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State of California
The Resources Agency
Department of Fish and Game

ANNUAL REPORT
TRINITY RIVER SALMON AND STEELHEAD HATCHERY
ELEVENTH YEAR OF OPERATION, 1968-69 1/

GERALD W. BEDELL

Region 1, Inland Fisheries

SUMMARY

King salmon, Oncorhynchus tshawytscha, started entering the hatchery on August 29, 1968. The run ended November 21. A few silver salmon, Oncorhynchus kisutch, entered the hatchery between October 31, and December 13, 1968. Steelhead trout, Salmo gairdnerii gairdnerii, began entering the hatchery on October 13, 1968, and continued through April 17, 1969. Brown trout, Salmo trutta, entered the hatchery from September 23 to November 26, 1968.

Production data are as follows:

Species	Number adults	Number females spawned	Number eggs taken	Number fingerlings planted	Number yearlings planted	Total pounds planted	On hand June 30, 1969
King salmon	3,899	1,897	6,094,000	4,252,000	518,400	76,276	597,000
Silver salmon	✓ 4	--	--	--	790,845	59,500	501,000
Steelhead trout	554	315	1,124,000*	--	120,500	40,388	1,311,200
Brown trout	170	32	76,644	--	41,514	6,610	54,900

*Includes 19,000 eggs from Eel River summer-run steelhead spawned at Trinity River Hatchery.

INTRODUCTION

This is the eleventh consecutive fiscal year report covering operation of the Trinity River Salmon and Steelhead Hatchery, located near Lewiston, Trinity County. Copies of the previous reports are available upon request from Inland Fisheries Branch, Sacramento.

The hatchery was constructed by the United States Bureau of Reclamation to compensate for spawning areas blocked by the Trinity River project. The California Department of Fish and Game began operation of the permanent installation on May 15, 1963, with funds for operation and maintenance supplied by the Bureau. Operation of the hatchery from July 1, 1968, through June 30, 1969 is described in this report.

BUDGET

The hatchery operating budget for fiscal year 1968-69 was \$204,000.00.

Total salary and wages	\$ 97,420.00
Fish food	58,710.00
General expense	3,300.00
Chemicals	3,000.00
Nets and seines	300.00
Liability insurance	120.00
Telephone and telegraph	350.00
Postage	100.00
Travel, instate	3,900.00
Rental of refrigeration unit	3,600.00
Utilities	100.00
Recurring maintenance of facility	2,700.00
Vehicle operation, automobile	5,900.00
Equipment, field and oper. additional	1,450.00
Equipment, misc. replacement	200.00
Sub-total	<u>\$181,350.00</u>
Administrative charges	22,650.00
Total	<u>\$204,000.00</u>

HATCHERY OPERATION

Hatchery operation proceeded with no more than a normal quota of problems throughout fiscal year 1968-69. There were no major outbreaks of disease. Minor losses due to Gill Bacteria occurred on several occasions, mainly because of overcrowding. With the possible exception of a few fish in the first lot of king salmon fingerlings, there was no evidence of Gas Bubble disease. All fish were reared exclusively on a diet of Oregon Moist Pellet.

Water temperatures to 59° F. (3°-4° warmer than normal) during April and May increased the growth rate among all species at the hatchery. These relatively warm temperatures were due to a combination of hot days and limited operation of the generating units at Trinity Dam.

About one-third of the king salmon fingerlings reached a size of 100 per pound by June 1. The others averaged 175 per pound when released on June 13.

MARKING PROGRAM

In 1964, a marking program was initiated at Trinity River Hatchery. Since then, over one million king salmon, silver salmon, steelhead and brown trout have been marked. The purpose of this program is to aid in determining the planting size, time, and place of release which will provide the maximum catch plus return of spawners to the hatchery. By comparing the returns of fish which were marked at different sizes at different times of the year and in different areas, it should be possible to formulate an improved planting policy. At least two more years will be required before enough data are collected to draw meaningful conclusions.

KING SALMON MAINTENANCE PROGRAM

History of the 1968 King Salmon Run

Spring-run king salmon were observed in the Trinity River adjacent to the hatchery in mid-June. By the end of August there were an estimated 2,000 fish in the river between the hatchery and the old Lewiston Bridge. During the first years of hatchery operation, these fish were permitted to enter the ladder and were trapped and held. They failed to survive in the holding tanks, and now the procedure is to keep the ladder closed until just before spawning time, thus forcing the salmon to remain in the river. Most of these fish become infected by fungus as time goes by. This fungus, and the white coloration of the flesh are criteria used in distinguishing spring-run salmon from the red-meated, silvery, fresh-looking, fall-run fish. These fish that are designated as being spring-run, spawn very soon after being trapped; usually their spawning is completed by the end of September--about the time the fall-run fish begin arriving.

Spring-run fish are spawned separately only insofar as described above.

Fingerlings which are to be reared to yearling size (spring-run yearling program of 500,000 fish) are selected from the first 7 or 8 spawnings. The vast majority of fish from these early spawnings are thought to be spring-run salmon.

The fish ladder was opened on August 20, 1968. After that date 4,772 king salmon were trapped. The run ended on November 21; it included ~~1,797 males, 2,102 females, and 873 grilse~~. Of the females that entered the trap, ~~1,897 were spawned~~, 185 died in the holding ponds, and 20 were killed while still too green to be spawned successfully. There were ~~6,094,000 eggs taken~~, an average of 3,212 per female spawned. Egg size averaged 83 per ounce. A sample of 114 adult fall-run king salmon, males and females, averaged 31.05 inches fork length.

Marked King Salmon Returns

Of the 565 marked king salmon trapped, 221 were marked LM (released May 25, 1965), 343 were marked RM (released October 29, 1965), and 1 was marked RP (released May 1964). The fish which had been released in May averaged 30.6 inches in length as compared with 30.0 inches for those released in October. The previous year, when these fish were returning as 3-year-olds, the difference was nearly 2 inches.

A total of 122 marked Trinity River king salmon (LM and RM) strayed up the Klamath River to Iron Gate Hatchery during the 1967 and 1968 spawning seasons. This represents 9.4 percent of the total number of marked king salmon trapped at Iron Gate and Trinity River hatcheries during these years.

Iron Gate Hatchery				Trinity River Hatchery			
Year	LM	RM	Total	LM	RM	Total	Percent straying to Iron Gate
1966	7	2	9	70	50	120	7.0
1967	50	49	99	187	299	486	16.9
1968	8	6	14	221	343	564	2.4
Total	65	57	122	478	692	1,170	9.4

Planting 1967 Brood Year Spring-Run Salmon

In November 1968, 100,000 king salmon yearlings, averaging 5.7 inches fork length and 17.4 per pound, were planted in the Trinity River at the hatchery. They were marked LV. Another 301,900 yearlings, averaging 14 per pound, were planted at the hatchery in December. They were not marked. In April 1969 the last of the 1967 brood year king salmon were

released. There were 116,500 fish at 6.8 per pound. One hundred thousand of them were marked RV.

Of the 3,758,050 king salmon eggs taken in 1967, 2,627,800 or 69.9 percent were later returned to the river as fish.

Planting the 1968 Brood Year Salmon

The 1968 king salmon (mostly fall-run) fingerlings were released at the hatchery as follows:

11/28
6/12/45

<u>Date</u>	<u>Size</u>	<u>Number</u>
5-16-69	101/lb.	600,000
5-21-69	101/lb.	360,000
6-2-69	83/lb.	300,000
6-2-69	158/lb.	423,000
6-2-69	166/lb.	353,000
6-13-69	105/lb.	404,000
6-13-69	184/lb.	620,000
6-13-69	210/lb.	592,000
6-13-69	151/lb.	600,000
Total		4,252,000

About 600,000 spring-run fingerlings are being held over to be planted as yearlings in November 1969.

SILVER SALMON MAINTENANCE PROGRAM

History of the 1968 Silver Salmon Run

The 1968 silver salmon "run" was composed of 3 males, 1 female, and 34 grilse. The female was spawned and the resulting fingerlings were combined with 250,000 Noyo River silver salmon fingerlings which were received from Mt. Shasta Hatchery. Trinity River Hatchery also received 300,000 eyed silver salmon eggs from Cascade Hatchery in Oregon. As of June 30, 1969, there were approximately 500,000 silver salmon on hand.

Planting 1967 Brood Year Silver Salmon

In November 1968, 62,700 silver salmon, 19 per pound, were planted in Hayfork Creek, tributary to the South Fork of Trinity River at the mouth

of Chanchelulla Gulch. During March 1969, the last 729,145 silver salmon of the 1967 brood year were planted in the Trinity River from Lime Point downstream to Hawkins Bar. The fish averaged about 14 per pound and weighed a total of 56,200 pounds.

Of the 1,411,500 silver salmon eggs taken during 1967, 1,056,845, or 74.9 percent were later planted as fish; 790,845 of these were yearlings; the remaining 265,000 were planted as fingerlings.

STEELHEAD MAINTENANCE PROGRAM

History of the 1968-69 Steelhead Run

Steelhead began entering the hatchery trap on October 13, 1968, and continued through April 17, 1969. The trap took 554 fish, most of them after February 1, 1969. Only about 25 were taken during the fall and winter months of 1968. Around February 1, a trap was installed in the fish ladder at the weir a mile downstream from the hatchery. Steelhead were trapped at the weir and transported to the hatchery for ripening and spawning. This was done to obtain as many eggs as possible and rear the resulting fish to 10 per pound in the hatchery. The 315 females that were spawned produced 1,105,000 eggs, for an average of 3,507 per female. Average egg size was 205 per ounce.

Marked Steelhead Returns

During the 1968-69 season, 93 marked steelhead were trapped which represent 17 percent of the total steelhead taken during the season. The marks were as follows:

Mark	Brood year	Released			Size at release	Marks recovered (1968-69)	
		Number	Date	Area		Number	Mean fork length
Ad-LV	1965	98,132	April 1966	Hatchery	35/lb.	21	23.4 (inches)
Ad-LM	"	3,116	"	"	10/lb.	1	25.0
Ad-RM	"	100,000	Nov. 1966	"	5.9/lb.	49	23.6
Ad-RV	"	70,921	Feb. 1967	Lime Point 6 miles be- low hatchery	5.3/lb.	16	23.6
LM	1966	12,503	April 1967	Hawkins Bar 60 miles be- low hatchery	5.6/lb.	1	25.0
LV	"	100,000	May 1967	"	4.4/lb.	1	26.0
RM	"	50,000	Nov. 1967	"	6.9/lb.	2	24.0
RV	"	27,057	March 1968	"	6.9/lb.	1	23.0
Ad	"	100,011	April 1968	"	6.9/lb.	2	24.0

Planting 1967 Brood Year Steelhead

In November 1968, 50,000 steelhead of the 1967 brood year were marked RV-RM and planted in the Trinity River from Lime Point downstream to Hawkins Bar. The fish averaged 3.9 per pound and totaled 12,540 pounds. In May 1969, 45,500 two-year-old steelhead were marked D and released in the Trinity River at Hawkins Bar. They averaged 1.9 per pound and totaled 23,598 pounds. The area in which these fish were planted is closed to all fishing from March 1 to the Friday preceding May 30. It was hoped that they would move downstream and not be vulnerable to heavy fishing pressure. However, large numbers were caught as soon as the season opened.

About 2,500 steelhead from the 1967 brood year are being held at the hatchery for broodstock.

Of the 207,400 steelhead eggs taken in 1967, 98,000 or 47 percent were later planted or are on hand as fish.

Planting 1968 Brood Year Steelhead

~~In May 1969, 25,000~~ 1968 brood year steelhead were planted at Hawkins Bar. ~~Of this total, 20,850 averaged 3.1 per pound~~ and 4,650 were 3.1 per pound. There were approximately 170,000 steelhead from the 1968 brood year on hand at the hatchery on June 30, 1969. About 3,000 of the fastest growing of these fish are being held for broodstock.

BROWN TROUT MAINTENANCE PROGRAM

History of the 1968 Brown Trout Run

Between September 23 and November 26, 1968, 170 brown trout were trapped and 75,644 eggs were taken from 32 females for an average of 2,363 per female. Average egg size was 228 per ounce.

Eighty-three adult brown trout, 42 females and 41 males, were planted in Hat Creek, Shasta County. It was hoped they would spawn there and contribute to the wild fishery which is being developed. There were approximately 50,000 brown trout fingerlings on hand at the hatchery on June 30, 1969.

Marked Brown Trout Returns

Twenty of the brown trout trapped during the 1968 season were marked Ad (released in April 1966). They averaged about 14 inches in length.

Planting 1966 Brood Year Brown Trout

In October 1968, 21,514 brown trout, averaging 6.3 per pound were planted in the Trinity River at Hawkins Bar. During the same period,

20,000, 6.2 per pound, were marked RV and planted in Hat Creek, Shasta County.

Of the 75,600 brown trout eggs taken during 1966, 41,514, or 54.9 percent were later planted as fish.

APPENDIX

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

TABLE A-1: Yearly comparison of fish trapped at Lewiston. Compares the number of fish by species trapped at the Lewiston Fish Trapping Facilities and at the Trinity River Hatchery from July 1, 1963 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 air and water temperatures, weather condition, river flow, and number of fish by species trapped at the Trinity River Hatchery.

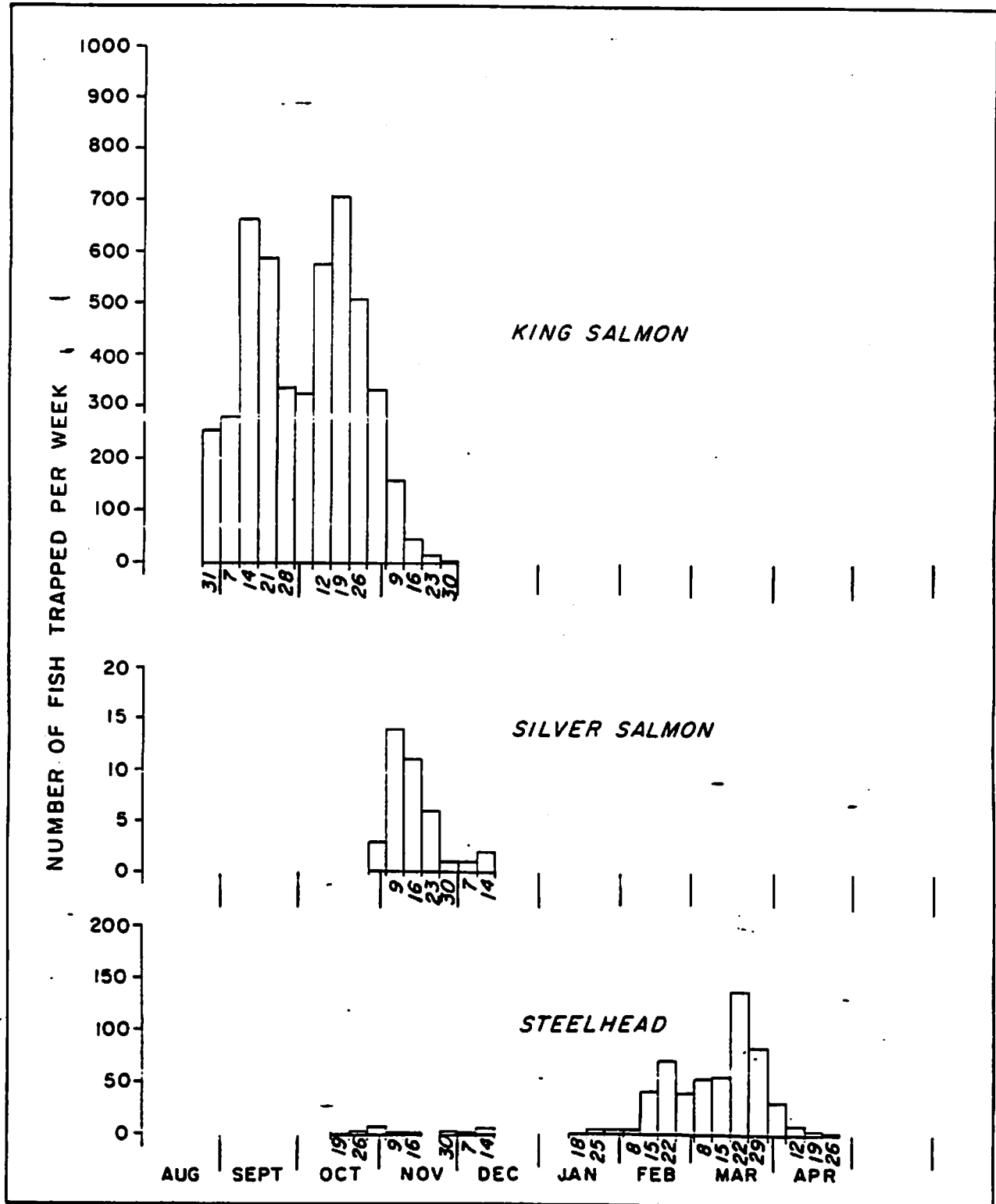


Figure 1. Salmon and steelhead trapped at Trinity River Fish Hatchery. Weekly counts during 1968-1969 season.

TABLE A-1

Yearly Comparison of Fish Trapped at Lewiston
July 1, 1963 through June 30, 1969

Species	July 1, 1963 through June 30, 1964	July 1, 1964 through June 30, 1965	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	1,571	1,974	477	1,052	1,620	1,797
Female	2,629	3,042	1,077	1,002	1,250	2,102
Total Adults	4,200	5,016	1,554	2,054	2,870	3,899
Grilse	2,540	1,287	1,521	2,786	1,746	873
Totals	6,740	6,303	3,075	4,840	4,616	4,772
Silver salmon						
Male	32	23	2	45	287	3
Female	40	25	1	173	519	1
Total Adults	72	48	3	218	806	4
Grilse	11	2	9	807	59	34
Totals	83	50	12	1,025	865	38
Steelhead trout						
Adults	894	6,941	992	135	232	554
Brown trout						
Adults	34	145	100	152	231	170

TABLE A-2

Chart of Operation
Trinity River Salmon and Steelhead Hatchery
1968-69

Species	Adult fish trapped	Females spawned	Eggs taken	Eggs and fish received by transfer	Fingerlings planted	Yearlings planted	Total pounds planted	Fish on hand June 30, 1968	Fish on hand June 30, 1969
King Salmon									
Male	1,797								
Female	2,102								
Grilse	873								
Totals	4,772	1,897	6,094,000		4,252,000	518,400	76,276	535,000	597,500
Silver Salmon									
Male	3								
Female	1								
Grilse	34								
Totals	38			300,000 ^{1/} 250,000 ^{2/}		790,845	59,500	870,000	501,000
Steelhead Trout	554	315	1,124,000 ^{4/}	200,000 ^{3/}		120,500	40,388	385,000	1,311,200
Brown Trout	170	32	70,095			41,514	6,610	37,000	54,900
Grand Totals	5,534	2,244	7,288,095	750,000	4,252,000	1,471,259	182,744	1,827,000	2,464,600

^{1/} Eggs from Cascade Hatchery in Oregon
^{2/} Fingerlings from Mt. Shasta Hatchery

^{3/} Eggs from Cowlitz Hatchery in Washington
^{4/} Includes 19,000 eggs from Eel River summer-run females

TABLE A-3
Trinity River Salmon and Steelhead Hatchery
Weather, Water and Fish Data Report
July 1968

Temperatures (degrees F.)									
Date	Air		Water		Weather	Flow of Trinity River at Lewiston (c.f.s.)*	Fish Trapped		
	Maximum	Minimum	Maximum	Minimum			King Salmon Adults Grilse	Silver Salmon Adults Grilse	Steelhead Trout
1	94	44	49	48	Clear	150			
2	94	53	49	48	Clear	150			
3	103	46	49	48	Clear	153			
4	107	55	50	48	Clear	153			
5	106	58	50	49	Clear	153			
6	105	60	50	49	Clear	150			
7	103	56	51	49	Clear	150			
8	100	56	51	49	Clear	150			
9	94	52	52	49	Clear	150			
10	93	52	52	49	Clear	150			
11	94	52	50	50	Clear	150			
12	92	62	49	49	Clear	150			
13	91	52	51	49	Clear	153			
14	91	60	50	48	Clear	153			
15	90	50	50	49	Clear	153			
16	89	51	50	49	Clear	153			
17	96	48	51	49	Clear	153			
18	100	50	50	49	Clear	150			
19	94	52	50	48	Clear	153			
20	98	51	50	49	Clear	153			
21	100	53	51	48	Clear	153			
22	101	51	50	49	Clear	153			
23	96	52	51	48	Clear	153			
24	94	52	51	50	Clear	153			
25	99	52	51	49	Clear	153			
26	102	50	51	48	Clear	155			
27	104	52	52	47	Clear	248			
28	106	48	51	48	Cloudy	180			
29	99	63	51	49	Partly Cloudy	158			
30	98	62	51	49	Clear	158			
31	90	58	51	50	Clear	155			

Totals

* From U.S.G.S. Records

TABLE A-4
Trinity River Salmon and Steelhead Hatchery
Weather, Water and Fish Data Report
August 1968

Temperatures (degrees F)									
Date	Air		Water		Weather	Flow of Trinity River at Lewiston (c.f.s.)*	Fish Trapped		
	Maximum	Minimum	Maximum	Minimum			King Salmon Adults	Silver Salmon Grilse	Steelhead Trout
1	97	61	50	50	Cloudy	155			
2	98	61	51	51	Partly cloudy	155			
3	95	56	52	49	Clear	158			
4	92	52	50	50	Clear	158			
5	94	47	51	49	Clear	158			
6	97	49	51	48	Clear	160			
7	95	53	52	50	Partly cloudy	160			
8	92	59	51	50	Cloudy	160			
9	94	51	51	50	Clear	160			
10	94	52	51	50	Clear	160			
11	95	53	48	48	Clear	160			
12	92	48	49	48	Clear	158			
13	82	48	50	48	Cloudy	144			
14	80	50	48	48	Clear	153			
15	86	44	48	48	Clear	158			
16	84	54	48	47	Clear	158			
17	82	43	50	48	Clear	155			
18	79	55	49	49	Cloudy	155			
19	74	52	49	48	Rain	158			
20	68	48	49	48	Showers	160			
21	70	48	49	48	Showers	158			
22	80	46	49	47	Clear	158			
23	84	47	51	48	Cloudy	158			
24	84	48	52	51	Clear	155			
25	67	48	52	51	Cloudy	155			
26	77	53	52	52	Cloudy	155			
27	84	52	52	51	Clear	153			
28	92	49	51	51	Partly cloudy	153			
29	95	46	52	52	Clear	153	193	10	
30	104	49	53	53	Clear	153	24	1	
31	104	53	53	53	Clear	153	23	3	
Totals							240	14	

*From U.S.G.S. Records

TABLE A-5
Trinity River Salmon and Steelhead Hatchery
Weather, Water and Fish Data Report
September 1968

Temperatures (degrees F.)										
Date	Air		Water		Weather	Flow of Trinity River at Lewiston (c.f.s.)*	Fish Trapped			
	Maximum	Minimum	Maximum	Minimum			King Salmon Adults	Grilse	Silver Salmon Adults	Grilse
1	99	52	54	53	Clear	195				
2	96	51	54	53	Clear	203				
3	98	48	54	53	Clear	203	131	8		
4	97	48	54	54	Clear	203				
5	96	51	54	54	Clear	203				
6	94	52	55	54	Clear	203	137	4		
7	96	52	55	54	Clear	203				
8	94	53	55	54	Clear	203	133	11		
9	88	52	55	54	Cloudy	203				
10	91	48	55	54	Clear	203	136	7		
11	89	51	55	55	Clear	203				
12	90	48	55	55	Clear	203	270	13		
13	82	48	54	53	Clear	203	85	8		
14	82	50	54	54	Cloudy	203				
15	82	43	55	54	Clear	206				
16	89	41	54	53	Clear	200	247	16		
17	96	47	55	54	Clear	187				
18	82	49	56	55	Clear	200				
19	71	41	54	54	Clear	200	232	21		
20	70	33	54	54	Clear	203	68	3		
21	79	32	54	53	Clear	203				
22	82	32	53	52	Clear	203				
23	91	38	53	52	Clear	206	143	4		
24	96	40	52	52	Clear	203				
25	98	43	53	52	Clear	203	127	14		
26	97	43	53	52	Clear	203	41	4		
27	96	44	53	52	Clear	200				
28	95	43	52	52	Clear	203				
29	84	42	53	53	Clear	200				
30	87	41	54	53	Clear	200	98	16		
Totals							1,848	129		

*From U.S.G.S. Records

TABLE A-6
Trinity River Salmon and Steelhead Hatchery
Weather, Water and Fish Data Report
October 1968

Temperatures (degrees F.)									
Date	Air		Water		Weather	Flow of Trinity River at Lewiston (c.f.s.)*	Fish Trapped		
	Maximum	Minimum	Maximum	Minimum			King Salmon Adults	Silver Salmon Grilse	Steelhead Trout
1	92	41	53	53	Clear	200			
2	92	44	53	53	Clear	200			
3	93	43	54	54	Clear	200	91	46	
4	78	43	54	53	Clear	203	46	29	
5	80	42	53	53	Clear	203			
6	75	44	53	53	Clear	200			
7	71	36	53	53	Clear	200	137	52	
8	76	29	53	52	Clear	200	75	42	
9	80	29	52	52	Clear	200	34	19	
10	77	40	53	51	Clear	203	53	35	
11	58	50	52	52	Rain	206	92	39	
12	60	47	51	51	Rain	203			
13	65	44	51	50	Cloudy	203			
14	56	36	50	50	Rain	200	152	79	
15	65	36	50	50	Cloudy	242	95	48	
16	69	40	51	50	Cloudy	256			
17	74	43	51	50	Clear	256	160	62	1
18	75	41	50	50	Clear	256	80	27	
19	75	35	51	50	Clear	256			
20	69	43	50	50	Clear	256			
21	70	36	51	50	Clear	256	148	77	1
22	76	37	51	50	Clear	256	65	18	1
23	80	40	51	50	Clear	256			
24	81	39	51	50	Clear	256	69	25	
25	79	39	51	51	Clear	256	80	21	
26	84	38	51	50	Clear	256			
27	82	37	51	50	Clear	256			
28	76	35	52	50	Clear	259	119	24	2
29	60	45	50	50	Clear	259	35	14	3
30	58	40	50	50	Clear	259			
31	64	40	50	49	Clear	259	60	9	1
Totals							1,591	666	9

*From U.S.G.S. Records

TABLE A-7
Trinity River Salmon and Steelhead Hatchery
Weather, Water and Fish Data Report
November 1968

Temperatures (degrees F)											
Date	Air		Water		Weather	Flow of Trinity River at Lewiston (c.f.s.)*	Fish Trapped				
	Maximum	Minimum	Maximum	Minimum			King Salmon Adults	Grilse	Silver Salmon Adults	Grilse	Steelhead Trout
1	64	36	49	49	Rain	259	55	14			1
2	50	45	49	49	Rain	259					
3	62	44	50	49	Clear	256					
4	56	43	49	49	Cloudy	259	53	16	1	3	1
5	62	44	49	48	Cloudy	259					
6	50	38	49	48	Cloudy	256	39	13		4	
7	60	44	49	49	Cloudy	256	12	3		3	
8	50	43	49	49	Cloudy	256	15	6		3	
9	62	40	49	49	Cloudy	256					
10	73	42	50	49	Rain	256					
11	53	45	50	50	Rain	259					
12	52	39	49	49	Clear	259	26	1	2	9	1
13	55	30	49	48	Clear	259					
14	34	28	48	48	Snow	248	11	5			
15	43	31	47	47	Cloudy	206					
16	47	35	47	47	Cloudy	203					
17	48	38	46	47	Rain	203					
18	53	44	47	46	Rain	203	5	3		3	
19	58	42	47	46	Clear	203					
20	53	43	47	47	Cloudy	203					
21	50	41	47	47	Cloudy	203	4	2		3	
22	55	44	48	47	Cloudy	203					
23	50	39	48	48	Cloudy	203					
24	45	38	47	47	Cloudy	206					
25	52	33	48	47	Cloudy	203					
26	46	36	47	47	Cloudy	203		1			
27	44	35	47	47	Cloudy	203				1	2
28	58	34	47	47	Cloudy	203					
29	52	32	47	47	Rain	203					
30	36	33	46	46	Snow	195					
Totals							220	64	3	29	5

*From U.S.G.S. Records

TABLE A-8
Trinity River Salmon and Steelhead Hatchery
Weather, Water and Fish Data Report
December 1968

Temperatures (degrees F.)						Flow of Trinity River at Lewiston (c.f.s.)*	Fish Trapped		
Air		Water		Weather	King Salmon		Silver Salmon	Steelhead Trout	
Date	Maximum	Minimum	Maximum		Minimum		Adults	Adults	Adults
1	45	32	46	46	Clear	162			
2	45	28	46	45	Clear	162			
3	38	31	46	45	Cloudy	164	1	1	
4	38	31	46	46	Cloudy	164			
5	56	34	46	46	Cloudy	164			
6	46	35	46	46	Cloudy	164			
7	51	34	46	46	Cloudy	164			
8	46	37	47	46	Cloudy	164			
9	51	41	47	47	Cloudy	164		1	
10	54	45	47	47	Rain	172			
11	52	23	47	46	Snow	164			
12	42	31	47	47	Cloudy	164	1	4	
13	44	30	47	47	Rain	164	1		
14	42	36	47	46	Rain	162			
15	54	42	46	46	Rain	170			
16	41	28	46	45	Cloudy	162			
17	46	33	46	46	Rain	162			
18	41	30	45	45	Rain	162			
19	40	25	45	45	Cloudy	162			
20	38	18	45	45	Cloudy	162			
21	36	18	44	44	Clear	164			
22	30	21	44	44	Snow	167			
23	35	30	43	43	Snow	167			
24	38	32	43	42	Snow	167			
25	42	34	42	42	Rain	164			
26	47	29	42	42	Clear	162			
27	34	24	41	41	Snow	164			
28	40	32	42	41	Snow	164			
29	41	27	42	41	Rain	162			
30	44	28	42	42	Clear	164			
31	35	28	43	42	Cloudy	164			
Totals							1	2	6

*From U.S.G.S. Records

TABLE A-9
Trinity River Salmon and Steelhead Hatchery
Weather, Water and Fish Data Report
January 1969

Temperatures (degrees F.)						Flow of Trinity River at Lewiston (c.f.s.)*	Fish Trapped		
Date	Air		Water		Weather		King Salmon	Silver Salmon	Steelhead Trout
	Maximum	Minimum	Maximum	Minimum			Adults	Grilse	
1	41	33	43	42	Cloudy	164			
2	43	33	44	43	Cloudy	162			
3	48	33	44	44	Clear	162			
4	42	33	44	44	Clear	162			
5	42	33	44	44	Clear	162			
6	38	32	44	44	Fog	162			
7	50	30	45	44	Clear	162			
8	44	21	44	44	Clear	162			
9	39	21	44	44	Clear	162			
10	34	32	44	44	Cloudy	162			
11	35	31	43	43	Snow	164			
12	35	31	43	43	Rain	164			
13	48	33	43	43	Rain	167			
14	43	32	43	43	Cloudy	167			
15	45	29	43	42	Cloudy	167			
16	44	30	42	42	Cloudy	164			
17	41	24	42	42	Cloudy	162		1	
18	36	25	41	41	Rain	162			
19	35	32	41	41	Rain	172			
20	41	33	41	41	Rain	174			
21	40	34	41	41	Rain	172		2	
22	40	26	42	41	Snow	167		1	
23	36	19	42	41	Cloudy	164			
24	45	23	42	41	Cloudy	160			
25	42	32	41	41	Rain	162			
26	39	33	41	41	Snow	162			
27	39	26	41	41	Cloudy	160		2	
28	39	26	41	41	Clear	160			
29	29	17	41	41	Snow	162			
30	49	20	41	40	Clear	160		1	
31	44	18	41	40	Cloudy	160			
Totals								7	

*From U.S.G.S. Records

TABLE A-10
Trinity River Salmon and Steelhead Hatchery
Weather, Water and Fish Data Report
February 1969

Temperatures (degrees F.)							Fish Trapped		
Date	Air		Water		Weather	at Lewiston (c.f.s.)*	King Salmon	Silver Salmon	Steelhead Trout
	Maximum	Minimum	Maximum	Minimum			Adults Grilse	Adults Grilse	
1	44	34	40	40	Cloudy	162			
2	50	28	41	40	Clear	160			
3	50	27	40	40	Clear	162			
4	44	26	41	40	Clear	162			
5	38	30	41	41	Snow	167			
6	50	31	41	40	Clear	167			
7	44	30	41	41	Cloudy	164			3
8	40	35	41	41	Rain	167			
9	44	33	42	41	Rain	167			
10	49	36	42	41	Cloudy	167			5
11	45	38	42	42	Rain	172			18
12	50	30	42	42	Clear	172			
13	48	28	42	42	Clear	170			11
14	38	33	42	42	Rain	167			8
15	38	35	42	42	Rain	167			
16	48	33	43	42	Cloudy	164			
17	51	33	43	43	Cloudy	162			20
18	48	35	43	43	Rain	164			12
19	56	36	44	43	Clear	164			12
20	48	32	44	43	Clear	164			14
21	39	27	44	43	Cloudy	164			14
22	41	26	43	43	Cloudy	164			
23	43	30	44	43	Cloudy	167			
24	43	31	43	43	Clear	167			16
25	46	31	43	43	Snow	164			10
26	46	30	44	43	Cloudy	164			
27	44	36	43	43	Rain	167			13
28	38	35	43	43	Rain	167			1
Totals									157

*From U.S.G.S. Records

TABLE A-11
Trinity River Salmon and Steelhead Hatchery
Weather, Water and Fish Data Report
March 1969

Temperatures (degrees F.)										
Date	Air		Water		Weather	Flow of Trinity River at Lewiston (c.f.s.)	Fish Trapped			
	Maximum	Minimum	Maximum	Minimum			King Salmon Adults	Grilse	Silver Salmon Adults	Steelhead Trout
1	50	33	44	43	Cloudy	164				
2	41	32	43	43	Rain	167				
3	50	32	43	43	Clear	167				12
4	59	26	43	42	Clear	167				10
5	50	30	43	43	Clear	167				12
6	53	33	43	43	Clear	164				9
7	55	24	44	43	Clear	164				11
8	56	23	45	43	Clear	164				
9	43	27	44	43	Snow	162				
10	51	21	44	43	Clear	162				
11	50	23	45	44	Cloudy	162				6
12	54	32	44	44	Cloudy	162				4
13	62	27	46	44	Clear	162				5
14	68	23	46	46	Clear	162				18
15	70	27	47	46	Clear	162				22
16	54	32	46	45	Cloudy	162				
17	54	40	46	46	Rain	164				40
18	52	37	46	46	Clear	164				19
19	66	28	48	46	Clear	162				26
20	52	36	48	48	Rain	164				19
21	65	40	48	47	Clear	167				32
22	70	40	48	47	Clear	167				
23	72	36	49	46	Clear	167				
24	71	29	50	48	Clear	167				26
25	78	26	50	49	Clear	167				
26	82	28	51	49	Clear	167				
27	81	32	51	50	Clear	167				40
28	80	32	51	50	Clear	164				17
29	72	40	53	51	Clear	167				
30	72	40	53	51	Clear	167				
31	64	45	52	52	Partly Cloudy	167				
Totals										328

* From U.S.G.S. Records

TABLE A-12
Trinity River Salmon and Steelhead Hatchery
Weather, Water and Fish Data Report
April 1969

Temperatures (degrees F)									
Date	Air		Water		Weather	Flow of Trinity River at Lewiston (c. f.s.)*	Fish Trapped		
	Maximum	Minimum	Maximum	Minimum			King Salmon adults Grilse	Silver Salmon adults Grilse	Steelhead Trout
1	60	33	51	50	Clear	170			22
2	47	42	51	51	rain	167			
3	54	36	52	51	Overcast	167			9
4	55	40	51	51	Overcast	167			
5	51	41	51	50	Overcast	167			
6	57	37	51	50	Cloudy	167			
7	63	36	52	50	Clear	167			1
8	64	30	51	51	Clear	164			1
9	63	42	52	51	Rain	167			
10	74	42	53	52	Clear	167			
11	80	35	54	53	Clear	164			6
12	78	44	54	53	Clear	164			
13	74	42	53	52	Clear	167			
14	61	39	52	51	Cloudy	167			2
15	69	33	54	52	Clear	167			
16	78	34	53	53	Clear	167			
17	67	39	54	54	Overcast	167			
18	69	35	53	52	Clear	164			
19	74	36	54	53	Clear	167			
20	81	34	54	53	Clear	167			
21	78	40	55	54	Overcast	164			
22	70	44	55	53	Overcast	167			1
23	51	40	54	53	Rain	170			
24	56	35	52	51	Clear	170			
25	65	31	53	52	Clear	170			
26	75	35	53	52	Clear	167			
27	80	37	54	53	Clear	167			
28	76	41	54	53	Clear	170			
29	71	36	54	53	Clear	170			
30	72	33	53	52	Clear	170			
Totals									42
*From U.S.G.S. Records									

TABLE A-13
Trinity River Salmon and Steelhead Hatchery
Weather, Water and Fish Data Report
May 1969

Temperatures (degrees F)									
Date	Air		Water		Weather	Flow of Trinity River at Lewiston (c.f.s.)*	Fish Trapped		
	Maximum	Minimum	Maximum	Minimum			King Salmon Adults Grilse	Silver Salmon Adults Grilse	Steelhead Trout
1	68	32	54	53	Overcast	170			
2	71	36	55	53	Clear	170			
3	68	44	54	52	Clear	170			
4	74	38	55	53	Clear	170			
5	84	36	55	54	Clear	172			
6	91	41	57	55	Clear	172			
7	92	42	57	54	Clear	172			
8	84	49	57	56	Clear	172			
9	95	50	58	56	Clear	174			
10	94	50	57	56	Clear	174			
11	94	49	57	56	Partly Cloudy	174			
12	82	48	58	58	Rain	174			
13	72	52	58	56	Clear	174			
14	75	44	57	56	Partly Cloudy	174			
15	85	44	58	56	Clear	174			
16	88	46	58	57	Clear	172			
17	89	48	57	56	Clear	172			
18	76	50	56	53	Partly Cloudy	172			
19	75	39	55	55	Clear	170			
20	85	41	54	53	Clear	170			
21	91	44	53	52	Clear	170			
22	93	47	52	52	Clear	170			
23	84	50	52	51	Clear	172			
24	78	47	51	49	Clear	172			
25	76	47	49	49	Cloudy	170			
26	70	46	49	47	Cloudy	174			
27	73	39	48	47	Partly Cloudy	174			
28	86	39	47	46	Clear	172			
29	87	47	47	47	Clear	172			
30	91	50	48	47	Clear	195			
31	95	48	49	50	Clear	238			
Totals									

*From U.S.G.S. Records