

State of California  
The Resources Agency  
Department of Fish and Game

ANNUAL REPORT IRON GATE SALMON AND STEELHEAD HATCHERY  
FIFTH YEAR OF OPERATION, 1969-70 1/

by

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SUMMARY

The first fall-run king salmon, Oncorhynchus tshawytscha, arrived at the Iron Gate trapping facilities on September 2, 1969, and the last on November 2. Spring-run king salmon were taken from July 1, 1969, to July 7, 1969, (for spawning in the fall of 1969) and from June 15, 1970, until June 30, 1970, (for spawning in the fall of 1970). Silver salmon, O. kisutch, started entering the trap September 29, 1969, and continued until December 13, 1969. Steelhead trout, Salmo gairdnerii, were trapped from September 14, 1969, to April 21, 1970.

For the third consecutive year part of the yearling steelhead production has been marked for a cooperative program with the Pacific Power and Light Company and the Oregon Game Commission. When these fish return as adults they will be released in the upper Klamath River above Copco Dam.

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, 1970
King salmon							
Fall run	3,868*	415	1,494,000	1,238,500	--	10,410	--
Spring run	62**	26	93,600		31,930	1,885	75,000
Silver salmon	951***	83	203,530	--	54,805	4,850	95,000
Steelhead trout	1,194	600	1,371,816	--	452,179	41,030	1,000,000

\* Includes 954 adults and 1,914 grilse.

\*\* There were 8 adults and 3 grilse trapped from July 1 to July 7, 1969. These fish were combined with 50 adults and 6 grilse trapped in May and June, 1969, and spawned in the fall of 1969.

\*\*\* Includes 202 adults and 749 grilse.

1/ Anadromous Fisheries Administrative Report No. 70-17.  
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## INTRODUCTION

This report covers the ninth 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 areas blocked by the Iron Gate project. This is the fifth 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 eight miles east of Hornbrook, Siskiyou County.

This report summarizes the number of fish trapped and spawned, production of eggs and fish, and water and weather conditions from July 1, 1969, through June 30, 1970.

## KING SALMON MAINTENANCE PROGRAM

### History of the 1969 Salmon Run

During the period from July 1, 1969, to July 7, 1969, 3 males, 5 females and 3 grilse spring-run salmon were trapped. These were added to the 26 males, 24 females, and 6 grilse taken in May and June, 1969. The combined group was held separately and spawned in the fall of 1969. On July 7, 1969, the water supply to the ladder and trap was shut down to conserve the cold water pool in Iron Gate Reservoir.

The fish ladder was opened again on September 2, 1969, and the first salmon entered the same day. When the run ended on November 2, a total of 2,868 fall-run salmon had been trapped. Of these, there were 518 males, 486 females and 1,914 grilse. Of the adult salmon trapped, 18.1 percent were males, 15.2 percent females, and 66.7 percent grilse.

There were 415 fall-run females spawned, producing 1,494,000 eggs, for an average of 3,600 eggs per female. Twenty-one fall-run females and 3 spring-run females died without spawning. There were 26 spring-run females spawned, and they produced 93,600 eggs. Eighteen lots of eggs were taken, 7 from spring-run fish and 11 from fall-run fish. The average fertility of the spring-run salmon eggs was 84 percent and the fall-run 93 percent. The progeny of the spring-run salmon are being reared separately and will be released in the fall of 1970 and spring of 1971. From June 15 to June 30, 1970, 51 spring-run salmon entered the trap and will be spawned in the fall of 1970. Of these 18 were males and 33 females.

### Marked King Salmon

During the fiscal year 1969-70 21 marked king salmon were trapped. All 21 were strays. The marks were as follows:

Mark	Brood Year	Area	<u>Released</u>		Size at Release	<u>Marks Recovered</u>	
			Date	Number		Number	Date
LM	1964	Trinity R. Hat.	5/26/65	100,000	192/lb.	7	June thru Sept.
RM	1964	"	10/29/65	100,000	15.7/lb.	10	--
LPRM	1965	Rogue River	Dec., 1966	55,598	7.8/lb.	2	--
LVRM	1966	"	--	64,719	6.6/lb.	2	June 16 & 18

### Planting 1968 Brood-Year Spring-Run King Salmon

On November 12, 1969, 22,240 yearling king salmon averaging 13.9 per pound and 9,690 averaging 34 per pound were planted at the boat ramp across from the hatchery.

### Planting 1969 Brood-Year Fall-Run King Salmon

On May 27, 1970, the screens were removed and 1,238,500 fall-run king salmon weighing 10,410 pounds were released into the river, through the hatchery discharge. The release consisted of 632,000 fish averaging 110 per pound, and 606,500 averaging 130 per pound.

## SILVER SALMON MAINTENANCE PROGRAM

### History of the 1969 Run

The first silver salmon entered the trap on September 29, 1969, and the last on December 13, 1969. A total of 951 silver salmon were trapped. Of these, 84 were males, 118 females and 749 grilse. Spawning of 83 females produced 203,530 eggs which had an average fertility of 85 percent. The egg size averaged 77 per ounce and the females produced an average of 2,452 eggs each. The first spawning was on October 15, and the last on December 17. The silvers spawned in late November and in December had smaller sized eggs and averaged fewer eggs per female than those spawned in October and early November.

### Planting 1968 Brood-Year Silver Salmon

On February 3, 1970, 54,805 yearling silver salmon, weighing 4,850 pounds and averaging 11.3 per pound, were planted in the Klamath River. These yearlings were from Cascade Hatchery, Oregon.

## STEELHEAD TROUT MAINTENANCE PROGRAM

### History of the 1969-70 Run

During the fall period (September 2 to December 31, 1969) 381 adult steelhead entered the trap and were placed in the holding pond to await spawning in the spring. In the spring (January 1 to April 21, 1970) 813 adult steelhead were trapped. For the second year these two groups were held and spawned separately. From the fall trapped steelhead, 161 females produced 310,155 eggs for an average of 1,926 per female while in the spring trapped group 439 females produced 1,061,661 for an average of 2,418 eggs per female. This made a total of 1,371,816 steelhead eggs, from 600 females, for the season. The overall fertility for both groups averaged 95.9 percent.

In September 1969, due to a shortage of steelhead fingerlings at Iron Gate, 200,380 fingerlings from the 1969 brood year were transferred from Trinity River Hatchery. This was necessary to provide sufficient fish for the planned steelhead program in the Upper Klamath River. In return, one group of 261,248 steelhead eggs (1970 brood-year) that were over and above the needs for Iron Gate was transferred to Trinity River Hatchery.

A large number of marked steelhead were trapped this year, some were strays from other river systems. Of those recovered at the station, 145 were marked and released at Iron Gate Hatchery and 28 at other locations. More information from various sources is shown in Table 4.

### STEELHEAD MARKING PROGRAM 1969-70

Due to a decline in the number of adult steelhead returning to the upper Klamath River and Iron Gate Hatchery, an intensive marking program was set up in 1968 in an attempt to find the following information:

1. The best age to release steelhead (yearling or older).
2. The best time of the year for release.
3. The best location for release.
4. Comparison of the progeny of spring-trapped and fall-trapped adults.

In addition to the above information, a marking program is being conducted for the Oregon Cooperative Agreement explained in another part of this report.

# Planting 1969 Brood-Year Steelhead

The 1969 Brood-Year steelhead were released as follows:

1970	Number	Weight	Mark	Size at Release
May 5	57,842	6,154 lbs. <sup>2/</sup>	An	9.4/lb.
May 13	14,300	650 lbs.	None	22/lb.
May 14	18,368	656 lbs.	None	28/lb.
May 20	75,904	5,345 lbs. <sup>2/</sup>	An	14.2/lb.
May 20	45,752	5,320 lbs.	None	8.6/lb.
June 5	47,395	5,042 lbs. <sup>3/</sup>	Ad-RV	9.4/lb.
June 18	57,230	5,781 lbs. <sup>4/</sup>	LV-RV	9.9/lb.
June 18	21,998	2,222 lbs.	None	9.9/lb.
June 29	113,390	9,860 lbs.	None	11.5/lb.
TOTAL	452,179			

- <sup>2/</sup> Eggs from Cowlitz Hatchery in Washington.  
<sup>3/</sup> Progeny of fall-trapped adults and marked for the Oregon Upper River Cooperative Agreement S-1942.  
<sup>4/</sup> Progeny of spring-trap adults, and marked for the Oregon Upper River Cooperative Agreement S-1942.

On April 24, 1968, the Department entered into an agreement with the Pacific Power and Light Company and the Oregon Game Commission to rear and release 100,000 yearling steelhead at Iron Gate Hatchery. This is being done in an attempt to establish a steelhead fishery on the river between Klamath Falls and Copco Lake which lies just south of the California-Oregon border. When these fish return as adults, a sufficient number will be spawned to rear another 100,000 yearlings and the marked returning adults not used for egg production will be trucked to the upper Klamath River by the Oregon Game Commission and released. This agreement will continue for five years or until three separate brood-years of steelhead have been tested.

The 47,395 steelhead marked Ad-RV and the 57,230 marked LV-RV are this year's releases for the above cooperative program.

## PUBLIC RELATIONS

During the period of this report, 10,851 persons visited the hatchery. Included in the total were 5,682 people in many organized groups conducted through the installation.

APPENDIX

- FIGURE A-1. Shows weekly number of king salmon, silver salmon, and steelhead trout trapped.
- 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, 1970.
- TABLE A-2. Chart of Operation - Enumerates details of each activity.
- TABLE A-3. Summarizes the marked fish trapped at the Iron Gate Hatchery.
- TABLES A-4 through A-5. Weather, Water, and Fish Data Report - Summarizes daily water and air temperatures, weather condition, and number of fish, by species, trapped at Iron Gate Hatchery.

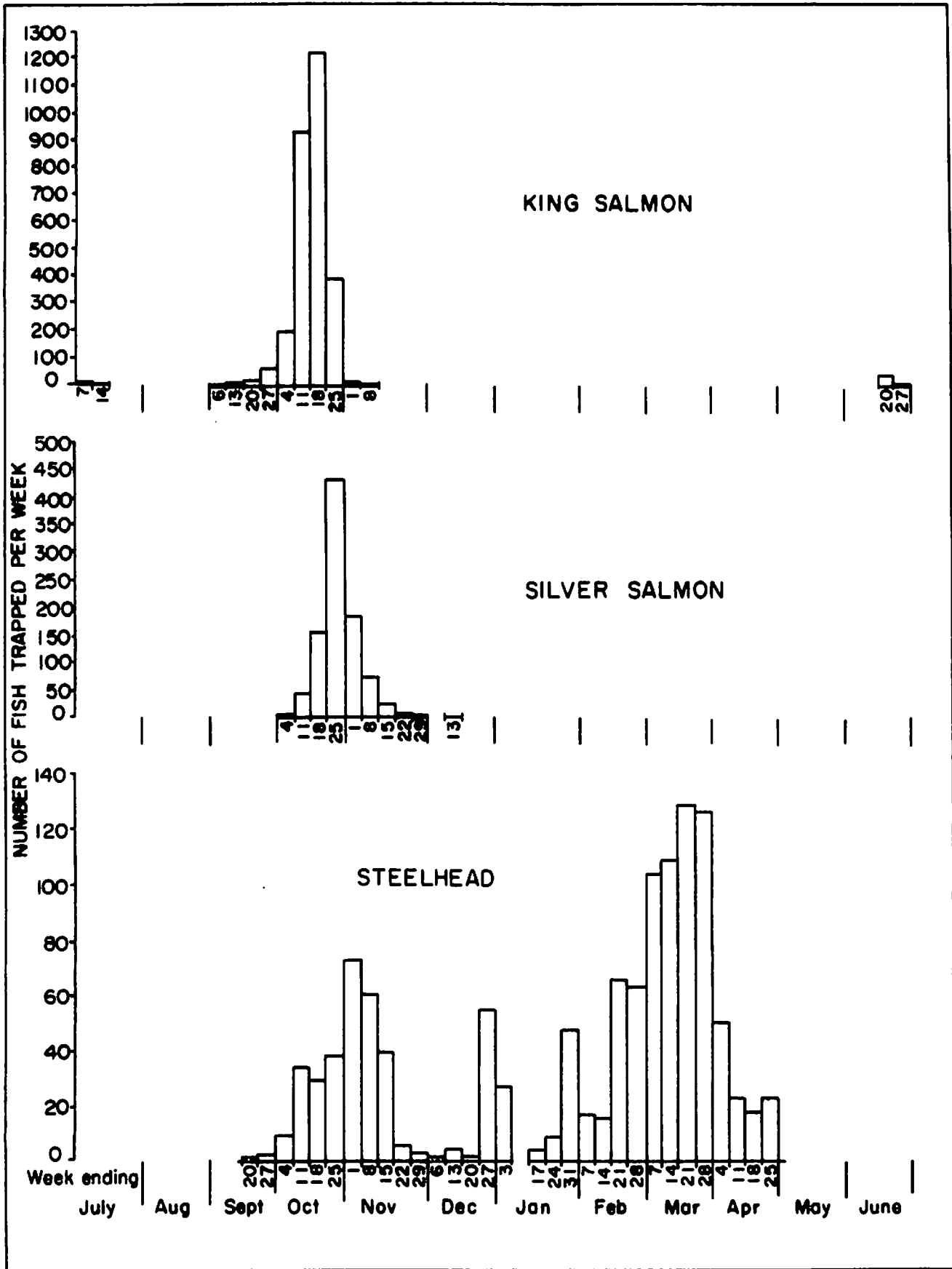


Figure A-1. Fish trapped at Iron Gate Salmon and Steelhead Hatchery. Weekly count of salmon and steelhead during 1969-70 season.

TABLE A-1

Yearly Comparison of Fish Trapped at  
Iron Gate Salmon and Steelhead Hatchery  
July 1, 1965, through June 30, 1970

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	July 1, 1969 through June 30, 1970
<b>King salmon</b>					
Male	141	1,129	850	972	539
Female	224	1,610	1,275	1,714	474
Total adults	365	2,739	2,125	2,686	1,013
Grilse	313	325	562	78	1,917
Totals	678	3,064	2,687	2,764	2,930
<b>Silver salmon</b>					
Male	2	2	27	14	84
Female	--	2	24	10	118
Total adults	2	4	51	24	202
Grilse	--	--	28	333	749
Totals	2	4	79	357	951
<b>Steelhead trout</b>					
Fall Trapped adults					381
Spring Trapped adults					813
Totals	227	299	984	370	1,194



TABLE A-2

Chart of Operation  
Iron Gate Salmon and Steelhead Hatchery  
1969-70

Species	Fish trapped	Females spawned	Eggs taken	Eggs transferred	Fish received by transfer	Fingerlings planted	Yearlings planted	Fish on hand June 30, 1970
<b>King salmon</b>								
Male		539						
Female		474						
Grilse		1,917						
<b>Totals</b>	<b>2,930</b>	<b>441<sup>1/</sup></b>	<b>1,587,600</b>	<b>--</b>	<b>--</b>	<b>1,238,500</b>	<b>31,930</b>	<b>75,000</b>
<b>Silver salmon</b>								
Male		84						
Female		118						
Grilse		749						
<b>Totals</b>	<b>951</b>	<b>83</b>	<b>203,530</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>54,805<sup>2/</sup></b>	<b>95,000</b>
<b>Steelhead trout</b>	<b>1,194</b>	<b>600</b>	<b>1,371,816</b>	<b>261,248<sup>3/</sup></b>	<b>200,380<sup>4/</sup></b>	<b>--</b>	<b>452,179</b>	<b>1,000,000</b>

1/ Includes 26 spring run females spawned.

2/ From Mount Shasta Hatchery.

3/ To Trinity River Hatchery.

4/ From Trinity River Hatchery.

TABLE A-3

Marked Steelhead Trapped at  
Iron Gate Salmon and Steelhead Hatchery

Mark	AnLP	Ad <u>1</u> /	IM	RM	D <u>2</u> /	D Ad <u>2</u> /
Number recovered spring fall	0 1	74 71	12 4	5 0	1 3	0 1
Source of eggs	Summer Steelhead	Klamath R.	Trinity R.	Trinity R.		
Where reared	Medco Pond and Bandon	Iron Gate Hat.	Trinity R. Hat.	Trinity R. Hat.		
Where released	Rogue R.	Iron Gate Hat.	60 mi. downstream	60 mi. downstream		
Number released	25,950	25,688	12,503	50,000		
When released	Apr '68	May '68	Apr '67	Nov '67		
Size @ release	7.4/lb.	8/lb.	5.6/lb.	6.9/lb.		
Previously recovered at Iron Gate <sub>68-69</sub>	0	1	4	4	1	
Recovered at other sites		19 on the Rogue R.				

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1/ One adipose was recovered in 1968-69 which was a stray from Trinity River Hatchery. Nineteen of the Iron Gate adipose clipped fish strayed to the Rogue River system and were reported verbally by J. Hanel, Biologist for P.P.&L.

2/ These marks were unknown as to origin.

TABLE A-4

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

Date	Temperature (degrees F)				Weather	Fish trapped					
	Klamath River		Hatchery water			King salmon		Steelhead			
	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse		
1	66	64	53	51	88	52	Clear	1			
2	68	65	52	51	80	51	Clear	2			
3	67	65	53	50	77	45	Clear	1		3	
4	68	65	54	51	78	45	Clear	1			
5	69	65	54	51	76	48	Clear				
6	69	65	54	51	76	46	Clear				
7	68	65	53	51	82	46	Clear	2			
8	68	65	53	52	92	50	Clear				
9	67	66	53	52	93	55	Partly Cloudy				
10	68	66	53	52	90	55	Clear				
11	70	66	53	52	86	51	Clear				
12	69	66	53	52	82	51	Clear				
13	70	66	53	52	86	48	Clear				
14	70	66	53	51	79	50	Clear	1			
15	70	66	54	51	80	48	Clear				
16	69	67	55	50	82	45	Clear				
17	69	66	55	50	85	52	Clear				
18	68	66	55	51	96	51	Clear				
19	69	67	54	51	94	57	Clear				
20	70	66	54	51	91	56	Clear				
21	70	67	55	51	96	55	Clear				
22	70	67	54	52	96	58	Clear				
23	69	67	55	52	95	61	Cloudy				
24	70	67	55	53	88	64	Cloudy				
25	70	67	55	53	89	60	Partly Cloudy				
26	69	68	54	53	98	58	Clear				
27	70	68	55	53	97	57	Partly Cloudy				
28	70	69	55	53	94	54	Clear				
29	70	69	55	54	93	55	Clear				
30	70	69	55	53	94	54	Clear				
31	71	68	55	53	89	53	Clear				
Totals								8	3		

TABLE A-5  
Iron Gate Salmon and Steelhead Hatchery  
Weather, Water, and Fish Data  
August 1969

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TABLE A-6  
Iron Gate Salmon and Steelhead Hatchery  
Weather, Water, and Fish Data  
September 1969

Date	Temperature (degrees F)						Weather	Fish trapped			
	Klamath River		Hatchery water		Air			King salmon		Steelhead	
	Max.	Min.	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse
1	68	67	56	54	95	50	Clear	1	1		
2	69	67	56	54	85	54	Clear				
3	69	67	56	55	74	47	Clear				
4	68	67	57	56	80	40	Clear				
5	68	67	56	56	84	42	Clear				
6	67	65	56	55	90	44	Clear				
7	66	65	56	55	90	48	Cloudy	1			
8	66	65	57	55	90	56	Partly cloudy	2			
9	68	66	57	55	86	55	Partly cloudy	1			
10	67	66	57	55	89	50	Partly cloudy				
11	67	66	56	55	90	54	Partly cloudy				
12	68	66	56	56	89	52	Clear				
13	68	66	57	55	80	50	Clear				
14	68	66	58	55	80	38	Clear	2			1
15	66	65	57	56	80	38	Clear	2			
16	66	65	57	56	79	48	Partly cloudy				
17	65	64	57	55	80	50	Partly cloudy				
18	65	64	58	56	70	60	Partly cloudy	1			
19	65	64	57	56	68	54	Partly cloudy	1			
20	65	64	58	57	63	50	Rain	6			
21	64	64	57	56	71	41	Clear	7			
22	64	64	58	56	80	40	Partly cloudy	4	1		
23	64	63	58	56	74	56	Partly cloudy	6			
24	64	63	58	57	79	41	Clear	11			
25	64	63	59	56	82	44	Clear		8		1
26	64	63	58	56	85	45	Partly cloudy	10			
27	64	63	58	57	92	48	Cloudy	4			1
28	64	63	59	57	80	44	Partly cloudy	13			
29	64	62	58	57	76	47	Cloudy	17		1	
30	63	62	58	57	72	43	Partly cloudy	17			1
Totals								106	63	1	5

TABLE A-7

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

Date	Temperature (degrees F)				Weather	King salmon		Fish trapped		Steelhead trout
	Klamath River Max.	Klamath River Min.	Hatchery water Max.	Hatchery water Min.		Adults	Grilse	Silver salmon Adults	Silver salmon Grilse	
1	63	62	59	57	Cloudy	11	8			
2	63	62	60	57	Rain	26	2			1
3	62	61	59	57	Rain	19	21			
4	62	61	59	58	Clear	18	23	3		5
5	62	60	59	59	Clear	10	14	1		2
6	61	60	60	59	Clear	15	15			3
7	61	59	60	58	Cloudy	38	106	2	1	5
8	60	59	61	59	Rain	93	170	6		8
9	60	59	60	59	Rain	96	121	5	6	3
10	60	58	60	59	Partly Cloudy	42	57	6	3	5
11	59	58	59	58	Clear	69	91	9	5	8
12	59	57	60	56	Partly Cloudy	61	134	6	4	4
13	58	57	60	59	Partly Cloudy	57	135	4	14	1
14	57	56	59	56	Cloudy	41	117	5	11	4
15	57	56	56	55	Cloudy	37	170	3	22	3
16	56	55	55	55	Clear	50	117	5	22	5
17	56	55	55	54	Clear	47	175	7	42	11
18	56	55	55	54	Clear	30	94	5	45	5
19	55	54	54	53	Clear	16	49	11	36	3
20	55	53	54	53	Clear	18	58	18	66	3
21	55	53	53	53	Clear	3	22	14	43	3
22	54	53	53	53	Partly Cloudy	8	40	7	63	9
23	54	53	53	53	Cloudy	10	29	5	58	3
24	54	53	53	52	Clear	7	6	10	51	12
25	53	51	53	52	Cloudy	1	1	4	32	10
26	53	51	52	52	Cloudy			4	20	10
27	52	51	52	52	Clear			5	28	13
28	52	51	52	52	Clear	3	4	4	25	3
29	52	50	52	51	Clear			1	36	16
30	51	50	52	51	Clear				9	5
31	51	50	52	51	Clear			4		
Totals						817	1850	160	657	164

TABLE A-8

Iron Gate Salmon and Steelhead Hatchery  
Weather, Water, and Fish Data  
November 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	51	49	52	51	68	32	Clear		1	1	12	16
2	51	50	52	51	68	32	Clear	1		3	10	6
3	51	50	52	51	66	34	Clear			1	5	6
4	50	49	52	51	65	44	Cloudy			2	11	7
5	50	49	52	51	53	40	Partly Cloudy			3	12	8
6	50	49	52	51	49	27	Partly Cloudy				13	14
7	50	49	52	51	50	33	Partly Cloudy			8	1	7
8	50	49	51	51	50	34	Partly Cloudy			1	4	12
9	50	49	51	51	63	32	Clear				4	10
10	50	48	51	51	56	28	Clear			3	3	11
11	49	48	51	50	61	28	Clear			2	7	7
12	49	48	51	50	62	30	Clear					8
13	49	47	50	49	60	29	Clear				3	3
14	48	47	50	49	58	28	Clear			2	1	
15	48	48	49	49	62	30	Cloudy				3	
16	48	47	49	49	57	25	Rain			2		
17	48	47	49	48	46	28	Clear					
18	47	47	49	48	46	25	Clear			4	1	4
19	47	46	48	48	49	23	Clear			1		
20	47	46	48	47	50	20	Clear					
21	46	45	48	47	50	26	Clear			1		
22	46	45	48	47	58	26	Clear					1
23	46	45	47	46	56	24	Clear			2		2
24	46	45	46	45	50	21	Clear					
25	45	44	46	45	50	21	Clear			1		
26	45	44	46	45	52	19	Clear					
27	44	43	46	45	50	18	Clear			2		
28	44	43	45	44	48	17	Clear					
29	44	43	45	44	49	13	Clear					1
30	44	42	44	43	48	13	Clear					1
Totals								1	1	39	90	124

TABLE A-9

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

Date	Temperature (degrees F)				Weather	Fish trapped					
	Klamath River		Hatchery water			King salmon		Silver salmon			
	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse		
1	43	42	44	44	Clear					1	
2	43	42	44	43	Clear						
3	42	42	43	43	Partly Cloudy						
4	42	41	44	43	Clear						
5	42	41	43	42	Partly Cloudy						
6	41	41	43	42	Partly Cloudy						
7	41	41	43	42	Partly Cloudy			1		1	
8	41	40	42	42	Rain						
9	41	40	42	42	Rain						
10	41	41	42	42	Partly Cloudy						3
11	40	40	42	42	Rain						1
12	41	40	42	41	Rain						
13	41	40	42	41	Partly Cloudy						
14	40	40	42	41	Rain			2			1
15	41	40	42	41	Cloudy						1
16	40	40	42	41	Cloudy						
17	40	40	42	41	Cloudy						
18	40	40	42	41	Rain						
19	40	40	41	41	Rain						
20	40	40	41	41	Rain						
21	40	40	41	41	Rain						5
22	40	40	41	41	Cloudy						14
23	40	40	42	42	Cloudy						15
24	40	40	42	42	Cloudy						13
25	40	40	43	42	Cloudy						7
26	40	40	42	41	Cloudy						1
27	41	40	42	42	Partly Cloudy						
28	41	40	42	42	Clear						12
29	41	40	42	41	Clear						8
30	41	40	42	41	Clear						2
31	40	40	42	41	Clear						4
Totals								3		1	88



TABLE A-10

Iron Gate Salmon and Steelhead Hatchery  
Weather, Water, and Fish Data  
January 1970

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	42	41	36	24	Clear					1
2	40	39	41	40	36	14	Clear					
3	40	39	41	41	33	11	Clear					
4	40	38	41	40	33	10	Clear					
5	39	38	41	40	31	12	Clear					
6	39	38	40	39	32	11	Partly Cloudy					
7	38	37	40	39	44	30	Partly Cloudy					
8	38	37	40	39	45	33	Cloudy					
9	38	37	39	39	48	40	Rain					
10	37	36	39	38	48	36	Cloudy-Rain					
11	37	36	38	38	43	34	Rain					
12	36	35	38	37	47	33	Partly Cloudy					
13	36	35	38	37	53	38	Cloudy					
14	36	36	39	38	44	40	Cloudy					4
15	36	35	38	37	42	36	Cloudy					
16	36	36	38	38	41	40	Cloudy					
17	36	36	39	38	48	39	Cloudy					
18	36	36	39	38	52	40	Cloudy					
19	36	36	38	38	52	40	Cloudy					1
20	37	37	39	38	47	35	Rain					3
21	37	37	38	38	48	45	Rain					
22	37	38	38	37	49	44	Rain					2
23	38	39	40	39	55	45	Rain-Wind					
24	39	41	41	40	52	41	Rain					3
25	41	41	43	42	45	38	Rain					14
26	Thermograph Removed		43	42	40	40	Rain					11
27			43	42	38	35	Partly Cloudy					11
28			44	43	40	25	Clear					4
29			44	43	40	23	Partly Cloudy					4
30			43	41	45	30	Clear					3
31			41	41	40	30	Cloudy					1
Totals								--	--	--	--	62

TABLE A-11

Iron Gate Salmon and Steelhead Hatchery  
Weather, Water, and Fish Data  
February 1970

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			41	40	42	30	Clear					
2			40	39	47	23	Cloudy					
3			40	39	42	33	Cloudy					
4			40	39	43	24	Partly Cloudy					5
5			39	39	46	24	Partly Cloudy					2
6			39	39	45	34	Partly Cloudy					3
7			39	38	56	27	Partly Cloudy					7
8			39	38	54	27	Partly Cloudy					
9	40	39	39	39	57	30	Partly Cloudy					1
10	40	39	39	39	58	20	Partly Cloudy					1
11	40	39	40	39	57	34	Partly Cloudy					5
12	40	39	40	39	50	42	Rain					3
13	40	39	40	40	44	29	Cloudy					1
14	41	40	40	40	46	27	Partly Cloudy					5
15	41	40	40	40	51	33	Cloudy					7
16	41	41	41	40	40	33	Rain					14
17	42	41	41	41	45	30	Clear					6
18	43	42	42	42	48	30	Clear					4
19	43	42	43	43	49	23	Clear					9
20	44	42	43	42	55	20	Clear					16
21	44	42	43	42	55	22	Clear					10
22	44	43	43	42	54	25	Clear					18
23	43	42	42	42	55	23	Clear					16
24	43	42	43	42	54	27	Partly Cloudy					3
25	43	42	42	42	60	29	Partly Cloudy					3
26	43	42	43	42	60	26	Partly Cloudy					11
27	43	42	44	42	60	26	Partly Cloudy					8
28	44	43	44	42	62	28	Snow					4
Totals								--	--	--	--	162

TABLE A-12

Iron Gate Salmon and Steelhead Hatchery  
Weather, Water, and Fish Data  
March 1970

[illegible]

TABLE A-13

Iron Gate Salmon and Steelhead Hatchery  
Weather, Water, and Fish Data  
April 1970

Date	Temperature (degrees F)				Weather	Fish trapped			
	Klamath River		Hatchery water			King salmon		Silver salmon	
	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse
1	49	47	52	50	Clear				Steelhead trout
2	49	48	53	50	Clear				10
3	48	47	51	50	Clear				6
4	49	47	52	50	Clear				4
5	50	48	52	51	Clear				6
6	51	49	54	52	Cloudy				7
7	51	49	54	52	Clear				10
8	50	49	54	52	Partly Cloudy				1
9	50	48	53	49	Partly Cloudy				5
10	52	48	52	50	Partly Cloudy				
11	52	50	52	50	Clear				
12	51	50	53	50	Partly Cloudy				
13	51	50	50	50	Rain				8
14	51	50	51	50	Cloudy				
15	51	49	51	50	Cloudy				
16	51	50	51	50	Partly Cloudy				10
17	51	49	51	50	Partly Cloudy				
18	50	48	51	50	Rain				
19	51	49	51	50	Rain				7
20	51	50	52	50	Clear				10
21	52	49	52	50	Clear				
22	51	49	52	50	Clear				6
23	51	49	52	50	Clear				
24	50	48	51	49	Clear				
25	50	49	51	50	Clear				
26	51	49	50	50	Clear				
27	51	49	51	50	Snow				
28	51	50	51	50	Partly Cloudy				
29	51	50	52	50	Partly Cloudy				
30	51	50	51	50	Partly Cloudy				
Totals	52	50	51	50	Cloudy	--	--	--	90

TABLE A-14

Iron Gate Salmon and Steelhead Hatchery  
Weather, Water, and Fish Data  
May 1970

Date	Temperature (degrees F)				Weather	Fish trapped			
	Klamath River		Hatchery water			King salmon		Silver salmon	
	Max.	Min.	Max.	Min.		Adults	Grilse	Adults	Grilse
1	51	50	53	50	Clear				
2	52	50	54	51	Clear				
3	52	49	55	49	Partly Cloudy				
4	53	49	53	49	Partly Cloudy				
5	57	52	55	51	Partly Cloudy				
6	57	52	54	52	Cloudy				
7	55	52	51	49	Partly Cloudy				
8	53	51	49	47	Rain				
9	53	51	48	47	Cloudy				
10	54	51	50	48	Rain				
11	53	51	48	47	Rain				
12	53	51	49	48	Partly Cloudy				
13	53	51	49	48	Clear				
14	55	52	49	47	Clear				
15	55	52	49	47	Clear				
16	56	53	48	47	Clear				
17	56	53	49	47	Clear				
18	58	54	49	48	Clear				
19	59	55	49	47	Partly Cloudy				
20	59	56	51	47	Partly Cloudy				
21	59	56	51	47	Clear				
22	59	56	52	49	Clear				
23	61	57	56	52	Partly Cloudy				
24	59	57	56	54	Partly Cloudy				
25	61	58	56	53	Clear				
26	61	58	54	52	Clear				
27	63	59	54	52	Clear				
28	65	60	51	51	Clear				
29	63	60	53	48	Clear				
30	63	59	53	51	Clear				
31	62	60	53	51	Clear				
31	63	60	55	53	Clear				
Totals									

**Iron Gate Salmon and Steelhead Hatchery  
Weather, Water, and Fish Data  
June 1970 .**

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Date	Temperature (degrees F)						Weather	Fish trapped			
	Klamath River		Hatchery water		Air	King salmon		Silver salmon		Steelhead trout	
	Max.	Min.	Max.	Min.	Max.	Adults		Gillies	Adults	Gillies	
1	63	60	56	54	91	45	Clear				
2	67	61	54	53	94	52	Clear				
3	69	64	54	53	92	55	Clear				
4	68	63	55	53	85	48	Clear				
5	68	63	54	53	90	54	Clear				
6	68	64	55	53	88	60	Partly Cloudy				
7	71	66	54	53	76	53	Clear				
8	67	63	54	53	55	52	Rain				
9	63	62	54	53	60	47	Rain				
10	66	62	54	54	63	45	Cloudy				
11	65	62	55	54	62	40	Cloudy				
12	64	59	55	54	60	38	Cloudy				
13	63	62	55	53	60	53	Cloudy				
14	62	61	54	53	66	43	Rain				
15	64	62	54	53	67	42	Clear	6			
16	64	61	54	53	72	43	Clear	10			
17	64	61	55	54	82	46	Clear	9			
18	65	62	54	53	89	50	Clear	11			
19	65	63	54	53	92	55	Clear	7			
20	65	63	54	53	96	60	Clear	3			
21	67	64	55	53	92	63	Partly Cloudy				
22	67	65	55	54	96	57	Clear	3			
23	67	64	56	52	94	62	Cloudy	2			
24	67	64	53	52	91	58	Cloudy				
25	67	62	55	53	94	53	Cloudy				
26	66	61	53	52	91	52	Cloudy				
27	68	65	54	53	85	59	Rain				
28	70	65	55	53	60	50	Rain				
29	69	65	55	53	80	46	Clear				
30	67	65	55	53	73	40	Clear				
Totals								51	--	--	--
GRAND TOTALS								1,013	1,917	749	1,194