

The Resources Agency of California
Department of Fish and Game

ANNUAL REPORT
IRON GATE SALMON AND STEELHEAD HATCHERY
FOURTH YEAR OF OPERATION 1964-65

James O. Riley, Jr.
Region I, Inland Fisheries

SUMMARY

King salmon, Oncorhynchus tshawytscha, first entered the trapping facilities on September 16, 1964. Trapping was terminated on October 14 as all incubators at Iron Gate and hatchery space at Mt. Shasta had been filled. No Silver salmon, Oncorhynchus kisutch, were trapped this year. Steelhead trout, Salmo gairdnerii gairdnerii, entering the trap during this same period were marked and returned to the river. In the spring of 1965 the first Steelhead trout entered the trapping facilities March 3 and trapping was discontinued on April 1.

Production data are as follows:

Species	Number Adults	Number females spawned	Number eggs taken	Number fingerlings planted	Number yearlings planted	On Hand June 30, 1965
King salmon (Bogus Cr. females)	2,598 348	1,193	4,291,030	2,787,420*	0	0
Silver salmon	0	0	0	0	0	0
Steelhead trout	812	354	759,508	708,357	0	0

* 2,746,420 planted from Mt. Shasta
41,000 planted from Iron Gate (This figure is an estimate of the number of KS surviving the flood. It represents 10% of 413,295 fingerlings.)

INTRODUCTION

This is the fourth annual report of the Iron Gate Trapping Facilities, Siskiyou County, operated by the Department of Fish and Game under agreement with the Pacific Power and Light Company.

KING SALMON MAINTENANCE PROGRAM

The fish ladder was activated on September 14, 1964. The first king salmon entered the trapping pond on September 16. A total of 2,598 king salmon entered the trap during the 1964 fall run. An additional 348 female salmon were trapped in Bogus Creek and transported by truck to the trapping facilities where they were held until ready to spawn.

Trapping was terminated on October 14 as all incubators at Iron Gate and hatchery space at Mt. Shasta had been filled. At this time a total of 4,291,030 eggs had been taken. 3,809,200 were shipped to Mt. Shasta Hatchery and 481,830 retained at Iron Gate.

A total of 1,999 females were handled at the facilities. Of these, 1,651 were trapped at Iron Gate and 348 from Bogus Creek. 1,193 were spawned, 300 died while being held and 506 were released on October 14.

Males trapped at Iron Gate totaled 837. No males were trucked from Bogus Creek. 183 were spawned, 325 died and 329 were released on October 14.

During August a set of racks and a trap were installed near the mouth of Bogus Creek to limit the number of adult salmon entering the stream to 700 pair. Prior to October 14, the day the racks were removed, 619 males and 700 females had been counted upstream.

During the first week of October the reservoir began its fall overturn. This resulted in water with a D. O. content of 3.6 PPM being drawn into the trapping facilities. A 6 inch pipe was extended across each pond as a temporary aerating device. This 6 inch pipe was drilled with $\frac{1}{2}$ inch holes and directed water down at the ponds surface. Approximately .75 cfs entered through this pipe and .75 cfs through bottom supply line of ponds, raising the D. O. to 7 PPM.

Heavy rains and resulting high water during December of 1964 caused severe erosion of the spillway at the dam. Thousands of yards of rock were deposited in the river immediately downstream from the powerhouse. This material completely filled the channel, backing up the river and flooding the trapping facilities and powerhouse. The area remained flooded through January 19, 1965. The spawning house was 45% destroyed and the shop/office building 90% destroyed. All incubators were tipped over and many trays washed away. Of the 413,295 fingerling king salmon on hand previous to the flood, approximately 10% survived and were released into the Klamath River. Many had not reached the swim-up stage.

STEELHEAD MAINTENANCE PROGRAM

From September 14 to October 14, 1964, 277 steelhead entered the trapping facilities. These fish were marked by clipping the adipose fin and returned to the river.

In January and February of 1965 the fish ladder was reconstructed and cleared of flood debris. By March 2, 1965 the ladder was back in order and it was activated that date. Trapping was discontinued on April 1 because the capacity of all in-

cubators at Iron Gate had been reached. During this period 812 steelhead were trapped. Of the 304 males trapped, 61 were spawned and released, 71 died while being held and 172 were released on April 2. Of 508 females, 354 were spawned and released, 11 died while being held and 143 were released not spawned on April 2.

Six lots of eggs were taken. The first lot was taken on March 12 and the last on April 2 for a total of 759,508 green eggs. Average fertility was 97%. All resulting fish, totaling 708,357, were released at the "swim-up" stage. The first fish were released on May 13 and the last on May 24, 1965.

Of the 277 steelhead trout trapped with the salmon in the fall of 1964, 24 remained in the river during the winter and returned to spawn in March, 1965.

Yearly Comparison of Fish Trapped at Iron Gate Facilities

July 1, 1963 through June 30, 1965

	July 1, 1963 to <u>June 30, 1964</u>	July 1, 1964 to <u>June 30, 1965</u>
KING SALMON		
Male	697	837
Female	1,015	1,651
Total Adults	1,723	2,488
Grilse	448	110
Totals	2,171	2,598
KING SALMON		
Bogus Cr. females	458	348
SILVER SALMON		
Male	81	
Female	95	
Total Adults	176	
Grilse	14	
Totals	190	
STEELHEAD TROUT		
Totals	1,542	1,065

DAILY RECORD OF FISH TRAPPED
IRON GATE SALMON & STEELHEAD HATCHERY

September and October 1964

DATE	KING SALMON		SILVER SALMON		STEELHEAD TROUT
	Adults	Grilse	Adults	Grilse	
Sept. 16	13				6
17	47	1			5
18	10	1			2
19	23	2			4
20	44	2			5
21	26	2			5
22	20				5
23	57	1			11
24	84	4			2
25	56	2			6
26	89	1			10
27	65	3			6
28	30	3			5
29	32	1			4
30	50	2			7
Oct. 1	80				8
2	46	2			6
3	125	2			13
4	109	7			10
5	35				4
6					
7	234	14			16
8	33	4			11
9	406	21			38
10	332	13			24
11	284	10			35
12	64	6			7
13					
14	94	6			22
TOTALS	2,488	110	0	0	277

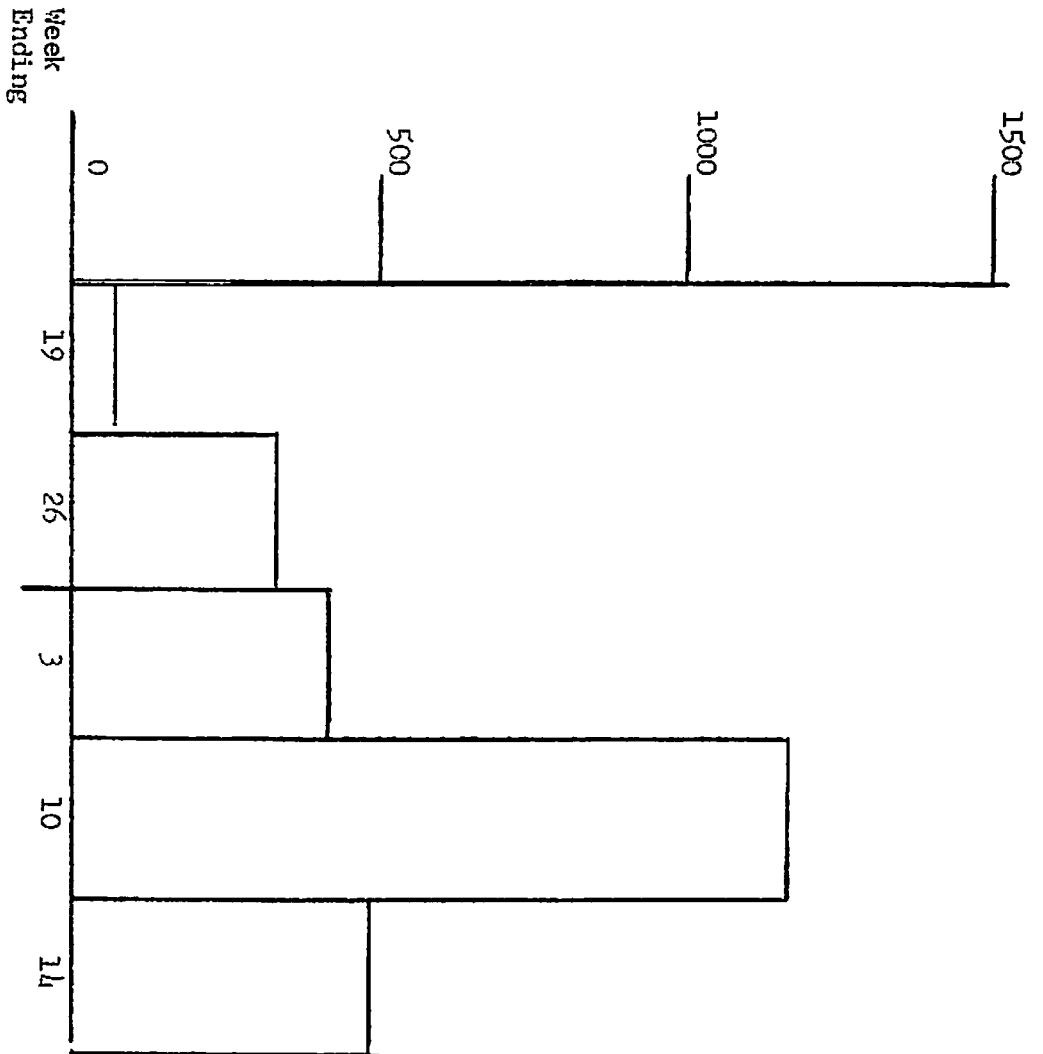
DAILY RECORD OF FISH TRAPPED
IRON GATE SALMON & STEELHEAD HATCHERY

March 1965

<u>DATE</u>	<u>STEELHEAD TROUT</u>	<u>MARKED STEELHEAD TROUT*</u>
March 2		
3	51	
4	79	5
5	58	3
6	30	2
7		
8	82	6
9	88	
10	70	1
11	31	
12	48	
13		
14	19	1
15		
16	36	2
17	16	1
18	18	1
19	18	1
20	13	1
21	34	
22	29	
23	24	
24	11	
25	15	
26	4	
27		
28		
29	7	
30	7	
31		
<hr/>		
TOTALS	788	24

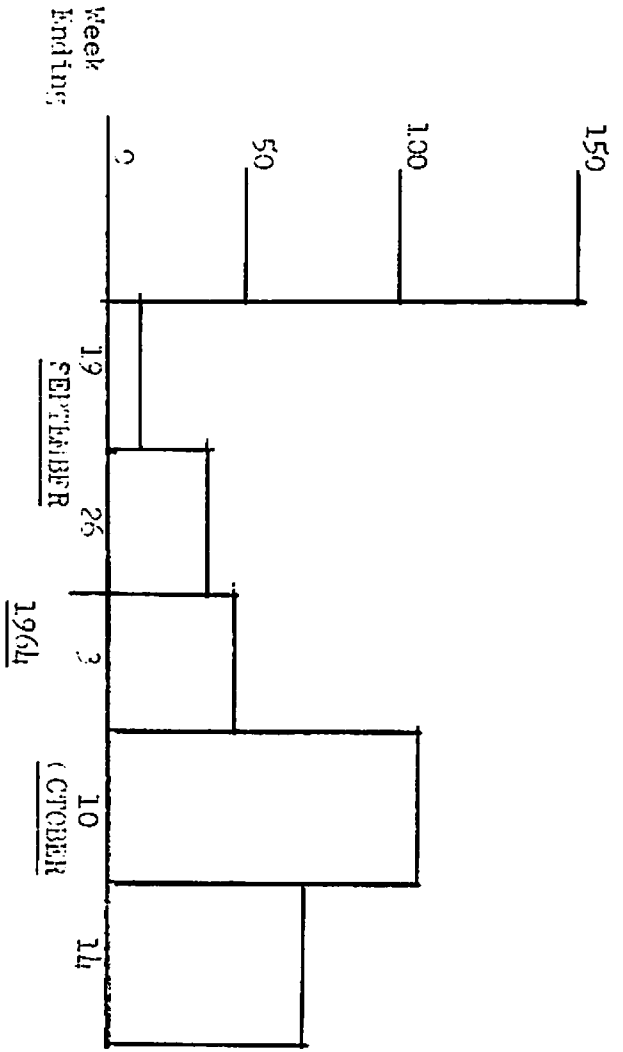
*Returning Adult Steelhead marked at Iron Gate fall of 1964.

Number of fish trapped per week



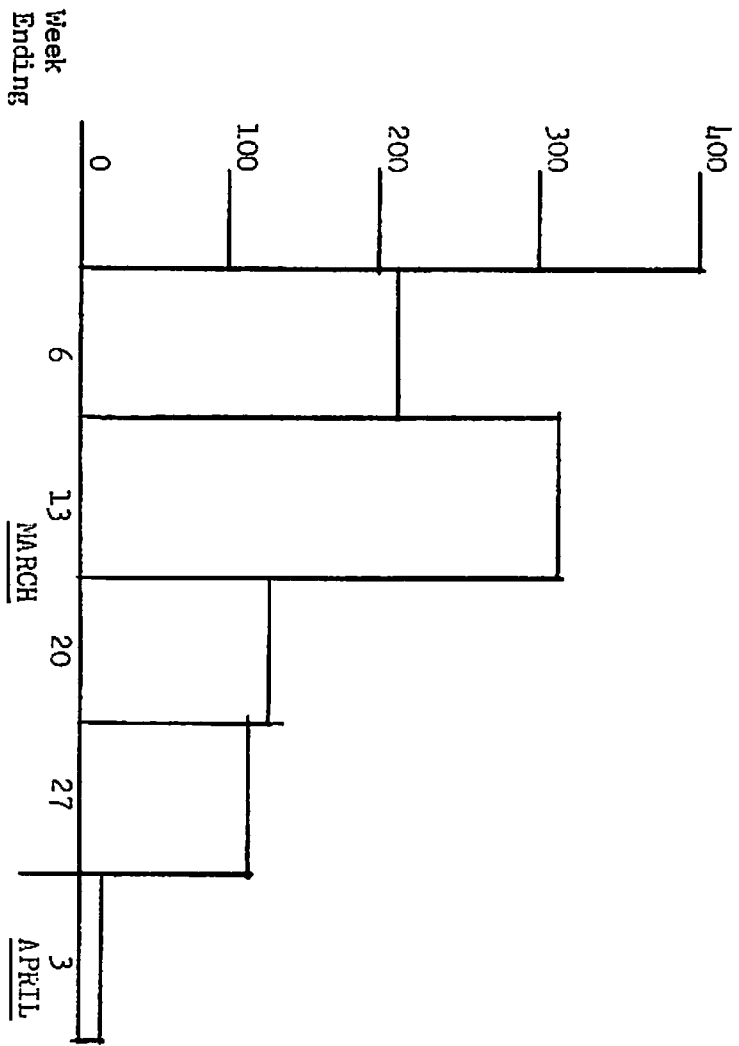
King Salmon trapped at Iron Gate Salmon & Steelhead Hatchery.
Weekly station fish count September 15, 1964 through October 11, 1964.

Number of fish trapped per week



Steelhead trout trapped at Iron Gate Salmon & Steelhead Hatchery.
 Weekly station fish count September 15, 1964 through October 14, 1964.

Number of fish trapped per week



Steelhead trout trapped at Iron Gate Salmon & Steelhead Hatchery.
Weekly station fish count February 28, 1965 through April 3, 1965.

1965

RECEIVED
MAY 19 1966
Department of Fish & Game
Region I

RECEIVED
MAY 19 1966
Department of Fish & Game
Region I