



SEP 13 2004

MEMORANDUM FOR THE MINISTER

**SARA LEGAL LISTING DECISION -
RECOMMENDATION FOR CULTUS AND SAKINAW LAKE SOCKEYE**

(Decision Sought)

SUMMARY

- A decision is required on whether to recommend that Cultus Lake and Sakinaw Lake sockeye salmon be listed under the *Species at Risk Act* (SARA).
- Under SARA, before the Minister of the Environment (MoE) makes a listing recommendation for an aquatic species to the Governor in Council (GiC), he must consult with the Minister of Fisheries and Oceans. A recommendation on listing must be made to the MoE by mid-September.
- We seek your concurrence for a recommendation to the MoE of not listing Cultus Lake and Sakinaw Lake sockeye because of the high socioeconomic impact.

Background

- In 2002, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessed sockeye from Cultus Lake and Sakinaw Lake as endangered and at imminent risk of extinction, and in 2003 requested their emergency listing. The former Minister of the Environment (MoE) subsequently decided not to emergency list, based on measures that Fisheries and Oceans Canada (DFO) agreed to implement in 2004. The regular SARA listing process is now in play and a recommendation on listing must be with the MoE by mid-September.

- In 2004, DFO implemented a \$1 million action plan that included enhancement, habitat work and predator control, along with a 10-12% exploitation rate limit on the populations. While the fisheries were managed to that limit, a subsequent downsizing of the run estimate by the Pacific Salmon Commission resulted in a final in-season exploitation rate calculation of 17% for Cultus. This number may change post-season. The return of Sakinaw was less than anticipated (99 fish compared to about 200 expected). A final return for Cultus will be available in November.
- These populations are small and at very low levels. REDACTED
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REDACTED These individual lake populations represent a fraction of 1% of all British Columbia (BC) sockeye (Annex 1).
- Cultus and Sakinaw sockeye co-migrate with and are not readily distinguished from fish that belong to larger sockeye population. Thus, fisheries restrictions to protect them have a significant effect on the capacity of all sectors to harvest these larger Fraser sockeye populations.
- There may be potential to reduce the impact of protecting these populations by moving sockeye fisheries into the Fraser River to avoid harvesting them in marine areas but this has not been explored in any comprehensive way. These changes would mean a controversial re-allocation of fishing opportunities from current marine harvesters to other groups upstream. These upstream areas have traditionally been fished by First Nations.

Analysis/ DFO Comment

The key implications of listing and not listing are considered here (Annex 2):

Socioeconomic and Fisheries Impacts of Listing

- While listing would demonstrate a commitment to SARA and offers the best chance of rebuilding these small populations, it comes at a high cost. Because of the poor status of the two populations, particularly Sakinaw sockeye, exploitation rates would need to be <5% (essentially zero), compared to 10-12% in 2004 and higher in prior years. This would result in widespread closures in the south coast commercial sockeye fisheries. It would also require restrictions to Aboriginal food, social and ceremonial (FSC) fisheries and recreational fisheries.

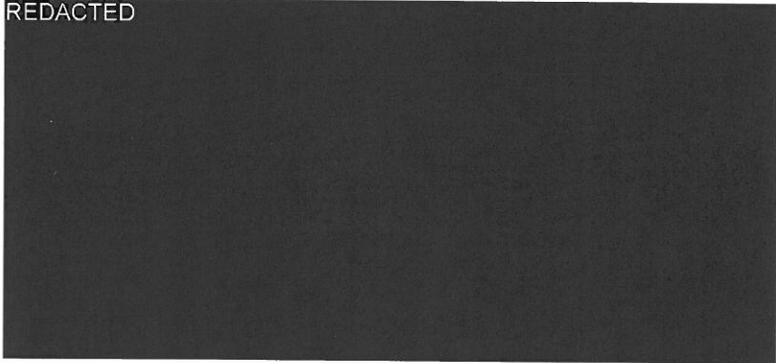
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- It is estimated that over a four year period (2004-2007), listing Cultus and Sakinaw Lake sockeye would result in a loss of approximately \$125 million compared to current (2004) measures. Obviously these impacts would be much higher over the actual duration of listing, which could be two decades or more. Because the commercial sector is already in a tenuous economic situation, this loss would lead to insolvencies in the fishing fleet and likely to bankruptcies of some major processing companies (A socioeconomic analysis is being finalized).

Socioeconomic and Fisheries Impacts of Not listing

- Maintaining the measures put in place for 2004 (10-12% exploitation rate) would result in revenue losses of \$75.5 million over the four years (2004-2007), in comparison to historic levels. Again, the losses would be greater the longer these measures were in place. Prospects for the commercial fleet and processing sector would remain bleak but less so than listing.
- The status quo 10-12% harvest rate provides reasonable prospects for the recovery of Cultus sockeye but is unlikely to halt the decline of Sakinaw sockeye and extinction might occur. At exploitation rates higher than 10-12%, benefits to fisheries would increase but risks to these populations and the potential of extinction would also increase.

Legal and other Considerations

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- Not listing may trigger a request for an emergency listing. Poor expected returns of these populations in 2004 will bolster this reaction. Section 29 of SARA binds the MoE to recommend on an emergency basis that GiC list a wildlife species as endangered if he is of the opinion there is an imminent threat to its survival, without consideration of socioeconomic factors.

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Public Reactions

- Views are polarized and a decision on listing will be controversial. Listing could trigger demands for compensation from commercial fishers and marine First Nations. REDACTED
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- The Province of BC has not provided its views but is expected to be against listing because of the high socio-economic impact. The view of the MoE is not known at this time. He is to be briefed by his departmental officials on September 13.

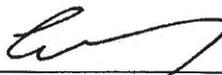
Summary of Implications

- The biological and legal risks if not listed are considered acceptable relative to the magnitude and potential duration of the socioeconomic costs of listing. The socioeconomic impact threatens the viability of the entire salmon industry in southern BC. The populations comprise only a small percentage of all BC sockeye and the impact of listing is especially high relative to their small size. There could be a second petition for emergency listing if the populations are not listed but that decision rests primarily with the MoE. All these risks can be mitigated by continuing with a cautious management approach under the *Fisheries Act*.
- If these populations are not listed, DFO can continue with its recovery actions to try and rebuild these populations REDACTED
REDACTED Maintaining the moderate, status quo exploitation rate of 10-12% would allow DFO to monitor the status of the populations and adjust recovery efforts over time where feasible. It entails acceptance that recovery of a population may fail and provides a reasonable basis from which to explain the trade-offs made should this occur.
- In sum, the reasons for listing are outweighed by the significant socioeconomic costs of doing so. The socioeconomic costs are too high and thus listing is not warranted.

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Recommendation

- I recommend against SARA listing of Cultus and Sakinaw sockeye and that you raise the matter with the MoE during the upcoming meeting of Ministers in Whitehorse on September 16 and 17.



Larry Murray, Deputy Minister

I concur,



Geoff Regan, Minister

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Annex 1

- The department manages five salmon species encompassing thousands of populations throughout coastal British Columbia (BC). Sockeye are the most important commercial species. About 220 lakes in BC have anadromous sockeye populations. Some have large run-sizes (1.5 to 6 million fish), but the majority of the lakes have small sockeye populations. Both Sakinaw and Cultus Lake sockeye were historically small to medium-sized with annual run-sizes commonly in the 1000s for Sakinaw and 10,000s for Cultus. Their abundance has declined greatly in recent decades and both are at very low levels. Over the last four years, Sakinaw has averaged 64 fish annually, with a low of 3 and Cultus has averaged 1494 fish annually with a low of 86. With the 2004 migration essentially complete, 99 fish have returned to Sakinaw Lake, fewer than the expected 200-300. The migration of Cultus is continuing, so no final count is available.
- According to COSEWIC, a number of factors have affected their abundance including, over-exploitation, pre-spawn mortality (Cultus), habitat degradation, recreational impacts, fresh water flows, and predation in the lakes.
- The contribution of these small populations to the genetic diversity of sockeye salmon is not quantified but specific adaptation to their lakes means they would be very difficult, if not impossible to replace, should they be lost. Based on historical population size, they make up a fraction of 1% (approximately 0.1%) of all BC sockeye salmon populations combined.
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- DFO's draft Wild Salmon Policy supports lake-specific conservation of sockeye salmon, but allows for some small populations to be lost if the economic sacrifices required to maintain them are considered too significant. Establishing policy on the tradeoffs between protecting small components of salmon diversity and maintaining a viable mixed-stock fishery was the primary goal of the Wild Salmon Policy. Such a policy will assist in making strategic decisions on listing of small populations under SARA.
- Managing to protect all very small populations would effectively preclude all mixed-stock sockeye fishing in BC. Debate arises, therefore, over whether the loss of an individual lake-based population represents an unacceptable risk to the overall genetic diversity of sockeye salmon as a species.

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Annex 2

Assessment of Options: List or Not List

This assessment looks at the pros and cons of listing versus not listing. Economic impacts were considered over the period 2004 to 2007. In this assessment, listing assumes a <5% exploitation rate for the 4-year period and not listing assumes the (2004) status quo 10-12% exploitation over the 4-year period. However, recovery measures could take up to 20 years or more and the corresponding costs and benefits would occur throughout that period.

List - SARA Compliant Measures – Exploitation Rate of <5%

Pros

- This would demonstrate DFO's commitment to SARA and increase the credibility of DFO's conservation mandate; recovery prospects for Cultus sockeye are good.
- It would provide collateral benefits to other co-migrating stocks and could lead to some additional benefits to fisheries in the longterm.

Cons

- Recovery of Sakinaw sockeye remains uncertain, even with harvesting all but eliminated. No targeted fisheries could be permitted for many years as this would jeopardize the survival or recovery of the species.
- Commercial sockeye fisheries in southern BC for all Fraser sockeye would be essentially terminated for the four years considered here (Actual restrictions would last many more years until the populations recovered or went extinct). Compensation or licence retirement would be demanded, although there are no provisions for such compensation under SARA. Because Aboriginals hold 25% of commercial salmon licenses, there would be a substantial economic impact on some coastal First Nations.
- The restrictions will make it difficult to consistently achieve annual FSC requirements for some First Nations (marine and lower Fraser), and will limit recreational sockeye opportunities
- Because the commercial sector is already in a tenuous economic situation, these measures would lead to insolvencies in the fishing fleet and could lead to the bankruptcy of some processing companies. The economic impact of listing these populations is in the range of \$100-125 million over four years (2004-2007) as compared to the status quo 10-12% exploitation rate, depending on abundance levels (A comprehensive socio-economic assessment is being finalized.)
- A <5% limit would exceed what is required to recover Cultus sockeye in each year of a 4-year cycle. In some years, a higher exploitation rate for recovery of Cultus under SARA may be possible, which could reduce the economic burden.

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(Annex 3).

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Not List – 10-12% Exploitation Rate

Pros

- Despite best efforts, the populations could continue to decline after listing. Not listing would allow more management flexibility and fisheries would derive greater socio-economic benefits compared to SARA compliant measures. Compared to listing at <5% exploitation rate, socio-economic benefits could be \$100-125 million greater for the 4-year period (2004-2007), depending on the level of harvest allowed. (A 20-25% historical exploitation rate would yield benefits of \$200 million over 2004-2007 compared to listing at a 5% exploitation rate, but with increased extinction risks to the populations).
- Ongoing commercial fishing opportunities would be provided to facilitate economic viability, still well below historic exploitation rate levels on Fraser River (recent historic was 20-25%).
- No additional restrictions would be anticipated for recreational and Aboriginal fisheries.
- At a 10-12% exploitation rate, there would be increased risks to Cultus on some years and increased risks to recovery as compared to the SARA compliant measures (<5%) under listing.

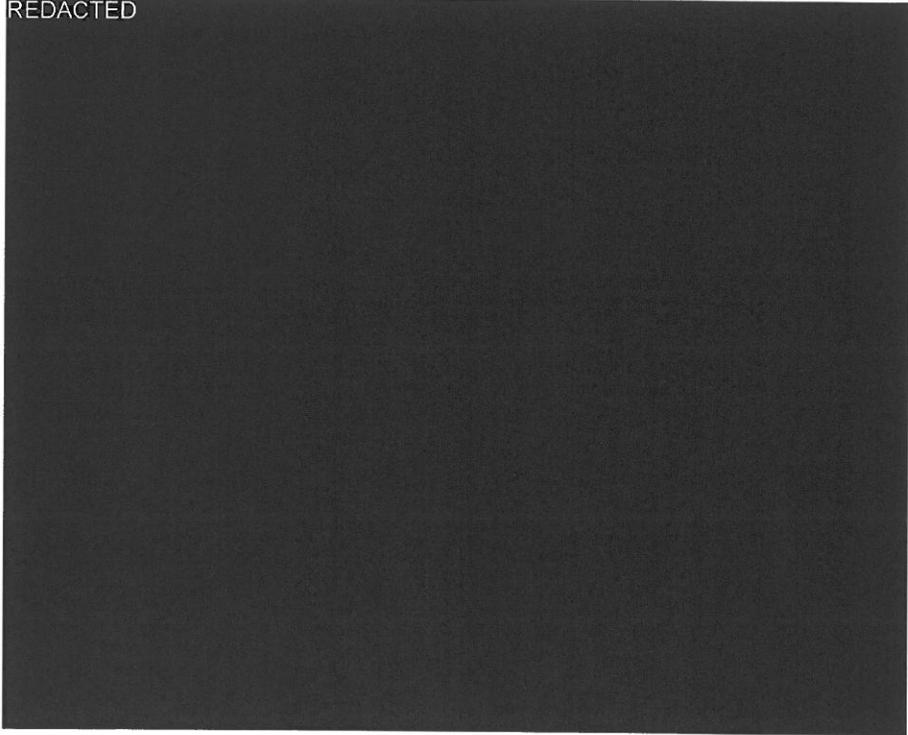
Cons

- DFO would be criticized for weak conservation measures at a 10-12% exploitation rate or higher, there could be valid concerns about the conservation of these populations.
- Fishery measures would be insufficient to halt the decline of Sakinaw sockeye, and extirpation may occur. If exploitation rates were increased to a range of 20-25%, additional benefits would accrue to the fisheries but a relatively rapid extirpation of Sakinaw sockeye is anticipated and the risk of the extinction of Cultus would increase.
- Prospects for the commercial fleet and the processing sector would remain difficult, particularly at lower exploitation rates in the range of 10-12%.
- Bolstered by the poor anticipated returns of these populations in 2004, there could be renewed demands for emergency listing, especially for Sakinaw sockeye. It may prove difficult for the MoE to avoid the conclusion that an imminent threat exists and thus he would have to recommend listing on an emergency basis, without consideration of economic factors.
- There could be new demands for SARA listing of other weak sockeye populations.
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Annex 3

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