

REF 90199

ANNUAL REPORT
IRON GATE SALMON AND STEELHEAD HATCHERY,
1973-74^{1/}

by

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ABSTRACT

This report describes the operation of the hatchery from July 1, 1973 through June 30, 1974. The hatchery was constructed to maintain runs of king salmon (Oncorhynchus tshawytscha), silver salmon (O. kisutch) and steelhead (Salmo gairdnerii gairdnerii) that formerly utilized spawning and rearing areas upstream from Iron Gate Dam on the Klamath River.

Tables present daily records of water temperatures and weather condition, daily numbers of salmonids entering the hatchery, and total numbers of salmonids reared and released.

^{1/} Anadromous Fisheries Branch Administrative Report No. 75-2.
Submitted July 1974.

INTRODUCTION

This report covers the thirteenth year of operation of the trapping facilities at Iron Gate. These facilities were completed by the Pacific Power and Light Company in February 1962, and have been operated by the Department of Fish and Game during the spring and fall of each year.

The hatchery was constructed by the Pacific Power and Light Company to compensate for spawning and nursery areas blocked by the Iron Gate project. This is the ninth report since the hatchery was completed in February 1966. The Department of Fish and Game, under agreement with the Pacific Power and Light Company, began operation of the hatchery in March 1966. The trapping facilities and hatchery are located on the Klamath River 13 km (8 miles) east of the town of Hornbrook, Siskiyou County.

The report summarizes the numbers of fish trapped and spawned, production of eggs and fish, and water and weather conditions from July 1, 1973 through June 30, 1974.

PRODUCTION SUMMARY

The first fall-run king salmon arrived at the Iron Gate trapping facilities on September 10, 1973, and the last on November 16, 1973.

Spring-run king salmon were taken from July 1 until July 19, 1973 (for spawning in the fall of 1973), and from June 5 until June 10, 1974 (for spawning in the fall of 1974). Silver salmon started entering the trap September 21, 1973, and continued until January 4, 1974. Steelhead trout were trapped from September 21, 1973 to April 30, 1974 (Figure 1). Production data are as follows:

	Adults trapped	Females spawned	Number eggs taken	Number fingerlings planted	Number yearlings planted	Total weight planted (kg)	Fish on hand June 30, 1974
King salmon, fall run							
1972 BY					110,000	6,237	0
1973 BY	8,702	3,933	11,578,645	6,150,000	0	33,153	0
King salmon, spring run							
1972 BY					36,000	1,853	0
1973 BY	23*	22	76,395	0	0		23,000
1974 BY	4						0
Silver salmon							
1972 BY					10,000	313	0
1973 BY	841	177	405,003				178,000
Steelhead							
1973 BY				421,504	200,800	9,018	0
1974 BY	1,865	768	1,454,558				600,000

* A total of 49 1973 brood year spring-run adults was trapped during the previous reporting period. Surviving fish from this group were combined with 23 trapped this year for spawning in the fall of 1973.

KING SALMON MAINTENANCE PROGRAM

History of the 1973-74 Run

Spring Run 1973 Brood Year

Between July 1 and July 21, 1973, 23 1973 brood year spring-run king salmon were trapped. Five of these were grilse. They were added to the 49 1973 brood year spring-run king salmon taken in June 1973, and the combined group was spawned in the fall of 1973. The fish ladder was closed in late July 1973 to conserve the cold water pool in Iron Gate Reservoir.

Twenty-two spring-run females were spawned. They produced 76,395 eggs. This was an average of 3,473 eggs/female. A total of five lots of eggs was taken. The average fertility of these eggs was 83%. Spring-run and fall-run salmon are being reared separately. None were planted. We had approximately 23,000 fingerlings on hand June 30, 1974. All will be held for release as yearlings next fiscal year.

Fall Run, 1973 Brood Year

The fish ladder was reopened September 9, 1973. A total of 8,702 fall-run king salmon was trapped: 3,273 males, 4,135 females, and 1,294 grilse. There were 3,933 fall-run king salmon females spawned, producing 11,578,645 eggs, for an average of 2,944 eggs/female. Prespawning mortality was 202 females (5%). Seventeen lots of eggs were taken from fall-run fish. The average fertility of the fall-run eggs was 78%. All resulting fingerlings (6,150,000) were planted from June 3 to June 14, 1974. Size at planting ranged from 5.0 to 6.5 g (see Table 1).

Spring Run, 1974 Brood Year

The 1974 brood year spring-run king salmon began entering the trap June 5, 1974. Four adults and no grilse had been collected by June 30, 1974. These will be held and spawned in the fall of 1974.

Planting Yearling King Salmon

A total of 146,000 yearling (1972 brood year) king salmon (36,000 spring-run and 110,000 fall-run) were planted this season (see Table 1).

Table 1

King Salmon Planting Data, 1973-74 Season

Race and brood year	Date released	Average size	Number released	Release site
Spring run, 1972 BY	11/ 8/73	57 g (7.9/lb)	18,000*	Hatchery outlet
	2/27/74	47 g (9.7/lb)	18,000**	Hatchery outlet
Fall run, 1972 BY	11/ 2/73	57 g (8.0/lb)	110,000	Hatchery outlet
Fall run, 1973 BY	6/ 3/74	6.5 g (70/lb)	1,500,000	Hatchery outlet
	6/ 7/74	5.0 g (91/lb)	2,750,000	Hatchery outlet
	6/11/74	5.0 g (91/lb)	1,250,000	Hatchery outlet
	6/14/74	5.0 g (91/lb)	650,000	Hatchery outlet

* Marked RV, to compare returns of fall-released fish with those of spring releases.

** Marked LV, to compare returns of fall-released fish with those of spring releases.

Marked King Salmon Recovered

During fiscal year 1973-74 eight marked king salmon were trapped. Seven were Iron Gate marks; one was a stray (see following table).

Mark	Number trapped	Brood year	Race	Number released	Date released	Average size at release	Release site
LV	4	1970	Spring run	6,487	3/72	108 g (4.2/lb)	Iron Gate Hatchery
RV	3	1970	Spring run	6,486	11/71	76 g (6.0/lb)	"
LV-RV	1	1969	Fall run	325,000	6/70	10.2 cm (4 inches) <u>FL</u>	Libby Pond-Rogue River, Oregon

SILVER SALMON MAINTENANCE PROGRAM

History of the 1973 Run

The first silver salmon entered the trap September 21, 1973, and the last January 4, 1974. A total of 841 was trapped: 201 males, 212 females, and 428 grilse. Spawning of the 177 females produced 405,003 eggs for an average of 2,288 eggs/female. Egg loss was fairly high, primarily due to white-spot and soft-shell. We had approximately 178,000 fingerlings remaining on hand June 30, 1974. All were held to assure 75,000 for release as yearlings in Spring, 1975.

Planting 1972 Brood Year Silver Salmon

Date	Average size	Number	Release site
11/9/73	31 g (14.5/lb)	10,000	Hatchery outlet

STEELHEAD TROUT MAINTENANCE PROGRAM

History of the 1973-74 Run

Between September 21 and November 27, 1973, 665 adult steelhead entered the trap and were placed in the holding ponds to await spawning in the spring. An additional 1,200 adult steelhead were trapped in the spring between January 4 and April 30, 1974. For the sixth consecutive year, these two groups were held and spawned separately. One hundred seventy females from the fall-trapped group produced 292,473 eggs, an average of 1,720 eggs/female. Five hundred and ninety-eight spring-trapped females produced 1,162,085 eggs, an average of 1,943 eggs/female. This made a total of 1,454,558 steelhead eggs, from 768 females, for the season. We had approximately 600,000 1974 brood year steelhead fingerlings on hand June 30, 1974.

Marked Steelhead Trapped

A total of 46 marked steelhead was trapped this season. Of these 42 had been reared at Iron Gate Hatchery. The Ad-RV were progeny of fall-trapped adults. The LV-RV were progeny of the spring-trapped adults (see following table).

Mark	Number trapped	Brood year	Number released	Date released	Average size at release	Release site
Ad-RV	23	1970	50,000	5/3/71	45 g (10/lb)	Iron Gate Hatchery
LV-RV	19	1970	50,000	5/3/71	44 g (10.4/lb)	Iron Gate Hatchery
Ad-LV	4	1969	36,113	Mar. 70	12.7 cm <u>FL</u>	Upper Rogue River

Planting 1973 Brood Year Steelhead

A total of 622,304 1973 brood year steelhead was planted this season: 400,000 fingerlings in 1973, and 21,504 fingerlings in 1974, and 200,800 yearlings in 1974 (see following table).

Planting, 1973 Brood Year Steelhead

Date	Average size	Number	Release site
8/23/73	0.75 g (600/lb)	200,000	Hatchery outlet
11/27/73	3.5 g (130/lb)	200,000	Hatchery outlet
3/ 1/74	10.8 g (42/lb)	21,504	Hatchery outlet
TOTAL FINGERLINGS		421,504	
5/ 8/74	45 g (10/lb)	97,800	Fish ladder outlet
5/ 8/74	35 g (13/lb)	83,000	Fish ladder outlet
5/20/74	30 g (15/lb)	20,000	Fish ladder outlet
TOTAL YEARLINGS		200,800	
TOTAL 1973 BROOD YEAR		622,304	

On April 24, 1968, the Department entered into an agreement with the Pacific Power and Light Company and the Oregon Game Commission to rear, mark and release 100,000 yearling steelhead at Iron Gate Hatchery annually for a 4 year period. These fish are in addition to the normal steelhead production. The goal of the program was to establish a steelhead fishery in the river above Copco Lake. According to this agreement, a portion of the surplus adult returns is trucked to the upper Klamath River by the Oregon Game Commission.

This year, 650 adult steelhead trapped at Iron Gate Hatchery were transported by the Oregon Game Commission and planted in the Klamath River above Copco Lake.

PUBLIC RELATIONS

During 1973-74 fiscal year, 6,207 people visited the hatchery. Included in the total were 1,610 people in many organized groups which were conducted through the installation.

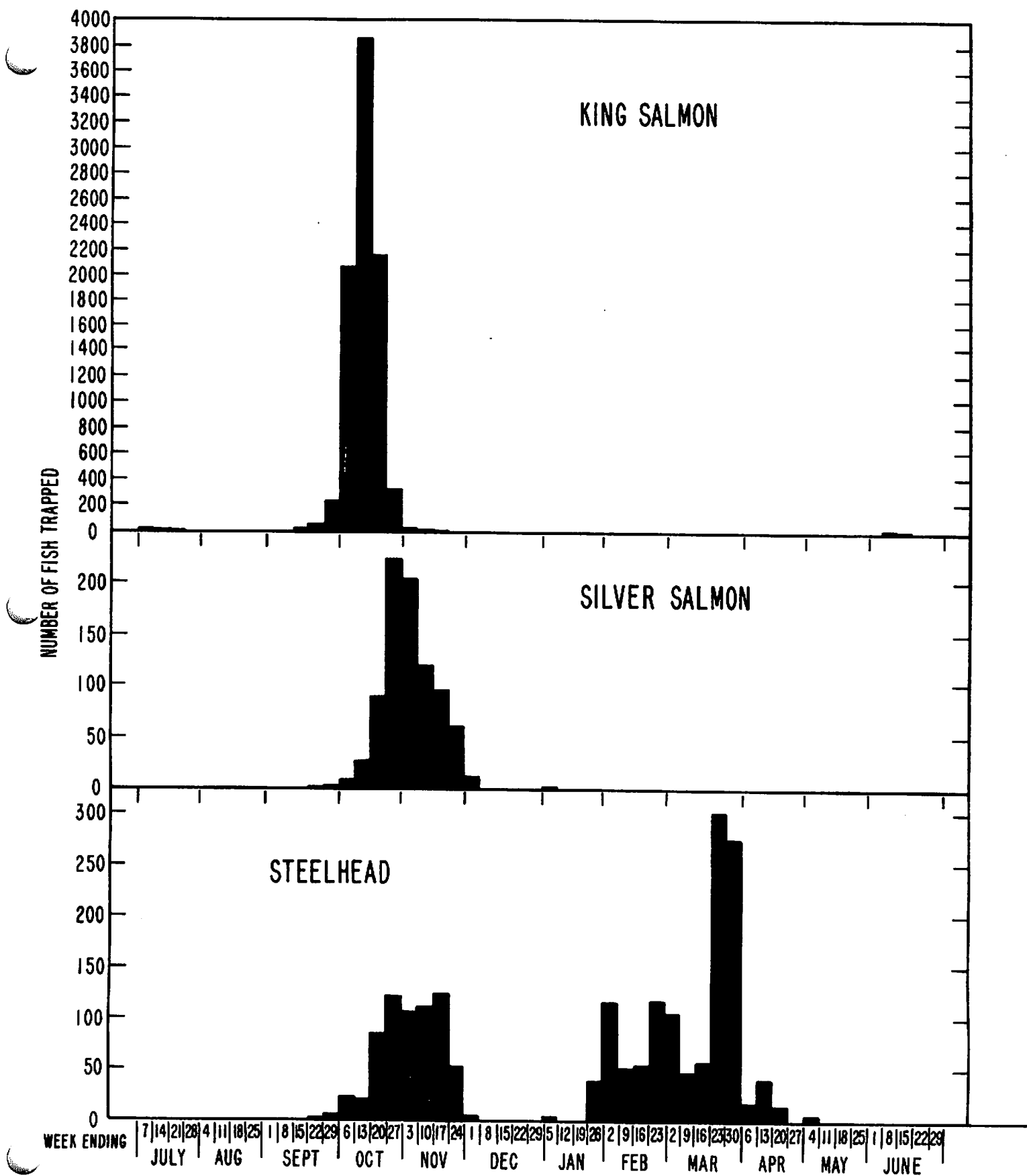


Figure 1. Weekly numbers of king salmon, silver salmon and steelhead trapped at Iron Gate Hatchery, July 1, 1973 through June 30, 1974.

Appendix Table 1

Yearly Comparison of Fish Trapped at
Iron Gate Salmon and Steelhead Hatchery
July 1, 1965 through June 30, 1974

Species	7/1/65 through 6/30/66	7/1/66 through 6/30/67	7/1/67 through 6/30/68	7/1/68 through 6/30/69	7/1/69 through 6/30/70	7/1/70 through 6/30/71	7/1/71 through 6/30/72	7/1/72 through 6/30/73	7/1/73 through 6/30/74
King Salmon									
Male	141	1,129	850	972	539	2,889	4,413	1,126	3,273
Female	224	1,610	1,275	1,714	474	7,395	6,033	1,919	4,135
Total Adults	365	2,739	2,125	2,686	1,013	10,284	10,526	3,200*	7,430**
Grilse	313	325	562	78	1,917	219	315	484	1,299***
Total	678	3,064	2,687	2,764	2,930	10,503	10,846	3,684*	8,729
Silver Salmon									
Male	2	2	27	14	84	716	74	38	201
Female	0	2	24	10	118	671	52	18	212
Total Adults	2	4	51	24	202	1,387	125	56	413
Grilse	0	0	28	333	749	236	21	35	428
Total	2	4	79	357	951	1,623	146	91	841
Steelhead									
Spring Trap					813	2,073	3,583	1,060	665
Fall Trap					381	292	174	226	1,200
Total Adults	227	299	984	370	1,194	2,365	2,757	1,286	1,865

* This total includes 155 unsexed spring-run king salmon.

** This total includes 22 unsexed adult spring-run king salmon.

*** This total includes 5 spring-run king salmon grilse.

Appendix Table 2

Iron Gate Salmon and Steelhead Hatchery
 Weather, Water, and Fish Data Report
 July 1, 1973, through June 30, 1974

July	Temperature (C*)				Weather	Fish Trapped				
	Water		Air			King Salmon		Silver Salmon		Steelhead Trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	9.4	8.3	30.6	3.9	clear	6	3			
2	9.4	8.3	32.6	7.2	clear					
3	8.9	8.3	33.9	9.4	clear	4				
4	10.0	8.3	32.6	11.0	clear					
5	10.0	8.9	32.6	11.0	clear					
6	9.4	8.9	26.7	9.4	clear	4				
7	9.4	8.3	32.6	7.2	clear					
8	10.0	8.3	31.7	9.4	clear					
9	9.4	8.9	37.2	10.0	clear					
10	10.0	8.9	31.7	12.2	clear					
11	10.0	8.9	31.1	12.2	clear	3	2			1
12	10.0	8.9	31.1	12.2	cloudy					6
13	9.4	8.9	35.6	10.0	clear					1
14	10.0	8.9	35.0	11.0	clear					
15	10.0	8.9	37.8	12.2	clear					
16	10.0	8.9	36.7	12.2	clear					
17	10.6	8.3	37.2	16.7	clear					
18	10.0	8.9	37.2	13.3	clear					
19	10.0	8.9	36.7	12.8	rain	1				
20	10.6	8.3	29.4	11.0	cloudy					
21	10.0	8.3	28.9	8.9	clear					
22	10.0	8.9	26.1	6.7	clear					
23	10.0	8.9	27.2	6.7	clear					
24	10.6	8.9	33.3	6.7	clear					
25	10.6	8.9	36.1	6.7	clear					
26	10.6	8.9	37.2	6.7	clear					
27	10.6	8.9	36.7	14.4	clear					
28	10.6	8.3	37.8	13.3	clear					
29	10.6	8.9	36.7	12.8	clear					
30	10.6	8.9	37.2	13.3	clear					
31	10.6	8.9	37.8	19.4	clear					
Totals						18	5			

* Temperature measured to nearest whole degree F, and later converted to C.

Appendix Table 2 (continued)

August	Temperature		(C*)		Weather	Fish Trapped				
	Water		Air			King Salmon		Silver Salmon		Steelhead Trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	10.6	8.3	37.8	18.3	clear					
2	10.6	8.9	36.1	12.8	clear					
3	10.6	8.9	33.9	12.2	clear					
4	10.6	8.3	34.4	12.8	clear					
5	10.6	8.9	33.9	11.7	clear					
6	11.0	8.9	33.9	11.0	clear					
7	11.0	8.9	32.6	11.7	clear					
8	11.0	8.9	35.0	10.6	clear					
9	10.6	8.9	31.1	13.9	clear					
10	11.0	8.9	32.2	10.6	clear					
11	10.6	8.9	34.4	10.0	clear					
12	10.6	8.9	35.0	12.2	clear					
13	10.6	8.9	35.6	11.7	clear					
14	10.6	8.9	37.2	11.0	clear					
15	10.6	8.9	33.9	11.7	clear					
16	11.0	8.9	29.4	8.9	clear					
17	10.6	8.9	30.6	6.7	clear					
18	11.0	8.9	31.1	6.1	clear					
19	11.0	9.4	32.2	6.7	clear					
20	10.6	10.0	32.2	8.3	clear					
21	10.6	9.4	30.0	7.8	clear					
22	11.0	9.4	27.2	6.7	clear					
23	11.0	9.4	22.2	5.0	cloudy					
24	11.0	9.4	22.2	5.6	rain					
25	10.6	10.0	23.9	4.4	cloudy					
26	11.0	9.4	28.9	6.7	cloudy					
27	11.0	8.9	27.2	7.8	clear					
28	11.0	9.4	31.7	6.1	clear					
29	11.0	9.4	33.3	8.9	clear					
30	11.0	9.4	28.9	8.9	cloudy					
31	11.7	9.4	27.2	8.3	clear					
Totals										

* Temperature measured to nearest whole degree F, and later converted to C.

Appendix Table 2 (continued)

September	Temperature		(C*)		Weather	Fish Trapped				
	Water		Air			King Salmon		Silver Salmon		Steelhead
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	Trout
1	11.7	9.4	23.3	4.4	clear					
2	11.0	10.0	30.6	6.7	clear					
3	11.0	10.0	33.9	4.4	clear					
4	11.0	10.6	36.1	6.7	clear					
5	11.0	9.4	34.4	7.8	clear					
6	11.7	10.0	26.7	6.1	clear					
7	11.7	10.0	18.9	11.7	cloudy					
8	11.7	9.4	28.9	6.7	clear					
9	11.0	10.6	32.2	10.6	clear					
10	11.0	10.6	33.3	10.0	clear	1	2			
11	11.0	10.6	32.2	10.0	clear	2	1			
12	12.2	10.6	33.3	8.3	clear					
13	11.7	10.6	31.1	6.7	pty cloudy					
14	11.7	10.6	25.5	5.6	clear					
15	11.7	11.0	27.8	4.4	clear		3			
16	11.7	11.0	29.4	6.1	clear					
17	11.7	11.0	29.4	6.1	pty cloudy	3				
18	12.2	11.0	25.0	9.4	cloudy					
19	11.7	11.0	23.9	13.9	rain	10				
20	12.2	11.7	18.9	11.0	rain	18	4			
21	12.2	11.0	21.7	2.2	clear	7	1		1	1
22	12.2	11.0	13.3	5.6	rain	8	1		1	1
23	12.2	11.7	25.0	10.0	rain					
24	12.2	11.7	18.9	9.4	rain	20	1		1	
25	12.2	11.7	20.0	4.4	clear	6	3			
26	12.2	11.7	26.1	4.4	clear	28	2		1	1
27	12.2	11.7	27.2	2.2	clear	71	12			2
28	12.2	11.7	26.1	3.3	clear	19	4			2
29	12.2	11.7	29.4	4.4	clear	58	8		1	2
30	12.2	11.7	26.1	6.7	pty cloudy	91	12		1	1
Totals						342	54		6	10

* Temperature measured to nearest whole degree F, and later converted to C.

Appendix Table 2 (continued)

October	Temperature (C*)				Fish Trapped			
	Water		Air		King Salmon		Silver Salmon	
	Maximum	Minimum	Maximum	Minimum	Adults	Grilse	Adults	Grilse
1	12.8	12.2	17.2	1.1	404	31		1
2	12.8	12.2	18.9	0.0	492	48		2
3	12.8	12.2	23.3	-2.8	271	40		
4	12.8	12.2	24.4	-3.3	182	31		1
5	12.8	12.2	21.7	0.6	268	33		1
6	12.8	12.2	15.6	6.7	136	15		2
7	12.8	12.2	14.4	2.2	196	21		1
8	13.3	12.8	16.1	-0.6	655	93		1
9	13.3	12.8	18.9	-1.1	435	67	1	1
10	13.3	13.3	18.9	-2.2	531	97	1	2
11	13.3	13.3	21.1	3.3	586	103		5
12	13.9	13.3	24.4	3.3	611	143	2	6
13	13.9	13.3	25.0	1.7	277	43	2	4
14	13.9	13.3	26.7	2.2	348	72	2	1
15	13.9	13.3	25.1	2.2	377	86	2	3
16	13.9	13.3	25.5	1.7	211	43	7	2
17	13.9	13.3	26.7	0.6	317	80	3	
18	13.9	12.8	25.5	1.1	265	63	6	6
19	13.9	12.8	24.4	1.1	166	54	9	11
20	13.9	12.8	21.1	8.9	62	11	8	8
21	13.9	13.3	20.6	8.9	79	15	15	9
22	13.9	13.3	20.6	6.7	36	7	17	10
23	13.9	13.3	13.3	5.0	94	18	8	7
24	13.9	13.3	10.6	1.1	9	5	42	22
25	13.3	13.3	13.3	-1.7	33	10	12	12
26	13.3	12.8	15.6	-3.3	3	6	20	13
27	13.3	12.8	18.3	-1.1	6		23	11
28	12.8	12.8	18.9	1.1			24	8
29	12.8	12.8	15.6	-2.2	10			
30	12.8	12.2	18.3	-2.2	2	3	37	22
31	12.8	12.2	14.4	1.1			34	20
Totals					7,062	1,238	282	200
								325

* Temperature measured to nearest whole degree F, and later converted to C.

Appendix Table 2 (continued)

November	Temperature		(C*)		Weather	Fish Trapped				
	Water		Air			King Salmon	Silver Salmon	Steelhead		
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	Trout
1	12.8	12.8	8.9	1.7	pty cloudy			20	13	22
2	12.2	12.2	9.4	-3.9	pty cloudy	1	2	6	27	12
3	12.2	12.2	8.3	-5.6	pty cloudy					
4	11.7	11.7	8.9	1.1	pty cloudy	2		20	16	18
5	11.7	12.2	8.3	2.2	rain			3	17	10
6	11.7	11.0	8.9	5.6	rain					
7	11.0	11.0	11.0	3.9	rain			24	24	22
8	10.6	10.6	16.7	8.3	cloudy			4	11	62
9	10.6	10.0	17.8	8.3	rain					
10	11.0	10.6	15.0	5.0	rain					
11	10.6	10.6	12.2	7.8	rain			20	19	30
12	10.6	10.0	10.0	6.7	rain			12	22	48
13	10.0	10.6	7.8	0.6	rain					
14	10.6	10.6	11.0	0.6	cloudy					
15	10.0	10.0	12.2	6.1	cloudy					
16	10.0	10.0	10.0	6.7	rain	1		5	17	47
17	10.0	10.0	7.8	0.0	rain					
18	10.0	9.4	4.4	0.0	cloudy					
19	9.4	9.4	6.7	-6.7	cloudy			5	22	32
20	9.4	9.4	6.7	0.0	snow			4	14	9
21	8.9	8.9	6.7	0.6	cloudy					
22	8.9	8.9	5.6	0.0	rain					
23	8.3	8.3	4.4	-1.1	rain			6	9	13
24	8.3	7.8	5.0	-0.6	rain					
25	7.8	7.2	7.2	0.6	rain					
26	7.2	7.2	6.7	1.1	rain					
27	7.2	6.7	11.0	2.2	cloudy			2	10	5
28	6.7	6.7	11.0	1.1	rain					
29	6.7	6.7	13.3	5.6	rain					
30	6.7	6.7	8.3	5.6	rain					
Totals						4	2	131	221	330

* Temperature measured to nearest whole degree F, and later converted to C.

Appendix Table 2 (continued)

December	Temperature (C°)				Weather	Fish Trapped				
	Water		Air			King Salmon		Silver Salmon		Steelhead Trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	6.1	5.1	5.7	1.1	rain					
2	6.1	5.6	8.3	-1.1	clear					
3	5.6	5.6	10.0	-2.2	pty cloudy					
4	5.6	5.0	4.4	-3.9	cloudy					
5	5.0	5.0	8.9	1.1	cloudy					
6	5.0	5.0	12.2	2.8	cloudy					
7	5.0	5.0	12.2	6.1	rain					
8	5.0	4.4	5.0	-1.7	cloudy					
9	4.4	4.4	7.8	3.9	cloudy					
10	4.4	4.4	5.6	-4.4	cloudy					
11	4.4	4.4	6.7	1.1	rain					
12	4.4	4.4	8.3	0.6	rain					
13	4.4	4.4	7.8	-1.1	rain					
14	4.4	4.4	8.3	0.0	cloudy					
15	4.4	4.4	11.7	0.0	pty cloudy					
16	4.4	4.4	8.9	-1.1	rain					
17	4.4	4.4	10.0	1.7	rain					
18	4.4	3.9	7.8	3.3	clear					
19	4.4	4.4	10.6	3.3	cloudy					
20	4.4	4.4	8.3	4.4	rain					
21	4.4	4.4	6.7	2.8	rain					
22	4.4	4.4	6.1	-1.7	rain					
23	4.4	4.4	4.4	-1.1	rain					
24	4.4	4.4	8.9	3.3	rain					
25	4.4	4.4	8.9	3.3	cloudy					
26	4.4	3.9	7.8	-1.1	rain					
27	4.4	3.9	6.7	2.7	rain					
28	4.4	4.4	8.9	3.9	rain					
29	4.4	3.9	10.6	1.7	rain					
30	4.4	3.9	6.1	-2.2	clear					
31	4.4	3.9	4.4	-2.8	rain					
Totals										

* Temperature measured to nearest whole degree F, and later converted to C.

Appendix Table 2 (continued)

January	Temperature (C°)				Weather	Fish Trapped				
	Water		Air			King Salmon		Silver Salmon		Steelhead Trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	4.4	3.9	3.3	-2.6	clear					
2	4.4	3.9	0.0	-11.0	cloudy					
3	3.9	3.9	1.1	-5.0	clear					
4	3.9	3.3	1.7	-11.0	clear					
5	3.3	3.9	-3.9	-7.8	snow				1	5
6	2.8	2.3	3.3	-10.6	clear					
7	2.8	2.3	0.0	-17.8	clear					
8	2.8	2.2	6.7	-16.7	clear					
9	2.8	2.2	2.2	-12.2	clear					
10	2.2	2.2	3.3	-15.6	clear					
11	2.2	2.2	2.2	-13.9	cloudy					
12	2.2	2.2	7.8	-0.6	rain					
13	2.2	2.2	13.3	3.9	clear					
14	2.8	2.2	11.0	4.4	rain					
15	2.8	2.8	10.0	8.9	rain					
16	1.7	1.7	6.7	5.6	rain					
17	2.2	2.2	9.4	-1.1	clear					
18	2.2	2.2	13.3	3.9	rain					
19	2.8	2.8	10.0	1.1	cloudy					
20	3.3	3.3	5.6	-1.1	clear					
21	3.3	3.3	5.6	-7.2	clear					
22	3.9	3.3	9.4	-6.1	clear					17
23	3.9	3.9	11.0	3.1	clear					
24	3.9	3.9	10.0	-5.0	clear					23
25	3.9	3.3	11.0	-5.6	pty cloudy					
26	3.3	3.3	6.7	-2.8	clear					
27	3.3	3.3	6.1	0.0	rain					
28	3.3	3.3	5.6	-2.8	clear					
29	3.3	3.3	2.8	-5.6	cloudy					30
30	3.3	3.3	8.9	-3.3	cloudy					36
31	3.3	3.3	5.6	3.3	rain					
Totals									1	161

* Temperature measured to nearest whole degree F, and later converted to C.

Appendix Table 2 (continued)

February	Temperature (C°)				Weather	Fish Trapped				
	Water		Air			King Salmon		Silver Salmon		Steelhead Trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	3.3	2.8	8.3	-0.6	pty cloudy					
2	3.3	2.8	7.8	-5.0	clear					
3	3.3	2.8	7.4	-7.2	clear					
4	3.3	2.8	8.3	-2.8	clear					17
5	3.3	2.8	5.6	-5.0	clear					
6	3.3	2.8	8.3	-7.8	clear					
7	3.3	2.8	13.9	-7.2	clear					9
8	3.3	2.8	14.4	-5.6	clear					
9	3.3	2.8	13.3	-6.7	clear					
10	3.3	2.8	13.9	-6.7	clear					
11	3.3	3.3	13.3	-6.7	clear					21
12	3.3	3.3	8.9	1.1	cloudy					
13	3.3	3.3	5.6	-5.0	cloudy					9
14	3.3	3.3	11.0	0.0	cloudy					
15	3.3	3.3	11.0	0.6	cloudy					
16	3.3	3.3	8.3	0.0	cloudy					
17	3.9	3.3	7.8	-3.3	cloudy					
18	3.9	3.9	4.4	0.0	rain					26
19	3.9	3.9	7.8	-1.7	cloudy					
20	4.4	3.9	7.2	-5.6	cloudy					33
21	4.4	4.4	6.7	1.1	rain					12
22	4.4	3.9	6.7	-6.1	cloudy					
23	4.4	1.1	8.3	-7.8	clear					
24	4.4	4.4	12.8	-4.4	clear					69
25	4.4	4.4	12.6	-1.1	rain					
26	4.4	4.4	15.0	-1.1	rain					
27	4.4	4.4	10.0	-2.2	rain					37
28	4.4	4.4	6.1	4.4	snow					
Totals										230

* Temperature measured to nearest whole degree F, and later converted to C.

Appendix Table 2 (continued)

March	Temperature		(C°)		Weather	Fish Trapped				Steelhead Trout
	Water		Air			King Salmon	Silver Salmon			
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	4.4	4.4	8.9	-1.1	rain					
2	4.4	3.9	7.8	-2.2	rain					
3	4.4	3.9	6.1	-3.3	rain					
4	4.4	3.9	8.9	-2.8	pty cloudy					34
5	4.4	3.9	10.0	0.0	pty cloudy					
6	3.9	3.9	1.7	0.6	rain					
7	4.4	3.9	3.3	-2.2	snow					
8	4.4	2.9	4.4	-10.0	clear					14
9	4.4	3.9	8.3	-7.8	clear					
10	3.9	3.9	11.0	-2.2	cloudy					
11	3.9	3.9	12.2	1.1	pty cloudy					
12	3.9	3.9	11.7	3.9	rain					21
13	4.4	3.9	11.7	1.1	pty cloudy					
14	4.4	4.4	16.7	3.9	pty cloudy					
15	4.4	3.9	20.0	3.9	pty cloudy					37
16	4.4	4.4	18.3	4.4	pty cloudy					
17	4.4	4.4	19.4	4.4	pty cloudy					
18	5.6	5.0	17.8	0.0	clear					205
19	5.6	5.6	20.0	-3.3	clear					
20	6.7	6.1	18.9	3.9	clear					
21	6.7	6.6	18.9	-4.4	clear					
22	6.7	6.7	18.9	-3.3	clear					
23	7.2	6.7	19.4	-3.3	clear					97
24	7.2	7.2	20.6	-2.2	clear					
25	7.2	7.2	16.7	-2.2	rain					
26	8.3	6.1	16.7	1.7	cloudy					143
27	7.3	7.2	13.9	3.3	rain					140
28	7.3	8.3	14.4	2.2	rain					20
29	7.9	7.9	15.0	4.4	rain					22
30	7.9	7.3	11.0	6.1	rain					
31	8.9	8.3	6.7	2.8	rain					142
total										683

* Temperature measured to nearest whole degree F, and later converted to C.

Appendix Table 2 (continued)

April	Temperature		(°C)		Weather	King Salmon		With Traps		Steelhead Trout
	Water		Air			Adults	Grilse	Silver Salmon		
	Maximum	Minimum	Maximum	Minimum				Adults	Grilse	
1	3.3	7.2	10.0	3.3	rain					
2	3.3	7.2	11.0	-2.2	pty cloudy					
3	7.2	7.2	12.2	-1.1	pty cloudy					
4	7.2	7.2	12.2	-2.2	clear					13
5	7.2	7.2	13.2	7.2	rain					
6	7.2	7.2	14.4	-1.7	pty cloudy					
7	7.2	7.2	14.4	-2.2	clear					
8	7.2	7.2	15.0	-2.2	pty cloudy					19
9	7.2	7.2	7.2	-2.2	pty cloudy					
10	8.3	8.3	11.0	0.0	pty cloudy					
11	8.3	8.3	12.2	1.1	cloudy					24
12	8.3	8.3	14.4	-2.2	clear					
13	8.3	8.3	16.7	-4.4	clear					
14	8.3	8.3	21.1	-2.2	clear					
15	8.9	8.3	18.3	2.2	clear					
16	8.9	8.9	21.1	-2.2	clear					8
17	8.9	8.3	23.3	0.0	clear					
18	9.4	9.4	12.2	6.1	rain					8
19	10.0	9.4	11.7	0.6	clear					
20	9.4	8.9	15.6	5.6	clear					
21	9.4	9.4	22.6	-1.1	clear					
22	9.4	9.4	14.4	-0.6	rain					
23	10.0	9.4	11.0	3.3	rain					
24	10.0	9.4	12.2	-0.6	cloudy					
25	10.0	9.4	14.4	-0.6	cloudy					
26	10.0	10.0	14.4	-2.2	rain					
27	10.0	9.4	15.6	1.1	cloudy					
28	10.0	9.4	21.1	0.0	clear					
29	10.0	9.4	25.0	2.2	clear					
30	10.0	9.4	26.1	4.4	clear					7
Totals										76

* Temperature measured to nearest whole degree F, and later converted to C.

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Appendix Table 2 (continued)

Day	Temperature				Weather	Fish Trapped			
	Water		Air			King Salmon		Silver Salmon	
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse
1	10.0	10.0	21.0	3.0	clear				
2	10.0	10.0	21.7	-1.1	clear				
3	10.0	10.0	22.2	0.0	clear				
4	10.6	9.4	26.7	1.7	clear				
5	10.0	10.0	26.3	3.9	clear				
6	10.0	10.0	29.4	5.6	clear				
7	10.0	9.4	30.0	7.2	clear				
8	10.0	9.4	27.8	7.8	clear				
9	10.0	9.4	18.0	2.8	clear				
10	10.6	9.4	21.1	3.9	clear				
11	10.0	9.4	22.8	2.8	clear				
12	10.6	10.0	21.1	6.1	clear				
13	10.6	10.0	17.2	-1.1	pty cloudy				
14	10.6	10.0	17.8	1.1	pty cloudy				
15	10.6	10.0	13.9	-0.6	pty cloudy				
16	10.6	10.0	13.9	-3.3	snow				
17	10.6	10.0	13.3	0.0	snow				
18	10.6	10.0	13.3	0.6	cloudy				
19	10.6	10.0	12.2	1.1	pty cloudy				
20	10.6	10.1	18.3	0.6	pty cloudy				
21	10.6	10.0	21.1	2.8	pty cloudy				
22	10.6	10.0	22.8	2.2	clear				
23	10.6	10.0	22.8	4.4	clear				
24	10.6	10.0	23.9	4.4	clear				
25	10.6	10.0	27.8	8.9	clear				
26	10.6	10.0	28.3	7.8	clear				
27	10.6	10.0	28.3	6.7	clear				
28	10.6	10.6	26.7	4.4	cloudy				
29	10.6	10.6	20.0	1.1	clear				
30	11.0	10.6	26.7	0.0	clear				

* Temperature measured to nearest whole degree F, and later converted to C.

Appendix Table 2 (continued)

June	Temperature		(C°)		Weather	Fish Trapped				
	Water		Air			King Salmon		Silver Salmon		Steelhead
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	Trout
1	11.7	10.0	32.6	6.1	clear					
2	11.7	10.0	27.8	7.2	clear					
3	12.8	11.0	25.0	7.8	clear					
4	13.3	12.2	23.3	8.3	rain					
5	13.3	12.8	20.0	7.2	cloudy	3				
6	13.3	13.3	21.7	7.2	clear					
7	13.9	12.8	21.1	1.7	clear					
8	13.3	10.6	27.8	2.8	clear					
9	11.0	10.0	32.2	14.4	clear					
10	11.7	10.6	35.6	6.1	clear	1				
11	11.7	10.6	37.8	10.0	clear					
12	10.0	10.6	36.1	11.0	clear					
13	11.7	10.0	35.0	10.0	clear					
14	10.0	10.6	33.3	11.0	clear					
15	11.7	10.0	31.1	10.0	clear					
16	11.7	10.6	27.2	10.0	cloudy					
17	12.2	10.6	33.9	9.4	clear					
18	12.2	10.6	34.4	12.2	clear					
19	12.2	10.6	16.1	15.6	rain					
20	11.7	10.6	26.7	10.0	clear					
21	11.7	10.6	33.3	7.2	clear					
22	11.7	10.6	30.0	10.0	clear					
23	12.2	10.6	30.0	8.3	clear					
24	11.7	10.6	29.4	8.3	clear					
25	12.2	10.6	26.1	9.4	clear					
26	12.2	10.0	28.3	3.3	clear					
27	11.7	10.6	28.3	6.7	clear					
28	12.2	10.6	31.7	8.9	clear					
29	12.2	10.0	38.9	14.4	clear					
30	11.7	11.0	31.1	14.4	clear					
Totals						4				
Grand Totals						7,430	1,299	413	428	1,865

* Temperature measured to nearest whole degree F, and later converted to C.