho spawning escapement of 20,000 to 25,000 wild-origin coho. This objective is designed to provide the abundance and diversity required to satisfy the recovery goal.
- Objective 2: Maintain the productivity of Interior Fraser Coho so that recovery can be sustained. This objective is designed to ensure that the threats to recovery are addressed.
- CSAS paper suggests Objective 1 can be achieved by an escapement of 20,000 IFC coho and Objective 2 would require 40,000 spawners. Note: May change following revisions to the paper.

Interior Fraser Coho



Red line on figure denotes upper end of spawner abundance range for recovery obj. 1 (25K)

- Returns in 2014 from 2011 brood spawners of 26,000 fish.
- 4 consecutive years with spawners above recovery objective 1 including approximately: 2010 - **36,000**; 2011 - **26,000**; 2012 - **55,000,** 2013 **– 55,000**.
- uncertainty remains about the trend in productivity with 4 of the last 10 years below replacement levels however most recent 3 yr average about 2.

Interior Fraser Coho

- Department has received requests for adjustments to fishing opportunities directed at more abundant stocks/species that could result in small incremental impacts on Interior Fraser River Coho.
- Pending completion of additional analysis, the Department is seeking feedback on potential adjustments to the current management approach for Interior Fraser Coho for the 2014 fishing season.
- Department planning to have a discussion document on potential options in mid-February which will help to inform the 2014 Draft IFMP.