



## **Fraser River Recreational Fishery Assessment (Creel Survey)** **October 9 to November 30**

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### **Regulations**

#### **Tidal Waters: downstream of the CPR Bridge at Mission** **October 9-December 31**

- **Chinook:** 4 fish per day over 30 cm, only one over 50 cm
- **Coho:** 2 hatchery fish per day over 25 cm
- **Chum:** 4 fish per day over 30 cm

#### **Non-Tidal Waters: CPR Bridge at Mission upstream to the Alexandra Bridge** **October 11-December 31**

- **Chinook:** 4 fish per day, only one over 50 cm
- **Coho:** 2 hatchery fish per day over 25 cm
- **Chum:** 2 fish per day

### **Study Area**

The Fraser River study area extends from the Port Mann Bridge (Vancouver) to the outlet of the Harrison River. Angling activity above the outlet of the Harrison River and below the Port Mann Bridge has been historically low.

### **Survey Methods**

The Fraser River recreational fishery survey began on October 9, 2003.

The surveyor worked all weekends and holidays with rotating days off during the week. One of two shifts (morning or afternoon) that spanned the entire daylight period were worked. Shifts were randomly assigned to each survey day.

The surveyor conducted angler interviews at their survey sites to obtain the following information: where the angler was fishing, length of angling trip, how much longer they

intend to fish, target species, gear used, total catch retained, total catch released. Further, if permitted by the angler, the surveyor inspected the catch to determine whether the angler's species identification was correct. For coho and chinook, if the adipose fin was missing the surveyor would retain the head. Heads were later checked at the hatchery for CWT presence or absence and if a CWT was present these heads were retained and submitted for analyses. Interviews were used to determine catch-per-unit effort (CPUE), release-per-unit effort (RPUE), and to summarize the angler characteristics listed above.

Daily effort is calculated using a combination of interview data, hourly rod counts conducted at the survey sites, and instantaneous effort rod counts of the survey area (conducted twice per week: one weekend and one weekday flight). Using total effort, CPUE and RPUE is expanded to determine catch and release numbers by species for the entire study area. Such analyses are documented in several DFO publications (Schubert 1992; Schubert 1995)

In October and November, one surveyor was randomly stationed at either Edgewater Bar (below Mission Bridge) or the Island 22 boat launch (above Mission Bridge). Shore-anglers were concentrated at the following sites: Port Mann Bridge, Patullo Bridge, Edgewater Bar (Derby Reach), Duncan Bar, and Mission Bridge. Boat anglers were distributed throughout the study area. Edgewater bar was used to obtain both hourly rod counts (Fraser River daily effort profiles), and interviews (CPUE and RPUE) below Mission Bridge. Two shifts, a morning and afternoon shift, were randomly assigned to weekend and weekdays for this site. At Island 22, interviews were obtained from anglers (CPUE and RPUE) above Mission Bridge; this site did not provide a sufficient view of angling effort to construct a daily effort profile. Since Island 22 is a boat launch, anglers did not return from angling until after 12:00 pm (based on previous and current year's data), and since this site was only used to calculate CPUE and RPUE, only truncated afternoon shifts were assigned to this site (shifts started later but ended at the same time as Edgewater bar afternoon shifts).

For October and November analyses, data were blocked by day type (weekend and weekday) and region (below Mission Bridge and above Mission Bridge). Since funding was available for only one surveyor, monthly data could not be blocked into smaller temporal segments (e.g. October 1-15 and October 16-30) due to minimum sample requirements for shifts (morning and afternoon) and day types (weekend/weekday).

Data were stored and analyzed using DPA software. The data were verified in three steps. First, all field data sheets were examined for compliance with study procedures by the supervising technician and/or biologist. Second, during data entry, the data entry program performed 31 automatic error checks, including duplication detection, code validity, and range and consistency verification. Third, after data entry was complete, all data were imported into an excel file for verification with the field data sheets; all data were error checked twice by two different individuals (generally the supervising technician and data entry clerk).

## Results

In October, the largest proportion of chinook (1.0), pink (1.0), and chum (0.8) retained by anglers occurred above Mission Bridge. The largest proportion of coho retention occurred below Mission Bridge (0.6) versus above Mission Bridge (0.4); coho retention below Mission Bridge was distributed throughout October while most coho retention above Mission Bridge occurred at the end of the month (October 31). The largest proportion of coho (0.8), pink (1.0), and chum (0.9) released by anglers occurred above Mission Bridge; coho release below Mission Bridge was distributed throughout October while most coho release above Mission Bridge occurred at the end of the month (October 31). The greatest proportion of pink released (0.9) occurred between October 8-12. Chinook were released in approximately equal proportions above (0.5) and below (0.5) Mission Bridge.

Similar to recent years, the proportion of coho adults retained was 0.8 (coho jacks: 0.2) and released was 0.8 (coho jacks: 0.2) below Mission Bridge. Above Mission Bridge, the proportion of coho adults retained was 1.0 (coho jacks: 0.0) and released was 0.9 (coho jacks: 0.1).

In November, the largest proportion of chinook (1.0), coho (0.9), and chum (1.0) retained by anglers occurred above Mission Bridge. The largest proportion of chinook (1.0) and chum (1.0) released by anglers also occurred above Mission Bridge, the largest proportion of coho released (0.7) occurred below Mission Bridge. Angler effort was greatest in the first half of November (proportion of total effort: ~0.9). After November 15, angler effort and catch & release significantly declined.

## **References**

Schubert, N.D. 1992. Angler Effort and Catch in the 1985-1988 Lower Fraser River Sport Fishery. Canadian Manuscript Report of Fisheries and Aquatic Sciences 2170.

Schubert, N.D. 1995. Angler Effort and Catch in Four Fraser River Sport Fisheries, 1991. Canadian Manuscript Report of Fisheries and Aquatic Sciences 2267.

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