



2007 Nicomen Slough/Norrish Creek Recreational Fishery Assessment

Final Results - October 9th to November 30th, 2007

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REGULATIONS

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 (adipose fin-clipped; AFC) 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 (adipose fin-clipped; AFC) per day (only 2 can be over 35 cm)

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 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 Hawkins Pickle Road.

SURVEY METHODS

The Nicomen Slough/Norrish Creek recreational fishery survey began on October 9th and ended on November 30th, 2007.

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 Road for 62% of the survey period (October 9th to November 15th) 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 (mainstem of the Fraser), 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 Hawkins Pickle Road, near the hatchery, where angling activity was concentrated. The surveyor was stationed here for the remaining 38% of the study period (November 16th to 30th). 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 along River Road and in Norrish Creek.

Surveyors conducted angler interviews at their survey site(s) 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, and total catch released. Further, 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 surveyor would request to retain the head due to the possible presence of a coded-wire-tag (CWT). 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 fish was classified as AFC. The angler always retained the option of turning the head into a local depot themselves. The anglers were also requested to recall (if possible) the mark status of any released fish. 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 is calculated using a combination of interview data, hourly rod counts conducted at the survey sites, and Instantaneous Rod Counts (IRCs) of the survey area. IRCS were conducted either by plane, when it could be piggy-backed onto the Fraser mainstem creel overflights, or the surveyor conducted IRCS at specific times during the study period by driving through the system and counting the number of anglers twice per week (one weekend and one weekday). Using the total effort estimate, HPUE and RPUE are expanded to determine harvest and release numbers by species for the entire study area. Such analyses are documented in several DFO publications (Schubert 1992; Schubert 1995).

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. Data were blocked by day type (weekend and weekday). All statutory holidays were included in the weekend analysis.

RESULTS

Survey Effort

The study period (October 11th - November 30th, 2007) covered 16 weekend and holiday days and 37 weekday days. Survey sampling occurred on 100% of the weekends and holidays, while 62% of the weekdays were surveyed. A total of 946 complete and incomplete interviews were collected during this time.

Angler Effort

Instantaneous rod counts of actively fishing anglers were conducted twice weekly (one on the weekend and one during the week). During October, 3 weekend and 5 weekday instantaneous counts were conducted, ranging from 35 to 53 anglers on the weekends and from 5 to 35 anglers on the weekdays. In November, 4 weekend and 3 weekday instantaneous counts were conducted ranging from 37 to 52 anglers and 6 to 17 anglers respectively.

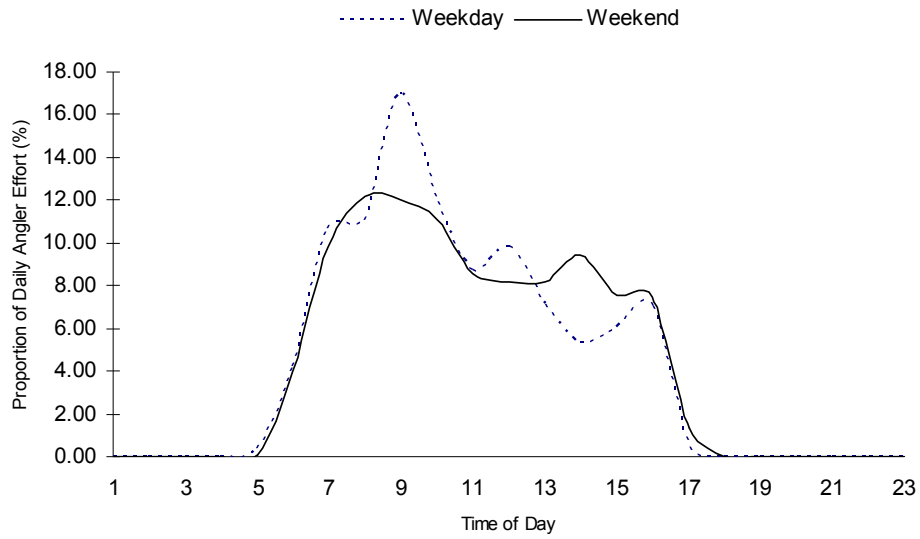


Figure 1 - Hourly angler effort profiles for October 9-31, 2007 in the Nicomen/Norrish Recreational Fishery. Hourly rod counts conducted at River Road boat launch near the mouth of Nicomen Slough.

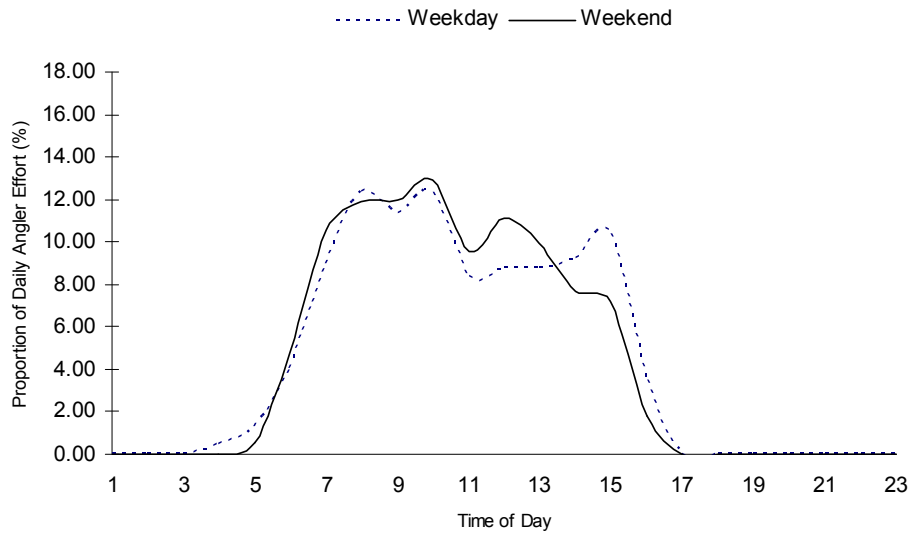


Figure 2 - Hourly angler effort profiles for November 1-15, 2005 in the Nicomen/Norrish Recreational Fishery. Hourly rod counts conducted at River Road boat launch near the mouth of Nicomen Slough.

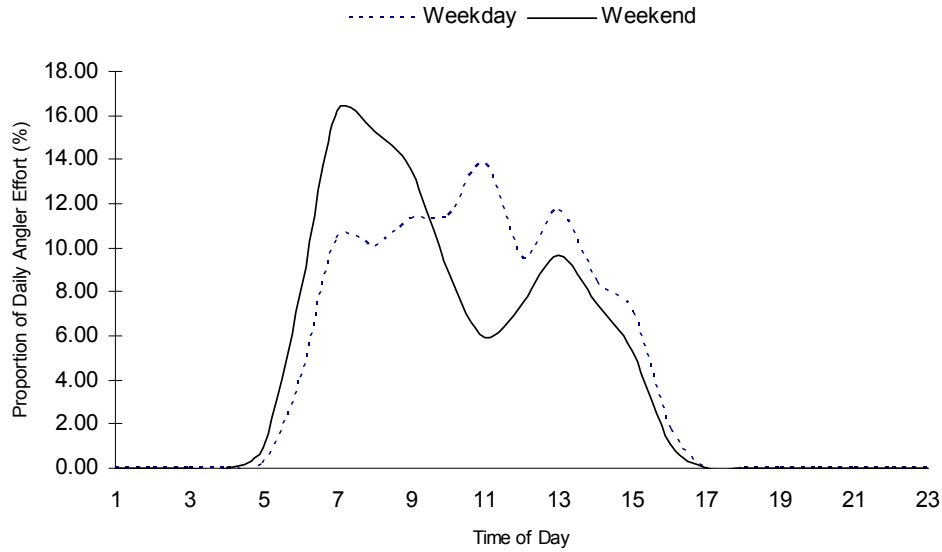


Figure 3 - Hourly angler effort profiles for November 16-30, 2005 in the Nicomen/Norrish Recreational Fishery. Hourly rod counts performed at Norrish Creek bridge crossing.

Catch Rate

During the entire study period, most anglers targeted coho (99.99%). The species of salmon retained in both months were coho and chum.

Table 1 – Average harvest-per-unit-effort (HPUE) from September 15th to November 15th, 2007, during the Chilliwack River Recreational Fishery.

	HPUE			Total
	Oct 9-31	Nov 1-15	Nov 16-30	
Chinook Adult	0	0	0	0
Chinook Jack	0	0	0	0
Coho Adult	0.003	0.03	0.05	0.04
Coho Jack	0	0	0.001	0.0002
Sockeye	0	0	0	0
Pink	0	0	0	0
Chum	0	0.001	0	0.0004

Table 2 – Average release-per-unit-effort (RPUE) from September 15th to November 15th, 2007, during the Chilliwack River Recreational Fishery.

	RPUE			Total
	Oct 9-31	Nov 1-15	Nov 16-30	
Chinook Adult	0.0009	0.001	0	0.0009
Chinook Jack	0	0	0	0
Coho Adult	0.03	0.03	0.08	0.04
Coho Jack	0.008	0.001	0.001	0.004
Sockeye	0	0	0	0
Pink	0.01	0	0	0.005
Chum	0.02	0.07	0.1	0.06



Catch Inspection

The surveyor will inspect the catch whenever possible to verify species identification and determine the mark status. Of interviews that had a reported harvest, 90% were inspected during October 9th to 31st, 85% were inspected from November 1st to 15th and 100% were inspected during November 16th to 30th. Anglers had correctly identified the species in 100% of these inspections. Of all catch that was inspected, 95% of coho heads were retained by the surveyor for post-season CWT detection (a total of 77 heads retained).

Acknowledgements

Technical supervision was provided by J. Evans. Technical support was provided by H. Knechtel and M. Hawkins. Data management was provided by McDaniel. Hawkins. Biological support provided by S. Grant.

Sincere thanks are expressed to all anglers who participated in the voluntary creel interviews.

Referenced Material

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Schubert, N.D. 1995. Angler Effort and Catch in Four Fraser River Sport Fisheries, 1991. Canadian Manuscript Report of Fisheries and Aquatic Sciences 2267.

Pollock, K.H., C.M. Jones, and T.L. Brown. 1994. Angler survey methods and their applications in fisheries management. American Fisheries Society Special Publications 25.

Guthrie, D., J.M. Hoenig, M. Holliday, C.M. Jones, M.J. Mills, S.A. Moberly, K.H. Pollock, and D.R. Talhelm, editors. 1991. Creel and angler surveys in fisheries management. American Fisheries Society Symposium 12.



Table 3 - Nicomen Slough and Norrish Creek Recreational Fishery Assessment results for October 9th to 31st, 2007. Data were stratified into weekend and weekday types.

NICOMEN / NORRISH RECREATIONAL FISHERY ASSESSMENT

RESULTS

(STUDY PERIOD: Oct 9-31, 2007)

SOURCE DATA	Weekend/Holiday	Weekday
Open Days in Study Period	6	17
Number of Survey Shifts	6	9
Number of Interviews	217	139
Interview Hours	752	454
Number of Instantaneous Effort Counts	3	6
Mean Rod Count (Instantaneous Effort)	43	21
Proportion of Effort in the Instantaneous Effort Count Time Block	0.1	0.2
Estimated Total Effort (Hours)	2,168	2,303

CATCH ESTIMATES	Weekend/Holiday		Weekday	
	Harvest	Release	Harvest	Release
CHINOOK ADULT	0	0	0	4
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	67	41	65	76
Marked (Adipose missing)	64	—	65	—
Unmarked (Adipose present)	3	—	0	—
COHO JACK	0	0	0	37
Marked (Adipose missing)	0	—	0	—
Unmarked (Adipose present)	0	—	0	—
SOCKEYE	0	0	0	0
PINK	0	48	0	0
CHUM	0	74	0	8



Table 4 - Nicomen Slough and Norrish Creek Recreational Fishery Assessment results for November 1st to 15th, 2007. Data were stratified into weekend and weekday types.

NICOMEN / NORRISH RECREATIONAL FISHERY ASSESSMENT

RESULTS

(STUDY PERIOD: November 1-15, 2007)

SOURCE DATA	Weekend/Holiday	Weekday
Open Days in Study Period	5	10
Number of Survey Shifts	5	6
Number of Interviews	182	137
Interview Hours	422	341
Number of Instantaneous Effort Counts	2	1
Mean Rod Count (Instantaneous Effort)	48	17
Proportion of Effort in the Instantaneous Effort Count Time Block	0.1	0.1
Estimated Total Effort (Hours)	2,003	1,456

CATCH ESTIMATES	Weekend/Holiday		Weekday	
	Harvest	Release	Harvest	Release
CHINOOK ADULT	0	5	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	62	57	60	60
Marked (Adipose missing)	62	—	60	—
Unmarked (Adipose present)	0	—	0	—
COHO JACK	0	0	0	4
Marked (Adipose missing)	0	—	0	—
Unmarked (Adipose present)	0	—	0	—
SOCKEYE	0	0	0	0
PINK	0	0	0	0
CHUM	0	52	4	184



Table 5 - Nicomen Slough and Norrish Creek Recreational Fishery Assessment results for November 16th to 30th, 2007. Data were stratified into weekend and weekday types.

NICOMEN / NORRISH RECREATIONAL FISHERY ASSESSMENT

RESULTS

(STUDY PERIOD: November 16-30, 2007)

SOURCE DATA	Weekend/Holiday	Weekday
Open Days in Study Period	4	11
Number of Survey Shifts	4	7
Number of Interviews	166	119
Interview Hours	403	352
Number of Instantaneous Effort Counts	2	2
Mean Rod Count (Instantaneous Effort)	28	10
Proportion of Effort in the Instantaneous Effort Count Time Block	0.1	0.1
Estimated Total Effort (Hours)	872	820

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	30	61	61	75
Marked (Adipose missing)	30	—	61	—
Unmarked (Adipose present)	0	—	0	—
COHO JACK	2	0	0	2
Marked (Adipose missing)	2	—	0	—
Unmarked (Adipose present)	0	—	0	—
SOCKEYE	0	0	0	0
PINK	0	0	0	0
CHUM	0	54	0	161



Table 6 - Nicomen Slough and Norrish Creel Recreational Fishery Assessment results, October 9th to November 30th, 2007. Total catch and release (weekend and weekday catch and release combined). Note that adipose-clipped releases are from angler recall only.

	Oct 9-31	Nov 1-15	Nov 16-30	Total
Number of Interviews	356	319	285	960
Interview Hours	1,206	763	755	2,724
Number of Overflights	9	3	4	16
Average Overflight Count	29	38	18	28
ANGLER EFFORT				
Estimated Effort (hours)	4,471	3,459	1,692	9,622
ESTIMATED TOTAL HARVEST				
Chinook Adult	0	0	0	0
Chinook Jack	0	0	0	0
Coho Adult	132	122	91	344
Coho Jack	0	0	2	2
Sockeye	0	0	0	0
Pink	0	0	0	0
Chum	0	4	0	4
ESTIMATED TOTAL RELEASE				
Chinook Adult	4	5	0	9
Chinook Jack	0	0	0	0
Coho Adult	117	117	136	366
Coho Jack	37	4	2	43
Sockeye	0	0	0	0
Pink	48	0	0	48
Chum	82	236	215	533
ADIPOSE CLIPPED HARVEST				
Chinook Adult	0	0	0	0
Chinook Jack	0	0	0	0
Coho Adult	129	121	91	341
Coho Jack	0	0	2	2
Sockeye	0	0	0	0
Pink	0	0	0	0
Chum	0	0	0	0
ADIPOSE CLIPPED RELEASED				
Chinook Adult	0	0	0	0
Chinook Jack	0	0	0	0
Coho Adult	0	2	37	39
Coho Jack	3	0	1	4
Sockeye	0	0	0	0
Pink	0	0	0	0
Chum	0	0	0	0