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REF 90089

ANNUAL REPORT
TRINITY RIVER SALMON AND STEELHEAD HATCHERY
1976-77/

by

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ABSTRACT

This report describes the operation of Trinity River Salmon and Steelhead Hatchery from July 1, 1976 through June 30, 1977. Tables present daily records of water temperatures and weather conditions, daily numbers of salmon and steelhead entering the hatchery, total numbers of salmonids reared and released, and a summary of annual salmonid runs to Trinity Hatchery from its opening through the current year.

There were 7,624 king salmon (Oncorhynchus tshawytscha) trapped, which produced 4,164,000 eggs. The 2,808 silver salmon (O. kisutch) produced 2,711,000 eggs. Only 13 steelhead (Salmo gairdnerii gairdnerii), the lowest run on record, returned to the hatchery. They produced 8,200 eggs.

About 3,246,075 fingerling and 1,023,710 yearling king salmon, 2,808 yearling silver salmon, 182,961 fingerling and 370,215 yearling steelhead, and 29,500 fingerling and 12,600 yearling brown trout were planted in FY 1976-77.

INTRODUCTION

This is the nineteenth 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, 1976 through June 30, 1977. Copies of previous annual reports are available upon request from the Anadromous Fisheries Branch, Sacramento.

PRODUCTION SUMMARY

King Salmon entered the hatchery from August 30 through November 18 (Figure 1). Silver salmon began entering the hatchery October 12. The run ended December 16. Steelhead were trapped at the hatchery from September 30, 1976 through April 14, 1977. Brown trout entered the hatchery between October 25 and December 9.

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 or brood stock	Total planted	On hand June 30, 1977
King salmon	7,624	1,467	6,373,510 ^{a/}	3,246,075	1,023,710	60,154	866,000
Silver salmon	2,808	1,356	2,711,000		164,730	12,338	396,000
Steelhead	13	3	540,900 ^{b/}	182,961	370,215	35,654	486,000
Brown trout	49	28	52,000	29,500	12,600	737	0
Totals	10,494	2,854	9,677,410	3,458,536	1,571,255	108,883	1,748,000

a/ 4,164,000 Trinity; 2,209,510 Iron Gate.

b/ 8,200 Trinity; 532,700 Iron Gate.

HATCHERY OPERATION

All production fish were reared on a diet of Oregon Moist Pellet (OMP). A total of 233,372 kg (514,500 lb) of feed produced 108,900 kg (240,085 lb) of fish during fiscal year 1976-77. The feed conversion rate (kg of feed required to produce 1 kg of fish) was 2.1.

The hatchery had 14,572 visitors in 1976-77. Guided tours were provided for several of the larger groups of visitors, most of which were from schools in the area.

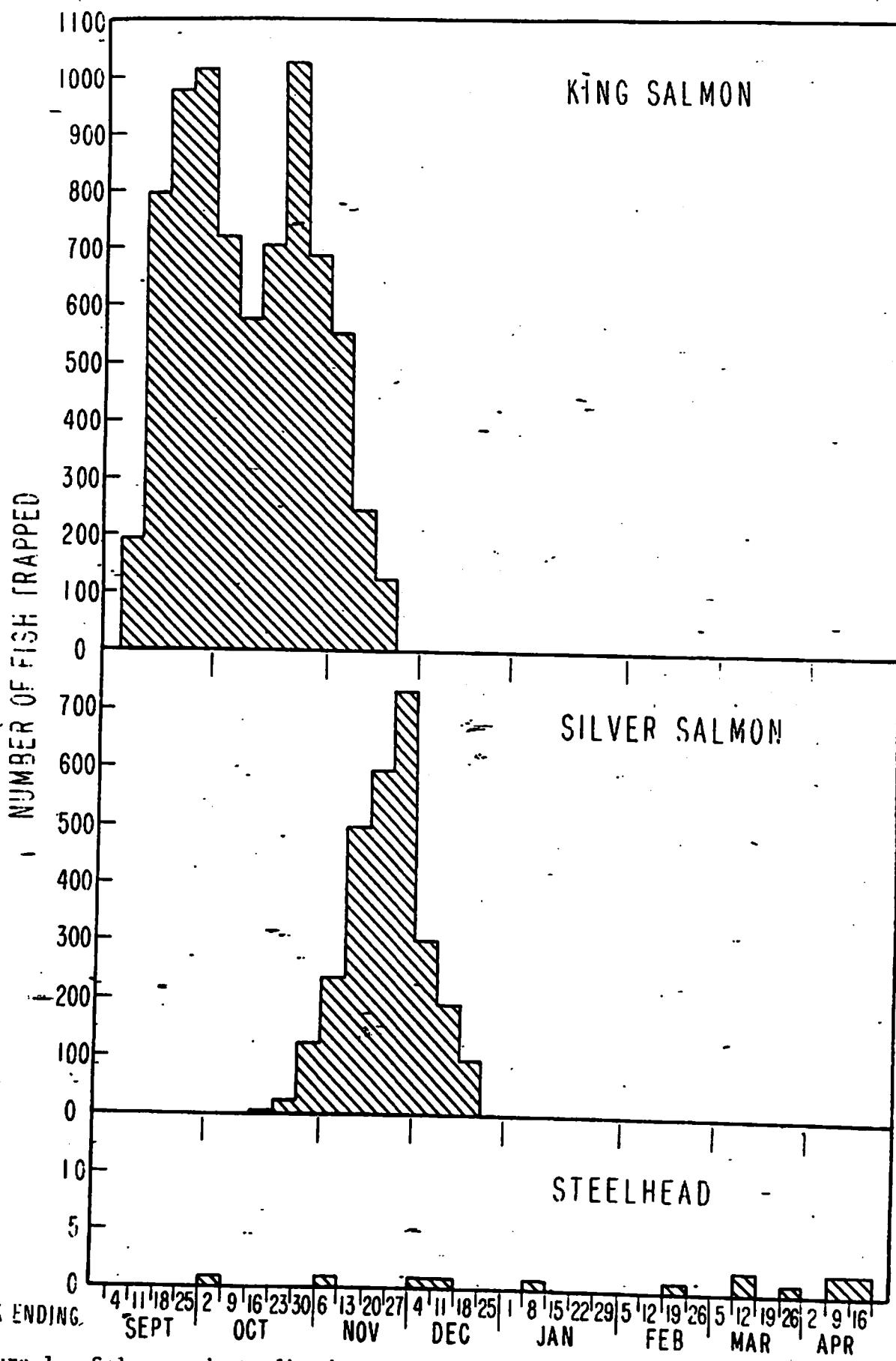


Figure 1. Salmon and steelhead trapped at Trinity River Fish Hatchery. Weekly counts during 1976-77 season.

KING SALMON MAINTENANCE PROGRAM

History of the 1976 Run

King salmon began arriving at the hatchery on May 18 and continued arriving in small numbers throughout the summer. The ladder was opened on August 30 and spawning operations began September 2.

Spring Run

Between August 30 and October 7, 1976, 4,284 king salmon, thought to be mostly spring-run, were trapped. This number included 1,821 males, 1,487 females, and 976 grilse. King salmon males <56 cm (22 inches) FL are considered grilse. The 1,090 females spawned from September 2 through October 7, produced 3,075,000 eggs, an average of 2,821/female. Egg size averaged 85/ounce.

Fall Run

There were 3,340 king salmon trapped from October 8 to November 18: 1,024 males, 414 females, and 1,902 grilse. All were assumed to be fall-run. The 377 fall-run females which were spawned produced 1,089,000 eggs, an average of 2,889/female. Egg size averaged 88/ounce.

One marked king salmon returned (Table 2).

Table 2. Marked King Salmon Return

Date	Mark	Sex	Fork length in inches
9/7/76	LV	M	29

Planting 1975 Broodyear King Salmon

An estimated 1,023,710 1975 broodyear king salmon yearlings were planted this fiscal year (Table 3). All were planted near the hatchery, and none were marked.

Table 3. Summary of Yearling King Salmon Plants

Date	Race	Size	Release site	Number
9/15/76	Fall run	14.0/lb	Hatchery	266,000
9/15/76	Spring run	14.0/lb	Hatchery	141,000
10/ 8/76	Fall run	9.5/lb	Hatchery	105,000
10/ 8/76	Fall run	11.0/lb	Hatchery	148,500
10/14/76	Spring run	10.0/lb	Hatchery	89,500
11/ 8/76	Fall run	8.5/lb	Hatchery	70,500
11/ 9/76	Spring run	7.8/lb	S.F. Trinity R.	19,500
11/10/76	Spring run	7.8/lb	S.F. Trinity R.	19,500
11/17/76	Fall run	9.0/lb	Hatchery	69,500
11/19/76	Spring run	7.7/lb	Hatchery	94,710
			Total	1,023,710

Approximately 4,092,000 1975 broodyear king salmon was planted last fiscal year as fingerlings. Of the 9,881,000 king salmon (fall and spring-run) eggs taken in 1975, 5,115,710 (52%) were eventually planted.

Planting 1976 Broodyear King Salmon

An estimated 3,246,075 1976 broodyear king salmon fingerlings were planted in the Trinity River at the hatchery (Table 4).

Table 4. Summary of Fingerling King Salmon Plants

Date	Race	Size	Number
4/25/77	Spring run	91/lb	417,000
4/25/77	Spring run	91/lb	440,000
4/25/77	Fall run	90/lb	516,000
4/27/77	Spring run	96/lb	302,400
4/27/77	Fall run	97/lb	160,050
4/28/77	Fall run	97/lb	264,325
5/ 2/77	Fall run	75/lb	403,550
5/ 4/77	Spring run	89/lb	339,000
5/ 5/77	Spring run	95/lb	403,750
Total			3,246,075

Approximately 746,000 fall-run and 120,000 spring-run fingerlings are being held at the hatchery for later release as yearlings.

SILVER SALMON MAINTENANCE PROGRAM

History of the 1976 Run

Silver salmon entered the hatchery from October 12 to December 16, 1976. The 2,808 fish trapped included 1,171 males, 1,414 females, and 223 grilse. Silver salmon males <56 cm (22 inches) FL are considered grilse. None were marked. There were 1,356 females spawned from November 1 through December 16. They produced 2,711,000 eggs, an average of 1,999/female. Egg size averaged 94/ounce.

Crystal Lake Hatchery and Mad River Hatchery in Region I received 610,000 and 945,800 of the eggs respectively (Appendix Table 1). No silver salmon fingerlings (1976 broodyear fish) were planted this fiscal year. We had an estimated 396,000 1976 broodyear fish on hand June 30, 1977.

Planting 1975 Broodyear Silver Salmon

All 1975 broodyear silver salmon were planted at the hatchery (Table 5).

Table 5. Summary of Silver Salmon Plants

Date	Size	Number
3/1/77	5.9/lb	84,750
3/1/77	2.1/lb	14,460
3/1/77	11.0/lb	65,520
Total		164,730

STEELHEAD MAINTENANCE PROGRAM

History of the 1976-77 Steelhead Run

The entire adult steelhead run at Trinity River Hatchery during the 1976-77 season consisted of 13 fish: 9 males and 4 females. From February 17 through April 7, three of the females were spawned, producing 8,200 eggs, an average of 2,733/female. Egg size averaged 218/ounce. We also received 532,700 steelhead eggs from Iron Gate Hatchery (Appendix Table 1).

Marked Steelhead Returns

Of the 13 steelhead trapped at Trinity River Hatchery during the 1976-77 season seven (54%) were marked (Table 6).

Table 6. Marked Steelhead Returns

Date	Mark	Sex	Fork length in inches
9/30/76	LV	F	26
2/10/77	RV	M	27
2/17/77	RM	M	22
3/24/77	RV	M	29
4/ 7/77	Ad-LP	M	21
4/14/77	Ad-LV	M	24
4/14/77	Ad-LV	M	17

Steelhead Plants

There were 533,176 steelhead planted in FY 1976-77 (Table 7).

Table 7. Steelhead Planting Summary

Strain & brood year	Date released	Average size	Mark	Release site	Number released
Iron Gate, 1974 BY	4/18/77	2.5lb/fish	Ad-LP	Lewiston Lake	742
Trinity River, 1975 BY	3/21/77	3/lb	Ad-LV-RP	Hatchery	21,000
Iron Gate, 1975 BY	3/21/77	3/lb	Ad-RV-LP	Hatchery	43,658
Trinity River, 1976 BY	3/29/77	19/lb	None	Trinity Lake	23,750
	4/ 1/77	5/lb	LV-RP	Hatchery	143,344
	4/ 1/77	20/lb	None	Trinity Lake	6,000
	4/21/77	7.3/lb	LV-RP	Hatchery	31,886
				Total	204,980
Iron Gate, 1976 BY	7/29/76	432/lb	None	Trinity Lake	63,936
	3/29/77	21/lb	None	Trinity Lake	26,250
	3/30/77	21/lb	None	Trinity Lake	53,025
	4/1/77	8/lb	RV-LP	Hatchery	113,785
	4/1/77	20/lb	None	Trinity Lake	10,000
	4/21/77	8/lb	RV-LP	Hatchery	45,800
				Total	282,796

BROWN TROUT MAINTENANCE PROGRAM

History of the 1976 Brown Trout Run

Between October 25 and December 9, 49 brown trout (21 males and 28 females) were trapped at the hatchery. From November 12 through December 16, all 28 of the females were spawned and produced 52,000 eggs, an average of 1,857/female. Egg size averaged 224/ounce.

Brown Trout Planting

There were 42,100 brown trout planted (Table 8).

Table 8. Brown Trout Planting Summary

Brood year	Date	Size	Mark	Release site	Number
1975	4/ 1/77	8/lb	Ad	Hatchery	12,600
1976	5/ 4/77	508/lb	None	Trinity Lake	12,700
	5/ 4/77	592/lb	None	Trinity Lake	8,880
	5/ 4/77	880/lb	None	Trinity Lake	7,920
				Total	29,500

Appendix Table 1

Eggs and Fish Shipped from and Received at
Trinity River Hatchery, July 1, 1976-June 30, 1977

Shipped	Number	Date	Destination
Silver salmon eggs Trinity River strain	610,000	1/ 6/77	Crystal Lake Hatchery
Silver salmon eggs Trinity River strain	945,800	1/20/77	Mad River Hatchery
TOTAL SHIPPED	1,555,800		

Received 6/15/95 RS

Received	Number	Date	Origin
King salmon eggs (1976 broodyear)	1,209,510	11/ 3/76	Iron Gate Hatchery
King salmon eggs (1976 broodyear)	1,000,000	11/16/76	Iron Gate Hatchery
Steelhead eggs (1977 broodyear) winter-run, Klamath River strain	200,000	4/14/77	Iron Gate Hatchery
Steelhead eggs (1977 broodyear) winter-run, Klamath River strain	224,000	4/26/77	Iron Gate Hatchery
Steelhead eggs (1977 broodyear) winter-run, Klamath River strain	168,700	5/10/77	Iron Gate Hatchery
TOTAL RECEIVED	2,742,210		

Appendix Table 2
Yearly Comparison of Fish Trapped at Lewiston
July 1, 1971 through June 30, 1977

Species	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	July 1, 1976 through June 30, 1977
King Salmon						
Male	3,648	5,217	2,483	4,547	2,958	2,845
Female	4,645	5,825	1,152	2,840	3,405	2,901
Total Adults	8,293	11,042	3,635	7,387	6,363	4,746
Grilse	928	339	1,577	677	860	2,878
Totals	9,221	11,381	5,212	8,064	7,223	7,624
Silver Salmon						
Male	28	28	3,808	33	68	1,171
Female	11	30	3,787	22	109	1,414
Total Adults	39	58	7,595	55	177	2,585
Grilse	8	2,612	486	40	2,060	223
Totals	47	2,670	8,081	95	2,237	2,808
Steelhead Trout						
Adults	242	271	162	372	175	13
Brown trout						
Adults	7	111	39	32	24	42

Appendix Table 3
 Trinity River Salmon and Steelhead Hatchery Weather,
 and Water Data, and Counts of Fish during Spawning
 Operations, July 1, 1976 through June 30, 1977

July	Temperature F.				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped		
	Air Maximum	Air Minimum	Water Maximum	Water Minimum			King salmon Adults	Silver salmon Grilse	Steelhead
1	81	37	56	51	partly cloudy	143			
2	85	43	58	51	clear	142			
3	84	48	57	51	clear	145			
4	88	53	58	52	clear	146			
5	94	53	57	52	clear	144			
6	97	50	60	53	clear	143			
7	91	51	59	54	clear	143			
8	90	58	59	55	clear	145			
9	91	54	60	55	clear	143			
10	97	52	62	54	clear	147			
11	82	52	57	55	clear-showers	147			
12	94	48	59	53	clear	147			
13	98	49	61	54	clear	146			
14	102	52	61	54	clear	147			
15	105	56	62	55	clear	146			
16	98	59	60	55	overcast	148			
17	90	61	57	55	rain-hail	149			
18	94	59	60	55	fog-clear	148			
19	93	54	61	54	clear	148			
20	90	52	59	53	clear	148			
21	96	50	60	53	clear	148			
22	99	51	62	54	clear	149			
23	98	58	62	54	clear	150			
24	102	56	62	55	clear	150			
25	105	56	63	56	clear	150			
26	105	59	63	56	clear	149			
27	104	59	64	56	clear	149			
28	100	59	62	56	partly cloudy	150			
29	94	60	62	55	showers	149			
30	91	55	61	56	clear	149			
31	90	56	61	56	partly cloudy	150			

*From USGS records.

Appendix Table 3 (Continued)

August	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped				
	Air		Water				King salmon	Silver salmon			
	Maximum	Minimum	Maximum	Minimum			Adults	Grilse	Adults		
1	79	59	59	55	rain	150					
2	83	53	61	56	partly cloudy	150					
3	78	54	59	56	partly cloudy	152					
4	77	56	59	56	partly cloudy	152					
5	75	55	56	56	showers	152					
6	71	52	56	54	showers	152					
7	80	53	58	54	partly cloudy	151					
8	86	50	59	54	fog-clear	150					
9	96	59	60	54	clear	150					
10	98	59	61	55	clear	151					
11	94	54	60	56	clear	151					
12	94	50	61	55	clear	151					
13	75	55	57	56	showers	149					
14	58	54	55	55	rain	150					
15	58	50	55	54	rain	149					
16	66	49	55	53	showers	146					
17	62	50	54	53	rain	148					
18	68	52	54	53	light rain	147					
19	86	50	57	53	fog-clear	147					
20	94	50	58	53	fog-clear	147					
21	85	59	59	54	clear	148					
22	68	62	57	55	showers	144					
23	84	66	59	55	partly cloudy	142					
24	91	55	60	55	fog-clear	131					
25	82	53	58	55	clear	138					
26	83	42	58	53	clear	138					
27	96	46	60	53	clear	135					
28	93	53	60	54	clear	136					
29	96	52	60	54	clear	141					
30	102	50	62	55	clear	136					
31	102	50	62	55	clear	137					

* From USGS records

Appendix Table 3 (Continued)

September	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 Steclings
1	103	51	58	57	clear	174				
2	101	50	56	53	clear	192	181	13		
3	100	53	56	52	clear	189				
4	100	54	56	52	clear	187				
5	90	56	56	53	partly cloudy	187				
6	84	58	54	52	clear	185				
7	91	41	55	52	clear	186	391	29		
8	94	49	55	51	clear	189				
9	97	43	55	52	clear	185				
10	93	48	59	52	overcast	183	347	52		
11	68	59	54	52	partly cloudy	184				
12	80	48	54	51	partly cloudy	183				
13	88	45	54	51	clear	183	362	30		
14	83	52	53	51	partly cloudy	184				
15	78	50	54	52	partly cloudy	185				
16	61	53	52	51	partly cloudy	193	536	51		
17	79	52	53	50	partly cloudy	196				
18	86	50	53	50	partly cloudy	196				
19	84	48	54	51	clear	195				
20	80	48	54	50	clear	194	516	77		
21	82	40	53	50	clear	193				
22	85	44	53	49	clear	195				
23	86	44	53	50	clear	196	315	78		
24	90	44	53	50	clear	195				
25	80	40	54	50	clear	194				
26	80	44	53	50	clear	194				
27	78	45	53	51	cloudy	192	265	120		
28	76	50	55	51	rain-cloudy	194				
29	90	56	53	50	fog-clear	197				
30	80	53	54	50	fog-clear	195	161	124		
TOTALS							1,104	344		

* From USGS records.

Appendix Table 3 (Continued)

October	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped				
	Air		Water				King salmon		Silver salmon		
	Maximum	Minimum	Maximum	Minimum			Adults	Grilse	Adults Grilse Steelhead		
1	82	50	53	50	clear-cloudy	197					
2	71	55	51	50	cloudy	203					
3	76	43	52	49	fog-clear	203					
4	81	41	49	43	fog-clear	198	136	201			
5	86	42	52	49	fog-clear	196					
6	93	44	53	49	fog-clear	197					
7	88	44	53	49	clear	198	66	171			
8	88	44	52	49	clear	199					
9	86	41	53	49	clear	199					
10	81	38	51	48	clear	200	142	314			
11	83	40	52	48	clear	199					
12	87	38	52	48	fog-clear	199			2 2		
13	84	36	51	48	clear	200					
14	85	37	51	48	clear	200	76	176	3		
15	80	34	50	47	clear	236					
16	80	34	50	47	clear	257					
17	77	35	50	47	clear	257					
18	81	32	50	47	clear	257	195	355	5		
19	80	34	50	47	clear	257					
20	79	33	50	47	clear	256					
21	79	34	50	47	partly cloudy	255	165	311	16 2		
22	77	40	50	48	partly cloudy	257					
23	75	37	50	48	clear	257					
24	60	37	49	48	cloudy-rain	257					
25	75	38	49	47	partly cloudy	257	131	194	36 36		
26	70	35	49	47	fog-clear	257					
27	75	28	49	47	clear	256					
28	73	29	49	47	clear	255	141	175	50 4		
29	69	54	49	47	cloudy	257					
30	72	35	49	47	clear	257					
31	71	35	49	47	cloudy-clear	257					
TOTALS						1,194	1,895	112	44		

* From USGS records.

Appendix Table 3 (Continued)

November	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped					
	Air		Water				King salmon		Silver salmon			
	Maximum	Minimum	Maximum	Minimum			Adults	Grilse	Adults	Grilse		
1	76	39	50	47	fog-clear	257	191	180	81	11		
2	75	41	48	48	fog-clear	257				1		
3	76	36	49	48	clear	258						
4	76	36	49	48	clear	257	91	88	113	33		
5	61	32	49	47	cloudy	257						
6	66	36	49	47	partly cloudy	257						
7	73	32	49	47	clear	256						
8	66	30	48	47	cloudy	256	87	36	192	17		
9	68	33	49	47	partly cloudy	256						
10	60	43	48	47	cloudy	254						
11	57	47	49	48	rain	253						
12	64	44	49	48	cloudy-rain	254	75	47	233	57		
13	53	40	49	48	cloudy-rain	256						
14	48	40	48	48	rain	255						
15	56	46	49	48	cloudy	230	63	17	301	19		
16	61	50	49	48	fog-clear	202						
17	54	48	49	48	fog	199						
18	55	48	49	48	fog-clear	198	31	11	268	6		
19	59	44	50	49	fog-clear	198						
20	60	40	50	48	fog-clear	200						
21	63	41	50	48	fog-clear	199						
22	58	42	49	48	fog-clear	199			449	16		
23	58	39	49	48	fog-clear	199						
24	55	39	49	48	fog-clear	197						
25	52	39	49	48	fog-clear	199						
26	45	34	46	46	fog-clear	200			259	8		
27	50	25	48	47	clear	201						
28	53	21	48	46	clear	199						
29	54	24	47	46	fog-clear	198			180	3		
30	55	28	47	46	fog-clear	199						
TOTALS							538	379	2,076	170		

*From USGS records.

Appendix Table 3 (Continued)

December	Temperature F				Weather	Flow of Trinity River (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	54	30	46	45	fog-clear	167					
2	53	30	46	45	fog-clear	145			116	3	1
3	51	30	46	45	fog-clear	146					
4	52	31	46	45	fog-clear	146					
5	54	29	46	45	fog-clear	149					
6	54	29	46	45	fog-clear	151			106	1	
7	53	31	46	45	fog-clear	151					
8	50	31	46	45	fog-cloudy	151					
9	48	32	46	45	fog-cloudy	152			82	1	
10	66	26	46	45	partly cloudy	150					
11	54	25	46	44	partly cloudy	146					
12	51	25	46	45	clear	146					
13	50	28	46	45	fog-clear	147			62		
14	49	26	46	45	fog-clear	143					
15	51	26	45	45	fog-clear	139					
16	51	30	45	45	partly cloudy	141			31	4	
17	48	25	45	44	fog-clear	147					
18	47	24	45	44	fog-clear	147					
19	46	25	45	44	fog-clear	148					
20	47	25	45	44	fog-clear	149					
21	45	25	45	44	fog-clear	148					
22	45	28	45	44	fog-clear	147					
23	50	28	45	44	fog-clear	147					
24	45	28	44	44	fog-cloudy	148					
25	43	30	45	44	cloudy	148					
26	50	24	45	44	cloudy	147					
27	48	28	45	44	partly cloudy	148					
28	44	24	45	44	fog-cloudy	148					
29	42	28	45	44	cloudy-snow	149					
30	45	36	45	44	cloudy	149					
31	45	35	45	44	cloudy	149					
TOTALS							397	9	2		

*From USGS records.

Appendix Table 3 (Continued)

January	Temperature F			Weather	Flow of Trinity River		Fish trapped		
	Air		Water		at Lewiston (cf.)*		King salmon	Silver salmon	Adults (grilse)
	Maximum	Minimum	Maximum		Maximum	Minimum	Adults (grilse)		Juveniles
1	34	30	45	44	rain-snow	149			
2	38	32	44	41	snow-rain	146			
3	41	30	44	43	partly cloudy	148			
4	41	30	44	44	partly cloudy	150			
5	40	29	44	44	cloudy-clear	152			
6	42	17	44	43	clear	149			
7	39	20	45	43	fog-clear	150			
8	40	22	46	45	fog-clear	146			
9	38	20	46	45	fog-clear	147			
10	48	27	47	45	partly cloudy	148			
11	40	31	46	46	fog-cloudy	149			
12	40	32	47	46	cloudy	151			
13	44	34	46	46	cloudy	149			
14	43	34	46	46	clear	145			
15	38	30	46	46	fog	144			
16	42	30	46	46	fog-clear	148			
17	42	26	46	45	fog-clear	148			
18	50	30	46	45	fog-clear	144			
19	50	30	46	45	partly cloudy	145			
20	47	31	46	45	fog-cloudy	143			
21	49	34	46	45	cloudy	145			
22	50	34	46	45	partly cloudy	145			
23	52	34	45	45	fog+clear	144			
24	55	31	46	45	partly cloudy	144			
25	54	29	45	44	partly cloudy	145			
26	56	24	46	44	fog-clear	144			
27	58	28	45	44	fog-clear	145			
28	58	28	46	45	fog-clear	145			
29	52	28	45	45	fog-clear	145			
30	52	26	45	44	partly cloudy	143			
31	49	30	46	44	fog-clear	145			
TOTALS									

*From USGS records.

Appendix Table 3 (Continued)

February	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped		
	Air Maximum	Air Minimum	Water Maximum	Water Minimum			King salmon Adults Grilse	Silver salmon Adults Grilse	Steelhead
1	61	29	46	45	fog-clear	143			
2	61	24	46	44	fog	143			
3	59	24	46	44	partly cloudy	144			
4	61	25	46	44	fog-clear	144			
5	55	31	46	45	cloudy-rain	145			
6	64	38	47	45	cloudy-clear	144			
7	63	31	47	45	partly cloudy	144			
8	51	43	47	46	rain	145			
9	57	40	48	46	partly cloudy	145			
10	65	39	48	46	partly cloudy	144			
11	67	37	48	46	fog-clear	144			
12	66	36	49	47	clear-fog	146			
13	68	38	49	47	fog-hazy	146			
14	72	37	50	47	fog-clear	146			
15	73	33	50	47	partly cloudy	146			
16	73	35	50	48	partly cloudy	146			
17	71	33	50	48	partly cloudy	145			
18	70	54	50	48	partly cloudy	144			1
19	75	27	50	48	partly cloudy	144			
20	51	37	49	48	cloudy rain	144			
21	50	41	48	48	rain	146			
22	51	31	47	45	partly cloudy	145			
23	46	33	48	47	rain-snow	146			
24	52	30	48	47	fog-cloudy	145			
25	56	33	48	47	fog-clear	144			
26	61	33	48	47	fog-clear	146			
27	65	36	49	47	partly cloudy	145			
28	48	39	47	47	partly cloudy	145			
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TOTALS									

*From USGS records.

Appendix Table 3 (Continued)

March	Temperature F.				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped					
	Air		Water				King salmon	Silver salmon				
	Maximum	Minimum	Maximum	Minimum			Adults	Grilse	Adults	Grilse		
1	53	27	47	46	partly cloudy	146						
2	53	26	47	46	overcast	148						
3	56	32	48	47	clear	148						
4	68	24	48	46	clear	149						
5	72	26	49	46	clear	149						
6	61	23	48	46	overcast	149						
7	47	26	47	47	cloudy-rain	148						
8	63	21	48	47	cloudy	148						
9	50	23	47	47	snow-showers	149						
10	60	25	47	46	clear	148						
11	60	27	48	46	partly cloudy	149						
12	50	36	47	47	cloudy	149						
13	54	26	47	46	partly cloudy	149						
14	49	30	47	46	cloudy	149						
15	41	33	46	46	snow-rain	151						
16	55	32	47	46	cloudy	150						
17	59	32	47	46	fog-clear	149						
18	53	33	47	46	fog-clear	149						
19	64	31	48	47	fog-clear	149						
20	70	33	50	47	fog-clear	149						
21	77	31	50	47	clear	150						
22	73	34	52	48	partly cloudy	156						
23	52	40	49	49	cloudy-rain	158						
24	48	32	48	48	cloudy-rain	151						
25	62	34	49	48	partly cloudy	148						
26	75	28	50	48	fog-clear	149						
27	58	39	49	48	clear-windy	149						
28	56	34	49	48	partly cloudy	149						
29	55	25	48	48	clear-cloudy	149						
30	61	21	49	48	partly cloudy	149						
31	68	25	49	47	partly cloudy	150						
TOTALS												

*From USGS records.

Appendix Table 3 (Continued)

April	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped					
	Air		Water				King salmon	Silver salmon				
	Maximum	Minimum	Maximum	Minimum			Adults	Grilse				
1	68	36	49	47	partly cloudy	148						
2	70	29	50	48	clear	148						
3	80	31	51	48	clear	148						
4	86	35	54	49	clear	149						
5	86	37	53	50	clear	149						
6	86	35	54	50	clear	148						
7	79	40	55	51	clear	147						
8	57	42	52	51	cloudy-rain	147						
9	64	42	51	50	partly cloudy	147						
10	70	38	52	50	clear	146						
11	77	36	52	50	clear	145						
12	80	34	53	51	clear	145						
13	70	31	52	51	clear	145						
14	78	31	53	51	partly cloudy	145						
15	85	38	54	51	partly cloudy	144						
16	77	52	52	51	partly cloudy	143						
17	76	40	52	50	clear	142						
18	72	29	53	51	clear	142						
19	78	29	54	52	clear	145						
20	76	33	56	53	partly cloudy	147						
21	74	37	56	53	partly cloudy	148						
22	75	41	56	54	partly cloudy	149						
23	80	42	58	55	cloudy-clear	150						
24	77	40	57	55	partly cloudy	148						
25	62	48	55	55	rain-cloudy	149						
26	76	33	57	55	fog-clear	148						
27	80	35	58	56	clear	148						
28	68	40	57	56	partly cloudy	149						
29	66	46	58	57	partly cloudy	149						
30	64	47	58	57	rain	155						
TOTALS										4		

*From U.S.G.S. records

Appendix Table 7 (Continued)

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May	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped				
	Air		Water				King salmon	Silver salmon			
	Maximum	Minimum	Maximum	Minimum			Adults	Grilse			
1	64	48	58	58	cloudy-rain	159					
2	63	42	58	57	cloudy-rain	149					
3	59	43	58	57	rain-cloudy	145					
4	64	32	56	55	partly cloudy	144					
5	59	40	53	53	partly cloudy	144					
6	55	33	51	50	cloudy-rain	145					
7	59	34	50	49	partly cloudy	146					
8	64	31	50	48	cloudy-clear	146					
9	56	45	50	49	rain	147					
10	62	38	49	48	cloudy-showers	152					
11	55	41	49	48	cloudy-rain	154					
12	65	41	51	48	partly cloudy	151					
13	75	38	52	49	cloudy	155					
14	68	38	51	49	clear	164					
15	68	34	51	49	partly cloudy	167					
16	61	32	50	49	cloudy-showers	157					
17	66	33	50	49	partly cloudy	152					
18	57	37	50	48	cloudy-rain	153					
19	78	41	51	49	cloudy-clear	153					
20	83	42	52	50	clear	154					
21	84	42	55	51	clear-hazy	152					
22	58	48	52	51	cloudy-rain	152					
23	64	42	52	50	cloudy	151					
24	72	41	52	50	cloudy	152					
25	65	45	52	50	partly cloudy	152					
26	66	48	51	51	cloudy-rain	153					
27	72	34	52	50	clear	152					
28	79	32	52	50	clear	151					
29	80	40	53	50	clear	152					
30	86	40	54	51	clear	154					
31		45	55	52	clear	154					
TOTAL											

*From USGS records.

Appendix Table 3 (Continued)

June	Temperature F				Weather	Flow of Trinity River at Lewiston (cfs)*	Fish trapped		
	Air Maximum	Air Minimum	Water Maximum	Water Minimum			King salmon Adults	Silver salmon Adults	Steelhead Grilse
1	79	49	55	52	cloudy-clear	153			
2	85	39	55	51	clear	151			
3	84	44	54	51	sprinkles	150			
4	84	44	54	51	partly cloudy	151			
5	104	51	57	53	clear	151			
6	100	59	58	53	partly cloudy	152			
7	95	52	57	54	partly cloudy	155			
8	98	59	57	53	partly cloudy	155			
9	77	62	56	54	partly cloudy	156			
10	66	52	57	52	showers	154			
11	79	46	53	51	cloudy-clear	153			
12	81	41	55	51	clear	153			
13	83	55	56	53	partly cloudy	156			
14	85	46	55	52	clear	156			
15	95	47	55	52	clear	155			
16	95	51	56	52	clear-cloudy	156			
17	82	58	56	53	partly cloudy	154			
18	91	57	56	52	clear-rain	157			
19	88	55	55	53	clear	161			
20	85	51	56	51	partly cloudy	155			
21	99	52	56	52	clear	153			
22	100	55	59	54	clear	152			
23	102	50	59	52	clear	152			
24	105	54	59	53	clear	151			
25	104	57	58	54	clear	153			
26	105	57	56	54	clear	151			
27	104	55	58	53	clear	153			
28	106	56	58	54	clear	151			
29	109	56	59	55	clear	151			
30	88	61	56	55	clear-showers	151			
TOTALS									

* From USGS records.

Appendix Table 4. Summary of Fish Runs to Trinity River
Salmon and Steelhead Hatchery
through 1976-77

Year	King salmon		Silver salmon		Steelhead	Brown trout
	Grilse	Adults	Grilse	Adults		
1958-59	878	3,013	33	583	2,880	80
59-60	2,701	4,549	26	93	2,071	52
60-61	4,130	2,780	70	138	3,526	82
61-62	2,899	2,498	37	318	3,243	35
62-63	6,535	2,916	9	7	1,687	49
63-64	2,540	4,200	11	72	894	34
64-65	1,287	5,016	2	48	6,941	145
65-66	1,521	1,554	9	3	992	100
66-67	2,786	2,054	807	218	135	152
67-68	1,746	2,870	59	806	232	231
68-69	873	3,899	34	4	554	170
69-70	1,130	1,456	1,711	285	141	70
70-71	2,946	1,498	341	2,806	67	23
71-72	928	8,293	8	39	242	7
72-73	339	11,042	2,612	58	271	111
73-74	1,577	3,635	486	7,595	162	39
74-75	677	7,387	40	55	372	32
75-76	860	6,363	2,060	177	175	24
76-77	2,878	4,746	223	2,585	13	49