Fisheries and Oceans Canada | Pêches et Océans Canada

POST SEASON SUMMARY - DRAFT

Date: November 30th, 2008

CHILLIWACK RIVER RECREATIONAL FISHERY ASSESSMENT

September 15th to November 15th, 2008

Table 1 – Chilliwack River salmon retention limits for the 2008 recreational fishery.

Species	Retention Openings	Daily Limits	Notes
Coho	July 1 to March 31	4	hatchery only
Chinook	July 1 to December 31	4	only 1 over 62cm
Chum	July 1 to March 31	1	
Sockeye	No Openings	0	
Pink	July 1 to March 31	2	non-pink year
All Species	All Dates	4	4 total salmon daily

Note - Effective Saturday, August 2, 2008, the current no fishing boundary was extended to include the area from the confluence of the Chilliwack River and Slesse Creek downstream 100 meters to a line between two triangular boundary signs on either side of the Chilliwack River.

A complete listing of regulations can be viewed at the Fisheries and Oceans Canada Pacific Region recreational fishery webpage: http://www.pac.dfo-mpo.gc.ca/recfish/default_e.htm

All Fisheries and Oceans fishery notices can be viewed at: http://ops.info.pac.dfo.ca/fishman/fnotice/fnotice.htm

STUDY AREA

The 2008 Chilliwack River recreational fishery assessment study area was bounded by the confluence with the Fraser River (downstream boundary) and the mouth of Slesse Creek (upstream boundary). The survey covered the entire area open for angling. The Vedder Crossing separated the study area into two sections.

METHODS

Chilliwack River water levels were obtained from Environment Canada (Figure 1). Levels recorded at the Vedder Crossing Hydrometric Station were used. These data can be found at: http://scitech.pyr.ec.gc.ca/waterweb/fullgraph.asp

The Chilliwack River recreational fishery assessment began on September 15th and ran until November 15th, 2008.

Three surveyors assessed the fishery. Two surveyors conducted a roving "bus-route" survey of the two separate sections of the river with no overlap in their respective ranges. These two surveyors conducted interviews of anglers in the process of fishing (incomplete interviews) as well as anglers who had just completed their angling trip (complete interviews). The sites surveyed were pre-selected for a bi-weekly period based on angler distribution observed on previous roving surveys and overflights of the river. The survey 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 location and performed angler interviews and hourly rod counts (anglers actively fishing). The access-point location was the Keith Wilson Bridge. Effort remained strong at this site throughout the study period.

The access point interviews were obtained from anglers who had finished fishing for the day. At the end of their shift, access-point surveyors collected interviews from anglers still fishing when possible. Sites where hourly rod counts were conducted had a total of 9 counts per day. IRCs (Instantaneous Rod Counts of anglers actively fishing) of the entire study area were scheduled once per week for each day type by fixed wing plane (i.e. one weekday and one weekend flight). Historically, angler effort on holidays equals that on weekend days; as such, holidays were pooled with weekend days and classified as weekend day types. Weekday IRCs were randomly assigned to a day from Monday through Friday (excluding holidays); weekend IRCs alternated between Saturday and Sunday; and once per year, a holiday was chosen to assess rather than a weekend day.

Surveyors worked all weekends and holidays with rotating days off during the weekdays. Surveyors worked one of two shifts (morning or afternoon), which were randomly assigned to each survey day. These shifts combined to span the entire daylight hours for each day type surveyed (weekday and weekend) during this study period. Data were blocked by day type (weekday or weekend) as well as the following time blocks:

1 – September 15th to 30th
2 – October 1st to 15th
3 – October 16th to 31st
4 – November 1st to 15th

Surveyors conducted angler interviews at their survey site 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 harvested, and total catch released. If permitted by the angler, the surveyor would inspect any harvests to determine whether the angler's species identification was correct and to check for adipose fin-clipped (AFC) fish. Heads from AFC Chinook or coho were requested by surveyors due to the possibility of CWT (coded-wire-tag) presence. If there was any doubt that an adipose fin might have been clipped for a particular fish, for example if the adipose fin was partially regenerated or malformed, the fish was classified as AFC and the head was requested.

Interviews were used to determine HPUE (fish harvested per hour of angling effort), RPUE (fish caught and released per hour of angling effort), and to summarize the angler characteristics listed above. Daily effort is calculated using a combination of hourly rod counts conducted at the access-point survey site and IRC data of the study area. Total angling effort is estimated by multiplying each day type's estimated daily effort (weekday and weekend) by the number of that day type in the study period. Using the total effort estimate, HPUE and RPUE are expanded to determine harvest and release numbers by species for the entire study area for the period assessed. Such analyses are documented in several DFO publications (Schubert 1992; Schubert 1995).

Interview data, hourly rod count data and overflight data were stored and analyzed using Microsoft Excel. The data were verified in two steps. First, all field data sheets were examined for compliance with study procedures by the supervising technician and/or the creel data manager. Second, all entered data were error checked once by the supervising technician.

RESULTS

Water Levels

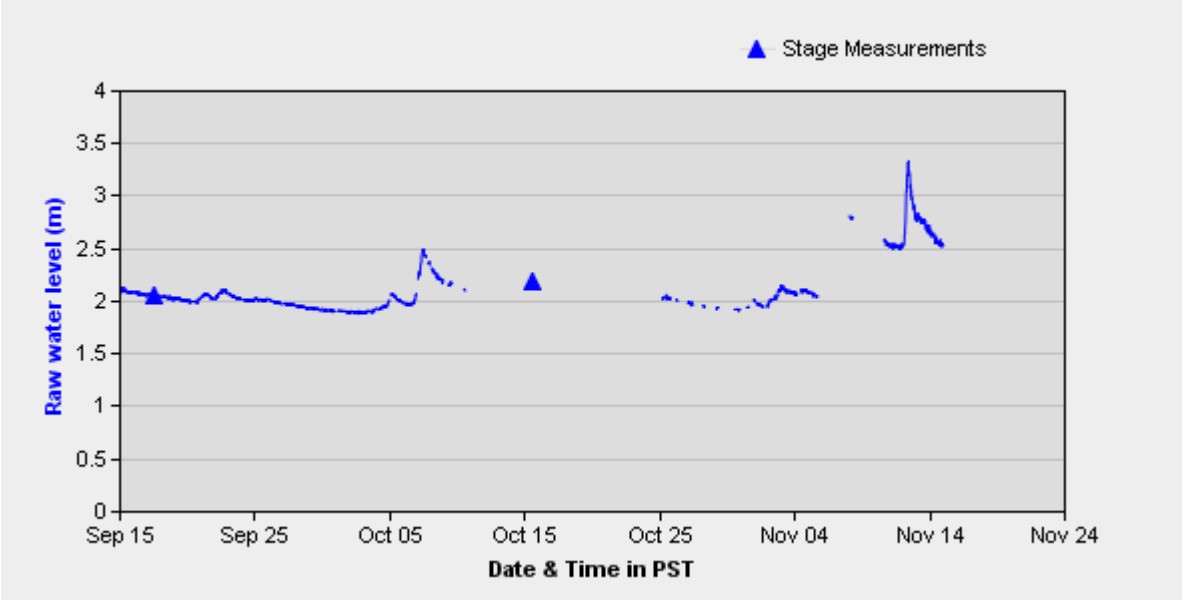

Figure 1 – 2008 Chilliwack River water level from September 15th to November 15th, 2008, at the Vedder Crossing Hydrometric Station, Environment Canada Website: http://scitech.pyr.ec.gc.ca/waterweb/fullgraph.asp (as accessed on November 28th, 2008).

Angling Effort Profile

An angling effort profile for each day type was generated (Figure 2 and 3) using hourly rod counts at the access-point survey site (Keith Wilson Bridge, Chilliwack).

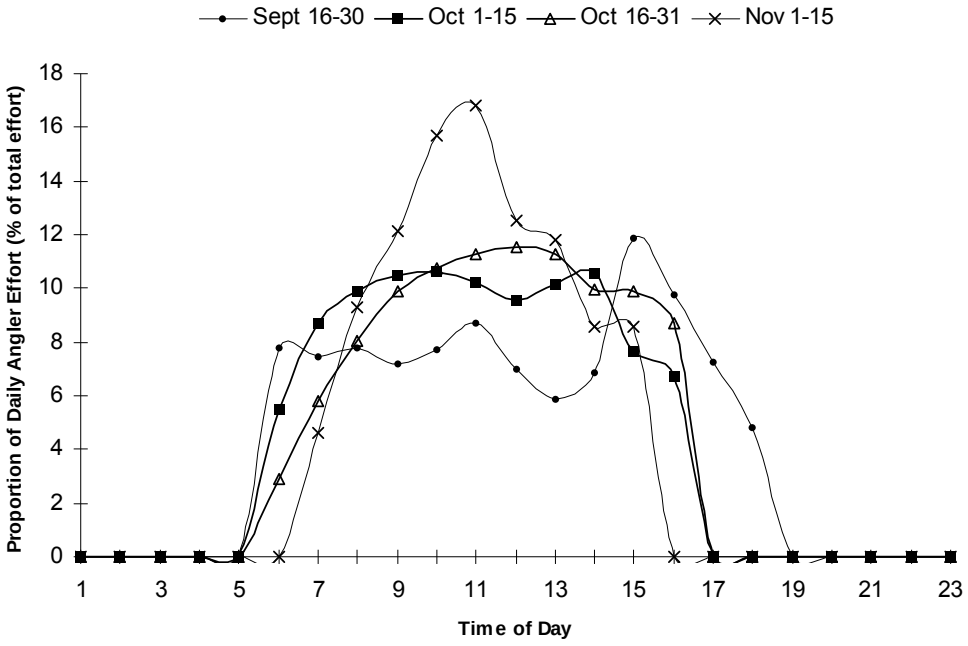

Figure 2 – Angling effort profile by hour during weekdays from September 15th to November 15th during the 2008 Chilliwack River recreational fishery.

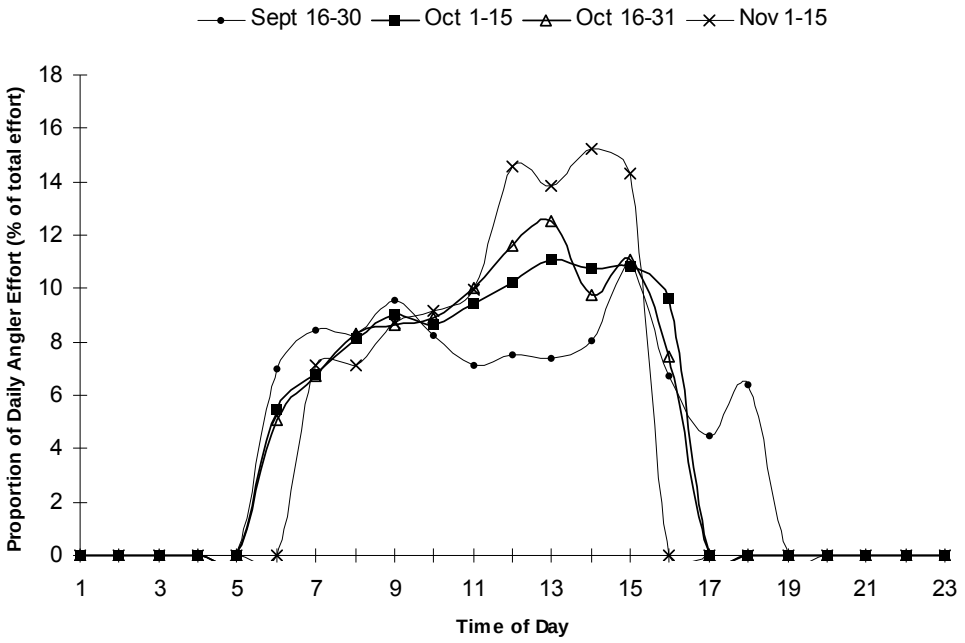

Figure 3 – Angling effort profile by hour during weekends from September 15th to November 15th during the 2008 Chilliwack River recreational fishery.

Survey Effort

Table 2 – Total number of angler interviews in which harvest was recorded with the proportion of inspected catch, species ID and AFC status, for the 2008 Chilliwack River recreational fishery.

Study Period	Total # of interviews	Total # of interviews with harvest	Proportion of harvests which were inspected	Proportion of inspections which had correct species ID	Proportion of inspected CN harvests that were AFC	Proportion of CO harvests that were AFC
Sept 15-30	862	96	0.83	1.00	0.12	0.83
Oct 1-15	1,618	229	0.82	0.99	0.046	0.95
Oct 16-31	1,288	250	0.85	1.00	0.036	1.0
Nov 1-15	445	51	0.82	0.98	0.0	1.0

Angling Effort

Table 3 – Retainable species, average target species, species harvested and released, estimated total angling effort and average trip length for the 2008 Chilliwack River recreational fishery.

	Sept 15-30	Oct 1-15	Oct 16-31	Nov 1-15
Retainable Species	CN, CO, CM	CN, CO, CM	CN, CO, CM	CN, CO, CM
Average Target Species	CO, CN	CO, CN	CO	CO
Estimated Total Angling Effort (hrs)	48,943	78,662	59,168	13,615
Average Trip Length (hrs)	3.4	3.2	3.4	2.4
Salmon Species Harvested	CN, CO, CM	CN, CO, CM	CN, CO, CM	CO, CM
Salmon Species Released	CN, CO, CM	CN, CO, CM	CN, CO, CM	CN, CO, CM

Catch Rates

Table 4 – Average HPUE for the 2008 Chilliwack River recreational fishery.

HPUE	Sep 15-30	Oct 1-15	Oct 16-31	Nov 1-15
Chinook Adult	0.02	0.02	0.008	0
Chinook Jack	0.002	0.0009	0.001	0
Coho Adult	0.008	0.01	0.01	0.03
Coho Jack	0.004	0.0009	0	0.005
Sockeye	0	0	0	0
Pink	0	0	0	0
Chum	0.003	0.02	0.04	0.03

Table 5 – Average RPUE for the 2008 Chilliwack River recreational fishery.

RPUE	Sep 15-30	Oct 1-15	Oct 16-31	Nov 1-15
Chinook Adult	0.05	0.07	0.06	0.002
Chinook Jack	0.005	0.003	0	0
Coho Adult	0.005	0.006	0.005	0.03
Coho Jack	0.004	0.006	0.0006	0.002
Sockeye	0.0005	0	0	0
Pink	0	0	0	0
Chum	0.004	0.08	0.2	0.3

Table 6 - Chilliwack River recreational fishery assessment results for September 16th to 30th, 2008. Data stratified by day type (weekday and weekend (including holidays)), catch status, species and AFC status.

CHILLIWACK RIVER RECREATIONAL FISHERY ASSESSMENT RESULTS

(STUDY PERIOD: September 16-30, 2008)

Source Data

	Weekdays	Weekend
Open Days in Study Period	11	4
Number of Survey Shifts	5	4
Number of Interviews	402	460
Interview Hours	1,293	1,603
Estimated Total Angling Effort (Hours)	23,019	25,924

Catch Estimates

	Weekdays		Weekends	
	Harvest	Release	Harvest	Release
Chinook Adult	596	968	415	1631
marked (adipose missing)	97	—	23	—
unmarked (adipose present)	499	—	392	—
Chinook Jack	15	148	86	116
marked (adipose missing)	0	—	26	—
unmarked (adipose present)	15	—	60	—
Coho Adult	247	68	165	191
marked (adipose missing)	181	—	165	—
unmarked (adipose present)	66	—	0	—
Coho Jack	123	145	56	34
marked (adipose missing)	107	—	56	—
unmarked (adipose present)	16	—	0	—
Sockeye	0	0	0	26
Pink	0	0	0	0
Chum	92	107	34	90

Table 7 - Chilliwack River recreational fishery assessment results for October 1st to 15th, 2008. Data stratified by day type (weekday and weekend (including holidays)), catch status, species and AFC status.

CHILLIWACK RIVER RECREATIONAL FISHERY ASSESSMENT RESULTS

(STUDY PERIOD: October 1–15, 2008)

Source Data

	Weekdays	Weekend
Open Days in Study Period	10	5
Number of Survey Shifts	6	5
Number of Interviews	746	872
Interview Hours	2,352.5	2,747
Estimated Total Angling Effort (Hours)	35,753	42,909

Catch Estimates

	Weekdays		Weekends	
	Harvest	Release	Harvest	Release
Chinook Adult	879	3,091	889	2,123
marked (adipose missing)	107	—	0	—
unmarked (adipose present)	772	—	889	—
Chinook Jack	48	214	24	59
marked (adipose missing)	0	—	0	—
unmarked (adipose present)	48	—	24	—
Coho Adult	483	293	338	163
marked (adipose missing)	461	—	338	—
unmarked (adipose present)	22	—	0	—
Coho Jack	47	162	23	310
marked (adipose missing)	47	—	11	—
unmarked (adipose present)	0	—	12	—
Sockeye	0	0	0	0
Pink	0	0	0	0
Chum	698	2,566	575	3,784

Table 8 - Chilliwack River recreational fishery assessment results for October 16th to 31st, 2008. Data stratified by day type (weekday and weekend (including holidays)), catch status, species and AFC status.

CHILLIWACK RIVER RECREATIONAL FISHERY ASSESSMENT RESULTS

(STUDY PERIOD: October 16-31, 2008)

Source Data

	Weekdays	Weekend
Open Days in Study Period	12	4
Number of Survey Shifts	8	4
Number of Interviews	710	578
Interview Hours	2,316	2,009
Estimated Total Angling Effort (Hours)	32,692	26,476

Catch Estimates

	Weekdays		Weekends	
	Harvest	Release	Harvest	Release
Chinook Adult	186	1,484	268	1,921
marked (adipose missing)	0	—	41	—
unmarked (adipose present)	186	—	227	—
Chinook Jack	29	0	41	0
marked (adipose missing)	0	—	0	—
unmarked (adipose present)	29	—	41	—
Coho Adult	332	121	251	202
marked (adipose missing)	332	—	251	—
unmarked (adipose present)	0	—	0	—
Coho Jack	0	38	0	0
marked (adipose missing)	0	—	0	—
unmarked (adipose present)	0	—	0	—
Sockeye	0	0	0	0
Pink	0	0	0	0
Chum	1,164	7,960	1,027	6,355

Table 9 - Chilliwack River recreational fishery assessment results for November 1st to 15th, 2008. Data stratified by day type (weekday and weekend (including holidays)), catch status, species and AFC status.

CHILLIWACK RIVER RECREATIONAL FISHERY ASSESSMENT RESULTS

(STUDY PERIOD: November 1-15, 2008)

Source Data

	Weekdays	Weekend
Open Days in Study Period	9	6
Number of Survey Shifts	5	6
Number of Interviews	129	316
Interview Hours	309	777
Estimated Total Angling Effort (Hours)	4,431	9,184

Catch Estimates

	Weekdays		Weekends	
	Harvest	Release	Harvest	Release
Chinook Adult	0	0	0	29
marked (adipose missing)	0	—	0	—
unmarked (adipose present)	0	—	0	—
Chinook Jack	0	0	0	0
marked (adipose missing)	0	—	0	—
unmarked (adipose present)	0	—	0	—
Coho Adult	146	188	293	283
marked (adipose missing)	146	—	293	—
unmarked (adipose present)	0	—	0	—
Coho Jack	0	25	73	0
marked (adipose missing)	0	—	73	—
unmarked (adipose present)	0	—	0	—
Sockeye	0	0	0	0
Pink	0	0	0	0
Chum	147	1,711	200	2,736

Table 10 - Chilliwack River recreational fishery assessment summary for September 15th to November 15th, 2008. Total harvest and release (weekday and weekend data combined). Data stratified by catch status and species.

CHILLIWACK RIVER MAINSTEM RECREATIONAL FISHERY ASSESSMENT RESULTS

	Sept 15-30	Oct 1-15	Oct 16-31	Nov 1-15	**Total**
Number of Interviews	862	1,618	1,288	445	**4,213**
Interview Hours	2,896	5,100	4,324	1,086	**13,405**
Number of Overflights	4	3	5	4	**16**
Average Overflight Count	337	507	430	130	**351**

ANGLER EFFORT

Estimated Effort (hours)	48,943	78,662	59,168	13,615	**200,388**

ESTIMATED TOTAL HARVEST

Chinook Adult	1,011	1,768	454	0	**3,233**
Chinook Jack	101	72	70	0	**243**
Coho Adult	412	821	583	439	**2,255**
Coho Jack	179	70	0	73	**322**
Sockeye	0	0	0	0	**0**
Pink	0	0	0	0	**0**
Chum	126	1,273	2,191	347	**3,937**

ESTIMATED AFC HARVEST (included in estimated total harvest)

Chinook Adult	120	107	41	0	**268**
Chinook Jack	26	0	0	0	**26**
Coho Adult	346	799	583	439	**2,167**
Coho Jack	163	58	0	73	**294**

ESTIMATED RELEASE

Chinook Adult	2,599	5,214	3,405	29	**11,247**
Chinook Jack	264	273	0	0	**537**
Coho Adult	259	456	323	471	**1,509**
Coho Jack	179	472	38	25	**714**
Sockeye	26	0	0	0	**26**
Pink	0	0	0	0	**0**
Chum	197	6,350	14,315	4,447	**25,309**

ACKNOWLEDGEMENTS

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