



**EVALUATION OF IDAHO STEELHEAD HARVEST FOR
LOWER SNAKE RIVER COMPENSATION PLAN
HATCHERY PROGRAMS**

Project Progress Report

Report Period September 1, 1997 to April 30, 1998



**Jon Hansen
Senior Fishery Research Biologist**

**Marsha White
Fishery Technician**

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September 1, 1997 to April 30, 1998 Annual Report

By

**Jon Hansen
Marsha White**

**Idaho Department of Fish and Game
Anadromous Fisheries Harvest Management Program
P. O. Box 25
Boise, ID 83707**

To

**U.S. Fish and Wildlife Service
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ABSTRACT

Steelhead *Oncorhynchus mykiss* fisheries in Idaho are monitored to assess hatchery contribution, distribution, and return rates. Coded-wire tags (CWT) are retrieved from fish harvested by anglers, and harvest rates are calculated by month and river section.

During the fall 1997 and spring 1998 steelhead seasons, 19,943 anglers were interviewed and 3,285 adult fish were examined, which was 8.9% of the total harvest. Through creel efforts, we retrieved 575 CWT from 81 of the 140 steelhead mark groups released in Idaho. We retrieved 63 of the 97 steelhead mark groups produced by the Lower Snake River Compensation Plan (LSRCP), or 65% of the total LSRCP groups released. We recovered an additional 15 CWT groups from releases from Oregon and Washington.

The total estimated harvest for the 1997-98 season was 36,782 hatchery steelhead, of which an estimated 9,845 (26.8%) were produced by the LSRCP. An additional 3,918 LSRCP-reared fish returned to hatchery racks or to off-site release locations. Therefore, we accounted for 13,763 adult steelhead from the LSRCP program, 71.5% of which were harvested.

Authors:

Jon Hansen
Senior Fishery Research Biologist

Marsha White
Fishery Technician

INTRODUCTION

Steelhead *Oncorhynchus mykiss* and chinook salmon *O. tshawytscha* are raised in Idaho hatcheries to mitigate for losses caused by the construction of hydroelectric dams. Adults returning to the Salmon River and Clearwater River basins commingle with each other and with wild stocks. In the Snake River, fish destined for Idaho also commingle with adults returning to Oregon and Washington streams.

The main purpose of this report is to show the composition of steelhead in the Idaho fishery and to estimate the adult harvest contribution from juveniles produced in Lower Snake River Compensation Plan (LSRCP) hatcheries. The LSRCP mitigates for four federal dams on the lower Snake River. Contribution to the Idaho fishery is one of the measures of performance of LSRCP fish.

Steelhead are also cultured by Idaho Power Company (IPC) and the U.S. Fish and Wildlife Service (USFWS). Idaho Power Company fish are released into the Salmon River and Snake River drainages, and USFWS fish are released into the Salmon River and Clearwater River drainages. A summary and discussion of the harvest contribution of these fish is not included in this report. However, harvest data for IPC and USFWS is incorporated into Appendix A tables by coded-wire tag (CWT) release group. Idaho Power Company and USFWS release groups are also identified by their rearing hatchery, Niagara Springs Fish Hatchery and Dworshak National Fish Hatchery, respectively, in Appendix B and Appendix C. Coded-wire tag fish from IPC and USFWS programs provided the basis for in-river return estimates in some instances.

Currently, wild stocks are below escapement goals, and protection is necessary to perpetuate those fish. Harvest management of steelhead in Idaho is directed toward harvest of hatchery fish and protection of wild (unmarked) fish. Beginning in 1984, all hatchery-produced steelhead smolts released into Idaho rivers and streams had their adipose fins excised before release so that returning adults could be selectively harvested. Regulations stated that "only steelhead with a missing adipose fin (as evidenced by a healed scar) may be kept." Consequently, the harvest of any wild (unmarked) steelhead was illegal. Table 1 lists the fall and spring steelhead fishing season dates, bag limits, and special restrictions in effect for Idaho during 1997–1998.

Representative groups of steelhead were marked with CWT prior to release as juveniles. Anglers were interviewed and fish snouts were retrieved in all major harvest areas to recover CWT from the fishery. Information was collected and used to estimate timing, straying, exploitation, harvest distribution, and relative abundance of hatchery stocks. Total harvested numbers were estimated by statewide harvest survey, and the harvest contribution for each hatchery program was derived from tag recoveries. Off-site smolt releases were used as a tool for distributing angler effort and harvest. This report documents some of the behavior and distribution of the returning fish.

In recent years, harvest opportunity for spring chinook and summer chinook salmon has been limited to hatchery stocks. Harvest is allowed only when returning adult numbers exceed hatchery escapement needs. During spring and summer 1998, chinook salmon seasons were held on the mainstem Clearwater River, North Fork Clearwater River, and the Little Salmon River. Harvest information regarding chinook fisheries was summarized in separate publications

(Barrett 2000; Janssen and Kiefer 1998), so this report pertains only to the harvest of LSRCP-produced steelhead in the Clearwater River, Snake River, and Salmon River basins.

Table 1. Steelhead season dates, bag limits, and special restrictions for the Clearwater River drainage, Salmon River drainage, and Snake River, 1997-98.

River (and Sections)	Fall Season Dates	Bag Limits^a
Snake River (01)	Sep 1-Dec 31	2, 4, 10
Clearwater River (03 ^c , 04)	Oct 15-Dec 31	2, 4, 10
North Fork Clearwater River (05)	Oct 15-Dec 31	2, 4, 10
South Fork Clearwater River (07)	Oct 15-Dec 31	2, 4, 10
Salmon River (10-19)	Sep 1-Dec 31	2, 4, 10
Little Salmon River (20)	Sep 1-Dec 31	2, 4, 10
River (and Sections)	Spring Season Dates	Bag Limits^a
Snake River (01)	Jan 1-Apr 30	2, 4, 10
Clearwater River (03, 04)	Jan 1-Apr 30	2, 4, 10
North Fork Clearwater River (05)	Jan 1-Apr 30	2, 4, 10
South Fork Clearwater River (07)	Jan 1-Apr 30	2, 4, 10
Salmon River (10-14)	Jan 1-Mar 31	2, 4, 10
Salmon River (15-19)	Jan 1-Apr 30	2, 4, 10
Little Salmon River (20)	Jan 1-Apr 30	2, 4, 10

^a Fall season dates are for catch and keep fishing. Catch and release fishing is open from August 1, 1997 in any water open for fishing for other species except in the Middle Fork Salmon River and South Fork Salmon River. See footnote c for river section exception regarding season dates.

^b Bag limits denote daily, possession, and season totals.

^c Catch and keep fishing open from September 1—December 31, 1997 on downriver portion of Section 03 from mouth to Memorial Bridge of Highway 12 at Lewiston.

OBJECTIVES

1. Identify the number and proportion of steelhead harvested in the Idaho sport fishery that are produced by LSRCP hatcheries.
2. Determine adult returns of LSRCP steelhead to Idaho hatcheries and off-site release areas by release group.

DESCRIPTION OF STUDY AREA

Juvenile steelhead are released into the Salmon River drainage and Clearwater River drainage by the LSRCP program. Consequently, Idaho's harvest of LSRCP produced steelhead primarily occurs in the Snake River, the Clearwater River, and the Salmon River. While additional harvest of LSRCP-produced steelhead occasionally occurs in other locations, such as the Boise River and Hells Canyon Reservoir, the majority of Idaho's steelhead harvest occurs within the central portion of the state (Figure 1; Table 2).

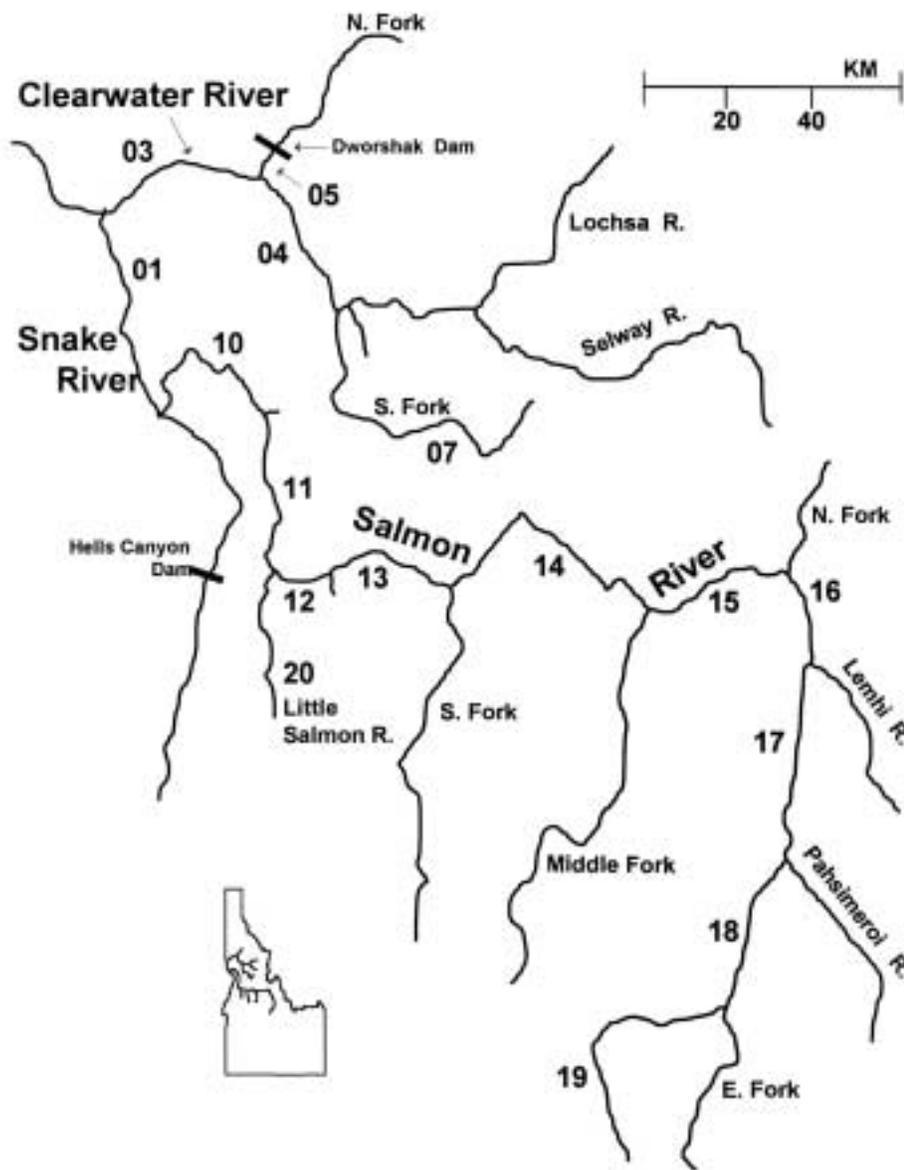


Figure 1. Map of steelhead harvest areas surveyed for the LSRCP program by IDFG.

Table 2. River location codes for steelhead fisheries surveyed for the LSRCP program in Idaho.

River Section	Location Code
Snake River, below Salmon River	01
Clearwater River, below Orofino Bridge	03
Clearwater River, above Orofino Bridge	04
North Fork Clearwater River	05
South Fork Clearwater River	07
Salmon River, below Whitebird Creek	10
Salmon River, Whitebird Creek to Little Salmon	11
Salmon River, Little Salmon to Vinegar Creek	12
Salmon River, Vinegar Creek to South Fork	13
Salmon River, South Fork to Middle Fork	14
Salmon River, Middle Fork to North Fork	15
Salmon River, North Fork to Lemhi River	16
Salmon River, Lemhi River to Pahsimeroi River	17
Salmon River, Pahsimeroi River to East Fork	18
Salmon River, above East Fork	19
Little Salmon River	20

METHODS

Creel Survey

Angler interviews were conducted at check stations, from jet boats, and from roving vehicles. Angler interview schedules and intensity were designed to observe maximum numbers of harvested fish. A jet boat was typically used to census anglers on the Clearwater River during the fall and winter months. However, boat density renders boat census methods impractical in the spring, so creel checks were conducted at boat ramps. We used check stations and roving techniques to census anglers fishing in the lower and upper Salmon River portions of the project. We used jet boat and boat ramp surveys to census anglers on the Snake River.

Data collected during creel surveys includes the number of anglers and hours fished, the number of fish kept or released, wild or hatchery origin of fish kept and released, fork length and sex of fish kept, and the date and river sections where fish were caught. Fish were inspected for tags and fin clips. The snout was removed for CWT retrieval from all fish with an abnormality of the left ventral fin or when use of a portable CWT hand wand detector signaled the presence of a CWT. Snouts were not excised from CWT fish when anglers desired to keep their fish intact.

Water conditions during the fall season are usually conducive to harvest, and the interview schedule can be followed. However, during the spring season, high, turbid flows can reduce harvest to near zero. Anglers were not interviewed during periods of very low harvest.

Interview Schedule

Lower Snake River (01)—by jet boat with Washington Department of Fish and Wildlife personnel and at boat ramps on alternating weekends for eight weekends during the fall season.

Lower Clearwater and North Fork Clearwater River (03 and 05)—by roving vehicle for three weekends and by jet boat two days each week for nine weeks in the fall and 13 weeks in the spring season. Interviews were conducted from boat ramps for the last six weeks of the spring season.

Upper Clearwater (including the Middle Fork) and South Fork Clearwater River (04 and 07)—by roving vehicle on both rivers for 11 weekends in the spring.

SALMON RIVER

Section 10—by roving vehicle for seven weekends in the fall and one week during the spring season (upper roaded portion only).

Section 11—by roving vehicle for eight weekends in the fall and six weeks in the spring.

Sections 12 and 13—by a check station at the old lumber mill site near Riggins for seven weekends in the fall and five weekends in the spring.

Sections 14 and 15—by a check station near North Fork for seven weekends in the fall and five weekends in the spring.

Section 16—by roving vehicle for seven weekends in the fall and seven weekends in the spring.

Section 17—by roving vehicle for six weekends during the fall in the bottom one-quarter of the section and three weekends in the spring.

Sections 17 and 18—by a check station near Challis for four weekends in the spring.

Section 18—by roving vehicle for five weekends in the spring.

Section 19—by roving vehicle for five weekends in the spring.

Section 20—by roving vehicle for eight weekends in the fall and 11 weekends in the spring.

Data Analysis

Monthly harvest estimates by river section were obtained from a statewide telephone survey (Appendix D). We calculated the number of fish checked for marks from each river section divided by the statewide harvest estimate, then estimated the sampling rate by river section each month. Fish that were not seen by creel clerks during angler interviews were not included in sample rate calculations. The harvest of hatchery fish by CWT code was calculated as the number of tags recovered divided by the monthly sampling rate (Appendix A). We estimated harvest of unmarked release groups by using harvest rates from marked companion release groups. Total returns were the sum of harvest and hatchery returns by release group. We defined the exploitation rate as the harvest estimate divided by the total return of fish. No

attempt was made to estimate the number of fish that spawned naturally or died prior to spawning.

Stock Separation

We categorized steelhead as either A-strain (<77.5 cm FL) or B-strain (\geq 77.5 cm FL) for dam count purposes (Ball and White 2001). The data was adjusted for size overlap between the two groups after it was separated by category. For a more detailed discussion regarding dam counts and overlap adjustments, see Ball and White (2001).

Oregon Department of Fish and Wildlife (ODFW) personnel trap steelhead at the Bonneville Dam fish ladder. They measure fork length, record the presence or absence of an adipose fin, and take scales from the fish samples. The ODFW then supplies Idaho Department of Fish and Game (IDFG) with copies of the data, including scale readings (Appendix E).

National Marine Fisheries Service (NMFS) personnel sample steelhead at Lower Granite Dam each week through the steelhead run. The NMFS supplies IDFG with the numbers of fish in each of four categories: wild steelhead <77.5 cm FL, hatchery steelhead <77.5 cm FL, wild steelhead \geq 77.5 cm FL, and hatchery steelhead \geq 77.5 cm FL (Appendix F).

We categorized fish into four length groups based on fishery type, strain, age, and sex for harvest purposes. We developed the following categories where mixed stock fisheries of A and B fish occur, such as in the Salmon River and Snake River: A-strain 1-ocean males are <68 cm FL; A-strain 2-ocean males are \geq 68 cm FL; A-strain 1-ocean females are <66 cm FL; and A-strain 2-ocean females are \geq 66 cm FL. Likewise, B-strain 2-ocean and 3-ocean males are \geq 79 cm FL, and B-strain 2-ocean and 3-ocean females are \geq 75 cm FL. Currently, we are unable to separate B-strain 1-ocean fish from A-strain 2-ocean fish based on length frequencies where mixed stock fisheries occur.

Where fishery stocks are separate, such as in the Clearwater River drainage, we developed the following categories: B-strain 1-ocean males are <74 cm FL, and B-strain 2-ocean and 3-ocean males are \geq 74 cm FL. Likewise, B-strain 1-ocean females are <67 cm FL, and B-strain 2-ocean and 3-ocean females are \geq 67 cm FL.

RESULTS

Creel Survey

We interviewed 19,943 anglers that had harvested 3,636 hatchery fish and released 1,803 and 743 hatchery and wild fish, respectively, during the fall 1997 and spring 1998 seasons (Tables 3-17). We physically examined 3,285 hatchery fish for marks, which represented 8.9% of the total steelhead harvest of 36,782 fish for river sections creeled for the LSRCP (Table 18).

We removed 623 snouts for CWT retrieval from fish with clipped left ventral fins or from fish that triggered positive detection signals using a portable CWT wand detector. We recovered 575 CWT from 96 different mark groups from sampled snouts. The overall proportion of tags recovered from the number of fish checked for marks was 17.5%. The number of tags

recovered, the estimated harvest of tag code groups by month and river section, and the total estimated harvest of tag code groups for the fall and spring seasons are listed in Appendix A. Of the 96 mark groups that yielded CWT in the fishery, 81 were from releases in Idaho (Appendices A, B, and C). The other 15 mark groups were recovered from six Oregon and nine Washington releases (Appendices A and G). One Oregon tag group was from a release in the Imnaha River, and five were from releases in the Wallowa River. The nine Washington tag groups were from two releases in the Touchet River, four in the Tucannon River, and three in the Lower Snake River. Fish from five additional CWT groups, 10/20/25, 10/30/53, 10/47/09, 10/47/27, and 10/47/29, were recovered at hatchery racks only; no tags from these five wire groups were recovered from the fishery.

Table 3. Steelhead fishery interview data (unexpanded) from lower Snake River (01), October-December 1997.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
October	391	1,410	81	0	31	17	129	11	87
November	445	1,431	57	0	7	13	77	19	83
December	137	348	31	0	2	3	36	10	92
Total	973	3,189	169	0	40	33	242		
Average								13	86

Table 4. Steelhead fishery interview data (unexpanded) from lower Clearwater River (03) and North Fork Clearwater River (05), October 1997-March 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
October	1,048	4,177	181	0	64	58	303	14	81
November	2,018	7,302	236	1	25	51	313	23	83
December	782	2,382	80	0	6	28	114	21	75
Fall Total	3,848	13,861	497	1	95	137	730		
Average								19	81
January	556	1,794	45	0	14	9	68	26	87
February	688	2,916	84	0	37	9	130	22	93
March	564	2,000	52	0	18	10	80	25	88
Spring total	1,808	6,710	181	0	69	28	278		
Average								24	90
Total	5,656	20,571	678	1	164	165	1,008		
Average								20	84

Table 5. Steelhead fishery interview data (unexpanded) from upper Clearwater River and Middle Fork Clearwater River (04), February-April 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
February	64	184	2	0	4	5	11	17	55
March	181	663	11	0	9	2	22	30	91
April	9	27	0	0	0	0	0	—	—
Total	254	874	13	0	13	7	33		
Average								27	79

Table 6. Steelhead fishery interview data (unexpanded) from South Fork Clearwater River (07), February-April 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
February	18	35	1	0	2	0	3	12	33
March	218	693	32	0	12	2	46	15	96
April	101	297	8	0	11	0	19	16	100
Total	337	1,025	41	0	25	2	68		
Average								15	97

Table 7. Steelhead fishery interview data (unexpanded) from Salmon River Section 10, October 1997-February 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
October	58	188	4	0	0	0	4	47	100
November	22	67	4	0	0	0	4	17	100
Fall total	80	255	8	0	0	0	8		
Average								32	100
February	16	35	0	0	0	0	0	—	—
Spring Total	16	35	0	0	0	0	0		
Average								—	—
Total	96	290	8	0	0	0	8		
Average								36	100

Table 8. Steelhead fishery interview data (unexpanded) from Salmon River Section 11, October 1997-March 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
October	241	872	34	0	9	10	53	16	81
November	237	935	35	0	6	5	46	20	89
Fall total	478	1,807	69	0	15	15	99		
Average								18	85
February	115	379	15	0	11	0	26	16	100
March	258	887	23	0	13	9	45	20	80
Spring Total	373	1,266	38	0	24	9	71		
Average								18	87
Total	851	3,073	107	0	39	24	170		
Average								18	86

Table 9. Steelhead fishery interview data (unexpanded) from Salmon River Section 12, October 1997-March 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
October	656	2,863	143	0	41	30	214	13	86
November	919	4,260	157	0	47	31	235	18	87
Fall total	1,575	7,123	300	0	88	61	449		
Average								16	86
February	420	1,678	56	0	13	10	79	21	87
March	750	3,092	94	0	75	31	200	16	85
Spring Total	1,170	4,770	150	0	88	41	279		
Average								17	85
Total	2,745	11,893	450	0	176	102	728		
Average								16	86

Table 10. Steelhead fishery interview data (unexpanded) from Salmon River Section 13, October 1997-March 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
October	86	358	19	0	5	14	38	9	63
November	87	340	28	0	0	7	35	10	80
Fall total	173	698	47	0	5	21	73		
Average	10	71							
February	4	10	4	0	0	0	4	3	100
March	67	265	20	0	12	10	42	6	76
Spring Total	71	275	24	0	12	10	46		
Average								6	78
Total	244	973	71	0	17	31	119		
Average								8	74

Table 11. Steelhead fishery interview data (unexpanded) from Salmon River Section 14, October 1997-March 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
October	228	3,216	37	0	25	40	102	32	61
November	264	4,586	126	0	44	48	218	21	78
Fall total	492	7,802	163	0	69	88	320		
Average								24	73
February	18	232	6	0	9	4	19	12	79
March	270	3,451	106	0	64	23	193	18	88
Spring Total	288	3,683	112	0	73	27	212		
Average								17	87
Total	780	11,485	275	0	142	115	532		
Average								22	78

Table 12. Steelhead fishery interview data (unexpanded) from Salmon River Section 15, October 1997-April 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
October	653	7,601	169	0	36	40	245	31	84
November	941	10,718	277	0	122	44	443	24	90
Fall total	1,594	18,319	446	0	158	84	688		
Average	27	88							
February	135	950	37	0	24	5	66	14	92
March	1,515	17,319	487	0	381	58	926	19	94
April	46	420	18	0	14	1	33	13	97
Spring Total	1,696	18,689	542	0	419	64	1,025		
Average								18	94
Total	3,290	37,008	988	0	577	148	1,713		
Average								22	91

Table 13. Steelhead fishery interview data (unexpanded) from Salmon River Section 16, October 1997-April 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
October	164	682	28	0	8	7	43	16	84
November	347	1,379	39	0	13	8	60	23	87
Fall total	511	2,061	67	0	21	15	103		
Average								20	85
February	96	356	9	0	1	1	11	32	91
March	524	1,969	74	0	22	7	103	19	93
April	72	484	19	0	2	2	23	21	91
Spring Total	692	2,809	102	0	25	10	137		
Average								21	93
Total	1,203	4,870	169	0	46	25	240		
Average								20	90

Table 14. Steelhead fishery interview data (unexpanded) from Salmon River Section 17, October 1997-April 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
October	3	15	0	0	0	0	0	—	—
November	34	142	0	0	0	0	0	—	—
Fall total	37	157	0	0	0	0	0		
Average								—	—
February	4	4	1	0	0	0	1	4	100
March	547	3,577	92	0	24	11	127	28	91
April	420	4,547	166	0	127	13	306	15	96
Spring Total	971	8,128	259	0	151	24	434		
Average								19	95
Total	1,008	8,285	259	0	151	24	434		
Average								19	95

Table 15. Steelhead fishery interview data (unexpanded) from Salmon River Section 18, March-April 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
March	169	886	15	0	6	0	21	42	100
April	517	2,993	72	0	201	17	290	10	94
Total	686	3,879	87	0	207	17	311		
Average								13	95

Table 16. Steelhead fishery interview data (unexpanded) from Salmon River Section 19, March-April 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
March	58	189	8	0	16	0	24	8	100
April	578	2,603	80	0	90	18	188	14	90
Total	636	2,792	88	0	106	18	212		
Average								13	92

Table 17. Steelhead fishery interview data (unexpanded) from Little Salmon River Section 20, October 1997-April 1998.

Months	No. Anglers	Total Hours Fished	Steelhead Kept		Steelhead Released		Total	Hours/ Fish	Percent Hatchery
			Hatchery	Wild	Hatchery	Wild			
October	25	75	12	0	4	2	18	4	89
November	92	241	15	0	7	3	25	10	88
Fall total	117	316	27	0	11	5	43		
Average								7	88
February	80	293	4	0	4	0	8	37	100
March	343	1,145	46	0	16	8	70	16	89
April	644	2,308	156	0	69	19	244	10	92
Spring Total	1,067	3,746	206	0	89	27	322		
Average								12	92
Total	1,184	4,062	233	0	100	32	365		
Average								11	91

Table 18. Proportion of estimated steelhead harvest by river section that was examined for marks, 1997-98.

River Section	No. Fish Checked	Estimated Harvest ^a	Sample Rate (%)
01	154	5,412	2.8
03 & 05	638	5,840	10.9
04 & 06	13	1,081	1.2
07	41	691	5.9
10	4	3,849	0.1
11	78	3,726	2.1
12	399	1,421	28.1
13	62	351	17.7
14	254	1,693	15.0
15	920	5,462	16.8
16	157	1,543	10.2
17	230	1,717	13.4
18	72	978	7.4
19	85	899	9.8
20	178	2,119	8.4
Total	3,285	36,782	
Average			8.9

^a Statewide steelhead harvest survey data from Thomas J. McArthur, IDFG, (unpublished).

Adult Returns To Idaho

We estimated that at least 12,509 A-strain and 1,254 B-strain steelhead reared by LSRCP hatcheries returned to Idaho during 1997-98 (Table 19). Adult returns from the LSRCP program, verified by CWT recoveries, were from releases into the Salmon River and Clearwater River drainages. However, CWT from LSRCP releases were also recovered from the fishery in

the Snake River bordering Idaho and Oregon-Washington. The CWT recoveries form the basis of estimating adult returns from the LSRCP program in Idaho. The estimated return of adult steelhead to Idaho during 1997-98 from the LSRCP program was 13,763 fish (Table 19). The return estimate was comprised of harvest by Idaho anglers, hatchery returns, and off-site escapement estimates, which are included with the hatchery return data. The LSRCP contribution to Idaho's hatchery steelhead harvest was 9,845 during 1997-1998. This number does not include an estimated 339 LSRCP-reared fish from Oregon harvested by Idaho anglers (Appendices A and G). Additionally, Oregon and Washington sport anglers and tribal fisheries caught LSRCP-reared fish released in Idaho in the Columbia and Snake River corridors as well as in the ocean during 1997-98. We queried the Pacific States Marine Fisheries Commission (PSMFC) CWT database to determine tag recoveries of these LSRCP fish in harvest areas outside Idaho. As of May 15, 2001, 49 CWT fish from LSRCP-reared hatcheries in Idaho were reported caught from fisheries in the lower Columbia River and its tributaries, in the ocean, and in the Zone 6 tribal fishery (Appendix H). The 49 CWT recoveries represent only those tag groups expected to return as adults during 1997-98. Harvest of LSRCP-reared fish from Idaho that occurred downstream of Snake River section 01 was reported by Washington (Martin et al. 2000) and was not included in this report.

Table 19. Summary of 1997-98 harvest estimates and hatchery returns of steelhead produced by LSRCP hatcheries.

Release Year	Strain and Ocean Age	No. of Fish Released	Release Site	Hatchery Rearing	Marks	Estimated Number of Fish		
						Harvest	Hatchery Return ^a	Total
1996	A-I	21,941	Sawtooth Hatchery	HNFH ^b	CWT 10/45/23	26	21	47
1996	A-I	21,491	Sawtooth Hatchery	HNFH	CWT 10/45/24	40	17	57
1996	A-I	21,420	Sawtooth Hatchery	HNFH	CWT 10/45/25 ^c	13	18	31
1996	A-I	22,036	Sawtooth Hatchery	HNFH	CWT 10/45/29	70	17	87
1996	A-I	21,716	Sawtooth Hatchery	HNFH	CWT 10/45/30	32	12	44
1996	A-I	21,305	Sawtooth Hatchery	HNFH	CWT 10/45/31	57	16	73
1996	A-I	21,682	Sawtooth Hatchery	HNFH	CWT 10/45/32	73	10	83
1996	A-I	22,297	Sawtooth Hatchery	HNFH	CWT 10/45/33	34	10	44
1996	A-I	20,379	Sawtooth Hatchery	HNFH	CWT 10/45/34 ^c	16	4	20
1996	A-I	513,842	Sawtooth Hatchery	HNFH	None	1,244	437	1,681
1996	A-I	21,185	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/26	48	13	61
1996	A-I	21,558	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/27	88	23	111
1996	A-I	21,298	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/28 ^c	20	5	25
1996	A-I	1,981	Salmon R. @ Torreys Hole	HNFH	None	5	1	6
1996	A-I	61,552	Salmon R. @ McNabbs Point	MVFH ^d	CWT 10/35/11 ^c	214	79	293
1996	A-I	140,416	Salmon R. @ McNabbs Point	MVFH	None	488	180	668
1996	A-I	62,686	Salmon R. @ Bruno's Bridge	MVFH	CWT 10/35/13 ^c	127	47	174
1996	A-I	144,559	Salmon R. @ Bruno's Bridge	MVFH	None	293	108	401
1996	A-I	21,196	Pahsimeroi R.	HNFH	None ^c	80	38	118
1996	A-I	61,673	Salmon R. @ Lemhi R.	MVFH	CWT 10/35/12 ^c	262	97	359
1996	A-I	139,539	Salmon R. @ Lemhi R.	MVFH	None	593	219	812
1996	A-I	61,852	Salmon R. @ N. Fork	MVFH	CWT 10/35/10 ^c	408	151	559
1996	A-I	65,856	Salmon R. @ N. Fork	MVFH	None	434	160	594
1996	A-I	20,699	Little Salmon R.	HNFH	CWT 10/45/35	0	0	0
1996	A-I	20,825	Little Salmon R.	HNFH	CWT 10/45/36	0	0	0
1996	A-I	19,762	Little Salmon R.	HNFH	CWT 10/45/37 ^c	8	8	16
1996	A-I	20,068	Little Salmon R.	HNFH	CWT 10/45/38	37	37	74
1996	A-I	21,012	Little Salmon R.	HNFH	CWT 10/45/39	82	82	164
1996	A-I	20,389	Little Salmon R.	HNFH	CWT 10/45/40	54	54	108
1996	A-I	406,511	Little Salmon R.	HNFH	None	599	599	1,198
Subtotal		2,062,726				5,445	2,463	7,908

Table 19, continued.

Release Year	Strain and Ocean Age	No. of Fish Released	Release Site	Hatchery Rearing	Marks	Estimated Number of Fish		
						Harvest	Hatchery Return ^a	Total
1995	A-II	19,923	Sawtooth Hatchery	HNFH	CWT 10/45/07 ^c	21	3	24
1995	A-II	19,689	Sawtooth Hatchery	HNFH	CWT 10/45/08 ^c	34	4	38
1995	A-II	19,900	Sawtooth Hatchery	HNFH	CWT 10/45/09 ^c	43	9	52
1995	A-II	20,321	Sawtooth Hatchery	HNFH	CWT 10/45/10 ^c	31	7	38
1995	A-II	20,331	Sawtooth Hatchery	HNFH	CWT 10/45/11 ^c	7	2	9
1995	A-II	20,591	Sawtooth Hatchery	HNFH	CWT 10/45/12 ^c	7	3	10
1995	A-II	23,576	Sawtooth Hatchery	HNFH	CWT 10/45/18 ^c	81	1	82
1995	A-II	21,995	Sawtooth Hatchery	HNFH	CWT 10/45/19 ^c	35	1	36
1995	A-II	18,109	Sawtooth Hatchery	HNFH	CWT 10/45/20 ^c	4	1	5
1995	A-II	500,571	Sawtooth Hatchery	HNFH	None	1,270	157	1,427
1995	A-II	20,287	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/13 ^c	8	4	12
1995	A-II	21,887	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/14 ^c	10	2	12
1995	A-II	19,085	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/15 ^c	16	2	18
1995	A-II	2,908	Salmon R. @ Torreys Hole	HNFH	None	2	0	2
1995	A-II	20,625	Salmon R. @ McNabbs Point	MVFH	CWT 10/20/16 ^c	31	16	47
1995	A-II	20,776	Salmon R. @ McNabbs Point	MVFH	CWT 10/20/17 ^c	33	17	50
1995	A-II	21,144	Salmon R. @ McNabbs Point	MVFH	CWT 10/20/18 ^c	34	18	52
1995	A-II	145,300	Salmon R. @ McNabbs Point	MVFH	None	227	117	344
1995	A-II	17,501	Salmon R. @ Bruno's Bridge	MVFH	CWT 10/20/09 ^c	38	20	58
1995	A-II	17,947	Salmon R. @ Bruno's Bridge	MVFH	CWT 10/20/10 ^c	41	21	62
1995	A-II	19,159	Salmon R. @ Bruno's Bridge	MVFH	CWT 10/20/11 ^c	71	37	108
1995	A-II	108,263	Salmon R. @ Bruno's Bridge	MVFH	None	298	156	454
1995	A-II	20,537	Salmon R. @ Lemhi R.	MVFH	CWT 10/20/07 ^c	63	32	95
1995	A-II	19,340	Salmon R. @ Lemhi R.	MVFH	CWT 10/20/08 ^c	25	13	38
1995	A-II	20,488	Salmon R. @ Lemhi R.	MVFH	CWT 10/20/15 ^c	19	10	29
1995	A-II	137,905	Salmon R. @ Lemhi R.	MVFH	None	244	126	370
1995	A-II	31,186	Salmon R. @ N. Fork	MVFH	CWT 10/46/60 ^c	234	96	330
1995	A-II	30,811	Salmon R. @ N. Fork	MVFH	CWT 10/46/61 ^c	114	47	161
1995	A-II	53,053	Salmon R. @ N. Fork	MVFH	None	298	122	420
1995	A-II	21,481	Little Salmon R.	HNFH	CWT 10/45/16 ^c	0	0	0
1995	A-II	20,853	Little Salmon R.	HNFH	CWT 10/45/17 ^c	4	4	8
1995	A-II	22,923	Little Salmon R.	HNFH	CWT 10/45/21 ^c	5	5	10
1995	A-II	19,236	Little Salmon R.	HNFH	CWT 10/45/22 ^c	14	14	28
1995	A-II	316,011	Little Salmon R.	HNFH	None	86	86	172
Subtotal		1,833,712				3,448	1,153	4,601
1996	B-I	61,695	Slate Cr.	MVFH	CWT 10/35/07 ^c	0	0	0
1996	B-I	174,602	Slate Cr.	MVFH	None	0	5	5
1996	B-I	63,013	E. Fork Salmon R. @ dumpster	MVFH	CWT 10/35/08 ^{c,e}	0	0	0
1996	B-I	10,806	E. Fork Salmon R. @ trap	MVFH	CWT 10/46/13 ^{c,f}	7	1	8
1996	B-I	22,050	E. Fork Salmon R. @ trap	MVFH	CWT 10/47/09 ^f	0	1	1
1996	B-I	30,064	E. Fork Salmon R. @ trap	MVFH	None	19	3	22
1996	B-I	326,121	E. Fork Salmon R. @ dumpster	MVFH	None	15	2	17
1996	B-I	38,320	E. Fork Salmon R. @ Herd Cr.	MVFH	None	5	1	6
1996	B-I	62,227	Little Salmon R.	MVFH	CWT 10/35/09 ^c	4	4	8
1996	B-I	341,054	Little Salmon R.	MVFH	None	22	22	44
1996	B-I	63,556	Clearwater R. @ Clear Cr.	CFH ^g	CWT 10/30/53 ^c	0	2	2
1996	B-I	234,886	Clearwater R. @ Clear Cr.	CFH	None	0	7	7
1996	B-I	6,164	Red R.	CFH	CWT 10/46/30	0	0	0
1996	B-I	8,198	Red R.	CFH	None ^c	0	0	0
1996	B-I	35,970	S. Fork Red R.	CFH	CWT 10/20/22	0	0	0
1996	B-I	6,256	S. Fork Red R.	CFH	None ^c	0	0	0
1996	B-I	46,018	Crooked R.	CFH	LV Clip ^c	0	0	0
1996	B-I	63,743	S. Fork Clearwater R.	CFH	CWT 10/20/29 ^c	0	0	0
1996	B-I	63,251	S. Fork Clearwater R.	CFH	CWT 10/35/14 ^c	0	0	0
1996	B-I	64,254	S. Fork Clearwater R.	CFH	CWT 10/35/15 ^c	0	0	0
1996	B-I	236,965	S. Fork Clearwater R.	CFH	None	0	0	0

Table 19, continued.

Release Year	Strain and Ocean Age	No. of Fish Released	Release Site	Hatchery Rearing	Marks	Estimated Number of Fish		
						Harvest	Hatchery Return ^a	Total
Subtotal		1,959,513				72	48	120
1995	B-II	20,328	Slate Cr.	MVFH	CWT 10/20/01 ^c	0	0	0
1995	B-II	20,983	Slate Cr.	MVFH	CWT 10/20/02 ^c	13	1	14
1995	B-II	20,391	Slate Cr.	MVFH	CWT 10/20/05 ^c	0	0	0
1995	B-II	154,233	Slate Cr.	MVFH	None	19	1	20
1995	B-II	21,337	E. Fork Salmon R.	MVFH	CWT 10/20/03 ^{c,e}	45	1	46
1995	B-II	19,328	E. Fork Salmon R.	MVFH	CWT 10/20/04 ^{c,e}	0	0	0
1995	B-II	20,414	E. Fork Salmon R.	MVFH	CWT 10/20/12 ^{c,e}	15	0	15
1995	B-II	61,767	E. Fork Salmon R.	MVFH	CWT 10/20/24 ^{c,f}	113	3	116
1995	B-II	3,233	E. Fork Salmon R.	MVFH	None ^f	6	0	6
1995	B-II	362,626	E. Fork Salmon R.	MVFH	None ^e	356	11	367
1995	B-II	19,430	Little Salmon R.	MVFH	CWT 10/20/06 ^c	3	3	6
1995	B-II	19,546	Little Salmon R.	MVFH	CWT 10/20/13 ^c	5	5	10
1995	B-II	19,998	Little Salmon R.	MVFH	CWT 10/20/14 ^c	8	8	16
1995	B-II	283,706	Little Salmon R.	MVFH	None	77	77	154
1995	B-II	56,573	Clearwater R. @ Clear Cr.	CFH	CWT 10/20/25 ^c	0	17	17
1995	B-II	62,835	Clearwater R. @ Clear Cr.	CFH	CWT 10/20/26 ^c	28	34	62
1995	B-II	58,316	Clearwater R. @ Clear Cr.	CFH	CWT 10/20/27 ^c	51	28	79
1995	B-II	5,988	Clearwater R. @ Clear Cr.	CFH	None	3	3	6
1995	B-II	22,056	Red R.	CFH	CWT 10/45/05 ^{h,i}	0	0	0
1995	B-II	21,585	Red R.	CFH	CWT 10/45/06 ^{h,i}	0	0	0
1995	B-II	6,140	Red R.	CFH	None ^c	0	0	0
1995	B-II	42,595	S. Fork Clearwater R.	CFH	CWT 10/46/21 ^c	19	0	19
1995	B-II	21,242	S. Fork Clearwater R.	CFH	CWT 10/47/27 ^c	0	1	1
1995	B-II	21,350	S. Fork Clearwater R.	CFH	CWT 10/47/28 ^c	0	0	0
1995	B-II	319,063	S. Fork Clearwater R.	CFH	None	119	56	175
Subtotal		1,685,063				880	249	1,129
1994	B-III	62,510	Slate Cr.	MVFH	CWT 10/49/25	0	0	0
1994	B-III	148,845	Slate Cr.	MVFH	None ^c	0	0	0
1994	B-III	21,296	E. Fork Salmon R.	MVFH	CWT 10/47/10 ^e	0	0	0
1994	B-III	20,048	E. Fork Salmon R.	MVFH	CWT 10/47/11 ^f	0	0	0
1994	B-III	21,377	E. Fork Salmon R.	MVFH	CWT 10/47/12 ^f	0	0	0
1994	B-III	21,369	E. Fork Salmon R.	MVFH	CWT 10/47/13 ^f	0	0	0
1994	B-III	20,443	E. Fork Salmon R.	MVFH	CWT 10/47/21 ^e	0	0	0
1994	B-III	20,974	E. Fork Salmon R.	MVFH	CWT 10/47/22 ^e	0	0	0
1994	B-III	226,333	E. Fork Salmon R.	MVFH	None ^{c,f}	0	0	0
1994	B-III	164,740	E. Fork Salmon R.	MVFH	None ^{c,e}	0	0	0
1994	B-III	20,891	Little Salmon R.	MVFH	CWT 10/47/14	0	0	0
1994	B-III	21,243	Little Salmon R.	MVFH	CWT 10/47/15	0	0	0
1994	B-III	21,582	Little Salmon R.	MVFH	CWT 10/47/16	0	0	0
1994	B-III	175,009	Little Salmon R.	MVFH	None ^c	0	0	0
1994	B-III	21,507	Clearwater R. @ Clear Cr.	CFH	CWT 10/47/29	0	1	1
1994	B-III	21,562	Clearwater R. @ Clear Cr.	CFH	CWT 10/47/30	0	0	0
1994	B-III	20,827	Clearwater R. @ Clear Cr.	CFH	CWT 10/47/33 ^c	0	0	0
1994	B-III	89,964	Clearwater R. @ Clear Cr.	CFH	None ^c	0	4	4
1994	B-III	21,779	Crooked R.	CFH	CWT 10/47/32 ^c	0	0	0
1994	B-III	20,883	Crooked R.	CFH	CWT 10/47/37 ^c	0	0	0
1994	B-III	61,788	Crooked R.	CFH	None	0	0	0
1994	B-III	71,566	Crooked R.	CFH	RV Clip ^{c,h}	0	0	0
1994	B-III	50,027	S. Fork Red R.	CFH	None ^{c,h,i}	0	0	0
1994	B-III	20,424	S. Fork Clearwater R.	CFH	CWT 10/47/31	0	0	0
1994	B-III	21,086	S. Fork Clearwater R.	CFH	CWT 10/47/34 ^c	0	0	0
1994	B-III	22,137	S. Fork Clearwater R.	CFH	CWT 10/47/35 ^c	0	0	0
1994	B-III	21,430	S. Fork Clearwater R.	CFH	CWT 10/47/36 ^c	0	0	0
1994	B-III	307,988	S. Fork Clearwater R.	CFH	None ^c	0	0	0

Table 19, continued.

Release Year	Strain and Ocean Age	No. of Fish Released	Release Site	Hatchery Rearing	Marks	Estimated Number of Fish		
						Harvest	Hatchery Return ^a	Total
Subtotal		1,739,628				0	5	5
Total		9,280,642				9,845	3,918	13,763

^a Includes off-site escapement and strays to hatchery racks.

^b HNFH = Hagerman National Fish Hatchery.

^c Release group includes fish marked with passive integrated transponder (PIT) tags.

^d MVFH = Magic Valley Fish Hatchery.

^e Dworshak National Fish Hatchery stock.

^f East Fork Salmon River stock.

^g CFH = Clearwater Fish Hatchery.

^h Fingerling release.

ⁱ Fall release.

Release Group Exploitation By Run Year

Sawtooth Hatchery and East Fork Satellite Facility

The exploitation rate for A-strain 1 and 2-ocean adult steelhead from Sawtooth Hatchery releases was 81% during 1997-98 (Table 19). The exploitation rate was 96% for B-strain adults from East Fork trap releases.

Salmon River Off-Site Areas

Exploitation rates for A strain adults from off-site releases at Torreys Hole, McNabbs Point, Bruno's Bridge, the Pahsimeroi River, the Lemhi River, North Fork, and the Little Salmon River were 80%, 71%, 69%, 68%, 71%, 70% and 50%, respectively. Exploitation rates for B-strain adults from off-site releases at Slate Creek (upper Salmon River), the East Fork Salmon River, and the Little Salmon River were 82%, 87%, and 50%, respectively.

Clearwater Fish Hatchery

Exploitation rates for B-strain adults from off-site releases at Clear Creek and the South Fork of the Clearwater River were 46% and 71%, respectively. We did not estimate exploitation rates for releases at Red River, the South Fork Red River, or Crooked River, because we did not recover CWT in the fishery.

Completed Adult Returns By Release Year

Sawtooth Hatchery and East Fork Satellite Facility

Returns are now complete for A-strain steelhead released from Sawtooth Hatchery during 1995. We estimated a return of 3,404 1-ocean adults (Ball and White 2001) and 1,721 2-ocean adults from the 685,006 smolts released (Table 19). The total return of 5,125 adults resulted in a smolt-to-adult return (SAR) of 0.75%.

Returns are now complete for B-strain steelhead released from the East Fork Salmon River during 1994. We estimated a return of 137 1-ocean adults (Ball 1999), 381 2-ocean adults (Ball and White 2001), and no 3-ocean adults (Table 19) from the 516,580 smolts released. The total return of 518 adults resulted in an SAR of 0.10%.

Salmon River Off-Site Areas

Returns are now complete for A-strain steelhead released from six off-site areas during 1995. We estimated a return of 322 1-ocean fish (Ball and White 2001) and 44 2-ocean fish (Table 19) from the 64,167 smolts released at Torreys Hole. The total return of 366 fish resulted in an SAR of 0.57% for Torreys Hole release groups. We estimated a return of 1,027 1-ocean fish (Ball and White 2001) and 493 2-ocean fish (Table 19) from the 207,845 smolts released at McNabbs Point. The total return of 1,520 fish resulted in an SAR of 0.73% for McNabbs Point release groups. We estimated a return of 853 1-ocean fish (Ball and White 2001) and 682 2-ocean fish (Table 19) from the 162,870 smolts released at Bruno's Bridge. The total return of 1,535 fish resulted in an SAR of 0.94% for Bruno's Bridge release groups. We estimated a return of 1,075 1-ocean fish (Ball and White 2001) and 532 2-ocean fish (Table 19) from the 198,270 smolts released at the Lemhi River. The total return of 1,607 fish resulted in an SAR of 0.81% for the Lemhi River release groups. We estimated a return of 487 1-ocean fish (Ball and White 2001) and 911 2-ocean fish (Table 19) from the 115,050 smolts released at the North Fork site. The total return of 1,398 fish resulted in an SAR of 1.21% for the North Fork release groups. We estimated a return of 1,085 1-ocean fish (Ball and White 2001) and 218 2-ocean fish (Table 19) from the 400,864 smolts released at the Little Salmon River. The total return of 1,303 fish resulted in an SAR of 0.32% for the Little Salmon River release groups.

Returns are now complete for B-strain steelhead released into Salmon River tributaries during 1994. We estimated a return of 37 1-ocean fish (Ball 1999), 166 2-ocean fish (Ball and White 2001), and no 3-ocean fish (Table 19) from the 211,355 smolts released at Slate Creek (upper Salmon River). The total return of 203 fish resulted in an SAR of 0.10% for the Slate Creek release groups. We estimated a return of no 1-ocean fish (Ball 1999), 195 2-ocean fish (Ball and White 2001), and no 3-ocean fish (Table 19) from the 238,725 smolts released into the Little Salmon River. The total return of 195 fish resulted in an SAR of 0.08% for the Little Salmon release groups.

Clearwater Fish Hatchery

Returns are now complete for B-strain fish released into various tributaries and branches of the Clearwater River during 1994. We estimated the return of no 1-ocean fish (Ball 1999), seven 2-ocean fish (Ball and White 2001), and five 3-ocean fish (Table 19) from the 153,860

fish released into Clear Creek. The total return of 12 fish resulted in an SAR of 0.01% for Clear Creek release groups. We did not recover CWT or right ventral clipped fish during fisheries from the 176,016 fish released into Crooked River. A fall fingerling release of 50,027 fish into the South Fork Red River was not CWT, and thus, we were unable to estimate possible adult returns. We estimated a return of no 1-ocean fish (Ball 1999), 266 2-ocean fish (Ball and White 2001), and no 3-ocean fish (Table 19) from the 393,065 smolts released into the South Fork Clearwater River. The total return of 266 fish resulted in an SAR of 0.07% for South Fork of the Clearwater River release groups.

Hatchery Straying

Nine hundred fifty-nine coded-wire tags were recovered from hatchery steelhead at hatchery racks in Idaho excluding Hells Canyon during 1998. We did not report rack recoveries from Hells Canyon, because the trap is typically operated in fall due to spring high flows, and it collects only a sample of returning adults. Five hundred eighty-eight CWT were recovered at Dworshak National Fish Hatchery and Kooskia National Fish Hatchery on the Clearwater River, and 371 at Pahsimeroi Hatchery, East Fork trap, and the Sawtooth Hatchery on the upper Salmon River. Of the 371 CWT recovered in the Salmon River drainage, 26 fish (7.0%) strayed to another rack or temporary weir. Only one of these 26 fish strayed from one hatchery rack to another; a 1-ocean fish released with CWT 10/45/29 from Sawtooth Hatchery returned to the Pahsimeroi rack. The remaining 25 fish returned to hatchery racks from various off-site release locations.

The Pahsimeroi Hatchery recovered 10 CWT from off-site releases near Challis and Salmon. Six A-strain fish released off-site at Bruno's Bridge and marked with CWT 10/35/13 were recovered at the Pahsimeroi Hatchery. One fish, marked with CWT 10/35/12, returned to the Pahsimeroi Hatchery from an off-site release near the mouth of the Lemhi River. Three fish, marked with CWT 10/35/11, returned to the Pahsimeroi Hatchery from an off-site release into the Salmon River at McNabbs Point located near the town of Challis. The Lemhi River release site is located 73.2 km downstream from the Pahsimeroi Hatchery, while the Bruno's Bridge and McNabbs Point release sites are located upstream from the Pahsimeroi Hatchery 12.6 km and 13.9 km, respectively.

Twelve fish from five CWT groups released into the Salmon River at Torreys Hole during 1995 and 1996 returned to Sawtooth Hatchery, 40.7 km upstream from their release site. Three fish each from wire groups 10/45/13, 10/45/26, and 10/45/28 were recovered at the Sawtooth Hatchery trap. Two fish carrying CWT 10/45/27 also returned to the Sawtooth Hatchery, along with one fish tagged with CWT 10/45/14.

Three other fish with tag codes 10/20/19 and 10/45/17 were released into the Little Salmon River and recovered approximately 484 km upriver at the Sawtooth Hatchery.

DISCUSSION

As stated earlier, we examined 8.9% of the total harvest or 3,285 fish. It is possible that the 8.9% sample rate is too low to expect CWT recoveries from certain release groups. For example, B-strain steelhead may be harvested at different rates before they reach Idaho because of their large size, and may, therefore, be more difficult to recover. Anglers are

sometimes reluctant to volunteer B-strain fish snouts from their catch. Some states, such as Alaska, sample their fisheries at approximately a 20% rate to assure adequate recoveries of CWT (Scott Marshall, IDFG, personal communication, 2001). Another possibility to ensure CWT recoveries from all release groups is to increase the overall CWT mark rate above the current 17.5%. For certain release groups that may be possible; however, the current CWT program is already at capacity in terms of workload. Either increasing the sample rate or CWT mark rate for specific release study groups should be reviewed.

The majority of recovered mark groups originated in Idaho. However, as steelhead programs in bordering states develop, particularly on the Snake River, it will be necessary to share both resources and data to adequately evaluate boundary water fisheries.

We should explore the possibility of creating expansion factors to adjust for disparities between CWT harvest estimates and statewide harvest estimates. Both the total contribution of steelhead from LSRCP programs of 13,763 fish and the harvest contribution of 9,845 are likely low estimates. By adjusting our contribution and harvest values, we could provide a better measure of how the LSRCP programs are meeting their adult return goals.

We need better access to sample rate values from downriver fisheries. Data provided in Appendix H is often incomplete because of our inability to expand CWT recoveries. Also, some agencies do not update the Pacific States Marine Fisheries Commission CWT database in a timely manner. Therefore, it is difficult to query for downriver recoveries of CWT for steelhead released in Idaho. We suggest creating a table that is published every several years with our annual reports that contains downriver recovery information from previous years. In that manner, we can provide a more complete accounting of downriver adult harvest.

Run year exploitation rates for release groups were similar compared to past years (Ball 1999; Ball and White 2001). The run year exploitation rate for Sawtooth Hatchery release groups is greater compared to other release groups because of multiple angler opportunities before the fish reach the uppermost portion of the Salmon River.

We should try to improve our ability to calculate in-river return estimates for the Little Salmon River and possibly the Clearwater River. Improving our in-river return estimates would increase the accuracy of our exploitation rates and SAR estimates. A way to improve in-river estimates of returning adults would be to develop adult return information via PIT tags. However, current PIT tagging efforts for steelhead releases statewide focus on juvenile emigration, and, thus, tagging rates are inadequate to assess adult returns. PIT tagging studies are costly, so working cooperatively with other planned or ongoing studies is important. PIT tag studies usually have limited repetitions because of costs, so methods should be explored that could yield yearly data on a consistent basis.

Smolt-to-adult return rates were similar for hatchery and off-site releases. The majority of A-strain SAR rates were between 1.0% and 0.3%. The SAR rates for Little Salmon River A-strain return groups were less compared to upper Salmon River release groups. This may partially be because the estimated exploitation rate of 50% is less compared to upper Salmon River release groups and negatively impacts the calculation of total adult returns. It is also possible that difficulties exist with retrieving CWT from the fisheries because access or juvenile emigration may be poor.

East Fork stock steelhead continued to outperform Dworshak stock steelhead regarding adult return numbers (Table 20) as previously noted by Ball and White (2001). We did not

recover any 1-ocean adults from the 1996 release of Dworshak fish stock with almost twice as many fish being released as compared to East Fork fish stock. This year's straying rate of 7.0% is greater compared to the mean straying rate of 1.46% for the past 14 years (Ball 1986a, 1986b, 1988, 1989, 1990, 1991, 1992a, 1992b, 1994, 1996, 1997, 1998, 1999; Ball and White 2001). In recent years, the increased number of off-site released fish apparently contributed to the increased straying rate (Figure 2). However, if straying is defined as fish that return to a different hatchery from which they were released, only one of 371 returning adults strayed during 1998. If the 1989 to 1998 straying rates are recalculated based on the new definition, only 1996 and 1997 depart from past reported values. Counting off-site released fish as strays because they return to a hatchery near their release site artificially inflates the straying rate. Based on past methods, the recalculated straying rates values would be 0.33%, 0.22%, and 0.27% for LSRCP steelhead for 1996, 1997, and 1998, respectively. The ingress of off-site released steelhead into neighboring hatcheries and tributaries is a separate area for future study.

Table 20. Coded-wire tag (CWT) recoveries of East Fork Salmon River steelhead releases- East Fork stock vs. Dworshak stock.

Release Year, Stock, Tag Codes, and No. Of Fish Released	1-Ocean			2-Ocean			3-Ocean			Total No. Tags Recovered
	Harvest		Rack Returns	Harvest		Rack Returns	Harvest		Rack Returns	
	Downriver ^a	ID ^b		Downriver	ID		Downriver	ID		
<u>1994</u>										
East Fork Stock: CWT 10/47/11, 10/47/12, 10/47/13 n = 63,394	4	4	12	25	12	36 ^{c,d}	0	0	0	93
<u>1994</u>										
Dworshak Stock: CWT 10/47/10, 10/47/21, 10/47/22 n = 62,713	2	0	0	11	4	0	0	0	0	17
<u>1995</u>										
East Fork Stock: CWT 10/20/24 n = 61,767	1	3	11	1	18	3	ND ^e	ND	ND	37
Dworshak Stock: CWT 10/20/03, 10/20/04, 10/20/12 n = 61,079	2	1	0	2	6	0	ND	ND	ND	11
<u>1996</u>										
East Fork Stock: CWT 10/46/13, 10/47/09 n = 32,856	2	1	2	ND	ND	ND	ND	ND	ND	5
Dworshak Stock: CWT 10/35/08 n = 63,013	0	0	0	ND	ND	ND	ND	ND	ND	0

^a Downriver recoveries queried from Pacific States Marine Fisheries Commission's CWT database on January 11, 2001.

^b ID = Idaho in-state harvest only.

^c Includes one stray to Hells Canyon trap.

^d Includes two strays to Slate Creek temporary weir.

^e ND = No data.

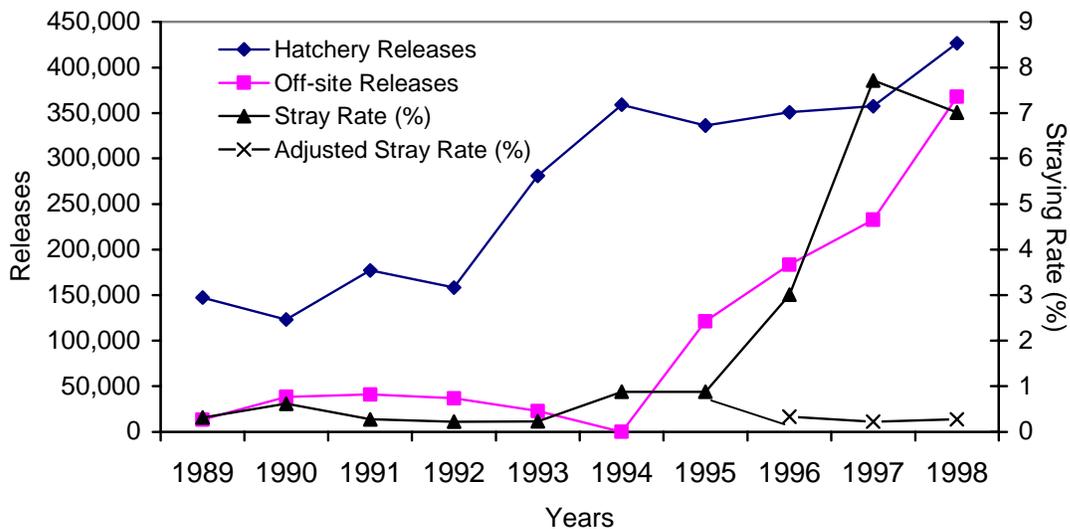


Figure 2. LSRCP steelhead straying rates and adjustments made for increases of off-site releases, 1989-1998.

Sources of Error

A-strain CWT steelhead released into the Salmon River did not have their left ventral (LV) fins clipped as external CWT indicators beginning with the spring of 1995. B-strain CWT fish released in the Salmon River and Clearwater River continued to be marked externally with LV fin clips. As a result, census clerks were equipped with portable CWT hand wand detectors manufactured by Northwest Marine Technology, Inc. (NMT) and checked all fish for CWT during the fishery of 1997-1998.

A CWT wand efficiency test conducted on both A- and B-strain steelhead snouts found the NMT portable hand wands detected a minimum of 97% of CWT (K. Ball, IDFG, personal communication). Steelhead snouts scanned in the field and at hatchery racks could yield false positives in a number of scenarios. A wand could show a positive detection signal for a foreign metal object in the snout area when scanned, such as a hook, leader, or broken off hook tip. Likewise, a wand might pick up external metal from the surrounding scan area, such as a watch, ring, coat zipper, or other metal object, if the snout was scanned too close to any of these metal-bearing surfaces. However, in all cases, false positive detections by the CWT hand wand result in excess snouts taken and very few CWT should be missed with this method.

Several consecutive low water years and poor migration survival of both juveniles migrating downstream and adults returning upstream have resulted in several poor steelhead runs in the Salmon River and Clearwater River. Consequently, the chance of recovering marked fish becomes very low, and the accuracy of return information diminishes. Harvest patterns, exploitation rates, age at return, and other reasonably stable statistics have been aberrant.

RECOMMENDATIONS

1. Continue to include coded-wire tags in each major smolt release that are representative in size, time of release, and fish health.
2. Continue to evaluate rate of return, contribution to the sport fishery, and distribution of adults returning from off-site releases.
3. Explore ways to improve the recovery of coded-wire tags from B-strain fish in the Salmon River and Clearwater River drainage.

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APPENDICES

Appendix A. Coded-wire tag recoveries, by tag code, release site, and number of CWT smolts released, harvest estimates by month and river section, and total harvest estimates for the 1997-98 season.

Tag Code: 05/24/54				Release Site: Clearwater R. @ Button Beach						Number Released: 18,951				
River Sect.	September			October			November			December			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05							1	0.129	8					
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
	January			February			March			April			1997-98	
River Sect.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05				1	0.154	7							2	15
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													15	

Appendix A. Continued.

Tag Code: 05/24/55				Release Site: Dworshak Hatchery						Number Released: 19,385				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05							1	0.129	8					
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													1	8
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													8	

Appendix A. Continued.

Tag Code: 05/24/56				Release Site: Dworshak Hatchery						Number Released: 18,437				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05				1	0.123	8	1	0.129	8					
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05	1	0.100	10										3	26
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													26	

Appendix A. Continued.

Tag Code: 05/24/57				Release Site: Dworshak Hatchery						Number Released: 18,573				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05							2	0.129	16					
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05	1	0.100	10										2	16
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													16	

Appendix A. Continued.

Tag Code: 05/24/58			Release Site: Dworshak Hatchery						Number Released: 20,488					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05				1	0.123	8								
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05							1	0.133	8				2	16
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													16	

Appendix A. Continued.

Tag Code: 05/24/59				Release Site: Dworshak Hatchery						Number Released: 14,763				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05										1	0.100	10		
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05	1	0.085	12										2	22
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													22	

Appendix A. Continued.

Tag Code: 05/24/60				Release Site: Dworshak Hatchery						Number Released: 19,635				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05							1	0.129	8					
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05	1	0.085	12	2	0.154	13							4	33
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													33	

Appendix A. Continued.

Tag Code: 05/24/61				Release Site: Dworshak Hatchery						Number Released: 20,372				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05							1	0.129	8					
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05				2	0.154	13							3	21
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													21	

Appendix A. Continued.

Tag Code: 05/24/62			Release Site: Dworshak Hatchery						Number Released: 22,297					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01							1	0.033	30					
03/05				1	0.123	8								
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													1	30
03/05	1	0.085	12	1	0.154	7	1	0.133	8				4	35
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													65	

Appendix A. Continued.

Tag Code: 05/24/63 Release Site: Clearwater R. @ Clear Cr. Number Released: 19,849

River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01												
03/05				1	0.123	8	1	0.129	8			
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													2	16
04/06				1	0.018	56							1	56
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Total Estimated Harvest

72

Appendix A. Continued.

Tag Code: 05/31/44				Release Site: Dworshak Hatchery						Number Released: 21,751				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05							1	0.129	8					
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													1	8
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													8	

Appendix A. Continued.

Tag Code: 05/31/47			Release Site: South Fork Clearwater R.						Number Released: 21,326					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05				1	0.123	8					1	0.100	10	
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													2	18
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													18	

Appendix A. Continued.

Tag Code: 05/31/48				Release Site: Dworshak Hatchery						Number Released: 21,747				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05				3	0.123	24	2	0.129	16	1	0.100	10		
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05				1	0.154	7							7	57
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													57	

Appendix A. Continued.

Tag Code: 05/33/62			Release Site: South Fork Clearwater R.						Number Released: 18,893					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05							1	0.129	8					
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													1	8
04/06														
07							1	0.200	5				1	5
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													13	

Appendix A. Continued.

Tag Code: 05/33/63				Release Site: South Fork Clearwater R.						Number Released: 20,065				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05							1	0.129	8					
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													1	8
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													8	

Appendix A. Continued.

Tag Code: 05/37/23				Release Site: Dworshak Hatchery						Number Released: 20,804				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05							1	0.129	8					
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05				1	0.154	7							2	15
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													15	

Appendix A. Continued.

Tag Code: 07/09/20 Release Site: Wallowa R. @ Big Canyon Cr. Number Released: 50,524

River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01				1	0.030	33						
03/05												
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													1	33
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Total Estimated Harvest

33

Appendix A. Continued.

Tag Code: 07/11/59 Release Site: Wallowa R. @ Big Canyon Cr. Number Released: 27,223

River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01				1	0.030	33						
03/05												
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													1	33
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Total Estimated Harvest

33

Appendix A. Continued.

Tag Code: 07/11/60 Release Site: Wallowa R. @ Big Canyon Cr. Number Released: 27,289

River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01							1	0.033	30	1	0.040	25
03/05												
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													2	55
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Total Estimated Harvest

55

Appendix A. Continued.

Tag Code: 07/12/18 **Release Site: Imnaha R. @ Little Sheep Cr.** **Number Released: 26,986**

River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01				1	0.030	33						
03/05												
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													1	33
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Total Estimated Harvest

33

Appendix A. Continued.

Tag Code: 07/58/22 **Release Site: Wallowa R. @ Spring Cr.** **Number Released: 26,336**

River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01										1	0.040	25
03/05												
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													1	25
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Total Estimated Harvest

25

Appendix A. Continued.

Tag Code: 10/20/02				Release Site: Slate Cr. (Upper Salmon R.)						Number Released: 20,983				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05														
04/06														
07														
10														
11														
12							2	0.314	6					
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12													2	6
13														
14														
15														
16														
17										1	0.150	7	1	7
18														
19														
20														
Total Estimated Harvest													13	

Appendix A. Continued.

Tag Code: 10/20/03			Release Site: East Fork Salmon R.						Number Released: 21,337					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01							1	0.033	30					
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													1	30
03/05														
04/06														
07														
10														
11														
12							1	0.194	5				1	5
13														
14														
15							1	0.316	3				1	3
16														
17										1	0.150	7	1	7
18														
19														
20														
Total Estimated Harvest													45	

Appendix A. Continued.

Tag Code: 10/20/06				Release Site: Little Salmon R.					Number Released: 19,430					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12				1	0.375	3							1	3
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													3	

Appendix A. Continued.

Tag Code: 10/20/07				Release Site: Salmon R. @ Lemhi R.					Number Released: 20,537					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14				1	0.090	11	2	0.238	8					
15				2	0.109	18								
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12							1	0.194	5				1	5
13														
14							1	0.386	3				4	22
15							1	0.316	3				3	21
16							2	0.186	11				2	11
17							1	0.257	4				1	4
18														
19														
20														
Total Estimated Harvest													63	

Appendix A. Continued.

Tag Code: 10/20/08				Release Site: Salmon R. @ Lemhi R.					Number Released: 19,340					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15				1	0.109	9	1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.316	3				3	16
16							1	0.186	5				1	5
17							1	0.257	4				1	4
18														
19														
20														
Total Estimated Harvest													25	

Appendix A. Continued.

Tag Code: 10/20/09				Release Site: Salmon R. @ Bruno's Bridge						Number Released: 17,501				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05														
04/06														
07														
10														
11														
12				1	0.688	2								
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12													1	2
13														
14														
15				1	0.052	19	2	0.316	6				3	25
16														
17							1	0.257	4	1	0.150	7	2	11
18														
19														
20														
Total Estimated Harvest													38	

Appendix A. Continued.

Tag Code: 10/20/10			Release Site: Salmon R. @ Bruno's Bridge						Number Released: 17,947					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12				1	0.375	3	1	0.194	5				2	8
13														
14														
15				1	0.052	19	2	0.316	10				5	33
16														
17														
18														
19														
20														
Total Estimated Harvest													41	

Appendix A. Continued.

Tag Code: 10/20/11			Release Site: Salmon R. @ Bruno's Bridge						Number Released: 19,159						
River Sect.	September			October			November			December					
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.			
01															
03/05															
04/06															
07															
10															
11															
12															
13															
14															
15							1	0.226	4						
16															
17															
River Sect.	January			February			March			April			1997-98		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.	
01															
03/05															
04/06															
07															
10															
11							1	0.035	29				1	29	
12				1	0.375	3							1	3	
13															
14							1	0.386	3				1	3	
15													1	4	
16															
17											1	0.150	7	1	7
18											2	0.081	25	2	25
19															
20															
Total Estimated Harvest													71		

Appendix A. Continued.

Tag Code: 10/20/12			Release Site: East Fork Salmon R.						Number Released: 20,414					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.316	3				1	3
16														
17														
18										1	0.081	12	1	12
19														
20														
Total Estimated Harvest													15	

Appendix A. Continued.

Tag Code: 10/20/13				Release Site: Little Salmon R.					Number Released: 19,546					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12							1	0.194	5				1	5
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													5	

Appendix A. Continued.

Tag Code: 10/20/14				Release Site: Little Salmon R.						Number Released: 19,998				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12							1	0.314	3					
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12							1	0.194	5				2	8
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													8	

Appendix A. Continued.

Tag Code: 10/20/15				Release Site: Salmon R. @ Lemhi R.					Number Released: 20,488					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14							1	0.238	4					
15				1	0.226	4								
16				1	0.183	6								
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14													1	4
15													1	4
16							1	0.186	5				2	11
17														
18														
19														
20														
Total Estimated Harvest													19	

Appendix A. Continued.

Tag Code: 10/20/16 **Release Site: Salmon R. @ McNabbs Point** **Number Released: 20,625**

River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01												
03/05												
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14							1	0.386	3				1	3
15							1	0.316	3				1	3
16														
17										2	0.081	25	2	25
18														
19														
20														

Total Estimated Harvest **31**

Appendix A. Continued.

Tag Code: 10/20/17			Release Site: Salmon R. @ McNabbs Point						Number Released: 20,776					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12							1	0.314	3					
13														
14							2	0.238	8					
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12													1	3
13														
14													2	8
15							2	0.316	6				2	6
16														
17							1	0.257	4				1	4
18										1	0.081	12	1	12
19														
20														
Total Estimated Harvest													33	

Appendix A. Continued.

Tag Code: 10/20/18			Release Site: Salmon R. @ McNabbs Point						Number Released: 21,144					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14							2	0.386	5				2	5
15				3	0.316	10							3	10
16														
17										1	0.150	7	1	7
18										1	0.081	12	1	12
19														
20														
Total Estimated Harvest													34	

Appendix A. Continued.

Tag Code: 10/20/19				Release Site: Little Salmon R.						Number Released: 38,390				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12				2	0.688	3	3	0.314	10					
13							1	0.509	2					
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12							3	0.194	16				8	29
13													1	2
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													31	

Appendix A. Continued.

Tag Code: 10/20/24			Release Site: East Fork Salmon R.						Number Released: 61,767					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12				1	0.688	2								
13														
14														
15							1	0.226	4					
16							1	0.147	7					
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12													1	2
13														
14														
15				1	0.052	19	8	0.316	25				10	48
16													1	7
17							1	0.257	4	1	0.150	7	2	11
18										3	0.081	37	3	37
19										1	0.134	8	1	8
20														
Total Estimated Harvest													113	

Appendix A. Continued.

Tag Code: 10/20/26				Release Site: Clearwater R. @ Clear Cr.						Number Released: 62,835				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05				1	0.123	8					2	0.100	20	
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													3	28
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													28	

Appendix A. Continued.

Tag Code: 10/20/27 Release Site: Clearwater River @ Clear Cr. Number Released: 58,316

River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01												
03/05							2	0.129	16	1	0.100	10
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05				1	0.154	7							4	33
04/06							1	0.055	18				1	18
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Total Estimated Harvest

51

Appendix A. Continued.

Tag Code: 10/30/46			Release Site: Pahsimeroi R.						Number Released: 64,953					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14				2	0.090	22	1	0.238	4					
15				2	0.109	18	1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12				1	0.375	3							1	3
13														
14							2	0.386	5				5	31
15				1	0.052	19	9	0.316	29				13	70
16														
17							2	0.257	8	1	0.150	7	3	15
18														
19														
20														
Total Estimated Harvest													119	

Appendix A. Continued.

Tag Code: 10/30/48			Release Site: Salmon R. @ Hammer Cr.						Number Released: 64,057					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12				1	0.688	2	1	0.314	3					
13				1	0.246	4	2	0.509	4					
14				1	0.090	11	1	0.238	4					
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12													2	5
13													3	8
14													2	15
15							1	0.316	3				1	3
16														
17														
18														
19														
20														
Total Estimated Harvest													31	

Appendix A. Continued.

Tag Code: 10/30/49			Release Site: Pahsimeroi R.						Number Released: 61,077					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13							1	0.509	2					
14				1	0.090	11	3	0.238	13					
15				1	0.109	9	7	0.226	31					
16				1	0.183	6	2	0.147	14					
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11							1	0.035	29				1	29
12														
13							1	0.432	2				2	4
14							4	0.386	10				8	34
15				1	0.052	19	9	0.316	29				18	88
16													3	20
17							2	0.257	8	7	0.150	47	9	55
18														
19														
20														
Total Estimated Harvest													230	

Appendix A. Continued.

Tag Code: 10/30/50				Release Site: Little Salmon R.						Number Released: 59,507				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12								2	0.314	6				
13								1	0.509	2				
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12								1	0.194	5			3	11
13													1	2
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													13	

Appendix A. Continued.

Tag Code: 10/30/51 Release Site: Snake R. @ Hells Canyon Dam Number Released: 60,534

River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01				1	0.030	33						
03/05												
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													1	33
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Total Estimated Harvest

33

Appendix A. Continued.

Tag Code: 10/30/52				Release Site: Salmon R. @ Hammer Cr.					Number Released: 61,313					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12				1	0.688	2	2	0.314	6					
13				1	0.246	4								
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12							1	0.194	5				4	13
13													1	4
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													17	

Appendix A. Continued.

Tag Code: 10/35/09				Release Site: Little Salmon R.					Number Released: 62,227					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15													1	4
16														
17														
18														
19														
20														
Total Estimated Harvest														4

Appendix A. Continued.

Tag Code: 10/35/10				Release Site: Salmon R. @ North Fork						Number Released: 61,852				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12				1	0.688	2	1	0.314	3					
13														
14							2	0.238	8					
15				7	0.109	64	6	0.226	27					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12													2	5
13														
14							1	0.386	3				3	11
15				3	0.052	58	12	0.316	38	6	0.030	200	34	387
16							1	0.186	5				1	5
17														
18														
19														
20														
Total Estimated Harvest													408	

Appendix A. Continued.

Tag Code: 10/35/11			Release Site: Salmon R. @ McNabbs Point						Number Released: 61,552					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01				1	0.030	33								
03/05														
04/06														
07														
10														
11														
12				2	0.688	3								
13														
14							3	0.238	13					
15				2	0.109	18	7	0.226	31					
16							1	0.147	7					
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													1	33
03/05														
04/06														
07														
10														
11														
12				1	0.375	3	2	0.194	10				5	16
13														
14							3	0.386	8				6	21
15							4	0.316	13				13	62
16							1	0.186	5	1	0.036	28	3	40
17							1	0.257	4	2	0.150	13	3	17
18										2	0.081	25	2	25
19														
20														
Total Estimated Harvest													214	

Appendix A. Continued.

Tag Code: 10/35/12			Release Site: Salmon R. @ Lemhi R.						Number Released: 61,673					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12							2	0.314	6					
13							2	0.509	4					
14														
15				5	0.109	46	5	0.226	22					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12													2	6
13				1	0.013	77	1	0.432	2				4	83
14							1	0.386	3				1	3
15							9	0.316	29				19	97
16										2	0.036	56	2	56
17							1	0.257	4	2	0.150	13	3	17
18														
19														
20														
Total Estimated Harvest													262	

Appendix A. Continued.

Tag Code: 10/35/13 **Release Site: Salmon R. @ Bruno's Bridge** **Number Released: 62,686**

River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01												
03/05												
04/06												
07												
10												
11												
12				2	0.688	3						
13												
14				1	0.090	11	1	0.238	4			
15				1	0.109	9	5	0.226	22			
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12							3	0.194	16				5	19
13														
14							1	0.386	3				3	18
15							3	0.316	10				9	41
16														
17							1	0.257	4	5	0.150	33	6	37
18										1	0.081	12	1	12
19														
20														

Total Estimated Harvest

127

Appendix A. Continued.

Tag Code: 10/45/07			Release Site: Sawtooth Hatchery						Number Released: 19,923					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14							1	0.238	4					
15				1	0.109	9								
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14													1	4
15													1	9
16														
17														
18														
19										1	0.134	8	1	8
20														
Total Estimated Harvest													21	

Appendix A. Continued.

Tag Code: 10/45/08				Release Site: Sawtooth Hatchery						Number Released: 19,689				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12				1	0.375	3							1	3
13														
14														
15													1	4
16														
17														
18							1	0.068	15	1	0.081	12	2	27
19														
20														
Total Estimated Harvest													34	

Appendix A. Continued.

Tag Code: 10/45/09				Release Site: Sawtooth Hatchery						Number Released: 19,900				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16							1	0.147	7					
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							4	0.316	13				4	13
16				1	0.043	23							2	30
17														
18														
19														
20														
Total Estimated Harvest													43	

Appendix A. Continued.

Tag Code: 10/45/10			Release Site: Sawtooth Hatchery						Number Released: 20,321					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14							1	0.238	4					
15				1	0.109	9								
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14													1	4
15							1	0.316	3				2	12
16														
17														
18														
19										2	0.134	15	2	15
20														
Total Estimated Harvest													31	

Appendix A. Continued.

Tag Code: 10/45/11				Release Site: Sawtooth Hatchery						Number Released: 20,331				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.316	3				2	7
16														
17														
18														
19														
20														
Total Estimated Harvest													7	

Appendix A. Continued.

Tag Code: 10/45/12				Release Site: Sawtooth Hatchery						Number Released: 20,311				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.316	3				2	7
16														
17														
18														
19														
20														
Total Estimated Harvest													7	

Appendix A. Continued.

Tag Code: 10/45/13			Release Site: Salmon R. @ Torreys Hole						Number Released: 20,287					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19										1	0.134	8	1	8
20														
Total Estimated Harvest													8	

Appendix A. Continued.

Tag Code: 10/45/14				Release Site: Salmon R. @ Torreys Hole						Number Released: 21,887				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							2	0.316	6				3	10
16														
17														
18														
19														
20														
Total Estimated Harvest													10	

Appendix A. Continued.

Tag Code: 10/45/15				Release Site: Salmon R. @ Torreys Hole						Number Released: 19,085				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15				1	0.109	9	1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.316	3				3	16
16														
17														
18														
19														
20														
Total Estimated Harvest													16	

Appendix A. Continued.

Tag Code: 10/45/17				Release Site: Little Salmon R.					Number Released: 20,853					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15													1	4
16														
17														
18														
19														
20														
Total Estimated Harvest														4

Appendix A. Continued.

Tag Code: 10/45/18			Release Site: Sawtooth Hatchery						Number Released: 23,576					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14							1	0.238	4					
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14				1	0.014	71							2	75
15							2	0.316	6				2	6
16														
17														
18														
19														
20														
Total Estimated Harvest													81	

Appendix A. Continued.

Tag Code: 10/45/19			Release Site: Sawtooth Hatchery						Number Released: 21,995					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14							2	0.238	8					
15							1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14													2	8
15							1	0.316	3				2	7
16														
17										2	0.257	8	2	8
18										1	0.081	12	1	12
19														
20														
Total Estimated Harvest													35	

Appendix A. Continued.

Tag Code: 10/45/20				Release Site: Sawtooth Hatchery						Number Released: 18,109				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17										1	0.257	4	1	4
18														
19														
20														
Total Estimated Harvest														4

Appendix A. Continued.

Tag Code: 10/45/21				Release Site: Little Salmon R.					Number Released: 22,923					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12							1	0.194	5				1	5
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													5	

Appendix A. Continued.

Tag Code: 10/45/22				Release Site: Little Salmon R.						Number Released: 19,236				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12				1	0.688	2	1	0.314	3					
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12													2	5
13														
14														
15														
16														
17														
18														
19														
20										1	0.106	9	1	9
Total Estimated Harvest													14	

Appendix A. Continued.

Tag Code: 10/45/23				Release Site: Sawtooth Hatchery						Number Released: 21,941				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15				1	0.109	9								
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							2	0.316	6				3	15
16														
17							1	0.257	4	1	0.150	7	2	11
18														
19														
20														
Total Estimated Harvest													26	

Appendix A. Continued.

Tag Code: 10/45/24			Release Site: Sawtooth Hatchery						Number Released: 21,491					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12				2	0.688	3								
13														
14							1	0.238	4					
15							1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12							1	0.375	3				3	6
13														
14													1	4
15							2	0.316	6				3	10
16														
17														
18										1	0.081	12	1	12
19										1	0.134	8	1	8
20														
Total Estimated Harvest													40	

Appendix A. Continued.

Tag Code: 10/45/25			Release Site: Sawtooth Hatchery						Number Released: 21,420					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14							1	0.238	4					
15				1	0.109	9								
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14													1	4
15													1	9
16														
17														
18														
19														
20														
Total Estimated Harvest													13	

Appendix A. Continued.

Tag Code: 10/45/26			Release Site: Salmon R. @ Torreys Hole						Number Released: 21,185					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							4	0.226	18					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15				1	0.052	19	1	0.316	3				6	40
16														
17														
18														
19										1	0.134	8	1	8
20														
Total Estimated Harvest													48	

Appendix A. Continued.

Tag Code: 10/45/27			Release Site: Salmon R. @ Torreys Hole						Number Released: 21,558					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12				1	0.688	2								
13							1	0.509	2					
14							2	0.238	8					
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11							1	0.035	29				1	29
12							1	0.194	5				2	7
13													1	2
14													2	8
15				1	0.052	19	1	0.316	3				2	22
16														
17														
18										1	0.081	12	1	12
19										1	0.134	8	1	8
20														
Total Estimated Harvest													88	

Appendix A. Continued.

Tag Code: 10/45/28			Release Site: Salmon R. @ Torreys Hole						Number Released: 21,298					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12							1	0.194	5				1	5
13														
14							1	0.386	3				1	3
15														
16														
17														
18														
19										1	0.081	12	1	12
20														
Total Estimated Harvest													20	

Appendix A. Continued.

Tag Code: 10/45/29			Release Site: Sawtooth Hatchery						Number Released: 22,036					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12				2	0.688	3	1	0.314	3					
13														
14							1	0.238	4					
15							1	0.226	4					
16							1	0.147	7					
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12													3	6
13														
14							1	0.386	3				2	7
15							1	0.316	3				2	7
16				1	0.043	23							2	30
17														
18										1	0.081	12	1	12
19										1	0.134	8	1	8
20														
Total Estimated Harvest													70	

Appendix A. Continued.

Tag Code: 10/45/30				Release Site: Sawtooth Hatchery						Number Released: 21,716				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15				1	0.109	9								
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14							2	0.386	5				2	5
15							3	0.316	10				4	19
16														
17														
18														
19										1	0.134	8	1	8
20														
Total Estimated Harvest													32	

Appendix A. Continued.

Tag Code: 10/45/31				Release Site: Sawtooth Hatchery						Number Released: 21,305				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12				1	0.688	2								
13														
14														
15							3	0.226	13					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12													1	2
13														
14														
15				1	0.052	19	2	0.316	6				6	38
16							1	0.186	5				1	5
17							1	0.257	4				1	4
18														
19										1	0.134	8	1	8
20														
Total Estimated Harvest													57	

Appendix A. Continued.

Tag Code: 10/45/32			Release Site: Sawtooth Hatchery						Number Released: 21,682					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15				1	0.109	9	4	0.226	18					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15				1	0.052	19	1	0.316	3				7	49
16							1	0.186	5				1	5
17										1	0.150	7	1	7
18										1	0.081	12	1	12
19														
20														
Total Estimated Harvest													73	

Appendix A. Continued.

Tag Code: 10/45/33				Release Site: Sawtooth Hatchery						Number Released: 22,297				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14							1	0.238	4					
15				2	0.109	18	1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14													1	4
15													3	22
16														
17														
18														
19										1	0.134	8	1	8
20														
Total Estimated Harvest													34	

Appendix A. Continued.

Tag Code: 10/45/34				Release Site: Sawtooth Hatchery						Number Released: 20,379				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14								1	0.238	4				
15								2	0.226	9				
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13													1	4
14								1	0.316	3			3	12
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													16	

Appendix A. Continued.

Tag Code: 10/45/37				Release Site: Little Salmon R.						Number Released: 19,672				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12				1	0.688	2	1	0.314	3					
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12				1	0.375	3							3	8
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													8	

Appendix A. Continued.

Tag Code: 10/45/38				Release Site: Little Salmon R.						Number Released: 20,068				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12							2	0.314	6					
13														
14							1	0.238	4					
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12				1	0.375	3	1	0.194	5				4	14
13														
14													1	4
15														
16														
17														
18														
19														
20										2	0.106	19	2	19
Total Estimated Harvest													37	

Appendix A. Continued.

Tag Code: 10/45/39				Release Site: Little Salmon R.						Number Released: 21,012				
River Sect.	September			October			November			December			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01										1	0.040	25		
03/05														
04/06														
07														
10														
11														
12				3	0.688	4	6	0.314	19					
13														
14														
15														
16														
20				1	0.114	9								
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													1	25
03/05														
04/06														
07														
10														
11														
12							1	0.194	5				10	28
13														
14														
15														
16														
17														
18														
19														
20							2	0.099	20				3	29
Total Estimated Harvest													82	

Appendix A. Continued.

Tag Code: 10/45/40				Release Site: Little Salmon R.						Number Released: 20,389				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12				5	0.688	7	2	0.314	6					
13							1	0.509	2					
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12							2	0.3194	10				9	23
13													1	2
14														
15														
16														
17														
18														
19														
20							1	0.099	10	2	0.106	19	3	29
Total Estimated Harvest													54	

Appendix A. Continued.

Tag Code: 10/46/13				Release Site: East Fork Salmon R.						Number Released: 10,806				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16							1	0.147	7					
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16													1	7
17														
18														
19														
20														
Total Estimated Harvest														7

Appendix A. Continued.

Tag Code: 10/46/21 Release Site: South Fork Clearwater R. Number Released: 42,595

River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01												
03/05												
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05				3	0.154	19							3	19
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Total Estimated Harvest

19

Appendix A. Continued.

Tag Code: 10/46/60				Release Site: Salmon R. @ North Fork					Number Released: 31,186					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15				3	0.109	28								
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15							5	0.316	16	5	0.030	167	13	211
16				1	0.043	23							1	23
17														
18														
19														
20														
Total Estimated Harvest													234	

Appendix A. Continued.

Tag Code: 10/46/61			Release Site: Salmon R. @ North Fork						Number Released: 30,811					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14							1	0.238	4					
15				2	0.109	18	1	0.226	4					
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05														
04/06														
07														
10														
11														
12				1	0.375	3							1	3
13														
14							1	0.386	3				2	7
15							5	0.316	16	1	0.030	33	9	71
16							1	0.186	5	1	0.036	28	2	33
17														
18														
19														
20														
Total Estimated Harvest													114	

Appendix A. Continued.

Tag Code: 63/57/17			Release Site: Tucannon R. @ Curl Lake						Number Released: 17,990					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05				1	0.154	7							1	7
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													7	

Appendix A. Continued.

Tag Code: 63/57/18				Release Site: Tucannon R. @ Curl Lake						Number Released: 18,112				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05				1	0.123	8								
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													1	8
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													8	

Appendix A. Continued.

Tag Code: 63/57/28				Release Site: Lower Snake R.						Number Released: 39,737				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05							1	0.129	8					
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													1	8
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													8	

Appendix A. Continued.

Tag Code: 63/57/48				Release Site: Tucannon R. @ Curl Lake						Number Released: 16,546				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No.	Est.
01														
03/05				1	0.123	8								
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													1	8
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													8	

Appendix A. Continued.

Tag Code: 63/60/30				Release Site: Touchet R.						Number Released: 39,292				
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05				3	0.123	24								
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													3	24
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													24	

Appendix A. Continued.

Tag Code: 63/60/31				Release Site: Touchet R.					Number Released: 39,397					
River Sect.	September			October			November			December				
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.		
01														
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05	1	0.085	12										1	12
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													12	

Appendix A. Continued.

Tag Code: 63/60/33				Release Site: Tucannon R.						Number Released: 29,136				
River Sect.	September			October			November			December			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01										1	0.040	25		
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													1	25
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
Total Estimated Harvest													25	

Appendix A. Continued.

Tag Code: 63/60/34				Release Site: Lower Snake R.					Number Released: 19,820			
River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01												
03/05				1	0.123	8						
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01														
03/05													1	8
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Total Estimated Harvest															8
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Appendix A. Continued.

Tag Code: 63/60/36				Release Site: Lower Snake R.					Number Released: 19,514			
River Sect.	September			October			November			December		
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.
01				1	0.030	33						
03/05												
04/06												
07												
10												
11												
12												
13												
14												
15												
16												
17												

River Sect.	January			February			March			April			1997-98	
	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Sample Rate	Est. Harv.	No. Tags	Est. Harv.
01													1	33
03/05														
04/06														
07														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Total Estimated Harvest														33
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Appendix B. Steelhead groups expected to return to the Salmon River, 1997-98.

Strain	Ocean Age	No. of Fish	Release Site	Hatchery Rearing	Marks
A	I	21,941	Sawtooth Hatchery	HNFH ^a	CWT 10/45/23
A	I	21,491	Sawtooth Hatchery	HNFH	CWT 10/45/24
A	I	21,420	Sawtooth Hatchery	HNFH	CWT 10/45/25 ^b
A	I	22,036	Sawtooth Hatchery	HNFH	CWT 10/45/29
A	I	21,716	Sawtooth Hatchery	HNFH	CWT 10/45/30
A	I	21,305	Sawtooth Hatchery	HNFH	CWT 10/45/31
A	I	21,682	Sawtooth Hatchery	HNFH	CWT 10/45/32
A	I	22,297	Sawtooth Hatchery	HNFH	CWT 10/45/33
A	I	20,379	Sawtooth Hatchery	HNFH	CWT 10/45/34 ^b
A	I	513,842	Sawtooth Hatchery	HNFH	None
A	I	21,185	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/26
A	I	21,558	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/27
A	I	21,298	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/28 ^b
A	I	1,981	Salmon R. @ Torreys Hole	HNFH	None
A	I	61,552	Salmon R. @ McNabbs Point	MVSH ^c	CWT 10/35/11 ^b
A	I	140,416	Salmon R. @ McNabbs Point	MVSH	None
A	I	62,686	Salmon R. @ Bruno's Bridge	MVSH	CWT 10/35/13 ^b
A	I	144,559	Salmon R. @ Bruno's Bridge	MVSH	None
A	I	61,077	Pahsimeroi R.	NSPR ^d	CWT 10/30/49 ^b
A	I	738,143	Pahsimeroi R.	NSPR	None
A	I	21,196	Pahsimeroi R.	HNFH	None ^b
A	I	61,673	Salmon R. @ Lemhi R.	MVSH	CWT 10/35/12 ^b
A	I	139,539	Salmon R. @ Lemhi R.	MVSH	None
A	I	61,852	Salmon R. @ North Fork	MVSH	CWT 10/35/10 ^b
A	I	65,856	Salmon R. @ North Fork	MVSH	None
A	I	59,507	Little Salmon R.	NSPR	CWT 10/30/50 ^b
A	I	98,501	Little Salmon R.	NSPR	None
A	I	20,699	Little Salmon R.	HNFH	CWT 10/45/35
A	I	20,825	Little Salmon R.	HNFH	CWT 10/45/36
A	I	19,762	Little Salmon R.	HNFH	CWT 10/45/37 ^b
A	I	20,068	Little Salmon R.	HNFH	CWT 10/45/38
A	I	21,012	Little Salmon R.	HNFH	CWT 10/45/39
A	I	20,389	Little Salmon R.	HNFH	CWT 10/45/40 ^b
A	I	406,511	Little Salmon R.	HNFH	None
A	I	61,313	Salmon R. @ Hammer Cr.	NSPR	CWT 10/30/52 ^b
A	I	44,712	Salmon R. @ Hammer Cr.	NSPR	None
A	I	30,090	Salmon R. @ Pine Bar Rapids	NSPR	None
Total		3,156,069			
A	II	19,923	Sawtooth Hatchery	HNFH	CWT 10/45/07 ^b
A	II	19,689	Sawtooth Hatchery	HNFH	CWT 10/45/08 ^b
A	II	19,900	Sawtooth Hatchery	HNFH	CWT 10/45/09 ^b
A	II	20,321	Sawtooth Hatchery	HNFH	CWT 10/45/10 ^b
A	II	20,331	Sawtooth Hatchery	HNFH	CWT 10/45/11 ^b
A	II	20,591	Sawtooth Hatchery	HNFH	CWT 10/45/12 ^b
A	II	23,576	Sawtooth Hatchery	HNFH	CWT 10/45/18 ^b
A	II	21,995	Sawtooth Hatchery	HNFH	CWT 10/45/19 ^b
A	II	18,109	Sawtooth Hatchery	HNFH	CWT 10/45/20 ^b
A	II	500,571	Sawtooth Hatchery	HNFH	None
A	II	20,287	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/13 ^b
A	II	21,887	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/14 ^b

Appendix B. Continued.

Strain	Ocean Age	No. of Fish	Release Site	Hatchery Rearing	Marks
A	II	19,085	Salmon R. @ Torreys Hole	HNFH	CWT 10/45/15 ^b
A	II	2,908	Salmon R. @ Torreys Hole	HNFH	None
A	II	20,625	Salmon R. @ McNabbs Point	MVSH	CWT 10/20/16 ^b
A	II	20,776	Salmon R. @ McNabbs Point	MVSH	CWT 10/20/17 ^b
A	II	21,144	Salmon R. @ McNabbs Point	MVSH	CWT 10/20/18 ^b
A	II	145,300	Salmon R. @ McNabbs Point	MVSH	None
A	II	17,501	Salmon R. @ Bruno's Bridge	MVSH	CWT 10/20/09 ^b
A	II	17,947	Salmon R. @ Bruno's Bridge	MVSH	CWT 10/20/10 ^b
A	II	19,159	Salmon R. @ Bruno's Bridge	MVSH	CWT 10/20/11 ^b
A	II	108,263	Salmon R. @ Bruno's Bridge	MVSH	None
A	II	64,953	Pahsimeroi R.	NSPR	CWT 10/30/46 ^b
A	II	764,325	Pahsimeroi R.	NSPR	None
A	II	20,537	Salmon R. @ Lemhi R.	MVSH	CWT 10/20/07 ^b
A	II	19,340	Salmon R. @ Lemhi R.	MVSH	CWT 10/20/08 ^b
A	II	20,488	Salmon R. @ Lemhi R.	MVSH	CWT 10/20/15 ^b
A	II	137,905	Salmon R. @ Lemhi R.	MVSH	None
A	II	31,186	Salmon R. @ N. Fork	MVSH	CWT 10/46/60 ^b
A	II	30,811	Salmon R. @ N. Fork	MVSH	CWT 10/46/61 ^b
A	II	53,053	Salmon R. @ N. Fork	MVSH	None
A	II	38,390	Little Salmon R.	NSPR	CWT 10/20/19 ^b
A	II	92,767	Little Salmon R.	NSPR	None
A	II	21,481	Little Salmon R.	HNFH	CWT 10/45/16 ^b
A	II	20,853	Little Salmon R.	HNFH	CWT 10/45/17 ^b
A	II	22,923	Little Salmon R.	HNFH	CWT 10/45/21 ^b
A	II	19,236	Little Salmon R.	HNFH	CWT 10/45/22 ^b
A	II	316,011	Little Salmon R.	HNFH	None
A	II	64,057	Salmon R. @ Hammer Cr.	NSPR	CWT 10/30/48 ^b
A	II	33,163	Salmon R. @ Hammer Cr.	NSPR	None
A	II	29,400	Salmon R. @ Pine Bar Rapids	NSPR	None
Total		2,920,766			
B	I	61,695	Slate Cr.	MVSH	CWT 10/35/07 ^b
B	I	174,602	Slate Cr.	MVSH	None
B	I	63,013	E. Fork Salmon R.	MVSH	CWT 10/35/08 ^{b,e}
B	I	10,806	E. Fork Salmon R.	MVSH	CWT 10/46/13 ^{b,f}
B	I	22,050	E. Fork Salmon R.	MVSH	CWT 10/47/09 ^f
B	I	30,064	E. Fork Salmon R.	MVSH	None ^f
B	I	326,121	E. Fork Salmon R.	MVSH	None ^e
B	I	32,320	E. Fork Salmon R. @ Herd Cr.	MVSH	None ^e
B	I	62,227	Little Salmon R.	MVSH	CWT 10/35/09 ^b
B	I	341,054	Little Salmon R.	MVSH	None
Total		1,129,952			
B	II	20,328	Slate Cr.	MVSH	CWT 10/20/01 ^b
B	II	20,983	Slate Cr.	MVSH	CWT 10/20/02 ^b
B	II	20,391	Slate Cr.	MVSH	CWT 10/20/05 ^b
B	II	154,233	Slate Cr.	MVSH	None
B	II	21,337	E. Fork Salmon R.	MVSH	CWT 10/20/03 ^b
B	II	19,328	E. Fork Salmon R.	MVSH	CWT 10/20/04 ^b
B	II	20,414	E. Fork Salmon R.	MVSH	CWT 10/20/12 ^b
B	II	61,767	E. Fork Salmon R.	MVSH	CWT 10/20/24 ^b
B	II	3,233	E. Fork Salmon R.	MVSH	None ^f
B	II	362,626	E. Fork Salmon R.	MVSH	None ^e

Appendix B. Continued.

Strain	Ocean Age	No. of Fish	Release Site	Hatchery Rearing	Marks
B	II	19,430	Little Salmon R.	MVSH	CWT 10/20/06 ^b
B	II	19,546	Little Salmon R.	MVSH	CWT 10/20/13 ^b
B	II	19,998	Little Salmon R.	MVSH	CWT 10/20/14 ^b
B	II	283,706	Little Salmon R.	MVSH	None
Total		1,047,320			
B	III	62,510	Slate Cr.	MVSH	CWT 10/49/25
B	III	148,845	Slate Cr.	MVSH	None ^b
B	III	21,296	E. Fork Salmon R.	MVSH	CWT 10/47/10
B	III	20,648	E. Fork Salmon R.	MVSH	CWT 10/47/11
B	III	21,377	E. Fork Salmon R.	MVSH	CWT 10/47/12
B	III	21,369	E. Fork Salmon R.	MVSH	CWT 10/47/13
B	III	20,443	E. Fork Salmon R.	MVSH	CWT 10/47/21
B	III	20,974	E. Fork Salmon R.	MVSH	CWT 10/47/22
B	III	226,333	E. Fork Salmon R.	MVSH	None ^{b,f}
B	III	164,740	E. Fork Salmon R.	MVSH	None ^e
B	III	20,891	Little Salmon R.	MVSH	CWT 10/47/14
B	III	21,243	Little Salmon R.	MVSH	CWT 10/47/15
B	III	21,582	Little Salmon R.	MVSH	CWT 10/47/16
B	III	175,009	Little Salmon R.	MVSH	None ^b
Total		967,260			

^a HNFH = Hagerman National Fish Hatchery.

^b Release group includes fish marked with passive integrated transponder (PIT) tags.

^c MVSH = Magic Valley Steelhead Hatchery.

^d NSPR = Niagara Springs Fish Hatchery.

^e Dworshak National Fish Hatchery stock.

^f East Fork Salmon River stock.

Appendix C. Steelhead groups expected to return to the Clearwater River, 1997-98.

Strain	Ocean Age	No. of Fish	Release Site	Hatchery Rearing	Marks
B	I	63,556	Clearwater R. @ Clear Cr.	CFH ^a	CWT 10/30/53 ^b
B	I	234,886	Clearwater R. @ Clear Cr.	CFH	None
B	I	21,913	Clearwater R. @ Clear Cr.	DNFH ^c	CWT 05/31/46
B	I	344,653	Clearwater R. @ Clear Cr.	DNFH	None
B	I	21,751	Dworshak Hatchery	DNFH	CWT 05/31/44
B	I	21,310	Dworshak Hatchery	DNFH	CWT 05/31/45
B	I	20,360	Dworshak Hatchery	DNFH	CWT 05/31/49
B	I	20,276	Dworshak Hatchery	DNFH	CWT 05/31/50
B	I	18,612	Dworshak Hatchery	DNFH	CWT 05/31/51
B	I	20,670	Dworshak Hatchery	DNFH	CWT 05/37/22
B	I	20,804	Dworshak Hatchery	DNFH	CWT 05/37/23
B	I	19,034	Dworshak Hatchery	DNFH	CWT 05/40/05
B	I	21,197	Dworshak Hatchery	DNFH	CWT 05/40/06
B	I	18,803	Dworshak Hatchery	DNFH	CWT 05/40/07
B	I	1,174,618	Dworshak Hatchery	DNFH	None
B	I	6,164	Red R.	CFH	CWT 10/46/30
B	I	8,190	Red R.	CFH	None ^b
B	I	35,970	South Fork Red R.	CFH	CWT 10/20/22 ^{d,e}
B	I	6,256	South Fork Red R.	CFH	None ^{b,d,e}
B	I	46,018	Crooked R.	CFH	LV Clip ^b
B	I	61,878	South Fork Clearwater R.	DNFH	CWT 05/32/12
B	I	520,489	South Fork Clearwater R.	DNFH	None
B	I	63,743	South Fork Clearwater R.	CFH	CWT 10/20/29 ^b
B	I	63,551	South Fork Clearwater R.	CFH	CWT 10/35/14 ^b
B	I	64,254	South Fork Clearwater R.	CFH	CWT 10/35/15 ^b
B	I	236,965	South Fork Clearwater R.	CFH	None
Total		3,114,903			
B	II	18,951	Clearwater R. @ Button Beach	DNFH	CWT 05/24/54
B	II	131,795	Clearwater R. @ Button Beach	DNFH	None
B	II	56,573	Clearwater R. @ Clear Cr.	CFH	CWT 10/20/25 ^b
B	II	62,835	Clearwater R. @ Clear Cr.	CFH	CWT 10/20/26 ^b
B	II	58,316	Clearwater R. @ Clear Cr.	CFH	CWT 10/20/27 ^b
B	II	5,988	Clearwater R. @ Clear Cr.	CFH	None
B	II	19,849	Clearwater R. @ Clear Cr.	DNFH	CWT 05/24/63
B	II	328,269	Clearwater R. @ Clear Cr.	DNFH	None
B	II	19,385	Dworshak Hatchery	DNFH	CWT 05/24/55
B	II	18,437	Dworshak Hatchery	DNFH	CWT 05/24/56
B	II	18,573	Dworshak Hatchery	DNFH	CWT 05/24/57
B	II	20,488	Dworshak Hatchery	DNFH	CWT 05/24/58
B	II	14,763	Dworshak Hatchery	DNFH	CWT 05/24/59
B	II	19,635	Dworshak Hatchery	DNFH	CWT 05/24/60
B	II	20,372	Dworshak Hatchery	DNFH	CWT 05/24/61
B	II	22,297	Dworshak Hatchery	DNFH	CWT 05/24/62
B	II	21,747	Dworshak Hatchery	DNFH	CWT 05/31/48
B	II	1,037,880	Dworshak Hatchery	DNFH	None
B	II	22,056	Red R.	CFH	CWT 10/45/05 ^{d,e}
B	II	21,585	Red R.	CFH	CWT 10/45/06 ^{d,e}
B	II	6,140	Red R.	CFH	None ^{b,d,e}
B	II	21,326	South Fork Clearwater R.	DNFH	CWT 05/31/47
B	II	18,893	South Fork Clearwater R.	DNFH	CWT 05/33/62

Appendix C. Continued.

Strain	Ocean		Release Site	Hatchery	
	Age	No. of Fish		Rearing	Marks
B	II	20,065	South Fork Clearwater R.	DNFH	CWT 05/33/63
B	II	614,457	South Fork Clearwater R.	DNFH	None
B	II	42,595	South Fork Clearwater R.	CFH	CWT 10/46/21 ^b
B	II	21,242	South Fork Clearwater R.	CFH	CWT 10/47/27 ^b
B	II	21,350	South Fork Clearwater R.	CFH	CWT 10/47/28 ^b
B	II	319,063	South Fork Clearwater R.	CFH	None ^b
Total		3,024,925			
B	III	136,447	Clearwater R. @ Button Beach	DNFH	None
B	III	21,507	Clearwater R. @ Clear Cr.	CFH	CWT 10/47/29
B	III	21,562	Clearwater R. @ Clear Cr.	CFH	CWT 10/47/30
B	III	20,827	Clearwater R. @ Clear Cr.	CFH	CWT 10/47/33 ^b
B	III	89,964	Clearwater R. @ Clear Cr.	CFH	None ^c
B	III	1,149	Clearwater R. @ Clear Cr.	DNFH	CWT 05/34/06
B	III	2,187	Clearwater R. @ Clear Cr.	DNFH	CWT 05/34/07
B	III	346,297	Clearwater R. @ Clear Cr.	DNFH	None
B	III	19,422	Dworshak Hatchery	DNFH	CWT 05/21/53
B	III	20,451	Dworshak Hatchery	DNFH	CWT 05/21/54
B	III	18,551	Dworshak Hatchery	DNFH	CWT 05/21/55
B	III	19,318	Dworshak Hatchery	DNFH	CWT 05/21/56
B	III	18,264	Dworshak Hatchery	DNFH	CWT 05/30/12
B	III	5,148	Dworshak Hatchery	DNFH	CWT 05/31/41
B	III	9,509	Dworshak Hatchery	DNFH	CWT 05/31/42
B	III	22,189	Dworshak Hatchery	DNFH	CWT 05/31/43
B	III	19,769	Dworshak Hatchery	DNFH	CWT 05/34/05
B	III	1,000,796	Dworshak Hatchery	DNFH	None
B	III	21,779	Crooked R.	CFH	CWT 10/47/32 ^b
B	III	20,883	Crooked R.	CFH	CWT 10/47/37 ^b
B	III	61,788	Crooked R.	CFH	None
B	III	71,566	Crooked R.	CFH	RV Clip ^{b,d}
B	III	50,027	South Fork Red R.	CFH	None ^{b,d,e}
B	III	20,424	South Fork Clearwater R.	CFH	CWT 10/47/31
B	III	21,086	South Fork Clearwater R.	CFH	CWT 10/47/34 ^b
B	III	22,137	South Fork Clearwater R.	CFH	CWT 10/47/35 ^b
B	III	21,430	South Fork Clearwater R.	CFH	CWT 10/47/36 ^b
B	III	307,988	South Fork Clearwater R.	CFH	None ^b
B	III	184,380	South Fork Clearwater R.	DNFH	None
Total		2,596,845			

^a CFH = Clearwater Fish Hatchery.

^b Release group includes fish marked with passive integrated transponder (PIT) tags.

^c DNFH = Dworshak National Fish Hatchery.

^d Fingerling release.

^e Fall release

Appendix D. Statewide harvest estimate^a of steelhead by section and month by resident and nonresident anglers, fall 1997 and spring 1998.

River Section	Fall 1997 Steelhead Harvest				
	September	October	November	December	Total
Snake R.					
01	140	2,300	1,701	697	4,839
Subtotal	140	2,300	1,701	697	4,839
Clearwater R.					
03	348	1,277	1,549	648	3,823
04	0	174	247	71	493
05	35	100	208	100	443
06	0	35	18	0	53
07	0	48	71	18	137
Subtotal	383	1,634	2,093	837	4,949
Salmon R.					
10	62	1,623	1,231	479	3,394
11	18	835	1,109	354	2,317
12	0	192	437	97	726
13	0	69	53	0	123
14	0	355	496	89	939
15	35	1,322	1,148	158	2,664
16	78	142	231	18	468
17	0	89	156	0	245
18	0	18	0	0	18
19	0	0	65	0	65
20	18	105	337	35	495
Subtotal	211	4,750	5,263	1,230	11,454
Total	734	8,684	9,057	2,764	21,242

Appendix D. Continued.

River Section	Spring 1998 Steelhead Harvest				
	January	February	March	April	Total
Snake R.					
01	352	172	49	0	573
Subtotal	352	172	49	0	573
Clearwater R.					
03	381	405	282	0	1,069
04	74	114	114	49	351
05	148	74	86	197	505
06	0	0	86	98	184
07	0	25	160	368	554
Subtotal	603	618	728	712	2,663
Salmon R.					
10	172	111	123	49	455
11	332	542	486	49	1,409
12	135	136	412	12	695
13	37	154	37	0	228
14	49	283	259	163	754
15	98	688	1,472	540	2,798
16	37	209	388	442	1,075
17	0	184	331	957	1,472
18	37	12	147	763	960
19	25	0	233	576	834
20	37	86	284	1,216	1,624
Subtotal	959	2,405	4,172	4,767	12,304
Total	1,914	3,195	4,949	5,479	15,540

^a Statewide harvest survey data from Thomas J. McArthur, IDFG (unpublished). Only LSRCP creel areas are included in this table.

Appendix E. Estimated steelhead run composition at Bonneville Dam, April 1-November 15, 1997.

Week	Dam Count	N	Dam Count		No. Hatchery		No. Natural		No. Hatchery		Estimated Counts		Estimated Counts		
			%	No. Natural <77.5 ^a	%	No. Hatchery <77.5	%	No. Natural >77.5	%	No. Hatchery >77.5	Natural <77.5	Hatchery <77.5	Natural >77.5	Hatchery >77.5	
4/1-6/8	5,360	98	1.8	9	9.2	81	82.7	0	0	8	8.2	492	4,430		438
6/9-15	898	40	4.5	3	7.5	35	87.5	1	2.5	1	2.5	67	786	22	22
6/16-22	1,922	22	1.1	2	9.1	19	86.4	0	0	1	4.5	175	1,660		87
6/23-29	3,094	98	3.2	13	13.3	81	82.7	0	0	4	4.1	410	2,557		126
6/30-7-6	4,444	107	2.4	14	13.1	87	81.3	0	0.0	6	5.6	581	3,613		249
7/7-13	5,946	70	1.2	11	15.7	53	75.7	3	4.3	3	4.3	934	4,502	255	255
7/14-20	8,350	79	0.9	12	15.2	62	78.5	2	2.5	3	3.8	1,268	6,553	211	317
7/21-27	17,476	64	0.4	14	21.9	50	78.1	0	0	0	0	3,823	13,653		
7/28-8/3	40,462	60	0.1	19	31.7	40	66.7	0	0	1	1.7	12,813	26,975		674
8/4-10	39,188	200	0.5	25	12.5	171	85.5	2	1.0	2	1.0	4,899	33,506	392	392
8/11-17	21,298	195	0.9	31	15.9	158	81.0	1	0.5	5	2.6	3,386	17,257	109	546
8/18-24	23,202	143	0.6	17	11.9	113	79.0	4	2.8	9	6.3	2,758	18,334	649	1,460
8/25	3,106	175	5.6	7	4.0	160	91.4	1	0.6	7	4.0	124	2,840	18	124
8/26-31	16,225	175	1.1	7	4.0	160	91.4	1	0.6	7	4.0	649	14,834	93	649
9/1-7	16,977	200	1.2	15	7.5	150	75.0	4	2.0	31	15.5	1,273	12,733	340	2,631
9/8-14	6,330	175	2.8	7	4.0	113	64.6	3	1.7	52	29.7	253	4,087	109	1,881
9/15-21	9,965	144	1.4	6	4.2	74	51.4	10	6.9	54	37.5	415	5,121	692	3,737
9/22-28	12,580	100	0.8	6	6.0	36	36.0	2	2.0	56	56.0	755	4,529	252	7,045
9/29-10/5	6,052	114	1.9	5	4.4	31	27.2	1	0.9	77	67.5	265	1,646	53	4,088
10/6-12	3,795	100	2.6	6	6.0	50	50.0	3	3.0	41	41.0	228	1,898	114	1,556
10/13-11/15	10,794	89	0.8	6	6.7	28	31.5	2	2.2	53	59.6	728	3,396	243	6,428
Total	257,464	2,448		235		1,752		40		421		36,298	184,909	3,550	32,706
%			1.0									14.1	71.8	1.4	12.7
Adjusted Total^b												35,407		4,441	

^a All fish measured in centimeter fork length.

^b Counts adjusted for overlap percentages: 2% for the number of naturally-produced fish <77.5 cm fork length, 36% for the number of naturally-produced fish >77.5 cm fork length.

Appendix F. Estimated steelhead run composition at Lower Granite Dam, June 1-December 15, 1997, and March 1-May 31, 1998.

Week	Dam Count	N	Dam Count %	No. Natural		No. Hatchery		No. Natural		No. Hatchery		Estimated Counts			
				<77.5 ^a	%	<77.5	%	>77.5	%	>77.5	%	Natural <77.5	Hatchery <77.5	Natural >77.5	Hatchery >77.5
6/1-9/7	8,672	75	0.9	8	10.7	66	88.0	0	0.0	1	1.3	925	7,631		116
9/8-14	3,151	50	1.6	6	12.0	44	88.0	0	0.0	0	0.0	378	2,773		
9/15-21	4,940	150	3.0	10	6.7	139	92.7	1	0.7	0	0.0	329	4,578	33	
9/22-28	9,272	200	2.2	17	8.5	179	89.5	1	0.5	3	1.5	788	8,298	46	139
9/29-10/5	16,327	300	1.8	21	7.0	253	84.3	4	1.3	22	7.3	1,143	13,769	218	1,197
10/6-12	11,322	300	2.6	23	7.7	226	75.3	3	1.0	48	16.0	868	8,529	113	1,812
10/13-19	9,359	300	3.2	26	8.7	225	75.0	8	2.7	41	13.7	811	7,019	250	1,279
10/20-26	6,859	300	4.4	24	8.0	205	68.3	8	2.7	63	21.0	549	4,687	183	1,440
10/27-11/2	3,435	150	4.4	10	6.7	82	54.7	4	2.7	54	36.0	229	1,878	92	1,237
11/3-9	2,082	75	3.6	4	5.3	50	66.7	4	5.3	17	22.7	111	1,388	111	472
11/10-16	2,771	50	1.8	8	16.0	32	64.0	0	0.0	10	20.0	443	1,773		554
11/17-11/23	2,429	25	1.0	3	12.0	16	64.0	1	4.0	5	20.0	291	1,555	97	486
11/24-12/15	1,664	25	1.5	1	4.0	19	76.0	0	0.0	5	20.0	67	1,265		333
3/1-22	1,548	70	4.5	4	5.7	20	28.6	3	4.3	43	61.4	88	442	66	951
3/23-29	645	22	3.4	0	0.0	15	68.2	0	0.0	7	31.8		440		205
3/30-4/5	816	41	5.0	3	7.3	21	51.2	2	4.9	15	36.6	60	418	40	299
4/6-5/31	1,325	71	5.4	18	25.4	30	42.3	4	5.6	19	26.8	336	560	75	355
Total	86,617	2,204	2.5	186		1,622		43		353		7,417	67,003	1,323	10,874
%												8.6	77.4	1.5	12.6
Adjusted Total^b												8,541		199	

^a All fish measured in centimeter fork length.

^b Counts adjusted for overlap percentages: 36% for the number of naturally-produced fish <77.5 cm fork length, 14% for the number of naturally-produced fish >77.5 cm fork length.

Appendix G. Miscellaneous coded-wire tag steelhead groups that were recovered by Idaho anglers, 1997-98.

Strain	Ocean		Tagging Release Site	Agency	Marks
	Age	No. of Fish			
A	I	27,223	Wallowa R. @ Big Canyon Cr.	ODFW ^a	CWT 07/11/59
A	I	27,289	Wallowa R. @ Big Canyon Cr.	ODFW	CWT 07/11/60
A	I	27,289	Wallowa R. @ Spring Cr.	ODFW	CWT 07/11/63
A	I	26,986	Imnaha R. @ Little Sheep Cr.	ODFW	CWT 07/12/18
A	I	39,292	Touchet R.	WDFW ^b	CWT 63/60/30
A	I	39,397	Touchet R.	WDFW	CWT 63/60/31
A	I	29,136	Tucannon R.	WDFW	CWT 63/60/33
A	I	19,820	Lower Snake R.	WDFW	CWT 63/60/34
A	I	19,514	Lower Snake R.	WDFW	CWT 63/60/36
A	II	50,524	Wallowa R. @ Big Canyon Cr.	ODFW	CWT 07/09/20
A	II	26,336	Wallowa R. @ Spring Cr.	ODFW	CWT 07/58/22
A	II	17,990	Tucannon R.	WDFW	CWT 63/57/17
A	II	18,112	Tucannon R.	WDFW	CWT 63/57/18
A	II	39,737	Lower Snake R.	WDFW	CWT 63/57/28
A	II	16,546	Tucannon R.	WDFW	CWT 63/57/48

^a ODFW = Oregon Department of Fish and Wildlife.

^b WDFW = Washington Department of Fish and Wildlife.

Appendix H. Coded-wire tag recoveries of Idaho's LSRCP steelhead from downriver and ocean fisheries during 1997-98. Data queried from PSMFC as of May 15, 2001. Sampling rate expansions not available for all harvest areas.

Tag Code	Lower Columbia River							
	Ocean		Sport		Tributary Sport		Zone 6	
	No. Tags	Est. Harv.	No. Tags	Est. Harv.	No. Tags	Est. Harv.	No. Tags	Est. Harv.
10/20/01			1	1				
10/20/06	2	4						
10/20/12			1	1				
10/20/24			1	1				
10/20/25			4	4			1	3
10/20/26			7	7			2	3
10/20/27			2	2	1	1	1	3
10/20/29							1	2
10/30/46	1							
10/35/09	1							
10/35/11							1	3
10/45/11	1							
10/45/12	1	1						
10/45/20	1							
10/46/21			11	16	2	2	1	3
10/47/27			1	1			1	1
10/47/28			2	2				
10/49/25			1	1				
Total	7	5	31	36	3	3	8	18

Prepared by:

Jon Hansen
Senior Fishery Research Biologist

Marsha White
Fishery Technician

Approved by:

IDAHO DEPARTMENT OF FISH AND GAME

Virgil K. Moore, Chief
Bureau of Fisheries

Sharon Kiefer
Anadromous Fisheries Manager