



Fraser River Fishery Assessment (Creel) Survey **May 15-September 7**

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MAY 15-31	(CHINOOK RETENTION)
JUNE 1-30	(CHINOOK RETENTION)
JULY 1-AUGUST 1	(CHINOOK RETENTION)
AUGUST 2-AUGUST 20	(SOCKEYE RETENTION)
AUGUST 21-29	(CHINOOK RETENTION)
AUGUST 30-SEPTEMBER 2	(SOCKEYE RETENTION)
SEPTEMBER 3-7	(CHINOOK RETENTION)

Regulations

The Fraser River mainstem was open for salmon fishing from the CPR Bridge at Mission upstream to the Alexandra Bridge. No fishing in the open areas was permitted at night (from one hour after sunset to one hour before sunrise). Chinook limits were four fish per day of which only one could exceed 50 cm in length. Sockeye retention was permitted from August 2 to August 20 and August 30 to September 2; sockeye limits were two fish per day of which only one could exceed 50 cm in length (CPR Bridge at Mission upstream to the Alexandra Bridge) and four fish per day, minimum size 30 cm (downstream of the CPR Bridge at Mission).

Study Area

The lower Fraser River sport fishery assessment study area is bounded by the outlet of the Sumas River (Chilliwack, B.C.) and the outlet of the Coquihalla River (Hope, B.C.).

From May to July 2002, the river was closed to all salmon fishing from upstream of the Pipeline (downstream from Hope) to the Hope Trans Canada (Hwy 1) Bridge. Anglers fishing in the closed areas were included in the analyses.

From August 2 – 20, 2002, the river was closed to all salmon fishing in designated areas of Landstrom (Scale Bar). Anglers fishing in the closed areas were included in the analyses.

Survey Methods

The lower Fraser River recreational fishery has historically been assessed between May 1 and August 31. In 2002, overflights commenced on May 1 and due to the low angling effort in early May, Fisheries and Oceans (DFO) fisheries assessment surveyors did not begin surveying until May 18.

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)

Depending on the distribution of angling effort on the river, surveyors were stationed at sites on the river where either shore-based angling effort is concentrated or at relatively high-use boat launch sites.

May and June

To effectively survey the May and June 2002 Fraser River recreational fishery, two surveyors were stationed at the mouth of the Sumas River where angling on the Fraser River was concentrated. Angling in May and June on the Fraser River was dominated by boat rather than shore-based fishing; water levels were high in the second half of May and in the first half of June, with most bars submerged at this time.

For river levels see the Environment Canada and Province of B.C. River Data website: <http://scitech.pyr.ec.gc.ca/waterweb/formnav.asp?lang=0>

July

Beginning in July, water levels dropped significantly and approached average water levels for this month (see Environment Canada and Province of B.C. River Data website). Angling effort increased in July, relative to May and June, and anglers were distributed throughout the study area.

Due to these changes, the river was divided into two regions for the purpose of this assessment: **region 1** (outlet of the Sumas River to the Agassiz-Rosedale bridge) and **region 2** (Agassiz-Rosedale bridge to the outlet of the Coquihalla). In region 1 the fisheries assessment surveyor was stationed at the Island 22 boat launch where the majority of boats in this region were launched. In region 1, most fishing was from boats or on bars with boat-access only. In region 2, the fisheries assessment surveyor was stationed in Hope, near the outlet of the Coquihalla. In the second half of the month the surveyor randomly was stationed at either Hope, near the outlet of the Coquihalla, or Jones bar where fishing effort was concentrated. At both sites in region 2, most angling occurred from the shore (vehicle-access).

August/September

In August the sockeye retention fishery was open from August 2 to August 20 and from August 30 to September 2. During this period two surveyors were added to the creel survey, for a total of four; two surveyors were stationed at Island 22 and two surveyors were stationed at Landstrom Bar.

In region 1 (mouth of the Sumas River to the Agassiz-Rosedale bridge), most fishing was from boats or on bars with boat-access only. Island 22 was the highest-use boat launch in this region with some shore-based angling activity occurring at this site. One surveyor at Island 22 would intercept and interview departing shore-based anglers and obtain hourly rod counts of these anglers. The second surveyor would intercept and interview departing boat-based anglers and obtain hourly rod counts of anglers fishing across from the boat launch. Hourly rod counts and interviews from both Island 22 surveyors were combined to generate total catch for this region.

In region 2 (Agassiz-Rosedale bridge to the outlet of the Coquihalla River), Landstrom Bar was the busiest angling site; it was also a site where complete interviews and hourly rod counts could be obtained. Two surveyors were stationed at this bar to obtain interviews from departing anglers and rod counts at this site.

For analyses, data were blocked by day type (weekend and weekday) and in July and August also by region (region 1 & 2). 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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