

State of California
The Resources Agency
Department of Fish and Game
Anadromous Fisheries Branch

REF 90194

ANNUAL REPORT IRON GATE SALMON AND STEELHEAD HATCHERY
FOURTH YEAR OF OPERATION, 1968-69 1/

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Region 1, Inland Fisheries

SUMMARY

The first king salmon, Oncorhynchus tshawytscha, arrived at the Iron Gate trapping facilities on September 2, 1968, and the last was trapped on November 20. Silver salmon, Oncorhynchus kisutch, started entering the trap on September 17 and continued until January 13, 1969. The first steelhead trout, Salmo gairdneri, entered the trap on September 14, 1968, and the last on April 16, 1969. Steelhead trout were trapped in small numbers during most weeks of the fall and winter. There was a 24-day period in late January and early February and a 15-day period in December with no steelhead. On May 11, 1969, the first spring-run king salmon arrived. From July 1, 1968 through June 30, 1969, spring-run salmon had entered the trap. Production data are as follows:

Species	Number trapped	Number females spawned	Number eggs taken	Number fingerlings planted	Number yearlings planted	Total pounds planted	On hand June 30, 1969
King salmon	2,708*	1,609	5,792,400	4,680,000	3,360	29,418	36,450
Silver salmon	357**	7	15,037	--	68,848	5,555	55,450 ^{2/}
Steelhead trout	370	184	322,777	--	526,005	65,965	432,000 ^{3/}

* Includes 2,636 adults and 72 grilse. Does not include 50 spring-run adults and 6 grilse which were trapped in May and June 1969, but were not ready to spawn until fall 1969.

** Includes 24 adults and 333 grilse.

1/ Anadromous Fisheries Administrative Report No. 70-2 (February 1970)

2/ Includes Cascade silver salmon received from Mt. Shasta Hatchery, February 1969.

3/ Includes fish received from Cowlitz Trout Hatchery, Winlock, Washington, May 1969.

INTRODUCTION

This report covers the eighth year of operation of the trapping facilities at Iron Gate. These facilities were completed by 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 Pacific Power and Light Company to compensate for spawning areas blocked by the Iron Gate project. This is the fourth report since the hatchery was completed in February 1966. The Department of Fish and Game, under agreement with Pacific Power and Light Company, began operation of the hatchery in March 1966. The trapping facilities and hatchery are located eight miles east of Hornbrook, Siskiyou County.

This report summarizes the number of fish trapped and spawned, production of eggs and fish, and water conditions from July 1, 1968, through June 30, 1969.

KING SALMON MAINTENANCE PROGRAM

History of the 1968 Salmon Run

The fish ladder was opened on September 1, 1968, and the first king salmon entered the trap on September 2. When the run ended on November 20, a total of 2,708 salmon had been trapped. Of these, 946 were males, 1,690 females, and 72 grilse. Of the adult salmon trapped, 35 percent were males, 62 percent females, and 3 percent grilse.

There were 1,609 females spawned; they produced 5,792,400 eggs, or 3,600 eggs per female. Sixteen lots of eggs were taken, the first on September 25 and the last on November 8. Average fertility of the eggs was 95 percent. Eleven of the spawned females were spring-run fish; they produced 39,600 eggs which are included above. The resulting fingerlings were being reared separately and were released in the fall of 1969.

During the fiscal year 1968-69, eighteen marked king salmon were trapped. Fifteen of these had been marked at Trinity River Hatchery and released in the Trinity River as follows: eight left maxillary (released May 25, 1965) and seven right maxillary (released October 29, 1965). There were three left ventral-right maxillary marked fish trapped in June 1969. They were 1966 brood-year fish released January 1968 in the Rogue River, Oregon.

Planting 1967 Brood-Year Spring-Run King Salmon

On November 14, 1968, 3,360 king salmon yearlings, averaging 20 per pound, and marked left pectoral, were released in the Klamath River through the hatchery discharge. These yearlings were the progeny of two spring-run king salmon spawned in 1967.

Planting 1968 Brood-Year Fall-Run King Salmon

On May 30, 1969, the screens were removed and 4,680,000 fall-run king salmon were released in the Klamath River through the hatchery discharge. At this time they averaged 160 per pound and weighed a total of 29,250 pounds.

SILVER SALMON MAINTENANCE PROGRAM

History of the 1968 Run

The first silver salmon entered the trap on September 17, 1968, and the last on January 13, 1969. During this period, 357 silver salmon were trapped. Of these, 14 were males, 10 females, and 333 grilse. Seven females were spawned producing 15,037 eggs. Average fertility of the eggs was 78 percent.

A shipment of 60,450 Cascade silver salmon fingerlings were received from Mt. Shasta Hatchery on February 14, 1969.

Planting 1967 Brood-Year Silver Salmon

On April 8, 1969, we released 68,848 yearling silver salmon in the Klamath River. Of these 28,263 fish averaged 9.5 per pound, and 40,585 fish averaged 15.7 per pound.

STEELHEAD TROUT MAINTENANCE PROGRAM

History of the 1968-69 Run

During the fall of 1968, 152 steelhead trout entered the trap. Six of these fish were marked: two left maxillary, three right maxillary and one dorsal. They were placed in holding ponds to be spawned in the spring.

In the spring, 218 more steelhead trout were trapped, including four marked individuals. Two were marked left maxillary, one right maxillary, and one adipose. All ten of the marked fish were strays from Trinity River Hatchery.

Fifteen lots of eggs were taken from 184 females, producing 322,777 eggs. Average fertility of the eggs was 94 percent. Fall-trapped females averaged 1,790 eggs per female, and spring-trapped females, 1,752.

A shipment of 200,000 eyed steelhead trout eggs were received from the Cowlitz Trout Hatchery, Winlock, Washington, on May 8, 1969. As of June 30, 1969, 184,000 of these Cowlitz steelhead fingerlings were on hand. These fish differ from the Klamath River strain in that they usually mature at four years of age and weigh from 10 to 12 pounds each.

Planting 1967 Brood-Year Steelhead

On October 30, 1968, 40,001 yearling steelhead, averaging 6.5 per pound, were released in the Klamath River through the hatchery discharge. During November 1968, another 99,785 yearling steelhead were released. Of this latter group, 49,935 were anal-left maxillary marked and were released in the Klamath River at the hatchery. The remaining 49,850 were anal-right maxillary marked and were released in the Klamath River at the Standard Oil Bulk Plant in Happy Camp. These fish averaged from 2.9 to 3.8 per pound.

Total loss incurred from green egg stage to the time these 1967 brood-year fish were released was 64.7 percent.

Planting 1968 Brood-Year Steelhead

The 1968 brood-year steelhead were released as follows:

Date	Number	Mark	Size at release	Area released
1969				
May 12	36,524 ⁴ / ₅	Ad-RV	9.8/lb.	Hatchery
May 12	37,575 ⁵ / ₅	Ad-RM	9.0/lb.	"
May	35,954 ⁵ / ₅	Ad-LM	9.1/lb.	Happy Camp
May 15	39,366	None	10.8/lb.	Hatchery
June 30	163,470	None	12-15/lb.	"
June 30	73,330	Ad-LV	12-15/lb.	"

On April 24, 1968, the Department entered into an agreement with Pacific Power and Light Company and the Oregon Game Commission to rear and release 100,000 yearling steelhead at Iron Gate Hatchery. When these fish return as adults, enough will be spawned to rear another 100,000 yearlings and the remainder will be released in the Klamath River above the utility company's Copco Dam on an experimental basis with the aim of establishing a steelhead fishery on the river between Klamath Falls and Copco Lake, which lies just south of the California-Oregon border. The fish raised under this agreement will be marked before release. The marked returning adults not used for egg production will be trucked by the Oregon Game Commission to the upper Klamath River for release. This agreement will continue for five years or until three separate brood-years of steelhead have been tested.

The 36,524 steelhead marked adipose-right ventral, and the 73,330 marked adipose-left ventral, are this year's release for the above cooperative program.

Total loss incurred from green egg stage to the time of release of all 1968 brood-year steelhead trout was 58.8 percent.

PUBLIC RELATIONS

During the period of this report, 8,315 persons visited the hatchery. Included in the total were 4,031 people in 18 organized groups conducted through the installation.

⁴/ Progeny of fall-run fish.

⁵/ Five hundred of these fish were tagged with non-reward green dangler tags.

APPENDIX

FIGURES

FIGURE A-1. Shows weekly number of king salmon, silver salmon, and steelhead trout trapped.

TABLES

TABLE A-1. Yearly Comparison of Fish Trapped at Iron Gate Salmon and Steelhead Hatchery - compares the number of fish, by species, trapped at Iron Gate trapping facilities from July 1, 1965, through June 30, 1969.

TABLE A-2. Chart of Operation - enumerates details of each activity.

TABLES A-3
through

A-14. Weather, Water, and Fish Data Report - summarizes daily water and air temperature, weather condition, and number of fish, by species, trapped at Iron Gate Hatchery.

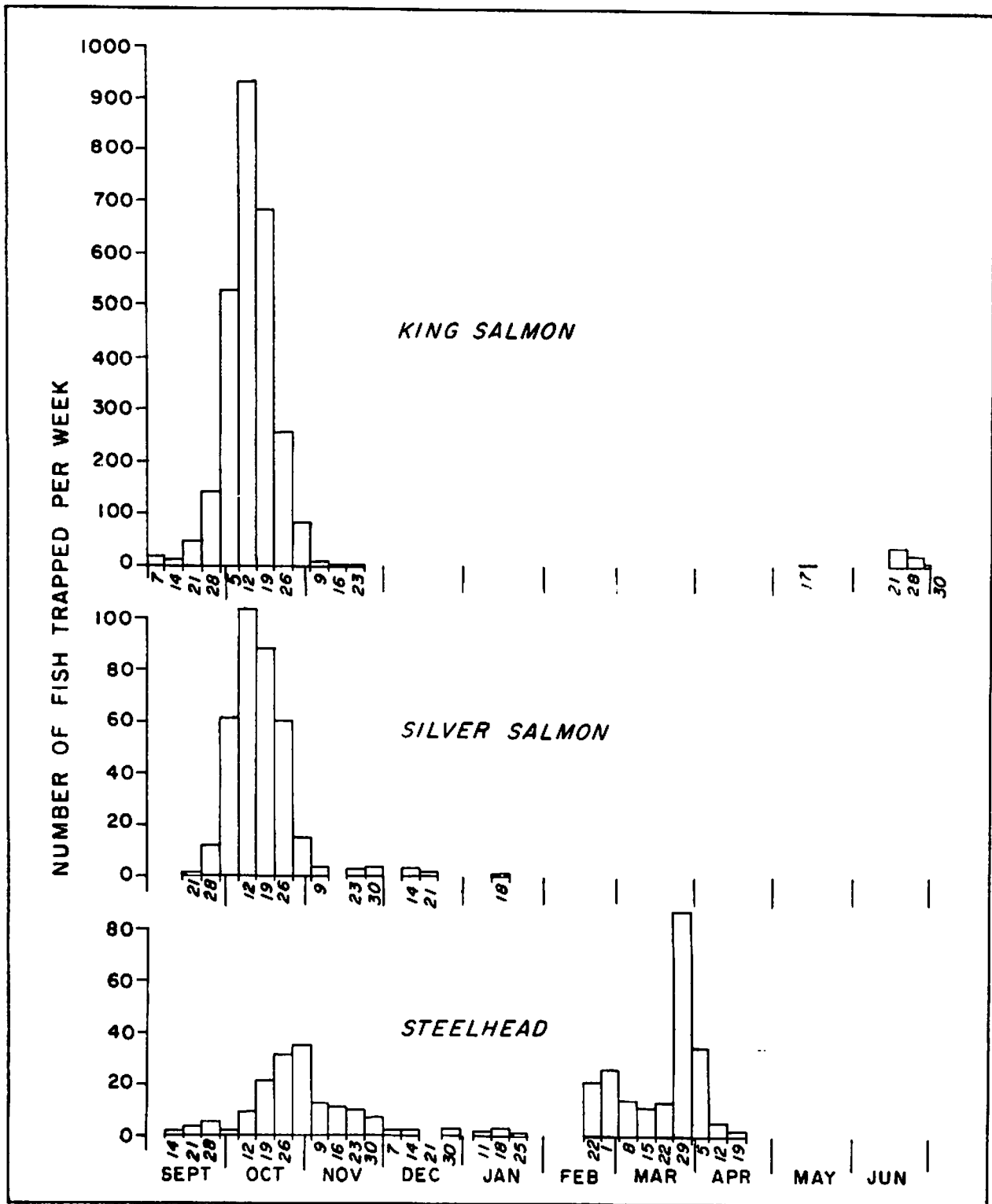


Figure A-1. Fish trapped at Iron Gate Salmon and Steelhead Hatchery.
Weekly count of salmon and steelhead during 1968-1969 season.

TABLE A-1

Yearly Comparison of Fish Trapped at
Iron Gate Salmon and Steelhead Hatchery
July 1, 1965, through June 30, 1969

Species	July 1, 1965 through June 30, 1966	July 1, 1966 through June 30, 1967	July 1, 1967 through June 30, 1968	July 1, 1968 through June 30, 1969
King salmon				
Male	141	1,129	850	972
Female	224	1,610	1,275	1,714
Total adults	365	2,739	2,125	2,686
Grilse	313	325	562	78
Totals	678	3,064	2,687	2,764
Silver salmon				
Male	2	2	27	14
Female	--	2	24	10
Total adults	2	4	51	24
Grilse	--	--	28	333
Totals	2	4	79	357
Steelhead trout				
Adults	227	299	984	370

TABLE A-2

Chart of Operation

Iron Gate Salmon and Steelhead Hatchery
1968-69

Species	Fish trapped	Females spawned	Eggs taken	Eggs received by transfer	Fish received by transfer	Fingerlings planted	Yearlings planted	Fish on hand June 30, 1969
King salmon								
Male	972							
Female	1,714							
Grilse	78							
Totals	2,764	1,609	5,792,400	--	--	4,680,000	3,360	36,450
Silver salmon								
Male	14							
Female	10							
Grilse	333							
Totals	357	7	15,037	--	60,450 ^{1/}	--	68,848	55,450
Steelhead trout	370	184	322,777	200,000 ^{2/}	--	--	526,005	432,000

^{1/} From Mt. Shasta Hatchery.^{2/} From Cowlitz Trout Hatchery, Winlock, Washington.

TABLE A-3

Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
July 1968

Date	Temperature (degrees F)						Weather	Fish trapped				
	Klamath River		Hatchery water		Air			King salmon		Silver salmon		Steelhead trout
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse	
1	67	65	54	53	102	48	Clear					
2	69	66	54	53	102	53	Cloudy					
3	70	67	55	53	106	58	Clear					
4	71	67	55	53	100	61	Clear					
5	70	67	55	52	107	57	Clear					
6	71	68	56	53	108	59	Partly Cloudy					
7	72	68	56	53	106	61	Clear					
8	72	69	56	53	106	60	Clear					
9	73	69	56	53	98	57	Clear					
10	71	69	56	53	100	55	Partly Cloudy					
11	71	69	56	54	98	53	Cloudy					
12	73	70	56	54	88	61	Partly Cloudy					
13	72	69	56	54	92	54	Clear					
14	73	69	56	54	87	49	Clear					
15	73	70	56	54	86	48	Clear					
16	74	70	56	54	86	49	Clear					
17	72	70	56	53	94	47	Clear					
18	73	70	56	53	95	50	Clear					
19	73	69	57	53	93	53	Clear					
20	71	69	56	53	99	50	Clear					
21	73	70	57	54	94	51	Clear					
22	72	69	56	54	96	50	Clear					
23	72	70	57	54	101	50	Clear					
24	72	70	56	54	100	53	Clear					
25	73	70	57	54	98	55	Clear					
26	71	69	57	53	106	45	Clear					
27	72	69	54	52	110	60	Clear					
28	73	70	54	52	107	61	Clear					
29	73	72	54	52	102	66	Partly Cloudy					
30	73	71	55	52	105	64	Partly Cloudy					
31	72	69	55	53	104	61	Cloudy					
Totals								--	--	--	--	--

TABLE A-4

Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
August 1968

Date	Temperature (degrees F)						Weather	Fish trapped				
	Klamath River		Hatchery water		Air			King salmon		Silver salmon		Steelhead trout
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse	
1	72	70	54	52	88	64	Rain					
2	72	70	54	53	101	57	Partly Cloudy					
3	72	71	55	52	102	58	Partly Cloudy					
4	73	71	54	52	97	55	Partly Cloudy					
5	74	70	55	53	90	50	Clear					
6	72	71	55	53	98	50	Clear					
7	72	71	55	52	100	54	Partly Cloudy					
8	72	71	55	53	90	63	Rain					
9	72	70	54	53	98	55	Partly Cloudy					
10	72	70	55	53	101	58	Cloudy					
11	72	70	55	52	100	55	Cloudy					
12	72	69	55	53	96	55	Cloudy					
13	73	71	54	53	85	54	Rain					
14	73	70	55	53	78	52	Rain					
15	71	70	55	52	84	42	Cloudy					
16	72	70	54	53	75	44	Cloudy					
17	71	69	55	53	80	46	Partly Cloudy					
18	70	69	54	53	78	51	Rain					
19	69	68	54	53	74	52	Rain					
20	69	67	54	53	73	54	Cloudy					
21	69	67	54	52	76	50	Partly Cloudy					
22	68	67	54	53	86	40	Partly Cloudy					
23	68	67	54	53	88	53	Cloudy					
24	68	65	54	52	90	50	Partly Cloudy					
25	66	65	54	52	76	57	Rain					
26	67	65	53	53	86	53	Partly Cloudy					
27	67	65	53	53	87	51	Partly Cloudy					
28	68	66	54	53	88	49	Clear					
29	69	67	54	53	97	53	Clear					
30	68	67	54	53	103	57	Clear					
31	68	67	54	52	105	51	Clear					
Totals								--	--	--	--	--

TABLE A-5

Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
September 1968

Date	Temperature (degrees F)						Weather	Fish trapped				
	Klamath River		Hatchery water		Air			King salmon		Silver salmon		Steelhead trout
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse	
1	69	67	54	52	95	54	Partly Cloudy					
2	69	67	55	52	89	52	Clear	7	1			
3	68	67	55	52	95	48	Clear	3	1			
4	68	67	55	53	99	49	Clear					
5	68	67	55	53	100	52	Clear	3				
6	68	67	55	53	98	52	Clear					
7	68	66	55	53	100	54	Clear	3	1			
8	68	67	55	53	100	52	Clear					
9	68	65	55	53	96	52	Partly Cloudy					
10	67	66	55	53	96	49	Clear	2				
11	71	67	55	53	92	53	Partly Cloudy					
12	69	64	55	53	90	49	Partly Cloudy					
13	67	66	55	53	86	46	Cloudy	6				
14	66	66	55	53	79	52	Partly Cloudy	3				1
15	67	66	55	53	74	48	Partly Cloudy					
16	66	66	55	53	86	41	Clear	2				
17	66	65	55	53	95	47	Clear	3	1		1	1
18	67	66	54	53	76	47	Rain	9	2			
19	66	66	55	53	65	42	Rain	14				1
20	66	65	55	53	64	42	Rain	8	2			
21	65	64	54	53	67	30	Clear	5	3			
22	64	64	54	53	82	32	Clear	6				
23	64	63	54	53	90	38	Clear	9	1			
24	63	63	54	53	95	40	Clear	11				1
25	63	63	54	53	96	40	Clear	20				1
26	64	63	54	53	96	43	Cloudy	20				1
27	65	63	54	53	88	44	Hazy	26			4	
28	64	63	56	53	87	41	Clear	44	2		8	2
29	63	62	54	53	88	47	Clear	33			7	1
30	63	62	55	54	91	41	Clear	31			6	
Totals								268	14		26	9

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TABLE A-6

Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
October 1968

Date	Temperature (degrees F)						Weather	Fish trapped				
	Klamath River		Hatchery water		Air			King salmon		Silver salmon		Steelhead trout
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse	
1	64	63	54	54	86	43	Clear	74	1		4	
2	64	62	55	54	88	42	Clear	90	2		6	
3	64	62	55	53	93	40	Clear	130	4		8	
4	64	62	55	53	80	44	Partly Cloudy	84	2		13	
5	62	61	54	53	80	44	Partly Cloudy	77	1		12	
6	62	61	55	53	72	41	Clear	116	1		8	
7	62	61	56	54	67	34	Clear	87	2		16	
8	61	60	55	53	75	33	Clear	73	3		22	1
9	61	60	55	53	80	28	Partly Cloudy	70	2		6	1
10	60	59	55	54	80	39	Partly Cloudy	110	2		19	2
11	60	59	56	53	70	46	Rain	118	4		8	1
12	59	59	55	53	62	45	Rain	338	6	1	23	4
13	59	58	56	54	70	35	Clear	147	2		14	4
14	59	58	55	54	63	31	Rain	93	5	2	19	6
15	58	57	56	54	66	38	Cloudy	73	2	1	10	1
16	58	57	56	55	72	36	Cloudy	71	1		19	4
17	58	57	56	55	75	34	Cloudy	117	2		10	5
18	58	57	56	54	70	33	Clear	82	1		5	
19	58	57	56	55	76	29	Partly Cloudy	80	5		8	1
20	56	55	55	55	77	42	Rain	99	1		15	5
21	57	56	55	54	72	35	Partly Cloudy	47	1		10	3
22	57	56	55	54	78	38	Clear	34	1		9	2
23	57	56	55	54	79	34	Clear	20	1		9	6
24	56	55	55	54	82	34	Clear	20		2	3	3
25	56	55	54	54	80	34	Partly Cloudy	21		1	2	1
26	56	55	54	53	81	41	Partly Cloudy	11			9	11
27	56	55	54	53	83	34	Clear	10	2		5	6
28	56	54	54	53	86	32	Clear	9		2	1	5
29	54	53	54	53	67	42	Rain	23	1		1	4
30	55	54	54	53	64	44	Rain	15			4	1
31	55	54	53	53	64	35	Partly Cloudy	7			1	2
Totals								2,346	55	9	304	79

TABLE A-7

Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
November 1968

Date	Temperature (degrees F)						Weather	Fish trapped				
	Klamath River		Hatchery water		Air			King salmon		Silver salmon		Steelhead trout
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse	
1	55	54	53	53	62	25	Rain	6	2		1	11
2	54	54	53	53	66	44	Rain	6				6
3	54	53	53	52	66	39	Cloudy	4			1	4
4	54	53	52	52	63	32	Partly Cloudy	3				
5	54	53	52	52	64	39	Partly Cloudy	1				6
6	54	53	52	52	54	28	Cloudy					
7	53	53	52	51	64	42	Cloudy			2		1
8	53	52	52	51	68	48	Cloudy			1		
9	53	52	51	51	68	43	Cloudy					1
10	53	52	52	51	70	40	Partly Cloudy					1
11	53	51	53	51	67	44	Cloudy					7
12	52	52	52	51	57	34	Rain	1	1			2
13	53	52	52	51	56	28	Partly Cloudy					1
14	52	51	52	51	46	25	Snow					
15	52	51	51	50	53	32	Cloudy					
16	51	51	50	50	54	25	Cloudy					
17	51	51	50	50	56	40	Cloudy			1		3
18	51	50	51	50	64	44	Cloudy					1
19	51	50	50	50	60	40	Partly Cloudy					3
20	51	50	50	50	56	31	Cloudy	1			1	
21	51	50	50	49	60	40	Rain					
22	50	50	49	49	58	44	Cloudy			1		3
23	50	50	49	49	55	30	Partly Cloudy					
24	50	48	49	48	50	34	Rain			1		
25	49	48	47	46	56	34	Clear					1
26	49	48	48	48	53	24	Fog					
27	49	48	48	48	46	24	Fog					3
28	49	48	48	47	47	30	Fog			1		
29	48	47	47	46	63	30	Rain			2		2
30	48	47	47	46	44	23	Snow					1
Totals								22	3	9	3	57

TABLE A-8
Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
December 1968

Date	Temperature (degrees F)									
	Klamath River		Hatchery water		Air				Fish trapped	
	Max.	Min.	Max.	Min.	Max.	Min.	Weather	King salmon Adults	Silver salmon Grilse	Steelhead trout
1	48	47	46	46	50	30	Snow			
2	47	47	46	45	52	29	Partly Cloudy			
3	47	47	46	45	44	22	Cloudy			
4	47	46	45	45	44	30	Cloudy			
5	47	46	45	45	43	32	Partly Cloudy			
6	46	45	45	44	52	22	Partly Cloudy			
7	46	44	44	43	62	28	Cloudy			
8	45	44	44	43	62	29	Partly Cloudy			
9	45	44	44	43	64	36	Partly Cloudy			
10	45	44	43	43	59	46	Rain			
11	45	44	43	43	50	30	Cloudy			
12	45	44	43	43	48	21	Partly Cloudy			
13	44	43	42	42	54	28	Cloudy			
14	44	43	42	42	58	29	Partly Cloudy			
15	43	43	42	42	54	51	Rain			
16	43	43	42	42	47	26	Snow			
17	43	43	42	41	43	22	Snow			
18	43	43	42	42	45	28	Snow			
19	43	43	42	41	44	23	Snow			
20	43	42	41	40	38	11	Clear			
21	43	42	41	40	38	8	Clear			
22	43	42	41	40	45	12	Snow			
23	41	41	41	40	47	30	Snow			
24	41	41	41	41	48	35	Cloudy			
25	41	41	41	40	51	32	Cloudy			
26	41	40	40	39	48	25	Cloudy			
27	41	40	40	39	54	34	Partly Cloudy			
28	40	39	40	39	46	27	Partly Cloudy			
29	40	39	39	39	50	26	Partly Cloudy			
30	40	39	39	38	52	21	Partly Cloudy			
31	39	38	39	38						
Totals										

TABLE A-9

Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
January 1969

Date	Temperature (degrees F)						Weather	Fish trapped				
	Klamath River		Hatchery water		Air			King salmon		Silver salmon		Steelhead trout
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse	
1	No reading		38	37	49	32	Cloudy					
2	available		38	37	50	34	Cloudy					
3	Jan. 1-4		37	36	54	37	Cloudy					
4			37	37	50	39	Cloudy					
5	37	37	37	37	46	36	Cloudy					
6	37	37	37	37	50	38	Cloudy					
7	37	37	37	37	48	35	Snow					1
8	37	37	37	36	38	20	Clear					
9	37	37	37	36	34	11	Partly Cloudy					
10	38	37	37	37	44	22	Cloudy					
11	39	38	39	38	42	24	Rain					1
12	38	37	38	37	49	34	Rain					
13	37	37	38	37	48	36	Partly Cloudy			1		
14	37	37	38	37	44	32	Cloudy					2
15	37	37	37	37	41	29	Snow					
16	37	36	37	36	43	23	Cloudy					1
17	37	36	37	35	40	16	Clear					
18	37	36	37	36	42	19	Snow					
19	37	36	36	36	40	33	Snow-Rain					
20	37	36	36	36	38	34	Rain					
21	37	36	36	36	42	34	Rain					
22	37	36	36	36	38	22	Snow					
23	37	36	36	36	32	1	Cloudy					1
24	37	36	36	35	34	5	Clear					
25	37	36	36	36	48	30	Snow					
26	36	36	36	36	40	32	Snow					
27	36	36	36	36	41	26	Snow					
28	36	36	36	35	40	19	Snow					
29	36	36	36	36	36	12	Snow					
30	36	36	36	36	42	19	Snow					
31	36	35	36	35	44	13	Cloudy					
Totals								--	--	1	--	6

TABLE A-10

Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
February 1969

Date	Temperature (degrees F)						Weather	Fish trapped				Steelhead trout
	Klamath River		Hatchery water		Air			King salmon		Silver salmon		
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse	
1	36	35	36	35	48	26	Cloudy					
2	36	34	35	34	47	18	Clear					
3	36	35	35	35	47	18	Clear					
4	36	35	35	35	50	17	Cloudy					
5	36	35	35	35	44	31	Snow					
6	36	35	35	35	48	30	Snow-Rain					
7	35	35	35	35	48	28	Cloudy					
8	36	35	36	35	50	39	Rain					
9	36	35	36	35	54	33	Cloudy					
10	36	35	36	36	60	33	Cloudy					
11	36	36	36	36	46	44	Rain					
12	36	36	36	36	44	34	Partly Cloudy					
13	37	35	36	36	46	21	Clear					
14	37	36	37	36	50	35	Partly Cloudy					
15	37	36	37	36	54	36	Cloudy					
16	37	36	37	36	53	25	Partly Cloudy					
17	37	36	38	37	57	28	Partly Cloudy					4
18	37	37	38	37	54	32	Cloudy					6
19	38	37	38	38	50	37	Partly Cloudy					4
20	38	37	38	38	42	27	Partly Cloudy					5
21	38	37	38	38	48	27	Partly Cloudy					2
22	39	38	40	38	48	22	Partly Cloudy					
23	40	39	40	39	47	20	Snow					4
24	39	39	40	39	48	30	Snow					5
25	40	39	40	39	46	30	Snow					4
26	40	39	40	39	50	24	Partly Cloudy					1
27	40	39	41	40	50	30	Partly Cloudy					6
28	40	39	41	40	46	36	Rain					5
Totals								--	--	--	--	46

TABLE A-11

Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
March 1969

Date	Temperature (degrees F)						Weather	Fish trapped				Steelhead trout
	Klamath River		Hatchery water		Air			King salmon		Silver salmon		
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse	
1	40	39	40	40	46	30	Snow					1
2	40	39	40	40	46	28	Cloudy					7
3	40	39	40	40	44	28	Cloudy					
4	40	39	41	39	53	24	Clear					1
5	40	39	40	40	54	30	Partly Cloudy					2
6	40	40	40	40	45	35	Partly Cloudy					1
7	40	39	40	40	50	30	Partly Cloudy					2
8	40	39	41	40	54	20	Partly Cloudy					1
9	40	40	40	40	44	33	Cloudy					1
10	40	40	40	40	47	29	Clear					1
11	40	40	41	40	54	18	Partly Cloudy					
12	40	40	41	40	54	30	Partly Cloudy					1
13	41	40	41	40	58	19	Clear					2
14	41	40	41	40	66	19	Partly Cloudy					3
15	41	40	41	40	69	23	Clear					3
16	42	40	43	40	54	33	Cloudy					2
17	40	40	41	40	48	36	Rain					1
18	41	40	41	41	54	34	Cloudy					1
19	41	40	42	41	60	22	Cloudy					1
20	42	41	43	42	58	36	Cloudy					4
21	42	41	43	42	66	42	Clear					3
22	43	42	44	42	65	29	Partly Cloudy					1
23	43	42	44	42	67	27	Clear					34
24	43	42	44	43	66	34	Clear					6
25	43	41	43	43	72	23	Clear					4
26	43	41	43	42	78	26	Clear					2
27	44	43	46	44	78	30	Clear					19
28	45	43	47	45	78	30	Clear					7
29	45	43	48	44	72	34	Cloudy					16
30	45	43	47	46	72	34	Clear					4
31	47	45	47	45	72	44	Clear					5
Totals								--	--	--	--	136

TABLE A-12

Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
April 1969

Date	Temperature (degrees F)						Weather	Fish trapped				Steelhead trout
	Klamath River		Hatchery water		Air			King salmon		Silver salmon		
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse	
1	47	45	49	47	66	32	Partly Cloudy					7
2	47	45	48	46	60	34	Cloudy					8
3	48	47	48	48	61	32	Cloudy					6
4	48	47	49	48	62	40	Cloudy					2
5	Thermograph removed		50	49	55	40	Cloudy					
6			50	49	55	37	Partly Cloudy					
7			50	49	63	27	Partly Cloudy					1
8			50	48	68	30	Partly Cloudy					1
9			50	48	60	39	Rain					1
10			50	48	68	31	Partly Cloudy					
11			50	48	75	32	Clear					
12			50	47	65	42	Cloudy					2
13			50	48	61	28	Cloudy					
14			50	48	56	38	Partly Cloudy					
15			52	49	62	38	Partly Cloudy					
16			50	50	74	32	Clear					2
17			52	50	69	40	Cloudy					
18			50	50	63	34	Cloudy					
19			53	50	65	38	Cloudy					
20			52	51	77	32	Clear					
21			54	52	80	38	Cloudy					
22			55	52	73	47	Partly Cloudy					
23			53	51	55	43	Rain and snow					
24			54	53	54	32	Rain					
25			55	53	58	28	Clear					
26			55	53	72	30	Clear					
27			55	53	78	35	Partly Cloudy					
28			56	53	70	46	Partly Cloudy					
29			57	54	60	32	Clear					
30			56	55	66	28	Partly Cloudy					
Totals								--	--	--	--	30

TABLE A-13

Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
May 1969

Date	Temperature (degrees F)						Weather	Fish trapped				
	Klamath River		Hatchery water		Air			King salmon		Silver salmon		Steelhead trout
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse	
1			56	54	57	35	Partly Cloudy					
2			58	55	60	29	Clear					
3			55	55	52	40	Partly Cloudy					
4			57	54	73	28	Partly Cloudy					
5	55	53	58	55	81	35	Clear					
6	55	54	57	54	87	38	Clear					
7	56	55	56	54	86	50	Clear					
8	57	55	56	54	91	44	Clear					
9	58	56	58	54	90	47	Clear					
10	Reading		55	54	90	46	Cloudy					
11	erratic		59	54	90	50	Cloudy	1				
12	59	58	53	51	86	47	Cloudy					
13	59	54	54	51	78	52	Clear					
14	60	58	54	53	70	47	Cloudy					
15	60	58	54	52	80	36	Clear					
16	60	58	54	52	86	42	Clear					
17	60	58	53	52	90	48	Partly Cloudy					
18	62	60	54	50	60	50	Cloudy					
19	63	61	51	50	66	36	Clear					
20	62	61	51	50	78	39	Clear					
21	63	61	51	49	84	52	Clear					
22	63	61	51	50	91	48	Clear					
23	64	60	50	50	90	50	Clear					
24	65	61	51	50	80	55	Partly Cloudy					
25	64	59	52	49	75	47	Clear					
26	62	61	52	49	70	52	Rain					
27	65	62	51	49	70	41	Partly Cloudy					
28	66	23	51	49	71	37	Partly Cloudy					
29	66	64	51	50	86	47	Clear					
30	69	64	51	49	81	52	Clear					
31	68	65	51	49	84	46	Clear					
Totals								1	--	--	--	--

TABLE A-14

Iron Gate Salmon and Steelhead Hatchery
Weather, Water, and Fish Data
June 1969

Date	Temperature (degrees F)						Weather	Fish trapped				
	Klamath River		Hatchery water		Air			King salmon		Silver salmon		Steelhead trout
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse	
1	67	65	51	49	86	49	Clear					
2	70	65	51	50	94	50	Clear					
3	71	66	51	50	99	44	Clear					
4	71	68	51	50	96	59	Rain					
5	72	67	51	50	86	56	Partly Cloudy					
6	70	67	51	49	84	54	Partly Cloudy					
7	70	67	52	49	80	52	Partly Cloudy					
8	68	67	53	49	66	55	Cloudy					
9	66	66	50	50	66	58	Rain					
10	66	64	51	50	71	58	Cloudy					
11	67	65	52	50	78	50	Rain					
12	70	65	52	50	82	68	Clear					
13	70	66	52	50	84	52	Clear					
14	71	65	52	50	84	58	Clear					
15	70	66	52	50	83	51	Clear					
16	69	67	52	50	84	50	Clear	2	1			
17	68	66	52	50	90	55	Clear					
18	66	64	52	50	88	58	Cloudy	10				
19	66	64	52	50	78	62	Rain	7	1			
20	67	65	52	50	78	57	Cloudy	4	1			
21	68	65	53	50	80	49	Clear	7				
22	67	66	53	50	76	52	Partly Cloudy	6				
23	68	66	53	50	69	57	Partly Cloudy	4	1			
24	68	66	52	51	67	51	Partly Cloudy	3				
25	67	66	53	50	65	50	Partly Cloudy	2				
26	66	65	53	51	64	40	Partly Cloudy	1				
27	65	65	52	50	63	43	Cloudy	1				
28	66	65	52	51	66	44	Partly Cloudy					
29	66	64	53	51	78	40	Clear	1	2			
30	65	64	53	51	88	46	Clear	1				
Totals								46	6	--	--	--
GRAND TOTALS								2,686	78	24	332	370