

ACTION REQUEST / FICHE DE SERVICE

From/De: Allison Webb
Regional Director
Policy Branch

Docket No. \ N° Dossier: 2010-501-00293
File Code\Indicatif:

Subject/ THE PSC WORKSHOP REPORT "SYNTHESIS OF EVIDENCE FROM A WORKSHOP ON
Objet: THE DECLINE OF FRASER RIVER SOCKEYE"

Topics: Pacific Salmon Treaty
Action Sec. resp. : PAC - RDG Pacific

Info. Sec(s) Informée(s) :

Dated/En date du	Input/Entrée	Deadline/Échéance
2010/09/21	2010/09/21	2010/09/21

ACTION REQUIRED/ SUITE A DONNER

Reply/Réponse

Other/Autre

() for DM's signature/
pour la signature du SM

() For info or necessary action/
Pour information ou suite à donner

Action Required \Tâches requise	Action Date \ Date d'assign.	Deadline \Échéance	Completed \Complété
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Charge To/Délégué à: RDG - PAC/Ivings, Juanita	ASSIG	2010/09/21	2010/09/21
Assignee/Assigné à:			

Assigned/Assigné à:
Action Date/Date d'assign.: 2010-September-21
Comments/Commentaires: For Melissa's worklist

Assigned/Assigné à:
Action Date/Date d'assign.: 2010-September-21
Comments/Commentaires: September 21, 2010 - Approved by the RDG, S. Farlinger. To M. Bloom & S. Mithani for approval and forwarding up for the DM's information. E-mailed to M. Chenier, D. Wallace, P. Banville & S. Johal.

Charge To/Délégué à: RDG - PAC/Warnock, Melissa	ASSIG	2010/09/21	2010/09/21
Assignee/Assigné à: Warnock, Melissa			

Charge To/Délégué à: Strategic Policy / Politiques stratégiques	APP	2010/09/22	2010/09/21	2010/09/27
Assignee/Assigné à: Strategic Policy / Politiques stratégiques				

Assigned/Assigné à:
Action Date/Date d'assign.: 2010-September-22
Comments/Commentaires: Received and submitted to EA. OSS, please note that ADM-SPS will approved first and we will forward the docket to ADM-OSS for approval. (pb)

Assigned/Assigné à:
Action Date/Date d'assign.: 2010-September-22
Comments/Commentaires: SPP: please review/comments prior to ADM's approval - due by cob today in ADMO. Printed documents in your folder for pick up. (pb)

Assigned/Assigné à:
Action Date/Date d'assign.: 2010-September-23
Comments/Commentaires: received and submitted to EA. (pb)

Assigned/Assigné à:
Action Date/Date d'assign.: 2010-September-27
Comments/Commentaires: OSS: will be hand delivered shortly to your folder in DMO for ADM's approval for today if possible. (pb)

Charge To/Délégué à: Oceans and Science / Océans et Science	APP	2010/09/21	2010/09/21
Assignee/Assigné à: Oceans and Science / Océans et Science			



Government of Canada
Fisheries and Oceans

Gouvernement du Canada
Pêches et Océans

MECTS # 2010-501-00293
EKME # 2223150
FILE / FICHER #

To: Claire Dansereau, Deputy Minister
Pour:

Date: **SEP 21 2010**

Object: **THE PACIFIC SALMON COMMISSION
WORKSHOP REPORT "SYNTHESIS OF EVIDENCE FROM
A WORKSHOP ON THE DECLINE OF FRASER RIVER SOCKEYE"**
Objet:

From / De: Susan Farlinger, Regional Director General

Susan Farlinger **SEP 21 2010**

Via: Mitch Bloom, ADM Policy

SEP 27 2010

Via: Siddika Mithani, ADM Science

SEP 27 2010

Your Signature
Votre signature

Information

For Comments
Observations

Material for the Minister
Documents pour le Ministre

Remarks:

Remarques: Paul Macgillivray, Associate Regional Director General *pm*
Laura Richards, Regional Director Science *see attached*

DISTRIBUTION Sharan Johal, Team Leader - Executive Secretariat

Drafting Officer/ Rédacteur: M. Saunders/L. Richards



SEP 21 2010

Your file Votre référence

2010-501-00293
Our file Notre référence
EKME # 2223150

BRIEFING NOTE FOR THE DEPUTY MINISTER

**THE PACIFIC SALMON COMMISSION
WORKSHOP REPORT “SYNTHESIS OF EVIDENCE FROM
A WORKSHOP ON THE DECLINE OF FRASER RIVER SOCKEYE”**

(Information Only)

SUMMARY

- The Pacific Salmon Commission (PSC) convened a workshop in June 2010 to examine the decline of Fraser River sockeye.
- An expert panel of eleven scientists, chaired by Dr. Randall Peterman (Simon Fraser University), listened to evidence from 25 invited experts who gave presentations on the Fraser sockeye situation and possible explanations.
- The workshop report was released on the PSC website on September 2, 2010.
- The report includes an examination of the plausibility of causes examined and recommends future research and monitoring. Physical and biological conditions inside the Strait of Georgia and freshwater/marine pathogens (viruses, bacteria and/or parasites) are considered to be major contributors to the poor return in 2009 and to the overall decline of Fraser River sockeye.
- Canadian and United States Commissioners will discuss the workshop report at the PSC Executive Session in Kamloops, October 19-21, 2010.

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Background

- Canada and the United States have established a close working relationship under the PSC and during the past decade have worked collaboratively to address issues related to Pacific salmon management.
- During the PSC Executive Meeting, October 20-21, 2009, Commissioners from both sides recognized the 2009 sockeye salmon decline as an important issue requiring further investigation. The United States pledged resources to support a review.
- Between February and May 2010, Canadian and United States representatives developed the review process, including terms of reference for a workshop, invited speakers and an expert panel tasked with preparing a summary report. The PSC Secretariat agreed to provide administrative support.
- The workshop was held in Nanaimo, June 15-17, 2010, with an expert panel of eleven scientists (one from DFO) chaired by Dr. Randall Peterman (Simon Fraser University) and 25 invited experts. The workshop was structured around possible alternative hypotheses for the decline in abundance of Fraser River sockeye. Fisheries and Oceans Canada (DFO) staff gave ten of the 18 presentations which described the evidence for/against these various hypotheses.
- Observers from the Cohen Commission, First Nations, Environmental Non-governmental organization's (ENGO), and commercial and recreational fish interests attended the workshop but did not participate in the dialogue.
- The expert panel report, entitled "Synthesis of Evidence from a Workshop on the Decline of Fraser River Sockeye", was released on the PSC website on September 2, 2010.

Analysis / DFO Comment

- According to the workshop report it is very likely that physical and biological conditions inside the Strait of Georgia and freshwater/marine pathogens (viruses, bacteria and/or parasites) are major contributors to the poor return in 2009 and to the overall decline of Fraser River sockeye.
- Other mechanisms that were considered to be contributing factors to both the poor return in 2009 and the overall decline include harmful algal blooms in the southern Strait of Georgia; delayed density-dependent mortality (poorer survival of offspring from larger returns of spawners); and competition between pink salmon and Fraser River sockeye.
- Other factors were also assessed and are summarized in the attached chart.

Recommendations / Next Steps

- DFO will continue to build on the findings of the PSC workshop, incorporating the results of the strong 2010 Fraser sockeye return and 2010 research results. In addition, DFO will develop a research plan, supplementing some of the suggestions in the report with other knowledge gaps related to an improved understanding and forecasting ability.
- Canadian and United States Commissioners will discuss the workshop report at the PSC Executive Session in Kamloops, October 19-21, 2010.

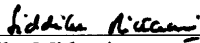
Sue Farlinger
Regional Director General
Pacific Region

We approved,



SEP 27 2010

Mitch Bloom
Assistant Deputy Minister, Strategic Policy



SEP 27 2010

Siddika Mithani
Assistant Deputy Minister, Oceans and Sciences

Attachment (1)

- Table E-1 from the Report on the Pacific Salmon Commission's Workshop on the Decline of Fraser River Sockeye Salmon

M. Saunders/L. Richards

Table E-1. The Expert Advisory Panel's judgment of the relative likelihood that a given hypothesis was either a major factor in, or merely contributed to, the observed spatial and temporal patterns in productivity of Fraser River sockeye populations. These likelihoods are based on evidence presented at the workshop, during subgroup discussions, and Panelists' background knowledge. The top row for each hypothesis reflects conclusions with respect to overall productivity patterns (i.e., over the long term). Shading of multiple cells reflects a range of opinions among Panel members. The second row considers just the 2009 *return year*. The colour of shading reflects the Panel's conclusion about the degree of importance: **black** = major factor; **grey** = contributing factor. The strength-of-evidence column reflects the quantity and quality of data available to evaluate each hypothesis/stressor. Panel members made their best judgments of the relative likelihood of each hypothesis, given the available evidence.

Hypothesis	Time Period	Strength of evidence	Relative likelihood that each hypothesis caused observed changes in productivity during the indicated time period				
			Very Likely	Likely	Possible	Unlikely	Very Unlikely
1a. Predation by marine mammals is an important contributor to the Fraser sockeye situation (Section 4.1).	overall	Fair					
	2009	Fair					
1b. Unreported catch in the ocean outside of the Pacific Salmon Treaty area is an important contributor to the Fraser sockeye situation (Section 4.1).	overall	Good					
	2009	Good					
2. Marine and freshwater pathogens (bacteria, parasites, and/or viruses), are important contributors to the Fraser sockeye situation (Section 4.2).	overall	Fair					
	2009	Fair					
3a. Ocean conditions (physical and biological) inside Georgia Strait are important indicators of contributors to the Fraser sockeye situation (Section 4.3).	overall	Fair					
	2009	Good					
3b. Ocean conditions (physical and biological) outside Georgia Strait are important indicators of contributors to the Fraser sockeye situation (Section 4.3).	overall	Fair					
	2009	Fair					
4. Harmful algal blooms in the Strait of Georgia and/or northern Puget Sound/Strait of Juan de Fuca are an important contributor to the Fraser sockeye situation (Sec 4.4).	overall	Fair					
	2009	Fair					
5. Contaminants in the Fraser River and/or Strait of Georgia are an important contributor to the Fraser sockeye situation (Section 4.5).	overall	Poor					
	2009	Poor					
6. Freshwater habitat conditions in the Fraser River watershed are an important contributor to the Fraser sockeye situation (Section 4.6).	overall	Fair					
	2009	Fair					

Hypothesis	Time Period	Strength of evidence	Relative likelihood that each hypothesis caused observed changes in productivity during the indicated time period				
			Very Likely	Likely	Possible	Unlikely	Very Unlikely
7. Delayed density dependent mortality is an important contributor to the Fraser sockeye situation (Section 4.7).	overall	Fair					
	2009	Fair					
8a. En-route mortality during upstream migration is an important contributor to the Fraser sockeye situation (Section 4.8). En-route mortality is already considered in estimates of total recruits, so while potentially strongly affecting <i>spawner abundance</i> , this hypothesis cannot explain declines in <i>recruits per spawner</i> .	overall	Good					
	2009	Good					
8b. The effects of en-route mortality on fitness of the next generation is an important contributor to the Fraser sockeye situation (Section 4.8).	overall	Poor					
	2009	Poor					
9. Competitive interactions with pink salmon are important contributors to the Fraser sockeye situation (Section 4.9).	overall	Fair					
	2009	Fair					