

# NECHAKO FISHERIES CONSERVATION PROGRAM

A Joint Program of the Government of Canada, Alcan and the Province of British Columbia

## TECHNICAL COMMITTEE DECISION RECORD

DATE: March 14, 2003

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### Decision Record (2002/03-05)

5. This Decision Record summarizes discussions of the NFCP Technical Committee on the need to conduct the Fry Emergence Study in 2003. The NFCP Technical Committee has determined from the results and analysis of data collected to date under the program that the project does not have to be carried out in 2003. The rationale for coming to this conclusion is presented below.
- The NFCP has collected 11 years of mark-recapture data and 13 years of fry index data for the Nechako River. These data indicate that there is a stable relationship between the indices of emergent fry and the number of spawning Chinook in the river upstream from the emergent fry trapping site (See Figures 1 and 2);
  - The substrate quality sampling, carried out in 1992 and 2000, indicates that spawning gravel quality in the river has not declined and has the characteristics of good spawning gravel.

Figure 1

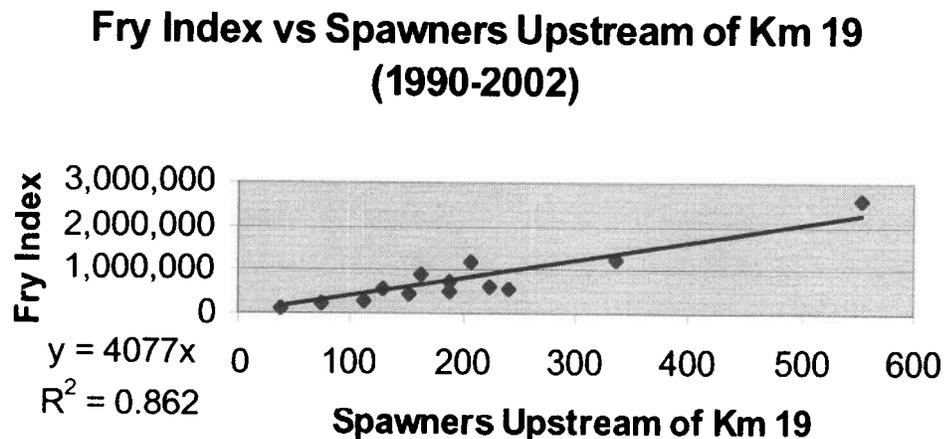
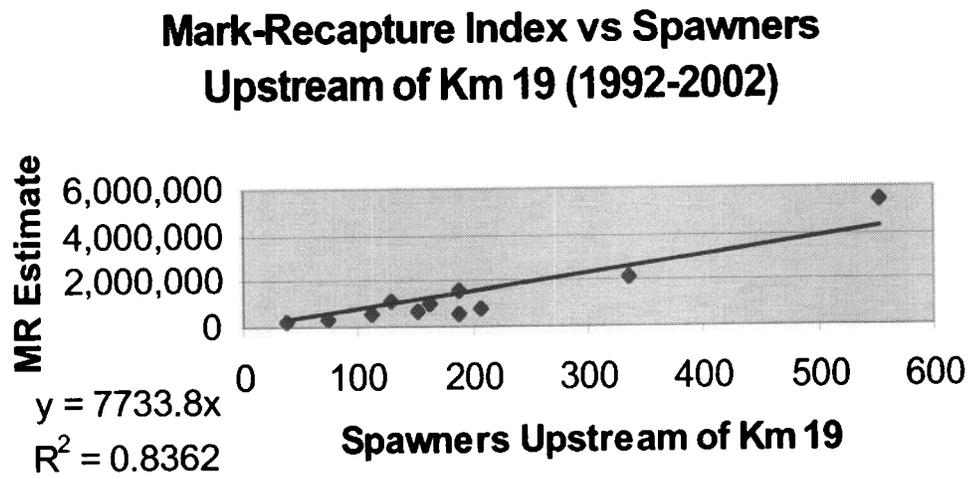


Figure 2

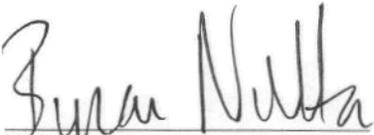


The analyses summarized in the figures illustrate that, for the range of spawning populations observed to date, the relationship between the number of spawning Chinook upstream of the sampling site and the indices of emergence is both stable and linear indicating no spawning habitat limitation. Further, with the inclusion of the 2002 data (the number of emergent fry in 2002 was the highest on record) the correlation coefficients for both relationships increased, providing further evidence of the stability of the relationship.

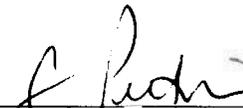
In addition, the NFCP Technical Committee has determined that for the fall and winter of 2002/03 the incubation environment conditions were:

1. Spawning – the number and distribution of spawning Chinook was within the range of that observed in past years and the biological indices of the Chinook adults (egg retention, size, age) were not significantly different from prior years;
2. Water temperatures up to the end of November were similar to prior years;
3. River flows during spawning were essentially the same as prior years (30 – 35 m<sup>3</sup>/s);
4. River flows were increased in late October and were held higher than during spawning to the end of December when they were returned to typical winter flows (see Decision Record 2002/03-04).
5. There have not been any abnormal events during 2002 that would contribute an increased sediment load to the river.

As conditions related to the incubation environment during the winter of 2002/03 appear to be within the range of those observed over the past 13 years , and given the relatively constant in-river conditions of the past decade, the Technical Committee has concluded that there is no need to conduct the fry emergence project in 2003. Given the stability of the relationships observed, and the stability of releases from the Skins Lake Spillway, there is no reason to expect that emergent fry production would change significantly in the future except possibly under conditions of significantly changed flows, sediment movement or water temperature changes. The NFCP will continue to annually review the need for this project in the future until a more comprehensive future plan for the NFCP is developed.

  
J. Hwang

  
D. Bouillon

  
E. Petticrew

  
D. Cadden