

IDAHO COOPERATIVE FISHERY RESEARCH UNIT
Department of Fish and Wildlife Resources
University of Idaho
Moscow, Idaho 83843
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KMT
DAW

2 January 1985

Ken Higgs
U.S.F.W.S.
4620 Overland Road, Room 238
Boise, Idaho 83705

Dear Ken:

Attached is the completion report for the 1984 fall chinook trapping project (Contract No. 14-16-0001-84122 (RWG)). We have asked that a final billing be prepared and mailed to you in the near future.

Sincerely,



Ted Bjornn, Leader

bj
attachment

COOPERATORS:



University of Idaho



Fish and Wildlife Service • University of Idaho • Department of Fish and Game

The University of Idaho is an equal opportunity/affirmative action employer and educational institution.

FALL CHINOOK TRAPPING AT ICE HARBOR DAM IN 1984

Completion Report

Contract No. 14-16-0001-84122 (RWG)

to

U.S. Fish and Wildlife Service
Contracting and General Services
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

by

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Idaho Cooperative Fishery Research Unit
University of Idaho
Moscow, Idaho 83843

December 1984

FALL CHINOOK TRAPPING AT ICE HARBOR DAM IN 1983

Summary of Operation

The fall chinook trap was installed in the south shore fish ladder at Ice Harbor Dam on September 1, 1984, and operated continuously through October 5, 1984. Between September 1 and October 5 Idaho Cooperative Fishery Research Unit personnel trapped and transported 663 adult salmon and 97 marked jack chinook salmon for use in the Snake River fall chinook egg bank program (Table 1).

Table 1. Dates of trap operation, adult fall chinook trapped and date of peak catch at Ice Harbor Dam for Snake River fall chinook egg bank program (1977-1984).

Year	Dates operated	Adults trapped	Peak day of trapping	
			Date	Fish trapped
1977	Sep 9 - Sep 29	395	Sep 18	39
1978	Sep 6 - Oct 3	368	Sep 22	30
1979	Sep 1 - Sep 23	439	Sep 9	39
1980	Sep 3 - Oct 6	394	Oct 2	26
1981	Sep 3 - Oct 2	407	Sep 15	33
1982	Sep 3 - Oct 5	473	Sep 9 & 10	33
1983	Sep 3 - Oct 3	619	Sep 27	61
1984	Sep 1 - Oct 5	663	Sep 11	57

In addition to fall chinook, we also trapped coho salmon for use in a Snake River coho egg bank program under the direction of Oregon Fish and Wildlife. We identified only one coho salmon. This male fish was trapped on October 3, held in our trap for one day, and then released when no other coho were caught.

Between September 1 and October 5, 663 adults and 97 adipose-clipped jacks were delivered to Lyons Ferry Hatchery (Table 2). As in the past three years, we trapped jack salmon with a clipped adipose fin and hauled them to the hatcheries to assist in coded wire tag recovery. All chinook salmon under 24 inches were classified as jacks for our trapping operation. During the period of trapping in 1984, we trapped and transported 60% of the adults passing up the south ladder at Ice Harbor Dam. The 663 adults trapped and transported were 47% of all adults counted at both ladders at Ice Harbor Dam from August 12 to October 5. Of 2052 chinook adults and jacks counted during the August 12 to October 5 period, 87% were counted passing the south shore ladder.

We continued the use of modifications made to the trap in 1983. These modifications consisted of an additional holding tank for coho and an underwater viewing chamber.

Chinook were hauled in a 1000-gallon, recirculating, refrigerated tank truck supplied by Dworshak NFH. The water was medicated with approximately 12.8 grams Oxytetracycline-HCl per 1000 gallons of water. The soluble powder used came from Medical Technology, Inc., of Elwood, Kansas, and is sold under the brand name of Medamycin.

Table 2. Adult and jack salmon and steelhead trout counted at Ice Harbor Dam; chinook trapped and transported to Lyons Ferry Fish Hatchery from September 1 to October 5, 1984. All jack salmon without a clipped adipose fin and steelhead trout were counted as they passed through the trap during the daylight operating period.

Date	South shore ladder counts*			University of Idaho trap			
	Chinook			Chinook trapped and transported to Lyons Ferry		Counted through trap	
	Adults	Jacks	Steelhead	Adults	Jacks	Non ad-clip jacks	Steelhead
Sep 1	20	8	169	4	0	5	15
2	12	1	152	4	0	3	10
3	22	4	175	12	1	1	13
4	35	11	265	15	1	7	21
5	34	13	466	17	2	10	61
6	35	6	816	24	2	6	226
7	25	11	834	22	2	20	817
8	29	7	667	25	4	16	510
9	24	11	402	24	0	26	564
10	34	18	756	25	5	16	682
11	70	19	1332	57	2	31	1041
12	79	13	1879	41	6	21	1310
13	60	10	1540	31	6	27	1187
14	29	17	2204	22	3	26	1697
15	50	24	2568	33	0	37	1631
16	38	17	2059	17	2	22	1499
17	19	14	1714	10	3	17	1597
18	42	28	1972	32	7	35	1616
19	44	60	2291	27	6	49	1922
20	53	25	2177	20	4	45	2044
21	41	18	2304	27	10	41	2610
22	50	20	2522	12	4	19	1473
23	26	13	2124	9	2	6	1044
24	23	8	1243	11	2	6	1361
25	32	20	3014	15	3	16	2467
26	34	14	2662	25	4	25	2811
27	19	20	1984	9	1	32	2385
28	38	25	2856	25	2	46	2586
29	11	24	2215	17	2	34	2450
30	29	35	2330	20	5	30	2041
Oct 1	10	6	823	4	2	16	1182
2	11	12	1522	7	0	20	1523
3	16	7	1482	9	2	9	1271
4	8	7	1286	5	1	14	1641
5	<u>11</u>	<u>11</u>	<u>1477</u>	<u>6</u>	<u>1</u>	<u>13</u>	<u>1085</u>
	1113	557	54,282	663	97	747	46,393

* Actual fish counted by fish counter on duty corrected by multiplying by factor of 1.2 to correct for counter's break times.

The trap was operated only during the daylight hours, approximately 6:30 a.m. to 7:30 p.m., and the trap doors were left open and fish were allowed to migrate through when the trap was not operating. Several times Oregon Department of Fish and Wildlife personnel operated the trap for several hours before and after daylight. They found less than five steelhead per hour, and no chinook at all passed the trap during these periods.

Salmon were loaded from the holding tank into the truck several times a day, depending on the number of fish and timing of their entry into our trap, to prevent crowding in the holding tank. After loading, fish were held in the tank truck until after sundown. This procedure resulted in a maximum holding time of 11 hours and a minimum of 1.5 hours in medicated water. Actual transport time was approximately 1.5 hours to Lyons Ferry Hatchery.

During the period of trapping in 1984, we counted only 1 adult coho salmon. During the same time, the south shore ladder count was approximately 15 adult coho and 5 jacks. We retained all salmon entering the trap over 24 inches long, thus coho longer than 24 inches which were misidentified would have been hauled to the hatcheries.

In 1984, we again obtained a rough estimate of the length classification of steelhead passing through our trap.

A measured distance was marked on our trap, and as steelhead passed we listed them as less than 24 inches, 24 to 28.9 inches, or over 29 inches long. We did not stop steelhead to get exact length, and they often came through in groups so not all fish were so classified. This year we had a higher number of larger steelhead (Table 3). Of 58,900 steelhead counted during the August 12 to October 5 period, 97% were counted passing the south shore ladder.

Table 3. Relative lengths and numbers of steelhead passing through University of Idaho trap in the south shore fishway, 1981, 1982, 1983, and 1984.

Date measured	Over 29 inches			24 to 28.9 inches			Less than 24 inches			Number of fish measured						
	1981	1982	1983	1984	1981	1982	1983	1984	1981	1982	1983	1984				
Sep 4-5	14	10	0	11	36	38	0	38	51	52	0	51	81	434	0	82
6-10	20	12	3	9	41	39	16	35	39	49	81	56	747	793	2301	2799
11-15	31	11	3	12	39	34	12	35	30	55	85	53	1591	1451	7664	6866
16-20	32	11	4	13	36	34	10	42	32	55	86	45	3409	4559	5605	8678
21-25	23	14	7	10	33	35	13	50	44	51	80	40	2842	6535	10008	8955
26-30	23	9	8	11	30	44	14	50	47	47	78	39	3424	4753	13140	12273
Oct 1-2	30	7	10	15	31	47	14	54	39	46	76	31	1813	5590	3697	2705
9/4 - 10/2	27	11	6	12	34	35	13	45	39	54	81	43	13907	24115	42415	42358