



2005 Nicomen Slough/Norrish Creek Recreational Fishery Assessment **Final Results - October 8 to November 30, 2005**

Prepared By: Jason Mahoney
Assessment Biologist
Stock Assessment
Lower Fraser Area

A. Regulations

Regulations for the 2005/06 fishing season were as follows:

Nicomen Slough is open from the confluence of Siddle (Bell's) Creek downstream to the Fraser River. Coho and chum retention on Nicomen Slough is permitted from January 1 to December 31 and the limits are as follows:

- **Coho:** 4 hatchery fish per day (only 2 can be over 35 cm)
- **Chum:** 2 fish per day

Norrish Creek is open to coho retention only from January 1 to December 31 and the limits are as follows:

- **Coho:** 4 hatchery fish per day (only 2 can be over 35 cm)

Note: for complete fresh water salmon fishing regulations please refer to the BC Fresh Water Salmon Supplement or visit the web page:

http://www.pac.dfo-mpo.gc.ca/recfish/default_e.htm

B. Study Area

The Nicomen Slough/Norrish Creek study area extends from the mouth of Nicomen Slough to its confluence with Norrish Creek and up Norrish Creek to a point approximately 200 metres upstream of the railway bridge.

C. Survey Methods

The Nicomen Slough/Norrish Creek recreational fishery survey began on October 8 and ended on November 30, 2005.

One surveyor assessed the fishery and was scheduled to work all weekends and holidays with rotating days off during the weekdays. In October, the day was divided into two shifts (morning or afternoon) that spanned the entire daylight period. Shifts were randomly assigned to each survey day. By the start of November, daylight hours have reduced making only one shift necessary.

The surveyor was stationed at the boat launch near the end of River Rd for 64% of the survey period (Oct 8 – Nov 10) since most of the angling effort (shore and boat-based) was captured at this site. Although interviews were obtained from boat-based anglers returning from other systems, these were excluded from the Nicomen analyses. In order to generate daily angler profiles, the surveyor conducted hourly rod counts. When angler effort decreased at the boat launch, hourly rod counts were conducted within visual range (up and down) of the Highway 7 bridge crossing of Norrish Creek, near the hatchery, where angling activity was concentrated. The surveyor was stationed here for the remaining 36% of the study period (Nov 11-30). Both sites provided the surveyor with the ability to collect complete fishing trip interviews.

The surveyor spent approximately 20 minutes of each hour of their survey day collecting incomplete interviews from anglers fishing from the shore along River Road. The surveyor took time each day to drive along the slough and collect incomplete fishing trip interviews from anglers fishing along River Road and in Norrish Creek. For each interview, the following information was obtained: where the angler was fishing, party size, length of angling trip, how much longer they intend to fish (if applicable), target species, gear used, total catch retained, total catch released.

If permitted, the surveyor inspected any catch to verify whether the angler's species identification was correct and to check for mark status. For coho, if the adipose fin was clipped (AFC) the surveyors would wand the head to determine if it contained a coded wire tag (CWT). The mark status for released fish was not reported consistently and thus was not reliable to use in the analysis. Interviews were used to determine harvest-per-unit effort in hours (HPUE), release-per-unit effort in hours (RPUE), and to summarize the angler characteristics listed above.

Daily effort was calculated using a combination of interview data, daily angler profiles, and instantaneous effort rod counts. The surveyor conducted instantaneous rod counts at specific times during the study period by driving through the system and counting the number of anglers twice a week (one weekend and one weekday). Multiplying total effort by HPUE and RPUE produce harvest and release estimates by species for the entire study area. Such analyses are documented in several DFO publications (Schubert 1992; Schubert 1995).

D. Data Analysis

Data was 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 October and November analyses, data were blocked by day type (weekend and weekday). All statutory holidays were included in the weekend analysis.

E. Results

Survey Effort

The study period (October 8 - November 30, 2005) covered 20 weekend and holiday days and 36 weekday days. Survey sampling occurred on 100% of the weekends and holidays, while 61% of the weekdays were surveyed. A total of 1,025 complete and incomplete interviews were collected during this time.

Angler Effort

Instantaneous effort rod counts of actively fishing anglers were conducted twice weekly (one on the weekend and one during the week). During October, 4 weekend and 4 weekday instantaneous counts were conducted, ranging from 15 to 51 anglers on the weekends and from 9 to 78 anglers on the weekdays. In November, 4 weekend and 4 weekday instantaneous counts were conducted ranging from 16 to 97 anglers and 1 to 42 anglers respectively.

Daily Profile: Anglers fished throughout the daylight hours. Effort was concentrated between 7:00-15:00 hours in October and between 6:00-15:00 hours in November.

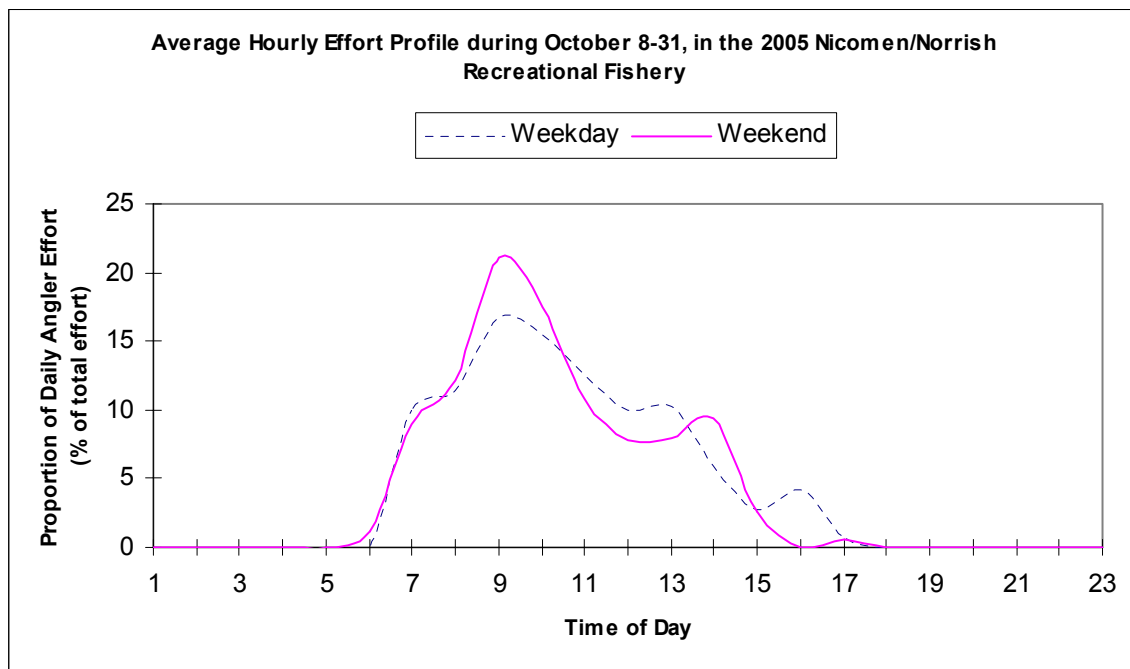


Figure 1. Hourly angler effort profiles for October 8-31, 2005 in the Nicomen/Norrish Recreational Fishery

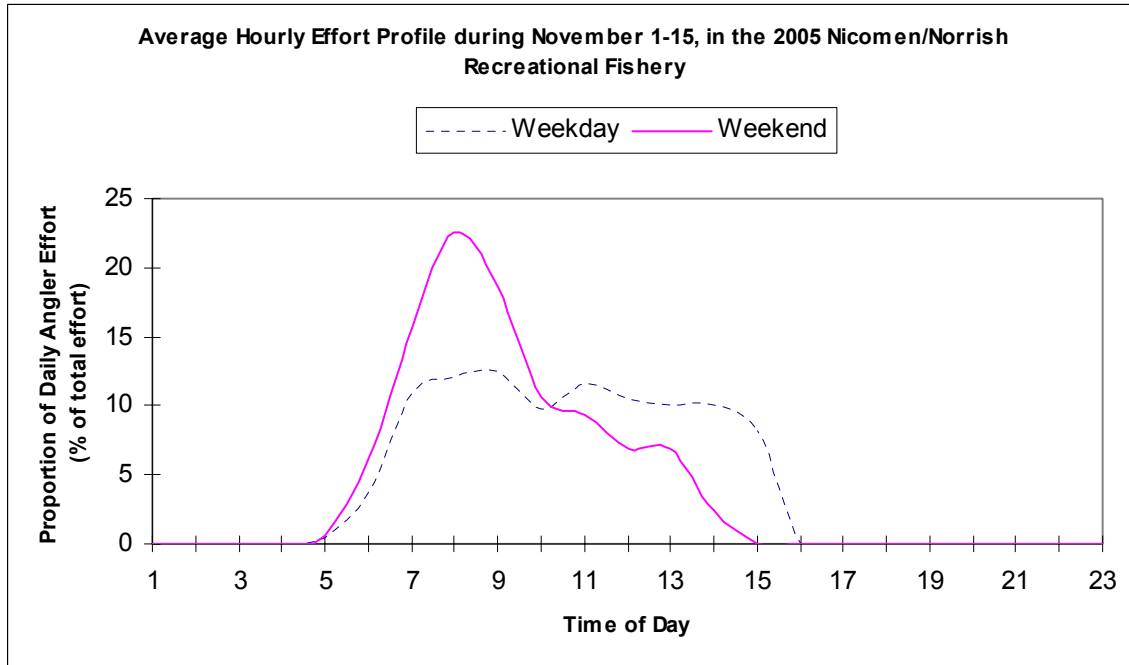


Figure 2. Hourly angler effort profiles for November 1-15, 2005 in the Nicomen/Norrish Recreational Fishery.

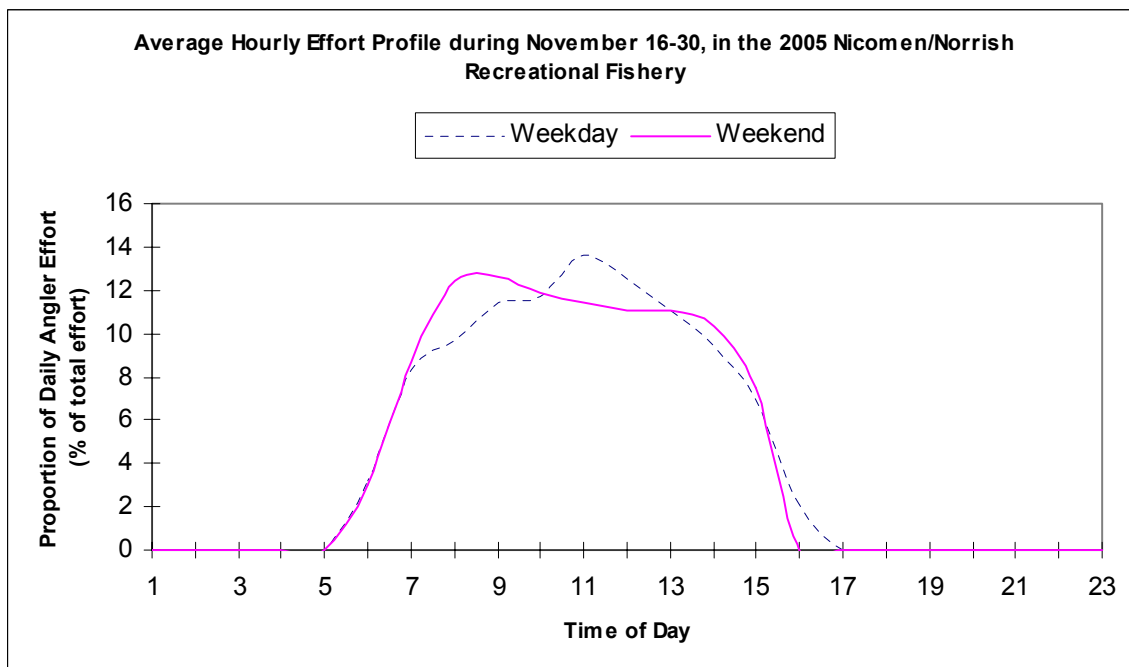


Figure 3. Hourly angler effort profiles for November 16-30, 2005 in the Nicomen/Norrish Recreational Fishery.

Catch-per-Unit-Effort in Hours (CPUE)

During the entire study period, anglers were most interested in catching coho. In October, 99.2% of interviewed anglers were targeting coho, and 0.8% had no preference at all. In November, 100% of interviewed anglers were targeting coho. The species of salmon retained in both months were coho and chum.

Average HPUE in October:

- coho-0.035, coho jacks-0.0006 and chum-0.012.

Average HPUE in November:

- coho-0.044, coho jacks-0.000 and chum-0.019.

Release-per-Unit-Effort in Hours (RPUE)

The species of salmon released by anglers were coho and chum.

Average RPUE in October:

- coho-0.0331, coho jacks-0.0013, chum-0.012

Average RPUE in November:

- coho-0.096, coho jacks-0.000, chum-0.0326

Catch Inspection

The surveyor will inspect the catch whenever possible to verify species identification, determine the mark status, and test for the presence of a coded wire tag (CWT). The use of a handheld wand detector was used to determine the presence or absence of a CWT's. The surveyor followed proper wand procedures, to ensuring false readings were minimized. Catch inspection in October occurred in 95.5% of harvested catch. During the inspection the angler had correctly identified the species 100% of the time. In November, catch inspection occurred in 83% of harvested catch. Anglers had correctly identified the species 100% of the time.

Throughout the entire study period, 100% of harvested coho were marked.

Water Levels

In 2005, Nicomen/Norrish water levels (Environment Canada's Chilliwack River Hydrometric Station) from October 8th to November 30th fluctuated weekly, starting at 6.4m and ending the study period at 5.6m. The water level peaked at 7.4m on Oct 17.

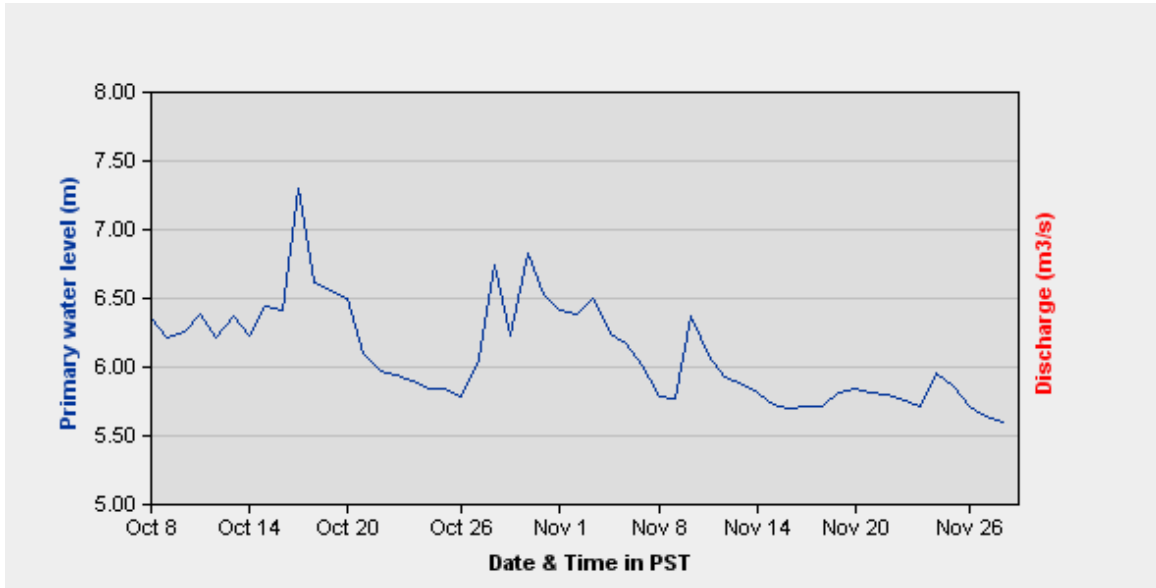


Figure 1 - Primary water levels (discharge data not available) on Norrish Creek, Environment Canada Preliminary Results from October 8 to November 30, 2005. Website: <http://scitech.pyr.ec.gc.ca/waterweb/fullgraph.asp> (accessed on December 16, 2005).

Table 3. Nicomen Slough and Norrish Creel Recreational Fishery Assessment, Final Results for **October 8-31, 2005**. Data were stratified into weekend and weekday types.

NICOMEN / NORRISH RECREATIONAL FISHERY ASSESSMENT
FINAL RESULTS
(STUDY PERIOD: Oct 8-31, 2005)

SOURCE DATA	Weekend/Holiday	Weekday
Open Days in Study Period	9	15
Number of Survey Shifts	9	9
Number of Interviews	384	241
Interview Hours	1,351	721
Number of Instantaneous Effort Counts	4	4
Mean Rod Count (Instantaneous Effort)	50	28
Proportion of Effort in the Instantaneous Effort Count Time Block	0.193	0.1615
Estimated Daily Effort (Hours)	259	173
Estimated Total Effort (Hours)	2,276	2,585

CATCH ESTIMATES	Weekend/Holiday		Weekday	
	Harvest	Release	Harvest	Release
CHINOOK ADULT	0	0	0	0
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	28	17	141	143
Marked (Adipose missing)	28	—	141	—
Unmarked (Adipose present)	0	—	0	—
COHO JACK	0	0	3	6
Marked (Adipose missing)	0	—	3	—
Unmarked (Adipose present)	0	—	0	—
SOCKEYE	0	0	0	0
PINK	0	0	0	0
CHUM	0	26	0	30

Table 4. Nicomen Slough and Norrish Creel Recreational Fishery Assessment, Final Results for **November 1-15, 2005**. Data were stratified into weekend and weekday types.

NICOMEN / NORRISH RECREATIONAL FISHERY ASSESSMENT
FINAL RESULTS
(STUDY PERIOD: November 1-15, 2005)

SOURCE DATA	Weekend/Holiday	Weekday
Open Days in Study Period	5	10
Number of Survey Shifts	5	6
Number of Interviews	168	87
Interview Hours	645	247
Number of Instantaneous Effort Counts	2	2
Mean Rod Count (Instantaneous Effort)	82	31
Proportion of Effort in the Instantaneous Effort Count Time Block	0.1465	0.125
Estimated Daily Effort (Hours)	560	248
Estimated Total Effort (Hours)	2,656	2,733

CATCH ESTIMATES	Weekend/Holiday		Weekday	
	Harvest	Release	Harvest	Release
CHINOOK ADULT	0	0	0	0
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	194	251	166	243
Marked (Adipose missing)	194	—	166	—
Unmarked (Adipose present)	0	—	0	—
COHO JACK	0	0	0	0
Marked (Adipose missing)	0	—	0	—
Unmarked (Adipose present)	0	—	0	—
SOCKEYE	0	0	0	0
PINK	0	0	0	0
CHUM	8	185	0	22

Table 5. Nicomen Slough and Norrish Creel Recreational Fishery Assessment, Final Results for **November 16-30, 2005**. Data were stratified into weekend and weekday types.

NICOMEN / NORRISH RECREATIONAL FISHERY ASSESSMENT

FINAL RESULTS

(STUDY PERIOD: November 16-30, 2005)

SOURCE DATA	Weekend/Holiday	Weekday
Open Days in Study Period	4	11
Number of Survey Shifts	4	7
Number of Interviews	77	68
Interview Hours	271	245
Number of Instantaneous Effort Counts	2	2
Mean Rod Count (Instantaneous Effort)	23	4
Proportion of Effort in the Instantaneous Effort Count Time Block	0.1225	0.1155
Estimated Daily Effort (Hours)	188	35
Estimated Total Effort (Hours)	746	335

CATCH ESTIMATES	Weekend/Holiday		Weekday	
	Harvest	Release	Harvest	Release
CHINOOK ADULT	0	0	0	0
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	11	97	12	12
Marked (Adipose missing)	11	—	12	—
Unmarked (Adipose present)	0	—	0	—
COHO JACK	0	0	0	0
Marked (Adipose missing)	0	—	0	—
Unmarked (Adipose present)	0	—	0	—
SOCKEYE	0	0	0	0
PINK	0	0	0	0
CHUM	0	17	0	12

Table 5. Nicomen Slough and Norrish Creel Recreational Fishery Assessment, Final Results, **October 8-November 30, 2005.** Total catch and release (weekend and weekday catch and release combined).

	October 8-31	Nov 1-30	Total
Number of Interviews	625	400	1,025
Interview Hours	2,072	1,408	3,480
Number of Overflights	8	8	16
Average Overflight Count	39	32	36
ANGLER EFFORT			0
Estimated Effort (hours)	4,861	6,470	11,331
ESTIMATED HARVEST			
Chinook Adult	0	0	0
Chinook Jack	0	0	0
Coho Adult	169	383	552
Coho Jack	3	0	3
Sockeye	0	0	0
Pink	0	0	0
Chum	0	8	8
ESTIMATED RELEASE			
Chinook Adult	0	0	0
Chinook Jack	0	0	0
Coho Adult	161	604	765
Coho Jack	6	0	6
Sockeye	0	0	0
Pink	0	0	0
Chum	56	236	292

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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