

REF 90088

ANNUAL REPORT
TRINITY RIVER SALMON AND STEELHEAD HATCHERY
1975-76^{1/}

by

Gerald W. Bedell
Region 1, Inland Fisheries

ABSTRACT

This report describes the operation of Trinity River Salmon and Steelhead Hatchery from July 1, 1975 through June 30, 1976. Tables present daily records of water temperatures and weather conditions, daily numbers of salmon and steelhead entering the hatchery, and total numbers of salmonids reared and released.

There were 7,223 king salmon (Oncorhynchus tshawytscha) trapped, which produced 9,881,000 eggs. The 2,237 silver salmon (O. kisutch) produced 418,000 eggs. Only 175 steelhead (Salmo gairdnerii gairdnerii) returned to the hatchery. They produced 440,000 eggs. Twenty-four sea-run brown trout (S. trutta) produced 17,272 eggs.

About 4,092,000 fingerling and 609,000 yearling king salmon, 29,000 yearling silver salmon, 517,500 yearling steelhead, and 7,000-yearling brown trout were planted in FY 1975-76.

^{1/} Anadromous Fisheries Branch Administrative Report No. 78-1
Submitted for publication December 1976.

INTRODUCTION

This is the eighteenth consecutive fiscal year report covering operation of the Trinity River Salmon and Steelhead Hatchery, located near Lewiston, Trinity County. 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. Operation and maintenance costs are paid by the Bureau.

This report describes operation of the hatchery from July 1, 1975 through June 30, 1976. Copies of previous annual reports are available upon request from the Anadromous Fisheries Branch, Sacramento.

PRODUCTION SUMMARY

King salmon entered the hatchery from August 29 through November 24, 1975 (Figure 1). Silver salmon began entering the hatchery October 14. The run ended December 15. Steelhead were trapped at the hatchery from January 21 until March 31, 1976. Brown trout entered the hatchery between October 23 and December 11, 1975.

Production data are summarized in Table 1.

Table 1. Production Summary

Species	Number trapped	Number females spawned	Eggs taken or received	Number fingerlings planted	Number yearlings planted	Total kg planted	On hand June 30, 1976
King salmon	7,223	2,936	9,881,000	4,092,000	609,068	46,954	1,186,000
Silver salmon	2,237	190	418,000		29,180	1,452	255,000
Steelhead	175	109	951,128 ^{a/}	8,800 ^{b/}	516,577	39,021	939,000
Brown trout	24	9	17,272		7,360	363	14,100
Total	9,659	3,244	11,267,400	4,100,800	1,162,185	87,790	2,391,400

a/ Includes 511,128 received from Iron Gate Hatchery.
b/ Transferred to Mad River Hatchery.

HATCHERY OPERATION

All production fish were reared on a diet of Oregon Moist Pellet (OMP). A total of 228,065 kg (502,800 lb) of feed produced 87,743 kg (193,442 lb) of fish during fiscal year 1975-76. The feed conversion rate (kg of feed required to produce 1 kg of fish) was 2.6.

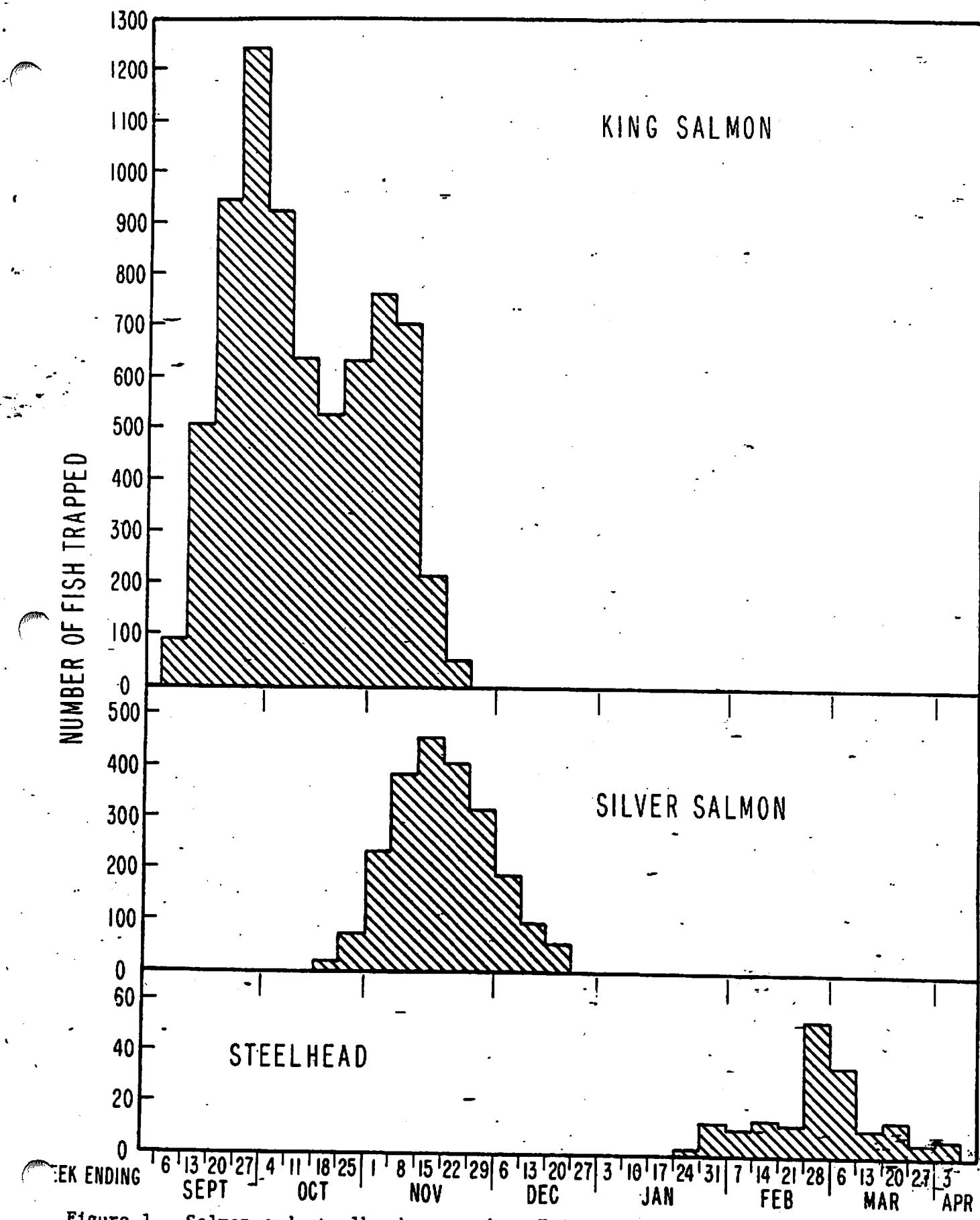


Figure 1. Salmon and steelhead trapped at Trinity River Fish Hatchery. Weekly counts during 1975-76 season.

The hatchery had 13,622 visitors in 1975-76. Guided tours were provided for several of the larger groups of visitors, most of which were from local schools.

KING SALMON MAINTENANCE PROGRAM

History of the 1975 Run

King salmon began arriving at the hatchery on June 24, 1975 and continued throughout the summer. The ladder was opened on August 29 and spawning operations began September 4.

Spring Run

Between August 29 and October 6, 1975, 4,065 king salmon, thought to be mostly spring-run, were trapped. This number included 1,725 males, 2,013 females, and 327 grilse. King salmon males < 56 cm (22 inches) FL are considered grilse. A total of 1,564 females was spawned from September 4 through October 6, producing 5,247,000 eggs, an average of 3,355/female. Egg size averaged 83/ounce.

Fall Run

There were 3,158 king salmon trapped from October 7 to November 24: 1,233 males, 1,392 females, and 533 grilse. All were assumed to be fall run. The 1,372 fall-run females which were spawned produced 4,634,000 eggs, an average of 3,378/female. Egg size averaged 85/ounce. Five of the king salmon which returned to the hatchery were marked (Table 2).

Table 2. Marked King Salmon Returns

Date	Mark	Sex	Fork length in inches
9/15/75	LV	F	18
9/25/75	LP	F	28
10/14/75	LV	F	27
10/23/75	LV	M	34
11/ 3/75	LV	M	27

Planting 1974 Broodyear King Salmon

An estimated 609,068 1974 broodyear king salmon yearlings were planted this fiscal year (Table 3). All were planted near the hatchery. None were marked.

Table 3. Summary of Yearling King Salmon Plants

Date	Size	Number
10/15/75 Spring run	12.0/lb	187,200
10/16/75 "	12.0/lb	6,600
10/17/75 Fall run	12.8/lb	150,400
10/20/75 "	13.8/lb	7,038
1/27/76 "	6.6/lb	83,325
1/28/76 "	6.9/lb	68,310
1/29/76 Spring run	6.5/lb	57,850
1/30/76 "	6.6/lb	48,345
Total		609,068

An estimated 2,267,075 1974 broodyear king salmon were planted last fiscal year as yearlings. Of the 6,054,000 king salmon (fall and spring-run) eggs taken in 1974 2,876,143 (48%) were eventually planted.

Planting 1975 Broodyear King Salmon

Approximately 4,092,000 1975 broodyear king salmon fingerlings were planted in the Trinity River at the hatchery (Table 4).

Table 4. Summary of Fingerling King Salmon Plants

Date	Size	Number
5/11/76 Fall run	119/lb	607,000
5/11/76 "	126/lb	591,000
5/11/76 Spring run	107/lb	610,000
5/12/76 "	118/lb	925,000
5/12/76 Fall run	99/lb	715,000
5/12/76 "	111/lb	644,000
Total		4,092,000

Approximately 700,000 fall-run and 486,000 spring-run fingerlings were being held at the hatchery for later release as yearlings.

SILVER SALMON MAINTENANCE PROGRAM

History of the 1975 Run

Silver salmon entered the hatchery from October 14 to December 15, 1975. The 2,237 fish trapped included 68 males, 109 females, and 2,060 grilse. Silver salmon males <56 cm (22 inches) FL are considered grilse. None were marked. All 109 females were spawned from November 6 through December 15, producing 289,000 eggs, an average of 2,651/female. Egg size averaged 106/ounce. In addition to the silver salmon females above, 81 small (probably two year old) females were spawned producing 129,000 eggs. Eggs/female averaged 1,593 and size was 211/ounce.

Crystal Lake Hatchery in Region 1 received 72,400 of the small eggs. No silver salmon fingerlings (1975 broodyear fish) were planted this fiscal year. We had an estimated 255,000 1975 broodyear fish on hand June 30, 1976.

Planting 1974 Broodyear Silver Salmon

All 1974 broodyear silver salmon on hand were planted at the hatchery (Table 5).

Table 5. Summary of Silver Salmon Plants

Date	Size	Number
3/16/76	4.0/lb	2,400
3/16/76	10.3/lb	26,780
Total		29,180

STEELHEAD MAINTENANCE PROGRAM

History of the 1975-76 Steelhead Run

On or about February 1, 1976 a temporary trap was placed in the ladder facility in the weir 1.6 km (1 mile) downstream from the hatchery. The first steelhead of the 1975-76 season was trapped on January 21 and the run continued through March 31. The total run consisted of 175 fish: 66 males and 109 females. From February 23 through April 5, all 109 females were spawned, producing 440,000 eggs, an average of 4,037/female. Egg size averaged 202/ounce. We also received 511,128 steelhead eggs from Iron Gate Hatchery (Appendix Table 1).

Marked Steelhead Returns

Of the 175 steelhead trapped at Trinity Hatchery during the 1975-76 season, 64 (37%) were marked (Table 6).

Table 6. Summary of Marked Steelhead Returns

Mark	Number		Mean fork length		Brood year	Number released	Date released	Release site
	M	F	trapped in inches	(range)				
LV	34	25	22.3 (19-26.5)	22.6 (20-28)	Trinity R. 1973	200,000	May 74	8 km below hatchery
RV	3	1	20.5 (14-26.5)	21	Trinity R. broodstock 1973	62,800	May 74	"
RM	1	1	21	21				
LV-LM		1		23	Trinity R. 1973	5,125	May 74	Weitchpec

Planting 1974 and 1975 Broodyear Steelhead

There were 525,377 steelhead planted in FY 1975-76 (Table 1).

Table 1. Steelhead Planting Data

Strain	Brood year	Date released	Average size	Mark	Number released	Release site	
Trinity River	1974	4/1/76	2.8/lb	LP	21,630	1.5 mi. below hatchery	
		4/1/76	2.8/lb	LP*	8,000	Big Bar & Weitchpec	
		4/23/76	6.0/lb	LV	31,509	Hatchery	
		4/23/76	6.0/lb	LV*	7,000	Big Bar, Mill Cr. & Weitchpec	
Total					68,139		
Iron Gate	1975	4/1/76	2.6/lb	Ad-LP	9,750	1.5 mi. below hatchery	
		4/1/76	2.6/lb	Ad-LP*	4,000	Big Bar & Weitchpec	
		4/23/76	7.0/lb	Ad-LV	37,221	Hatchery	
		4/23/76	7.0/lb	Ad-LV*	9,000	Big Bar, Mill Cr. & Weitchpec	
Total					59,971		
Trinity River	1975	4/23/76	5.7/lb	RV	50,000	Hatchery	
		5/3/76	5.4/lb	RV	48,607	Hatchery	
		5/3/76	5.4/lb	RV*	17,000	Big Bar, Mill Cr. & Weitchpec	
		5/13/76	10.0/lb	None	26,000	Weitchpec	
		5/14/76	10.0/lb	None	17,000	Weitchpec	
		5/19/76	10.0/lb	None	8,500	Weitchpec	
		5/20/76	10.0/lb	None	8,750	Weitchpec	
Total					175,857		
Iron Gate	1975	4/23/76	8.0/lb	Ad-RV	75,000	Hatchery	
		5/3/76	7.8/lb	Ad-RV	36,966	Hatchery	
		5/3/76	7.8/lb	Ad-RV*	7,000	Big Bar, Mill Cr. & Weitchpec	
		5/14/76	10.0/lb	None	13,000	Weitchpec	
		5/21/76	10.0/lb	None	8,000	Weitchpec	
		5/24/76	10.0/lb	None	9,000	Weitchpec	
		5/26/76	10.0/lb	None	18,000	Weitchpec	
Total					14,250	Weitchpec	
Total					181,216		
Mad River (Washougal)	1975	8/12/75	88.0/lb	None	8,800	Mad River Hatchery	
		4/23/76	5.4/lb	Ad	23,394	Hatchery	
		4/23/76	5.9/lb	Ad*	8,000	Big Bar, Mill Cr. & Weitchpec	
Total					40,194		

* Also received freeze-brand or maxillary marks for experiments on net efficiency.

BROWN TROUT MAINTENANCE PROGRAM

History of the 1975 Brown Trout Run

Between October 23 and December 11, 1975, 24 brown trout (15 males and 9 females) were trapped at the hatchery. From November 10 through December 15, all nine females were spawned, and produced 17,272 eggs, an average of 1,919/female. Egg size averaged 232/ounce.

Planting 1974 Broodyear Brown Trout

The 1974 broodyear brown trout were all planted at the hatchery (Table 8).

Table 8. Brown Trout Planting Summary

Date	Size	Mark	Number
4/23/76	9.2/lb	None	7,360

Appendix Table 1

Eggs and Fish Shipped from and Received at
Trinity River Hatchery, July 1, 1975-June 30, 1976

Shipped	Number	Date	To
King salmon eggs (1975 broodyear) Trinity River strain	1,062,300	11/25/75	Mad River Hatchery
Silver salmon eggs (1975 broodyear)	72,400	1/ 8/76	Crystal Lake Hatchery
Steelhead fingerlings (1975 broodyear) summer-run, Mad River strain	8,800	8/12/75	Mad River Hatchery
TOTAL SHIPPED	1,143,500		

Received	Number	Date	From
Steelhead eggs (1976 broodyear) winter-run, Klamath River strain	351,990	3/30/76	Iron Gate Hatchery
"	159,138	5/ 4/ 76	"
TOTAL RECEIVED	511,128		

Appendix Table 2
Yearly Comparison of F ♂ Trapped at Lewiston
July 1, 1970 through June 30, 1976

Species	July 1, 1970 through June 30, 1971	July 1, 1971 through June 30, 1972	July 1, 1972 through June 30, 1973	July 1, 1973 through June 30, 1974	July 1, 1974 through June 30, 1975	July 1, 1975 through June 30, 1976
ing Salmon						
Male	773	3,648	5,217	2,483	4,547	2,953
Female	725	11,645	5,825	1,152	2,840	3,405
Total Adults	1,498	8,293	11,042	3,635	7,387	6,363
Grilse	2,946	928	339	1,577	677	360
Totals	4,444	9,221	11,381	5,212	8,064	7,223
Silver Salmon						
Male	1,410	28	21	3,808	33	68
Female	1,396	11	30	3,787	22	109
Total Adults	2,806	39	58	7,595	55	177
Grilse	341	8	2,612	486	40	2,060
Totals	3,147	47	2,670	8,081	95	2,237
Steelhead Trout						
Adults	67	242	271	162	372	175
Cown Trout						
Adults	23	7	111	39	32	11

Appendix Table 3
Trinity River Salmon and Steelhead Hatchery Weather,
and Water Data, and Counts of Fish during Spawning
Operations, July 1, 1975, through June 30, 1976

July	Maximum	Minimum	Maximum	Minimum	Weather	Trinity River at Lewiston (cfs)*	Flow of Trinity River		
							King salmon	Silver salmon	Fish trapped
							Adults Grilse	Adults Grilse	Steelhead
1	76	40	50	49	partly cloudy	373			
2	76	40	50	48	partly cloudy	315			
3	82	43	51	48	clear	270			
4	82	44	52	50	partly cloudy	223			
5	85	45	52	50	clear	195			
6	86	44	52	49	clear	179			
7	91	50	50	49	clear	168			
8	101	51	51	50	clear	168			
9	97	51	51	50	clear	166			
10	101	54	56	55	partly cloudy	166			
11	100	57	57	54	clear	166			
12	97	51	51	51	clear	166			
13	97	55	52	52	partly cloudy	166			
14	87	58	58	54	clear	166			
15	70	57	57	54	partly cloudy	167			
16	87	59	59	54	rain-cloudy	166			
17	85	52	52	50	partly cloudy	166			
18	88	55	53	53	partly cloudy	166			
19	91	54	54	51	partly cloudy	166			
20	93	55	55	51	clear	166			
21	97	54	54	51	clear	166			
22	100	55	55	52	clear	165			
23	104	55	54	53	clear	165			
24	103	52	54	54	clear	166			
25	107	52	58	55	clear	165			
26	106	54	56	58	clear	165			
27	102	56	57	57	clear	165			
28	94	57	61	57	clear	167			
29	80	57	55	55	clear	167			
30	86	54	57	57	partly cloudy	166			
31	91	46	58	54	clear	166			

* From USGS records.

Appendix Table 3 (Continued)

August	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped				
	Air Maximum	Air Minimum	Water Maximum	Water Minimum			King salmon Adults	King salmon Grilse	Silver salmon Adults	Silver salmon Grilse	Steelhead
1	98	46	58	55	clear	167					
2	102	49	58	55	clear	168					
3	102	52	58	55	clear	170					
4	97	52	57	53	clear	171					
5	96	51	57	54	clear	171					
6	85	47	57	54	partly cloudy	172					
7	86	42	56	54	clear	169					
8	98	46	57	50	clear	169					
9	99	49	58	55	clear	168					
10	101	50	59	55	clear	167					
11	98	51	59	55	clear	163					
12	98	54	58	55	partly cloudy	168					
13	96	56	56	54	clear	170					
14	98	52	56	53	partly cloudy	169					
15	96	51	55	52	partly cloudy	170					
16	94	50	55	52	partly cloudy	170					
17	75	51	53	52	cloudy-rain	170					
18	72	51	52	52	cloudy	168					
19	79	50	52	51	partly cloudy	167					
20	87	50	53	51	partly cloudy	167					
21	86	52	54	52	partly cloudy	169					
22	92	50	54	52	partly cloudy	169					
23	88	52	54	52	partly cloudy	168					
24	93	52	55	53	clear	168					
25	92	52	55	53	clear	167					
26	92	52	54	52	clear	166					
27	72	52	53	52	partly cloudy	168					
28	77	46	53	52	partly cloudy	168					
29	81	42	53	51	clear	168					
30	78	42	53	52	clear	170					
31	83	42	53	51	fog-clear	168					

* From USGS records.

Appendix 1 Table 3 (Continued)

September	Temperature F			Weather	(cfs)*	Flow of Trinity River at Lewiston			Fish trapped		
	Air		Water			King Salmon		Silver Salmon	Adults	Grilse	Steelhead
	Maximum	Minimum	Maximum			Adults	Grilse				
1	82	42	53	clear	168	168	168	168	168	168	168
2	90	40	51	clear	191	191	191	191	191	191	191
3	94	43	51	clear	213	213	213	213	213	213	213
4	99	44	51	clear	213	213	213	213	213	213	213
5	100	48	51	clear	213	213	213	213	213	213	213
6	100	45	51	clear	212	212	212	212	212	212	212
7	98	46	51	clear	211	211	211	211	211	211	211
8	102	48	53	cloudy	217	217	217	217	217	217	217
9	81	59	52	cloudy	217	217	217	217	217	217	217
10	97	52	50	clear	216	216	216	216	216	216	216
11	101	94	51	clear	216	216	216	216	216	216	216
12	94	84	51	partly cloudy	217	217	217	217	217	217	217
13	87	51	51	clear	216	216	216	216	216	216	216
14	87	48	51	cloudy	217	217	217	217	217	217	217
15	88	47	51	clear	218	218	218	218	218	218	218
16	87	47	51	clear	217	217	217	217	217	217	217
17	92	51	52	clear	216	216	216	216	216	216	216
18	89	45	53	clear	215	215	215	215	215	215	215
19	91	45	55	clear	216	216	216	216	216	216	216
20	92	45	55	clear	216	216	216	216	216	216	216
21	91	47	56	clear	217	217	217	217	217	217	217
22	84	47	55	clear	216	216	216	216	216	216	216
23	94	52	52	clear	206	206	206	206	206	206	206
24	96	52	52	clear	206	206	206	206	206	206	206
25	93	57	52	clear	206	206	206	206	206	206	206
26	91	57	51	clear	207	207	207	207	207	207	207
27	88	50	50	clear	168	168	168	168	168	168	168
28	90	54	52	clear	168	168	168	168	168	168	168
29	94	55	55	clear	168	168	168	168	168	168	168
30	93	55	55	clear	168	168	168	168	168	168	168
TOTALS					3,035	3,035	3,035	3,035	3,035	3,035	3,035

* From USGS records.

Appendix Table 3 (Continued)

- 14 -

October	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*			Fish trapped		
	Air		Water	Minimum		King salmon Adults Grilse			Silver salmon Adults Grilse		Steelhead
	Maximum	Minimum	Maximum	Minimum							
1	92	46	55	53	clear	52	208	372	32		
2	80	57	52	50	cloudy	51	208				
3	83	46	52	50	partly cloudy	50	208				
4	85	43	52	49	clear	49	207				
5	84	43	49	48	rain	48	209	331	32		
6	57	36	49	48	cloudy	48	212				
7	64	38	49	48	cloudy	48	212	242	28		
8	66	51	48	48	rain	48	212				
9	65	42	48	48	showers	47	212				
10	61	42	48	48	cloudy	47	208				
11	61	43	48	48	fog-clear	47	209				
12	69	67	49	49	fog-clear	47	209	270	37	1	10
13	69	70	49	49	fog-clear	47	209				
14	70	72	49	49	fog-clear	47	209	237	107	107	10
15	70	72	50	50	fog-clear	48	208				
16	72	73	50	50	fog-clear	48	208	258			
17	64	70	49	49	fog-clear	48	208				
18	70	72	50	50	fog-clear	48	208	258			
19	72	76	50	50	fog-clear	48	208				
20	76	68	50	48	fog-clear	48	208	258			
21	68	69	48	48	fog-clear	48	208				
22	69	38	48	48	clear	48	208	259			
23	69	26	47	46	fog-clear	46	208				
24	60	26	48	46	fog-clear	46	208	257			
25	43	46	46	46	rain	46	208	263			
26	56	39	46	46	partly cloudy	46	208	259			
27	50	35	46	46	fog-showers	46	208	262			
28	60	37	46	46	partly cloudy	45	208	259			
29	58	33	46	45	cloudy-rain	45	208	261			
30	60	42	46	45	partly cloudy	45	208	261			
31	63	36	47	46	fog-clear	46	208	259			
TOTALS								2,429	521	18	315

* From USGS records.

Appendix Table 3 (Continued)

November	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped				
	Air Maximum	Air Minimum	Water Maximum	Water Minimum			King salmon Adults	King salmon Grilse	Silver salmon Adults	Silver salmon Grilse	Steelhead
1	65	39	48	46	fog-clear	260					
2	65	40	48	47	fog-clear	261					
3	68	45	48	47	fog-clear	260	406	32	15	192	
4	71	44	49	47	fog-clear	259					
5	54	40	47	47	fog-cloudy	259					
6	47	35	46	46	fog-cloudy	259	254	13	18	160	
7	59	42	46	45	cloudy	261					
8	55	33	46	45	partly cloudy	260					
9	43	30	45	45	fog-rain	260					
10	47	33	45	45	sleet-cloudy	261	155	14	12	198	
11	54	30	46	45	fog-clear	261					
12	55	31	46	45	fog-clear	261					
13	59	30	46	45	fog-clear	259					
14	48	36	46	45	cloudy-rain	242	44	1	21	314	
15	50	43	46	46	rain	213					
16	50	34	46	45	partly cloudy	212					
17	41	27	45	45	fog-clear	211	28	15	28	265	
18	49	20	45	44	clear	209					
19	48	24	44	44	cloudy	209					
20	41	31	44	44	cloudy	210	10		7	103	
21	50	33	45	45	fog	211					
22	36	34	46	45	cloudy	210					
23	56	39	46	45	partly cloudy	209					
24	50	35	46	45	fog-clear	213	2	1	21	182	
25	53	33	46	45	fog-clear	213					
26	52	31	46	45	partly cloudy	211					
27	48	28	45	42	partly cloudy	211			11	105	
28	48	26	45	44	partly cloudy	210					
29	46	25	45	44	clear	210					
30	43	35	45	45	partly cloudy	209					
TOTALS					cloudy-rain	211	899	76	133	1,429	

* From USGS records.

Appendix Table 3 (Continued)

December	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped				
	Air Maximum	Air Minimum	Water Maximum	Water Minimum			King salmon Adults	King salmon Grilse	Silver salmon Adults	Silver salmon Grilse	Steelhead
1	46	38	45	45	cloudy	184					
2	46	42	45	45	cloudy	162		8	135		
3	44	38	45	44	fog	162					
4	44	40	45	44	rain	162					
5	47	43	45	44	rain	163					
6	54	41	45	45	fog-clear	162					
7	46	42	45	45	fog	161					
8	48	36	45	45	fog-clear	161					
9	49	36	45	45	fog-clear	161					
10	41	37	45	45	fog	160					
11	41	34	45	45	fog-rain	160					
12	45	32	45	45	fog-clear	160					
13	46	30	45	45	clear	160					
14	43	25	45	44	fog-clear	160					
15	44	27	45	45	fog-clear	160					
16	41	30	45	44	fog-clear	160					
17	42	30	44	44	fog-clear	158					
18	44	29	44	43	fog-clear	158					
19	44	31	44	43	fog-clear	158					
20	44	30	44	43	fog-clear	159					
21	44	28	43	43	fog-clear	158					
22	40	36	43	43	cloudy-rain	158					
23	50	36	44	43	cloudy	157					
24	44	36	44	43	partly cloudy	158					
25	46	38	44	44	cloudy	160					
26	47	36	44	44	cloudy	161					
27	54	36	44	44	cloudy-rain	160					
28	55	33	45	44	partly cloudy	160					
29	50	40	45	44	fog-clear	161					
30	46	28	44	44	fog-clear	160					
31	43	20	44	43	partly cloudy	159					
					clear	158					
TOTALS								26	316		

* From USGS records.

Appendix Table 3 (Continued)

January	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped		
	Maximum Air	Minimum Air	Maximum Water	Minimum Water			King salmon	Silver salmon	Adults Grilse
1	43	20	44	43	clear	159			
2	42	18	44	43	partly cloudy	160			
3	43	20	44	43	cloudy	159			
4	30	14	44	43	cloudy	160			
5	32	14	43	43	partly cloudy	162			
6	31	13	43	42	clear	162			
7	28	12	42	42	cloudy	162			
8	30	12	48	47	rain	162			
9	38	10	50	47	partly cloudy	161			
10	34	10	53	43	partly cloudy	161			
11	30	11	53	43	cloudy	161			
12	32	12	53	43	partly cloudy	161			
13	34	12	50	47	partly cloudy	162			
14	38	13	53	43	partly cloudy	162			
15	37	14	54	44	clear	161			
16	35	14	45	45	fog	161			
17	34	14	45	45	fog-clear	161			
18	34	14	45	44	fog-clear	162			
19	34	14	45	45	fog-clear	162			
20	36	19	57	45	fog-clear	163			
21	36	20	54	44	fog-clear	164			
22	55	30	45	44	fog-clear	164			
23	46	30	45	44	fog-clear	159			
24	42	32	45	44	cloudy-rain	899			
25	42	34	45	44	fog-clear	648			
26	30	45	45	44	fog-clear	465			
27	56	28	45	44	fog-clear	373			
28	50	28	45	44	fog-clear	319			
29	58	30	45	44	fog-clear	298			
30	57	30	45	44	fog-clear	249			
31	61	31	46	45	fog-clear	190			
TOTALS	52	28	45	45	fog-clear	158			
* From USGS records.							3	15	

Appendix Table 3 (Continued)

February	Temperature F					Weather	Flow of Trinity River at Lewiston (cfs)*			Fish trapped			
	Air		Water	Maximum	Minimum		King Salmon			Silver Salmon		Adults Grilse	
	Maximum	Minimum					Adults Grilse	Steelhead					
1	31	27	25	23	21	35	31	38	31	32	27	9	1
2	34	31	29	27	25	35	31	38	31	32	27	10	1
3	45	43	41	39	37	45	41	48	41	42	37	11	2
4	46	44	42	40	38	46	42	49	41	42	37	10	1
5	51	49	47	45	43	55	51	58	51	52	46	10	9
6	57	54	52	50	48	62	54	61	54	55	46	10	4
7	60	57	55	53	51	65	57	64	57	58	46	10	10
8	62	59	57	55	53	67	59	66	59	60	46	10	11
9	64	61	59	57	55	69	61	68	61	62	46	10	12
10	66	63	61	59	57	71	63	70	63	64	46	10	13
11	68	65	63	61	59	73	65	72	65	66	46	10	14
12	69	66	64	62	60	75	67	74	67	68	46	10	15
13	71	68	66	64	62	77	69	76	69	70	46	10	16
14	72	70	68	66	64	79	71	78	71	72	46	10	17
15	74	72	70	68	66	81	73	80	73	74	46	10	18
16	75	73	71	69	67	82	74	81	74	75	46	10	19
17	77	75	73	71	69	84	76	83	76	77	46	10	20
18	78	76	74	72	70	85	77	84	77	78	46	10	21
19	79	77	75	73	71	87	79	85	79	80	46	10	22
20	80	78	76	74	72	88	80	86	80	81	46	10	23
21	81	79	77	75	73	89	81	87	81	82	46	10	24
22	82	80	78	76	74	90	82	88	82	83	46	10	25
23	83	81	79	77	75	91	83	89	83	84	46	10	26
24	84	82	80	78	76	92	84	90	84	85	46	10	27
25	85	83	81	79	77	93	85	91	85	86	46	10	28
26	86	84	82	80	78	94	86	92	86	87	46	10	29
27	87	85	83	81	79	95	87	93	87	88	46	10	30
28	88	86	84	82	80	96	88	94	88	89	46	10	31
29	89	87	85	83	81	97	89	95	89	90	46	10	32
													TOTALS
													94

* From USGS records.

Appendix Table 3 (Continued)

	Temperature F						Weather	(cfs)*	Flow of Trinity River at Lewiston			Fish trapped		
	Air		Water		Maximum	Minimum			King salmon		Silver salmon		Adults Grilse	
	March	Maximum	Minimum	Maximum	Minimum	Adults	Grilse	Adults	Grilse	Adults	Grilse	Adults	Grilse	Steelhead
1	45	28	46	45	45	45	snow-showers	164	1					
2	35	28	46	45	45	45	snow	164	10					
3	46	29	46	45	45	45	clear	163						
4	52	28	46	45	45	45	clear	162						
5	58	26	46	45	45	45	clear	162						
6	65	27	46	45	45	45	partly cloudy	163						
7	59	29	45	45	45	45	clear	163						
8	68	37	47	45	45	45	fog-clear	163						
9	72	31	48	46	46	46	fog-clear	162						
10	73	31	48	47	47	47	clear	163						
11	64	27	47	47	47	47	partly cloudy	163						
12	70	24	49	47	47	47	partly cloudy	163						
13	65	28	48	47	47	47	partly cloudy	163						
14	68	35	48	48	47	47	partly cloudy	163						
15	70	33	48	48	47	47	high clouds	164						
16	74	41	48	47	47	47	partly cloudy	164						
17	68	41	49	47	47	47	showers	164						
18	48	29	48	47	47	47	partly cloudy	164						
19	50	50	48	47	47	47	clear	164						
20	64	27	32	48	46	46	fog-clear	164						
21	74	29	47	47	47	47	showers	164						
22	55	29	47	47	47	47	clear	164						
23	59	42	42	42	42	42	rain	164						
24	49	42	47	47	47	47	clear	164						
25	58	27	47	43	43	43	fog-cloudy	165						
26	56	34	47	46	46	46	partly cloudy	164						
27	53	26	47	46	46	46	partly cloudy	164						
28	60	42	47	48	47	47	clear	164						
29	72	29	48	47	47	47	clear	164						
30	70	32	50	47	47	48	partly cloudy	164						
31	48	38	49	48	48	48	partly cloudy	164						
TOTALS									3					

* From USGS records.

Appendix Table 3 (Continued)

	Temperature F			Weather	Flow of Trinity River at Lewiston (cfs)*			Fish trapped		
	Air		Water		King salmon		Silver salmon	Adults	Grilse	Steelhead
	Maximum	Minimum	Maximum	Minimum	Adults	Grilse				
1	66	24	50	48	48	48	158			
2	61	27	50	49	49	48	157			
3	65	33	52	49	49	49	156			
4	61	33	50	49	49	49	157			
5	69	46	50	50	50	50	130			
6	48	48	50	49	49	49	114			
7	53	39	50	49	49	49	126			
8	50	36	51	51	51	51	115			
9	50	35	51	51	51	51	110			
10	52	35	51	51	51	51	108			
11	52	35	51	51	51	51	107			
12	54	35	51	51	51	51	104			
13	64	52	52	52	52	52	101			
14	60	52	51	51	51	51	100			
15	63	59	53	53	53	53	105			
16	69	59	53	53	53	53	104			
17	63	59	53	53	53	53	103			
18	69	59	53	53	53	53	102			
19	78	76	59	59	59	59	101			
20	69	65	58	58	58	58	131			
21	76	70	43	43	43	43	151			
22	71	71	35	35	35	35	151			
23	71	70	43	43	43	43	151			
24	62	29	56	56	56	56	149			
25	63	29	57	57	57	57	149			
26	63	29	57	57	57	57	149			
27	70	31	57	57	57	57	153			
28	67	31	57	57	57	57	152			
29	72	33	57	57	57	57	152			
30	85	37	57	57	57	57	152			
TOTALS										

* From ISS records.

Appendix Table 3' (Continued)

May	Temperature F			Weather	Flow of Trinity River			Fish trapped		
	Air		Water		at Lewiston		King salmon		Silver salmon	
	Maximum	Minimum	Maximum		Maximum	Minimum	Adults	Grilse	Adults	Grilse
1	76	57	82	56	48	35	57	56	151	150
2	75	58	80	56	47	37	59	58	150	150
3	78	60	86	60	42	42	61	60	151	151
4	78	61	88	61	47	53	62	61	150	150
5	75	61	87	61	47	53	62	61	150	150
6	75	61	80	61	40	40	63	62	150	150
7	78	62	83	62	42	45	63	62	149	149
8	78	62	83	62	40	40	63	62	147	147
9	75	61	87	61	40	40	63	62	148	148
10	75	61	80	61	42	37	63	62	150	150
11	78	62	83	62	37	38	63	62	149	149
12	73	54	98	74	37	34	64	65	148	148
13	74	54	94	74	37	34	64	65	149	149
14	75	55	98	75	37	34	64	65	149	149
15	75	55	98	75	37	34	64	65	148	148
16	76	56	98	76	37	34	64	65	149	149
17	77	56	98	77	37	34	64	65	148	148
18	78	57	98	78	37	34	64	65	146	146
19	74	54	89	74	37	34	63	63	145	145
20	74	54	82	74	37	34	63	63	145	145
21	74	54	80	74	37	34	63	63	145	145
22	79	59	83	79	37	34	63	63	145	145
23	79	59	84	79	37	34	63	63	145	145
24	78	58	84	78	37	34	63	63	145	145
25	78	58	84	78	37	34	63	63	145	145
26	92	76	84	92	37	34	63	63	145	145
27	76	73	84	76	37	34	63	63	145	145
28	69	69	84	69	37	34	63	63	145	145
29	69	69	84	69	37	34	63	63	145	145
30	64	64	84	64	37	34	63	63	145	145
31	70	70	84	70	37	34	62	62	145	145
TOTALS										

* From USGS records.

Appendix Table 3 (Continued)

- 22 -

June	Temperature F			Weather	Fish trapped			Trinity River at Lewiston (cfs)*
	Air		Water		King salmon	Silver salmon	Adults	
	Maximum	Minimum			Adults	Drifts	Steelhead	
1	72	39	64	clear	114	112	112	114
2	77	36	63	partly cloudy	112	113	112	114
3	76	39	59	clear	113	114	115	116
4	70	37	55	partly cloudy	115	116	116	116
5	73	42	50	cloudy	114	115	115	116
6	73	42	50	cloudy	115	116	116	116
7	70	39	52	cloudy	115	116	116	116
8	73	42	50	clear	116	117	117	117
9	78	45	58	clear	117	118	118	117
10	81	48	58	clear	117	118	118	117
11	93	50	58	clear	117	118	118	117
12	90	52	58	clear	117	118	118	117
13	95	52	58	clear	117	118	118	117
14	92	50	58	clear	117	118	118	117
15	80	50	58	clear	117	118	118	117
16	89	52	58	clear	117	118	118	117
17	91	52	58	clear	117	118	118	117
18	96	52	58	clear	117	118	118	117
19	91	52	58	clear	117	118	118	117
20	93	52	58	clear	117	118	118	117
21	99	52	58	clear	117	118	118	117
22	93	52	58	clear	117	118	118	117
23	98	52	58	clear	117	118	118	117
24	91	52	58	clear	117	118	118	117
25	93	52	58	clear	117	118	118	117
26	94	52	58	clear	117	118	118	117
27	99	52	58	clear	117	118	118	117
28	84	52	58	clear	117	118	118	117
29	77	52	58	clear	117	118	118	117
30	71	52	58	clear	117	118	118	117
TOTALS								

* From USGS records.