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ANNUAL REPORT
WARM SPRINGS SALMON AND STEELHEAD HATCHERY
1983-84

by

Donald F. Estey
Region 3, Inland Fisheries

Anadromous Fisheries Branch
Administrative Report No. 84-04

1984

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ABSTRACT

This report describes the operation of Warm Springs Salmon and Steelhead Hatchery from July 1, 1983 through June 30, 1984. Tables present daily records of water temperatures, weather conditions, daily numbers of salmon and steelhead entering the hatchery and total number of salmonids reared and released.

Four chinook salmon, Oncorhynchus tshawytscha, 9 coho salmon, Oncorhynchus kisutch, and 1,962 steelhead, Salmo gairdneri gairdneri, were trapped at the hatchery this season. There were 66,120 advanced fingerling chinook salmon and 3,800 advanced fingerling and 30,310 yearling coho salmon planted. Also planted or transferred were 963,740 fingerling and 124,146 yearling steelhead.

^{1/} Anadromous Fisheries Branch Administrative Report No. 84-04.
Submitted August 22, 1984.

INTRODUCTION

This is the fourth annual report for operation of the Warm Springs Salmon and Steelhead Hatchery. It describes operation of the hatchery from July 1, 1983 through June 30, 1984. Copies of previous annual reports are available upon request from the Anadromous Fisheries Branch, Rancho Cordova.

Warm Springs Hatchery is located on Dry Creek, 14 miles upstream from its confluence with the Russian River, 2 miles south of Healdsburg, Sonoma County. The hatchery was constructed by the Department of the Army, Corps of Engineers to compensate for spawning and nursery areas blocked by the Warm Springs Dam - Lake Sonoma Project. The Department of Fish and Game, under agreement with the Department of the Army, operates the fish hatchery and related facilities.

This report summarizes the number of fish trapped and spawned, production of eggs and fish, and water and weather conditions from July 1, 1983 through June 30, 1984.

PRODUCTION SUMMARY

The ladder was opened October 3, 1983. The flows in Dry Creek were maintained at about 15 cfs until mid November because of stream bank work below the hatchery. Four chinook salmon, 9 coho salmon and 1,962 steelhead were trapped and 154,456 yearlings and 1,033,660 fingerlings planted or transferred during the 1983-84 season (Table 1 and Appendix Table 1).

All fish were started on Bio-Diet and then fed Oregon Moist Pellets (OMP). A total of 33,171 pounds of fish were produced using 40,934 pounds of feed, giving a conversion rate (pounds of feed to produce one pound of fish) of 1.2.

TABLE 1. Warm Springs Hatchery Production Summary, 1983-84

Species	Adults Trapped	Females Spawmed	Eggs Taken or Received	Eggs Transferred	Fingerlings Transferred or Planted	Yearlings Planted	Total Pounds Released
Chinook Salmon 1983 BY	3	0	89,040	0	66,120		1,740
Coho Salmon 1982 BY						30,310	4,330
Coho Salmon 1983 BY	1	0	4,600	0	3,800		126
Steelhead 1983 BY						124,146	22,730
Steelhead 1984 BY	1,962	329	1,890,000	362,036	963,740		4,245
Totals	1,966	329	1,983,640	362,036	1,033,660	154,456	33,171

DISEASE

Minor outbreaks of columnaris occurred when water temperatures reached the high 60's^oF. They were controlled with the use of Terramycin.

CHINOOK SALMON PROGRAM

History of the 1983-84 Season

There were four chinook salmon trapped at the hatchery this season; two adult males, one adult female and one grilse (less than 22 inches FL). Low flows in Dry Creek, less than 15 cfs, during October and part of November and the effects of El Nino may have caused the return to be lower than expected. No eggs were taken at the hatchery, but eggs were received from Silverado Fisheries Base and Mad River Hatchery. A total of 75,000 Wisconsin strain and 14,040 Hollow Tree strain eggs were received from Silverado Fisheries Base. The Wisconsin strain fish were released in Dry Creek (Table 2). The Hollow Tree strain fish are being reared to a larger size for later release.

TABLE 2. Chinook Salmon Plants

Date	Strain	Release Site	Average Size	Number
4/27/84	Wisconsin	Dry Creek (Hatchery)	38/lb	66,120
Total fingerlings				66,120

COHO SALMON PROGRAM

History of the 1983-84 Season

One adult female and 8 grilse (less than 20 inches FL) were trapped at the hatchery this season. No fish were spawned, but 4,600 eggs were available from Noyo River. A total of 30,310 marked yearlings and 3,800 fingerlings were released into the Russian River and Dry Creek during the year (Table 3).

TABLE 3. Coho Salmon Plants

Date	Strain	Release Site	Average size/lb	Number	Mark
11/21/83	Dry Creek	Dry Creek (Hatchery)	7 (6480)	15,260	AD-CWT 06-55-01
11/22/83	Dry Creek	Russian River (Jenner)	7 (6480)	15,050	AD-CWT 06-55-02
Total yearlings				30,310	
5/29/84	Noyo River	Dry Creek	30	3,800	--
Total fingerlings				3,800	

STEELHEAD TROUT PROGRAM

History of the ⁸³⁻⁸⁴~~1982-83~~ Season

The first steelhead entered the trap on November 28, 1983 and the last on April 21, 1984. A total of 1,962 fish was trapped: 923 females and 1,039 males. The 392 females spawned produced 1,890,000 eggs, an average of 4,820 eggs per female. All surplus adult fish were trucked to the Russian River and released near Cloverdale.

In order to spread the spawning over as long a period as possible surplus eggs were taken. The run now covers five months. Some surplus eggs were shipped to other installations and surplus fingerlings were planted in local streams or transferred to Silverado Fisheries Base and rearing pond programs.

A total of 124,146 steelhead yearlings was released into the Russian River and Dry Creek. Surplus fingerlings were released into the Russian River and tributaries (Table 4).

PUBLIC RELATIONS

All visitors to the hatchery must enter through the Visitors Center where they are hand counted. During the 1983-84 season, 137,926 people visited the hatchery (Table 5).

TABLE 4. Steelhead Trout Plants

Date	Strain	Release Site	Average size/lb.	Number
11/16/83	Dry Creek	Dry Creek (Mouth)	8.8	45,320
01/04/84	Dry Creek	Dry Creek (Hatchery)	4.7	16,121
02/08/84	Dry Creek	Russian River (Ukiah)	4.4	9,680
02/08/84	Dry Creek	Dry Creek (Hatchery)	4.4	2,640
02/09/84	Dry Creek	Russian River (Monte Rio)	4.9	9,800
02/09/84	Dry Creek	Dry Creek (Hatchery)	4.9	6,370
02/28/84	Dry Creek	Russian River (Ukiah)	4.5	10,125
02/28/84	Dry Creek	Dry Creek (Mouth)	4.5	11,025
02/29/84	Dry Creek	Dry Creek (Hatchery)	3.9	13,065
Total yearlings				124,146
05/09/84	Dry Creek	Warm Springs Creek	350	5,250
05/10/84	Dry Creek	East Branch Russian River	285	20,520
05/17/84	Dry Creek	Commiskey Creek	210	10,500
05/17/84	Dry Creek	Mill Creek	250	16,250
05/21/84	Dry Creek	Upper Dry Creek	280	21,000
05/22/84	Dry Creek	Ackerman Creek	250	5,000
05/22/84	Dry Creek	Walker Creek	250	10,000
05/22/84	Dry Creek	Russian River (Ukiah)	250	20,000
05/22/84	Dry Creek	Mill Creek	250	5,000
05/23/84	Dry Creek	Willow Creek	280	20,160
05/25/84	Dry Creek	Green Valley Creek	440	15,400
05/25/84	Dry Creek	Atascadero Creek	440	15,400
05/26/84	Dry Creek	Feliz Creek	266	20,748
05/29/84	Dry Creek	Warm Springs Creek	250	20,000
05/31/84	Dry Creek	Maacama Creek	234	19,890
05/31/84	Dry Creek	Briggs Creek	234	19,890
06/05/84	Dry Creek	Sonoma Creek	270	15,120
06/14/84	Dry Creek	Warm Springs Creek	126	13,500
06/14/84	Dry Creek	Ingalls Creek	150	10,500
06/18/84	Dry Creek	Russian River (Ukiah)	156	60,840
06/19/84	Dry Creek	Austin Creek	153	13,770
06/21/84	Dry Creek	Russian River (Cloverdale)	152	46,512
06/28/84	Dry Creek	Russian River (Monte Rio)	288	54,720
Total fingerlings				459,970

TABLE 5. Warm Springs Hatchery Monthly
Visitation Data, 1983-84 FY

<u>Month</u>	<u>Number of Visitors</u>
July	12,293
August	12,667
September	10,381
October	10,285
November	9,825
December	5,299
January	11,368
February	12,989
March	14,214
April	11,823
May	13,454
June	13,328
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Total	137,926

APPENDIX TABLE 1. Warm Springs Salmon and Steelhead Hatchery Temperature, Weather, and Fish Data July 1, 1983 through June 30, 1984

July	Temperature (°F)				Weather	Fish trapped				
	Water		Air			Chinook salmon		Coho salmon		Steelhead trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	68	68	83	57	Overcast					
2	68	68	72	56	Clear					
3	68	68	78	58	Clear					
4	68	68	87	56	Clear					
5	68	68	92	56	Clear					
6	68	68	92	57	Clear					
7	68	68	92	57	Clear					
8	68	68	89	56	Clear					
9	68	68	77	54	Clear					
10	68	68	88	60	Clear					
11	68	68	101	58	Clear					
12	68	68	105	60	Clear					
13	68	68	105	72	Clear					
14	68	68	104	67	Clear					
15	68	68	92	60	Clear					
16	68	68	94	58	Clear					
17	68	68	88	48	Ptly Cloudy					
18	68	68	91	49	Ptly Cloudy					
19	69	68	86	47	Clear					
20	69	68	89	55	Clear					
21	69	68	90	56	Clear					
22	69	68	93	54	Fog					
23	69	68	84	53	Overcast					
24	69	68	83	51	Overcast					
25	69	68	84	53	Clear					
26	69	68	85	56	Clear					
27	69	68	88	54	Clear					
28	69	68	88	54	Clear					
29	70	69	92	54	Clear					
30	70	69	94	51	Fog					
31	70	69	90	53	Fog					

APPENDIX TABLE 1 (Continued)

August	Temperature (^o F)				Weather	Fish trapped				
	Water		Air			Chinook	salmon	Coho salmon		Steelhead
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	trout
1	70	69	91	52	Clear					
2	70	69	93	52	Clear					
3	70	69	93	54	Fog/Clear					
4	70	69	92	51	Fog/Clear					
5	70	69	90	50	Clear					
6	70	70	91	50	Overcast					
7	70	70	93	51	Clear					
8	70	70	100	57	Clear					
9	70	70	103	52	Clear					
10	70	70	92	51	Clear					
11	70	70	89	51	Clear					
12	70	70	93	53	Clear					
13	70	70	92	52	Clear					
14	70	70	90	53	Clear					
15	70	70	92	52	Clear					
16	70	70	101	58	Clear					
17	70	70	99	49	Clear					
18	70	70	87	51	Rain					
19	70	70	89	54	Overcast					
20	70	70	89	57	Fog/Clear					
21	70	70	79	53	Fog/Clear					
22	70	70	80	55	Clear					
23	70	70	82	55	Fog/Clear					
24	70	70	85	53	Fog/Clear					
25	70	70	82	51	Fog/Clear					
26	70	70	90	51	Clear					
27	70	70	89	52	Clear					
28	71	70	91	54	Clear					
29	71	70	90	50	Clear					
30	71	70	81	55	Rain					
31	71	70	78	60	Rain					

APPENDIX TABLE 1 (Continued)

September	Temperature (°F)				Weather	Fish trapped				
	Water		Air			Chinook salmon		Coho salmon		
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	71	70	65	53	Clear					Steelhead trout
2	71	70	80	56	Clear					
3	70	69	82	60	Clear					
4	70	69	79	55	Fog/Clear					
5	70	69	80	58	Fog/Clear					
6	69	69	98	58	Fog/Clear					
7	69	69	82	56	Cloudy					
8	69	69	70	58	Cloudy					
9	69	69	80	55	Clear					
10	69	69	80	56	Clear					
11	69	69	85	52	Clear					
12	69	69	102	57	Clear					
13	69	69	102	55	Clear					
14	69	69	98	52	Clear					
15	69	69	101	52	Clear					
16	69	69	100	51	Fog/Clear					
17	69	69	95	50	Fog/Clear					
18	69	69	85	52	Clear					
19	69	69	84	50	Clear					
20	69	69	93	54	Cloudy					
21	68	68	99	59	Overcast					
22	68	68	85	62	Cloudy					
23	68	68	85	58	Clear					
24	68	68	76	56	Fog/Clear					
25	68	68	85	54	Fog/Clear					
26	68	68	80	54	Fog/Clear					
27	68	68	78	50	Clear					
28	68	68	77	49	Clear					
29	68	68	82	49	Fog/Clear					
30	68	68	64	53	Rain					

APPENDIX TABLE 1 (Continued)

October	Temperature (°F)				Weather	Fish trapped				
	Water		Air			Chinook salmon		Coho salmon		Steelhead trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	68	68	65	54	Cloudy					
2	68	68	75	51	Fog					
3	69	68	75	46	Clear					
4	69	68	85	50	Clear					
5	69	68	88	50	Clear					
6	69	68	80	52	Fog					
7	69	68	85	49	Fog					
8	69	68	79	49	Cloudy					
9	69	68	71	56	Cloudy					
10	68	68	70	49	Fog/Clear					
11	68	67	81	51	Clear					
12	67	67	89	49	Clear					
13	67	67	82	52	Clear					
14	67	67	83	52	Clear					
15	66	66	75	45	Clear					
16	66	66	78	40	Clear					
17	66	66	74	45	Clear					
18	66	66	79	46	Clear					
19	66	66	80	42	Clear					
20	66	66	82	44	Clear					
21	66	65	86	45	Clear					
22	66	65	85	45	Clear					
23	66	65	83	54	Showers					
24	66	65	75	52	Clear					
25	65	65	85	48	Clear					
26	65	65	86	48	Clear					
27	65	65	88	48	Clear					
28	65	65	85	49	Clear					
29	65	64	82	53	Clear					
30	64	64	67	58	Rain					
31	65	64	64	58	Rain					

APPENDIX TABLE 1 (Continued)

November	Temperature (°F)				Weather	Fish trapped				
	Water		Air			Chinook salmon		Coho salmon		Steelhead trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	63	62	68	58	Cloudy					
2	63	62	69	59	Ptly Cloudy					
3	62	62	71	51	Fog					
4	62	62	71	52	Clear					
5	61	60	67	42	Cloudy					
6	61	60	70	52	Rain					
7	61	60	62	40	Clear					
8	61	60	62	35	Clear					
9	60	60	60	38	Rain					
10	60	60	61	38	Rain					
11	60	60	62	46	Cloudy					
12	60	60	65	44	Rain					
13	60	60	65	45	Rain					
14	60	60	60	38	Clear					
15	60	60	65	39	Cloudy					
16	60	60	61	40	Fog					
17	58	57	61	40	Fog					
18	58	57	60	41	Clear					
19	58	57	62	45	Rain					
20	58	57	55	44	Rain					
21	58	57	54	33	Clear					
22	58	58	57	39	Cloudy					
23	58	58	52	39	Rain	1		1		
24	58	58	58	45	Rain					
25	58	58	59	35	Clear					
26	58	57	58	37	Clear					
27	58	57	62	38	Clear					
28	57	57	67	36	Clear					1
29	57	57	64	36	Clear					
30	56	56	55	37	Rain					
Monthly Totals						1		1		1

APPENDIX TABLE 1 (Continued)

December	Temperature (°F)				Weather	Fish trapped				Steelhead trout
	Water		Air			Chinook salmon		Coho salmon		
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	56	55	58	45	Cloudy					1
2	56	55	57	42	Clear					
3	56	55	63	48	Rain					
4	56	55	54	33	Clear					
5	56	55	56	30	Cloudy					5
6	55	55	50	33	Cloudy					1
7	55	55	53	47	Cloudy					1
8	55	55	56	47	Rain					1
9	54	54	58	51	Rain					11
10	54	54	58	46	Rain					
11	54	54	55	51	Rain					
12	54	53	55	47	Clear					
13	54	53	55	40	Rain					
14	54	53	57	49	Clear					3
15	54	53	64	44	Clear					1
16	54	53	62	44	Cloudy					3
17	54	53	55	46	Clear					
18	54	53	62	40	Cloudy					
19	54	53	60	42	Clear			3		
20	54	53	61	34	Clear					7
21	54	53	52	30	Clear	1	1		2	12
22	54	53	48	31	Clear			3		5
23	54	53	46	35	Rain	1				19
24	54	53	48	38	Rain					
25	54	53	58	44	Rain					
26	54	53	61	45	Cloudy					24
27	54	53	52	45	Clear					4
28	54	53	59	43	Cloudy					3
29	53	52	57	42	Rain					9
30	53	52	52	46	Rain					8
31	53	52	62	41	Clear					11
Monthly Totals						2	1	0	8	129
Cumulative Totals						3	1	1	8	130

APPENDIX TABLE 1 (Continued)

January	Temperature (°F)				Weather	Fish trapped				Steelhead trout
	Water		Air			Chinook salmon		Coho salmon		
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	53	52	62	38	Clear					
2	53	52	62	38	Clear					27
3	53	52	61	38	Clear					15
4	53	52	56	38	Fog					11
5	53	52	54	41	Fog					29
6	53	52	49	42	Fog					87
7	53	52	46	42	Cloudy					
8	53	52	55	39	Fog					
9	53	52	56	42	Fog					109
10	53	52	49	43	Fog					46
11	52	52	55	41	Clear					30
12	52	52	64	38	Clear					21
13	52	52	60	30	Clear					67
14	52	52	59	28	Clear					
15	52	52	50	29	Cloudy					
16	52	52	47	40	Clear					37
17	52	52	59	33	Clear					39
18	52	52	58	32	Clear					
19	52	52	55	33	Clear					26
20	52	52	56	32	Clear					35
21	52	52	53	32	Cloudy					
22	52	52	60	39	Clear					
23	52	52	59	41	Clear					26
24	52	52	66	45	Clear					15
25	52	52	72	49	Clear					23
26	52	52	71	44	Clear					31
27	52	51	71	42	Clear					29
28	52	51	79	40	Clear					
29	52	51	68	38	Clear					
30	51	51	68	38	Clear					18
31	51	51	64	37	Fog					12
Monthly Totals										733
Cumulative Totals						3	1	1	8	863

APPENDIX TABLE 1 (Continued)

February	Temperature (°F)				Weather	Fish trapped					
	Water		Air			Chinook salmon		Coho salmon		Steelhead trout	
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse		
1	51	51	57	38	Clear					6	
2	51	51	62	35	Fog					5	
3	51	51	60	34	Clear					11	
4	51	51	70	32	Clear						
5	51	51	69	35	Clear						
6	50	50	62	38	Clear					12	
7	50	50	69	36	Clear					10	
8	50	50	67	39	Clear					7	
9	50	50	65	45	Cloudy					7	
10	50	50	56	32	Clear					19	
11	50	50	56	34	Overcast						
12	50	50	47	40	Rain						
13	50	50	52	44	Rain					41	
14	50	50	58	32	Clear					86	
15	50	50	55	32	Rain					190	
16	50	50	52	38	Clear					57	
17	50	50	54	32	Clear					100	
18	50	50	61	34	Clear						
19	50	50	63	35	Clear						
20	50	50	66	45	Overcast					42	
21	50	50	56	37	Clear					14	
22	50	50	53	36	Clear					12	
23	50	50	58	32	Clear					30	
24	50	50	59	32	Cloudy					34	
25	50	50	55	36	Clear						
26	50	50	63	35	Clear					13	
27	50	50	67	35	Clear						
28	50	50	65	34	Clear						
29	50	50	60	36	Cloudy					14	
Monthly Totals											710
Cumulative Totals						3	1	1	8		1,573

APPENDIX TABLE 1 (Continued)

March	Temperature (°F)				Weather	Fish trapped					
	Water		Air			Chinook salmon		Coho salmon		Steelhead trout	
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse		
1	50	50	61	36	Clear					16	
2	50	50	68	43	Clear					12	
3	50	50	70	42	Clear						
4	50	50	76	41	Clear						
5	50	50	80	39	Clear					9	
6	50	50	79	36	Clear					15	
7	50	50	70	39	Clear					6	
8	50	50	70	37	Clear						
9	50	50	64	39	Clear					23	
10	50	50	69	42	Clear						
11	50	50	71	43	Overcast						
12	50	50	71	44	Overcast					5	
13	50	50	71	51	Rain						
14	50	50	63	46	Rain					18	
15	50	50	62	44	Clear					31	
16	50	50	60	37	Overcast					38	
17	50	50	56	35	Clear						
18	50	50	62	38	Clear						
19	50	50	72	47	Clear					29	
20	50	50	83	49	Clear					34	
21	50	50	77	38	Clear					17	
22	50	50	64	39	Clear					20	
23	50	50	80	45	Clear					8	
24	50	50	78	44	Fog						
25	50	50	72	44	Overcast						
26	50	50	68	52	Overcast					18	
27	50	50	64	45	Clear					10	
28	50	50	76	45	Clear					5	
29	50	50	75	37	Clear					6	
30	50	50	67	38	Clear					15	
31	51	51	69	44	Overcast						
Monthly Totals											335
Cumulative Totals						3	1	1	8		1,908

APPENDIX TABLE 1 (Continued)

April	Temperature (°F)				Weather	Fish trapped				
	Water		Air			Chinook salmon		Coho salmon		Steelhead trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	51	51	55	38	Clear					
2	51	51	67	35	Clear					18
3	51	51	69	36	Clear					7
4	52	51	70	42	Overcast					5
5	52	51	64	39	Overcast					7
6	52	51	66	42	Clear					4
7	52	51	67	44	Clear					
8	52	51	71	44	Overcast					
9	52	51	60	39	Clear					
10	52	52	61	42	Clear					
11	52	52	65	38	Clear					
12	53	52	65	45	Clear					
13	53	52	72	44	Clear					
14	53	52	82	46	Clear					
15	53	52	87	43	Clear					
16	53	53	78	44	Clear					
17	54	53	63	42	Clear					8
18	54	53	67	44	Rain					2
19	54	53	60	39	Clear					
20	54	53	60	38	Clear					3
21	54	53	69	41	Clear					
22	54	53	79	52	Clear					
23	54	53	82	56	Clear					
24	54	53	72	48	Clear					
25	54	54	67	41	Clear					
26	54	54	60	37	Clear					
27	54	54	64	39	Clear					
28	56	55	70	40	Clear					
29	56	55	74	44	Clear					
30	56	55	69	39	Clear					
Monthly Totals										54
Cumulative Totals						3	1	1	8	1,962

APPENDIX TABLE 1 (Continued)

May	Temperature (°F)				Weather	Fish trapped				
	Water		Air			Chinook salmon		Coho salmon		Steelhead trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	56	55	65	40	Overcast					
2	56	56	59	48	Overcast					
3	56	56	71	49	Drizzle					
4	56	56	72	44	Overcast					
5	56	56	65	40	Overcast					
6	56	56	69	44	Clear					
7	56	56	80	45	Clear					
8	56	56	90	47	Clear					
9	56	56	89	51	Clear					
10	56	56	81	53	Clear					
11	58	58	76	55	Overcast					
12	58	58	78	55	Clear					
13	58	58	88	61	Clear					
14	58	58	83	51	Clear					
15	58	58	65	41	Clear					
16	58	58	70	45	Clear					
17	58	58	76	49	Clear					
18	58	58	78	44	Clear					
19	58	58	83	45	Clear					
20	58	58	91	47	Clear					
21	59	59	82	56	Clear					
22	59	59	81	56	Clear					
23	59	59	90	60	Clear					
24	59	59	79	52	Clear					
25	59	59	73	52	Clear					
26	59	59	88	57	Clear					
27	59	59	92	58	Clear					
28	60	60	104	58	Clear					
29	60	60	104	51	Clear					
30	60	60	95	47	Fog/Clear					
13	60	60	91	49	Clear					
Monthly Totals										
Cumulative Totals						3	1	1	8	1,962

APPENDIX TABLE 1 (Continued)

June	Temperature (°F)				Weather	Fish trapped					
	Water		Air			Chinook salmon		Coho salmon		Steelhead trout	
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse		
1	60	60	90	52	Clear						
2	60	60	93	43	Clear						
3	60	60	82	57	Clear						
4	60	60	84	54	Overcast						
5	60	60	72	51	Clear						
6	60	60	58	50	Rain						
7	60	60	65	50	Clear						
8	60	60	75	50	Clear						
9	60	60	80	54	Clear						
10	60	60	80	49	Clear						
11	60	60	85	54	Clear						
12	60	60	80	49	Clear						
13	61	61	80	51	Overcast						
14	61	61	82	46	Overcast						
15	61	61	82	48	Overcast						
16	61	61	78	47	Clear						
17	61	61	94	53	Clear						
18	61	61	95	50	Clear						
19	61	61	93	55	Clear						
20	61	61	88	56	Clear						
21	61	61	80	52	Clear						
22	61	61	90	56	Clear						
23	61	61	93	48	Clear						
24	61	61	93	48	Clear						
25	61	61	91	46	Clear						
26	61	61	94	46	Clear						
27	61	61	90	50	Clear						
28	61	61	100	50	Clear						
29	63	62	92	52	Overcast						
30	63	62	87	59	Overcast						
Monthly Totals											
Cumulative Totals											
						3	1	1	1	8	1,962