



## **Chilliwack River Recreational Fishery Assessment (Creel Survey)** **September 15 to November 30, 2002**

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### **Regulations**

The fishing boundary for the Chilliwack River is from Slesse Creek down to the boundary signs near its confluence with the Fraser River. The recreational fishery is closed at night, from one hour after sunset to one hour before sunrise

From July 1 to March 31, 2002 salmon recreational catch limits are as follows:

- **Coho:** 4 hatchery fish (adipose fin clipped) per day
- **Chinook:** 4 per day, only 1 can be over 62 cm
- **Chum:** 1 per day

### **Study Area**

The Chilliwack River sport fishery assessment study area is bounded by its confluence with the Fraser River (downstream boundary) and Slesse Creek (upstream boundary).

### **Survey Methods**

The Chilliwack River recreational fishery survey began on September 16, 2002.

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

Surveyors conducted angler interviews at their survey sites to obtain the following information: where the angler was fishing, party size, length of angling trip, when their fishing lines were in the water, 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 surveyors would want the fish to determine if the fish contained a coded wire tag (CWT) in their head, and if they did contain a CWT, the surveyor would retain these heads for the DFO Mark Recovery Program (MRP) and DFO Stock Assessment. 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 overflight rod counts of the survey area (conducted twice per week: one weekend and one weekday overflight). 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)

Four surveyors assessed the Chilliwack River recreational fishery. **Two surveyors** conducted a bus-route approach survey of the upper and lower sections of the river with no overlap in their respective ranges; the Vedder Bridge was selected as the boundary between the upper and lower sections of the river. These two surveyors conducted interviews of anglers in the process of fishing. The sites surveyed were pre-selected for a biweekly period based angler distribution observed on previous roving surveys and overflights of the river. The surveyors start point and direction of travel (upstream or downstream) was randomized each survey day to ensure that the entire survey area was assessed and that each site was visited at different times of the survey day. A **third surveyor** was stationed at an access-point located, depending on the month, at the Keith Wilson Bridge in September and early October, Lickman road in late October and early November, and Limits Hole (adjacent to hatchery) in November. This surveyor obtained exit interviews from anglers and conducted hourly rod counts. A **fourth surveyor** was stationed at either the Barrowtown (Pumphouse) boat launch in September and the Nicomen boat launch in October where they obtained interviews from boat-based anglers fishing the lower part of the Chilliwack River.

For analyses the study area was divided into two regions; **region 1:** mouth of the Vedder/Sumas with Fraser upstream to the Vedder Bridge; **region 2:** Vedder Bridge to Limits Hole (hatchery).

For analyses, data were blocked by day type (weekend and weekday) and region (below Vedder Bridge and above Vedder Bridge). 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).

## **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 No. 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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