



## **FRASER RIVER RECREATIONAL FISHERY ASSESSMENT FINAL RESULTS**

**May 1 – July 22** (Chinook Retention)  
**July 23 – August 18** (Chinook and Sockeye Retention)  
**August 19 – September 10** (Chinook Retention)

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### **A. Regulations**

The Fraser River mainstem was open for salmon fishing downstream of the Alexandra Bridge (Area 29: tidal and Region 2: non-tidal/freshwater), excluding upper Landstrom Bar.

Non-sockeye retention period (May – July 22; August 19 – September 10)  
Chinook limits were four fish per day of which only one could exceed 50 cm in length.

Sockeye retention period (July 23 – August 18)  
Chinook limits were four fish per day of which only one could exceed 50 cm in length.  
Sockeye limits were four fish per day minimum size 30 cm (downstream of Mission Bridge) or two fish per day minimum size 30 cm (upstream of Mission Bridge).

- August 16 – 18: The retention of sockeye was closed in tidal waters of the Fraser River (downstream of Mission Bridge) and downstream of the Sumas/Vedder (boundary defined in Fisheries Notice FN0634).

### **B. 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.).

## C. Methods

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, 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. All chinook heads with adipose fins missing were retained by surveyors. If there was any doubt that an adipose might have been clipped for a particular fish, for example if the adipose fin was partially regenerated or malformed, the head was retained by the surveyor. Chinook with no adipose fins were all wanded and those with coded-wire tags (CWT's) detected were retained.

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 (9 rod counts per shift), 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)

Each month surveyors were stationed at different sites depending on where anglers were concentrated. At each surveyed site, interviews were obtained from anglers who had finished fishing for the day (complete interviews) and at the end of the surveyor's shift interviews were obtained from anglers still in the process of fishing (incomplete interviews). Rod counts were obtained at most surveyed sites, unless otherwise indicated. For each survey hour, the number of anglers who left the survey site without being interviewed was recorded.

In May, two surveyors were stationed initially at the Barrowtown boat launch and subsequently, for the remainder of May and June were stationed at the Island 22 boat launch. The location of the hourly rod counts for the Barrowtown boat launch site was the outlet of the Sumas River. At the Island 22 boat launch site, hourly rod counts were conducted at Wellington and Grassy Bars. These rod count locations were accessed by boat. From July 1 to 22, one surveyor was stationed at the Island 22 boat launch and one surveyor was stationed at Landstrom Bar (Hope, B.C.). Rod counts and end-of-shift incomplete interviews were obtained from the Landstrom Bar site. During the sockeye retention period (July 23-August 18), two surveyors alternated shift locations between one of the four following sites: Pegleg (Minto Channel), Island 22 boat launch, Landstrom/Scale Bar (Hope, B.C.), and Jones Bar. On August 14, Jones Bar was changed to the Cornfield (upstream of Jones Bar), due to low water levels and reduced fishing effort and catch at Jones Bar. After the sockeye retention period (August 18 – September 10), one surveyor was stationed at the Island 22 boat launch and a second surveyor was stationed at Pegleg (Minto Channel). Hourly rod counts and end-of-shift incomplete interviews were conducted at Pegleg.

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 once by the supervising technician.

For May, June, and August 19 – September 10 analyses, data were blocked by day type (weekend and weekday) and time (May 1-16, May 17-31, June 1-14, June 15-30, August 19-September 10). Data were not blocked by region during these months since effort was concentrated in region 1. From July 1- August 18, data were blocked by day type and region (region 1: downstream of the Agassiz-Rosedale Bridge; region 2: upstream of the Agassiz-Rosedale Bridge), since angling effort occurred throughout the entire study area.

Interviews from anglers fishing systems other than the Fraser River were excluded from this analysis. Interviews from anglers targeting sturgeon were also excluded from this analysis. Released sturgeon were not estimated due to different effort profiles required for sturgeon analysis (not assessed in this Fraser River creel program).

## D. Results

### *Water Levels*

In 2004, water levels (Environment Canada’s Hope Hydrometric station) from May 1 to 16 started and ended at low water levels for this period (approximately 5.6 m primary water level); peak water levels were approximately 6.3 m on May 8. From May 17 to June 11, water levels increased to a maximum 7.3 m, after which water levels generally decreased until September (Figure 1). In early September, water levels increased.

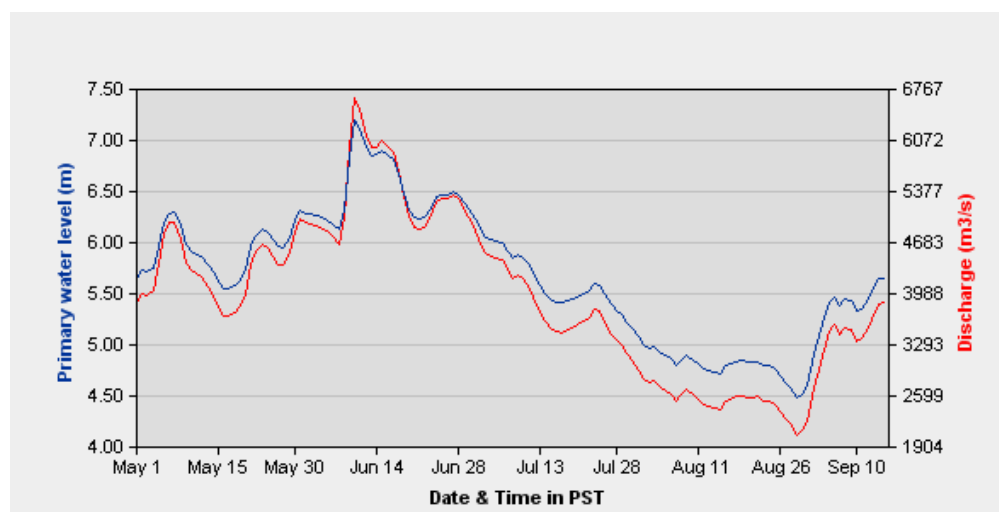


Figure 1. Primary water level and discharge at the Hope Hydrometric Station, Environment Canada Preliminary Results May 1-September 10, 2004. Website: <http://scitech.pyr.ec.gc.ca/waterweb/formnav.asp?lang=0> (accessed on September 21, 2004)

## *Survey Effort*

### Non-sockeye retention period

The study period, from May 1 to July 22 and August 19 to September 10, covered 33 weekend days (including the May 24, July 1, August 2, and September 6 holidays) and 73 weekday days; 100% of the weekend days and 60 % of the weekday days were sampled by survey shifts. A total of 577 interviews in May, 972 interviews in June, 1,517 interviews from July 1 to 22, and 1,015 interviews from August 19 to September 10 were obtained from anglers.

Nine overflights were conducted in May (5 weekend and 4 weekday), eight overflights were conducted in June (4 weekend and 4 weekday), seven overflights (3 weekend and 4 weekday) were conducted from July 1 to 22, and six overflights (3 weekend and 3 weekday) were conducted from August 19 to September 10. Overflight rod counts in May ranged from 12 to 221 anglers actively fishing (rods counted). Overflight rod counts in June ranged from 66 to 465 anglers actively fishing. Overflight rod counts from July 1 to 22 ranged from 166 to 563 anglers actively fishing. Overflight rod counts from August 19 to September 10 ranged from 75 to 416 anglers actively fishing.

In May and June, approximately 75% of the fishing effort occurred downstream of the Agassiz-Rosedale Bridge. Since Island 22 was the largest-use boat launch, surveyors captured the largest proportion of angling effort at this site. Similarly, hourly rod counts, conducted from Island 22 to Grassy Bar, captured approximately 40% of the angling effort on the river. Most fishing in May and June was by boat and on bars accessed by boats. In July, fishing occurred throughout the study area: 60% downstream of the Agassiz-Rosedale Bridge and 40% upstream of the bridge. In July, fishing occurred by boat and on boat-accessed bars throughout the study area. Also, particularly upstream of the Agassiz-Rosedale Bridge, fishing occurred on bars accessed by shore (e.g. Jones, Pipeline, and Landstrom/Scale bar). After the sockeye retention period, from August 19 to September 10, effort was concentrated in region 1 of the study area (downstream of the Agassiz-Rosedale Bridge).

### Sockeye retention period

The study period from July 23 to August 18 covered 9 weekend days (including the August 2 holiday) and 18 weekday days; 100% of the weekend days and 60% of the weekday days were sampled by survey shifts. A total of 3,365 interviews were obtained from anglers.

Eight overflights were conducted from July 23 to August 18 (4 weekend and 4 weekday). Overflight rod counts in ranged from 705 to 1,453 anglers actively fishing (rods counted).

## *Angler Effort*

Non-sockeye retention period

**Daily Profile:** Anglers fished through the daylight hours. Effort for weekend and weekdays peaked generally midday between 10:00 to 15:00 (Figures 2 – 7).

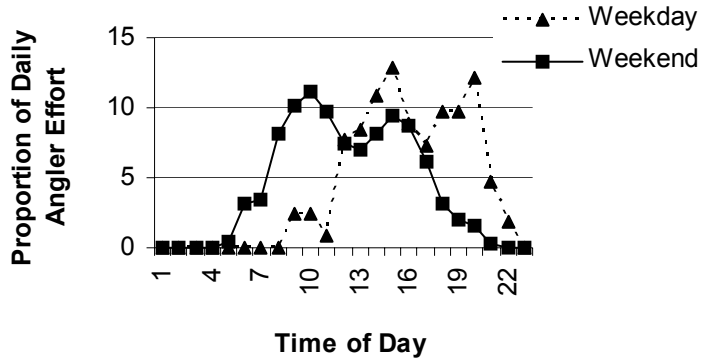


Figure 2. Hourly angler effort profiles for May 1-16 in the 2004 Lower Fraser Recreational Fishery.

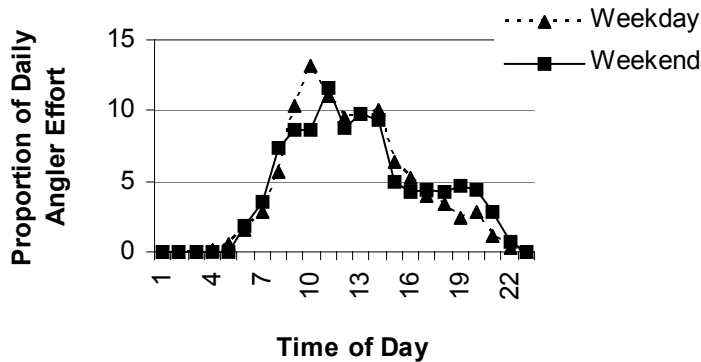


Figure 3. Hourly angler effort profiles for May 17-31 in the 2004 Lower Fraser Recreational Fishery.

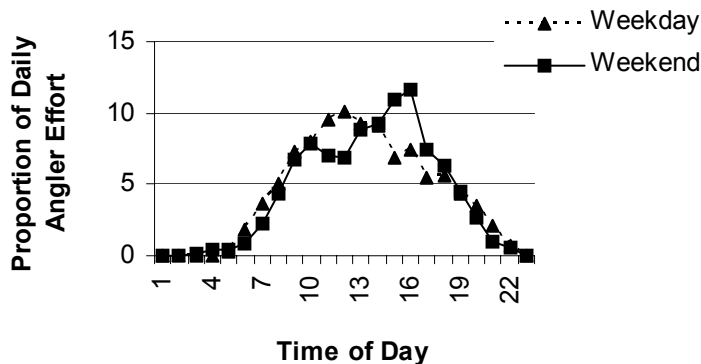


Figure 4. Hourly angler effort profiles for June 1-14 in the 2004 Lower Fraser Recreational Fishery.

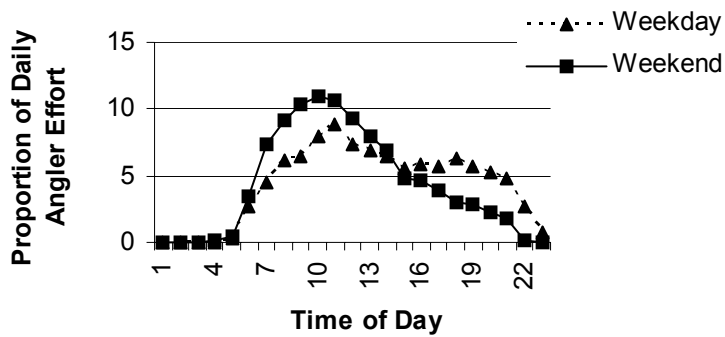


Figure 5. Hourly angler effort profiles for June 15-30 in the 2004 Lower Fraser Recreational Fishery.

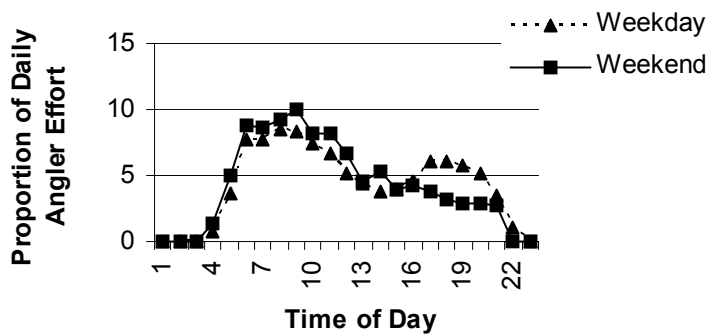


Figure 6. Hourly angler effort profiles for July 1-22 in the 2004 Lower Fraser Recreational Fishery.

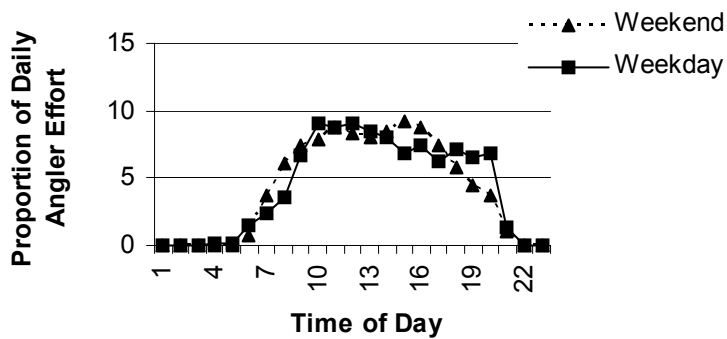


Figure 7. Hourly angler effort profiles for August 19-September 10 in the 2004 Lower Fraser Recreational Fishery.

**Total Angler Effort:** Total effort was 24,109 angler hours in May; 49,772 angler hours in June; 80,186 angler hours from July 1-22; and 45,132 angler hours from August 19-September 10 (Tables 1-6).

**Catch-per-Unit Effort:** The target species on the Lower Fraser River (downstream of Hope, B.C.) in May, June, July 1-22, and August 19-September 10 was chinook. Although a small proportion of anglers targeted sturgeon, these interviews were not included in the analysis due to different effort profiles and effort required to estimate sturgeon release. The species of salmon retained by anglers from May to September 10 (excluding sockeye retention period) were chinook, chinook jacks, and a small number of sockeye and coho.

Based on creel interviews, no chinook were retained prior to May 14. The only salmon species retained in May and June was chinook. The average CPUE in the first half of May (1-16) was 0.003 adult chinook per hour and the average CPUE in the second half of May (17-31) was 0.012 adult chinook per hour; no chinook jacks were retained during these time periods (Figure 8). The average CPUE were identical in the first half (1-15) and second half (16-30) of June at 0.038 adult chinook per hour; chinook jacks were only retained in the second half of June (average CPUE: 0.0001 chinook jacks per hour). The average CPUE from July 1-22 was 0.036 adult chinook per hour and from August 19 – September 10 was 0.042 adult chinook per hour; CPUE for chinook jacks were 0 from July 1-22 and 0.002 from August 19 – September 10. Total catch was 174 adult chinook and 0 jack chinook in May, 1,576 adult chinook and 4 jack chinook in June, 2,898 adult chinook and 0 jack chinook in July, and 1,599 adult chinook and 87 jack chinook from August 19 – September 10 (Tables 1-5). No chinook retained in May were marked (adipose fins clipped/absent). An estimated 22 chinook retained in June were marked, 7 chinook retained July 1 to 22 were marked, and 23 chinook retained from August 19-September 10 were marked (Tables 1-5).

The only species of salmon released in May was chinook (release-per-unit-effort (RPUE): 0.0004 chinook per hour). In June and July, both chinook and sockeye were released. In June, the average chinook RPUE was 0.0009 chinook per hour and 0.0003 chinook jack per hour. In the second half of June sockeye were also released (RPUE: 0.0020 sockeye per hour). In July the average chinook RPUE was 0.002 chinook per hour and the average sockeye RPUE was 0.026 sockeye per hour. From August 19 to September 10 the average chinook RPUE was 0.005 chinook per hour, the average chinook jack RPUE was 0.0004 chinook jack per hour, and the average sockeye RPUE was 0.039 sockeye per hour. Total salmon released in May were 9 chinook. Total salmon released in June were 57 chinook adults, 10 chinook jacks, and 64 sockeye, total released from July 1 to 22 were 184 chinook and 2,385 sockeye, total released from August 19-September 10 were 200 chinook, 14 chinook jack, and 1732 sockeye (Tables 1-5). A small number of coho (56) and chum (12) were also released during these last weeks of the creel survey.

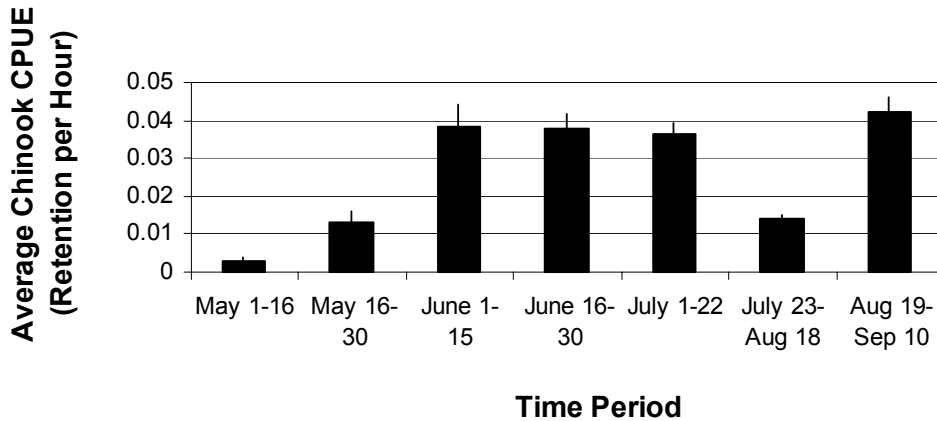


Figure 8. Average (standard error bars) chinook catch-per-unit-effort (CPUE) from May 1 to September 10, 2004.

Sockeye Retention Period

Fishing occurred by boat and on boat-accessed bars throughout the study area (high effort sites included: Gilligan’s Bar, Grassy Bar, Pegleg/Minto Channel, and Spaghetti Bar). Fishing also occurred on bars accessed by shore (high effort sites included: Pegleg/Minto Channel, Herling Island, Jones, the Cornfield, Pipeline, and Landstrom/Scale bar).

**Daily Profile:** Anglers fished throughout the daylight hours. Daily effort profiles (proportion of effort occurring each hour) were similar for region 1 and region 2 (Figures 9 & 10); effort for weekend and weekdays peaked generally in the morning between 07:00 to 10:00.

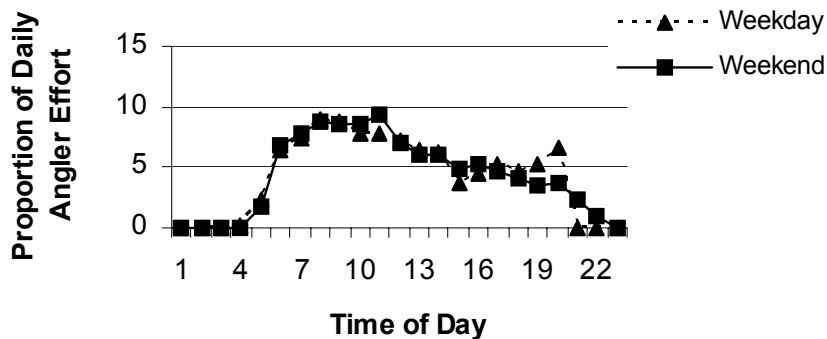


Figure 9. Hourly angler effort profiles, July 23-August 18, for region 1 (below the Agassiz-Rosedale Bridge) of the Lower Fraser recreational fishery.



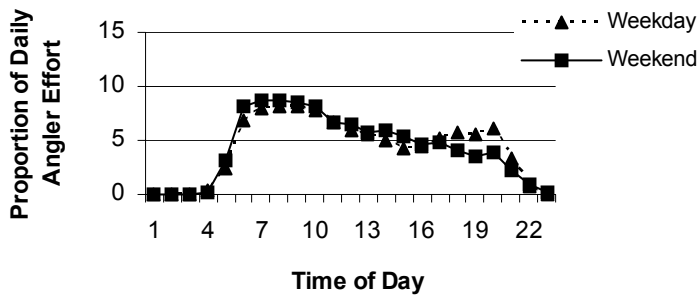


Figure 10. Hourly angler effort profiles, July 23-August 18, for region 2 (above the Agassiz-Rosedale Bridge) of the Lower Fraser recreational fishery.

**Total Angler Effort:** Total effort was 325,687 angler hours (Tables 4 & 6).

**Catch-per-Unit Effort:** The target species on the Lower Fraser River (downstream of Hope, B.C.) from July 23 to August 18 was predominantly sockeye (98% of all interviews) and to a lesser extent chinook (2 % of all interviews). Although a small proportion of anglers targeted sturgeon, these interviews were not included in the analysis due to different effort profiles and effort required to estimate sturgeon release. The species of salmon retained by anglers were sockeye, chinook, and chinook jacks.

The average CPUE for sockeye was 0.15 sockeye per hour. CPUE fluctuated throughout the study period; peak CPUE (0.4 sockeye per hour) occurred in early August (Figure 11). The average CPUE for adult chinook was 0.012 chinook per hour and jack chinook was 0.0007 chinook jack per hour. Total catch was 50,364 sockeye, 4,027 chinook adults, and 244 chinook jacks (Tables 4 & 6). No chinook retained were marked (Table 4).

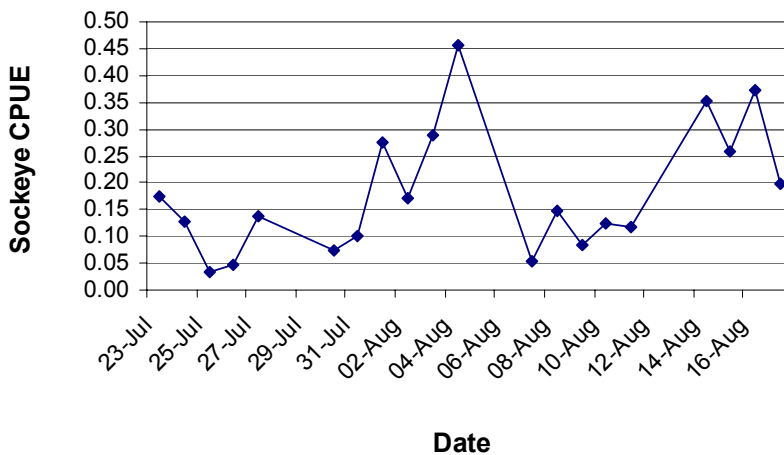


Figure 11. Average sockeye catch-per-unit-effort (CPUE), sockeye retained per hour, from July 23-August 18 for the entire survey area. Data was interpolated for dates not surveyed.

Both sockeye and chinook were released. The average sockeye and chinook RPUE was, respectively, 0.016 sockeye per hour and 0.0004 chinook per hour. Total salmon released were 5,438 sockeye and 137 chinook adults (Table 4 & 6).

**Catch Inspection:** From May to September 10, catch was inspected for 90% of the creel interviews. In 99.9 % of these inspections, anglers had correctly identified the species.

### **Acknowledgements**

Technical oversight, data management and data entry was provided by R. Tadey. Technical support was provided by G. Brown and D. Cline. Data entry was also provided by P. Lam. Technical assistance and study design input was provided by R. Tadey, K. Peters, and L. Kalnin.

### **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.

**Table 1:** Fraser River recreational fishery assessment final results from May 1-31, 2004. Data stratified into day types (weekend and weekday) and time blocks (May 1-16 and May 17-31) for analysis.

<b>SOURCE DATA</b>				
	<b>Weekend</b>		<b>Weekday</b>	
Open Days in Study Period	11		20	
Number of Survey Shifts	11		12	
Number of Interviews	380		197	
Interview Hours	1,584		1,131	
Number of Instantaneous Effort Counts	5		4	
Mean Rod Count (Instantaneous Effort)	117		35	
Proportion of Effort in the Instantaneous Effort Count Time Block	0.094		0.073	
Estimated Daily Effort (Hours)	1,245		486	
Estimated Total Effort (Hours)	14,258		9,851	
<b>CATCH ESTIMATES</b>				
	<b>Weekend</b>		<b>Weekday</b>	
	<b>Harvest</b>	<b>Release</b>	<b>Harvest</b>	<b>Release</b>
<b>CHINOOK ADULT</b>	<b>76</b>	<b>9</b>	<b>98</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	76	--	98	--
<b>CHINOOK JACK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>COHO ADULT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>COHO JACK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>SOCKEYE</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>PINK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CHUM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Table 2:** Fraser River recreational fishery assessment final results from June 1-30, 2004. Data stratified into day types (weekend and weekday) and time blocks (June 1-14 and June 15 to 30) for analysis.

<b>SOURCE DATA</b>				
	<b>Weekend</b>		<b>Weekday</b>	
Open Days in Study Period	8		22	
Number of Survey Shifts	8		12	
Number of Interviews	503		469	
Interview Hours	2,974		2,581	
Number of Instantaneous Effort Counts	4		4	
Mean Rod Count (Instantaneous Effort)	256		100	
Proportion of Effort in the Instantaneous Effort Count Time Block	0.085		0.089	
Estimated Daily Effort (Hours)	3,012		1,124	
Estimated Total Effort (Hours)	23,535		26,237	
<b>CATCH ESTIMATES</b>				
	<b>Weekend</b>		<b>Weekday</b>	
	<b>Harvest</b>	<b>Release</b>	<b>Harvest</b>	<b>Release</b>
<b>CHINOOK ADULT</b>	<b>541</b>	<b>47</b>	<b>1,035</b>	<b>10</b>
Marked (Adipose missing)	10	--	12	--
Unmarked (Adipose present)	531	--	1,023	--
<b>CHINOOK JACK</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>10</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>COHO ADULT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>COHO JACK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>SOCKEYE</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>41</b>
<b>PINK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CHUM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Table 3:** Fraser River recreational fishery assessment final results from July 1-22, 2004. Data stratified into day types (weekend and weekday) and region (upstream and downstream of the Agassiz-Rosedale Bridge).

<b>SOURCE DATA</b>				
	<b>Weekend</b>		<b>Weekday</b>	
Open Days in Study Period	7		15	
Number of Survey Shifts	7		9	
Number of Interviews	785		732	
Interview Hours	4,675		4,400	
Number of Instantaneous Effort Counts	3		4	
Mean Rod Count (Instantaneous Effort)	486		221	
Proportion of Effort in the Instantaneous Effort Count Time Block	0.091		0.079	
Estimated Daily Effort (Hours)	5,341		2,797	
Estimated Total Effort (Hours)	37,593		42,593	
<b>CATCH ESTIMATES</b>				
	<b>Weekend</b>		<b>Weekday</b>	
	<b>Harvest</b>	<b>Release</b>	<b>Harvest</b>	<b>Release</b>
<b>CHINOOK ADULT</b>	<b>1,427</b>	<b>58</b>	<b>1,471</b>	<b>126</b>
Marked (Adipose missing)	0	--	7	--
Unmarked (Adipose present)	1,427	--	1,464	--
<b>CHINOOK JACK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>COHO ADULT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>COHO JACK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>SOCKEYE</b>	<b>0</b>	<b>896</b>	<b>24</b>	<b>1,489</b>
<b>PINK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CHUM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Table 4.** Fraser River recreational fishery assessment final results from July 23 – August 18, 2004 (sockeye retention permitted). Data was stratified into day types (weekend and weekday) and region (upstream and downstream of the Agassiz-Rosedale Bridge).

<b>SOURCE DATA</b>				
	<b>Weekend</b>		<b>Weekday</b>	
Open Days in Study Period	9		18	
Number of Survey Shifts	9		11	
Number of Interviews	1,734		1,631	
Interview Hours	8,717		7,620	
Number of Instantaneous Effort Counts	4		4	
Mean Rod Count (Instantaneous Effort)	1,394		772	
Proportion of Effort in the Instantaneous Effort Count Time Block	0.085		0.081	
Estimated Daily Effort (Hours)	16,400		9,531	
Estimated Total Effort (Hours)	151,367		174,320	
<b>CATCH ESTIMATES</b>				
	<b>Weekend</b>		<b>Weekday</b>	
	<b>Harvest</b>	<b>Release</b>	<b>Harvest</b>	<b>Release</b>
<b>CHINOOK ADULT</b>	<b>1,571</b>	<b>65</b>	<b>2,456</b>	<b>72</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	1,571	--	2,456	--
<b>CHINOOK JACK</b>	<b>24</b>	<b>0</b>	<b>220</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	24	--	220	--
<b>COHO ADULT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>COHO JACK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>SOCKEYE</b>	<b>23,457</b>	<b>3,537</b>	<b>26,907</b>	<b>1,901</b>
<b>PINK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CHUM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Table 5.** Fraser River recreational fishery assessment final results from August 19 – September 10, 2004. For analyses, data was stratified into day types (weekend and weekday).

<b>SOURCE DATA</b>				
	<b>Weekend</b>		<b>Weekday</b>	
Open Days in Study Period	7		16	
Number of Survey Shifts	7		9	
Number of Interviews	492		523	
Interview Hours	2,384		2,509	
Number of Instantaneous Effort Counts	3		3	
Mean Rod Count (Instantaneous Effort)	313		91	
Proportion of Effort in the Instantaneous Effort Count Time Block	0.077		0.079	
Estimated Daily Effort (Hours)	4,064		1,152	
Estimated Total Effort (Hours)	28,236		16,896	
<b>CATCH ESTIMATES</b>				
	<b>Weekend</b>		<b>Weekday</b>	
	<b>Harvest</b>	<b>Release</b>	<b>Harvest</b>	<b>Release</b>
<b>CHINOOK ADULT</b>	<b>939</b>	<b>93</b>	<b>660</b>	<b>107</b>
Marked (Adipose missing)	6	--	17	--
Unmarked (Adipose present)	933	--	643	--
<b>CHINOOK JACK</b>	<b>50</b>	<b>0</b>	<b>37</b>	<b>14</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	50	--	37	--
<b>COHO ADULT</b>	<b>12</b>	<b>31</b>	<b>0</b>	<b>25</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	12	--	0	--
<b>COHO JACK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marked (Adipose missing)	0	--	0	--
Unmarked (Adipose present)	0	--	0	--
<b>SOCKEYE</b>	<b>0</b>	<b>1,029</b>	<b>0</b>	<b>703</b>
<b>PINK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CHUM</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>

**Table 6.** Fraser River recreational fishery assessment final results from May 1 to September 10, 2004. Total catch and release (weekend and weekday catch and release data combined).

	<b>May 1-31</b>	<b>June 1-30</b>	<b>July 1-22</b>	<b>July 23- August 18</b>	<b>August 19 - September 10</b>	<b>Total</b>
	chinook retention	chinook retention	chinook retention	sockeye retention	chinook retention	
Number of Interviews	577	972	1,517	3,365	1,015	<b>7,446</b>
Interview Hours	2,715	5,555	9,075	16,337	4,893	<b>38,575</b>
Number of Overflights	9	8	7	8	6	<b>38</b>
Average Overflight Count	76	178	354	1,083	202	<b>1,893</b>
<b>ANGLER EFFORT</b>						
Estimated Effort (hours)	24,109	49,772	80,186	325,687	45,132	<b>524,886</b>
<b>ESTIMATED HARVEST</b>						
Chinook Adult	174	1,576	2,898	4,027	1,599	<b>10,274</b>
Chinook Jack	0	4	0	244	87	<b>335</b>
Coho Adult	0	0	0	0	12	<b>12</b>
Coho Jack	0	0	0	0	0	<b>0</b>
Sockeye	0	0	24	50,364	0	<b>50,388</b>
Pink	0	0	0	0	0	<b>0</b>
Chum	0	0	0	0	0	<b>0</b>
<b>ESTIMATED RELEASE</b>						
Chinook Adult	9	57	184	137	200	<b>587</b>
Chinook Jack	0	10	0	0	14	<b>24</b>
Coho Adult	0	0	0	0	56	<b>56</b>
Coho Jack	0	0	0	0	0	<b>0</b>
Sockeye	0	64	2,385	5,438	1,732	<b>9,619</b>
Pink	0	0	0	0	0	<b>0</b>
Chum	0	0	0	0	12	<b>12</b>