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ANNUAL REPORT
WARM SPRINGS SALMON AND STEELHEAD HATCHERY
1982-83

by

Don F. Estey
Region 3, Inland Fisheries

Anadromous Fisheries Branch
Administrative Report No. 83-15

1983

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ABSTRACT

This report describes the operation of Warm Springs Salmon and Steelhead Hatchery from July 1, 1982 through June 30, 1983. Tables present daily records of water temperatures, weather conditions, daily numbers of salmon and steelhead entering the hatchery, and numbers of salmonids reared and released.

Two chinook salmon, Oncorhynchus tshawytscha, 986 coho salmon, Oncorhynchus kisutch, and 564 steelhead, Salmo gairdneri, were trapped at the hatchery this season. There were 68,750 fingerling and 20,900 yearling chinook salmon and 214,484 fingerling and 32,305 yearling coho salmon planted or transferred. Also planted or transferred were 359,525 fingerling and 102,622 yearling steelhead.

^{1/} Anadromous Fisheries Branch Administrative Report No. 83-15.
Submitted December 1983.

INTRODUCTION

This is the 3rd annual report describing the operation of the Warm Springs Salmon and Steelhead Hatchery. It describes operation of the hatchery from July 1, 1982 through June 30, 1983. 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, 1982 through June 30, 1983.

PRODUCTION SUMMARY

The ladder was opened November 15, 1982. Two chinook salmon, 986 coho salmon and 564 steelhead were trapped and 155,827 yearlings and 643,659 fingerlings planted or transferred during the 1982-83 season (Table 1 and Appendix Table 1).

All fish were started on Bio-Diet and then fed Oregon Moist Pellets (OMP). A total of 29,071 lb of fish were produced using 46,189 lb of feed, giving a conversion rate (pounds of feed to produce 1 lb of fish) of 1.59.

The hatchery had 137,299 visitors in 1982-83.

DISEASE

Several outbreaks of columnaris occurred when water temperatures reached high 60's or 70°F. They were controlled with the use of Terramycin.

CHINOOK SALMON PROGRAM

History of the 1982-83 Season

There were two chinook salmon trapped at the hatchery this season; one adult male on November 29, 1982 and one grilse (less than 22 inches FL) on December 20, 1982. No eggs were taken at the hatchery, but eggs were received from Silverado Fisheries Base and Mad River Hatchery. A total of 49,980 eggs was received from Silverado Fisheries Base (Wisconsin origin) and 20,040 eggs from Mad River Hatchery. The resulting fish, plus 11,500 fingerlings received from Silver King Oceanic Farms, were released into Dry Creek; yearlings were released into the Russian River (Table 2).

TABLE 1. Warm Springs Hatchery Production Summary, 1982-83

Species	Fish on hand 7/1/82	Adults trapped	Females spawned	Eggs taken or received	Eggs transferred	Fingerlings received	Fingerlings transferred or planted	Yearlings planted	Total pounds released	Fish on hand 6/30/83
Chinook salmon								81		
1982 BY	20,900	2	0	70,020	0	12,000	68,750	20,900	5,157	0
Coho salmon										
1981 BY	34,400	0	0	0	0	0	0	32,305	3,310	0
1982 BY	0	986	174	387,243	44,800	0	214,484	0	1,376	31,000
Steelhead										
1982 BY	106,000	0	0	0	0	0	0	102,622	18,225	0
1983 BY	0	564	160	701,500	104,500	0	359,525	0	1,003	117,500
Totals	161,300	1,552	334	1,158,763	149,300	12,000	642,759	156,827	29,071	148,500

TABLE 2, Chinook Salmon Plants, 1982-83

Date	Strain	Release site	Average size/lb	Number
10/14/82	Hollow Tree	Russian River (Monte Rio)	6.8	20,900
Total yearlings				20,900
05/02/83	Wisconsin	Dry Creek	33	48,000
05/02/83	Silver King	Dry Creek	33	11,500
05/02/83	Mad River	Dry Creek	33	9,250
Total fingerlings				68,750

COHO SALMON PROGRAM

History of the 1982-83 Season

The first coho salmon entered the trap on November 16, 1982 and the last on January 22, 1983. A total of 986 fish was trapped: 277 females, 515 males, and 194 grilse. The 174 females spawned produced 387,243 eggs, an average of 2,226 eggs per female. All the surplus fish were trucked to the Russian River near Geyserville.

A total of 115,292 coho salmon (1982 and 1983 BY) was released into the Russian River and Dry Creek during the year (Table 3).

A total of 44,800 eyed eggs was shipped to the Lagunitas Creek Citizens Advisory Committee for a hatch-box program and 131,497 fingerlings were transferred to Silverado Fisheries Base for various rearing ponds. There were 31,000 fingerlings on hand June 30, 1983.

TABLE 3. Coho Salmon Plants, 1982-83

Date	Strain	Release site	Average size/lb	Number	Mark
11/10/82	Iron Gate	Russian River (Monte Rio)	10	6,600	
03/09/83	Iron Gate	Dry Creek	9.7	25,705	
Total yearlings				32,305	
05/26/83	Dry Creek	Russian River (Geyserville)	68	70,687	AD & CWT (06-55-03 to 06-55-6)
05/31/83	Dry Creek	Russian River (Geyserville)	82	12,300	
Total fingerlings				82,987	

STEELHEAD TROUT PROGRAM

History of the 1982-83 Season

The first steelhead entered the trap on December 3, 1982 and the last on April 4, 1983. A total of 564 fish was trapped: 242 females and 322 males. The 160 females spawned produced 701,500 eggs, an average of 4,384 eggs per female. Approximately 104,500 eyed eggs were shipped to Nimbus Hatchery. All surplus fish were trucked to the Russian River near Geyserville.

A total of 329,332 steelhead was released into the Russian River, Dry Creek, and tributaries (Table 4). There were 100,800 fingerlings transferred to Silverado Fisheries Base and 32,015 fingerlings provided for the Napa and Gualala River rearing ponds. There were 117,500 fingerlings on hand June 30, 1983.

TABLE 4. Steelhead Trout Plants

Date	Strain	Release site	Average size/lb	Number
10/19/82	Dry Creek	Russian River (Monte Rio)	12	12,000
10/28/82	Dry Creek	Dry Creek	10	3,500
02/08/83	Dry Creek	Dry Creek	6.1	15,402
03/09/83	Dry Creek	Dry Creek	4.8	18,240
04/07/83	Dry Creek	Dry Creek	5.2	42,900
04/11/83	Dry Creek	Dry Creek	4.6	10,580
Total yearlings				102,622
04/08/83	Dry Creek	Mark West Creek	256	8,960
04/11/83	Dry Creek	Mill Creek	480	15,360
04/12/83	Dry Creek	Mill Creek	400	14,400
04/25/83	Dry Creek	Austin Creek	400	13,600
05/02/83	Dry Creek	Big Sulphur Creek	360	12,600
05/03/83	Dry Creek	Warm Springs Creek	380	8,360
05/31/83	Dry Creek	Squaw Creek	400	12,000
06/03/83	Dry Creek	Feliz Creek	328	13,120
06/03/83	Dry Creek	Maacama Creek	350	12,600
06/13/83	Dry Creek	Upper Warm Springs Creek	260	16,120
06/14/83	Dry Creek	Austin Creek	280	11,200
06/15/83	Dry Creek	Upper Dry Creek	300	12,000
06/17/83	Dry Creek	Coon Creek	240	13,200
06/22/83	Dry Creek	Forsythe Creek	325	16,250
06/22/83	Dry Creek	Wood Creek	304	3,040
06/24/83	Dry Creek	Pieta Creek	260	14,300
06/27/83	Dry Creek	Russian River	198	19,800
06/28/83	Dry Creek	Pena Creek	196	9,800
Total fingerlings				226,710

05 11/30/83

PUBLIC RELATIONS

All visitors to the hatchery must enter through the Visitors Center; during the 1982-83 season 137,299 people visited the hatchery (Table 5).

TABLE 5. Warm Springs Hatchery Monthly Visitation Data, 1982-83 FY

<u>Month</u>	<u>Number of visitors</u>
July	12,790
August	13,139
September	11,450
October	10,164
November	8,208
December	9,046
January	10,882
February	9,000
March	11,030
April	10,643
May	12,978
June	17,969
<hr/>	
Total	137,299

APPENDIX TABLE 1. Warm Springs Salmon and Steelhead Hatchery Temperature,
Weather, and Fish Data July 1, 1982 through June 30, 1983

July	Temperature (°F)				Weather	Fish trapped				
	Water		Air			Chinook salmon		Coho salmon		Steelhead trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	66	65	77	55	Cloudy					
2	66	65	77	54	Cloudy					
3	66	65	81	54	Ptly Cloudy					
4	66	65	74	51	Clear					
5	67	66	83	57	Clear					
6	67	66	105	52	Clear					
7	67	66	87	49	Overcast					
8	67	66	81	49	Clear					
9	67	66	89	50	Clear					
10	68	67	93	57	Clear					
11	68	67	95	55	Clear					
12	68	67	95	56	Cloudy					
13	68	67	96	56	Clear					
14	68	67	96	65	Clear					
15	69	68	100	67	Clear					
16	69	68	92	53	Clear					
17	69	68	83	52	Fog/Clear					
18	69	68	83	51	Fog/Clear					
19	69	68	83	51	Fog/Clear					
20	69	68	83	51	Fog/Clear					
21	69	68	84	51	Clear					
22	69	68	89	48	Clear					
23	69	68	91	49	Clear					
24	69	68	86	51	Clear					
25	69	68	82	51	Fog/Clear					
26	69	68	82	52	Fog/Clear					
27	69	68	86	50	Fog/Clear					
28	69	68	90	48	Fog/Clear					
29	69	68	96	47	Clear					
30	69	68	99	50	Fog/Clear					
31	69	68	98	50	Clear					

APPENDIX TABLE 1 (Continued)

August	Temperature (°F)				Weather	Fish trapped				
	Water		Air			Chinook salmon		Coho salmon		Steelhead trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	70	69	95	47	Clear					
2	70	69	91	49	Clear					
3	70	69	92	49	Clear					
4	70	69	84	50	Clear					
5	70	69	88	53	Clear					
6	71	70	94	60	Clear					
7	71	70	104	66	Clear					
8	71	70	99	54	Clear					
9	71	70	95	56	Fog/Clear					
10	71	70	89	56	Clear					
11	71	70	87	61	Clear					
12	71	70	88	52	Clear					
13	71	70	85	54	Clear					
14	71	70	79	52	Fog/Clear					
15	71	70	78	47	Clear					
16	71	70	88	57	Clear					
17	71	70	94	61	Clear					
18	71	70	97	50	Clear					
19	71	70	90	55	Clear					
20	71	70	87	48	Clear					
21	71	70	95	49	Clear					
22	71	70	102	52	Clear					
23	71	70	103	54	Clear					
24	71	70	85	56	Fog/Clear					
25	71	70	84	53	Fog/Clear					
26	71	70	79	48	Fog/Clear					
27	71	70	83	48	Clear					
28	71	70	87	50	Clear					
29	71	70	83	49	Clear					
30	71	70	82	47	Clear					
31	71	70	88	47	Clear					

APPENDIX TABLE 1 (Continued)

September	Temperature (°F)				Weather	Fish trapped				
	Water		Air			Chinook salmon		Coho salmon	Steelhead	
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	trout
1	71	70	94	47	Clear					
2	71	70	92	51	Clear					
3	70	69	94	64	Fog/Clear					
4	70	69	87	62	Clear					
5	70	69	93	62	Clear					
6	70	69	101	54	Fog/Clear					
7	70	69	92	58	Clear					
8	70	69	104	54	Clear					
9	70	69	96	46	Clear					
10	70	69	84	60	Clear					
11	70	69	87	52	Clear					
12	70	69	95	64	Clear					
13	70	69	91	61	Clear					
14	70	69	87	46	Fog/Clear					
15	70	69	70	51	Fog/Clear					
16	70	69	75	49	Rain					
17	70	69	72	52	Rain					
18	69	68	69	55	Cloudy					
19	69	68	70	47	Clear					
20	69	68	70	51	Clear					
21	69	68	97	53	Clear					
22	69	68	88	52	Clear					
23	69	68	87	49	Fog/Clear					
24	69	68	87	50	Rain					
25	69	68	75	57	Cloudy					
26	69	68	76	49	Clear					
27	69	68	75	51	Clear					
28	68	67	77	54	Clear					
29	68	67	81	53	Clear					
30	68	67	76	45	Clear					

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	67	81	44	Clear					
2	68	67	81	45	Clear					
3	68	67	84	41	Clear					
4	67	66	84	47	Clear					
5	67	66	74	49	Clear					
6	67	66	80	43	Ptly Cloudy					
7	67	66	64	44	Clear					
8	67	66	71	49	Clear					
9	67	66	85	51	Clear					
10	67	66	87	50	Clear					
11	67	66	92	49	Clear					
12	67	66	88	43	Clear					
13	65	64	87	46	Clear					
14	65	64	89	47	Ptly Cloudy					
15	65	64	80	46	Fog/Clear					
16	65	64	74	43	Ptly Cloudy					
17	65	64	78	44	Clear					
18	65	64	81	44	Clear					
19	65	64	79	45	Ptly Cloudy					
20	65	64	78	53	Ptly Cloudy					
21	65	64	69	56	Rain					
22	63	63	66	55	Rain					
23	63	63	65	58	Rain					
24	63	63	71	52	Cloudy					
25	63	63	72	52	Rain					
26	63	63	63	45	Rain					
27	62	62	62	42	Clear					
28	62	62	69	42	Clear					
29	62	62	67	43	Rain					
30	62	62	57	50	Ptly Cloudy					
31	62	62	71	46	Clear					

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	62	62	77	41	Clear						
2	62	62	73	40	Clear						
3	62	62	77	39	Clear						
4	62	62	74	41	Clear						
5	61	60	76	42	Clear						
6	61	60	75	48	Clear						
7	61	60	68	45	Cloudy						
8	61	60	62	39	Cloudy						
9	60	60	52	36	Clear						
10	60	60	55	39	Cloudy						
11	60	60	61	34	Fog						
12	60	60	62	36	Fog						
13	60	60	61	34	Fog						
14	60	60	63	32	Clear						
15	60	60	58	34	Fog						
16	60	60	57	33	Fog			8		5	
17	58	57	55	38	Rain			36		15	
18	58	57	60	43	Rain			61		32	
19	58	57	60	41	Fog			40		7	
20	58	57	57	36	Fog						
21	58	57	57	34	Clear						
22	58	58	52	37	Rain			147		36	
23	58	58	73	44	Cloudy			70		21	
24	58	58	61	41	Clear			22		7	
25	58	58	66	37	Fog						
26	57	57	64	39	Fog						
27	57	57	56	41	Rain			12		2	
28	57	57	55	49	Rain						
29	57	57	59	45	Rain				1		
30	56	56	54	46	Rain						
Monthly Totals								554		169	

APPENDIX TABLE 1 (Continued)

December	Temperature (OF)				Weather	Fish trapped				
	Water		Air			Chinook salmon		Coho salmon		Steelhead trout
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	
1	55	55	53	39	Clear			24	6	
2	55	55	56	38	Rain			16		
3	55	55	56	39	Overcast			13	2	1
4	55	55	53	47	Cloudy					
5	55	55	65	48	Cloudy					
6	55	55	61	48	Fog			9	2	
7	55	55	66	37	Clear			4		
8	55	55	62	32	Clear					
9	54	54	67	32	Clear			4		
10	54	54	69	35	Clear			2		
11	54	54	58	32	Clear					
12	53	53	60	33	Ptly Cloudy					
13	53	53	48	33	Clear					
14	53	53	58	33	Fog					
15	53	53	48	38	Rain			6		2
16	52	52	54	46	Rain			8		
17	52	52	58	45	Ptly Cloudy			100	11	5
18	52	52	58	35	Ptly Cloudy					
19	52	52	59	34	Clear					
20	52	52	58	35	Rain	1		17		4
21	52	52	55	42	Rain			13	2	2
22	52	52	57	42	Rain			4		1
23	52	52	59	37	Clear			6		4
24	52	52	53	31	Clear			7	1	1
25	52	52	55	35	Clear					
26	52	52	58	40	Cloudy					
27	52	52	59	31	Cloudy					
28	52	52	55	32	Cloudy					
29	52	52	57	30	Clear			3		
30	51	51	59	29	Clear					1
31	51	51	61	29	Clear					
Monthly Totals						1		236	24	21
Cumulative Totals						2		790	193	21

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	51	51	54	24	Clear					
2	51	51	43	30	Fog			2		
3	51	51	51	34	Fog				2	
4	51	51	59	35	Fog					
5	51	51	54	36	Fog					
6	51	51	48	38	Fog					
7	51	51	49	36	Fog					
8	51	51	61	36	Fog					
9	51	51	64	38	Clear					
10	51	51	67	39	Clear				2	
11	51	51	70	28	Clear				5	
12	51	51	70	29	Clear				2	
13	50	50	54	26	Fog				2	
14	50	50	54	27	Overcast				3	
15	50	50	53	27	Overcast					
16	50	50	54	39	Overcast					
17	50	50	61	45	Rain					
18	50	50	54	47	Rain				1	
19	50	50	55	35	Clear				5	
20	50	50	54	30	Clear				6	
21	50	50	54	31	Rain				6	
22	50	50	49	45	Rain			1	14	
23	50	50	58	41	Fog					
24	50	50	57	45	Rain				4	
25	50	50	61	42	Rain				2	
26	50	50	61	44	Rain				4	
27	50	50	58	46	Rain				1	
28	50	50	59	43	Overcast				4	
29	51	51	53	41	Rain					
30	51	51	51	42	Cloudy				7	
31	51	51	57	37	Fog				7	
Monthly Totals								2	1	77
Cumulative Totals						2		792	194	98

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	60	35	Clear					10	
2	51	51	60	40	Overcast					14	
3	51	51	52	44	Overcast					4	
4	51	51	62	35	Overcast					6	
5	51	51	56	40	Rain					12	
6	51	51	58	46	Rain					15	
7	51	51	55	41	Overcast						
8	52	51	58	48	Overcast					6	
9	52	51	55	46	Overcast					4	
10	52	51	60	47	Overcast					19	
11	52	51	61	46	Overcast					16	
12	52	51	63	50	Rain					13	
13	52	51	60	44	Clear					5	
14	52	51	62	43	Clear					8	
15	52	51	64	45	Overcast						
16	52	51	57	44	Overcast					20	
17	52	51	61	41	Overcast						
18	52	51	60	47	Rain					32	
19	52	51	58	39	Clear					18	
20	52	51	60	41	Clear					13	
21	52	51	68	40	Cloudy						
22	52	51	61	48	Clear					13	
23	53	52	63	51	Overcast					8	
24	53	52	55	45	Clear					4	
25	53	52	61	44	Rain					18	
26	53	52	59	45	Rain					7	
27	53	52	61	44	Rain					13	
28	53	52	56	44	Rain					13	
Monthly Totals											291
Cumulative Totals						2		792	194		389

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	53	52	59	42	Rain					6
2	53	52	60	50	Rain					4
3	53	52	54	49	Rain					
4	53	52	59	45	Clear					
5	53	52	64	44	Rain					
6	53	52	64	38	Fog					
7	53	52	58	41	Fog					7
8	53	52	61	51	Clear					6
9	53	52	65	53	Fog					9
10	53	52	65	55	Fog					21
11	53	52	64	54	Clear					10
12	53	52	64	48	Clear					
13	53	52	60	48	Overcast					
14	53	52	62	40	Clear					20
15	53	52	64	39	Clear					8
16	53	52	69	37	Overcast					6
17	53	52	52	42	Overcast					
18	53	52	50	39	Fog					20
19	53	52	61	38	Clear					
20	53	52	68	43	Overcast					
21	53	52	68	39	Overcast					17
22	53	52	58	43	Rain					13
23	53	52	57	41	Overcast					8
24	53	52	50	42	Rain					6
25	53	52	55	40	Clear					9
26	53	52	63	40	Overcast					
27	53	52	53	44	Clear					
28	53	52	62	39	Overcast					
29	53	52	61	43	Rain					
30	53	52	59	49	Overcast					
31	53	52	58	45	Clear					
Monthly Totals										170
Cumulative Totals						2	0	792	194	559

APPENDIX TABLE 1 (Continued)

April	Temperature (°F)				Weather	Fish trapped				
	Water		Air			Chinook salmon		Coho salmon		Steelhead
	Maximum	Minimum	Maximum	Minimum		Adults	Grilse	Adults	Grilse	trout
1	53	52	69	46	Clear					
2	53	52	71	43	Clear					
3	53	52	62	41	Clear					
4	53	52	63	37	Clear					5
5	53	52	70	42	Clear					
6	53	52	68	37	Clear					
7	53	52	73	39	Clear					
8	53	52	76	37	Clear					
9	53	52	65	45	Cloudy					
10	53	52	59	35	Clear					
11	53	52	62	39	Clear					
12	53	52	61	37	Clear					
13	53	52	62	36	Clear					
14	53	52	66	34	Clear					
15	53	52	67	37	Clear					
16	53	52	69	40	Clear					
17	53	52	78	43	Cloudy					
18	53	52	65	48	Overcast					
19	53	52	64	51	Cloudy					
20	53	52	69	51	Rain					
21	53	52	66	50	Clear					
22	53	52	70	47	Overcast					
23	53	52	58	48	Rain					
24	53	52	55	39	Rain					
25	53	52	59	40	Overcast					
26	54	53	63	39	Overcast					
27	54	53	62	43	Rain					
28	54	53	63	46	Rain					
29	54	53	61	44	Overcast					
30	54	53	63	45	Cloudy					
Monthly Totals										5
Cumulative Totals						2	0	792	194	564

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	54	53	64	45	Overcast					
2	54	53	68	46	Clear					
3	54	53	71	41	Clear					
4	54	53	71	45	Overcast					
5	54	53	61	47	Rain					
6	56	55	61	38	Clear					
7	56	55	65	40	Clear					
8	56	55	68	39	Overcast					
9	56	55	63	48	Clear					
10	56	55	68	42	Clear					
11	58	58	73	44	Clear					
12	58	58	78	46	Overcast					
13	58	58	79	49	Clear					
14	58	58	78	49	Overcast					
15	58	58	75	46	Overcast					
16	59	59	82	46	Clear					
17	59	59	83	50	Clear					
18	59	59	89	50	Clear					
19	59	59	89	57	Clear					
20	59	59	94	56	Clear					
21	59	59	90	59	Clear					
22	59	59	88	55	Fog					
23	59	59	97	50	Overcast					
24	59	59	75	52	Overcast					
25	59	59	78	49	Overcast					
26	59	59	83	50	Overcast					
27	59	59	85	51	Overcast					
28	61	61	84	51	Overcast					
29	61	61	85	51	Overcast					
30	61	61	81	55	Overcast					
31	61	61	80	55	Clear					
Monthly Totals										
Cumulative Totals						2	0	792	194	564

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	63	63	77	54	Clear					
2	63	63	77	49	Clear					
3	63	63	78	49	Overcast					
4	63	63	79	49	Clear					
5	63	63	86	53	Clear					
6	63	63	97	58	Clear					
7	63	63	98	54	Clear					
8	63	63	84	54	Overcast					
9	63	63	76	50	Clear					
10	63	63	89	59	Clear					
11	63	63	75	51	Clear					
12	63	63	77	55	Clear					
13	63	63	89	55	Clear					
14	63	63	92	49	Fog/Clear					
15	63	63	85	58	Clear					
16	65	65	92	59	Clear					
17	65	65	94	51	Clear					
18	65	65	93	54	Clear					
19	65	65	81	50	Clear					
20	65	65	85	51	Clear					
21	65	65	82	56	Clear					
22	65	65	88	52	Clear					
23	65	65	89	51	Clear					
24	65	65	90	51	Clear					
25	65	65	90	50	Clear					
26	65	65	93	61	Clear					
27	67	67	90	59	Clear					
28	67	67	86	50	Clear					
29	67	67	85	57	Clear					
30	68	68	82	56	Clear					
Monthly Totals										
Cumulative Totals						2	0	792	194	564