

**From:** Whitehouse, Timber  
**Sent:** Wednesday, February 3, 2010 12:44 PM  
**To:** Cass, Alan <Alan.Cass@dfo-mpo.gc.ca>  
**Subject:** FW: Cohen Inquiry input  
**Attach:** SF-2007 Fraser Sockeye Calibration Report.pdf; TR2647 Cronkite Salmon Escapement Horsefly.pdf; 2009SEFSockeyeCalibrationConceptBenner.doc

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Al, summary from Keri does this get at what you are looking for please advise and we can modify if required.

Timber.

Here is brief overview of the progress made on Fraser sockeye calibration work for populations between 25,000-75,000 since 2005:

2005 - proposal submitted to PSC SBF (not funded); opportunistic calibration work conducted on the Middle River population (DFO funded).

2006 - proposal submitted to PSC SBF (not funded).

2007 - calibration study of Stellako, Horsefly and Adams conducted (funded by PSC SBF; report attached).

2008 - proposal submitted to PSC SBF (not funded)

2009 - PSC SBF proposal approved however no funding received due to global economic crisis; opportunistic calibration work was conducted on Stellako, Mitchell and Tachie river populations (DFO funded).

2010 - 2009 proposal approved with revisions for 2010; proposed calibration work includes Scotch, Seymour, Horsefly, Mitchell, Stellako and Eagle populations (2009 concept proposal attached).

Here is a blurb on the calibration progress if you find it helpful.....

Calibration work has been conducted on six Fraser River sockeye populations in the 25,000 and 75,000 range between 2005 and 2009. The results of this work have shown that visual estimates of populations in the 25,000 to 75,000 range will be significantly underestimated using the standard 1.8 index. In addition to reduced observer efficiency, larger populations will tend to have a more protracted arrival and spawning period than smaller stocks resulting in higher rates of spawner replacement which will influence the index required to accurately estimate escapement. In addition to the effects of density, counting conditions and fish behaviour can vary dramatically throughout rivers in the Fraser watershed, requiring different calibration indices for systems even when escapements are similar. To be able to effectively evaluate escapement in a given river, a system-specific index is required, or if this is not possible, an index from a nearby system that is morphologically and behaviourally similar must be developed. Therefore, continued calibration work must take place on a variety of systems (size and type i.e. clear, glacial, tannic etc.) at various spawner densities in order to develop a set of indices that can be applied to a broad set of populations. The six systems that have been the focus of the calibration work since 2005, while having clearly different morphological and sockeye behavioural characteristics, do not fully reflect the variability that exists across all systems in the Fraser watershed.

Here is the progress with respect to promoting and supporting R&D of more efficient spawner enumeration technologies since 2005:

2005 - PSC SBF funded study to determine feasibility of using DIDSON technology to enumerate sockeye spawning escapement on the Horsefly River (report attached).

2006 - Chilko River DIDSON feasibility; Horsefly River DIDSON feasibility - Year 2 (both DFO funded)

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2007 - Horsefly DIDSON enumeration (included as part of the PSC SBF calibration study)  
2008 - Chilko River DIDSON feasibility - Year 2 (DFO funded)  
2009 - Chilko River DIDSON enumeration, Mitchell River DIDSON feasibility (both DFO funded)

Let me know if there anything else you need to respond.  
Thanks,  
Keri

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**From:** Cass, Alan  
**Sent:** January 19, 2010 3:31 PM  
**To:** Whitehouse, Timber; Benner, Keri  
**Subject:** Cohen Inquiry input

Timber/Keri, the Inquiry Team is in the mist of addressing the list of recommendations from the previous reviews (going back to Pearse 1982). The Pacific Inquiry team has listed the recommendations (back to Pearse 1982) and needs to identify the government initial response (already done in this case) and provide a narrative on actions taken. Here is an interesting one that needs some input from you. In this case DFO disagreed with the recommendation but if you could elaborate on progress of the calibration study and the re-funding from SEF to continue I think that will cover it. That would help the Commission understand where we are. Any supporting documentation would be good (how 'bout the SEF proposal?)

I don't see this as much more than a short summary so no biggy.

This is required in the first week of Feb. Thanks Al.

**Source:**

Tom Wappel, M.P., Chair, "*Here we go again... or the 2004 Fraser River Salmon Fishery – Report of the Standing Committee on Fisheries and Oceans*" (March 2005).

*Government Response to the 2<sup>nd</sup> Report of the Standing Committee on Fisheries and Oceans entitled: Here We Go Again or the 2004 Fraser River Salmon Fishery, March 2005 (2005).*

**Recommendation #7:** That the Department of Fishery and Oceans re-establish the threshold of 25,000 fish for the mark recapture method to be used for the estimation of spawning escapement.

**Response:** DFO is not of the view that it is necessary to re-establish the threshold of 25,000 fish. The 75,000 fish threshold introduced in 2004 provides suitable coverage of the spawning systems, coupled with priority studies on key stocks. In October 2004, DFO proposed to the Pacific Salmon Commission to raise the threshold to 75,000 fish as a cost saving measure, which would allow DFO to maintain the extent of escapement survey coverage throughout the Fraser watershed. Prior to 2004, stocks with expected spawner abundances less than 25,000 were estimated using visual surveys, whereas stocks expected to exceed 25,000 were assessed using more precise techniques (e.g. mark-recapture programs). Under DFO's proposal, visual surveys would apply to spawning abundances less than 75,000, and more precise techniques would be used for populations exceeding this level. In October 2004, the Pacific Salmon Commission, with agreement of the U.S., adopted DFO's proposal to raise the threshold with the following conditions: \_ that calibration studies be conducted on the higher priority Early Summer and Laterun systems. Further analysis on appropriate threshold levels (e.g., 25,000 - 75,000) should be developed, and \_ that the PSC take advantage of all opportunities to promote and support research and development of more efficient and effective spawner enumeration technologies.

Al Cass

On assignment to the DFO Commission of Inquiry Team into the decline of Sockeye Salmon in the Fraser River /  
En affectation à l'équipe du MPO pour la Commission d'enquête sur le déclin du saumon sockeye du fleuve  
Fraser"

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