



Fraser River Recreational Fishery Assessment (Creel Survey) **May 1 to September 1, 2003**

Prepared by: Sue C.H. Grant, M.Sc.
Biologist, Chum Salmon and Fishery Assessments
Stock Assessment, Lower Fraser Area
Fisheries and Oceans Canada

Regulations

May 1-July 31; August 25-September 1

The Fraser River mainstem was open for salmon fishing from the CPR Bridge at Mission upstream to the Alexandra Bridge, excluding the following sections: upper Landstrom Bar and Croft Island. Chinook limits were four fish per day of which only one could exceed 50 cm in length.

August 1-August 24

The Fraser River mainstem was open for salmon fishing from the CPR Bridge at Mission upstream to the Alexandra Bridge, excluding the triangle “no fishing” area at the upstream end of Landstrom Bar. Chinook limits were four fish per day of which only one could exceed 50 cm in length. Pink limits were four fish per day, minimum size 30 cm. Sockeye limits in Fraser River tidal waters below Mission Bridge were four fish per day, minimum size 30 cm. Sockeye limits in Fraser River non-tidal waters above Mission Bridge were two fish per day, minimum size 30 cm.

Study Area

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

Survey Methods

In 2003, the recreational fishery assessment on the Lower Fraser River began on May 1. Similar to previous years, angler effort from May 1 - 15 was concentrated at the outlet of the Sumas River. As water levels dropped in early May, angler effort began to shift to bars on the Fraser mainstem between the outlet of the Sumas River and the outlet of the Harrison River. Water levels began to rise in the second half of May until the second half of June when they began to drop again. For water levels at the Hope hydrographic station

see the following Government of British Columbia's River Forecast Centre's website:
http://srmwww.gov.bc.ca/aib/wat/rfc/river_forecast/hydrofrs.html

Two 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. From May 1 to June 12, surveyors wanded all chinook. If a coded wire tag (CWT) was detected the surveyors, if permitted by the angler, would retain these heads for the DFO Mark Recovery Program (MRP). After June 12 the head sampling protocol was changed to account for possible errors associated with wand detection of CWT's. Instead all chinook heads with adipose fins missing were retained. If there was any doubt that an adipose might have been removed for a particular fish, for example if the adipose fin was partially regenerated or malformed, the head was retained. Chinook with no adipose fins were all wanded and those with CWT's detected were retained.

Interviews were used to calculate 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).

To assess the Fraser River sport fishery, study design was modified each month to account for changes in angler distribution:

- From May 1 -16, surveyors were stationed at the Barrowtown boat launch. At this site surveyors interviewed anglers that returned by boat from fishing the outlet of the Sumas River. Surveyors obtained rod counts at the outlet of the Sumas River and at the end of their shift surveyors also conducted angler interviews at this site; surveyors accessed the outlet of the Sumas River by boat.
- From May 17 – June 30, surveyors were stationed at the Island 22 boat launch in Chilliwack, B.C. where they obtained interviews from anglers that returned by boat from fishing at various bars on the Fraser River. Surveyors obtained rod counts and at the end of their shift, conducted interviews from anglers fishing at two bars located near the Island 22 boat launch; surveyors accessed these bars by boat.
- From July 1-31, surveyors were randomly scheduled to work either together at the Island 22 boat launch or separately at Jones Bar (located on the south shore of the Fraser River) or the Pipeline (located on the north shore of the Fraser River downstream of the Pipeline near Hope). Protocols for the Island 22 interviews

and rod counts were identical to the previous month. At both the Jones Bar and the Pipeline, interviews were obtained from anglers who had finished fishing for the day and at the end of their shift surveyors interviewed all remaining anglers (incomplete interviews). Rod counts of shore-based anglers were obtained at each site.

- From August 1-August 24 (sockeye retention), surveyors followed a similar schedule to July; Lanstrom bar replaced the Pipeline as an interview/rod count site for this period.
- From August 25-September 1, surveyors followed a similar study design to July.

In May and June analyses, data were blocked by day type (weekend and weekday). Data were not blocked by region during these months since effort was concentrated in one area; near the Island 22 boat launch. Due to shifts in angler distribution and effort near the middle of May and June, data were also blocked by two time periods: first and second half of the month.

For July and August analyses, data were blocked by day type and region (below the Agassiz-Rosedale power line and above the Agassiz-Rosedale powerline). In July, since the greatest proportion (0.7) of all sockeye reported released occurred from July 28 to July 31 data for sockeye released was analyzed in two time blocks: July 1-27 and July 28-31. Catch & release data for all other species was analyzed in one time block: July 1-31.

In August, the sockeye retention period (August 1-24) and non-retention period (August 25-September 1) were analyzed separately and blocked by day type and region.

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 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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