

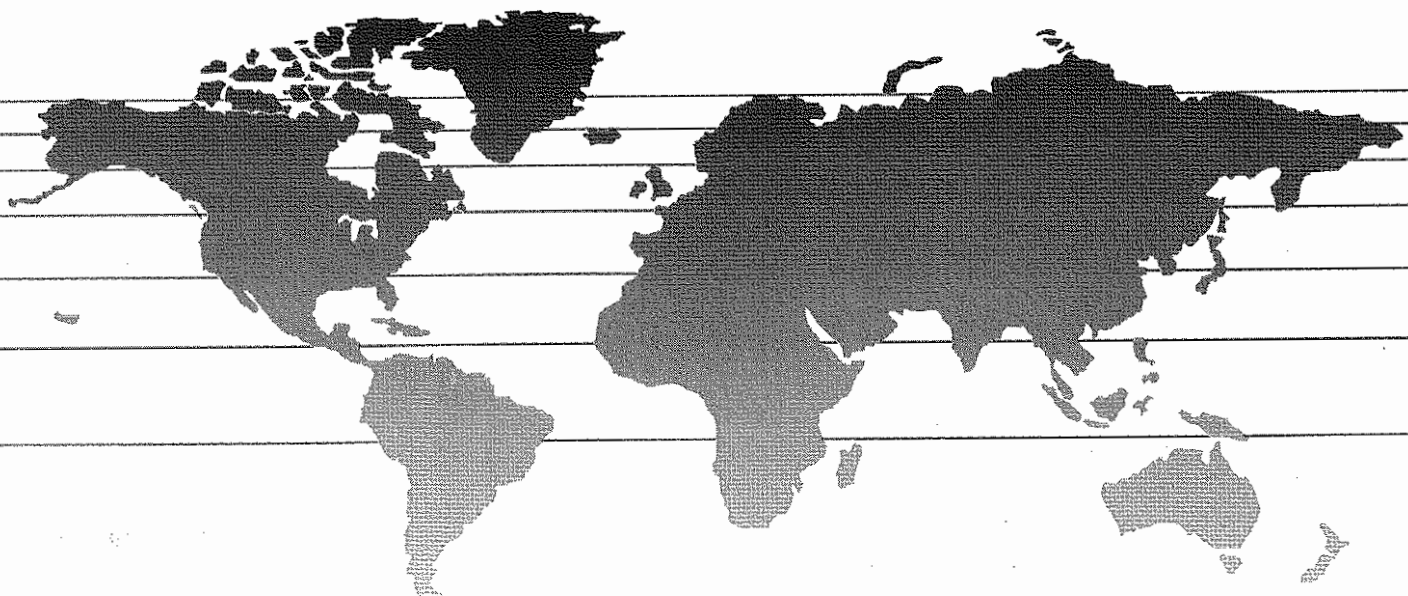
**SKEENA RIVER
SELECTIVE HARVEST MONITORING PROJECT 1995**

KITSELAS FISHWHEELS

for

**Fisheries Branch
Ministry of Environment, Lands and Parks
Room 318 - 780 Blanshard Street
Victoria, B.C. V8V 1X5**

November 1996



LGL Limited environmental research associates

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KITSELAS FISHWHEELS

by

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in cooperation with the

Kitselas Band Council

for

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INTRODUCTION

Selective Harvest Program

The 1995 selective harvest monitoring program at the Kitselas fishwheels was initiated by the Fisheries Branch, B.C. Ministry of Environment, Lands and Parks, in an effort to evaluate the effectiveness of fishwheels as an in-river capture method for selective harvest of sockeye and pink salmon that would have minimal impact on comigrating chinook, coho, and steelhead stocks. The evaluation included the effectiveness of fishwheels as a method of capturing fish for tagging and the suitability of fishwheels to provide representative indices of run strength. The Kitselas fishwheels are operated by members of the Kitselas Band and were used in 1995 to capture fish for both food and commercial harvest. The 1995 selective harvest monitoring program, and the 1995 steelhead telemetry program (Alexander et al. 1996), were designed in cooperation with the Kitselas Band prior to the commencement of the 1995 fishing season.

Study Design

The Kitselas fishwheels selective harvest monitoring program was part of a larger project that included the monitoring of harvests and releases at Moricetown fishway (see Nelson et al. 1996). Specifically, the following nine task/services were defined for the entire project:

1. Recruit Band members in Moricetown and Kitselas to assist with fishing and monitoring activities.
2. Conduct adequate training to ensure that all technicians follow standardized procedures for fish handling, catch monitoring, data recording and reporting.
3. Provide adequate logistic and technical support for recruiting, training, monitoring, equipment maintenance, communication, transportation, emergency response, data analysis and reporting.
4. Ensure that all technicians have sufficient diplomatic tact and communication skills to maintain good relations with the Band members, the general public and other biologists involved.
5. Ensure there is sufficient flexibility in operations to adapt to uncertain schedules.

6. Conduct on-site monitoring of fishwheel operations by assisting the Kitselas band members with fishwheel installation, maintenance and sockeye harvesting throughout the harvest period.
7. Conduct on-site monitoring of the gaffing and dip-netting operations at the Moricetown fishway by local band members throughout the harvest period.
8. Maintain daily records of the catch composition, apparent losses and losses and injuries, and various environment factors that could affect the effectiveness of both harvest methods.
9. Conduct tagging and bio-sampling of all steelhead released at the Moricetown fishway.

This report summarizes biophysical data, tag release and data, harvest and release data, and fishwheel operating/efficiency data (presented as catch per unit effort [CPUE]) collected from 14 July through 21 September 1995. Information for the selective harvest monitoring program at Moricetown can be found in Nelson et al. (1996).

Study Area

The Skeena River drains 51,200 km² and is the second largest watershed in British Columbia (Fig. 1a). It originates in the Skeena Mountains and flows south and southwest for 530 km. It empties into Chatham Sound (Statistical Area 4) on the north coast of British Columbia (Fig. 1b). The Skeena River enters Chatham Sound and Hecate Strait via a series of passages and channels between several islands lying off the river mouth. About 25% of the flow moves through Inverness Passage while the remaining 75% of the flow is divided nearly equally between Marcus and Telegraph passages.

The location of the 1995 Kitselas selective harvest program was Kitselas Canyon, the lower end of which is located approximately 17 km upstream of the city limits of Terrace and 8 km upstream of the mouth of the Zymoetz (Copper) River (Fig. 2). This is one of the most confined and narrow sections of the lower Skeena River, typified by steep canyon walls and deep water; several sites in the canyon are less than 100 m from bank to bank, and depths can exceed 45 m (150 feet). There is considerable variation in the flow rates depending on the season and weather conditions. Average mean monthly flow at Usk, located approximately 4 km upstream of Kitselas Canyon, is 950 m³/sec with a spring freshet between mid-May and the end of June (Hoos 1975) and lowest flows during March. Maximum flow rates during the spring freshet are about three times average flow rates and minimum rates during March are about one sixth of mean rates.

Fishwheels

The use of fishwheels in Skeena River aboriginal fisheries was initiated in 1993 at Kitselas Canyon. The application of fishwheels on the Skeena was promoted by 1) the success observed in the Nass River fishwheel program in 1992 (Link et al. 1993); 2) the implementation of DFO's Aboriginal Fisheries Strategy (AFS) in 1993; and 3) pressure to reduce the harvest rates on the Skeena's depress summer-run coho salmon (*Oncorhynchus kisutch*) and steelhead (*O. mykiss*) stocks. While fishwheels have been used for many years in harvesting and stock assessment on the Yukon and Taku Rivers, and annual escapement monitoring programs on the Kenai and Kasilof Rivers of Cook Inlet, Alaska (Borba 1992; McGregor et al. 1991; Milligan et al. 1985; King and Tarbox 1989), there are no records of fishwheels being used on the Skeena River prior to 1993.

The first documented use of fishwheels was to capture shad (*Alosa sapidissima*) in rivers in the eastern United States as early as 1829 (Donaldson and Cramer 1971). Fishwheels were introduced to the Columbia River in 1879, where they were used there for over 50 years to commercially harvest all species of salmon. By 1934 both the Washington and Oregon state legislatures had capitulated to the powerful net fishery lobby and outlawed the use of fishwheels on the Columbia River. Fishwheels were introduced to Alaska in the late 1800s and early 1900s and are still used there for commercial and subsistence harvesting of chinook (*O. tshawytscha*), chum (*O. keta*), and coho salmon.

Skeena Fishery Overview

The Skeena River supports significant populations of chinook, sockeye (*O. nerka*), coho, chum, and pink salmon (*O. gorbuscha*) and steelhead. Local salmon stocks are harvested in major commercial net fisheries, native fisheries and sport fisheries within and adjacent to the Skeena River. Details on the historical and current management of these fisheries can be found in a variety of reports (the best sources being: PRSSMP 1986; Sprout and Kadowaki 1987; Cox-Rogers 1994; and Anon. 1988). The following brief fisheries descriptions, adapted from the above-mentioned reports, are provided as background information regarding the fisheries that exploit Skeena River stocks.

Commercial Fisheries

The Statistical Area 4 commercial net fishery is one of the largest and most intensive salmon fisheries on the Pacific Coast. The fishery is managed to provide optimum escapement of major enhanced sockeye and wild pink salmon stocks destined for the Skeena River. However, incidental catch of non-target species, such as steelhead, coho and chinook salmon, are a major management concern. Overlaps in run timing among the various salmon stocks prevent harvesting of single stocks in Area 4, while major differences in the

productivity and size of stocks preclude the application of a single exploitation rate that would provide the maximum sustained yield for all stocks (Sprout and Kadowaki 1987; Cox-Rogers 1994). Fisheries management in recent years has attempted to reduce harvest rates on summer run coho and steelhead by restricting fishing opportunities in early August. In 1991, DFO committed to reducing Area 4 steelhead harvest rates by 50% within three years (Cox-Rogers 1994).

Fishing plans for Area 4 are established in an effort to maximize sockeye and pink salmon harvests while minimizing harvests of summer-run steelhead and coho. Cumulative catch and escapement during the season are combined with pre-season estimates to forecast the run size. This forecast, in addition to the target escapement and predicted effort, is used to determine the number of days that fishing is permitted during each week that a fishery is open. In-season escapements are estimated by a gillnet test fishery at Tyee on the lower Skeena River (Fig. 1a).

In general, fishing is not permitted in Area 4 prior to the first week in July to conserve the depressed early Skeena sockeye and chinook stocks. Fishing is normally scheduled for the first week in July to coincide with the run of the enhanced sockeye stocks. Directed fisheries focus on pinks from early August until the end of August. The fisheries are managed according to the abundance of sockeye and pinks returning to the Skeena River.

Area 4 is primarily a gillnet fishing area, although seiners are allowed to operate during the peak of the run of enhanced sockeye stocks (usually the third to fourth week of July). The number of days of seine fishing permitted depends on run size. In years when sockeye are abundant, seiners may be permitted to fish for more than one week. Recently, seiners have also been allowed to harvest pinks when gillnetters have not been capable of exploiting the available surplus, or were reluctant to harvest pinks because of the high degree of effort for a low value catch (PRSSMP 1986).

The troll fishery in the Skeena Region is relatively minor because of the intensive net fisheries in the area. The number of troll vessels fishing Statistical Area 4 and 5 is generally less than 50. This fishery harvests a mixture of stocks which mainly originate from the Nass and Skeena rivers but include stocks from all areas of the coast. The primary target species for trollers in this region are chinook and coho, however, substantial numbers of pink salmon are caught along with incidental harvests of sockeye and chum.

Native Traditional Fisheries

Traditionally native fisheries have been managed on a sub-district basis to meet the food, social and ceremonial needs of the local First Nation communities. The method of fishing generally differs depending on access to the resource. The coastal communities

participate in the offshore areas using commercial gillnet gear, while non-coastal tribes generally use river gillnets, fishwheels, dipnets or gaffs. Currently, native fishery allocations are determined on an annual basis through consultations with each native band and the Skeena Watershed Committee.

The major marine native fishery in the region is the gillnet fishery in Area 4. The fishery is open to one local band (Metlakatla), by band licence and on an individual basis to any native of Canada. The fishery targets sockeye and chinook salmon returning to the Skeena River. The fishery has been managed in recent years starting in the third week of May with two days of fishing per week and reducing to one day/week or less in the first week of June. Fishing continues until the sockeye allocation is taken or the sockeye run has passed, late July in recent years. When fishery re-opens for three weeks of fishing from late August to mid-September, the target is coho and chum salmon and the opening period is two days/week. There are no net restrictions and fishermen generally use large mesh nets until sockeye arrive in strength.

Major freshwater native fisheries occur throughout the Skeena watershed. In the lower Skeena (Terrace sub-district), the Kitsumkalum and Kitselas bands target chinook, sockeye and coho sequentially from late May through the end of October. The Kitsumkalum Band fishes from the tidal boundary to the power line at the foot of Eby Street in Terrace. The Kitselas Band fishes from the power line up to Ketoneda.

Seven of eight Gitksan Wet'suwet'en food fisheries on the Skeena, Bulkley and Babine rivers occur within the Hazelton sub-district. Fishing generally starts in mid-May targeting chinook with large mesh gillnets, with an incidental catch of steelhead kelts. Sockeye are targeted from July through September, and this fishery uses small-mesh gill nets.

The major food fisheries in the Smithers sub-district conducted by the Moricetown Band (the eighth Gitksan Wet'suwet'en band) and the Babine Lake Band. The Moricetown fishery begins in early July (depending on water conditions), and is primarily a gaff and dipnet fishery at Moricetown fishway that targets chinook, coho, sockeye and steelhead (food fishery) and pink salmon (commercial fishery; see Nelson et al. 1996). The food fishery is officially open year round but fishing effort after mid-October is minimal. The food fishery for the Babine Lake Band takes place in Nilkitkwa Lake, targeting sockeye using set and drift gillnets from mid-July through early September.

Sport Fisheries

The major sport fisheries in the region are: an important but relatively small tidal fishery which targets chinook and coho, with incidental harvests of pink and sockeye; and a

world renowned non-tidal fishery for chinook and steelhead which also harvests coho. The tidal sport fishery on chinook takes place on a year round basis, with the best catches occurring during the return of Skeena-bound stocks (late May through mid-July). Coho are harvested in tidal sport fisheries from late June through early September, with the best success and greatest effort occurring from mid-July to mid-August. The best fishing areas for both species are Bell Pass, Eddy Pass, Tugwell Island and Porcher Island.

The Skeena system, specifically the Kitsumkalum River, produces some of the largest chinook in British Columbia, with fish up to 89 pounds being caught in the in-river sport fishery. The size and accessibility of these chinook has resulted in major sport fisheries on the Skeena mainstem and many tributaries. Most of the tributaries are closed during spawning periods after allowing some degree of sport harvest. Major tributary fisheries occur on the Ecstall, Kitsumkalum, Bulkley, Morice, and Bear rivers. The mainstem fishery is most intense between Polymar Bar and the Kispiox River. Timing of these fisheries varies from early April to late August. The chinook fisheries are regulated using daily catch limits (usually 1 chinook/day), single hook restrictions, and specific time and area closures.

The Skeena watershed supports some of the highest quality angling opportunities for wild steelhead in North America. Most of the Skeena mainstem fishing is concentrated on the lower Skeena as summer run stock migrate upstream from late July to late August. Peak effort in tributary fisheries occurs in the fall, with angling in specific areas continuing through the winter months. All steelhead sport fisheries on the Skeena River are catch and release only and some streams have gear restrictions limiting anglers to fly-fishing tackle.

US (Interception) Fisheries

The major U.S. net fisheries which intercept salmon stock originating from the Skeena Region are: the Noyes/Dall Island seine fishery, the lower Clarence seine fishery and the Tree Point (also known as Cape Fox) gillnet fishery. The target species for these fisheries are sockeye and pink salmon, however, substantial numbers of coho, chinook and steelhead are harvested as bicatch. Southern southeast Alaskan troll fisheries also intercept substantial numbers of chinook and coho bound for the Skeena Region and other Canadian streams. Where available, estimates of the U.S. harvest of Skeena Region salmon stocks are provided in the species specific sections that follow.

METHODS

Fishwheels Operation

The fishwheel design used in this study was similar to the fishwheels that have been used on the Yukon, Taku and Nass rivers (Link et al. 1993; McGregor et al. 1991; Milligan et al. 1985). Fishwheels were built by the Kitselas Band using similar modifications as to fishwheels on the Nass River in 1993 (i.e., aluminum pontoons, larger live tanks, a hoist to raise and lower the axle, and a balanced, three-basket design; see Link and English (1994) for details). Four fishwheels were used for this study; fishwheels No. 1, 2, and 4 were built in 1995 and fishwheel No. 3 was built in 1994. Fishwheel 3 had smaller baskets and holding pens than the other fishwheels. Fishwheel baskets were lined with gillnet mesh netting (approximately 5 cm, clear with small knots).

Up to four fishwheels were operated from 14 July - 21 September at Kitselas Canyon, 10 km upstream (east) of Terrace (Fig. 2). The fishwheels were used for food and commercial harvests of sockeye and pink salmon by the Kitselas Band and the tagging of steelhead and coho for stock assessment purposes. Six sites were selected for the capturing of fish. Site selection was determined by the river velocity, rotation speed of the fishwheel (measured in revolutions per minute [RPM]), and shoreline attachment and protection. Site 1 and 2 were the same as 1994.

Physical Monitoring

Water temperature and fishwheel RPM were monitored daily. Temperature was recorded using a Fisherbrand, alcohol-based thermometer in the inside holding pen of each fishwheel during the morning and afternoon sampling sessions. The fishwheel RPM was measured by the timing of two complete revolutions and the subsequent calculation of the number of revolutions per minute. RPM measurements were recorded for each fishwheel for the morning and afternoon sessions.

A staff gauge was installed on the Skeena River, in a channel east of site 2, on 17 August. Water levels were recorded daily from 17 August - 21 September. Dissolved oxygen was measured twice at the fishwheels using a Hydrolab IV water analysis kit on 29-30 August. Only two measurements were made because the Hydrolab was not available prior to these dates and further measurements were not made because the fish densities in the holding pens were lower after these dates. The two days of dissolved oxygen measurements provided a rough estimate of dissolved oxygen levels in the holding pens during low to moderate fish densities.

Tagging

The objective of the tagging program was to tag all healthy steelhead and coho captured. Steelhead were processed one or twice a day by technicians from either LGL Limited or the Kitselas Band. All healthy steelhead greater than 55 cm (nose-fork length) that were captured in the fishwheels were tagged with radio transmitters (Alexander et al. 1996). In addition to the radio transmitter, the fish were tagged with two orange anchor tags so that they could visibly be recognized by persons observing fish at Moricetown fishway, Babine fence or during angling. Adult steelhead smaller than 55 cm, or in less than perfect condition, and coho of any size and condition were anchor-tagged with a single tag. Coho were anchor-tagged with a white tag to distinguish between the two species.

Anchor-tagging Procedures

Steelhead not required for the radio-tagging program, and coho salmon captured in the fishwheels, were tagged with orange and white anchor tags (Floy Tag & Manufacturing Inc., Seattle, Washington, USA), respectively. Fish were dipnetted, guided into a vinyl sling and transported to a tagging tray. The tagging tray was a padded V-shaped trough filled with water. Once the fish became calm within the tagging trough, the needle of the tag dispensing gun pierced the fish just behind the dorsal fin. The anchor tag was deposited with a squeeze of the trigger and a clockwise twist before withdrawing the needle. The anchor tag number, nose-fork length, sex, notable scars, condition of the fish upon release, and release time were recorded. In addition, five scales were removed from each steelhead tagged, and approximately one third of the adipose fin was removed from coho and steelhead tagged. Scale samples were taken for subsequent aging and possible stock identification analyses. The adipose samples were placed in alcohol-filled vials and will be analyzed for stock identification purposes at a later date. Once all the tagging data were recorded, the tagged fish was released directly off the fishwheel. Processing of each individual fish generally took less than thirty seconds.

Radio-tagging Procedures

Radio-tagged steelhead were handled very similarly as to fish that were anchor-tagged with the exception of two anchor tags placed behind the dorsal fin instead of one and a radio tag inserted into the stomach. The radio tag was pushed into the stomach cavity using a short hollow, plastic tube which was smaller in diameter than the radio tag. Once the tag was beyond the cardiac sphincter of the stomach, the tube was removed and the protruding antenna was bent at the corner of the mouth. Similar data as anchor-tagged fish were collected with the additional recording of the radio tag channel and code. For additional information regarding radio-tag procedures, see Alexander et al. (1996).

Harvesting

A record of all fish captured at the Kitselas fishwheels, by species, and subsequent harvest or release, was maintained throughout the period of fishwheel operation by both LGL Limited and the Kitselas Band. Harvest of fish from the fishwheels was either for food or ceremonial purposes, or sold as part of the ESSR (excess salmon spawning requirement) license issued by the Department of Fisheries and Oceans (DFO). The harvesting of fish captured in the fishwheels by members of the Kitselas Band was classified as either 1) food fish; 2) ESSR-1 (sockeye removal only, 15 July-8 August); or 3) ESSR-2 (sockeye and pink removal only, 8-20 August). The 20 August cutoff for the ESSR-2 harvest was a limitation imposed by DFO to avoid additional harvests of wild-stock Babine sockeye, which typically have a later run timing than enhanced stocks (D. Peacock, DFO Prince Rupert, Pers. Comm.).

Both adult and jack (less than 40 cm) sockeye captured in the fishwheels were harvested by the Kitselas Band. Pink salmon were also harvested as part of the ESSR between 8-21 August. Sockeye or pink salmon that were injured in some way, and/or had wounds from seals or commercial nets, were released. Fishwheel holding pens were processed from one to two times a day, in the morning and afternoon. If catches were small, harvesting was delayed until the next sampling session. Harvested fish were dipnetted from the holding pens using a knotless mesh dipnet and transferred to plastic totes filled with ice. Food fish were distributed to the Kitselas community, and ESSR fish were transported and sold in Prince Rupert. Fish that were not harvested were either tagged (i.e., steelhead and coho) or released (chinook, chum, Dolly Varden, and incidental species).

Records were kept of the number of live, injured, and dead fish removed from the holding pens. The injured fish were classified into groups depending on the nature of the injury (i.e. net (gillnet) scares, seal (bite) marks, hooking wounds, and other (unclassified) injuries). Two types of dead fish were identified: 1) those caught as carcasses (one chinook) and those which likely died in the holding pens after capture. In most cases, both injured and dead fish were released, with the exception of harvestable sockeye or pinks that had recently died in the holding pens.

Effort and Catch

Daily fishing effort by the fishwheels was measured in two ways. First, total effort was measured as the time each wheel was fishing from midnight to midnight. Second, the effort used to calculate catch per unit effort (CPUE) was measured as the number of hours each fishwheel fished to obtain the daily catch. These two values were different because the time of the last sampling session on each day varied; this affected that day's and the following day's effort and catch. The daily catch of each species was recorded and used to

estimate the daily CPUE. The speed of fishwheel (i.e., RPM measurements) was not used to adjust effort estimates.

RESULTS

Biophysical Observations

Water temperature and water level data at Kitselas Canyon, recorded between 15 July and 21 September 1995, is presented in Appendix A. During this period, the mean water temperature was 14.5° C, with a maximum water temperature of 17.0° C and a minimum water temperature of 13.0° C. Water levels during the period of 18 August to 21 September averaged 3.47 m, with a maximum water level of 6.20 m and a minimum water level of 1.20 m. An illustration of daily water temperatures and levels is presented in Fig. 3.

Tagging

Anchor Tagging

Steelhead: For steelhead, all anchor-tag release data, by tag number and tagging date, is provided in Appendix B (anchor tagged only) and Appendix C (anchor tagged and radio tagged). A summary of the numbers of steelhead that were tagged (anchor and radio tags) at the Kitselas fishwheels, by statistical week and fishwheel site, is provided in Table 1. For the entire tagging period, a total of 15 steelhead were released with an anchor tag only and 100 steelhead were released with both anchor and radio tags.

Coho: For coho, all anchor-tag release data, by tag number and tagging date, is provided in Appendix D. A summary of the numbers of coho that were anchor tagged at the Kitselas fishwheels, by statistical week and fishwheel site, is provided in Table 2. For the entire tagging period, a total of 146 coho were released with an anchor tag.

Radio Tagging

All steelhead radio-tag release data is provided in Appendix C. A summary of the number of steelhead radio tagged at the Kitselas fishwheels, by statistical week and fishwheel site, is provided in Table 1. As indicated above, a total of 100 steelhead were released with a radio tag. For further information regarding the steelhead radio-tagging project, see Alexander et al. (1996).

Catch and Harvest

In 1995, only sockeye and pink salmon were harvested at the Kitselas fishwheels. An illustration of the total catch (all fishwheels) of salmonids for the entire fishwheel period of operation in 1995 is provided in Fig. 4. The total catch was composed of 56% sockeye,

42% pink salmon, and less than 2% coho, steelhead, chum and chinook (combination of all species).

In addition to salmonids, several other species of fish were also captured (Appendix E). The total catch of these species (from all fishwheels) was as follows: Dolly Varden, 384; cutthroat, 49; whitefish, 235; sucker, 78; and lamprey, 944. All incidental catch was released.

Steelhead, Chinook, Coho, and Chum

The high majority of all steelhead, chinook, coho, and chum captured in the Kitselas fishwheels in 1995 were released. An unknown number of each species was harvested for food purposes during ESSR activities (less than 1% of the total catch in all cases). For the purpose of this report we have incorporated this small fraction of the catch into the release category. Total catch and subsequent release numbers of these species, by date (for all fishwheels) is provided in Appendix F. A summary of the total catch and subsequent release of steelhead, coho, chinook, and chum, by statistical week (for all fishwheels), is provided in Table 3. The total catch (both live and dead) from all fishwheels, by species, was as follows: 121 steelhead, 33 chinook, 176 coho, and 106 chum.

Sockeye

Catch and release data for sockeye included an adult or jack designation. The total catch (from all fishwheels) and harvest of adult sockeye, by date and harvest type (food, ESSR-1, or ESSR-2) is provided in Appendix G. The total adult sockeye catch and subsequent harvest or release, by statistical week, is summarized in Table 4 and illustrated in Fig. 5. Of the 5,774 adult sockeye captured, 3,132 (54%) were harvested under ESSR-1 and ESSR-2, 387 (7%) were harvested for food, and 2,255 (39%) were released (Fig. 5).

The total catch (from all fishwheels) and harvest of jack sockeye, by date and harvest type (food, ESSR-1, or ESSR-2) is provided in Appendix H. The total jack sockeye catch and subsequent harvest or release, by statistical week, is summarized in Table 5 and illustrated in Fig. 6. Of the 9,617 jack sockeye captured, 5,088 (53%) were harvested under ESSR-1 and ESSR-2, 793 (8%) were harvested for food, and 3,736 (39%) were released (Fig. 6).

The combined total catch of all sockeye (adult and jack, from all fishwheels) and subsequent harvest (food, ESSR-1, or ESSR-2) or release, by statistical week, is summarized in Table 6 and illustrated in Fig. 7. Of the 15,391 sockeye captured, 8,220 (53%) were harvested under ESSR-1 and ESSR-2, 1,180 (8%) were harvested for food, and 5,991 (39%) were released (Fig. 7). Several sockeye were released during the ESSR fishery due to a lack

of ice for packing. The majority of sockeye releases occurred after August 20, the last day of the ESSR fishery; very few of these fish were injured (Appendix G and H).

Pink Salmon

The total catch (from all fishwheels) and harvest of pink salmon, by date and harvest type (food or ESSR-2) is provided in Appendix I. The total pink salmon catch and subsequent harvest or release, by statistical week, is summarized in Table 7 and illustrated in Fig. 8. Of the 11,402 pink salmon captured, 1,773 (16%) were harvested under ESSR-2 and 9,629 (84%) were released; no pink salmon were harvested for food in 1995 (Fig. 8).

Effort and Catch

A summary of fishwheel effort (hours) and the resultant effort used to calculate CPUE, by date and by fishwheel, is provided in Appendix J. Appendices K - O provide daily catches and calculated CPUE, by fishwheel and species. Figures 9 - 20 illustrate the relationships of catch and CPUE, by fishwheel and species. A list of the appendices and figures that present CPUE information, by species, is provided below:

<u>Species</u>	<u>Appendix</u>	<u>Figure</u>
Steelhead	K	9 and 10
Coho	L	11 and 12
Chinook	M	13 and 14
Chum	M	15 and 16
Sockeye	N	17 and 18
Pink salmon	O	19 and 20

DISCUSSION

Table 8 provides a summary of catches from all fishwheels operated in Kitselas Canyon in 1995. Included in Table 8 is information regarding the total number of injured fish (live fish) captured, and the type (category) of injury for steelhead and coho. Steelhead had the occurrence of injury (36.4% of the total catch). Steelhead injuries were predominantly (45%) net (gillnet) injuries.

An indication of the effectiveness of the Kitselas fishwheels as a method of selective harvest is a comparison of the catch with the semi-concurrent gillnet fishery conducted by the Kitselas Band. Table 9 provides the total catch, by species, from both the Kitselas fishwheel and Kitselas gillnet fisheries for both 1994 and 1995. The percent catch by fishwheels of the total Kitselas catch (fishwheels and gillnet), by species, is also provided in Table 9. In both 1994 and 1995, fishwheels captured the majority of steelhead (79.9% in 1994 and 85.2% in 1995, respectively). Very high proportions of jack sockeye (98.5% in 1994, 100.0% in 1995) were captured by fishwheels; this is likely a result of the selective (large) mesh sizes used in the gillnet fishery (Jim Steward, DFO Prince Rupert, Pers. Comm.). Chinook catches were low at fishwheels as a result of chinook run timing (the period of fishwheel operation did not cover the chinook run).

The fishwheels were successful in capturing sockeye and pink salmon for harvest under ESSR licences (commercial sale). During the first 10 days of ESSR-1 (15 July-8 August), several sockeye that would have been sold were released or retained for food due to a lack of ice for shipping. Of the total catch of both adult and jack sockeye from July 14 - September 21 (15,391), 64% (9884) were captured during ESSR-1 and ESSR-2 openings, and 83% (8220) of these were sold commercially.

Of the total catch of pink salmon from July 14 - September 21 (11,402), 50% (5682) were captured prior to the ESSR opening on August 8 and 30% (3344) were captured following the ESSR closure on August 21. Of the 2376 pink salmon captured during the August 8-20 ESSR opening (20% of total catch), 1773 (75%) were sold. The limiting factor in the sale of pink salmon harvest in 1995 was the ESSR opening and closing dates.

On August 6, 1995, a combination of falling water levels and poor site selection resulted in the malfunction of fishwheel 3. The result was that the wheel did not turn continuously, although enough rotations were made that fish were captured. It is likely that the combination of a low rotation rate and high density of fish in the holding pens resulted in low levels of dissolved oxygen in the holding pen. This isolated incident at fishwheel 3 resulted in significant mortalities of pink salmon (n=589, Appendix I), and mortalities of adult sockeye (n=31, Appendix G), jack sockeye (n=27, Appendix H), and coho (n=3,

Appendix F). Mortalities did not occur for either steelhead or chinook as none were captured on this date.

The catch rate for steelhead at the Kitselas fishwheels in 1995 was lower than in 1994. The catch rate was also lower than that estimated for the 3-4 fishwheels operated on the Nass River in 1994 and 1995 (Table 10). Some likely reasons for the lower catch efficiency of the Kitselas fishwheels include:

1. **River depth at the fishwheel sites** - most of the time the Kitselas fishwheels were fishing in 10-20 m of water while the Nass River fishwheels are typically operated in waters 5-6 m deep.
2. **Fish migratory behaviour** - information for depth and fish sounders indicates that Skeena fish are frequently detected in the deeper, offshore portions of the river channel at Kitselas Canyon while Nass fish tend to migrate along the shoreline as they make their way upstream through the canyon at Gitwinksihlkw. One possible reason for the different behaviour could be that water velocities along the banks of Kitselas canyon may be faster than in the deeper offshore waters. In contrast, the water velocities through the relatively shallow Nass canyon are much higher offshore than along the bank. Another reason could have been water temperature. The mean water temperature of the Skeena River at the Kitselas fishwheels in 1995 was 14.5° C; the mean water temperature of the Nass River at the fishwheels during the same period in 1995 was 10.0° C.
3. **Water clarity** - the Nass is generally much more turbid than the Skeena thereby reducing the fishes ability to detect and avoid the fishwheel baskets.
4. **Fishwheel operation** - within season changes in water levels and velocities can have a substantial effect on fishwheel catch rates and adjustments are often required to maintain the optimum rotation rate and fishing position along the river bank. The extensive experience of the supervisors and crews working on Nass River since 1992 has been a significant factor in the success of the Nisga'a fishwheel program.

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TABLES

Table 1. Numbers of steelhead anchor tagged and radio tagged at the Kitselas fishwheels, and total fishwheel hours of operation, by statistical week, 1995.

Stat week	Week ending	Total fishwheel hours	Fishwheel (a)										Total		
			Site 1		Site 2		Site 3		Site 4		Site 5		Anchor	Radio	
			Anchor	Radio	Anchor	Radio	Anchor	Radio	Anchor	Radio	Anchor	Radio			
28	15/07/95	72.0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	22/07/95	385.6	0	0	0	0	0	0	0	0	0	0	0	0	0
30	29/07/95	498.0	1	1	1	1	0	1	0	0	0	0	2	3	
31	05/08/95	497.3	0	0	0	1	0	0	0	0	0	0	0	1	
32	12/08/95	492.0	2	4	0	2	0	0	0	0	0	0	2	6	
33	19/08/95	665.3	0	2	0	4	0	0	0	5	0	0	0	11	
34	26/08/95	437.0	0	1	0	1	0	11	0	0	0	0	0	13	
35	02/09/95	394.0	0	0	0	0	1	4	0	0	0	2	1	6	
36	09/09/95	534.0	0	1	0	0	0	0	0	0	2	7	2	8	
37	16/09/95	482.9	2	15	1	9	0	0	0	0	4	20	7	44	
38	23/09/95	336.3	0	2	1	2	0	0	0	0	0	4	1	8	
Totals		4794.3	5	26	3	20	1	16	0	5	6	33	15	100	

(a) Site 1=fishwheel 1 (15 Jul-21 Sep), lower east bank; Site 2=fishwheels 2 (15 Jul-26 Aug), 3 (1-13 Sep) and 4 (14-21 Sep), upper east bank; Site 3=fishwheel 3 (20 Jul-31 Aug), lower west bank; Site 4= fishwheel 4 (12-24 Aug), upper west bank; and Site 5=fishwheel 2 (27 Aug-21 Sep), upper west bank; Site 6=fishwheel 4 (9-11 Sep), upper west slough

Table 2. Number of coho anchor tagged at the Kitselas fishwheels, and total fishwheel hours of operation, by statistical week, 1995.

Stat week	Week ending	Total fishwheel hours	Fishwheel (a)						Total fish tagged
			Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	
28	15/07/95	72.0	0	0	0	0	0	0	0
29	22/07/95	385.6	0	0	0	0	0	0	0
30	29/07/95	498.0	0	0	0	0	0	0	0
31	05/08/95	497.3	0	0	0	0	0	0	0
32	12/08/95	492.0	4	1	1	0	0	0	6
33	19/08/95	665.3	5	2	3	2	0	0	12
34	26/08/95	437.0	3	1	11	0	0	0	15
35	02/09/95	394.0	0	0	12	0	2	0	14
36	09/09/95	534.0	2	2	0	0	7	1	12
37	16/09/95	482.9	22	15	0	0	35	0	72
38	23/09/95	336.3	7	0	0	0	8	0	15
Totals		4794.4	43	21	27	2	52	1	146

(a) Site 1=fishwheel 1 (15 Jul-21 Sep), lower east bank; Site 2=fishwheels 2 (15 Jul-26 Aug), 3 (1-13 Sep) and 4 (14-21 Sep), upper east bank; Site 3=fishwheel 3 (20 Jul-31 Aug), lower west bank; Site 4= fishwheel 4 (12-24 Aug), upper west bank; and Site 5=fishwheel 2 (27 Aug-21 Sep), upper west bank; Site 6=fishwheel 4 (9-11 Sep), upper west slough

Table 3. Total catch and subsequent release of steelhead, chinook, coho, and chum from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by statistical week, 1995.

Stat week	Week ending	Total fishwheel hours	Total catch and release (a)											
			Steelhead			Chinook			Coho			Chum		
			Live	Dead	Total	Live	Dead	Total	Live	Dead	Total	Live	Dead	Total
28	15/07/95	72.0	0	0	0	0	0	0	0	0	0	0	0	0
29	22/07/95	385.6	0	0	0	1	0	1	0	0	0	1	0	1
30	29/07/95	498.0	5	0	5	21	0	21	4	0	4	3	0	3
31	05/08/95	497.3	1	0	1	4	0	4	2	0	2	3	0	3
32	12/08/95	492.0	8	0	8	1	0	1	8	3	11	3	0	3
33	19/08/95	665.3	11	0	11	2	0	2	14	0	14	2	0	2
34	26/08/95	437.0	14	0	14	1	0	1	15	0	15	10	0	10
35	02/09/95	394.0	7	0	7	2	0	2	14	2	16	10	0	10
36	09/09/95	534.0	13	0	13	0	0	0	14	0	14	13	0	13
37	16/09/95	482.9	52	0	52	0	1	1	78	3	81	50	0	50
38	23/09/95	336.3	10	0	10	0	0	0	19	0	19	11	0	11
Totals		4794.4	121	0	121	32	1	33	168	8	176	106	0	106

(a) release numbers include a small unrecorded harvest (considered to be less than 1% of the total catch for each species)

Table 4. Total catch of adult sockeye, and subsequent harvest (for food fish or ESSR) or release, from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by statistical week, 1995.

Stat week	Week ending	Total fishwheel hours	Adult sockeye								Number injured	Number released (d)
			Catch			Harvest						
			Live	Dead	Total	Food (a)	ESSR-1 (b)	ESSR-2 (c)	Total			
28	15/07/95	72.0	67	0	67	0	53	0	53	5	14	
29	22/07/95	385.6	413	1	414	260	0	0	260	50	154	
30	29/07/95	498.0	1152	18	1170	26	1011	0	1037	133	133	
31	05/08/95	497.3	626	7	633	0	586	0	586	47	47	
32	12/08/95	492.0	1153	31	1184	0	708	415	1123	61	61	
33	19/08/95	665.3	369	0	369	0	0	332	332	37	37	
34	26/08/95	437.0	582	0	582	75	0	27	102	25	480	
35	02/09/95	394.0	344	0	344	26	0	0	26	25	318	
36	09/09/95	534.0	319	0	319	0	0	0	0	0	319	
37	16/09/95	482.9	559	0	559	0	0	0	0	3	559	
38	23/09/95	336.3	133	0	133	0	0	0	0	0	133	
Totals		4794.4	5717	57	5774	387	2358	774	3519	386	2255	

(a) food fish removal

(b) sockeye removal (15 July - 8 August)

(c) sockeye and pink removal (8 - 20 August)

(d) includes injured fish

Table 5. Total catch of jack sockeye, and subsequent harvest (for food fish or ESSR) or release, from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by statistical week, 1995.

Stat week	Week ending	Total fishwheel hours	Jack sockeye								
			Catch			Harvest				Number injured	Number released (d)
			Live	Dead	Total	Food (a)	ESSR-1 (b)	ESSR-2 (c)	Total		
28	15/07/95	72.0	15	1	16	0	12	0	12	0	4
29	22/07/95	385.6	369	0	369	272	0	0	272	17	97
30	29/07/95	498.0	1122	0	1122	94	1011	0	1105	17	17
31	05/08/95	497.3	970	1	971	0	930	0	930	41	41
32	12/08/95	492.0	1962	27	1989	0	605	1324	1929	60	60
33	19/08/95	665.3	1276	0	1276	0	0	1140	1140	136	136
34	26/08/95	437.0	1141	0	1141	304	0	66	370	118	771
35	02/09/95	394.0	839	0	839	123	0	0	123	0	716
36	09/09/95	534.0	816	0	816	0	0	0	0	0	816
37	16/09/95	482.9	739	0	739	0	0	0	0	0	739
38	23/09/95	336.3	339	0	339	0	0	0	0	0	339
Totals		4794.4	9588	29	9617	793	2558	2530	5881	389	3736

(a) food fish removal

(b) sockeye removal (15 July - 8 August)

(c) sockeye and pink removal (8 - 20 August)

(d) includes injured fish

Table 6. Total catch of all sockeye (adult and jack), and subsequent harvest (for food fish or ESSR) or release, from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by statistical week, 1995.

Stat week	Week ending	Total fishwheel hours	Sockeye (adult and jack)								Number injured	Number released (d)
			Catch			Harvest						
			Live	Dead	Total	Food (a)	ESSR-1 (b)	ESSR-2 (c)	Total			
28	15/07/95	72.0	82	1	83	0	65	0	65	5	18	
29	22/07/95	385.6	782	1	783	532	0	0	532	67	251	
30	29/07/95	498.0	2274	18	2292	120	2022	0	2142	150	150	
31	05/08/95	497.3	1596	8	1604	0	1516	0	1516	88	88	
32	12/08/95	492.0	3115	58	3173	0	1313	1739	3052	121	121	
33	19/08/95	665.3	1645	0	1645	0	0	1472	1472	173	173	
34	26/08/95	437.0	1723	0	1723	379	0	93	472	143	1251	
35	02/09/95	394.0	1183	0	1183	149	0	0	149	25	1034	
36	09/09/95	534.0	1135	0	1135	0	0	0	0	0	1135	
37	16/09/95	482.9	1298	0	1298	0	0	0	0	3	1298	
38	23/09/95	336.3	472	0	472	0	0	0	0	0	472	
Totals		4794.4	15305	86	15391	1180	4916	3304	9400	775	5991	

- (a) food fish removal
- (b) sockeye removal (15 July - 8 August)
- (c) sockeye and pink removal (8 - 20 August)
- (d) includes injured fish

Table 7. Total catch of pink salmon, and subsequent harvest (for food fish or ESSR) or release, from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by statistical week, 1995.

Stat week	Week ending	Total fishwheel hours	Pink salmon								Number injured	Number released (d)
			Catch			Harvest						
			Live	Dead	Total	Food (a)	ESSR-1 (b)	ESSR-2 (c)	Total			
28	15/07/95	72.0	9	0	9	0	0	0	0	1	9	
29	22/07/95	385.6	47	0	47	0	0	0	0	0	47	
30	29/07/95	498.0	1321	0	1321	0	0	0	0	0	1321	
31	05/08/95	497.3	1164	0	1164	0	0	0	0	0	1164	
32	12/08/95	492.0	3303	589	3892	0	0	478	478	31	3414	
33	19/08/95	665.3	1550	0	1550	0	0	1290	1290	260	260	
34	26/08/95	437.0	1113	0	1113	0	0	5	5	51	1108	
35	02/09/95	394.0	443	0	443	0	0	0	0	0	443	
36	09/09/95	534.0	306	0	306	0	0	0	0	0	306	
37	16/09/95	482.9	1410	0	1410	0	0	0	0	0	1410	
38	23/09/95	336.3	147	0	147	0	0	0	0	0	147	
Totals		4794.4	10813	589	11402	0	0	1773	1773	343	9629	

(a) food fish removal

(b) sockeye removal (15 July - 8 August)

(c) sockeye and pink removal (8 - 20 August)

(d) includes injured fish

Table 8. Summary of fishwheel catches, by species, at the Kitselas fishwheels, 1995.

	Steelhead	Chinook	Coho	Chum	Adult Sockeye	Jack Sockeye	Total Sockeye	Pink
Total catch	121	33	176	106	5774	9617	15305	11402
Total No. Injured (live fish)	44	0	53	0	386	389	775	343
Injury Category:								
Gill net	20		11					
Seal	1		6					
Hook	8		13					
Other	15		23					
Unclassified	0	0	0	0	386	389	775	343
Total No. Dead fish	0	1	8	0	57	29	86	589
Total No. tagged	115	0	146	0	0	0	0	0
Radio/anchor tagged	100		0					
Anchor tagged only	15		146					
Total No. released	121	33	176	106	2255	3736	5991	9629
<hr/>								
% Injured	36.4%	0.0%	30.1%	0.0%	6.7%	4.0%	5.1%	3.0%
% Dead	0.0%	3.0%	4.5%	0.0%	1.0%	0.3%	0.6%	5.2%
% Tagged	95.0%	0.0%	83.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 9. Catch comparison of the 1994 and 1995 Kitselas fishwheel fishery with respective catches from the Kitselas Band gillnet fishery, by species.

	Total Catch			Percent Fishwheels (D) = A/C * 100
	Kitselas Fisheries		Total (C) = A + B	
	Fishwheels (A)	Gillnet (B)		
1994 (a)				
Steelhead	226	57	283	79.9%
Chinook	27	901	928	2.9%
Coho	458	45	503	91.1%
Chum	277	54	331	83.7%
Adult Sockeye	5339	14418	19757	27.0%
Jack Sockeye	6907	104	7011	98.5%
Pink	10630	1494	12124	87.7%
1995 (b)				
Steelhead	121	21	142	85.2%
Chinook	33	249	282	11.7%
Coho	176	68	244	72.1%
Chum	106	20	126	84.1%
Adult Sockeye	5774	9757	15531	37.2%
Jack Sockeye	9617	0	9617	100.0%
Pink	11402	242	11644	97.9%

(a) Two fishwheels were operated in 1994; fishwheel and gillnet catch data provided by DFO Prince Rupert

(b) Up to four fishwheels operated in 1995; fishwheel data from this report; gillnet catch data provided by DFO Prince Rupert

Table 10. Comparison of adult salmonid catches and run sizes for fishwheels operated on the Nass and Skeena rivers in 1994 and 1995. Run size estimates are the totals for summer runs that migrate upstream of the fishwheel sites. (N/A = not available)

	Nass River (Nisga'a) Fishwheels			Skeena River (Kitselas) Fishwheels		
	Catch	Run	Percent	Catch	Run	Percent
1994 (a)						
Steelhead	208	5,400	3.9%	226	28,660 (d)	0.8%
Chinook	2,667	25,000	10.7%	27 (c)	N/A	N/A
Coho	6,990	143,000	4.9%	458	38,053 (e)	1.2%
Chum	250	N/A	N/A	277	N/A	N/A
Sockeye	24,746	289,000	8.6%	12,246	1,129,850	1.1%
Pink	12,436	N/A	N/A	10,630	N/A	N/A
1995 (b)						
Steelhead	111	3,200	3.5%	121	26,027 (f)	0.5%
Chinook	920	10,000	9.2%	33 (c)	N/A	N/A
Coho	1,237	22,800	5.4%	176	N/A	N/A
Chum	224	N/A	N/A	106	N/A	N/A
Sockeye	21,090	290,000	7.3%	15,391	1,972,673	0.8%
Pink	8,881	N/A	N/A	11,402	N/A	N/A

(a) In 1994, three fishwheels were operated on the Nass River and two fishwheels were operated on the Skeena River;

1994 Nass River catch and run data provided by Nisga'a Fisheries, New Aiyansh; 1994 Skeena River catch and run data provided by DFO Prince Rupert

(b) In 1995, four fishwheels were operated on both the Nass and Skeena rivers

1995 Nass River catch and run data provided by Nisga'a Fisheries, New Aiyansh; 1995 Skeena River catch data from this report;

1995 Skeena River run data provided by DFO Prince Rupert

(c) Skeena River fishwheel effort timing in 1994 and 1995 did not cover the chinook run

(d) Bayesian mark-recapture estimate of 1994 summer-run steelhead escapement (D. Atagi, MELP Smithers)

(e) 1994 coho run estimate from Koski et al. 1995

(f) 1995 steelhead run estimate (preliminary) from Alexander et al. 1996

FIGURES

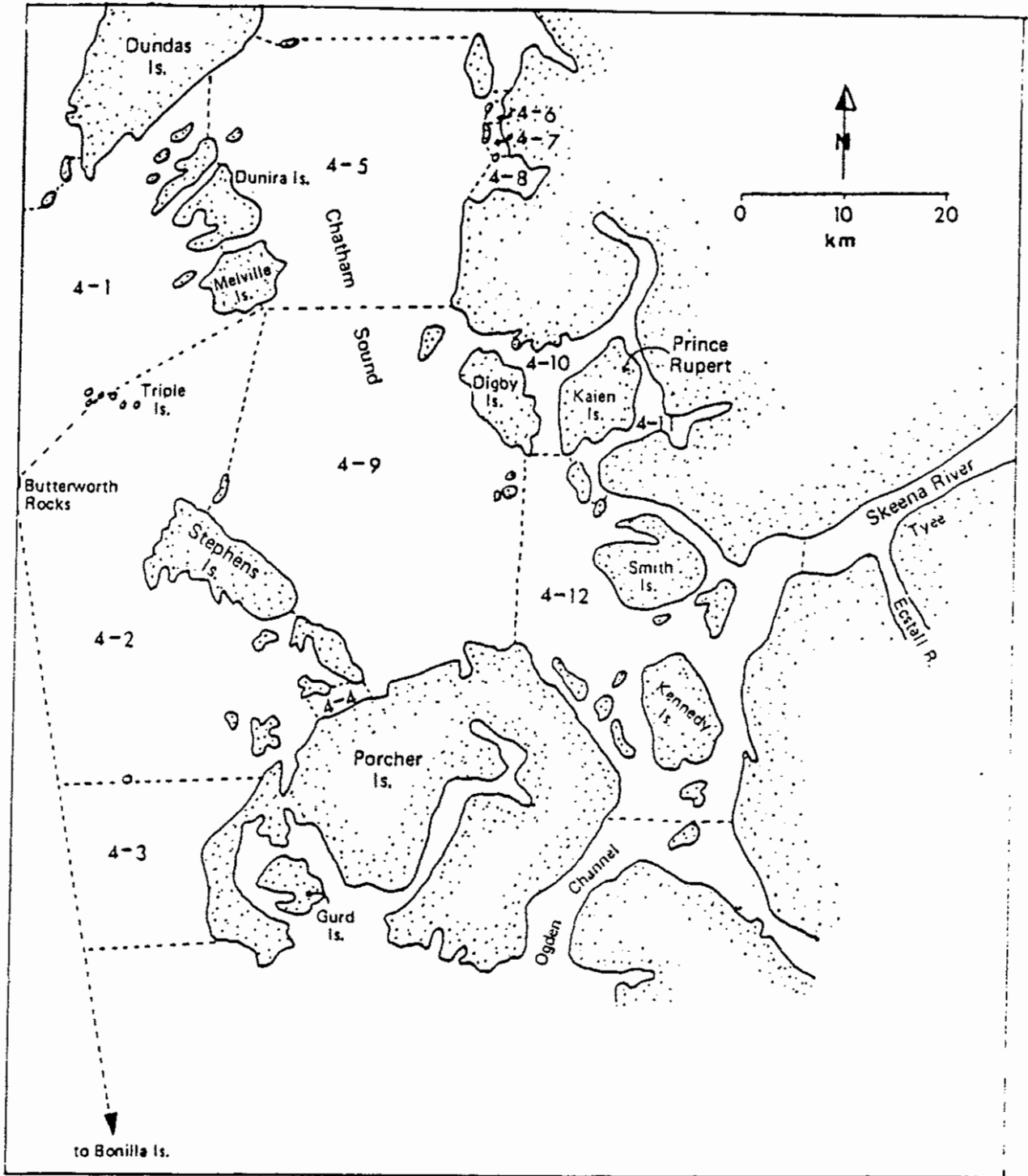


Figure 1b. Map of the mouth of the Skeena River, located in Statistical Area 4.

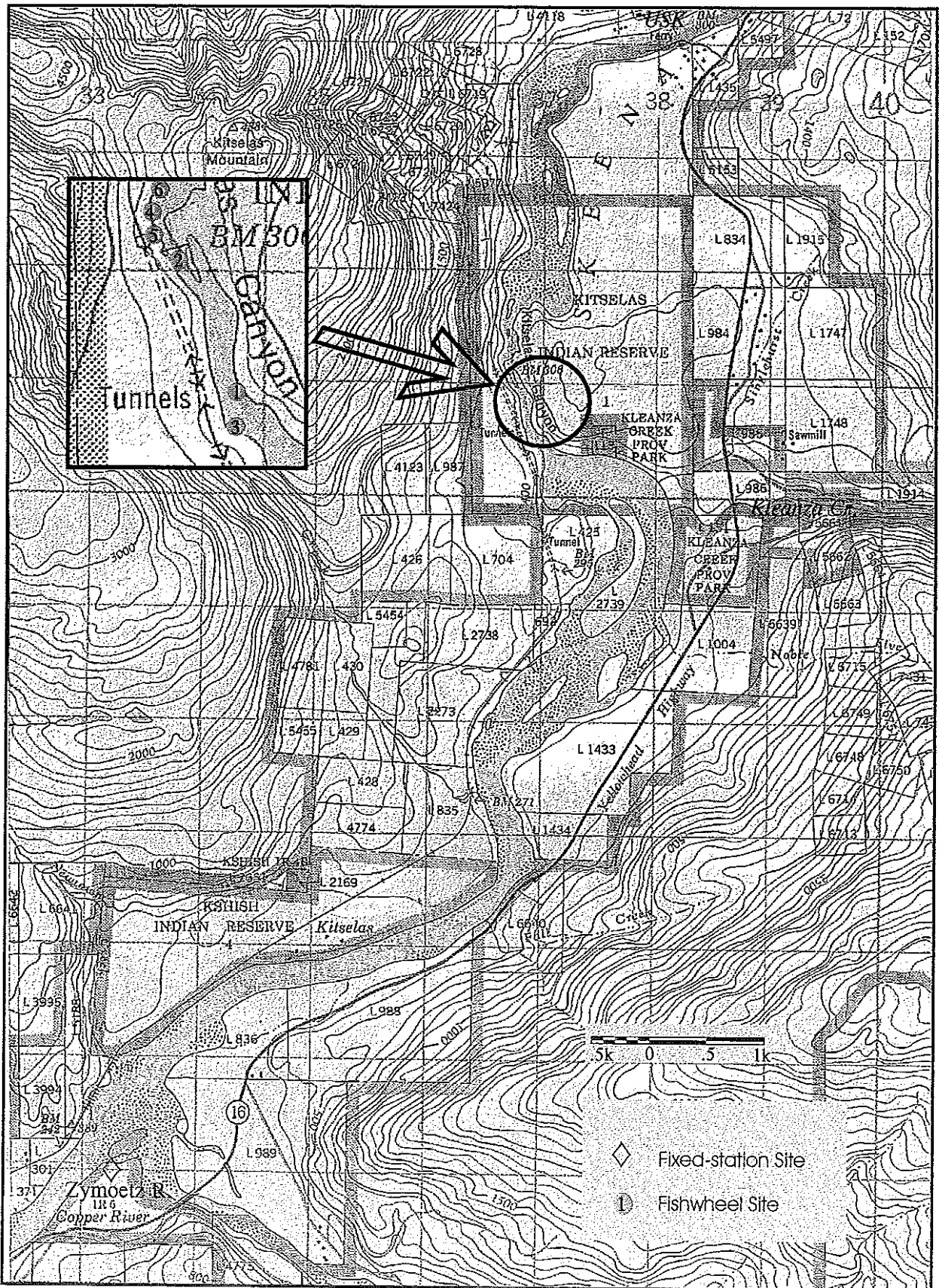


Figure 2. Map of the Middle Skeena River from Zymoetz River to Usk showing the locations of the fishwheels in Kitselas Canyon.

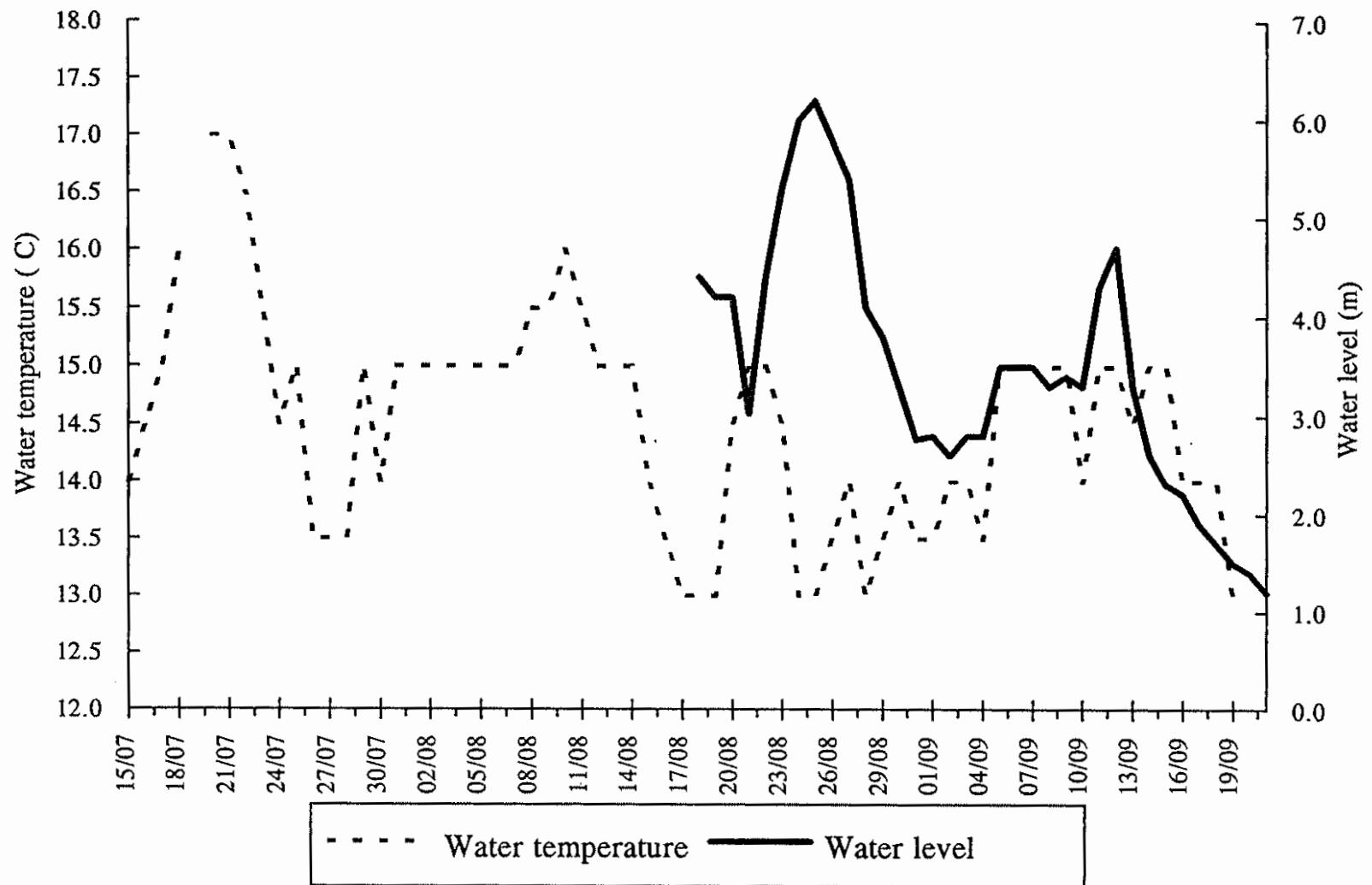


Figure 3. Water temperature and level recordings at the Kitselas fishwheels, 15 July - 21 September 1995.

CATCH AT KITSELAS FISHWHEELS 1995

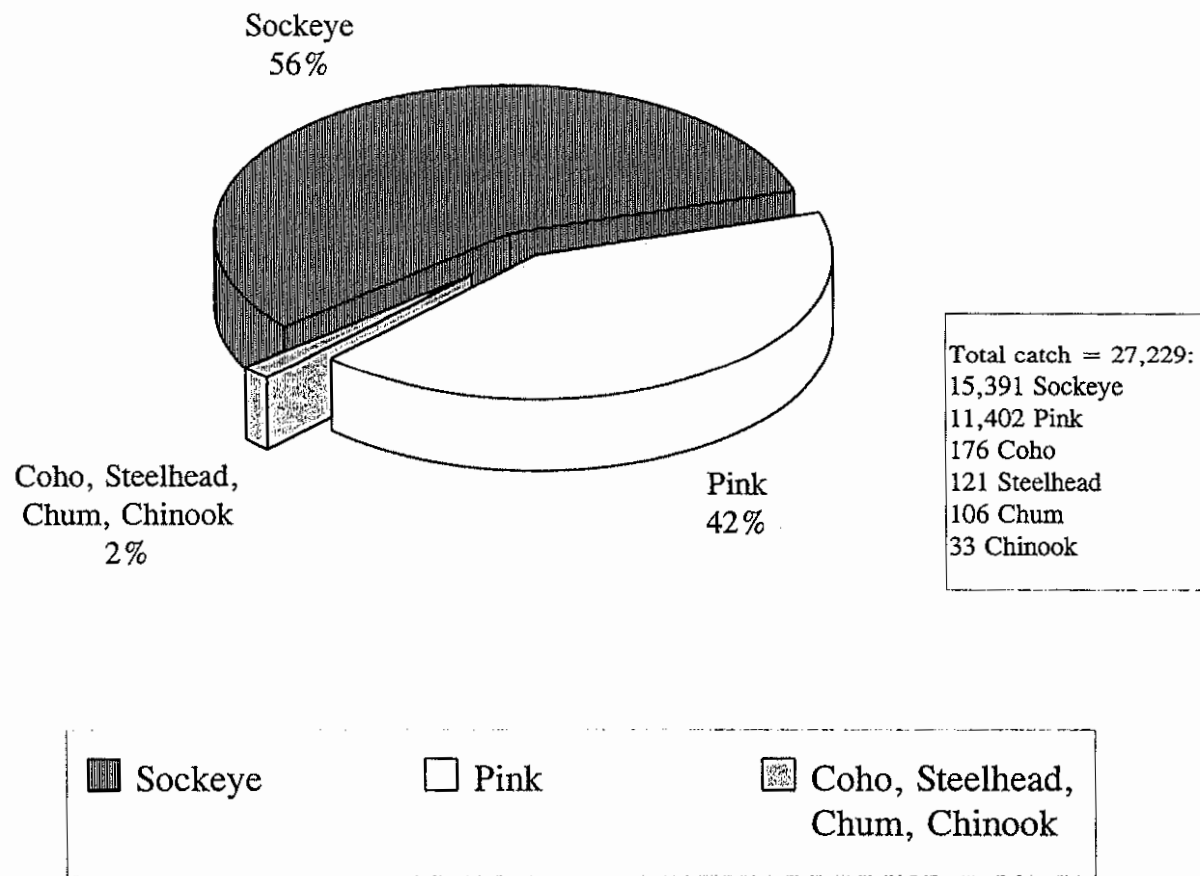


Figure 4. Illustration of the total catch of sockeye, pink salmon, and the combination of coho, steelhead, chum, and chinook from four fishwheels at Kitselas Canyon, Skeena River, 1995.

ADULT SOCKEYE HARVEST AND RELEASE 1995

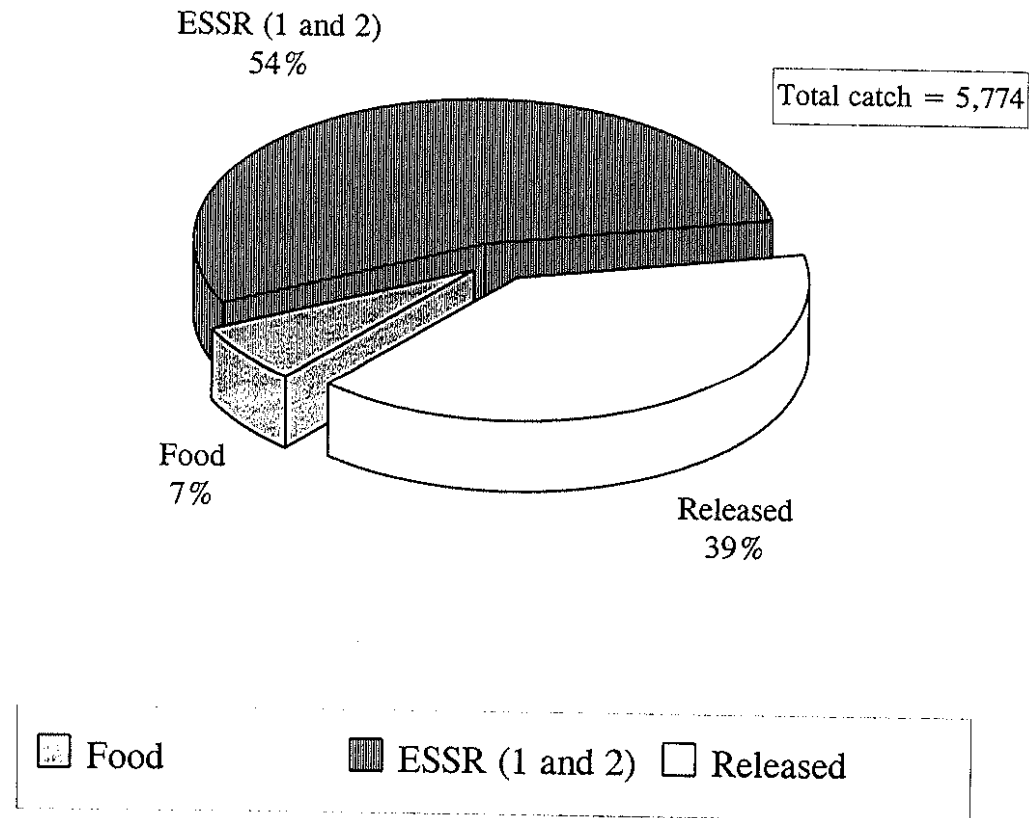


Figure 5. Illustration of the total catch, harvest, and release of adult sockeye from four fishwheels at Kitselas Canyon, Skeena River, 1995.

JACK SOCKEYE HARVEST AND RELEASE 1995

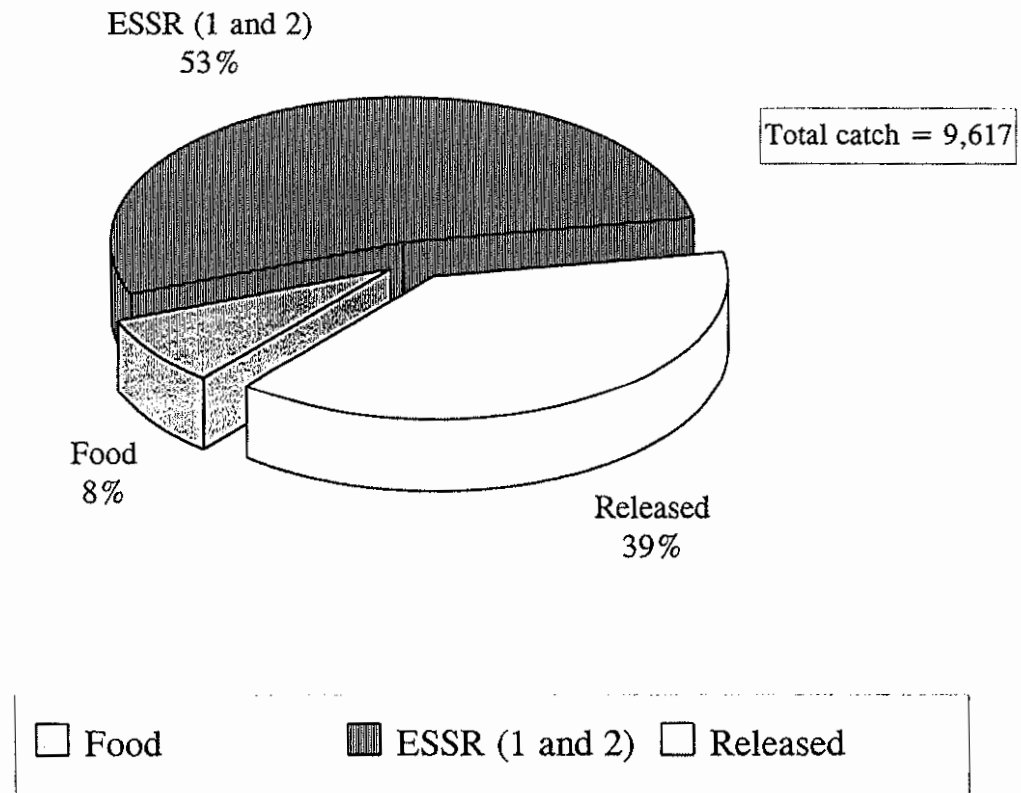


Figure 6. Illustration of the total catch, harvest, and release of jack sockeye from four fishwheels at Kitselas Canyon, Skeena River, 1995.

SOCKEYE (ADULT AND JACK) HARVEST AND RELEASE 1995

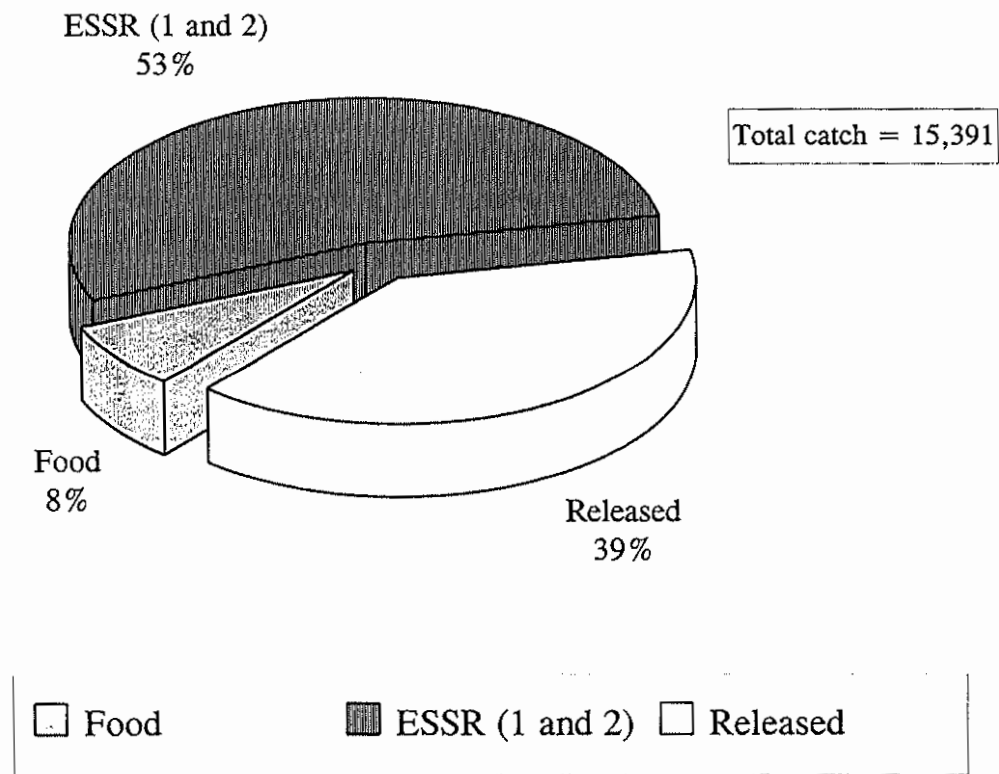


Figure 7. Illustration of the total catch, harvest, and release of all sockeye (adults and jacks) from four fishwheels at Kitselas Canyon, Skeena River, 1995.

PINK SALMON HARVEST AND RELEASE 1995

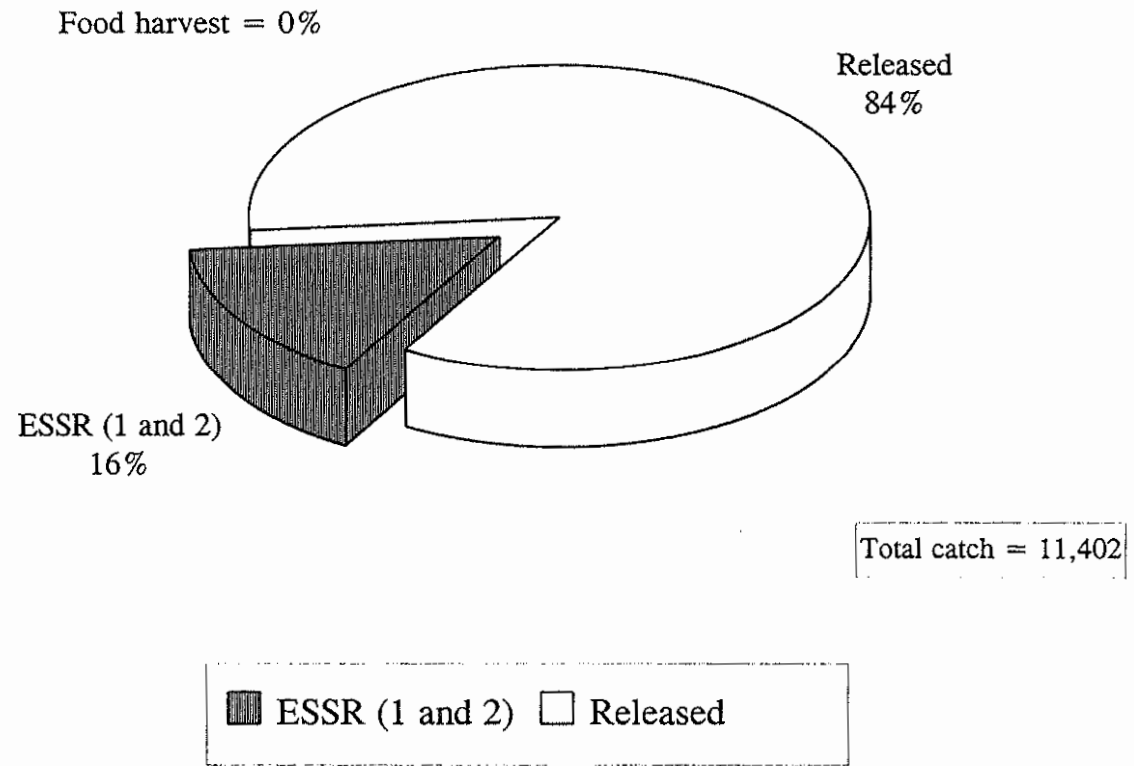
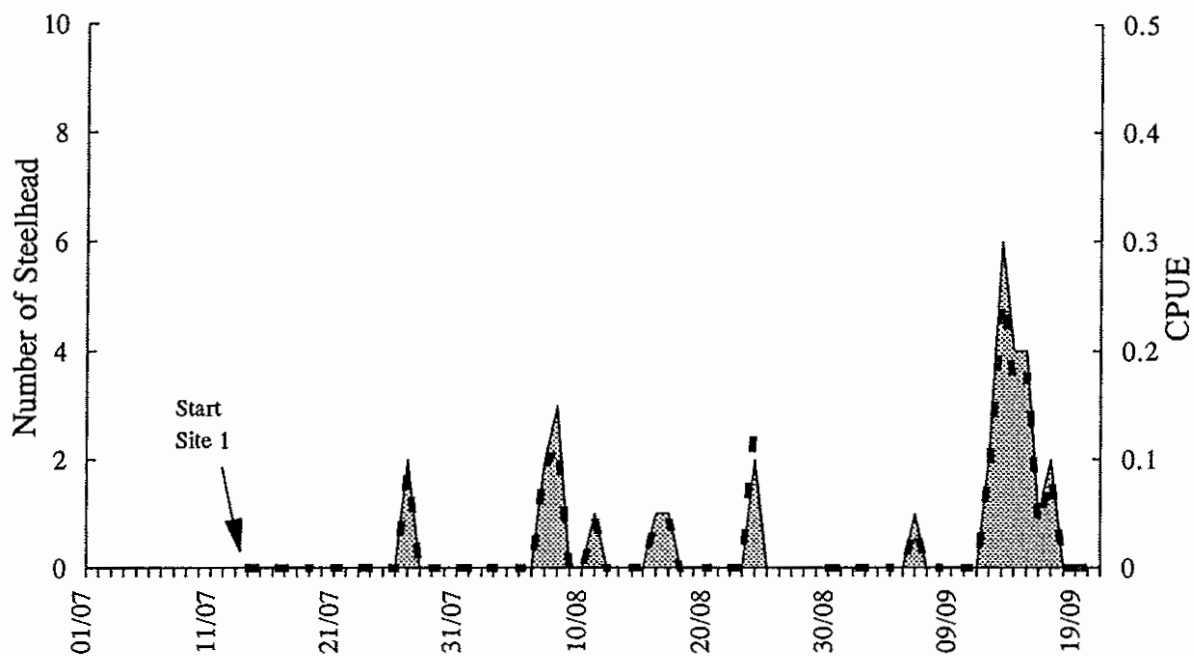


Figure 8. Illustration of the total catch, harvest, and release of pink salmon from four fishwheels at Kitselas Canyon, Skeena River, 1995.

Fishwheel 1



Fishwheel 2

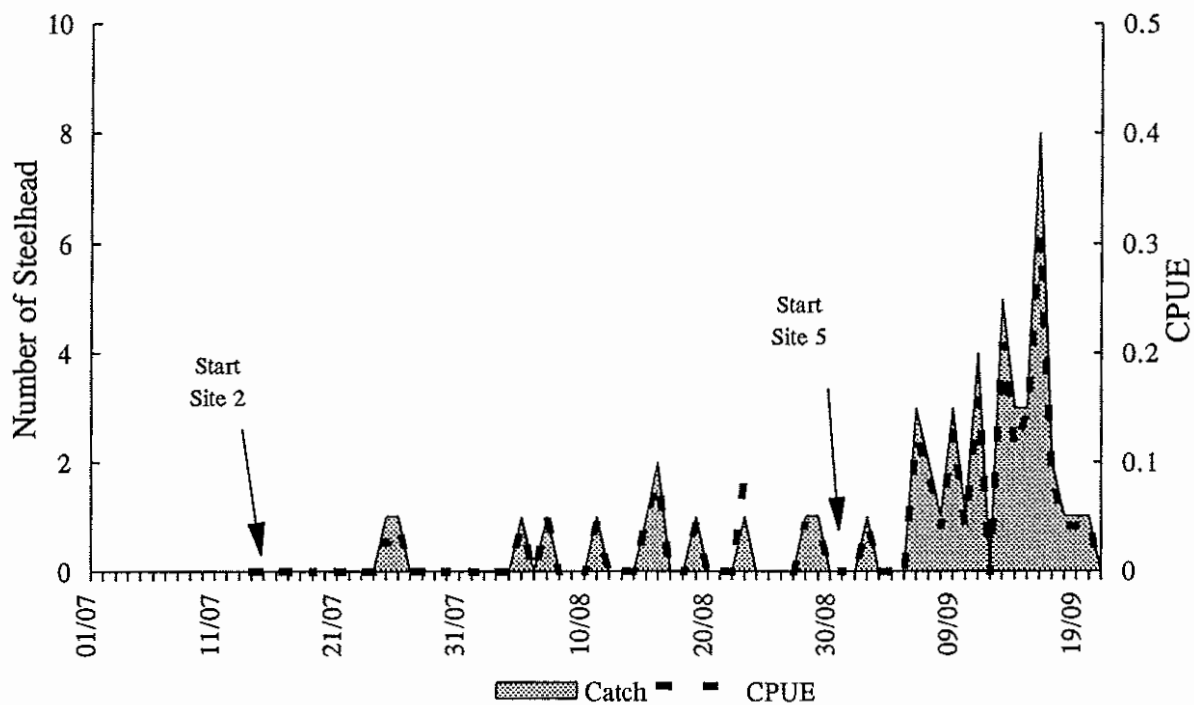
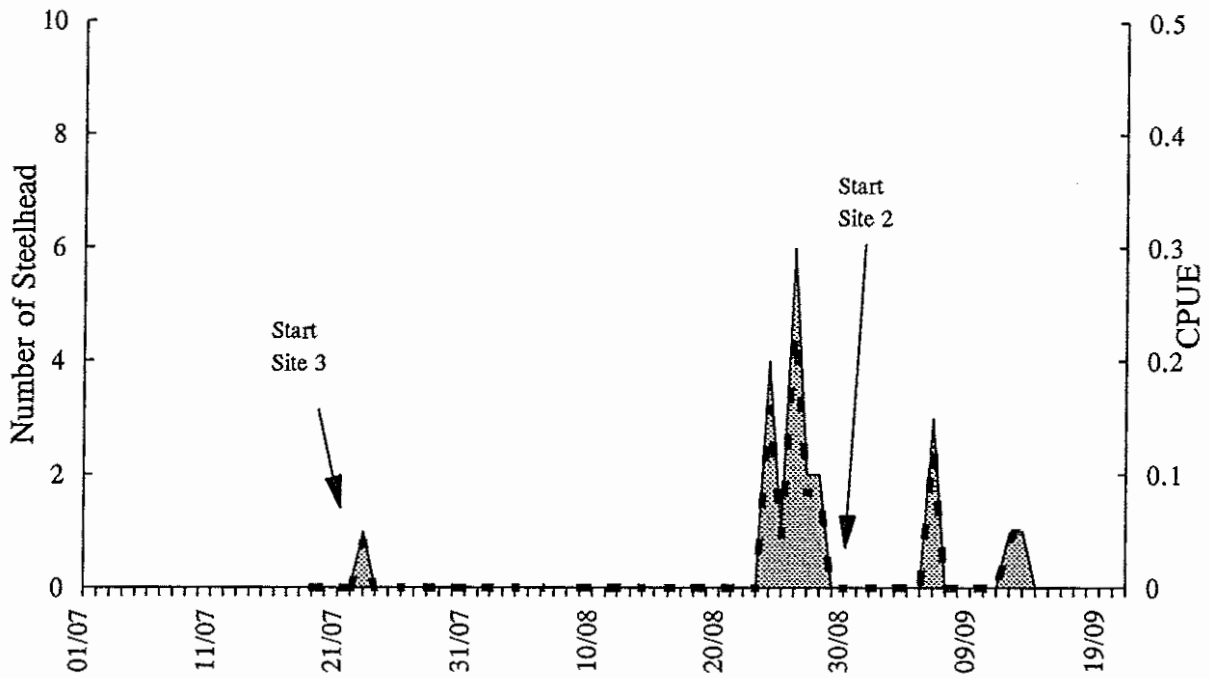


Figure 9. Fishwheel catches and CPUE (number/h) of steelhead captured in fishwheels 1 and 2 on the Skeena River near Kitselas, 1995.

Fishwheel 3



Fishwheel 4

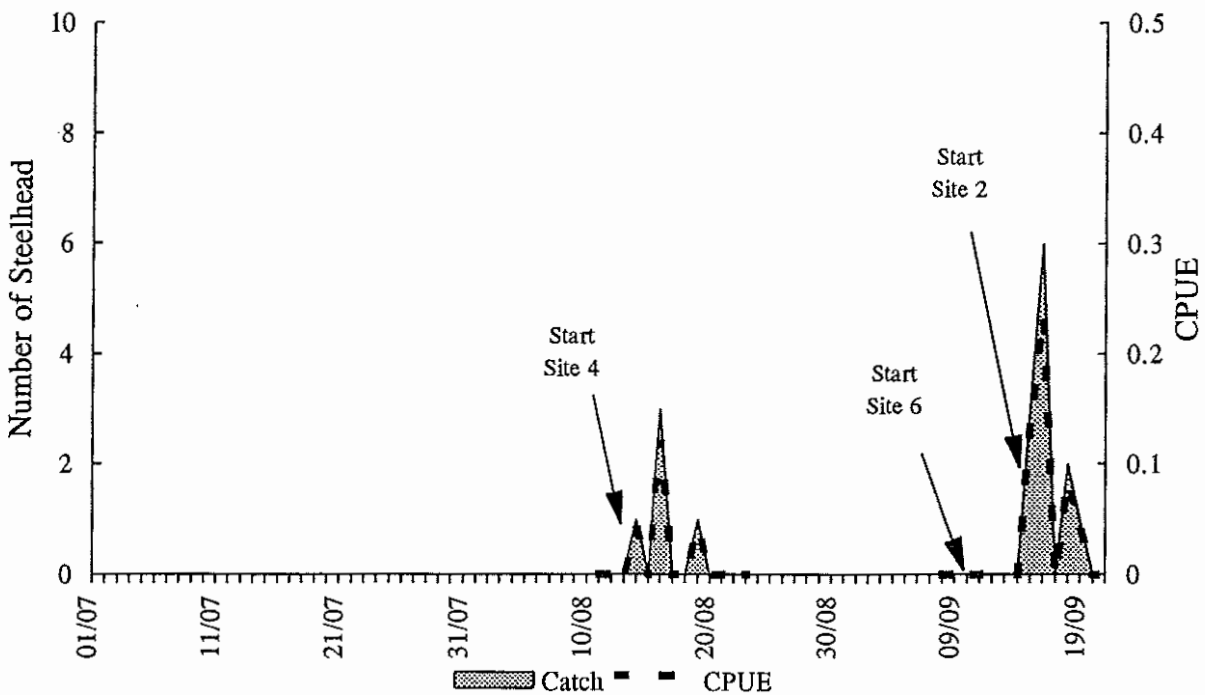
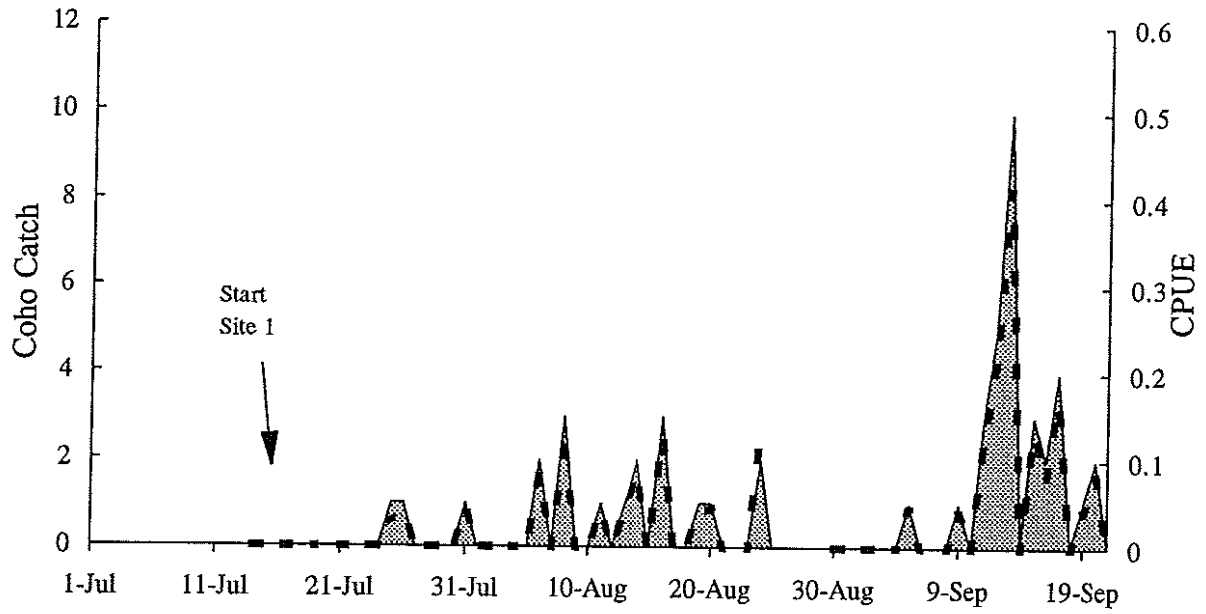


Figure 10. Fishwheel catches and CPUE (number/h) of steelhead captured in fishwheels 3 and 4 on the Skeena River near Kitselas, 1995.

Fishwheel 1



Fishwheel 2

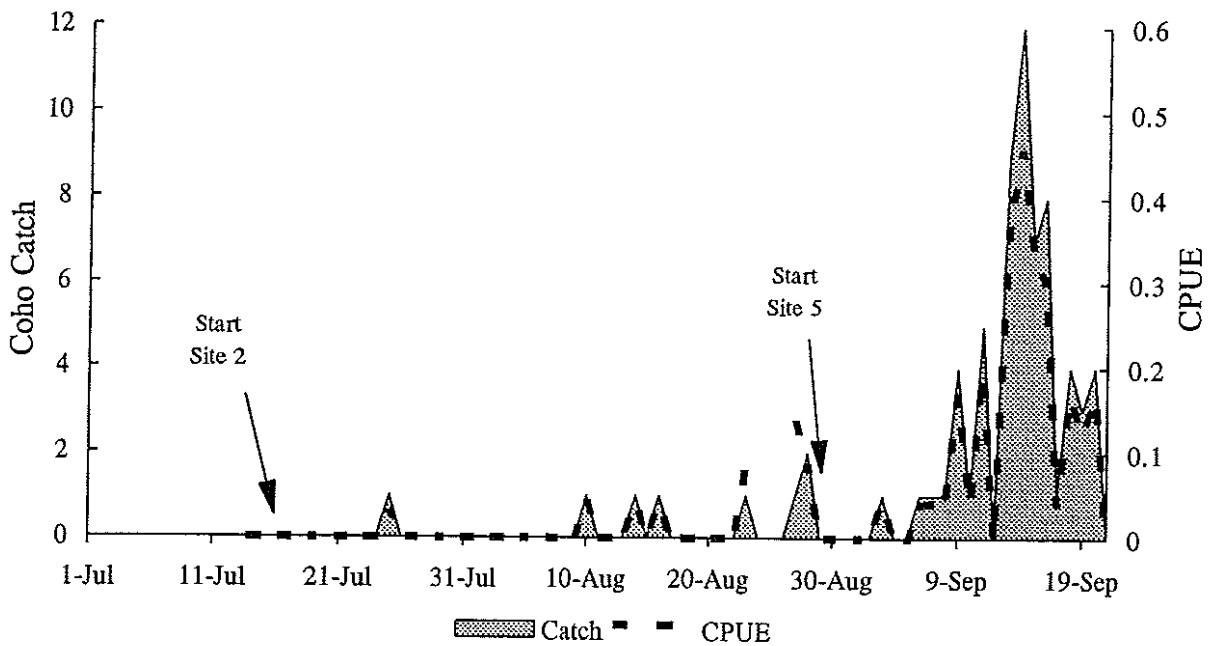
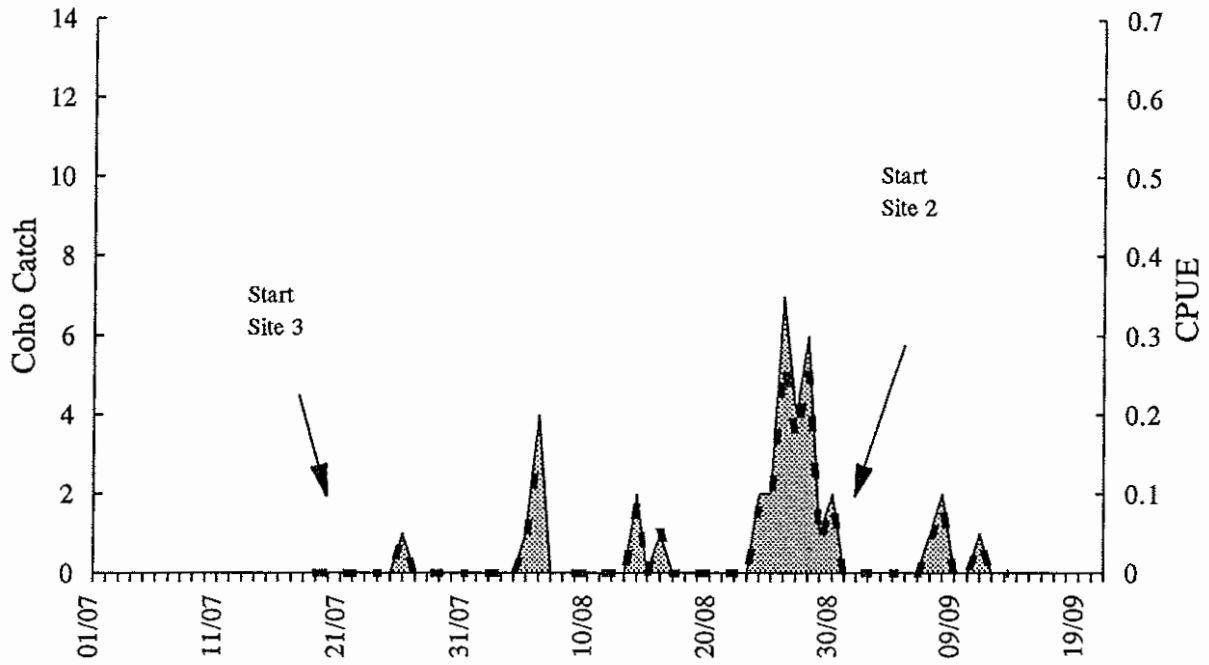


Figure 11. Fishwheel catches and CPUE (catch/wheel hour) for coho salmon captured with fishwheels 1 and 2 on the Skeena River, 1995.

Fishwheel 3



Fishwheel 4

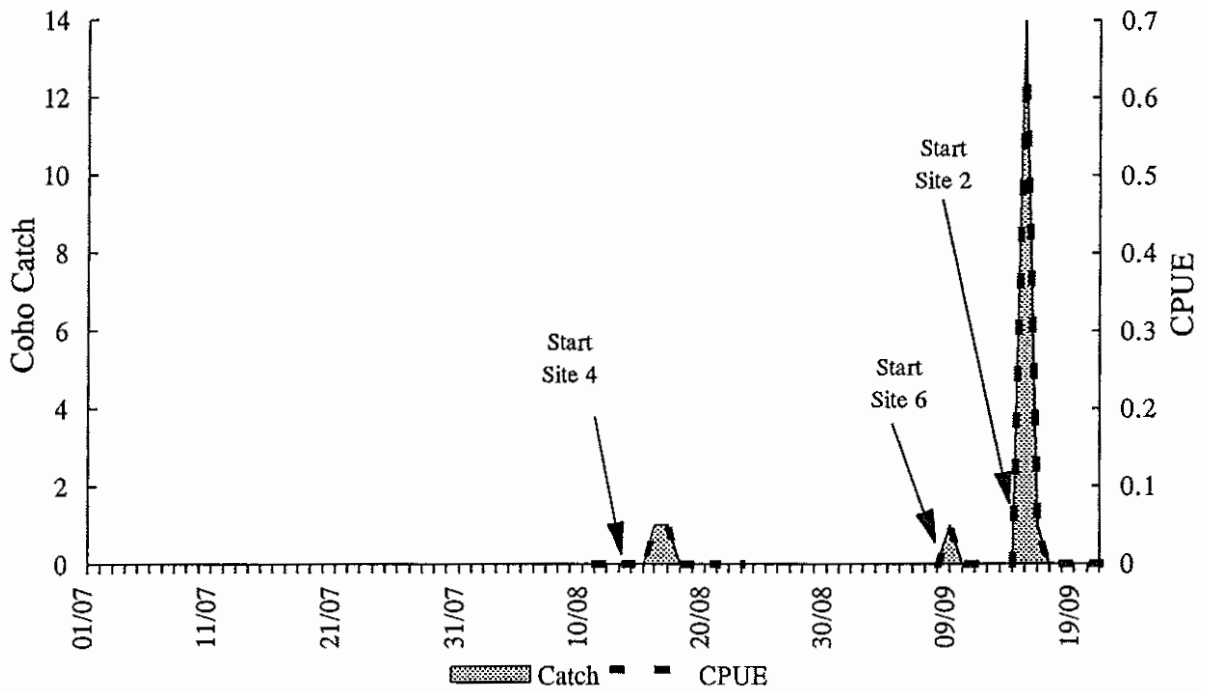
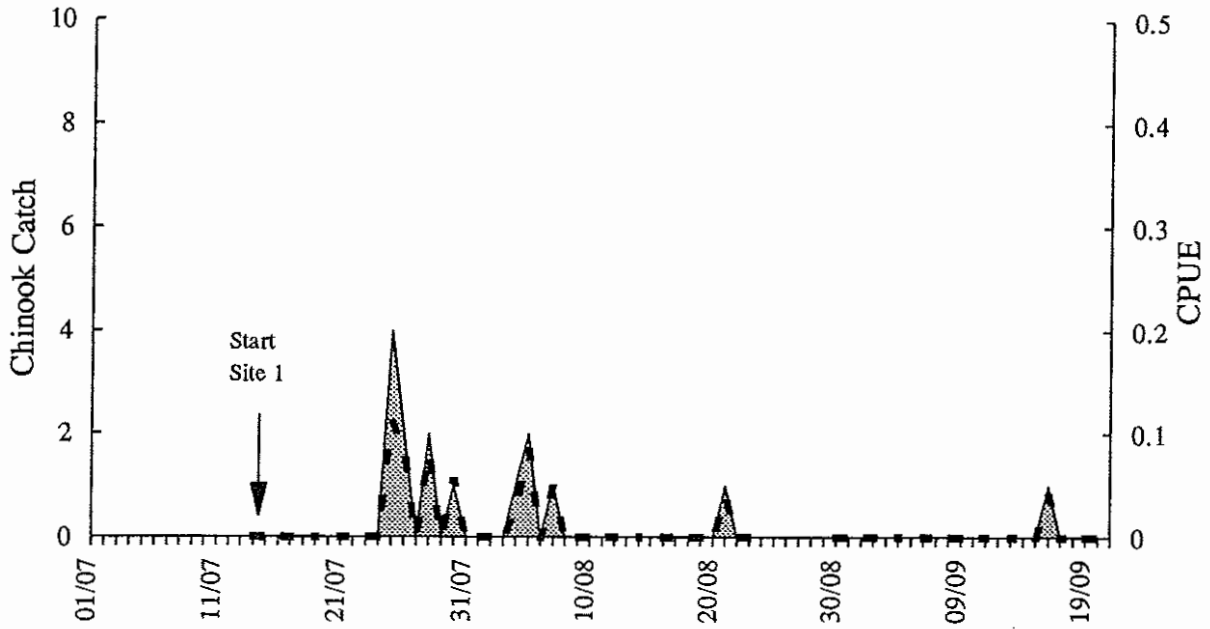


Figure 12. Fishwheel catches and CPUE (catch/wheel hour) for coho salmon captured with fishwheels 3 and 4 on the Skeena River, 1995.

Fishwheel 1



Fishwheel 2

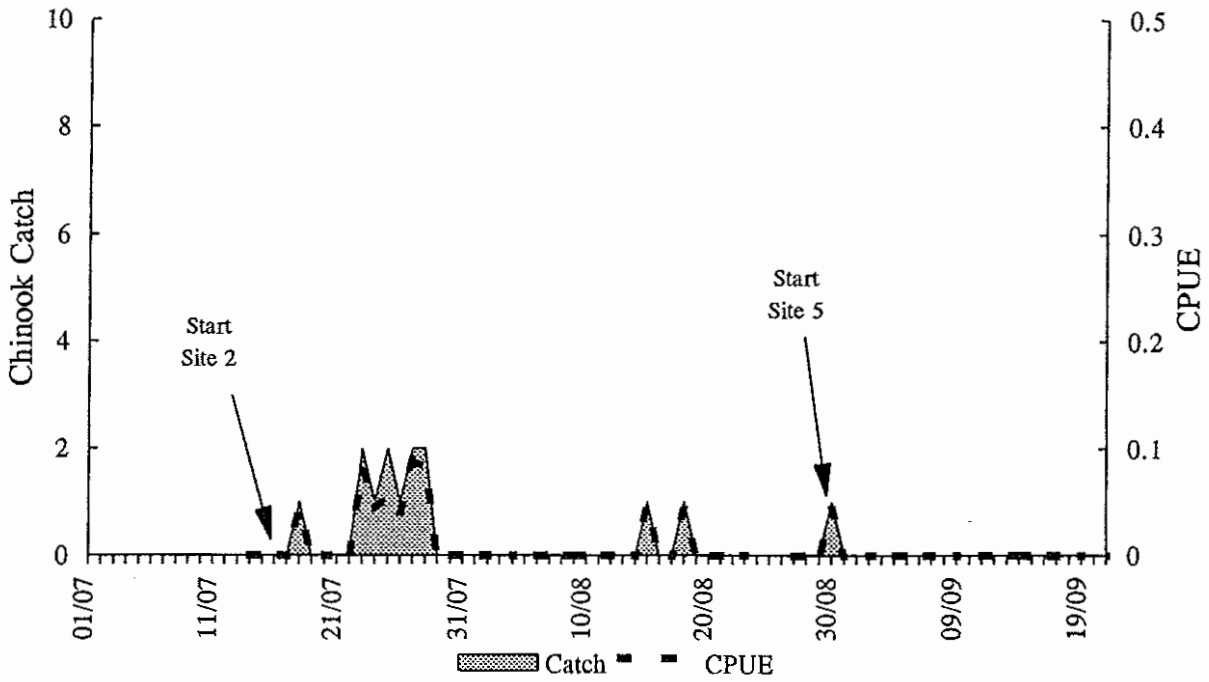
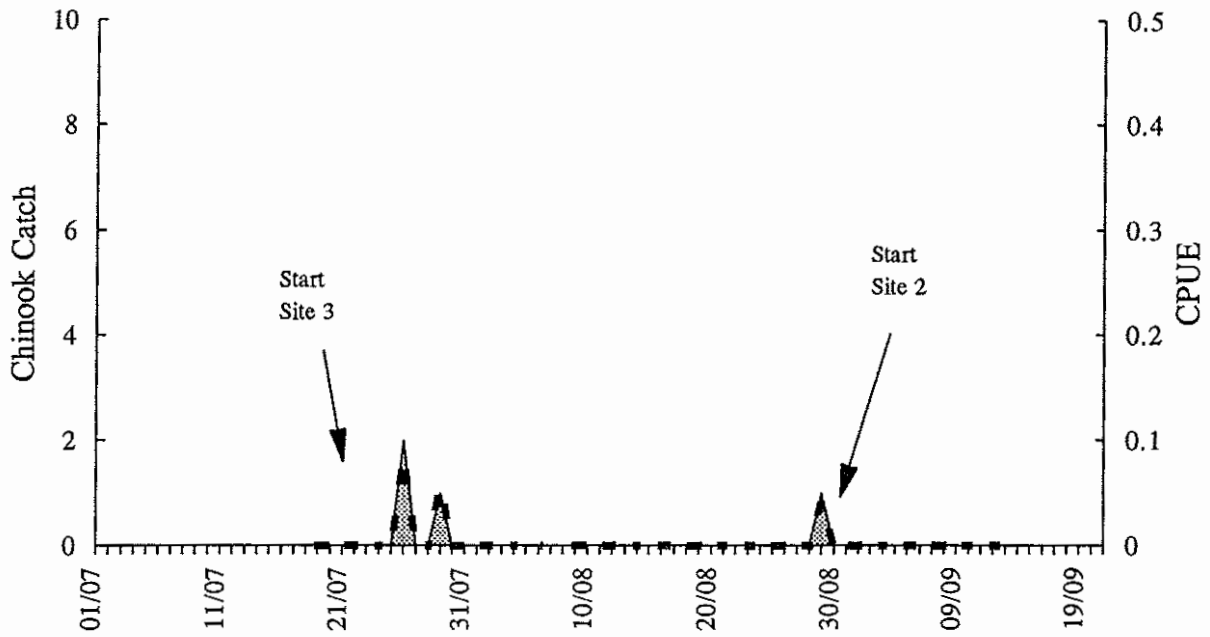


Figure 13. Fishwheel catches and CPUE (catch/wheel hour) for chinook salmon captured with fishwheels 1 and 2 on the Skeena River, 1995.

Fishwheel 3



Fishwheel 4

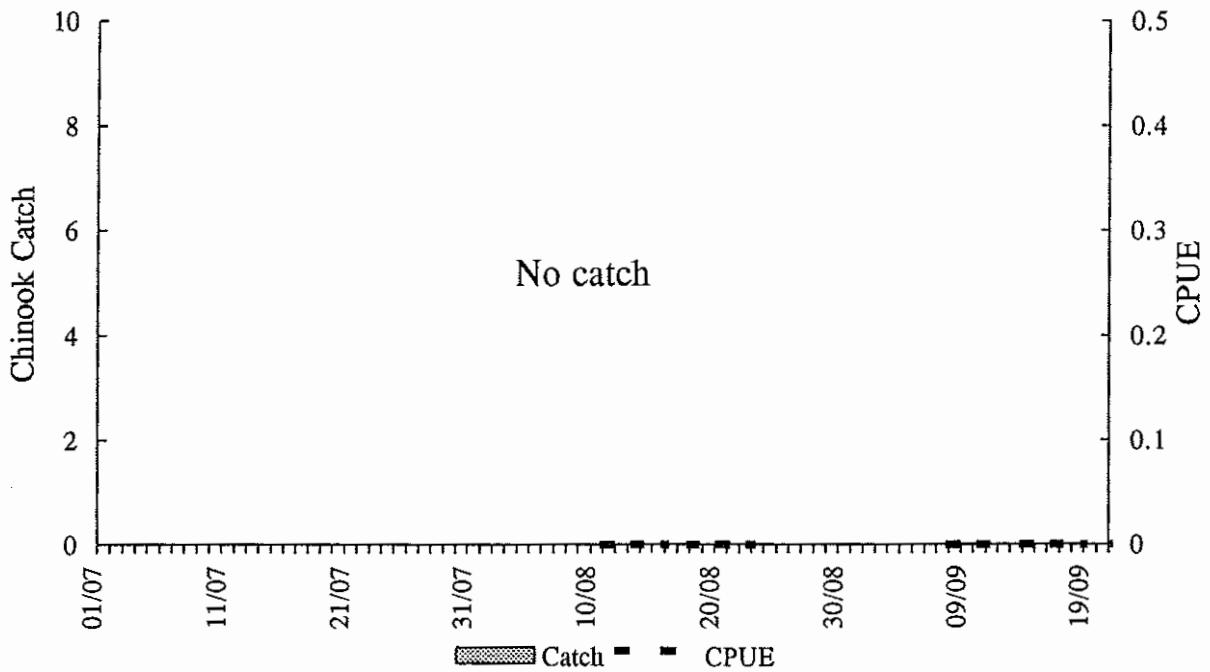
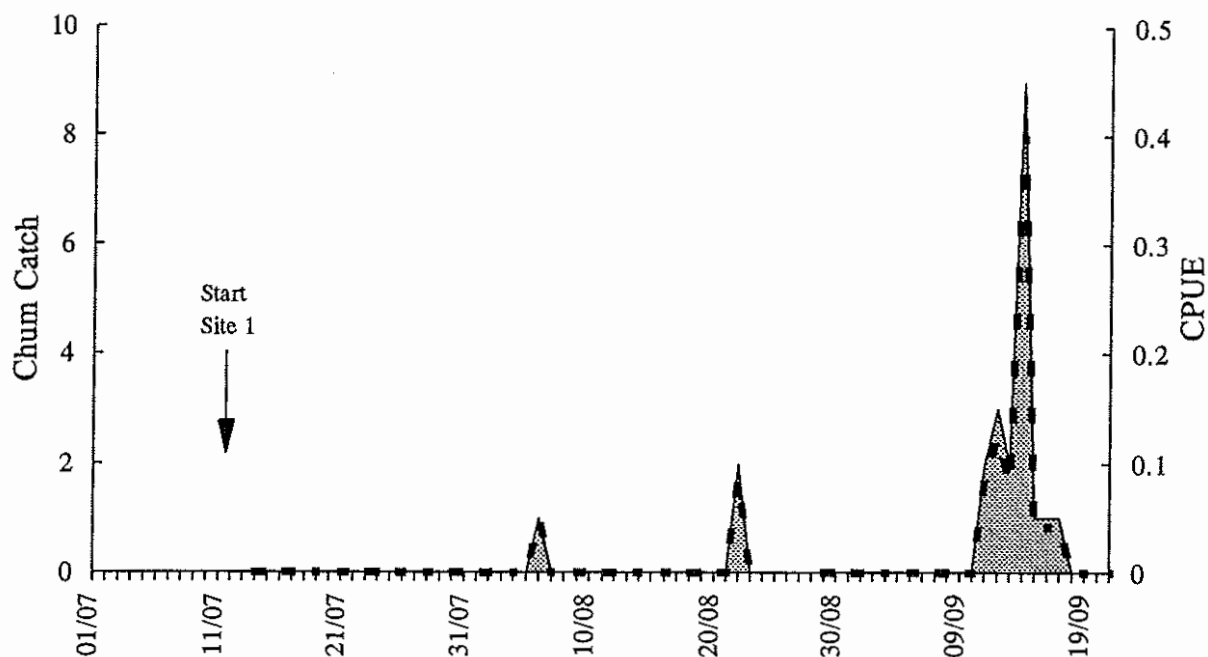


Figure 14. Fishwheel catches and CPUE (catch/wheel hour) for chinook salmon captured with fishwheels 3 and 4 on the Skeena River, 1995.

Fishwheel 1



Fishwheel 2

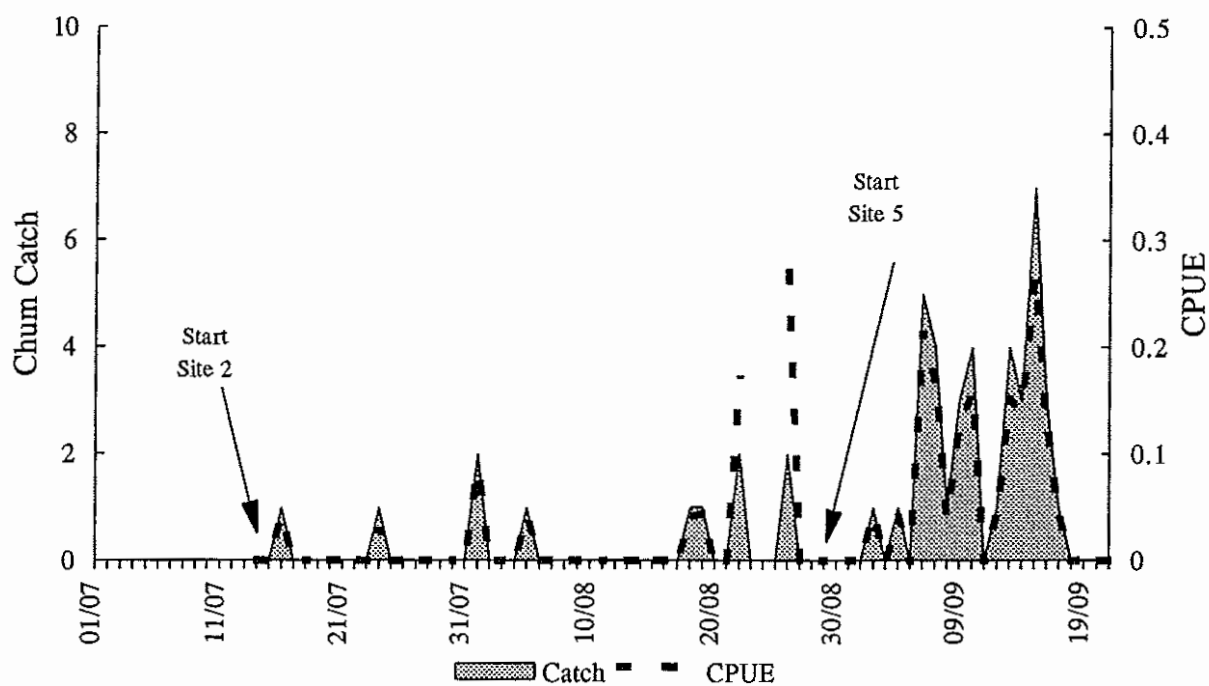
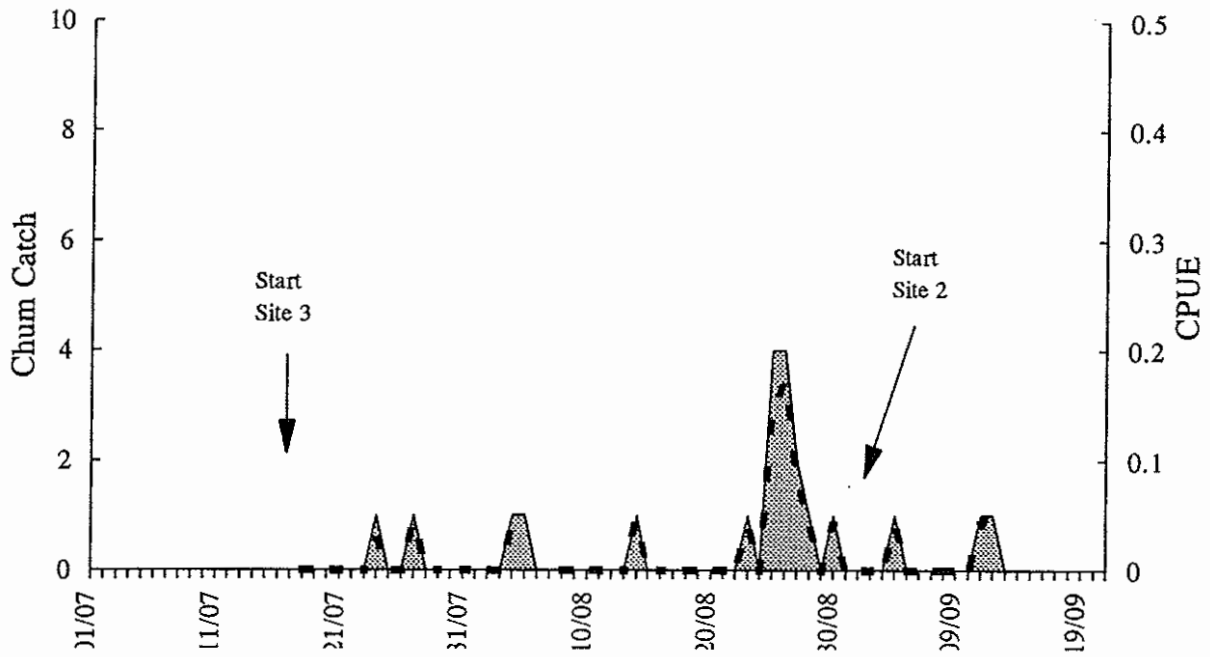


Figure 15. Fishwheel catches and CPUE (catch/wheel hour) for chum salmon captured with fishwheels 1 and 2 on the Skeena River, 1995.

Fishwheel 3



Fishwheel 4

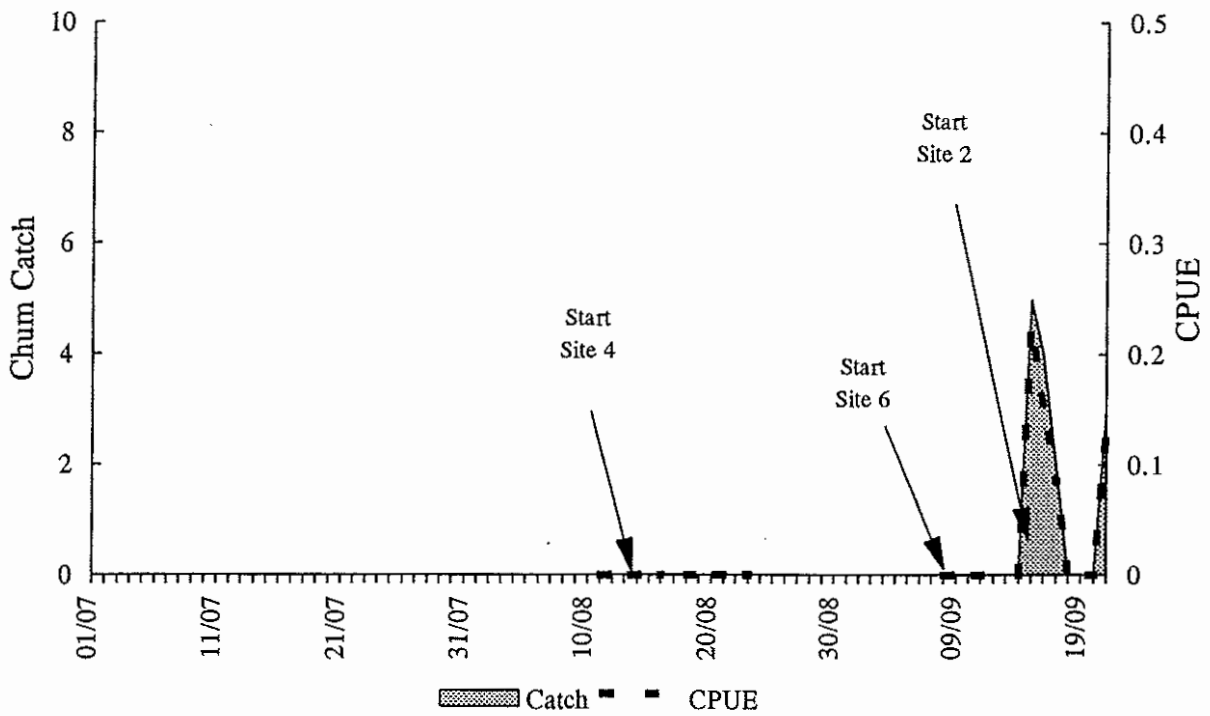


Figure 16. Fishwheel catches and CPUE (catch/wheel hour) for chum salmon captured with fishwheels 3 and 4 on the Skeena River, 1995.

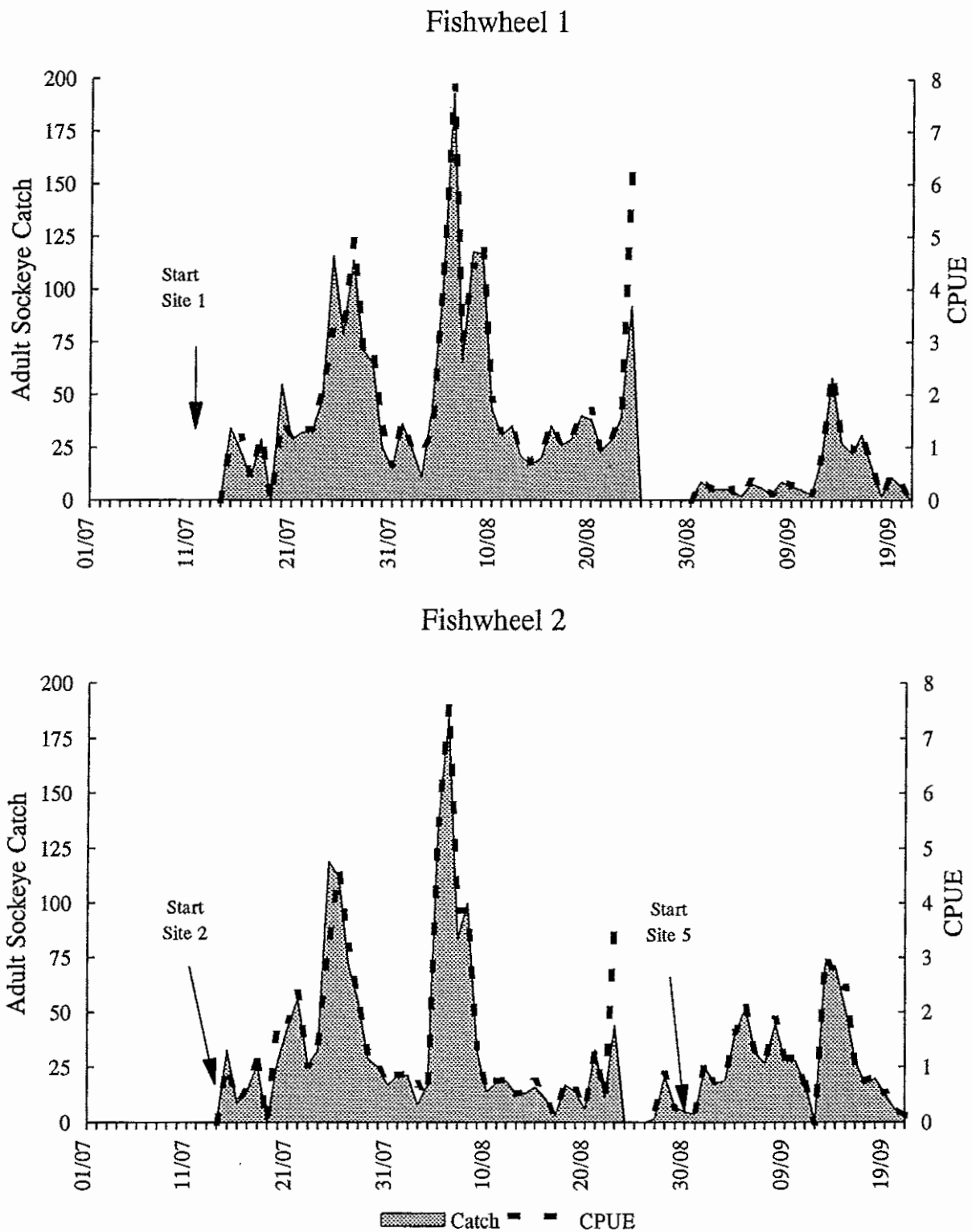
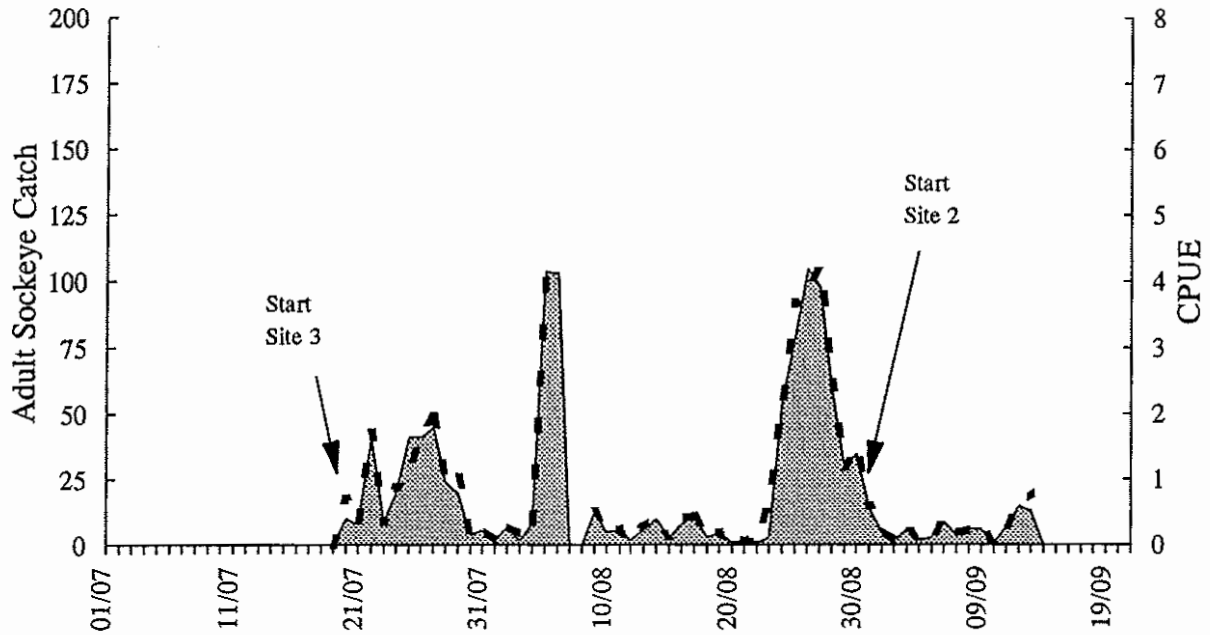


Figure 17. Fishwheel catches and CPUE (catch/wheel hour) for adult sockeye salmon captured with fishwheels 1 and 2 on the Skeena River, 1995.

Fishwheel 3



Fishwheel 4

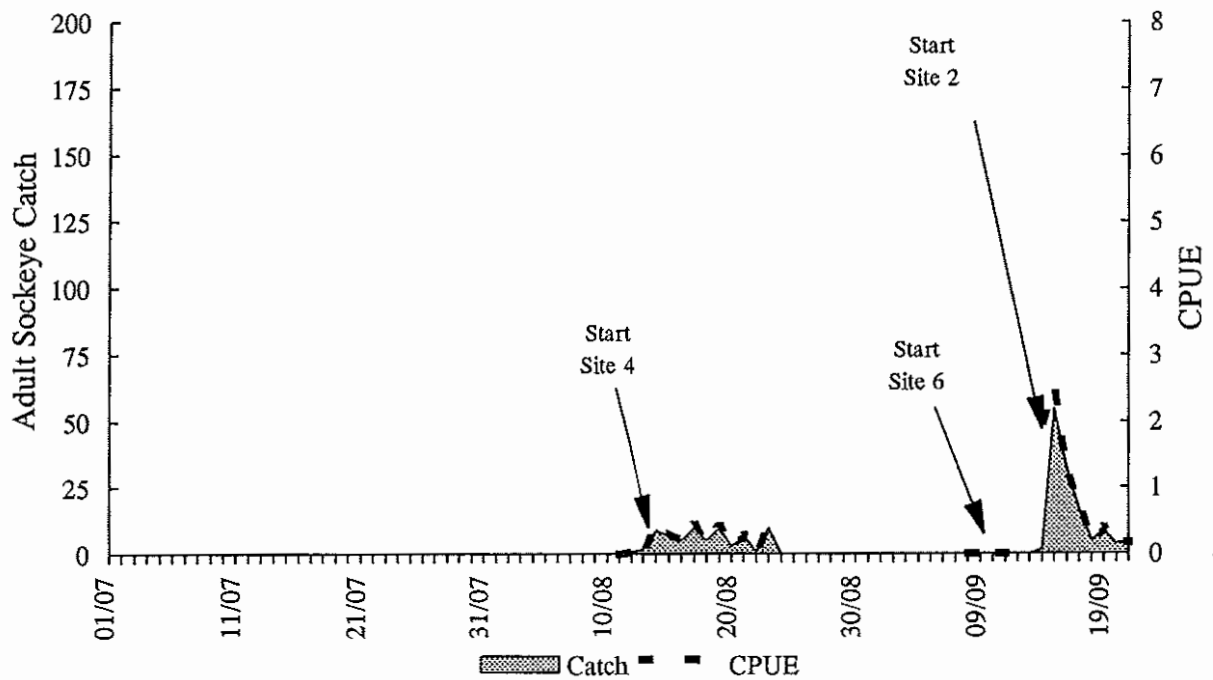


Figure 18. Fishwheel catches and CPUE (catch/wheel hour) for adult sockeye salmon captured with fishwheels 3 and 4 on the Skeena River, 1995.

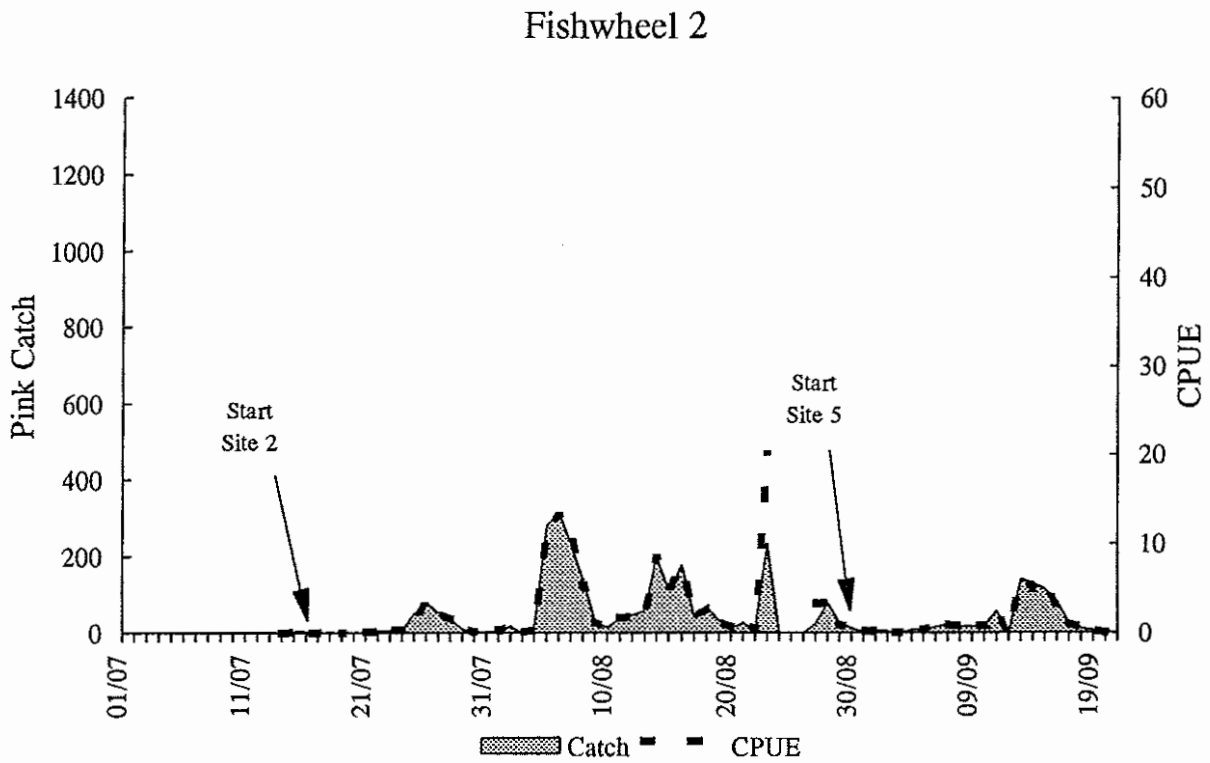
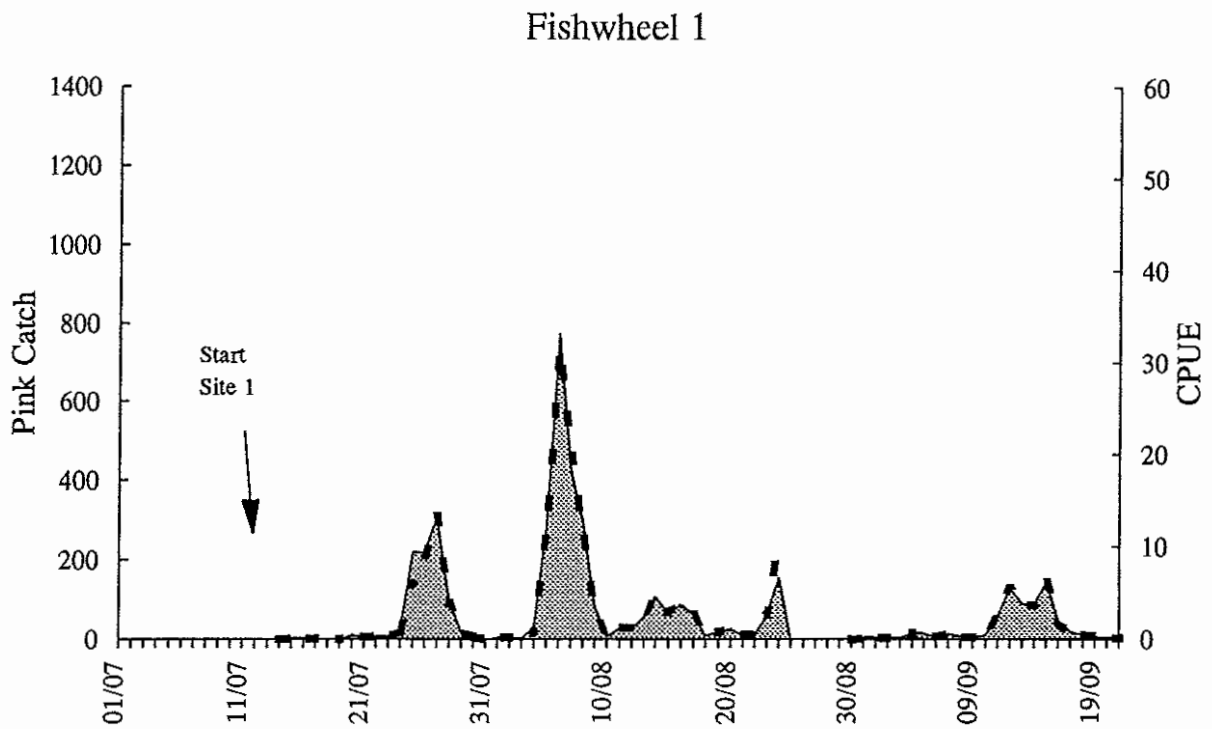


Figure 19. Fishwheel catches and CPUE (catch/wheel hour) for pink salmon captured with fishwheels 1 and 2 on the Skeena River, 1995.

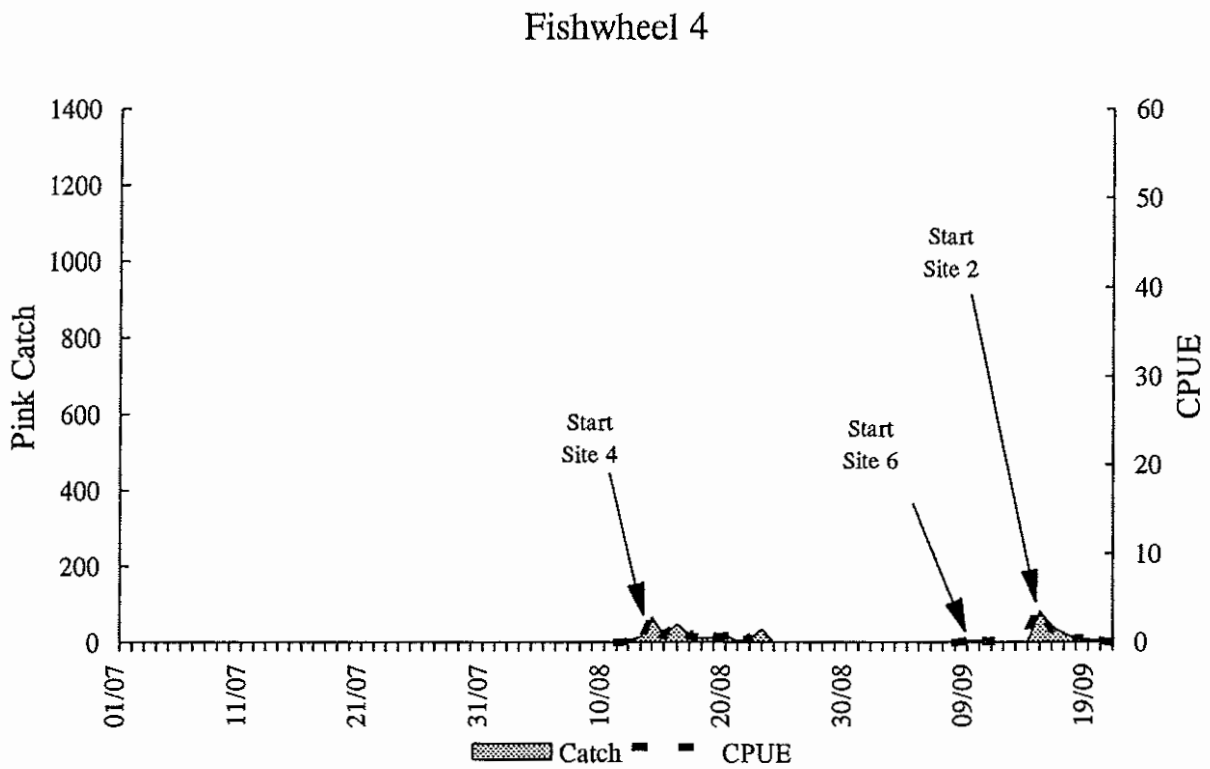
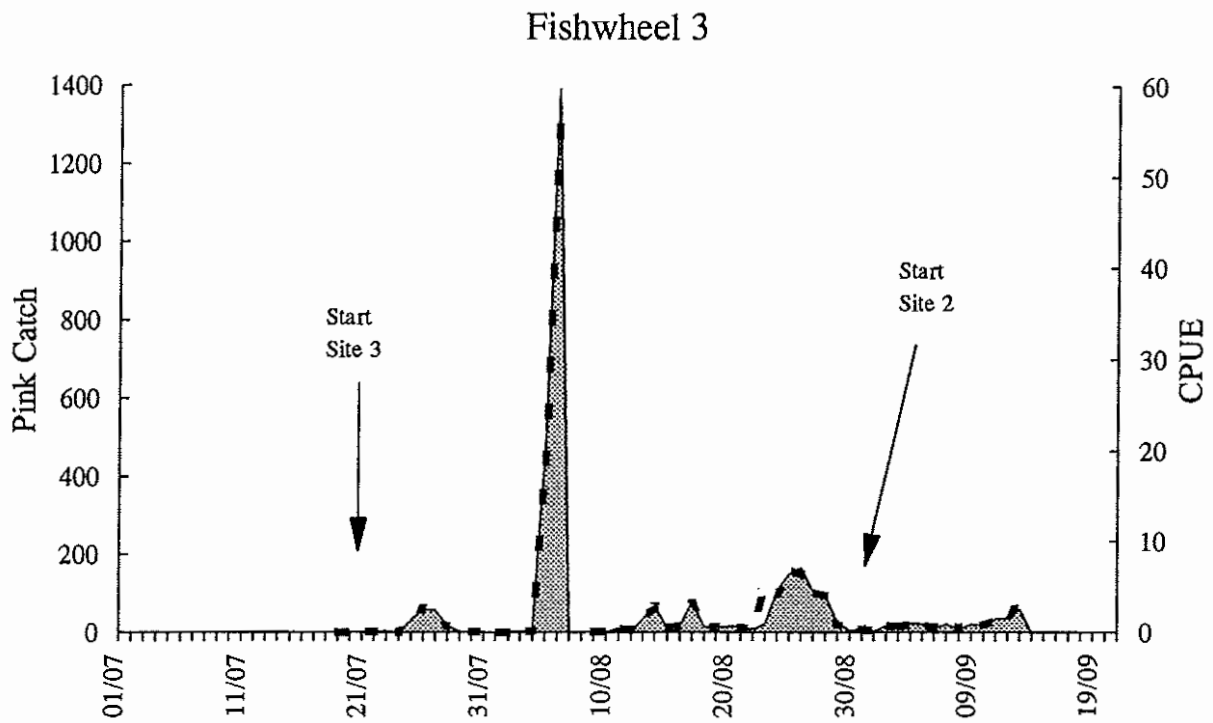


Figure 20. Fishwheel catches and CPUE (catch/wheel hour) for pink salmon captured with fishwheels 3 and 4 on the Skeena River, 1995.

APPENDICES

Appendix A. Water temperature and water level data for Kitselas fishsheels, by date, 1995.

Date	Water temperature (C)	Water level (m)
15/07/95	14.0	
16/07/95	14.5	
17/07/95	15.0	
18/07/95	16.0	
19/07/95		
20/07/95	17.0	
21/07/95	17.0	
22/07/95	16.5	
23/07/95	15.5	
24/07/95	14.5	
25/07/95	15.0	
26/07/95	13.5	
27/07/95	13.5	
28/07/95	13.5	
29/07/95	15.0	
30/07/95	14.0	
31/07/95	15.0	
01/08/95	15.0	
02/08/95	15.0	
03/08/95	15.0	
04/08/95	15.0	
05/08/95	15.0	
06/08/95	15.0	
07/08/95	15.0	
08/08/95	15.5	
09/08/95	15.5	
10/08/95	16.0	
11/08/95	15.5	
12/08/95	15.0	
13/08/95	15.0	
14/08/95	15.0	
15/08/95	14.0	
16/08/95	13.5	
17/08/95	13.0	
18/08/95	13.0	4.40
19/08/95	13.0	4.20
20/08/95	14.5	4.20
21/08/95	15.0	3.03
22/08/95	15.0	4.40
23/08/95	14.5	5.30
24/08/95	13.0	6.00
25/08/95	13.0	6.20

Appendix A. Water temperature and water level data for Kitselas fishsheels, by date, 1995.

Date	Water temperature (C)	Water level (m)
26/08/95	13.5	5.80
27/08/95	14.0	5.40
28/08/95	13.0	4.10
29/08/95	13.5	3.80
30/08/95	14.0	3.30
31/08/95	13.5	2.77
01/09/95	13.5	2.80
02/09/95	14.0	2.60
03/09/95	14.0	2.80
04/09/95	13.5	2.80
05/09/95	15.0	3.50
06/09/95	15.0	3.50
07/09/95	15.0	3.50
08/09/95	15.0	3.30
09/09/95	15.0	3.40
10/09/95	14.0	3.30
11/09/95	15.0	4.30
12/09/95	15.0	4.70
13/09/95	14.5	3.30
14/09/95	15.0	2.60
15/09/95	15.0	2.30
16/09/95	14.0	2.20
17/09/95	14.0	1.90
18/09/95	14.0	1.70
19/09/95	13.0	1.50
20/09/95	13.0	1.40
21/09/95	13.5	1.20
Mean	14.5	3.47
Maximum	17.0	6.20
Minimum	13.0	1.20

Appendix B. Anchor tag release data for steelhead, by tag number and tagging date, at Kitselas fishwheels, 1995.

Anchor tag No. (a)	Species	Nose-fork length (cm)	Sex (b)	Tagging date	Release		Scale	Scale	Vial No.	Scar code (c)	Health code (d)	Comments
					Time	Location	Book	No.				
N07179	ST	81.0	M	25/07/95	10:42	Site 2	47002	9	2	B	2	too scarred to radio tag
N07182	ST	86.0	M	27/07/95	8:15	Site 1	47002	7	4	B/E	2	badly scarred dorsal fin
N07196	ST	50.0	F	08/08/95	8:50	Site 1	47001	8	15	F	1	too small to radio tag
N07203	ST	36.0	M	11/08/95	18:20	Site 1	NA	NA	21	F	1	too small to radio tag
N07919/N0792	ST	54.0	F	27/08/95	8:30	Site 3	47005	3	76	F	1	too small to radio tag
N07955/N0795	ST	55.0	M	06/09/95	17:00	Site 5	47006	5	79	D	2	too small, maxillary damaged
N07957/N0795	ST	69.0	M	06/09/95	17:05	Site 5	47006	4	88	D	3	eye missing, maxillary damaged
N07990	ST	72.0	F	11/09/95	17:28	Site 5	47007	3	113	E	2	major head injury
N07259	ST	55.0	F	13/09/95	15:00	Site 5	47008	2	143	B	1	too small to radio tag
N07347	ST	55.0	F	15/09/95	10:45	Site 1	47010	9	162	F	2	too small to radio tag
N07276	ST	52.0	M	15/09/95	11:14	Site 1	47010	7	154	F	2	too small to radio tag
N07277	ST	58.0	F	15/09/95	14:28	Site 5	47010	6	195	F	2	too small to radio tag
N07287	ST	72.0	F	16/09/95	9:16	Site 2	47011	10	274	E	1	severe fungus on head
N07293	ST	77.0	F	16/09/95	9:55	Site 5	47011	8	155	A	4	severe seal bite on side
N07948	ST	51.0	M	19/09/95	9:55	Site 2	47012	1	211	E	3	caudal erosion, mod. scale loss

(a) Skeena Fish Commission (orange) anchor tags were used

(b) M = male; F = female

(d) Scar code: A=seal; B=gillnet; C=troll; D=hook; E=other; F=none

(c) Health code: 1=excellent (little scale loss/extremely vigorous); 2=good (some scale loss/vigorous); 3=fair (mod. scale loss/sluggish);
4=poor (heavy scale loss/lethargic)

NA = not available or not applicable

Appendix C Information regarding steelhead that were radio tagged at Kitselas Canyon as part of the 1995 Skeena River telemetry program.

Anchor tag No. (a)		Radio tag (b)		Nose-fork length (cm)	Sex (d)	Tagging date	Release		Scale		Vial No.	Scar code (e)	Health code (f)	Comments
First	Second	Chan (c)	Code				Time	Location	Book	No.				
N07177	N07178	14	97	87.0	M	23/07/95	9:00	Site 3	47002	10	1	E	2	healed scar left oper.
N07180	N07181	14	2	73.0	F	26/07/95	21:39	Site 2	47002	8	3	F	2	released in 2 min
N07183	N07184	16	96	57.0	M	27/07/95	19:01	Site 1	47002	6	5	F	1	released < 2 min
N07185	N07186	12	61	82.0	F	05/08/95	7:34	Site 2	47002	5	7	F	2	released < 2 min
N07187	N07188	16	92	76.0	F	07/08/95	8:15	Site 1	47002	4	2	F	2	
N07189	N07190	18	48	71.5	F	07/08/95	9:35	Site 1	47002	3	10	F	3	fishwheel pen anoxic
N07192	NA	16	91	76.0	F	07/08/95	17:20	Site 2	47001	10	11	E	2	tail mark, 20 min recov.
N07193	N07195	12	98	76.0	F	08/08/95	8:25	Site 1	47001	9	14	F	2	prev. tag: C07133
N07199	N07198	12	48	58.0	F	08/08/95	18:50	Site 1	47001	7	18	F	3	sluggish release
N07201	N07202	12	99	76.0	M	11/08/95	7:30	Site 2	47001	6	20	B	2	
N07204	N07205	12	15	78.0	M	14/08/95	20:00	Site 4	47003	10	26	F	3	5 min release off wheel
N07206	N07207	12	51	70.0	F	15/08/95	18:46	Site 2	47003	9	27	B	1	light net marks, nursery rel.
N07208	N07211	14	47	79.0	M	16/08/95	7:30	Site 1	47003	8	28	F	3	held 5 min, nursery rel.
N07212	N07213	16	39	72.0	F	16/08/95	9:00	Site 2	47003	7	30	F	2	held 8 min, nursery rel.
N07214	N07215	12	52	83.0	M	16/08/95	9:40	Site 4	47003	6	32	F	1	held 5 min, nursery rel.
N07217	N07218	18	31	77.0	M	16/08/95	10:25	Site 4	47003	5	33	F	3	S00558, nursery rel.
N07219	N07220	14	42	55.0	F	16/08/95	17:20	Site 2	47003	4	37	C	2	old marks, nursery rel.
N07221	N07222	18	32	100.0	M	16/08/95	18:05	Site 4	47003	3	39	F	2	nursery release
N07223	N07224	12	35	65.0	F	17/08/95	7:40	Site 1	47004	10	42	F	3	held 5 min, nursery rel.
N07226	N07227	18	28	66.0	F	19/08/95	10:10	Site 2	47004	9	43	B	3	held 6 min, nursery rel.
N07229	N07230	14	34	67.0	F	19/08/95	10:50	Site 4	47004	8	44	F	3	held 5 min, nursery rel.
N07232	N07233	16	46	65.0	M	23/08/95	9:15	Site 2	47004	7	40	B	2	healed gillnet scar
N07234	N07235	14	44	76.0	F	24/08/95	16:50	Site 3	47004	6	52	B	2	bleeding from adipose
N07237	NA	16	37	59.0	M	24/08/95	16:55	Site 3	47004	5	48	F	2	prev. tag: S02463
N07238	N07239	14	41	67.0	M	24/08/95	17:20	Site 3	47004	4	41	F	2	
N07241	N07244	18	27	75.0	M	24/08/95	17:40	Site 3	47004	3	37	B	2	
N07245	N07246	16	38	84.0	M	24/08/95	17:55	Site 1	47004	2	49	B	1	
N07247	N07248	16	40	76.0	F	25/08/95	14:25	Site 3	47005	10	51	F	1	
N07249	N07902	18	29	68.0	F	26/08/95	8:35	Site 3	47005	9	36	E	1	minor scale loss
N07903	N07905	18	33	76.0	F	26/08/95	8:45	Site 3	47005	8	38	D	1	minor scale loss
N07906	N07907	16	34	86.0	M	26/08/95	8:55	Site 3	47005	7	47	F	1	
N07908	N07909	14	43	75.0	F?	26/08/95	9:20	Site 3	47005	6	57	F	1	sl. bleeding from left tag
N07911	N07913	16	45	88.0	M	26/08/95	16:45	Site 3	47005	5	208	F	1	
N07914	N07915	16	27	78.0	F	26/08/95	17:35	Site 3	47005	4	64	E	2	bleeding from maxillary
N07926	N07927	16	24	82.0	M	27/08/95	16:40	Site 3	47005	2	59	F	1	
N07928	N07930	16	22	84.0	F	28/08/95	8:30	Site 3	47005	1	46	F	1	

Appendix C Information regarding steelhead that were radio tagged at Kitselas Canyon as part of the 1995 Skeena River telemetry program.

Anchor tag No. (a)		Radio tag (b)		Nose-fork length (cm)	Sex (d)	Tagging date	Release		Scale		Vial No.	Scar code (e)	Health code (f)	Comments
First	Second	Chan (c)	Code				Time	Location	Book	No.				
N07931	N07935	16	31	94.0	M	28/08/95	9:15	Site 5	47006	10	65	F	1	
N07937	N07938	14	51	78.0	M	28/08/95	16:30	Site 3	47006	9	61	B	3	bleeding from left floy
N07939	N07941	14	35	68.0	M	29/08/95	9:10	Site 3	47006	8	105	F	1	
N07951	N07952	14	23	59.0	M	02/09/95	8:45	Site 5	47006	7	93	F	1	
N07953	N07954	14	46	70.0	F	06/09/95	8:20	Site 1	47006	6	97	B	2	dorsal/oper. damage
N07959	N07960	14	16	68.0	F	06/09/95	17:10	Site 5	47006	3	86	F	2	
N07961	N07962	14	17	75.0	M	07/09/95	8:25	Site 5	47006	2	101	F	2	
N07964	N07965	14	19	70.0	M	07/09/95	16:35	Site 5	47006	1	103	B	2	
N07967	N07968	14	99	64.0	F	08/09/95	16:32	Site 5	47007	1	76	B	1	
N07971	N07972	12	78	61.0	F	09/09/95	8:40	Site 5	47007	10	82	F	1	
N07973	N07974	18	39	72.0	F	09/09/95	8:50	Site 5	47007	9	102	F	3	
N07976	N07977	12	2	79.0	F	09/09/95	9:00	Site 5	47007	8	83	B	2	
N07978	N07979	16	86	71.0	F	10/09/95	8:25	Site 5	47007	7	90	E	2	minor scale loss
N07984	N07985	12	66	74.0	M	11/09/95	8:55	Site 5	47007	6	111	F	2	minor fin erosion
N07987	N07988	18	36	74.0	F	11/09/95	9:15	Site 5	47007	5	109	F	2	
N07989	NA	12	8	73.0	F	11/09/95	17:20	Site 5	47007	4	128	D	2	prev. tag: S02426
N07991	N07992	12	74	69.0	M	12/09/95	8:45	Site 1	47008	10	127	F	2	
N07993	N07994	12	67	85.0	F	12/09/95	16:08	Site 1	47008	9	112	F	2	
N07995	N07996	12	70	91.0	F	13/09/95	8:15	Site 2	47008	8	110	F	2	
N07997	NA	14	14	62.0	M	13/09/95	8:55	Site 1	47008	7	68	F	2	
N07251	N07252	12	33	76.0	F	13/09/95	9:05	Site 1	47008	6	116	F	4	held ~ 8 min
N07253	N07254	12	31	68.0	F	13/09/95	9:14	Site 1	47008	5	124	E	2	minor scale loss
N07255	N07256	16	47	77.0	F	13/09/95	10:10	Site 5	47008	4	120	F	3	rough tag insertion
N07257	N07258	18	46	68.0	F	13/09/95	10:20	Site 5	47008	3	129	F	2	minor scale loss
N07260	N07261	18	35	80.0	F	13/09/95	15:10	Site 5	47008	1L	136	F	2	
N07262	N07263	14	28	84.0	M	13/09/95	15:15	Site 5	47008	1R	137	B	3	old scar, held 4 min
N07265	N07266	16	42	93.0	M	13/09/95	15:50	Site 1	47015	9	133	F	2	
N07267	N07268	18	24	60.0	M	13/09/95	15:55	Site 1	47015	10	142	F	2	
N07269	N07270	12	16	76.0	F	13/09/95	16:10	Site 1	47015	8	135	B	1	old scars
N07271	N07272	12	32	60.0	M	14/09/95	9:35	Site 1	47009	10	149	F	2	
N07273	N07274	12	29	74.0	F	14/09/95	16:20	Site 1	47009	9	182	E	2	minor scale loss
N07326	N07327	14	45	74.0	F	14/09/95	16:30	Site 1	47009	8	185	B	2	old scars
N07328	N07329	14	38	79.0	F	14/09/95	16:37	Site 1	47009	7	161	F	2	
N07330	N07331	14	39	70.0	F	14/09/95	17:15	Site 5	47009	6	188	E	2	dorsal fin injury
N07332	N07333	16	48	76.0	F	14/09/95	17:40	Site 5	47009	5	168	F	2	
N07334	N07335	16	44	75.0	F	14/09/95	17:42	Site 5	47009	4	163	F	2	

Appendix C Information regarding steelhead that were radio tagged at Kitselas Canyon as part of the 1995 Skeena River telemetry program.

Anchor tag No. (a)		Radio tag (b)		Nose-fork length (cm)	Sex (d)	Tagging date	Release		Scale		Vial No.	Scar code (e)	Health code (f)	Comments
First	Second	Chan (c)	Code				Time	Location	Book	No.				
N07336	N07337	16	43	83.0	F	15/09/95	8:17	Site 5	NA	NA	174	F	1	
N07338	N07339	12	36	69.0	F	15/09/95	9:07	Site 2	47009	3	151	F	2	
N07340	N07341	14	40	76.0	F	15/09/95	9:14	Site 2	47009	2	148	D	1	hook wound to mouth
N07342	N07343	18	98	61.0	M	15/09/95	9:46	Site 2	47009	1	171	F	1	
N07344	NA	18	37	93.0	M	15/09/95	10:36	Site 1	47010	10	165	D	2	tag gun problems, delay
N07348	N07349	16	41	75.0	F	15/09/95	11:06	Site 1	47010	8	152	F	1	
N07278	N07279	18	34	79.0	F	15/09/95	14:43	Site 5	47010	5	147	F	2	
N07280	NA	12	19	84.0	M	16/09/95	8:41	Site 2	47010	4	270	F	3	tag needle broke in fish dorsal damage
N07281	N07282	14	52	80.0	M	16/09/95	8:52	Site 2	47010	3	272	E	1	
N07283	N07284	16	67	72.0	F	16/09/95	9:02	Site 2	47010	2	190	F	2	
N07285	N07286	16	51	73.0	M	16/09/95	9:10	Site 2	47010	1	158	F	2	
N07289	N07290	18	91	73.0	F	16/09/95	9:24	Site 2	47011	9	271	F	3	
N07294	N07295	12	42	72.0	F	16/09/95	10:05	Site 5	47011	7	146	E	2	side scar
N07296	N07297	14	20	88.0	F	16/09/95	10:12	Site 5	47011	6	273	E	1	caudal scar
N07298	N07299	12	44	67.0	F	16/09/95	10:22	Site 5	47011	5	227	F	1	
N07301	N07302	18	40	76.0	F	16/09/95	10:29	Site 5	47011	4	240	F	1	
N07303	N07304	18	44	77.0	M	16/09/95	10:40	Site 5	47011	3	244	F	1	
N07306	N07307	14	49	77.0	M	16/09/95	10:47	Site 5	47011	2	239	F	1	
N07308	N07310	14	32	75.0	F	16/09/95	16:27	Site 1	47011	1	220	F	2	some scale loss
N07312	N07313	18	7	71.0	F	16/09/95	17:12	Site 5	47012	10	236	F	1	
N07316	N07317	18	99	71.0	F	17/09/95	8:46	Site 5	47012	9	235	B	3	healed hvy gillnet marks
N07318	N07319	16	21	72.0	F	17/09/95	9:40	Site 1	47012	8	226	B	2	healed scars
N07320	N07321	12	45	70.0	F	17/09/95	9:59	Site 1	47012	7	233	F	2	
N07322	N07323	16	33	85.0	M	17/09/95	16:45	Site 5	47012	6	222	E	3	sluggish, some scale loss
N07324	N07325	18	8	68.5	F	18/09/95	8:28	Site 5	47012	5	225	F	2	
N07942	N07943	16	75	79.0	F	18/09/95	9:10	Site 2	47012	4	243	D	2	hook wound lower jaw
N07944	N07945	12	83	83.0	F	18/09/95	9:21	Site 2	47012	3	203	F	2	fungus on dorsal
N07946	N07947	14	96	81.0	M	19/09/95	9:37	Site 5	47012	2	200	F	1	

(a) Skeena Fish Commission (orange) anchor tags were used

(b) Shaded radio-tagged steelhead were previously anchor-tagged in 1993

(c) Five frequencies (MHz) were used: Channels 12=149.540, 14=149.580; 16=149.620, 18=149.660 and 20=149.700

(d) M = male; F = female

(e) Scar code: A=seal; B=gillnet; C=troll; D=hook; E=other; F=none

(f) Health code: 1=excellent (little scale loss/extremely vigorous); 2=good (some scale loss/vigorous); 3=fair (mod. scale loss/sluggish);

4=poor (heavy scale loss/lethargic)

NA = Not available or not applicable.

Appendix D. Anchor tag release data for coho, by tag number and tagging date, at Kitselas fishwheels, 1995.

Anchor tag No. (a)	(b) Species	Nose-fork length (cm)	Sex (c)	Tagging date	Release		Vial No.	Scar code (d)	Health code (e)	Comments
					Time	Location				
7176	CO	58.0	F	06/08/95	09:25	Site 3	8	F	2	30 sec release
7177	CO	66.0	F	08/08/95	08:05	Site 1	12	F	1	
7178	CO	46.0	M	08/08/95	08:10	Site 1	13	F	1	
7179	CO	43.0	M	08/08/95	09:30	Site 1	17	B	1	
7181	CO	46.0	F	10/08/95	18:35	Site 2	22	D	3	
7182	CO	59.0	M	11/08/95	08:15	Site 1	19	B	2	gillnet marks, fin-rot
7187	CO	64.0	M	14/08/95	07:16	Site 1	34	F	3	
7188	CO	65.0	M	14/08/95	18:15	Site 1	23	F	3	heavy scale loss
7189	CO	69.0	?	14/08/95	18:35	Site 3	NA	F	1	no adipose sample
7190	CO	70.0	M	14/08/95	18:45	Site 3	24	F	2	bleeding from anchor tag
7191	CO	67.0	M	14/08/95	19:15	Site 2	25	D	2	bleeding from mouth injury
7193	CO	51.0	M	16/08/95	08:26	Site 3	29	F	2	
7197	CO	66.0	?	16/08/95	10:50	Site 4	35	F	1	
7200	CO	63.0	F	16/08/95	16:20	Site 1	36	F	4	heavy scale loss
7202	CO	66.0	F	16/08/95	16:25	Site 1	45	F	1	
7203	CO	72.0	M	16/08/95	17:20	Site 2	41	F	1	
7204	CO	68.0	M	17/08/95	17:45	Site 4	31	B	1	
7206	CO	76.0	M	19/08/95	09:30	Site 1	NA	D	2	no adipose, hatchery fish
7207	CO	66.0	F	20/08/95	09:30	Site 1	NA	B	3	no adipose, hatchery fish
7208	CO	69.0	F	23/08/95	09:15	Site 2	38	D	1	
7212	CO	63.0	F	24/08/95	17:10	Site 3	43	F	2	slight bleeding from tag
7213	CO	56.0	M	24/08/95	17:15	Site 3	55	E	2	bleeding from fin
7214	CO	70.0	F	24/08/95	18:10	Site 1	39	D	1	
7215	CO	69.0	F	24/08/95	18:20	Site 1	50	F	1	
7217	CO	63.0	F	25/08/95	14:42	Site 3	44	F	2	
7218	CO	67.0	F	25/08/95	14:50	Site 3	53	E	2	parasitic infection
7220	CO	69.0	F	26/08/95	09:10	Site 3	58	E	1	bleeding from fins
7221	CO	70.0	F	26/08/95	09:15	Site 3	42	F	4	heavy scale loss
7222	CO	68.0	F	26/08/95	09:30	Site 3	54	E	4	heavy scale loss
7223	CO	64.0	F	26/08/95	16:50	Site 3	60	E	1	minor scale loss
7224	CO	64.0	M	26/08/95	17:15	Site 3	199	C	4	heavy scale loss
7254	CO	63.0	F	26/08/95	17:25	Site 3	57	C	1	
7253	CO	68.0	F	26/08/95	17:35	Site 3	56	F	1	
7255	CO	58.0	F	27/08/95	16:50	Site 3	74	F	1	
7256	CO	63.0	F	27/08/95	16:55	Site 3	198	E	2	heavy scale loss
7257	CO	67.0	F	27/08/95	16:58	Site 3	66	F	1	
7258	CO	68.0	F	27/08/95	17:03	Site 3	72	E	1	adipose tear
7259	CO	56.0	M	27/08/95	17:25	Site 5	69	B	1	heavy gillnet scar
7260	CO	64.0	M	28/08/95	08:30	Site 3	62	E	1	heavy scale loss
7261	CO	69.0	F	28/08/95	08:45	Site 3	67	E	1	minor scale loss
7262	CO	62.0	F	28/08/95	08:50	Site 3	75	F	1	
7263	CO	68.0	F	28/08/95	09:05	Site 3	71	E	1	bleeding from floy tag
7264	CO	67.0	F	28/08/95	09:25	Site 5	73	F	1	
7265	CO	63.0	M	28/08/95	00:00	Site 3	81	F	2	
7266	CO	68.0	M	28/08/95	00:00	Site 3	80	F	2	
7267	CO	70.0	F	30/08/95	09:00	Site 2	84	F	1	
7269	CO	71.0	F	30/08/95	17:25	Site 2	98	F	1	
7270	CO	69.0	F	03/09/95	15:30	Site 5	92	E	1	abdomen swollen
7271	CO	63.0	F	05/09/95	16:00	Site 1	106	D	2	left maxillary missing
7272	CO	68.0	M	06/09/95	08:50	Site 5	77	B	3	
7276	CO	76.0	M	07/09/95	08:50	Site 2	87	E	1	scale loss, parasite
7277	CO	69.0	F	08/09/95	08:10	Site 5	NA	F	2	no adipose, hatchery fish

Appendix D. Anchor tag release data for coho, by tag number and tagging date, at Kitselas fishwheels, 1995.

Anchor tag		Nose-fork length (cm)	Sex (c)	Tagging date	Release		Vial No.	Scar code (d)	Health code (e)	Comments
No. (a)	(b) Species				Time	Location				
7278	CO	70.0	F	08/09/95	08:41	Site 2	96	F	1	
7279	CO	69.0	F	09/09/95	08:20	Site 1	70	D	1	scar behind adipose
7280	CO	60.0	M	09/09/95	08:45	Site 5	104	D	1	maxillary injury
7281	CO	67.0	F	09/09/95	09:05	Site 5	91	F	1	
7282	CO	62.0	M	09/09/95	16:15	Site 6	99	F	1	
7283	CO	66.0	M	09/09/95	16:25	Site 5	78	E	1	mod. scale loss
7284	CO	62.0	F	09/09/95	16:26	Site 5	85	F	1	
7226	CO	73.0	M	10/09/95	16:05	Site 5	117	F	2	
7227	CO	72.0	M	11/09/95	08:30	Site 1	115	E	2	minor scale loss
7228	CO	69.0	F	11/09/95	08:32	Site 1	119	F	2	
7231	CO	69.0	F	11/09/95	09:05	Site 5	118	F	2	
7232	CO	76.0	M	11/09/95	09:20	Site 5	108	F	1	
7233	CO	65.0	M	11/09/95	09:25	Site 5	126	F	1	
7234	CO	68.0	F	11/09/95	16:43	Site 1	NA	F	1	no adipose, hatchery fish
7236	CO	69.0	F	11/09/95	16:55	Site 2	121	AB	1	mod. scale loss
7237	CO	57.0	M	11/09/95	17:15	Site 5	NA	E	1	no adipose, hatchery fish
7239	CO	65.0	M	11/09/95	17:35	Site 5	123	F	1	
7240	CO	69.0	F	12/09/95	08:55	Site 1	107	F	1	
7241	CO	63.0	F	12/09/95	16:05	Site 1	122	F	1	
7242	CO	74.0	M	12/09/95	16:20	Site 1	114	F	1	
7244	CO	65.0	M	12/09/95	16:22	Site 1	125	A	1	severe abdominal wound
7245	CO	68.0	F	13/09/95	09:25	Site 1	95	E	2	minor scale loss
7246	CO	62.0	F	13/09/95	09:30	Site 1	100	E	3	major abdominal injury
7247	CO	75.0	M	13/09/95	09:55	Site 5	197	F	2	
7248	CO	68.0	F	13/09/95	10:00	Site 5	209	B	2	minor scale loss
7249	CO	70.0	F	13/09/95	10:05	Site 5	215	F	2	
7250	CO	68.0	M	13/09/95	10:20	Site 5	210	E	2	minor scale loss
7302	CO	62.0	F	13/09/95	14:55	Site 5	134	E	2	bleeding from floy tag
7303	CO	76.0	F	13/09/95	15:05	Site 5	128	F	1	
7304	CO	71.0	F	13/09/95	15:25	Site 5	131	E	2	parasite infection
7305	CO	69.0	M	13/09/95	15:30	Site 5	130	F	1	
7306	CO	69.0	M	13/09/95	15:35	Site 5	132	B	2	scar near anus
7307	CO	68.0	M	13/09/95	16:00	Site 1	145	F	2	
7308	CO	69.0	F	13/09/95	16:20	Site 1	141	B	2	minor scale loss, old scar
7309	CO	67.0	F	13/09/95	16:25	Site 1	140	F	2	minor scale loss
7310	CO	69.0	M	13/09/95	16:30	Site 1	144	F	2	
7311	CO	67.0	F	13/09/95	16:31	Site 1	139	F	1	
7312	CO	65.0	F	13/09/95	16:32	Site 1	212	F	1	
7313	CO	63.0	F	13/09/95	16:35	Site 1	201	F	1	
7314	CO	59.0	M	13/09/95	16:37	Site 1	214	F	2	
7316	CO	71.0	M	14/09/95	09:50	Site 5	156	F	1	
7319	CO	79.0	M	14/09/95	10:00	Site 5	170	B	2	
7320	CO	66.0	F	14/09/95	10:20	Site 5	194	F	2	
7321	CO	69.0	M	14/09/95	10:22	Site 5	193	F	1	
7353	CO	68.0	F	14/09/95	16:15	Site 1	231	F	1	
7322	CO	70.0	F	14/09/95	17:08	Site 5	177	E	1	minor scale loss
7323	CO	67.0	F	14/09/95	17:25	Site 5	167	F	1	
7324	CO	76.0	M	14/09/95	17:27	Site 5	160	F	1	
7325	CO	65.0	M	14/09/95	17:28	Site 5	169	F	1	
7286	CO	71.0	M	14/09/95	17:31	Site 5	184	B	2	old scar
7287	CO	73.0	F	14/09/95	17:45	Site 5	189	F	2	
7288	CO	56.0	M	14/09/95	17:50	Site 5	175	D	2	maxillary injury (bleeding)

Appendix D. Anchor tag release data for coho, by tag number and tagging date, at Kitselas fishwheels, 1995.

Anchor tag No. (a)	(b) Species	Nose-fork length (cm)	Sex (c)	Tagging date	Release		Vial No.	Scar code (d)	Health code (e)	Comments
					Time	Location				
7289	CO	65.0	F	14/09/95	18:00	Site 5	181	F	2	
7290	CO	75.0	M	15/09/95	08:21	Site 5	164	F	1	
7291	CO	71.0	M	15/09/95	08:25	Site 5	173	F	1	
7292	CO	70.5	F	15/09/95	08:28	Site 5	NA	F	1	
7294	CO	72.0	F	15/09/95	08:34	Site 5	180	F	2	poor tag placement
7295	CO	61.0	M	15/09/95	09:01	Site 2	NA	F	2	
7296	CO	74.0	F	15/09/95	09:19	Site 2	183	F	1	
7297	CO	60.0	M	15/09/95	09:24	Site 2	186	A	3	
7298	CO	69.0	F	15/09/95	09:27	Site 2	159	F	1	
7299	CO	73.0	F	15/09/95	09:31	Site 2	179	F	1	
7327	CO	69.0	F	15/09/95	09:40	Site 2	166	F	3	mandible wound
7328	CO	71.0	F	15/09/95	09:50	Site 2	150	F	2	
7329	CO	68.0	F	15/09/95	09:54	Site 2	172	F	1	
7330	CO	64.0	F	15/09/95	09:58	Site 2	176	F	1	
7331	CO	71.0	F	15/09/95	10:51	Site 1	178	F	1	
7333	CO	68.0	M	15/09/95	10:56	Site 1	187	F	1	
7335	CO	75.0	M	15/09/95	11:02	Site 2	153	A	1	seal mark old
7337	CO	68.0	F	15/09/95	14:32	Site 5	192	E	2	scale loss, FW marks
7338	CO	67.5	F	15/09/95	14:35	Site 5	157	F	1	
7339	CO	69.0	M	15/09/95	14:47	Site 5	NA	F	1	
7340	CO	67.0	F	15/09/95	15:03	Site 2	NA	F	2	
7341	CO	59.0	F	15/09/95	15:07	Site 2	NA	F	1	some scale loss
7343	CO	54.0	F	15/09/95	15:10	Site 2	NA	F	2	fungus
7344	CO	68.0	F	15/09/95	15:12	Site 2	NA	F	1	
7345	CO	68.0	M	16/09/95	16:32	Site 1	229	F	1	
7346	CO	68.0	F	16/09/95	16:34	Site 1	228	F	1	
7347	CO	66.0	F	16/09/95	16:48	Site 2	237	F	1	anchor worm
7348	CO	70.0	F	16/09/95	17:04	Site 5	224	F	1	
7349	CO	76.0	M	17/09/95	08:50	Site 5	234	A	2	severe tail damage
7350	CO	72.0	M	17/09/95	09:45	Site 1	221	F	1	
7351	CO	66.0	F	17/09/95	09:51	Site 1	223	D	1	missing eye
7352	CO	72.0	F	17/09/95	09:53	Site 1	241	F	1	
7354	CO	71.0	M	18/09/95	08:37	Site 5	230	E	2	high scale loss
7355	CO	54.0	M	18/09/95	08:42	Site 5	232	A	2	
7356	CO	65.0	F	18/09/95	08:46	Site 5	238	F	2	
7357	CO	74.0	F	18/09/95	16:39	Site 5	219	F	2	
7358	CO	59.0	F	19/09/95	10:16	Site 1	263	F	1	some scale loss
7359	CO	72.0	M	19/09/95	16:40	Site 5	261	F	2	
7360	CO	61.0	F	19/09/95	16:45	Site 5	264	F	2	
7361	CO	59.0	F	20/09/95	09:05	Site 1	266	F	2	
7362	CO	78.0	M	20/09/95	09:10	Site 1	253	D	2	mouth injury
7363	CO	68.0	F	20/09/95	16:36	Site 5	NA	F	1	no adipose, hatchery fish

(a) Skeena Fish Commission (orange) anchor tags were used

(b) Shaded anchor-tagged coho were missing their adipose fin and assumed hatchery reared.

(c) M = male; F = female

(d) Scar code: A=seal; B=gillnet; C=troll; D=hook; E=other; F=none

(e) Health code: 1=excellent (little scale loss/extremely vigorous); 2=good (some scale loss/vigorous); 3=fair (mod. s
4=poor (heavy scale loss/lethargic)

NA = not available or not applicable

Appendix E. Numbers of incidental fish caught by fishwheels operated in Kitselas Canyon,
15 July - 21 September 1995.

Date	Dolly Varden	Cutthroat	Whitefish	Sucker	Lamprey
15/07/95	0	0	0	0	0
16/07/95	0	0	0	0	0
17/07/95	4	0	0	0	0
18/07/95	4	0	0	0	1
19/07/95	0	0	0	0	0
20/07/95	9	2	0	0	0
21/07/95	12	0	0	0	0
22/07/95	30	0	0	1	1
23/07/95	37	2	1	0	0
24/07/95	18	0	0	0	4
25/07/95	16	2	2	0	4
26/07/95	8	2	3	0	19
27/07/95	3	1	1	0	79
28/07/95	1	1	1	0	99
29/07/95	2	0	0	0	13
30/07/95	0	0	1	0	19
31/07/95	9	0	0	0	16
01/08/95	3	0	1	0	2
02/08/95	5	0	0	0	1
03/08/95	1	0	0	0	0
04/08/95	6	0	0	0	6
05/08/95	4	0	0	0	14
06/08/95	4	9	0	0	195
07/08/95	2	1	0	0	126
08/08/95	1	0	2	0	110
09/08/95	4	0	1	0	22
10/08/95	3	0	1	0	21
11/08/95	0	0	1	0	7
12/08/95	9	0	1	0	1
13/08/95	5	0	1	0	3
14/08/95	1	4	0	0	6
15/08/95	4	3	0	0	5
16/08/95	0	1	4	0	4
17/08/95	3	0	2	0	3
18/08/95	1	0	0	0	0
19/08/95	0	0	4	0	3
20/08/95	5	0	1	0	2
21/08/95	1	0	1	1	2
22/08/95	5	0	1	0	0
23/08/95	6	0	1	0	4
24/08/95	0	0	0	0	2
25/08/95	1	0	0	0	4
26/08/95	1	0	0	0	5
27/08/95	0	0	0	0	27

Appendix E. Numbers of incidental fish caught by fishwheels operated in Kitselas Canyon,
15 July - 21 September 1995.

Date	Dolly Varden	Cutthroat	Whitefish	Sucker	Lamprey
28/08/95	3	0	1	1	72
29/08/95	3	0	2	0	11
30/08/95	0	1	2	1	3
31/08/95	2	0	1	0	2
01/09/95	0	0	2	0	0
02/09/95	1	0	4	0	1
03/09/95	0	0	7	0	1
04/09/95	1	0	16	1	0
05/09/95	3	0	8	8	1
06/09/95	1	0	11	0	0
07/09/95	5	0	13	2	1
08/09/95	6	0	10	4	0
09/09/95	8	0	9	0	0
10/09/95	2	0	2	5	0
11/09/95	4	0	8	4	0
12/09/95	4	1	0	1	4
13/09/95	12	0	13	8	2
14/09/95	9	0	10	6	5
15/09/95	19	0	28	18	5
16/09/95	18	16	17	12	1
17/09/95	15	1	6	3	0
18/09/95	12	1	12	0	3
19/09/95	19	1	10	2	0
20/09/95	5	0	7	0	1
21/09/95	4	0	5	0	1
Totals	384	49	235	78	944

Appendix F. Total catch and subsequent release of steelhead, chinook, coho, and chum from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by date, 1995.

Date	Total fishwheel hours	Total catch and release (a)											
		Steelhead			Chinook			Coho			Chum		
		Live	Dead	Total	Live	Dead	Total	Live	Dead	Total	Live	Dead	Total
14/07/95	24.0	0	0	0	0	0	0	0	0	0	0	0	0
15/07/95	48.0	0	0	0	0	0	0	0	0	0	0	0	0
16/07/95	48.0	0	0	0	0	0	0	0	0	0	0	0	0
17/07/95	43.7	0	0	0	0	0	0	0	0	0	1	0	1
18/07/95	43.4	0	0	0	1	0	1	0	0	0	0	0	0
19/07/95	34.5	0	0	0	0	0	0	0	0	0	0	0	0
20/07/95	72.0	0	0	0	0	0	0	0	0	0	0	0	0
21/07/95	72.0	0	0	0	0	0	0	0	0	0	0	0	0
22/07/95	72.0	0	0	0	0	0	0	0	0	0	0	0	0
23/07/95	72.0	1	0	1	2	0	2	0	0	0	0	0	0
24/07/95	72.0	0	0	0	1	0	1	0	0	0	0	0	0
25/07/95	72.0	1	0	1	6	0	6	2	0	2	2	0	2
26/07/95	72.0	1	0	1	5	0	5	2	0	2	0	0	0
27/07/95	72.0	2	0	2	2	0	2	0	0	0	0	0	0
28/07/95	71.0	0	0	0	4	0	4	0	0	0	1	0	1
29/07/95	67.0	0	0	0	1	0	1	0	0	0	0	0	0
30/07/95	65.3	0	0	0	1	0	1	0	0	0	0	0	0
31/07/95	72.0	0	0	0	0	0	0	1	0	1	0	0	0
01/08/95	72.0	0	0	0	0	0	0	0	0	0	0	0	0
02/08/95	72.0	0	0	0	0	0	0	0	0	0	2	0	2
03/08/95	72.0	0	0	0	0	0	0	0	0	0	0	0	0
04/08/95	72.0	0	0	0	1	0	1	0	0	0	0	0	0
05/08/95	72.0	1	0	1	2	0	2	1	0	1	1	0	1
06/08/95	70.0	0	0	0	0	0	0	3	3	6	2	0	2
07/08/95	48.0	3	0	3	1	0	1	0	0	0	1	0	1
08/08/95	53.0	3	0	3	0	0	0	3	0	3	0	0	0
09/08/95	72.0	0	0	0	0	0	0	0	0	0	0	0	0
10/08/95	72.0	0	0	0	0	0	0	1	0	1	0	0	0
11/08/95	81.0	2	0	2	0	0	0	1	0	1	0	0	0
12/08/95	96.0	0	0	0	0	0	0	0	0	0	0	0	0
13/08/95	94.0	0	0	0	0	0	0	1	0	1	0	0	0
14/08/95	96.0	1	0	1	0	0	0	5	0	5	0	0	0
15/08/95	96.0	1	0	1	1	0	1	0	0	0	1	0	1
16/08/95	91.3	6	0	6	0	0	0	6	0	6	0	0	0
17/08/95	96.0	1	0	1	0	0	0	1	0	1	0	0	0
18/08/95	96.0	0	0	0	1	0	1	0	0	0	0	0	0
19/08/95	96.0	2	0	2	0	0	0	1	0	1	1	0	1
20/08/95	96.0	0	0	0	0	0	0	1	0	1	1	0	1
21/08/95	96.0	0	0	0	1	0	1	0	0	0	0	0	0
22/08/95	90.0	0	0	0	0	0	0	0	0	0	0	0	0
23/08/95	71.0	1	0	1	0	0	0	1	0	1	4	0	4
24/08/95	36.0	6	0	6	0	0	0	4	0	4	1	0	1
25/08/95	24.0	1	0	1	0	0	0	2	0	2	0	0	0

Appendix F. Total catch and subsequent release of steelhead, chinook, coho, and chum from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by date, 1995.

Date	Total fishwheel hours	Total catch and release (a)											
		Steelhead			Chinook			Coho			Chum		
		Live	Dead	Total	Live	Dead	Total	Live	Dead	Total	Live	Dead	Total
26/08/95	24.0	6	0	6	0	0	0	7	0	7	4	0	4
27/08/95	36.0	2	0	2	0	0	0	5	0	5	6	0	6
28/08/95	48.0	3	0	3	0	0	0	7	1	8	2	0	2
29/08/95	48.0	1	0	1	1	0	1	0	1	1	1	0	1
30/08/95	54.0	0	0	0	1	0	1	2	0	2	0	0	0
31/08/95	66.0	0	0	0	0	0	0	0	0	0	1	0	1
01/09/95	70.0	0	0	0	0	0	0	0	0	0	0	0	0
02/09/95	72.0	1	0	1	0	0	0	0	0	0	0	0	0
03/09/95	72.0	0	0	0	0	0	0	1	0	1	1	0	1
04/09/95	72.0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/95	72.0	0	0	0	0	0	0	1	0	1	2	0	2
06/09/95	72.0	7	0	7	0	0	0	1	0	1	0	0	0
07/09/95	72.0	2	0	2	0	0	0	2	0	2	5	0	5
08/09/95	78.0	1	0	1	0	0	0	3	0	3	4	0	4
09/09/95	96.0	3	0	3	0	0	0	6	0	6	1	0	1
10/09/95	96.0	1	0	1	0	0	0	1	0	1	3	0	3
11/09/95	73.6	4	0	4	0	0	0	9	0	9	4	0	4
12/09/95	56.5	3	0	3	0	0	0	5	0	5	3	0	3
13/09/95	56.8	12	0	12	0	0	0	19	0	19	5	0	5
14/09/95	56.0	7	0	7	0	0	0	12	0	12	6	0	6
15/09/95	72.0	10	0	10	0	0	0	24	0	24	17	0	17
16/09/95	72.0	15	0	15	0	1	1	8	3	11	12	0	12
17/09/95	72.0	4	0	4	0	0	0	5	0	5	6	0	6
18/09/95	72.0	3	0	3	0	0	0	4	0	4	2	0	2
19/09/95	72.0	2	0	2	0	0	0	4	0	4	0	0	0
20/09/95	72.0	1	0	1	0	0	0	6	0	6	0	0	0
21/09/95	48.3	0	0	0	0	0	0	0	0	0	3	0	3
Totals	4794.3	121	0	121	32	1	33	168	8	176	106	0	106

(a) release numbers include a small unrecorded harvest (considered to be less than 1% of the total catch for each species)

Appendix G. Total catch of adult sockeye, and subsequent harvest (for food fish or ESSR) or release, from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by date, 1995.

Date	Total fishwheel hours	Adult sockeye									
		Catch			Harvest				Number injured	Number released (d)	
		Live	Dead	Total	Food (a)	ESSR-1 (b)	ESSR-2 (c)	Total			
14/07/95	24.0	0	0	0	0	0	0	0	0	0	0
15/07/95	48.0	67	0	67	0	53	0	53	5	14	
16/07/95	48.0	32	0	32	0	0	0	0	0	32	
17/07/95	43.7	25	0	25	22	0	0	22	3	3	
18/07/95	43.4	54	1	55	30	0	0	30	6	25	
19/07/95	34.5	0	0	0	0	0	0	0	0	0	
20/07/95	72.0	93	0	93	83	0	0	83	10	10	
21/07/95	72.0	80	0	80	66	0	0	66	14	14	
22/07/95	72.0	129	0	129	59	0	0	59	17	70	
23/07/95	72.0	68	0	68	26	0	0	26	42	42	
24/07/95	72.0	100	0	100	0	87	0	87	13	13	
25/07/95	72.0	276	0	276	0	258	0	258	18	18	
26/07/95	72.0	214	17	231	0	211	0	211	20	20	
27/07/95	72.0	230	1	231	0	214	0	214	17	17	
28/07/95	71.0	150	0	150	0	136	0	136	14	14	
29/07/95	67.0	114	0	114	0	105	0	105	9	9	
30/07/95	65.3	53	1	54	0	47	0	47	7	7	
31/07/95	72.0	36	2	38	0	31	0	31	7	7	
01/08/95	72.0	55	4	59	0	46	0	46	13	13	
02/08/95	72.0	52	0	52	0	48	0	48	4	4	
03/08/95	72.0	21	0	21	0	18	0	18	3	3	
04/08/95	72.0	70	0	70	0	59	0	59	11	11	
05/08/95	72.0	339	0	339	0	337	0	337	2	2	
06/08/95	70.0	450	31	481	0	456	0	456	25	25	
07/08/95	48.0	148	0	148	0	143	0	143	5	5	
08/08/95	53.0	218	0	218	0	109	96	205	13	13	
09/08/95	72.0	163	0	163	0	0	154	154	9	9	
10/08/95	72.0	62	0	62	0	0	61	61	1	1	
11/08/95	81.0	55	0	55	0	0	51	51	4	4	
12/08/95	96.0	57	0	57	0	0	53	53	4	4	
13/08/95	94.0	42	0	42	0	0	33	33	9	9	
14/08/95	96.0	49	0	49	0	0	43	43	6	6	
15/08/95	96.0	46	0	46	0	0	43	43	3	3	
16/08/95	91.3	59	0	59	0	0	53	53	6	6	
17/08/95	96.0	50	0	50	0	0	46	46	4	4	
18/08/95	96.0	54	0	54	0	0	50	50	4	4	
19/08/95	96.0	69	0	69	0	0	64	64	5	5	
20/08/95	96.0	48	0	48	16	0	27	43	5	5	
21/08/95	96.0	66	0	66	59	0	0	59	7	7	
22/08/95	90.0	41	0	41	0	0	0	0	4	41	
23/08/95	71.0	96	0	96	0	0	0	0	0	96	
24/08/95	36.0	147	0	147	0	0	0	0	0	147	

Appendix G. Total catch of adult sockeye, and subsequent harvest (for food fish or ESSR) or release, from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by date, 1995.

Date	Total fishwheel hours	Adult sockeye								Number injured	Number released (d)
		Catch			Harvest						
		Live	Dead	Total	Food (a)	ESSR-1 (b)	ESSR-2 (c)	Total			
25/08/95	24.0	79	0	79	0	0	0	0	0	79	
26/08/95	24.0	105	0	105	0	0	0	0	9	105	
27/08/95	36.0	100	0	100	0	0	0	0	18	100	
28/08/95	48.0	80	0	80	0	0	0	0	0	80	
29/08/95	48.0	37	0	37	4	0	0	4	7	33	
30/08/95	54.0	40	0	40	0	0	0	0	0	40	
31/08/95	66.0	27	0	27	22	0	0	22	0	5	
01/09/95	70.0	35	0	35	0	0	0	0	0	35	
02/09/95	72.0	25	0	25	0	0	0	0	0	25	
03/09/95	72.0	30	0	30	0	0	0	0	0	30	
04/09/95	72.0	44	0	44	0	0	0	0	0	44	
05/09/95	72.0	63	0	63	0	0	0	0	0	63	
06/09/95	72.0	47	0	47	0	0	0	0	0	47	
07/09/95	72.0	34	0	34	0	0	0	0	0	34	
08/09/95	78.0	60	0	60	0	0	0	0	0	60	
09/09/95	96.0	41	0	41	0	0	0	0	0	41	
10/09/95	96.0	34	0	34	0	0	0	0	0	34	
11/09/95	73.6	28	0	28	0	0	0	0	3	28	
12/09/95	56.5	34	0	34	0	0	0	0	0	34	
13/09/95	56.8	144	0	144	0	0	0	0	0	144	
14/09/95	56.0	100	0	100	0	0	0	0	0	100	
15/09/95	72.0	128	0	128	0	0	0	0	0	128	
16/09/95	72.0	91	0	91	0	0	0	0	0	91	
17/09/95	72.0	50	0	50	0	0	0	0	0	50	
18/09/95	72.0	27	0	27	0	0	0	0	0	27	
19/09/95	72.0	33	0	33	0	0	0	0	0	33	
20/09/95	72.0	16	0	16	0	0	0	0	0	16	
21/09/95	48.3	7	0	7	0	0	0	0	0	7	
Totals	4794.3	5717	57	5774	387	2358	774	3519	386	2255	

(a) food fish removal

(b) sockeye removal (15 July - 8 August)

(c) sockeye and pink removal (8 - 20August)

(d) includes injured fish

Appendix H. Total catch of jack sockeye, and subsequent harvest (for food fish or ESSR) or release, from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by date, 1995.

Date	Total fishwheel hours	Jack sockeye									
		Catch			Harvest				Number injured	Number released (d)	
		Live	Dead	Total	Food (a)	ESSR-1 (b)	ESSR-2 (c)	Total			
14/07/95	24.0	0	0	0	0	0	0	0	0	0	0
15/07/95	48.0	15	1	16	0	12	0	12	0	0	4
16/07/95	48.0	15	0	15	0	0	0	0	0	0	15
17/07/95	43.7	26	0	26	26	0	0	26	0	0	0
18/07/95	43.4	63	0	63	36	0	0	36	0	0	27
19/07/95	34.5	0	0	0	0	0	0	0	0	0	0
20/07/95	72.0	67	0	67	67	0	0	67	0	0	0
21/07/95	72.0	90	0	90	78	0	0	78	12	0	12
22/07/95	72.0	108	0	108	65	0	0	65	5	0	43
23/07/95	72.0	94	0	94	94	0	0	94	0	0	0
24/07/95	72.0	87	0	87	0	87	0	87	0	0	0
25/07/95	72.0	226	0	226	0	225	0	225	1	0	1
26/07/95	72.0	228	0	228	0	223	0	223	5	0	5
27/07/95	72.0	204	0	204	0	204	0	204	0	0	0
28/07/95	71.0	170	0	170	0	159	0	159	11	0	11
29/07/95	67.0	113	0	113	0	113	0	113	0	0	0
30/07/95	65.3	78	0	78	0	73	0	73	5	0	5
31/07/95	72.0	129	0	129	0	123	0	123	6	0	6
01/08/95	72.0	138	1	139	0	136	0	136	3	0	3
02/08/95	72.0	133	0	133	0	126	0	126	7	0	7
03/08/95	72.0	55	0	55	0	53	0	53	2	0	2
04/08/95	72.0	213	0	213	0	199	0	199	14	0	14
05/08/95	72.0	224	0	224	0	220	0	220	4	0	4
06/08/95	70.0	326	27	353	0	348	0	348	5	0	5
07/08/95	48.0	87	0	87	0	86	0	86	1	0	1
08/08/95	53.0	502	0	502	0	171	312	483	19	0	19
09/08/95	72.0	451	0	451	0	0	437	437	14	0	14
10/08/95	72.0	229	0	229	0	0	226	226	3	0	3
11/08/95	81.0	168	0	168	0	0	162	162	6	0	6
12/08/95	96.0	199	0	199	0	0	187	187	12	0	12
13/08/95	94.0	153	0	153	0	0	145	145	8	0	8
14/08/95	96.0	134	0	134	0	0	128	128	6	0	6
15/08/95	96.0	195	0	195	0	0	189	189	6	0	6
16/08/95	91.3	243	0	243	0	0	230	230	13	0	13
17/08/95	96.0	221	0	221	0	0	212	212	9	0	9
18/08/95	96.0	145	0	145	0	0	97	97	48	0	48
19/08/95	96.0	185	0	185	0	0	139	139	46	0	46
20/08/95	96.0	256	0	256	72	0	66	138	118	0	118
21/08/95	96.0	232	0	232	232	0	0	232	0	0	0
22/08/95	90.0	164	0	164	0	0	0	0	0	0	164
23/08/95	71.0	170	0	170	0	0	0	0	0	0	170
24/08/95	36.0	138	0	138	0	0	0	0	0	0	138

Appendix H. Total catch of jack sockeye, and subsequent harvest (for food fish or ESSR) or release, from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by date, 1995.

Date	Total fishwheel hours	Jack sockeye								
		Catch			Harvest				Number injured	Number released (d)
		Live	Dead	Total	Food (a)	ESSR-1 (b)	ESSR-2 (c)	Total		
25/08/95	24.0	57	0	57	0	0	0	0	0	57
26/08/95	24.0	124	0	124	0	0	0	0	0	124
27/08/95	36.0	174	0	174	0	0	0	0	0	174
28/08/95	48.0	172	0	172	0	0	0	0	0	172
29/08/95	48.0	115	0	115	65	0	0	65	0	50
30/08/95	54.0	80	0	80	0	0	0	0	0	80
31/08/95	66.0	102	0	102	58	0	0	58	0	44
01/09/95	70.0	105	0	105	0	0	0	0	0	105
02/09/95	72.0	91	0	91	0	0	0	0	0	91
03/09/95	72.0	64	0	64	0	0	0	0	0	64
04/09/95	72.0	139	0	139	0	0	0	0	0	139
05/09/95	72.0	165	0	165	0	0	0	0	0	165
06/09/95	72.0	111	0	111	0	0	0	0	0	111
07/09/95	72.0	130	0	130	0	0	0	0	0	130
08/09/95	78.0	129	0	129	0	0	0	0	0	129
09/09/95	96.0	78	0	78	0	0	0	0	0	78
10/09/95	96.0	86	0	86	0	0	0	0	0	86
11/09/95	73.6	82	0	82	0	0	0	0	0	82
12/09/95	56.5	44	0	44	0	0	0	0	0	44
13/09/95	56.8	143	0	143	0	0	0	0	0	143
14/09/95	56.0	134	0	134	0	0	0	0	0	134
15/09/95	72.0	94	0	94	0	0	0	0	0	94
16/09/95	72.0	156	0	156	0	0	0	0	0	156
17/09/95	72.0	104	0	104	0	0	0	0	0	104
18/09/95	72.0	62	0	62	0	0	0	0	0	62
19/09/95	72.0	68	0	68	0	0	0	0	0	68
20/09/95	72.0	85	0	85	0	0	0	0	0	85
21/09/95	48.3	20	0	20	0	0	0	0	0	20
Totals	4794.3	9588	29	9617	793	2558	2530	5881	389	3736

(a) food fish removal

(b) sockeye removal (15 July - 8 August)

(c) sockeye and pink removal (8 - 20 August)

(d) includes injured fish

Appendix I. Total catch of pink salmon, and subsequent harvest (for food fish or ESSR) or release, from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by date, 1995.

Date	Total fishwheel hours	Pink salmon								
		Catch			Harvest				Number injured	Number released (d)
		Live	Dead	Total	Food (a)	ESSR-1 (b)	ESSR-2 (c)	Total		
14/07/95	24.0	0	0	0	0	0	0	0	0	0
15/07/95	48.0	9	0	9	0	0	0	0	1	9
16/07/95	48.0	7	0	7	0	0	0	0	0	7
17/07/95	43.7	1	0	1	0	0	0	0	0	1
18/07/95	43.4	3	0	3	0	0	0	0	0	3
19/07/95	34.5	0	0	0	0	0	0	0	0	0
20/07/95	72.0	12	0	12	0	0	0	0	0	12
21/07/95	72.0	11	0	11	0	0	0	0	0	11
22/07/95	72.0	13	0	13	0	0	0	0	0	13
23/07/95	72.0	17	0	17	0	0	0	0	0	17
24/07/95	72.0	30	0	30	0	0	0	0	0	30
25/07/95	72.0	302	0	302	0	0	0	0	0	302
26/07/95	72.0	366	0	366	0	0	0	0	0	366
27/07/95	72.0	418	0	418	0	0	0	0	0	418
28/07/95	71.0	154	0	154	0	0	0	0	0	154
29/07/95	67.0	34	0	34	0	0	0	0	0	34
30/07/95	65.3	12	0	12	0	0	0	0	0	12
31/07/95	72.0	3	0	3	0	0	0	0	0	3
01/08/95	72.0	14	0	14	0	0	0	0	0	14
02/08/95	72.0	26	0	26	0	0	0	0	0	26
03/08/95	72.0	4	0	4	0	0	0	0	0	4
04/08/95	72.0	62	0	62	0	0	0	0	0	62
05/08/95	72.0	1043	0	1043	0	0	0	0	0	1043
06/08/95	70.0	1896	589	2485	0	0	0	0	0	2485
07/08/95	48.0	656	0	656	0	0	0	0	0	656
08/08/95	53.0	436	0	436	0	0	194	194	0	242
09/08/95	72.0	118	0	118	0	0	111	111	7	7
10/08/95	72.0	24	0	24	0	0	21	21	3	3
11/08/95	81.0	82	0	82	0	0	75	75	7	7
12/08/95	96.0	91	0	91	0	0	77	77	14	14
13/08/95	94.0	169	0	169	0	0	155	155	14	14
14/08/95	96.0	449	0	449	0	0	403	403	46	46
15/08/95	96.0	209	0	209	0	0	190	190	19	19
16/08/95	91.3	334	0	334	0	0	301	301	33	33
17/08/95	96.0	205	0	205	0	0	177	177	28	28
18/08/95	96.0	102	0	102	0	0	56	56	46	46
19/08/95	96.0	82	0	82	0	0	8	8	74	74
20/08/95	96.0	75	0	75	0	0	5	5	51	70
21/08/95	96.0	57	0	57	0	0	0	0	0	57
22/08/95	90.0	43	0	43	0	0	0	0	0	43
23/08/95	71.0	356	0	356	0	0	0	0	0	356
24/08/95	36.0	263	0	263	0	0	0	0	0	263

Appendix I. Total catch of pink salmon, and subsequent harvest (for food fish or ESSR) or release, from fishwheels operated at Kitselas Canyon, and total fishwheel hours of operation, by date, 1995.

Date	Total fishwheel hours	Pink salmon								
		Catch			Harvest				Number injured	Number released (d)
		Live	Dead	Total	Food (a)	ESSR-1 (b)	ESSR-2 (c)	Total		
25/08/95	24.0	151	0	151	0	0	0	0	0	151
26/08/95	24.0	168	0	168	0	0	0	0	0	168
27/08/95	36.0	129	0	129	0	0	0	0	0	129
28/08/95	48.0	177	0	177	0	0	0	0	0	177
29/08/95	48.0	57	0	57	0	0	0	0	0	57
30/08/95	54.0	18	0	18	0	0	0	0	0	18
31/08/95	66.0	21	0	21	0	0	0	0	0	21
01/09/95	70.0	13	0	13	0	0	0	0	0	13
02/09/95	72.0	28	0	28	0	0	0	0	0	28
03/09/95	72.0	24	0	24	0	0	0	0	0	24
04/09/95	72.0	49	0	49	0	0	0	0	0	49
05/09/95	72.0	46	0	46	0	0	0	0	0	46
06/09/95	72.0	39	0	39	0	0	0	0	0	39
07/09/95	72.0	60	0	60	0	0	0	0	0	60
08/09/95	78.0	37	0	37	0	0	0	0	0	37
09/09/95	96.0	51	0	51	0	0	0	0	0	51
10/09/95	96.0	55	0	55	0	0	0	0	0	55
11/09/95	73.6	156	0	156	0	0	0	0	0	156
12/09/95	56.5	166	0	166	0	0	0	0	0	166
13/09/95	56.8	295	0	295	0	0	0	0	0	295
14/09/95	56.0	222	0	222	0	0	0	0	0	222
15/09/95	72.0	340	0	340	0	0	0	0	0	340
16/09/95	72.0	176	0	176	0	0	0	0	0	176
17/09/95	72.0	69	0	69	0	0	0	0	0	69
18/09/95	72.0	37	0	37	0	0	0	0	0	37
19/09/95	72.0	24	0	24	0	0	0	0	0	24
20/09/95	72.0	9	0	9	0	0	0	0	0	9
21/09/95	48.3	8	0	8	0	0	0	0	0	8
Totals	4794.3	10813	589	11402	0	0	1773	1773	343	9629

(a) food fish removal

(b) sockeye removal (15 July - 8 August)

(c) sockeye and pink removal (8 - 20 August)

(d) includes injured fish

Appendix J. Summary of fishwheel effort (hours), effort used to calculate CPUE (a), and fishwheel speed (RPM) for four fishwheels operated on the Skeena River, 14 July - 21 September 1995.

Date	Fishwheel 1 operation				Fishwheel 2 operation				Fishwheel 3 operation				Fishwheel 4 operation				Total hours
	Hours	%	Effort for CPUE	RPM (b)	Hours	%	Effort for CPUE	RPM (b)	Hours	%	Effort for CPUE	RPM (b)	Hours	%	Effort for CPUE (a)	RPM (b)	
14/07/95	12.0	50	0.0	3.3	12.0	50	0.0	2.5									24.0
15/07/95	24.0	100	31.9	3.3	24.0	100	32.2	2.5									48.0
16/07/95	24.0	100	19.3	3.3	24.0	100	23.5	2.5									48.0
17/07/95	19.7	82	24.1	2.5	24.0	100	24.1	2.3									43.7
18/07/95	24.0	100	24.0	2.4	19.4	81	23.6	2.1									43.4
19/07/95	24.0	100	0.0	2.5	5.5	23	0.0		5.0	21	0.0						34.5
20/07/95	24.0	100	37.2	2.9	24.0	100	15.2	2.5	24.0	100	14.1	1.1					72.0
21/07/95	24.0	100	23.3	2.2	24.0	100	23.2	2.4	24.0	100	23.3	1.2					72.0
22/07/95	24.0	100	23.7	2.1	24.0	100	23.8	2.2	24.0	100	23.8	1.1					72.0
23/07/95	24.0	100	24.8	2.0	24.0	100	25.2	2.4	24.0	100	25.5	0.9					72.0
24/07/95	24.0	100	23.3	2.3	24.0	100	22.9	1.9	24.0	100	22.5	1.2					72.0
25/07/95	24.0	100	36.2	2.1	24.0	100	36.9	1.7	24.0	100	36.5						72.0
26/07/95	24.0	100	24.4	2.4	24.0	100	24.5	2.4	24.0	100	24.1	1.5					72.0
27/07/95	24.0	100	23.2	2.6	24.0	100	22.4	2.3	24.0	100	23.1	1.4					72.0
28/07/95	24.0	100	24.8	2.2	24.0	100	24.6	2.2	23.0	96	23.0	1.8					71.0
29/07/95	24.0	100	23.1	2.0	24.0	100	22.9	1.9	19.0	79	18.2	1.6					67.0
30/07/95	17.3	72	18.5	1.4	24.0	100	24.6	1.6	24.0	100	24.0	1.1					65.3
31/07/95	24.0	100	22.6	1.7	24.0	100	23.2	1.7	24.0	100	23.9	1.8					72.0
01/08/95	24.0	100	24.3	2.2	24.0	100	24.4	2.0	24.0	100	24.3	1.5					72.0
02/08/95	24.0	100	23.9	1.7	24.0	100	23.7	1.8	24.0	100	24.0	1.3					72.0
03/08/95	24.0	100	11.4	1.9	24.0	100	11.5	2.1	24.0	100	12.2	1.0					72.0
04/08/95	24.0	100	36.0	2.0	24.0	100	36.0	1.9	24.0	100	35.9	1.3					72.0
05/08/95	24.0	100	24.3	2.9	24.0	100	25.0	2.9	24.0	100	25.7	1.7					72.0
06/08/95	24.0	100	24.6	2.6	24.0	100	24.4	2.1	22.0	92	24.9	1.3					70.0
07/08/95	24.0	100	21.3	2.0	24.0	100	21.4	2.0	0.0	0	0.0						48.0
08/08/95	24.0	100	26.5	2.0	24.0	100	25.9	1.6	5.0	21	0.0						53.0
09/08/95	24.0	100	24.3	2.1	24.0	100	24.2	1.7	24.0	100	25.4	1.0					72.0
10/08/95	24.0	100	22.6	1.8	24.0	100	22.7	1.5	24.0	100	22.6	0.8					72.0

Appendix J. Summary of fishwheel effort (hours), effort used to calculate CPUE (a), and fishwheel speed (RPM) for four fishwheels operated on the Skeena River, 14 July - 21 September 1995.

Date	Fishwheel 1 operation				Fishwheel 2 operation				Fishwheel 3 operation				Fishwheel 4 operation				Total hours
	Hours	%	Effort for CPUE	RPM (b)	Hours	%	Effort for CPUE	RPM (b)	Hours	%	Effort for CPUE	RPM (b)	Hours	%	Effort for CPUE (a)	RPM (b)	
11/08/95	24.0	100	23.9	1.7	24.0	100	23.8	1.7	24.0	100	23.7	1.3	9.0	38	0.0		81.0
12/08/95	24.0	100	24.2	1.5	24.0	100	24.3	1.8	24.0	100	24.4	1.6	24.0	100	28.0	2.1	96.0
13/08/95	24.0	100	24.3	2.0	24.0	100	24.5	1.9	22.0	92	22.1	1.4	24.0	100	24.4	2.9	94.0
14/08/95	24.0	100	23.6	1.7	24.0	100	24.3	1.8	24.0	100	23.8	1.4	24.0	100	24.8	2.4	96.0
15/08/95	24.0	100	22.2	1.8	24.0	100	21.4	2.0	24.0	100	21.9	1.7	24.0	100	21.0	2.9	96.0
16/08/95	24.0	100	24.2	2.8	24.0	100	24.7	1.9	19.3	80	19.4	1.7	24.0	100	25.4	2.3	91.3
17/08/95	24.0	100	24.2	1.9	24.0	100	23.9	2.1	24.0	100	25.3	1.8	24.0	100	23.3	2.7	96.0
18/08/95	24.0	100	23.9	2.0	24.0	100	23.6	1.9	24.0	100	22.8	1.7	24.0	100	23.4	2.3	96.0
19/08/95	24.0	100	24.4	1.8	24.0	100	24.3	1.8	24.0	100	24.3	1.6	24.0	100	24.3	2.3	96.0
20/08/95	24.0	100	22.3	1.8	24.0	100	22.4	1.5	24.0	100	22.4	1.4	24.0	100	22.3	2.2	96.0
21/08/95	24.0	100	25.2	1.9	24.0	100	25.4	1.5	24.0	100	25.3	1.4	24.0	100	25.4	2.7	96.0
22/08/95	24.0	100	23.8	1.9	21.0	88	23.8	1.8	21.0	88	23.9	1.9	24.0	100	23.8	2.6	90.0
23/08/95	24.0	100	23.7	3.0	15.0	63	11.8	3.0	8.0	33	4.7	1.9	24.0	100	23.7	3.3	71.0
24/08/95	12.0	50	14.2	3.3	0.0	0	0.0		24.0	100	25.3	2.0	0.0	0	0.0		36.0
25/08/95	0.0	0	0.0		0.0	0	0.0		24.0	100	21.4	1.9	0.0	0	0.0		24.0
26/08/95	0.0	0	0.0		0.0	0	0.0		24.0	100	26.7	1.9	0.0	0	0.0		24.0
27/08/95	0.0	0	0.0		12.0	50	7.4	1.3	24.0	100	23.3	1.6	0.0	0	0.0		36.0
28/08/95	0.0	0	0.0		24.0	100	23.8	1.6	24.0	100	23.9	1.1	0.0	0	0.0		48.0
29/08/95	0.0	0	0.0		24.0	100	25.1	1.0	24.0	100	25.1	1.1	0.0	0	0.0		48.0
30/08/95	6.0	25	0.0		24.0	100	23.3	0.4	24.0	100	23.3	0.9	0.0	0	0.0		54.0
31/08/95	24.0	100	23.0	1.6	18.0	75	17.9	2.3	24.0	100	23.8	0.8	0.0	0	0.0		66.0
01/09/95	24.0	100	23.2	1.6	24.0	100	23.0	2.0	22.0	92	21.0	0.8	0.0	0	0.0		70.0
02/09/95	24.0	100	24.0	1.9	24.0	100	24.1	2.0	24.0	100	24.1	1.8	0.0	0	0.0		72.0
03/09/95	24.0	100	23.0	1.8	24.0	100	23.0	1.9	24.0	100	22.9	1.6	0.0	0	0.0		72.0
04/09/95	24.0	100	24.5	2.0	24.0	100	24.4	2.2	24.0	100	24.5	2.8	0.0	0	0.0		72.0
05/09/95	24.0	100	22.5	1.3	24.0	100	24.5	1.9	24.0	100	24.5	1.4	0.0	0	0.0		72.0
06/09/95	24.0	100	27.3	1.5	24.0	100	24.8	1.7	24.0	100	25.2	1.5	0.0	0	0.0		72.0
07/09/95	24.0	100	22.8	1.4	24.0	100	23.6	1.7	24.0	100	22.9	1.7	0.0	0	0.0		72.0

Appendix J. Summary of fishwheel effort (hours), effort used to calculate CPUE (a), and fishwheel speed (RPM) for four fishwheels operated on the Skeena River, 14 July - 21 September 1995.

Date	Fishwheel 1 operation				Fishwheel 2 operation				Fishwheel 3 operation				Fishwheel 4 operation				Total hours
	Hours	%	Effort for CPUE	RPM (b)	Hours	%	Effort for CPUE	RPM (b)	Hours	%	Effort for CPUE	RPM (b)	Hours	%	Effort for CPUE (a)	RPM (b)	
08/09/95	24.0	100	24.1	1.4	24.0	100	23.9	1.9	24.0	100	24.0	1.4	6.0	25	0.0		78.0
09/09/95	24.0	100	24.6	1.4	24.0	100	23.8	1.8	24.0	100	24.3	1.4	24.0	100	22.3	2.6	96.0
10/09/95	24.0	100	23.6	1.3	24.0	100	23.7	1.8	24.0	100	23.6	1.7	24.0	100	23.8	2.6	96.0
11/09/95	24.0	100	24.2	1.4	17.6	73	25.5	2.7	24.0	100	24.7	1.8	8.0	33	16.0	3.0	73.6
12/09/95	24.0	100	23.7	2.0	8.5	35	0.0		24.0	100	23.6	2.2	0.0	0	0.0		56.5
13/09/95	24.0	100	24.3	2.3	24.0	100	24.2	2.6	8.8	36	16.1	2.7	0.0	0	0.0		56.8
14/09/95	24.0	100	24.0	1.5	24.0	100	26.4	1.8					8.0	33	1.0	1.3	56.0
15/09/95	24.0	100	22.6	1.8	24.0	100	20.7	1.8					24.0	100	22.2	1.4	72.0
16/09/95	24.0	100	25.2	1.4	24.0	100	26.4	1.5					24.0	100	25.8	1.4	72.0
17/09/95	24.0	100	23.8	1.3	24.0	100	23.7	1.4					24.0	100	23.6	0.9	72.0
18/09/95	24.0	100	23.8	1.4	24.0	100	23.8	1.3					24.0	100	23.9	1.1	72.0
19/09/95	24.0	100	24.1	1.2	24.0	100	24.1	1.1					24.0	100	23.9	1.5	72.0
20/09/95	24.0	100	24.0	0.8	24.0	100	23.8	1.1					24.0	100	24.0	0.6	72.0
21/09/95	15.9	66	23.6	1.1	16.3	68	23.7	0.7					16.1	67	23.8	0.5	48.3
Totals	1498.8	89	1493		1513.3	90.1	1508.1		1255.0	91.7	1255.0		527.1	52.3	520.0		4794.3

(a) The total effort is the time the wheel was fishing from midnight to midnight whereas the effort used to calculate the CPUE is the number of hours fished to obtain that date's catch; these two values are different because the time of the last sampling session on each day varied and this affected the following day's effort and catch

(b) Shading indicates periods when fishwheels were intermittently stopping due to low speeds resulting in an inaccurate RPM measurement

Appendix K. Daily catches, numbers tagged, and CPUE (catch/fishwheel hour) for steelhead captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

STEELHEAD CPUE																
Date	Fishwheel 1				Fishwheel 2				Fishwheel 3				Fishwheel 4			
	Daily catch	Tagged (a) (b)		Total CPUE	Daily catch	Tagged (a) (b)		Total CPUE	Daily catch	Tagged (a) (b)		Total CPUE	Daily catch	Tagged (a) (b)		Total CPUE
14/07/95	0			0 0.00	0			0 0.00								
15/07/95	0			0 0.00	0			0 0.00								
16/07/95	0			0 0.00	0			0 0.00								
17/07/95	0			0 0.00	0			0 0.00								
18/07/95	0			0 0.00	0			0 0.00								
19/07/95	0			0 0.00	0			0 0.00	0			0 0.00				
20/07/95	0			0 0.00	0			0 0.00	0			0 0.00				
21/07/95	0			0 0.00	0			0 0.00	0			0 0.00				
22/07/95	0			0 0.00	0			0 0.00	0			0 0.00				
23/07/95	0			0 0.00	0			0 0.00	1		1	1 0.04				
24/07/95	0			0 0.00	0			0 0.00	0			0 0.00				
25/07/95	0			0 0.00	1	1		1 0.03	0			0 0.00				
26/07/95	0			0 0.00	1		1	1 0.04	0			0 0.00				
27/07/95	2	1	1	2 0.09	0			0 0.00	0			0 0.00				
28/07/95	0			0 0.00	0			0 0.00	0			0 0.00				
29/07/95	0			0 0.00	0			0 0.00	0			0 0.00				
30/07/95	0			0 0.00	0			0 0.00	0			0 0.00				
31/07/95	0			0 0.00	0			0 0.00	0			0 0.00				
01/08/95	0			0 0.00	0			0 0.00	0			0 0.00				
02/08/95	0			0 0.00	0			0 0.00	0			0 0.00				
03/08/95	0			0 0.00	0			0 0.00	0			0 0.00				
04/08/95	0			0 0.00	0			0 0.00	0			0 0.00				
05/08/95	0			0 0.00	1		1	1 0.04	0			0 0.00				
06/08/95	0			0 0.00	0			0 0.00	0			0 0.00				
07/08/95	2		2	2 0.09	1		1	1 0.05								
08/08/95	3	1	2	3 0.11	0			0 0.00								
09/08/95	0			0 0.00	0			0 0.00	0			0 0.00				
10/08/95	0			0 0.00	0			0 0.00	0			0 0.00				

Appendix K. Daily catches, numbers tagged, and CPUE (catch/fishwheel hour) for steelhead captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

STEELHEAD CPUE																
Date	Fishwheel 1				Fishwheel 2				Fishwheel 3				Fishwheel 4			
	Daily catch	Tagged (a) (b)			Daily catch	Tagged (a) (b)			Daily catch	Tagged (a) (b)			Daily catch	Tagged (a) (b)		
		Anch	Rad	Total CPUE		Anch	Rad	Total CPUE		Anch	Rad	Total CPUE		Anch	Rad	Total CPUE
11/08/95	1	1	1	0.04	1	1	1	0.04	0		0	0.00	0		0	0.00
12/08/95	0		0	0.00	0		0	0.00	0		0	0.00	0		0	0.00
13/08/95	0		0	0.00	0		0	0.00	0		0	0.00	0		0	0.00
14/08/95	0		0	0.00	0		0	0.00	0		0	0.00	1	1	1	0.04
15/08/95	0		0	0.00	1	1	1	0.05	0		0	0.00	0		0	0.00
16/08/95	1	1	1	0.04	2	2	2	0.08	0		0	0.00	3	3	3	0.12
17/08/95	1	1	1	0.04	0		0	0.00	0		0	0.00	0		0	0.00
18/08/95	0		0	0.00	0		0	0.00	0		0	0.00	0		0	0.00
19/08/95	0		0	0.00	1	1	1	0.04	0		0	0.00	1	1	1	0.04
20/08/95	0		0	0.00	0		0	0.00	0		0	0.00	0		0	0.00
21/08/95	0		0	0.00	0		0	0.00	0		0	0.00	0		0	0.00
22/08/95	0		0	0.00	0		0	0.00	0		0	0.00	0		0	0.00
23/08/95	0		0	0.00	1	1	1	0.08	0		0	0.00	0		0	0.00
24/08/95	2	1	1	0.14					4		4	0.16				
25/08/95									1		1	0.05				
26/08/95									6		6	0.23				
27/08/95					0		0	0.00	2	1	1	0.09				
28/08/95					1	1	1	0.04	2		2	0.08				
29/08/95					1	1	1	0.04	0		0	0.00				
30/08/95	0		0	0.00	0		0	0.00	0		0	0.00				
31/08/95	0		0	0.00	0		0	0.00	0		0	0.00				
01/09/95	0		0	0.00	0		0	0.00	0		0	0.00				
02/09/95	0		0	0.00	1	1	1	0.04	0		0	0.00				
03/09/95	0		0	0.00	0		0	0.00	0		0	0.00				
04/09/95	0		0	0.00	0		0	0.00	0		0	0.00				
05/09/95	0		0	0.00	0		0	0.00	0		0	0.00				
06/09/95	1	1	1	0.04	3	2	1	0.12	3		0	0.12				
07/09/95	0		0	0.00	2	2	2	0.08	0		0	0.00				

Appendix K. Daily catches, numbers tagged, and CPUE (catch/fishwheel hour) for steelhead captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

STEELHEAD CPUE																				
Date	Fishwheel 1					Fishwheel 2					Fishwheel 3					Fishwheel 4				
	Daily catch	Tagged (a) (b)		Total CPUE		Daily catch	Tagged (a) (b)		Total CPUE		Daily catch	Tagged (a) (b)		Total CPUE		Daily catch	Tagged (a) (b)		Total CPUE	
		Anch	Rad				Anch	Rad				Anch	Rad				Anch	Rad		
08/09/95	0		0	0.00	1		1	1	0.04	0		0	0.00	0		0	0	0.00		
09/09/95	0		0	0.00	3		3	3	0.13	0		0	0.00	0		0	0	0.00		
10/09/95	0		0	0.00	1		1	1	0.04	0		0	0.00	0		0	0	0.00		
11/09/95	0		0	0.00	4	1	3	4	0.16	0		0	0.00	0		0	0	0.00		
12/09/95	2		2	0.08	0		0	0.00		1		0	0.04							
13/09/95	6		6	0.25	5	1	4	5	0.21	1		1	0.06							
14/09/95	4		4	0.17	3		3	3	0.11					0			0	0.00		
15/09/95	4	2	2	0.18	3	1	2	3	0.14					3		3	3	0.14		
16/09/95	1		1	0.04	8	1	7	8	0.30					6	1	5	6	0.23		
17/09/95	2		2	0.08	2		2	2	0.08					0			0	0.00		
18/09/95	0		0	0.00	1		1	1	0.04					2		2	2	0.08		
19/09/95	0		0	0.00	1		1	1	0.04					1	1		1	0.04		
20/09/95	0		0	0.00	1		0	0.04						0			0	0.00		
21/09/95	0		0	0.00	0		0	0.00						0			0	0.00		
Totals	32	5	26	31	0.02	51	7	43	50	0.03	21	1	16	17	0.02	17	2	15	17	0.03

(a) Anch = anchor tag; Rad = radio tag

(b) Shaded regions indicate periods when fishwheel was not operating

Appendix L. Daily catches, numbers tagged, and CPUE (catch/fishwheel hour) for coho captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

COHO CPUE												
Date	Fishwheel 1			Fishwheel 2			Fishwheel 3			Fishwheel 4		
	Daily catch	Anchor tagged	CPUE	Daily catch	Anchor tagged	CPUE	Daily catch	Anchor tagged	CPUE	Daily catch	Anchor tagged	CPUE
14/07/95	0	0	0.00	0	0	0.00						
15/07/95	0	0	0.00	0	0	0.00						
16/07/95	0	0	0.00	0	0	0.00						
17/07/95	0	0	0.00	0	0	0.00						
18/07/95	0	0	0.00	0	0	0.00						
19/07/95	0	0	0.00	0	0	0.00	0	0	0.00			
20/07/95	0	0	0.00	0	0	0.00	0	0	0.00			
21/07/95	0	0	0.00	0	0	0.00	0	0	0.00			
22/07/95	0	0	0.00	0	0	0.00	0	0	0.00			
23/07/95	0	0	0.00	0	0	0.00	0	0	0.00			
24/07/95	0	0	0.00	0	0	0.00	0	0	0.00			
25/07/95	1	0	0.03	1	0	0.03	0	0	0.00			
26/07/95	1	0	0.04	0	0	0.00	1	0	0.04			
27/07/95	0	0	0.00	0	0	0.00	0	0	0.00			
28/07/95	0	0	0.00	0	0	0.00	0	0	0.00			
29/07/95	0	0	0.00	0	0	0.00	0	0	0.00			
30/07/95	0	0	0.00	0	0	0.00	0	0	0.00			
31/07/95	1	0	0.04	0	0	0.00	0	0	0.00			
01/08/95	0	0	0.00	0	0	0.00	0	0	0.00			
02/08/95	0	0	0.00	0	0	0.00	0	0	0.00			
03/08/95	0	0	0.00	0	0	0.00	0	0	0.00			
04/08/95	0	0	0.00	0	0	0.00	0	0	0.00			
05/08/95	0	0	0.00	0	0	0.00	1	0	0.04			
06/08/95	2	0	0.08	0	0	0.00	4	1	0.16			
07/08/95	0	0	0.00	0	0	0.00						
08/08/95	3	3	0.11	0	0	0.00						
09/08/95	0	0	0.00	0	0	0.00	0	0	0.00			
10/08/95	0	0	0.00	1	1	0.04	0	0	0.00			
11/08/95	1	1	0.04	0	0	0.00	0	0	0.00	0	0	0.00
12/08/95	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
13/08/95	1	0	0.04	0	0	0.00	0	0	0.00	0	0	0.00
14/08/95	2	2	0.08	1	1	0.04	2	2	0.08	0	0	0.00
15/08/95	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
16/08/95	3	2	0.12	1	1	0.04	1	1	0.05	1	1	0.04
17/08/95	0	0	0.00	0	0	0.00	0	0	0.00	1	1	0.04
18/08/95	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
19/08/95	1	1	0.04	0	0	0.00	0	0	0.00	0	0	0.00
20/08/95	1	1	0.04	0	0	0.00	0	0	0.00	0	0	0.00
21/08/95	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
22/08/95	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
23/08/95	0	0	0.00	1	1	0.08	0	0	0.00	0	0	0.00

Appendix L. Daily catches, numbers tagged, and CPUE (catch/fishwheel hour) for coho captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

COHO CPUE												
Date	Fishwheel 1			Fishwheel 2			Fishwheel 3			Fishwheel 4		
	Daily catch	Anchor tagged	CPUE	Daily catch	Anchor tagged	CPUE	Daily catch	Anchor tagged	CPUE	Daily catch	Anchor tagged	CPUE
24/08/95	2	2	0.14				2	2	0.08			
25/08/95							2	2	0.09			
26/08/95							7	7	0.26			
27/08/95				1	1	0.13	4	4	0.17			
28/08/95				2	1	0.08	6	6	0.25			
29/08/95				0	0	0.00	1	0	0.04			
30/08/95	0	0	0.00	0	0	0.00	2	2	0.09			
31/08/95	0	0	0.00	0	0	0.00	0	0	0.00			
01/09/95	0	0	0.00	0	0	0.00	0	0	0.00			
02/09/95	0	0	0.00	0	0	0.00	0	0	0.00			
03/09/95	0	0	0.00	1	1	0.04	0	0	0.00			
04/09/95	0	0	0.00	0	0	0.00	0	0	0.00			
05/09/95	1	1	0.04	0	0	0.00	0	0	0.00			
06/09/95	0	0	0.00	1	1	0.04	0	0	0.00			
07/09/95	0	0	0.00	1	0	0.04	1	1	0.04			
08/09/95	0	0	0.00	1	1	0.04	2	1	0.08	0	0	0.00
09/09/95	1	1	0.04	4	4	0.17	0	0	0.00	1	1	0.04
10/09/95	0	0	0.00	1	1	0.04	0	0	0.00	0	0	0.00
11/09/95	3	3	0.12	5	5	0.20	1	1	0.04	0	0	0.00
12/09/95	5	4	0.21	0	0	0.00	0	0	0.00			
13/09/95	10	10	0.41	9	9	0.37	0	0	0.00			
14/09/95	0	0	0.00	12	12	0.45				0	0	0.00
15/09/95	3	2	0.13	7	7	0.34				14	14	0.63
16/09/95	2	2	0.08	8	1	0.30				1	1	0.04
17/09/95	4	4	0.17	1	1	0.04				0	0	0.00
18/09/95	0	0	0.00	4	4	0.17				0	0	0.00
19/09/95	1	1	0.04	3	2	0.12				0	0	0.00
20/09/95	2	2	0.08	4	1	0.17				0	0	0.00
21/09/95	0	0	0.00	0	0	0.00				0	0	0.00
Totals	51	42	0.03	70	56	0.05	37	30	0.03	18	18	0.03

Shaded regions indicate periods when fishwheel was not operating

Appendix M. Daily catches, numbers tagged, and CPUE (catch/fishwheel hour) for chinook and chum captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

Date	CHINOOK AND CHUM CPUE															
	Fishwheel 1				Fishwheel 2				Fishwheel 3				Fishwheel 4			
	Chinook		Chum		Chinook		Chum		Chinook		Chum		Chinook		Chum	
	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE
14/07/95	0	0.00	0	0.00	0	0.00	0	0.00								
15/07/95	0	0.00	0	0.00	0	0.00	0	0.00								
16/07/95	0	0.00	0	0.00	0	0.00	0	0.00								
17/07/95	0	0.00	0	0.00	0	0.00	1	0.04								
18/07/95	0	0.00	0	0.00	1	0.04	0	0.00								
19/07/95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
20/07/95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
21/07/95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
22/07/95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
23/07/95	0	0.00	0	0.00	2	0.08	0	0.00	0	0.00	0	0.00				
24/07/95	0	0.00	0	0.00	1	0.04	0	0.00	0	0.00	0	0.00				
25/07/95	4	0.11	0	0.00	2	0.05	1	0.03	0	0.00	1	0.03				
26/07/95	2	0.08	0	0.00	1	0.04	0	0.00	2	0.08	0	0.00				
27/07/95	0	0.00	0	0.00	2	0.09	0	0.00	0	0.00	0	0.00				
28/07/95	2	0.08	0	0.00	2	0.08	0	0.00	0	0.00	1	0.04				
29/07/95	0	0.00	0	0.00	0	0.00	0	0.00	1	0.05	0	0.00				
30/07/95	1	0.05	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
31/07/95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
01/08/95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
02/08/95	0	0.00	0	0.00	0	0.00	2	0.08	0	0.00	0	0.00				
03/08/95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
04/08/95	1	0.03	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
05/08/95	2	0.08	0	0.00	0	0.00	0	0.00	0	0.00	1	0.04				
06/08/95	0	0.00	0	0.00	0	0.00	1	0.04	0	0.00	1	0.04				
07/08/95	1	0.05	1	0.05	0	0.00	0	0.00								
08/08/95	0	0.00	0	0.00	0	0.00	0	0.00								

Appendix M. Daily catches, numbers tagged, and CPUE (catch/fishwheel hour) for chinook and chum captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

Date	Fishwheel 1		Fishwheel 2		Fishwheel 3		Fishwheel 4	
	Chinook		Chum		Chinook		Chum	
	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE
09/08/95	0	0.00	0	0.00	0	0.00	0	0.00
10/08/95	0	0.00	0	0.00	0	0.00	0	0.00
11/08/95	0	0.00	0	0.00	0	0.00	0	0.00
12/08/95	0	0.00	0	0.00	0	0.00	0	0.00
13/08/95	0	0.00	0	0.00	0	0.00	0	0.00
14/08/95	0	0.00	0	0.00	0	0.00	0	0.00
15/08/95	0	0.00	0	0.00	1	0.05	0	0.00
16/08/95	0	0.00	0	0.00	0	0.00	0	0.00
17/08/95	0	0.00	0	0.00	0	0.00	0	0.00
18/08/95	0	0.00	0	0.00	1	0.04	0	0.00
19/08/95	0	0.00	0	0.00	0	0.00	1	0.04
20/08/95	0	0.00	0	0.00	0	0.00	1	0.04
21/08/95	1	0.04	0	0.00	0	0.00	0	0.00
22/08/95	0	0.00	0	0.00	0	0.00	0	0.00
23/08/95	0	0.00	2	0.08	0	0.00	2	0.17
24/08/95	0	0.00	0	0.00			0	0.00
25/08/95							1	0.04
26/08/95							0	0.00
27/08/95					0	0.00	4	0.15
28/08/95					0	0.00	2	0.08
29/08/95					0	0.00	1	0.04
30/08/95	0	0.00	0	0.00	1	0.04	0	0.00
31/08/95	0	0.00	0	0.00	0	0.00	1	0.04
01/09/95	0	0.00	0	0.00	0	0.00	0	0.00
02/09/95	0	0.00	0	0.00	0	0.00	0	0.00
03/09/95	0	0.00	0	0.00	0	0.00	1	0.04

Appendix M. Daily catches, numbers tagged, and CPUE (catch/fishwheel hour) for chinook and chum captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

CHINOOK AND CHUM CPUE																
Date	Fishwheel 1				Fishwheel 2				Fishwheel 3				Fishwheel 4			
	Chinook		Chum		Chinook		Chum		Chinook		Chum		Chinook		Chum	
	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE
04/09/95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
05/09/95	0	0.00	0	0.00	0	0.00	1	0.04	0	0.00	1	0.04				
06/09/95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
07/09/95	0	0.00	0	0.00	0	0.00	5	0.21	0	0.00	0	0.00				
08/09/95	0	0.00	0	0.00	0	0.00	4	0.17	0	0.00	0	0.00	0	0.00	0	0.00
09/09/95	0	0.00	0	0.00	0	0.00	1	0.04	0	0.00	0	0.00	0	0.00	0	0.00
10/09/95	0	0.00	0	0.00	0	0.00	3	0.13	0	0.00	0	0.00	0	0.00	0	0.00
11/09/95	0	0.00	0	0.00	0	0.00	4	0.16	0	0.00	0	0.00	0	0.00	0	0.00
12/09/95	0	0.00	2	0.08	0	0.00	0	0.00	0	0.00	1	0.04				
13/09/95	0	0.00	3	0.12	0	0.00	1	0.04	0	0.00	1	0.06				
14/09/95	0	0.00	2	0.08	0	0.00	4	0.15					0	0.00	0	0.00
15/09/95	0	0.00	9	0.40	0	0.00	3	0.14					0	0.00	5	0.23
16/09/95	1	0.04	1	0.04	0	0.00	7	0.27					0	0.00	4	0.16
17/09/95	0	0.00	1	0.04	0	0.00	3	0.13					0	0.00	2	0.08
18/09/95	0	0.00	1	0.04	0	0.00	1	0.04					0	0.00	0	0.00
19/09/95	0	0.00	0	0.00	0	0.00	0	0.00					0	0.00	0	0.00
20/09/95	0	0.00	0	0.00	0	0.00	0	0.00					0	0.00	0	0.00
21/09/95	0	0.00	0	0.00	0	0.00	0	0.00					0	0.00	3	0.13
Totals	15	0.01	22	0.01	14	0.01	49	0.03	4	0.00	21	0.02	0	0.00	14	0.03

Shaded regions indicate periods when fishwheel was not operating

Appendix N. Daily catches and CPUE (catch/fishwheel hour) for adult and jack sockeye captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

Date	ADULT AND JACK SOCKEYE CPUE															
	Fishwheel 1				Fishwheel 2				Fishwheel 3				Fishwheel 4			
	Adult		Jack		Adult		Jack		Adult		Jack		Adult		Jack	
	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE
14/07/95	0	0.00	0	0.00	0	0.00	0	0.00								
15/07/95	34	1.07	11	0.34	33	1.02	5	0.16								
16/07/95	23	1.19	12	0.62	9	0.38	3	0.13								
17/07/95	11	0.46	16	0.66	14	0.58	10	0.41								
18/07/95	29	1.21	43	1.79	26	1.10	20	0.85								
19/07/95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00				
20/07/95	55	1.48	49	1.32	28	1.85	7	0.46	10	0.71	11	0.78				
21/07/95	29	1.24	45	1.93	43	1.86	36	1.55	8	0.34	9	0.39				
22/07/95	32	1.35	38	1.60	56	2.36	38	1.60	41	1.72	32	1.34				
23/07/95	33	1.33	38	1.54	26	1.03	28	1.11	9	0.35	28	1.10				
24/07/95	47	2.02	42	1.80	33	1.44	27	1.18	20	0.89	18	0.80				
25/07/95	116	3.20	104	2.87	119	3.22	72	1.95	41	1.12	50	1.37				
26/07/95	78	3.20	85	3.48	112	4.57	74	3.02	41	1.70	69	2.86				
27/07/95	114	4.92	118	5.10	72	3.22	53	2.37	45	1.95	33	1.43				
28/07/95	71	2.86	84	3.39	55	2.24	42	1.71	24	1.04	44	1.91				
29/07/95	65	2.82	66	2.86	29	1.27	38	1.66	20	1.10	9	0.49				
30/07/95	25	1.35	35	1.89	25	1.02	37	1.50	4	0.17	6	0.25				
31/07/95	15	0.66	84	3.71	17	0.73	33	1.42	6	0.25	12	0.50				
01/08/95	36	1.48	103	4.24	21	0.86	33	1.35	2	0.08	3	0.12				
02/08/95	24	1.00	95	3.97	21	0.89	25	1.05	7	0.29	13	0.54				
03/08/95	11	0.96	33	2.89	8	0.70	16	1.40	2	0.16	6	0.49				
04/08/95	45	1.25	150	4.16	17	0.47	52	1.45	8	0.22	11	0.31				
05/08/95	99	4.08	68	2.80	136	5.44	64	2.56	104	4.05	92	3.58				
06/08/95	193	7.85	162	6.59	185	7.59	103	4.22	103	4.14	88	3.54				
07/08/95	65	3.06	56	2.64	83	3.87	31	1.45								
08/08/95	118	4.45	413	15.58	100	3.86	89	3.43								

Appendix N. Daily catches and CPUE (catch/fishwheel hour) for adult and jack sockeye captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

Date	ADULT AND JACK SOCKEYE CPUE															
	Fishwheel 1				Fishwheel 2				Fishwheel 3				Fishwheel 4			
	Adult		Jack		Adult		Jack		Adult		Jack		Adult		Jack	
	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE
09/08/95	117	4.82	345	14.22	33	1.37	67	2.77	13	0.51	39	1.54				
10/08/95	43	1.91	174	7.71	14	0.62	40	1.76	5	0.22	15	0.66				
11/08/95	31	1.30	119	4.97	18	0.76	44	1.85	6	0.25	5	0.21	0	0.00	0	0.00
12/08/95	35	1.45	157	6.50	19	0.78	25	1.03	2	0.08	8	0.33	1	0.04	9	0.32
13/08/95	21	0.86	83	3.41	13	0.53	41	1.68	6	0.27	25	1.13	2	0.08	4	0.16
14/08/95	17	0.72	55	2.34	13	0.53	33	1.36	10	0.42	20	0.84	9	0.36	26	1.05
15/08/95	20	0.90	136	6.14	16	0.75	35	1.64	3	0.14	14	0.64	7	0.33	10	0.48
16/08/95	35	1.45	132	5.47	11	0.45	70	2.84	8	0.41	21	1.08	5	0.20	20	0.79
17/08/95	26	1.08	137	5.67	3	0.13	17	0.71	11	0.43	40	1.58	10	0.43	27	1.16
18/08/95	29	1.22	87	3.65	17	0.72	39	1.65	3	0.13	10	0.44	5	0.21	9	0.38
19/08/95	40	1.64	123	5.04	14	0.58	48	1.98	5	0.21	0	0.00	10	0.41	14	0.58
20/08/95	38	1.70	169	7.57	6	0.27	61	2.72	1	0.04	6	0.27	3	0.13	20	0.90
21/08/95	24	0.95	136	5.39	33	1.30	80	3.15	2	0.08	8	0.32	7	0.28	8	0.31
22/08/95	28	1.17	112	4.70	11	0.46	36	1.51	1	0.04	7	0.29	1	0.04	9	0.38
23/08/95	39	1.64	85	3.58	44	3.74	74	6.29	3	0.64	1	0.21	10	0.42	10	0.42
24/08/95	92	6.48	83	5.85					55	2.18	55	2.18				
25/08/95									79	3.69	57	2.66				
26/08/95									105	3.94	124	4.65				
27/08/95					2	0.27	9	1.21	98	4.21	165	7.08				
28/08/95					21	0.88	40	1.68	59	2.47	132	5.53				
29/08/95					7	0.28	13	0.52	30	1.19	102	4.06				
30/08/95	0	0.00	0	0.00	5	0.21	11	0.47	35	1.50	69	2.96				
31/08/95	9	0.39	50	2.18	4	0.22	6	0.34	14	0.59	46	1.93				
01/09/95	5	0.22	28	1.21	25	1.09	55	2.39	5	0.24	22	1.05				
02/09/95	5	0.21	15	0.62	18	0.75	59	2.44	2	0.08	17	0.70				
03/09/95	5	0.22	21	0.91	19	0.82	36	1.56	6	0.26	7	0.31				

Appendix N. Daily catches and CPUE (catch/fishwheel hour) for adult and jack sockeye captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

Date	ADULT AND JACK SOCKEYE CPUE															
	Fishwheel 1				Fishwheel 2				Fishwheel 3				Fishwheel 4			
	Adult		Jack		Adult		Jack		Adult		Jack		Adult		Jack	
	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE
04/09/95	2	0.08	35	1.43	40	1.64	94	3.85	2	0.08	10	0.41				
05/09/95	8	0.36	39	1.73	52	2.12	107	4.37	3	0.12	19	0.78				
06/09/95	6	0.22	25	0.92	32	1.29	67	2.71	9	0.36	19	0.75				
07/09/95	3	0.13	46	2.01	27	1.15	63	2.67	4	0.17	21	0.92				
08/09/95	9	0.37	38	1.58	45	1.89	75	3.14	6	0.25	16	0.67	0	0.00	0	0.00
09/09/95	7	0.28	27	1.10	28	1.18	39	1.64	6	0.25	12	0.49	0	0.00	0	0.00
10/09/95	5	0.21	29	1.23	28	1.18	47	1.98	1	0.04	10	0.42	0	0.00	0	0.00
11/09/95	3	0.12	7	0.29	18	0.71	61	2.39	7	0.28	14	0.57	0	0.00	0	0.00
12/09/95	19	0.80	22	0.93	0	0.00	0	0.00	15	0.64	22	0.93				
13/09/95	58	2.39	60	2.47	73	3.02	57	2.36	13	0.81	26	1.62				
14/09/95	27	1.12	32	1.33	71	2.69	102	3.86					2	2.00	0	0.00
15/09/95	22	0.97	14	0.62	51	2.46	39	1.88					55	2.48	41	1.85
16/09/95	31	1.23	46	1.83	28	1.06	53	2.01					32	1.24	57	2.21
17/09/95	15	0.63	24	1.01	18	0.76	49	2.07					17	0.72	31	1.31
18/09/95	2	0.08	13	0.55	20	0.84	43	1.80					5	0.21	6	0.25
19/09/95	11	0.46	18	0.75	13	0.54	38	1.58					9	0.38	12	0.50
20/09/95	6	0.25	26	1.08	6	0.25	39	1.64					4	0.17	20	0.83
21/09/95	0	0.00	4	0.17	3	0.13	12	0.51	4	0.17	4	0.17				
Totals	2261	1.51	4702	3.15	2187	1.45	2860	1.90	1128	0.90	1718	1.37	198	0.38	337	0.65

Shaded regions indicate periods when fishwheel was not operating

Appendix O. Daily catches and CPUE (catch/fishwheel hour) for pink salmon captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

PINK SALMON CPUE								
Date	Fishwheel 1		Fishwheel 2		Fishwheel 3		Fishwheel 4	
	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE
14/07/95	0	0.00	0	0.00				
15/07/95	5	0.16	4	0.12				
16/07/95	4	0.21	3	0.13				
17/07/95	1	0.04	0	0.00				
18/07/95	0	0.00	3	0.13				
19/07/95	0	0.00	0	0.00				
20/07/95	12	0.32	0	0.00	0	0.00		
21/07/95	7	0.30	3	0.13	1	0.04		
22/07/95	9	0.38	3	0.13	1	0.04		
23/07/95	6	0.24	6	0.24	5	0.20		
24/07/95	21	0.90	9	0.39	0	0.00		
25/07/95	218	6.02	50	1.36	34	0.93		
26/07/95	222	9.10	82	3.35	62	2.57		
27/07/95	308	13.30	54	2.42	56	2.43		
28/07/95	97	3.91	37	1.51	20	0.87		
29/07/95	18	0.78	12	0.52	4	0.22		
30/07/95	6	0.32	4	0.16	2	0.08		
31/07/95	0	0.00	2	0.09	1	0.04		
01/08/95	5	0.21	9	0.37	0	0.00		
02/08/95	5	0.21	19	0.80	2	0.08		
03/08/95	2	0.18	1	0.09	1	0.08		
04/08/95	34	0.94	18	0.50	10	0.28		
05/08/95	284	11.71	281	11.24	478	18.61		
06/08/95	774	31.48	318	13.04	1393	55.98		
07/08/95	423	19.91	233	10.87				
08/08/95	296	11.17	140	5.40				
09/08/95	83	3.42	33	1.37	2	0.08		
10/08/95	8	0.35	15	0.66	1	0.04		
11/08/95	30	1.25	41	1.73	11	0.47	0	0.00
12/08/95	30	1.24	47	1.93	7	0.29	7	0.25
13/08/95	58	2.38	60	2.45	35	1.58	16	0.66
14/08/95	108	4.59	205	8.43	68	2.86	68	2.74
15/08/95	65	2.93	113	5.28	13	0.59	18	0.86
16/08/95	89	3.69	179	7.26	16	0.83	50	1.97
17/08/95	63	2.61	41	1.72	80	3.16	21	0.90
18/08/95	10	0.42	67	2.84	15	0.66	10	0.43
19/08/95	19	0.78	34	1.40	13	0.53	16	0.66
20/08/95	26	1.16	14	0.62	17	0.76	18	0.81
21/08/95	12	0.48	27	1.06	15	0.59	3	0.12
22/08/95	12	0.50	11	0.46	9	0.38	11	0.46
23/08/95	61	2.57	236	20.06	24	5.09	35	1.47

Appendix O. Daily catches and CPUE (catch/fishwheel hour) for pink salmon captured with four fishwheels at Kitselas Canyon, Skeena River, 14 July - 21 September 1995.

PINK SALMON CPUE								
Date	Fishwheel 1		Fishwheel 2		Fishwheel 3		Fishwheel 4	
	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE	Daily catch	CPUE
24/08/95	156	10.99			107	4.24		
25/08/95					151	7.05		
26/08/95					168	6.30		
27/08/95			25	3.37	104	4.46		
28/08/95			80	3.36	97	4.06		
29/08/95			28	1.12	29	1.15		
30/08/95	0	0.00	13	0.56	5	0.21		
31/08/95	5	0.22	5	0.28	11	0.46		
01/09/95	5	0.22	5	0.22	3	0.14		
02/09/95	4	0.17	5	0.21	19	0.79		
03/09/95	5	0.22	2	0.09	17	0.74		
04/09/95	17	0.70	9	0.37	23	0.94		
05/09/95	14	0.62	10	0.41	22	0.90		
06/09/95	8	0.29	17	0.69	14	0.56		
07/09/95	14	0.61	24	1.02	22	0.96		
08/09/95	9	0.37	18	0.75	10	0.42	0	0.00
09/09/95	6	0.24	17	0.71	22	0.90	6	0.27
10/09/95	12	0.51	21	0.89	19	0.80	3	0.13
11/09/95	59	2.43	59	2.31	35	1.42	3	0.19
12/09/95	130	5.48	0	0.00	36	1.53		
13/09/95	91	3.75	143	5.92	61	3.79		
14/09/95	88	3.66	132	5.00			2	2.00
15/09/95	144	6.36	115	5.55			81	3.65
16/09/95	50	1.99	84	3.18			42	1.63
17/09/95	19	0.80	27	1.14			23	0.98
18/09/95	13	0.55	14	0.59			10	0.42
19/09/95	9	0.37	8	0.33			7	0.29
20/09/95	3	0.12	1	0.04			5	0.21
21/09/95	4	0.17	4	0.17			0	0.00
Totals	4296	2.88	3280	2.17	3371	2.69	455	0.88

Shaded regions indicate periods when fishwheel was not operating.