



April 4, 2019

The Honourable Jonathan Wilkinson
Minister, Fisheries and Oceans Canada
200 Kent St
Station 15N100
Ottawa ON K1A 0E6

Re: Measures required to protect endangered, threatened and at risk Fraser River Chinook

Dear Minister,

In 2018, COSEWIC identified seven populations of Fraser Chinook salmon as endangered, four as threatened and one as special concern. Based on data to 2015, the only Fraser Chinook Conservation Unit that COSEWIC considered 'stable' was the South Thompson population. DFO has identified this population as a stock of concern and recommended harvest reductions because of its declining productivity. At this time, there are no wild populations of Chinook salmon in the Fraser River considered healthy.

Early timed Chinook: Fraser 4-2 and 5-2

Early timed Chinook to the Fraser River have been considered a conservation concern for the past decade. Since 2012, DFO's efforts to implement conservation measures - that would recover these Chinook through abundance based management zones - have failed.

The salmon committee of the Marine Conservation Caucus (MCC) has been clear in its correspondence to DFO regarding the 2019 fishing season that *total mortalities* on endangered 4-2 and 5-2 Fraser Chinook populations must be held to a maximum of 5%.

Importantly, existing total mortality estimates (i.e. all fish that die from their interaction with the fishery, whether retained or not) as calculated by DFO managers likely significantly underestimate the true total mortality of Chinook in marine recreational salmon fisheries.

This conclusion is based on analysis by DFO's own Science Advice (<https://waves-vagues.dfo-mpo.gc.ca/Library/40602758.pdf>) and the Discussion Paper the MCC provided to you in our recent meeting (<https://www.mccpacific.org/2019/03/discussion-paper-on-frim-in-south-coast-recreational-fisheries/>).

The underestimation of total mortalities is driven by non-retention fisheries and the methods used to calculate the Fisheries Related Incidental Mortality (FRIM) associated with releasing salmon. Figure 1 illustrates the importance of incorporating an appropriate FRIM estimate and the impact of underestimating it.

Importantly, the science information provided only speaks to FRIM; it does not incorporate other identified uncertainties associated with compliance, catch/release reporting, uncertainty in genetic information, or the effects of management measures (e.g. slot size).

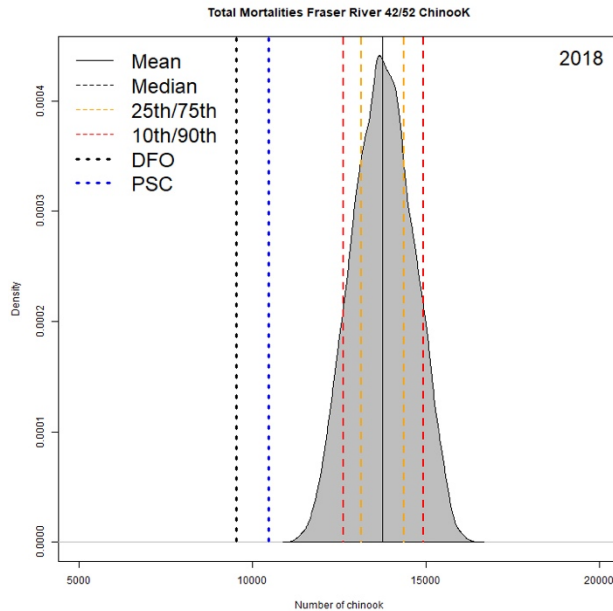


Figure 1. Total mortality estimates of Fraser 4-2 and 5-2 Chinook in BC’s South Coast recreational fisheries (PFMAs 18,19,20,29,121,123) in 2018 using various approaches. The grey shaded area represents the probability density generated through a stochastic model following the guidance in Patterson et al. 2017. The solid vertical black line shows the mean (overlaps the median in this case), with dashed vertical lines showing various percentiles. The dotted vertical blue line is the estimate derived from FRIM calculation methods used by the PSC. The dotted vertical black line is the estimate derived from FRIM calculation methods used by DFO. Total mortality as determined by DFO managers may be an underestimate by up to 50%.

It would be impossible for the MCC to support any proposed ceiling on total mortalities of Fraser 4-2 and 5-2 Chinook if the associated management actions do not specifically and quantifiably incorporate the uncertainties associated with FRIM, compliance and catch reporting, as the management measures would not be based in the most recent science on this topic.

Ensuring that total mortalities of Fraser 4-2 and 5-2 Chinook are kept below 5% will require the following:

- Marine recreational salmon fisheries in the Juan de Fuca, Gulf Islands and Southern Georgia Strait (Areas 18, 19, 20, 121, 123, and 29) be closed from May to early August.
- Northern Georgia Strait Recreational Fisheries (Areas 13 to 17, 28) be Chinook non-retention from May until early August.
- Johnstone Strait and Queen Charlotte Sound be Chinook non-retention May to early August
- WCVI AABM Recreational (Areas 124-127) be Chinook non-retention from May to early August.

Unfortunately, any credible analysis shows that neither the 5% nor the 10% total mortality ceiling can be met without closing these fisheries if DFO is to honour its Section 35 constitutional obligations to First Nations. As with marine recreational fisheries, there are outstanding uncertainties associated with FRIM, compliance, and catch reporting in First Nation's FSC fisheries that must be considered as well.

Closing salmon fisheries in these areas has the added benefit of supporting SRKW threat reduction and recovery. As the MCC pointed out in recent TWG meetings, closures are the most cost-effective and efficient management measure DFO could adopt to reduce competition, and improve the availability and accessibility of 4-2 and 5-2 Chinook. These are preferred prey for SRKWs. Continuing these closures through to October is also necessary for SRKWs in SRKW critical habitats.

Concerns for Fraser Chinook Summer (South Thompson) and Lates (Harrison).

As DFO (and COSEWIC in the case of Harrison) has identified, there are conservation concerns for both these populations. DFO has recommended that total mortality not exceed 20% and harvest be reduced by at least 25%. Given that last year's efforts to achieve this reduction failed, and given the on-going concern for the abundance of south migrating Chinook to SRKW critical habitat, the MCC is recommending the following:

Recreational Fisheries

Georgia Strait North, Areas 13 to 17, 28

- Aug 1 to September 15th 2019, 1 Chinook/day and manage fisheries so encounters (retained catch and releases) do not exceed the 2015-2018 average. September 16th to April 30th, 2020, 1 chinook per day

WCVI AABM Recreational (Areas 124- 127)

- Aug 1 to September 15th 2019, 1 Chinook/day and manage fisheries so encounters (retained catch and releases) do not exceed the 2015-2018 average. September 16th to April 30th, 2020, 1 chinook per day
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Johnstone Strait and Queen Charlotte Sound

- Aug 1 to September 15th 2019, 1 Chinook/day and manage fisheries so encounters (retained catch and releases) do not exceed the 2015-2018 average. September 16th to April 30th, 2020, 1 chinook per day
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Langara/Haida Gwaii

- 1 Chinook/day (all North Coast fisheries should be managed so total mortalities of South Thompson chinook do not exceed 10% (see commercial troll below). DFO should report catch and releases from a creel survey on a weekly basis. Total encounters (retained catch and releases) should be managed so as not to exceed the 2014 to 2018 average.
- It is likely that total mortalities due to FRIM, non-compliance, and lack of fishery independent catch reporting are currently underestimates. These uncertainties

must be explicitly taken into account in the management of this fishery so their impact on South Thompson chinook are fully accounted for. These uncertainties should be captured in the IFMP along with how they will be accounted for.

Commercial Troll

- NBC AABM Area F Troll closed to July 17. The fishery should be managed so total mortalities of the South Thompson population in all north coast fisheries (FSC, troll, and recreational) do not exceed 10%. If this ceiling is exceeded, fisheries should be closed.
- WCVI AABM Area G Troll closed to August 1 (Option A)

In closing, Chinook management for 2019 must address the serious conservation concerns that exist for early timed Fraser fish, broader conservation concerns for all wild Fraser Chinook, and the recovery objectives for Southern Resident killer whales.

These objectives should be taken very seriously.

MCC Salmon committee

Original signed by Greg Taylor