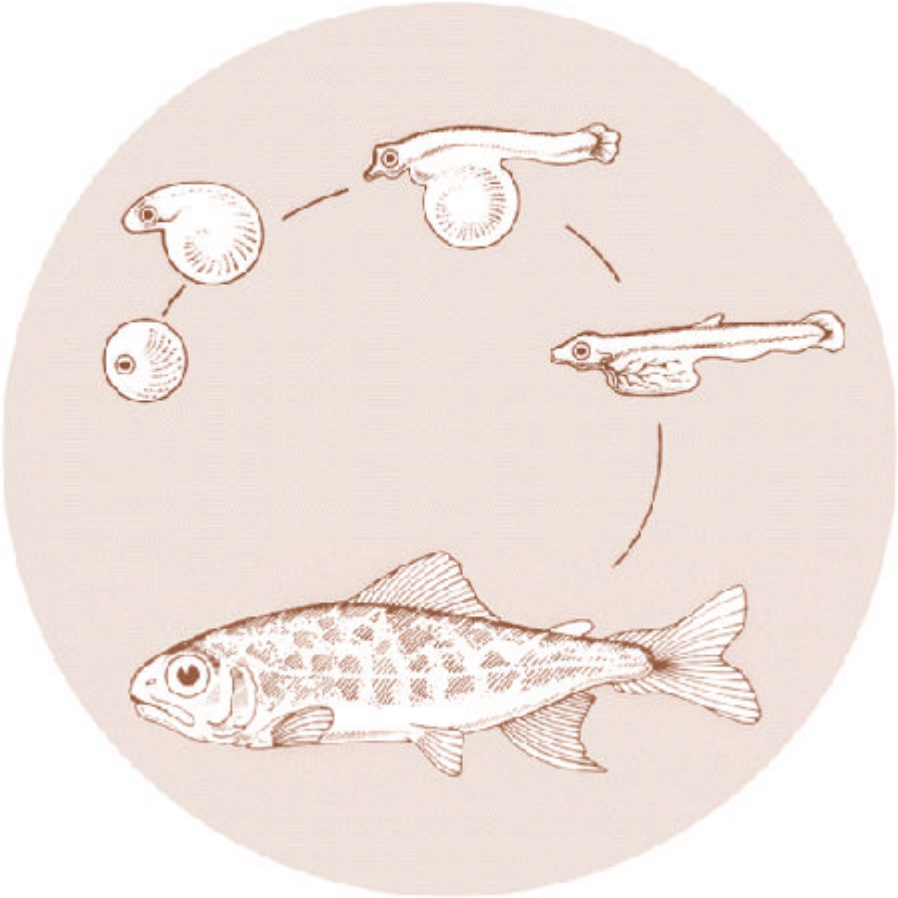
December 1992

Annual Coded Wire Program Oregon Missing Production Groups

Annual Report 1992



DOE/BP-01610-1

This report was funded by the Bonneville Power Administration (BPA), U.S. Department of Energy, as part of BPA's program to protect, mitigate, and enhance fish and wildlife affected by the development and operation of hydroelectric facilities on the Columbia River and its tributaries. The views of this report are the author's and do not necessarily represent the views of BPA.

This document should be cited as follows:

Garrison, Robert L., D. L. Isaac, M. A. Lewis, W. M. Murry - Oregon Department of Fish and Wildlife, 1992, Annual Coded Wire Program Oregon Missing Production Groups, Annual Report 1992, Report to Bonneville Power Administration, Contract No. 1989BP01610, Project No. 198906900, 79 electronic pages (BPA Report DOE/BP-01610-1)

This report and other BPA Fish and Wildlife Publications are available on the Internet at:

http://www.efw.bpa.gov/cgi-bin/efw/FW/publications.cgi

For other information on electronic documents or other printed media, contact or write to:

Bonneville Power Administration
Environment, Fish and Wildlife Division
P.O. Box 3621
905 N.E. 11th Avenue
Portland, OR 97208-3621

Please include title, author, and DOE/BP number in the request.

ANNUAL CODED WIRE PROGRAM
OREGON MISSING PRODUCTION GROUPS

Annual Report
1992

Prepared by:

Robert L. Garrison
Dennis L. Isaac
Mark A. Lewis
William M. Murry

Oregon Department of Fish and Wildlife

Prepared for:

U.S. Department of Energy
Bonneville Power Administration
Environment, Fish and Wildlife
PO Box 3621
Portland, Oregon 97208

Project No. 89-069
Contract No. DE-BI79-89BP01610

December 1992

TABLE OF CONTENTS

	Page
Abstract	1
Introduction	1
Methods and Materials	2
Results	3
Discussion	5
Big Creek Hatchery	5
Klaskanine Hatchery	5
Clatsup Economic Development Commission (CEDC)	10
Gnat Creek Hatchery	21
Eagle Creek National Fish Hatchery	21
Clackamas Hatchery	21
Marion Forks Hatchery	27
South Santiam Hatchery	27
Stayton Rearing Pond	34
Roaring River Hatchery	34
Leaburg Hatchery	34
Willamette Hatchery	34
Sandy Hatchery	37
Cascade Hatchery	37
Bonneville Hatchery	37
Oxbow Hatchery	43
Wahkeena Pond	43
Round Butte Hatchery	50
Wizard Falls Hatchery	50
Fall River Hatchery	50
Irrigon Hatchery	50
Umatilla Hatchery	53
Lookingglass Hatchery	53
Wallowa Hatchery	61
Appendix	65

ABSTRACT

This annual report is in fulfillment of contract obligations with Bonneville Power Administration which is the funding source for the Oregon Department of Fish and Wildlife's Annual Coded Wire Tag Program - Oregon Missing Production Groups Project.

Tule brood fall chinook were caught primarily in the British Columbia, Washington and northern Oregon ocean commercial fisheries. The up-river bright fall chinook contributed primarily to the Alaska and British Columbia ocean commercial fisheries and the Columbia River gillnet fishery. Contribution of Rogue fall chinook released in the lower Columbia River system occurred primarily in the Oregon ocean commercial and river gillnet fisheries

Willamette spring chinook salmon contributed primarily to the Alaska and British Columbia ocean commercial, Oregon freshwater sport and Columbia River gillnet fisheries. The up-river stocks of spring chinook contributed primarily to the Columbia River sport and in-river gillnet fisheries.

The up-river stocks of Columbia River summer steelhead contributed primarily to the Columbia River gillnet and in-river freshwater sport fisheries.

The Columbia River early stock coho contributed well to the Oregon ocean sport and commercial fisheries. The 1985 to 1988 brood years of coho released in the Umatilla River survived at an average rate of 2.4% and contributed primarily to the Washington, Oregon and California ocean sport and commercial fisheries and the Columbia River gillnet fishery. The 1986 to 1988 brood years of coho released in the Yakima River survived at an average rate of 1.5% and contributed primarily to the Washington, Oregon and California ocean sport and commercial fisheries and the Columbia River gillnet fishery.

INTRODUCTION

The Columbia Basin Fish and Wildlife Program Section 203 (a) proposes an interim goal of doubling runs of salmon and steelhead in the Columbia Basin. Doubling means increasing the current run size of 2.5 million to 5 million adult fish. As part of this effort Section 206 (c) states an objective of exploring methods for substantially increasing and improving hatchery production at existing hatcheries. Section 206 (e)(l) states Bonneville shall fund collection of Columbia Basin hatchery data for anadromous fish. These data will include at a minimum: number of returning adults; disposition of returning adults; source and description of brood stock; actions to maintain genetic diversity; and size, location and time of release of juvenile fish.

A system of monitoring and evaluation is necessary to measure present and future levels of fish production by various hatchery and natural fish production components if we are going to be able to evaluate the success of this program in attaining the goal of doubling the size of fish runs.

In September 1989 the Oregon Department of Fish and Wildlife received a grant from the Bonneville Power Administration to begin a project of annually coded-wire tagging missing production groups of anadromous salmonids. Some groups of production fish were already being tagged by other programs, so this contract consisted of filling in the missing production groups for the future data base. This project began in 1990 coded-wire tagging groups of juvenile anadromous salmon produced at Oregon hatcheries.

Tagging will enable evaluation of survival and contribution rates. As the fish mature and are captured in various fisheries or return to release/recapture facilities, they are sampled to recover coded-wire tags. All recoveries of coded-wire tagged fish are reported to the Pacific States Marine Fisheries Commission. Release and recovery information is stored along with sampling and mark/unmarked release ratios. This information is then used to estimate survival rates for each production lot of fish reared and released at that hatchery. The number and rate that each hatchery production group of fish contribute to the various fisheries is then estimated by recovery area and brood year. This information is then used to evaluate effectiveness of each hatchery and various rearing and release practices conducted by the hatcheries. Evaluation of the various hatchery and natural production projects will be needed to measure the effectiveness of any mitigation program and to help direct future efforts in maintaining or enhancing fish runs in the Columbia Basin. This information will also be valuable to salmon harvest managers in developing scenarios that will allow harvest of excess hatchery fish while protecting threatened and endangered natural stocks.

Methods and Materials

The goal of this program is to develop the ability to estimate hatchery production survival values and evaluate effectiveness of Oregon hatcheries. To accomplish this goal, work has progressed under three objectives.

Objective 1. Implement the project by tagging missing production groups within hatcheries to assure each production group is identifiable to allow future evaluation upon recovery of tag data.

Objective 2. Recover coded-wire tags from snouts of fish tagged under Objective 1.

Objective 3. Prepare an annual report for all Oregon fish hatcheries in the Columbia Basin in a Propagation Evaluation Format. The annual report will include a Propagation Evaluation Summary format for each tag code released by an ODFW hatchery in the Columbia Basin. The hatchery summary will include estimates of survival and contribution for each hatchery represented by a coded-wire tag release group. The information will be obtained from the latest information available on the Pacific States Marine Fish Commission's computer data base at the time of report preparation.

RESULTS

Objective. 1. We completed coded-wire tagging and ad-clipping a total of about 0.8 million juvenile 1990 and 1991 brood spring and fall chinook and coho salmon (Table 1). The total represents 27 different tag groups. Estimated total operational costs (without administrative overhead averaged $76 and ranged between $65 and $96 per thousand fish tagged.

Table 1. Fish Tagged and Respective Estimated Operational Costs. (Sept. 1, 1991 to August 31, 1992)

Act #	Period	Location	Brood	Sp.	CWT'd	Grps	$/K	Tot. $
8	Oct, 91	Sandy	90	Co	114,411	4	$71	8,050
9	Oct, 91	Cascade	90	Co	169,928	6	$73	12,390
10	Oct, 91	Eagle Cr.	90	Co	55,330	2	$65	3,565
1	Mar, Ap,92	Big Cr.	91	Co	163,566	6	$79	12,887
2	Mar,92	Bonneville	91	CHF	107,522	4	$73	7,881
3	Deleted	Stayt-Bon						
4	May,92	Clack @ Ox.	91	CHS	98,304	2	$86	8,464
5	Jul,92	Willamette	91	CHS	50,106	1	$79	3,939
7	Deleted	S. Santiam						
11	Jul,Aug,92	Bon-Hood R.	91	CHS	40,473	1	$81	3,278
11	Jul,92	RndB-Hood R	91	CHS	29,218	1	$96	2,812
6	Scheduled Sep,92	McKenzie	91	CHS				
	TOTALS				828,888	27	$76	63,266

Objective 2. We completed processing a total of 33,087 tags at the laboratory in Clackamas. The total consisted of fish from sport, commercial, ceremonial, hatchery, spawning ground surveys, and miscellaneous other fisheries (Table 2). We verified 5,032 ODFW tags recovered and returned to us by other agencies.

Table 2. CWT's Recovered at Clackamas. (Sept. 1, 1991 to August 31, 1992)

FISHERY	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
River Sport	262	105	134	257	2	0	142	79	329	0	12	33	1,355
Test Fish	129	0	0	0	0	0	0	54	5	0	0	0	168
Estuary Spt	107	321	426	0	0	0	0	0	0	0	0	140	994
Treaty Gillnet	1,056	735	36	0	0	0	0	0	1	0	0	148	1,976
Non-Tr Gillnet	813	4,004	238	0	0	68	88	0	0	0	0	0	5,211
Youngs Bay Gillnet	79	120	510	0	0	0	0	0	84	2	0	0	795
Ocean Sport/Troll	46	0	77	0	0	0	0	0	3	106	970	2,046	3,246
Hatchery	0	362	4,288	3,677	4,669	1,694	1,777	256	267	367	115	341	17,813
Spawning Ground	0	30	15	126	0	35	18	0	0	0	0	0	224
Willamette Migration	0	20	0	0	0	0	235	341	24	0	200	0	820
Rogue Seine	0	0	0	0	0	0	13	0	0	0	0	0	13
Ceremonial/ Subsistence	0	0	0	0	0	0	0	69	64	252	65	0	450
TOTAL	2,492	5,697	5,724	4,060	4,671	1,797	2,273	799	777	727	1,362	2,708	33,087
Verifications	0	0	0	2,048	0	1,808	1,820	0	0	0	758	0	6,434

Objective 3. We prepared summaries of available coded-wire tag recovery information for all groups of tagged fish released from Oregon Department of Fish and Wildlife hatcheries in the Columbia basin and supplied them in the Propagation Evaluation Format to the Bonneville Power Administration Program Manager. Summaries of the coded-wire tag recovery and survival information are presented in Appendix Table 1. Charts depicting the latest five year average distribution of catch and estimated survival rates for each stock and hatchery are presented in Figures 1 - 49.

Discussion

The average percent recovery (by fishery) for the last 5 completed brood years (chinook 1982 to 1986 broods; coho 1984 to 1988 broods; steelhead 1983 to 1987 broods) are presented in Appendix Table 1.

Big Creek Hatchery

Big Creek Hatchery is located 2 miles south of Knappa off Highway 30 near the mouth of the Columbia River. The hatchery was originally built in 1939-41 and was operated by the Oregon Fish commission. Big Creek Hatchery rears and releases tule and Rogue fall chinook, coho, chum salmon, winter steelhead and cutthroat trout.

Tule 1986 brood fall chinook survived at a rate of 0.2%. They were caught primarily in the British Columbia, Washington and northern Oregon ocean commercial fisheries (Figure 1).

Rogue fall chinook were originally released at Big Creek as an experiment with the 1982 brood. Good survival and contribution rates to Oregon have caused this program to be expanded to a pilot production level. Rogue fall chinook from the 1982 to 1986 broods averaged survival at a rate of 3.0%. The largest contribution occurred in the Oregon ocean commercial and river gillnet fisheries (Figure 2).

The 1984 to 1988 brood Big Creek coho survived at an average rate of 4.0%. They contributed well to the Oregon ocean sport and commercial fisheries (Figure 3).

The 1984 brood Tanner Creek coho stock released at Big Creek hatchery survived at an average rate of 4.6% (Figure 4).

Only small experimental groups of chum salmon are reared at Big Creek and none of these fish have been coded-wire tagged for evaluation.

Winter steelhead and cutthroat trout are reared at Big Creek but none have been marked with coded-wire tags for evaluation.

Klaskanine Hatchery

Klaskanine Hatchery is located 21 miles southeast of Astoria on Highway 202 on the Klaskanine River. The hatchery originally built in 1913 was expanded and remodeled in 1953. Klaskanine Hatchery presently raises tule fall chinook, coho salmon and winter steelhead trout.

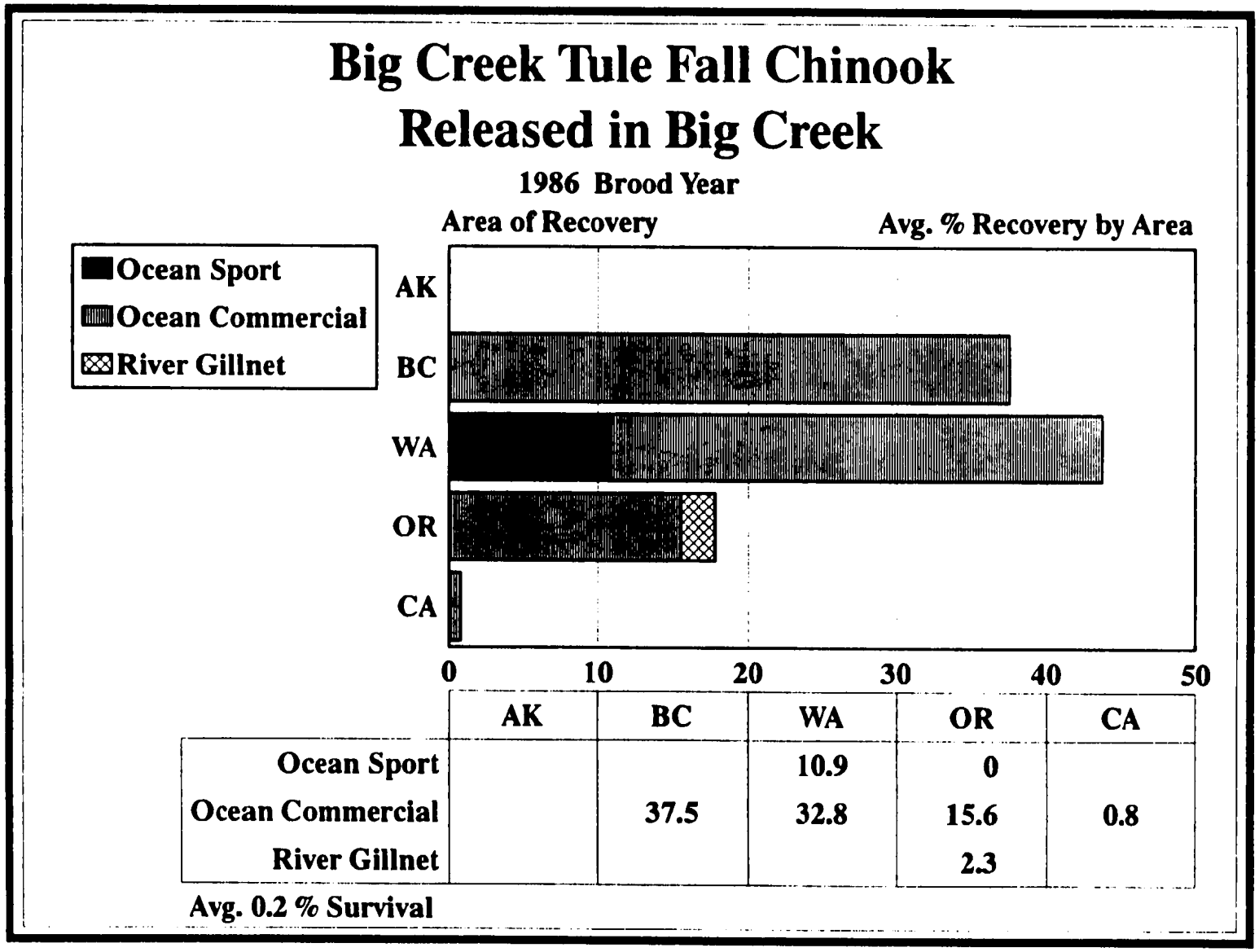
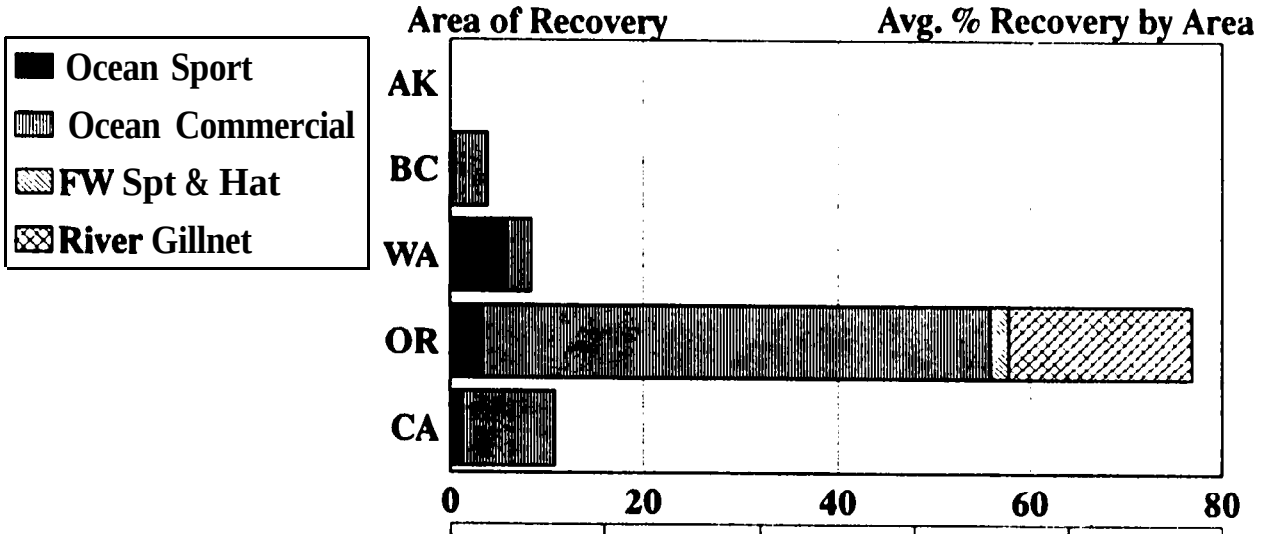

Big Creek Tule Fall Chinook
Released in Big Creek
1986 Brood Year
Area of Recovery
Avg. % Recovery by Area
Ocean Sport
Ocean Commercial
River Gillnet
AK
BC
WA
OR
CA
0
10
20
30
40
50
AK
BC
WA
OR
CA
Ocean Sport
10.9
0
Ocean Commercial
37.5
32.8
15.6
0.8
River Gillnet
2.3
Avg. 0.2 % Survival

Figure 1.

Rogue Fall Chinook Released in Big Creek

1982 - 1986 Brood Year



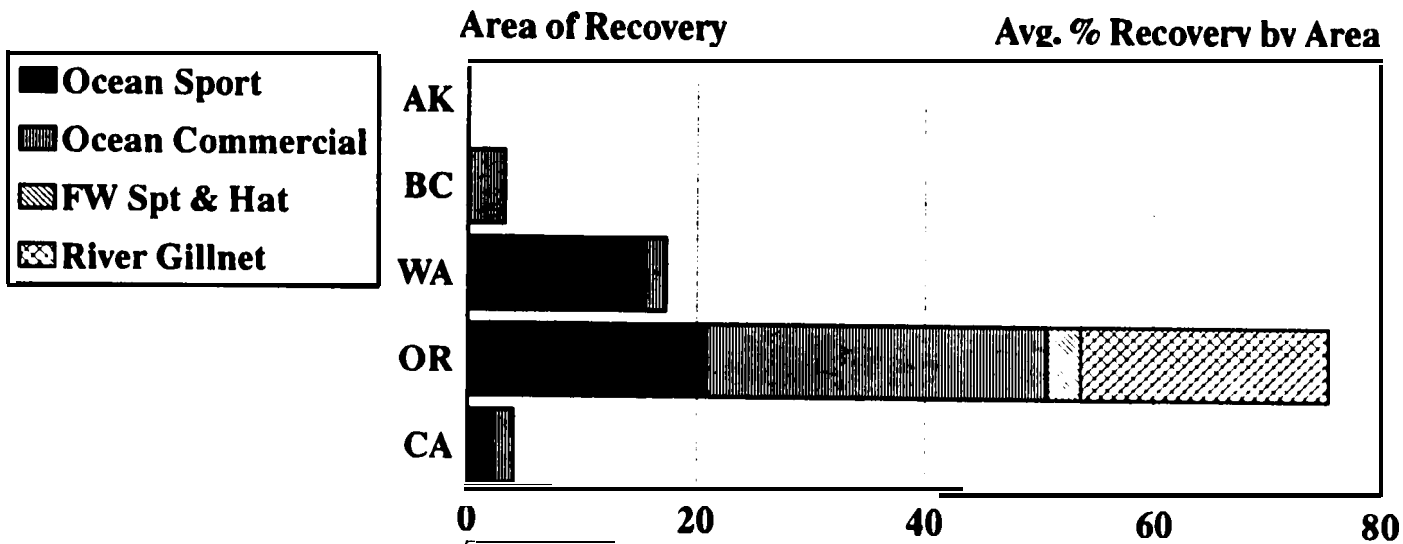
	AK	BC	WA	OR	CA
Ocean Sport		0.3	6	3.5	1.4
Ocean Commercial		3.6	2.4	52.4	9.5
FW Spt & Hat				1.9	
River Gillnet				19	

Avg. 3.0% Survival

Figure 2.

Big Creek Coho (Big Creek Hat)
Released in Big Creek

1984 - 1988 Brood Year



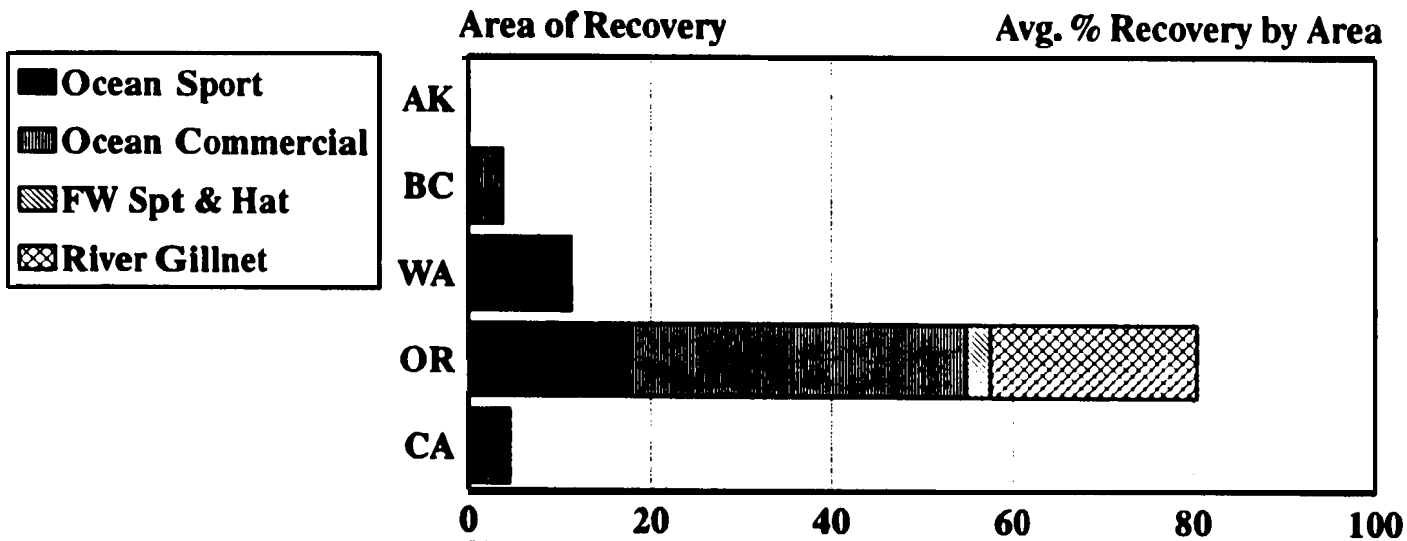
	AK	BC	WA	OR	CA
Ocean Sport			15.6	20.9	2.2
Ocean Commercial		3.2	1.7	29.8	1.8
FW Spt & Hat				3	
River Gillnet				21.7	

Avg. 4.0 % Survival

Figure 3.

Tanner Cr Coho (Big Creek Hat)
Released Big Cr

1984 Brood Year



	AK	BC	WA	OR	CA
Ocean Sport			10.7	17.6	1.6
Ocean Commercial		3.8	0.5	37.3	2.9
FW Spt & Hat				2.7	
River Gillnet				22.8	

Avg. 4.6 % Survival

Figure 4.

The 1986 brood of tule fall chinook released from Klaskanine Hatchery survived at a rate of 0.2%. They contributed primarily to the British Columbia, Washington, and Oregon ocean commercial and the Columbia River and Youngs Bay gillnet fisheries (Figure 5).

The 1984 - 1988 brood Klaskanine coho produced an average survival at a rate of 4.2%. They contributed primarily to the Oregon ocean sport, commercial and the Columbia River and Youngs Bay gillnet fisheries (Figure 6).

The 1984 brood Tanner Creek coho stock released in the Klaskanine river had an average survival rate of 2.2% (Figure 7).

Winter steelhead are reared at Klaskanine Hatchery but none have been marked with coded-wire tags for evaluation.

Clatsup Economic Development Commission (CEDC)

CEDC operates a series of freshwater ponds and saltwater net pens in Young Bay near Astoria. CEDC releases coho and chinook salmon.

The 1982 to 1986 brood tule fall chinook released in the South Fork Klaskanine River averaged a survival rate of 0.4%. They were caught primarily in the British Columbia ocean commercial and the lower Columbia River and Youngs Bay gillnet fisheries (Figure 8).

The 1985 Tanner Creek coho stock reared by CEDC and released in the North Fork Klaskanine River survived at a rate of 5.5%. They were harvested primarily in the Oregon ocean commercial and sport fisheries and the lower Columbia and Youngs Bay gillnet fisheries (Figure 9).

The 1984 to 1987 brood Tanner Creek coho stock acclimated in the CEDC freshwater ponds survived at an average rate of 4.0% (Figure 10).

The 1984 to 1988 brood Klaskanine coho stock acclimated in the CEDC freshwater ponds survived at an average rate of 3.0% (Figure 11).

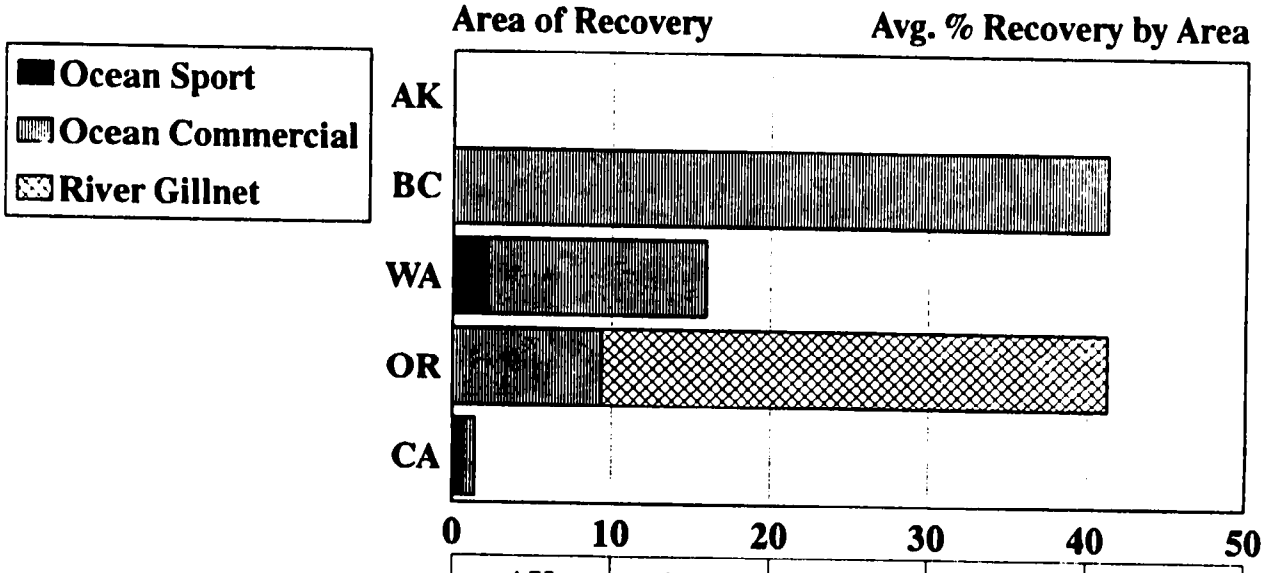
The 1986 brood Big Creek coho stock acclimated in the CEDC freshwater ponds survived at a **rate of 3.1% (Figure 12).**

The 1987 brood Sandy coho stock acclimated in the CEDC freshwater ponds survived at a rate of 2.0% (Figure 13).

The 1988 brood Clackamas coho stock acclimated in the Youngs Bay saltwater net pens survived at a **rate of 8.1% (Figure 14).**

Klaskanine Tule Fall Chinook Released in Klaskanine R

1986 Brood Year



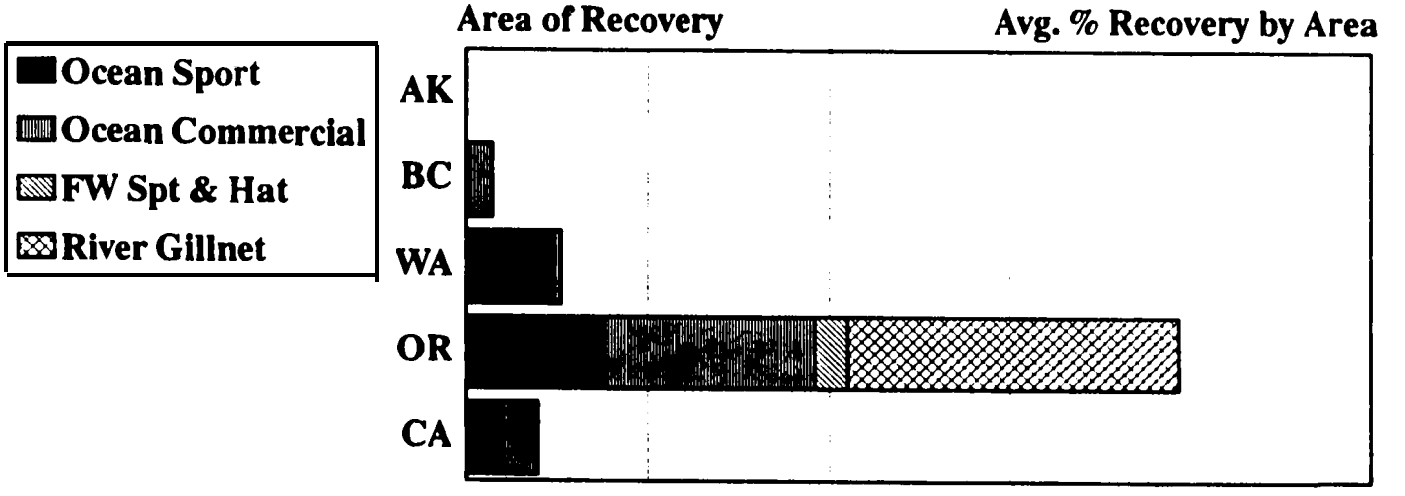
	AK	BC	WA	OR	CA
Ocean Sport			2.2		0.7
Ocean Commercial		41.3	13.8	9.4	0.7
River Gillnet				31.9	

Avg. 0.2 % Survival

Figure 5.

Klaskanine Coho (Klaskanine Hat) Released in Klaskanine R

1984 - 1988 Brood Year



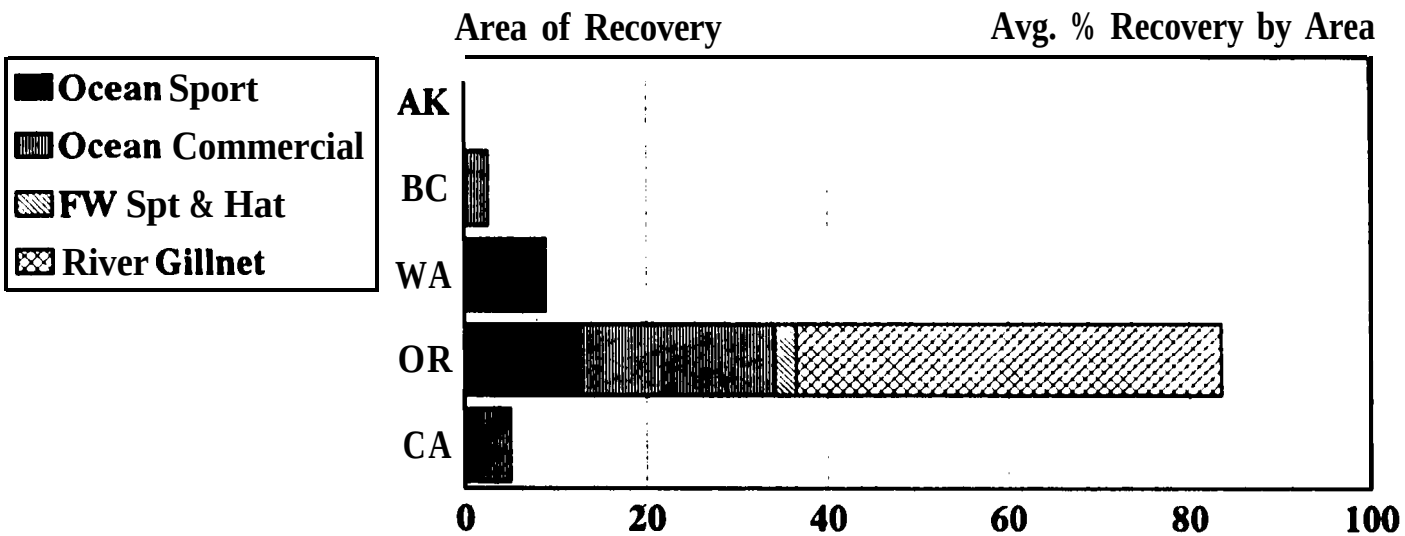
	AK	BC	WA	OR	CA
Ocean Sport		0.2	9.5	15.4	3.9
Ocean Commercial		2.7	1	23	4.1
FW Spt & Hat				3.7	
River Gillnet				36.6	

Avg. 4.2 % Survival

Figure 6.

Tanner Creek Coho (Klaskanine Hat) Released in Klaskanine R

1984 Brood Year



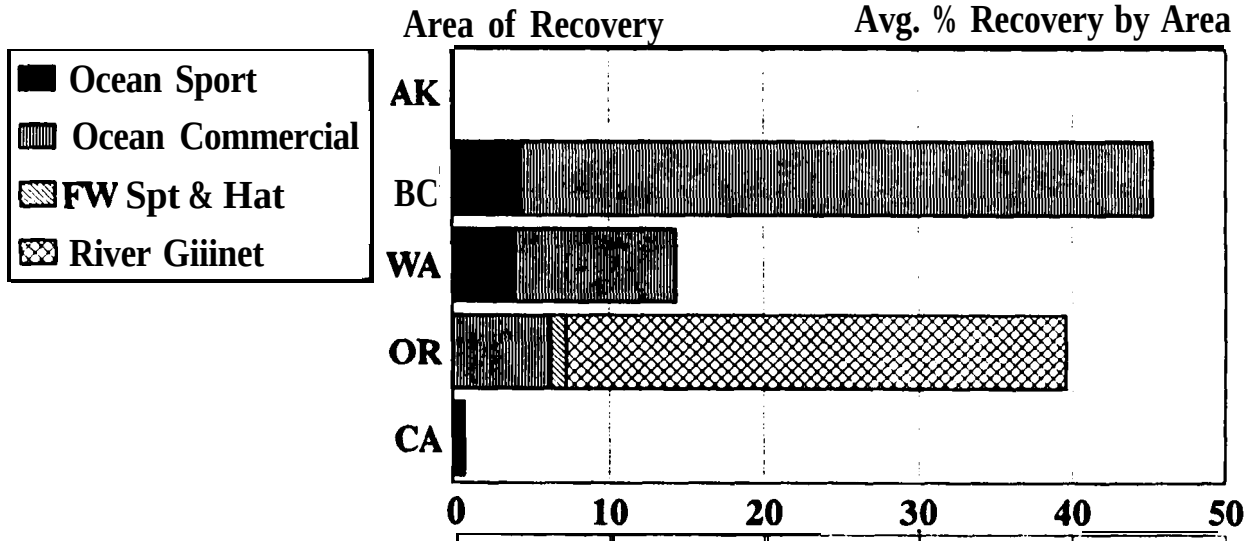
	AK	BC	WA	OR	CA
Ocean Sport			8.9	12.8	1.7
Ocean Commercial		2.6		21.4	33
FW Spt & Hat				2.4	
River Gillnet				46.9	

Avg. 2.2 % Survival

Figure 7.

Klaskanine Tule Fall Chinook
Released in Klaskanine R

1982 - 1986 Brood Year



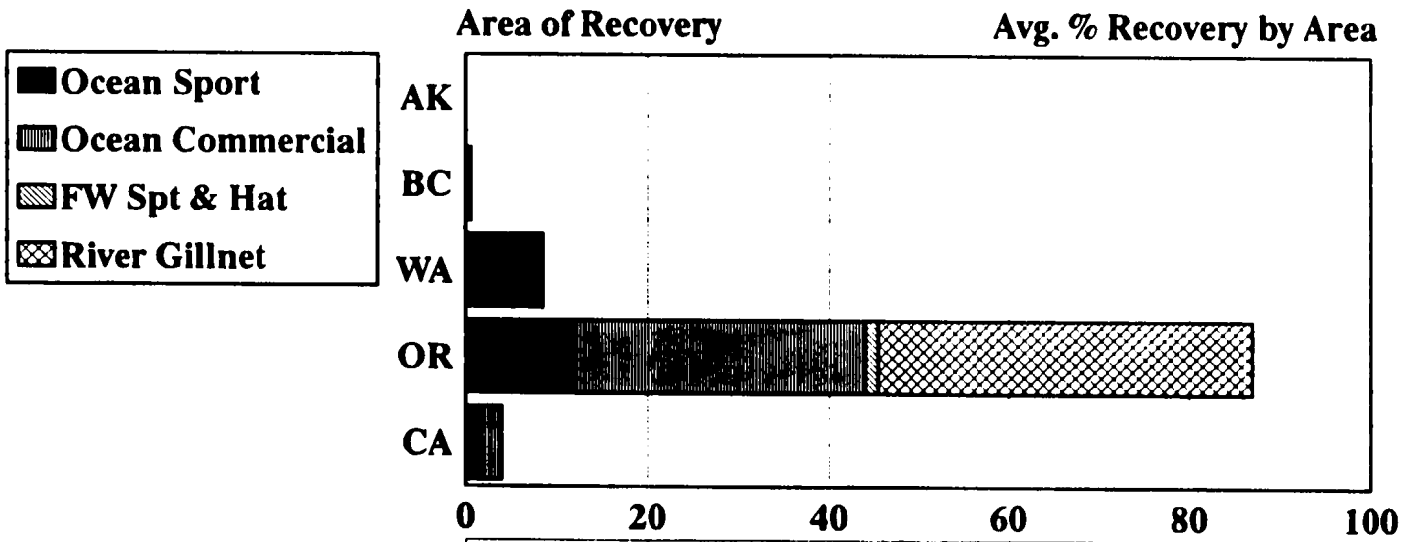
	AK	BC	WA	OR	CA
Ocean Sport		4.4	4.1	0.1	0.8
Ocean Commercial	0.1	40.8	10.3	6.2	
FW Spt & Hat				1	
River Giiinet				32.3	

Avg. 0.4 % Survival

Figure 8.

Tanner Creek Coho (Klaskanine Hat) Released in Klaskanine R

1985 Brood Year



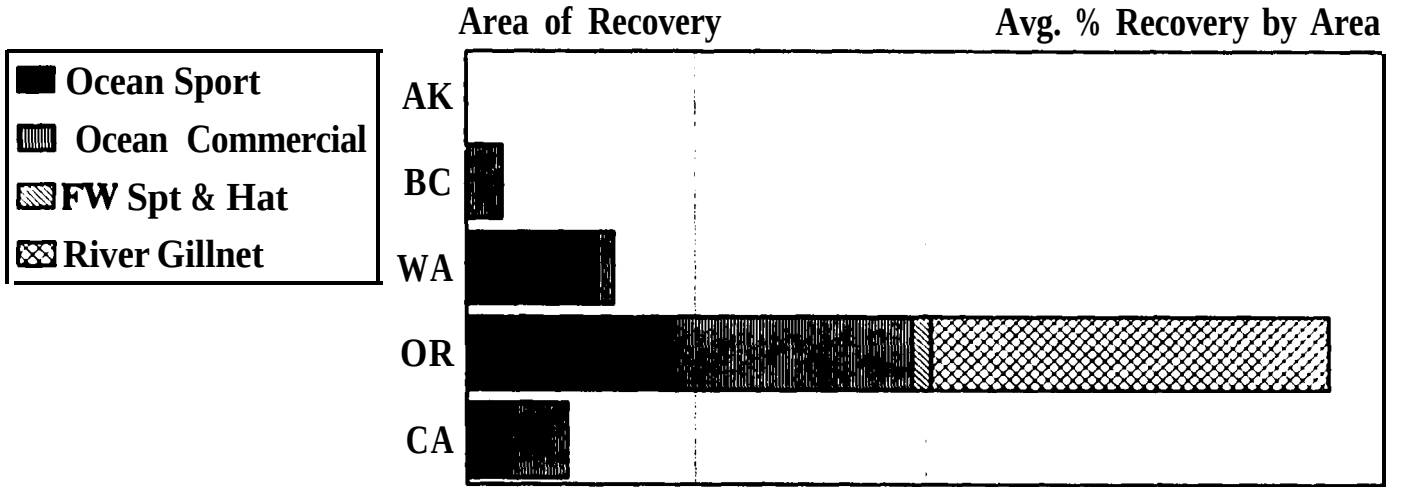
	AK	BC	WA	OR	CA
Ocean Sport			8.6	12	1.8
Ocean Commercial		0.6		32	2.2
FW Spt & Hat				1.4	
River Gillnet				41.5	

Avg. 5.5 % Survival

Figure 9.

Tanner Creek Coho (SF Klaskanine Hat) Released in Youngs R

1984 - 1987 Brood Year



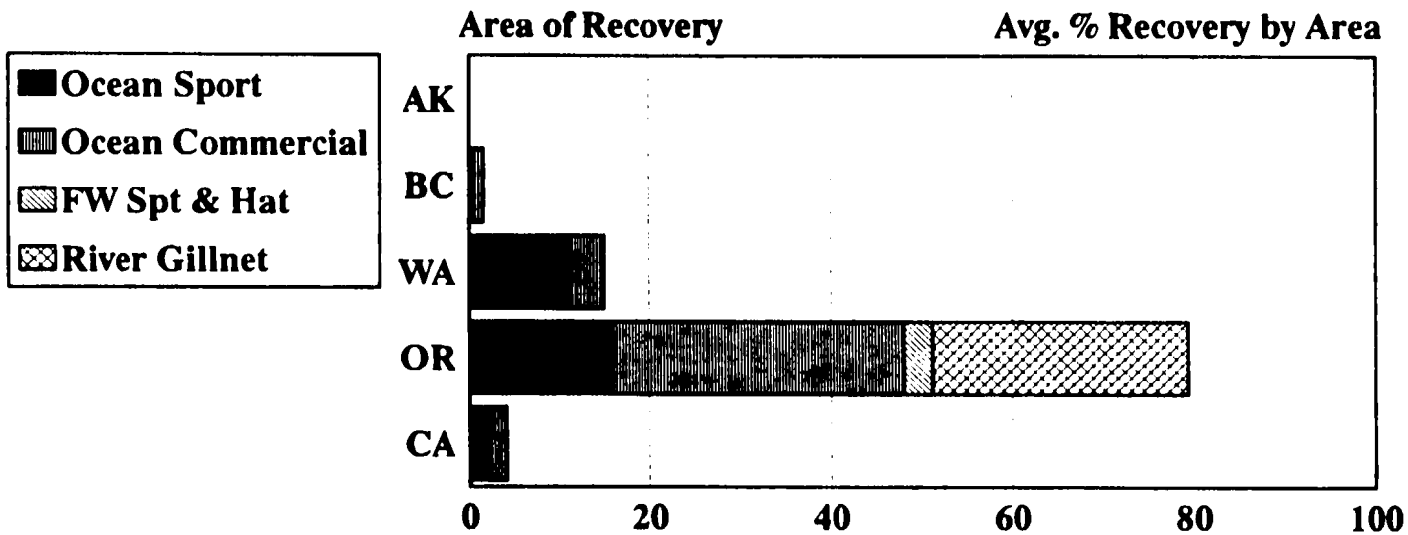
	AK	BC	WA	OR	CA
Ocean Sport			113	18.1	3.7
Ocean Commercial		3.2	1.6	20.8	5.1
FW Spt & Hat				1.6	
River Gillnet				34.7	- -

Avg. 4.0 % Survival

Figure 10.

Klaskanine Coho (SF Klaskanine Hat) Released in Youngs R

1984 - 1988 Brood Year



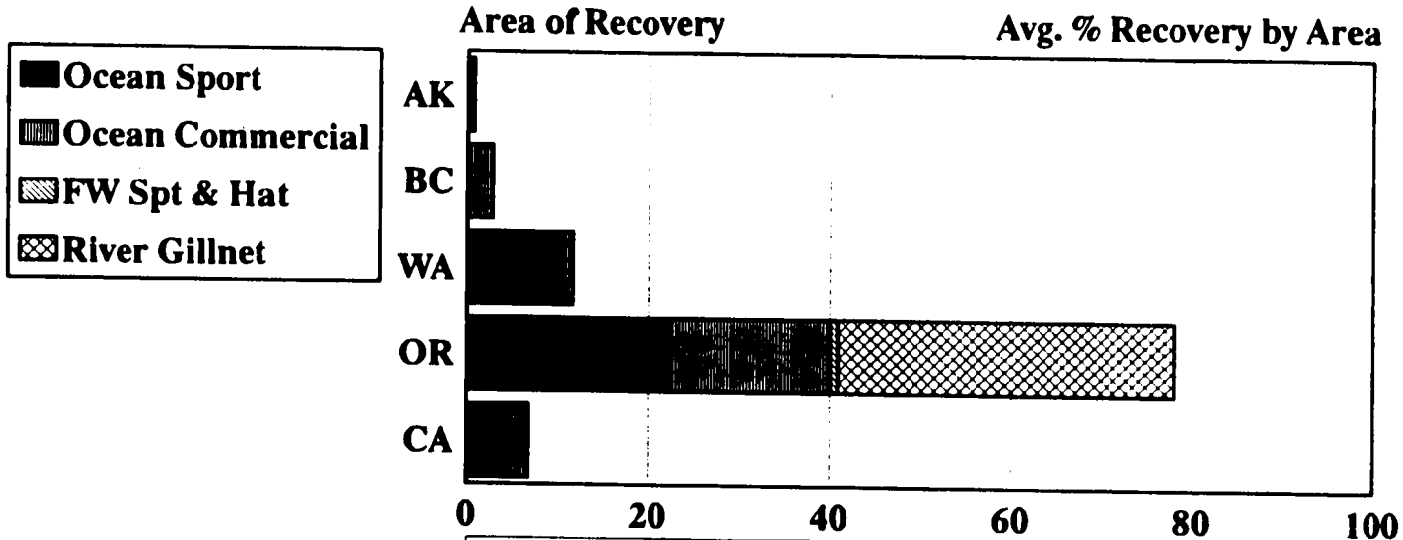
	AK	BC	WA	OR	CA
Ocean Sport		0.3	11.1	16	2.1
Ocean Commercial		1.3	3.9	32	2
FW Spt & Hat				3.2	
River Gillnet				28.2	

Avg. 3.0 % Survival

Figure 11.

Big Creek Coho (SF Klaskanine Hat) Released in Youngs R

1986 Brood Year



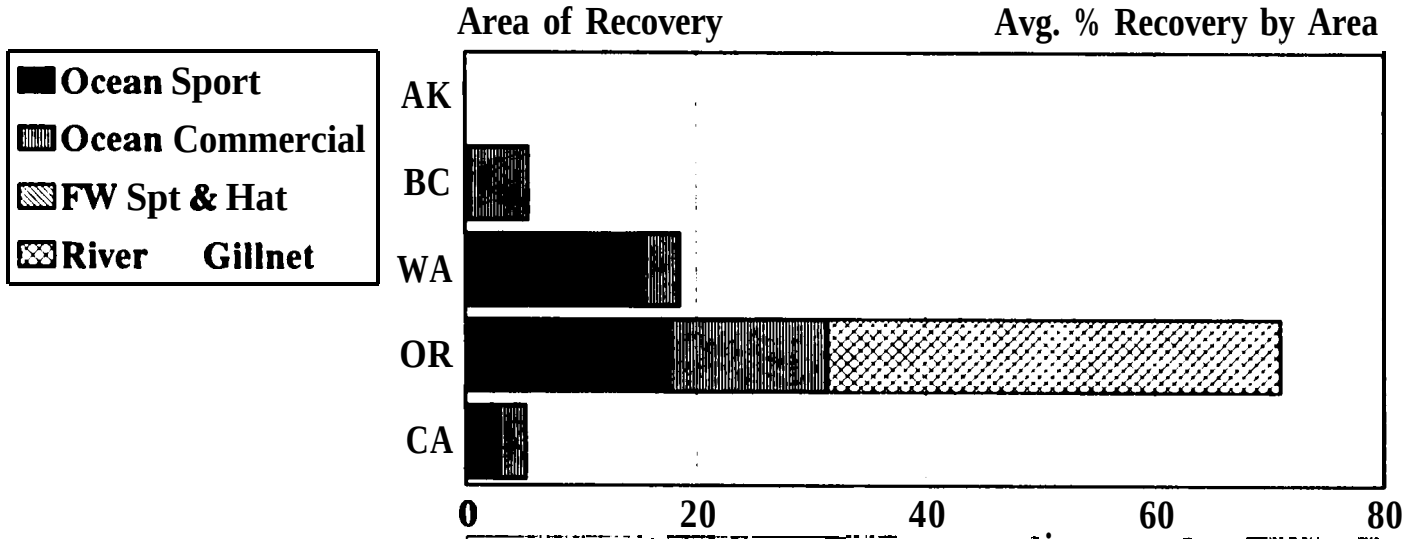
	AK	BC	WA	OR	CA
Ocean Sport			10.4	22.4	4.6
Ocean Commercial	0.7	2.8	1.2	17.7	2.2
FW Spt & Hat				0.8	
River Gillnet				37.2	

Avg. 3.1 % Survival

Figure 12.

Sandy Coho (SF Klaskanine Hat) Released in Youngs R

1987 Brood Year



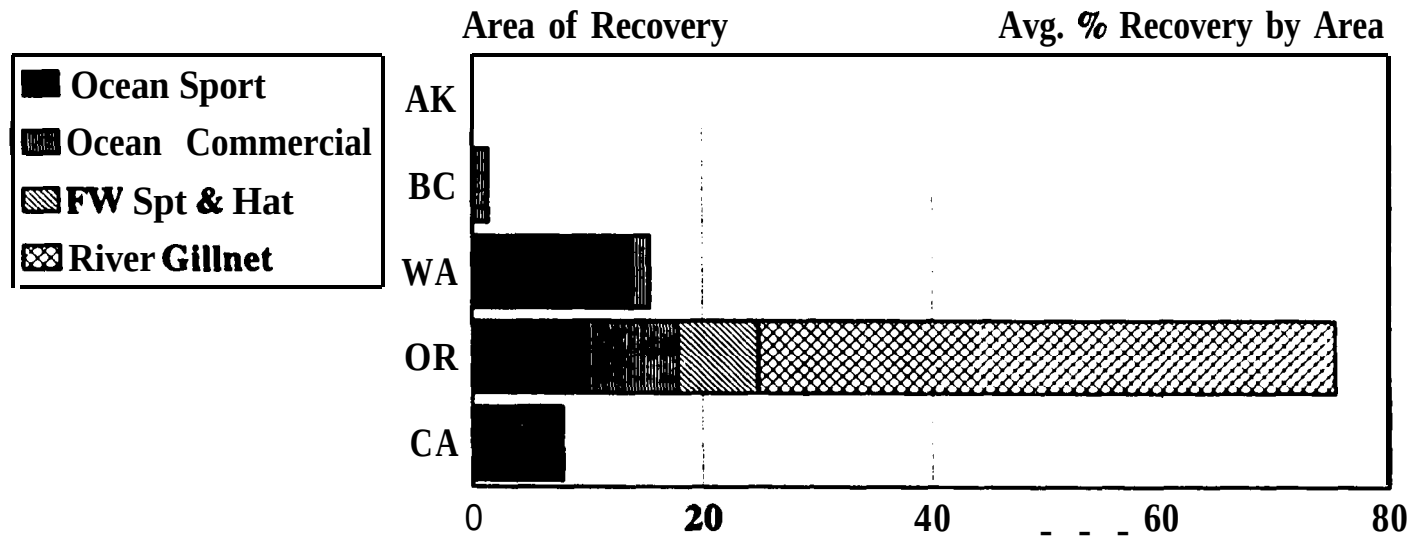
	AK	BC	WA	OR”	CA
Ocean Sport		03	15.5	17.8	2.8
Ocean Commercial		5.1	3.1	13.5	2.4
FW Spt & Hat				0.2	
River Gillnet				39.5	

Avg. 2.0 % Survival

Figure 13.

Clackamas Coho (SF Klaskanine Hat) Released in Youngs R

1988 Brood Year



	AK	BC	WA	OR	CA
Ocean Sport			13.8	10	3.9
Ocean Commercial		1.4	1.7	7.9	4
FW Spt & Hat				7	
River Gillnet				503	

Avg. 8.1 % Survival

Figure 14.

The 1984 to 1986 brood Rogue stock fall chinook released in the Klaskanine river survived at an average rate of 2.8% (Figure 15).

Gnat Creek Hatchery

Gnat Creek Hatchery is located east of Knappa off Highway 30 on Gnat Creek a tributary to the Lower Columbia River. Gnat Creek Hatchery releases summer and winter steelhead and cutthroat trout. None of these groups of fish have been coded-wire tagged for evaluation.

Eagle Creek National Fish Hatchery

Eagle Creek National Fish Hatchery is located on Eagle Creek a tributary of the Clackamas River southeast of Portland. Eagle Creek Hatchery presently rears and releases coho salmon in Eagle Creek. Additional coho are reared for ODFW and are transported to net pens for acclimation in Young Bay near Astoria. The saltwater net pens are operated by the Clasp Economic Development Commission (CEDE).

The 1987 brood Eagle Creek coho released in the Collawash River survived at a rate of 0.4% (Figure 16).

The 1988 brood Eagle Creek coho released in the Eagle Creek survived at a rate of 2.2% (Figure 17).

The 1988 brood Sandy stock coho released in the Eagle Creek survived at a rate of 4.7% (Figure 18).

Clackamas Hatchery

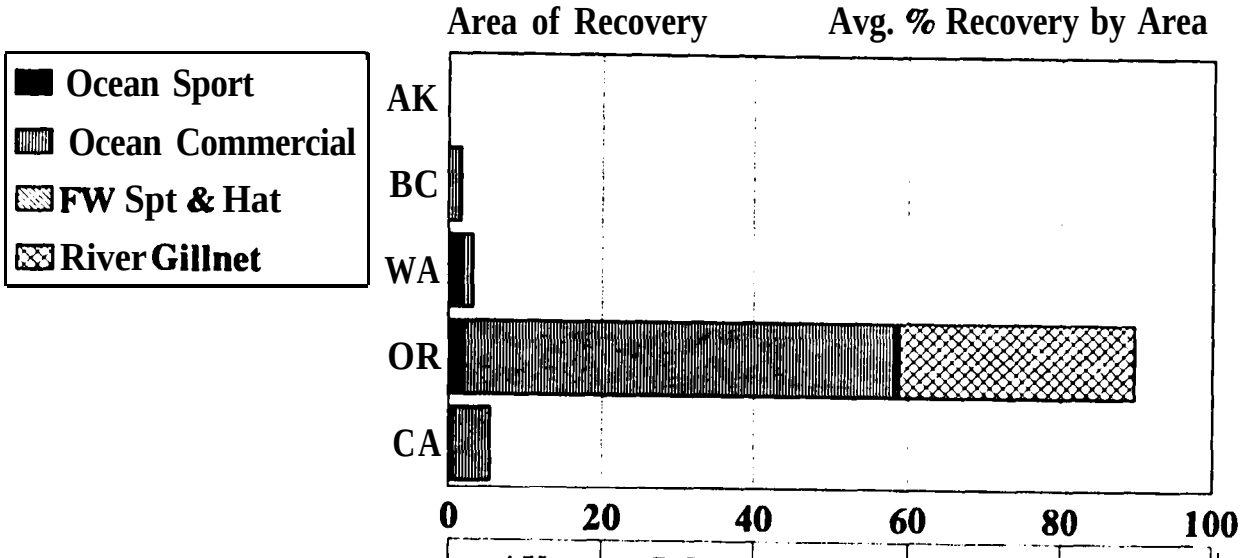
Clackamas Hatchery is located on the Clackamas River 4 miles west of Estacada near McIver Park. Clackamas Hatchery rears and released spring chinook salmon, summer and winter steelhead trout.

The 1984 to 1986 brood S. Santiam stock spring chinook released in the Clackamas River survived at an average rate of 0.8%. They were caught primarily in the Oregon freshwater sport fishery with lesser contributions to the Alaska and British Columbia ocean commercial and Columbia River gillnet fisheries (Figure 19).

None of the summer and winter steelhead were marked with coded-wire tags for evaluation.

Rogue Fall Chinook (SF Klaskanine Hat) Released in Klaskanine R

1984 - 1986 Brood Year



	AK	BC	WA	OR	CA
Ocean Sport			2	2.1	0.6
Ocean Commercial		1.6	1.1	56.3	4.8
FW Spt & Hat				0.5	
River Gillnet				30.9	

Avg. 2.8 % Survival

Figure 15,

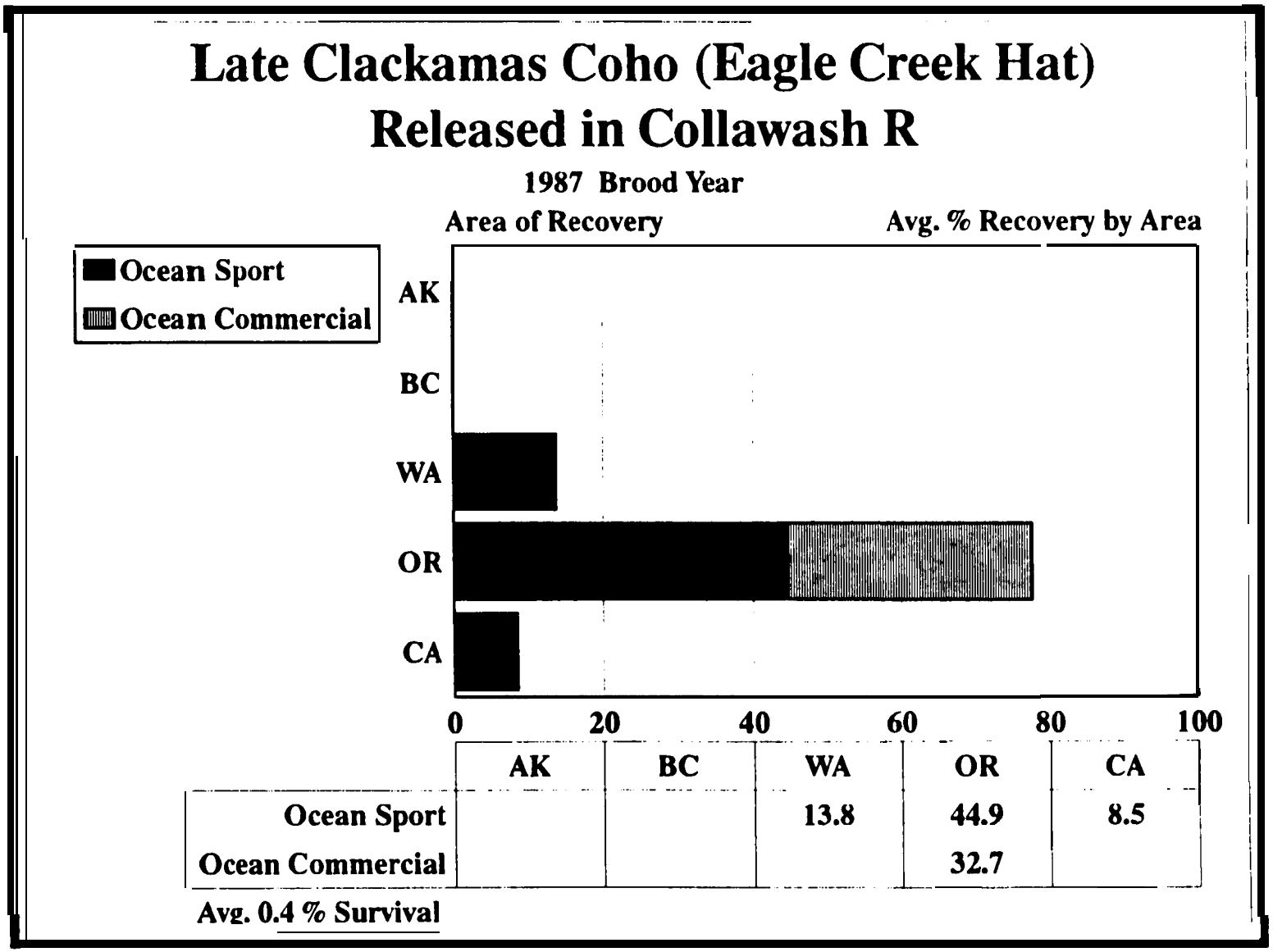
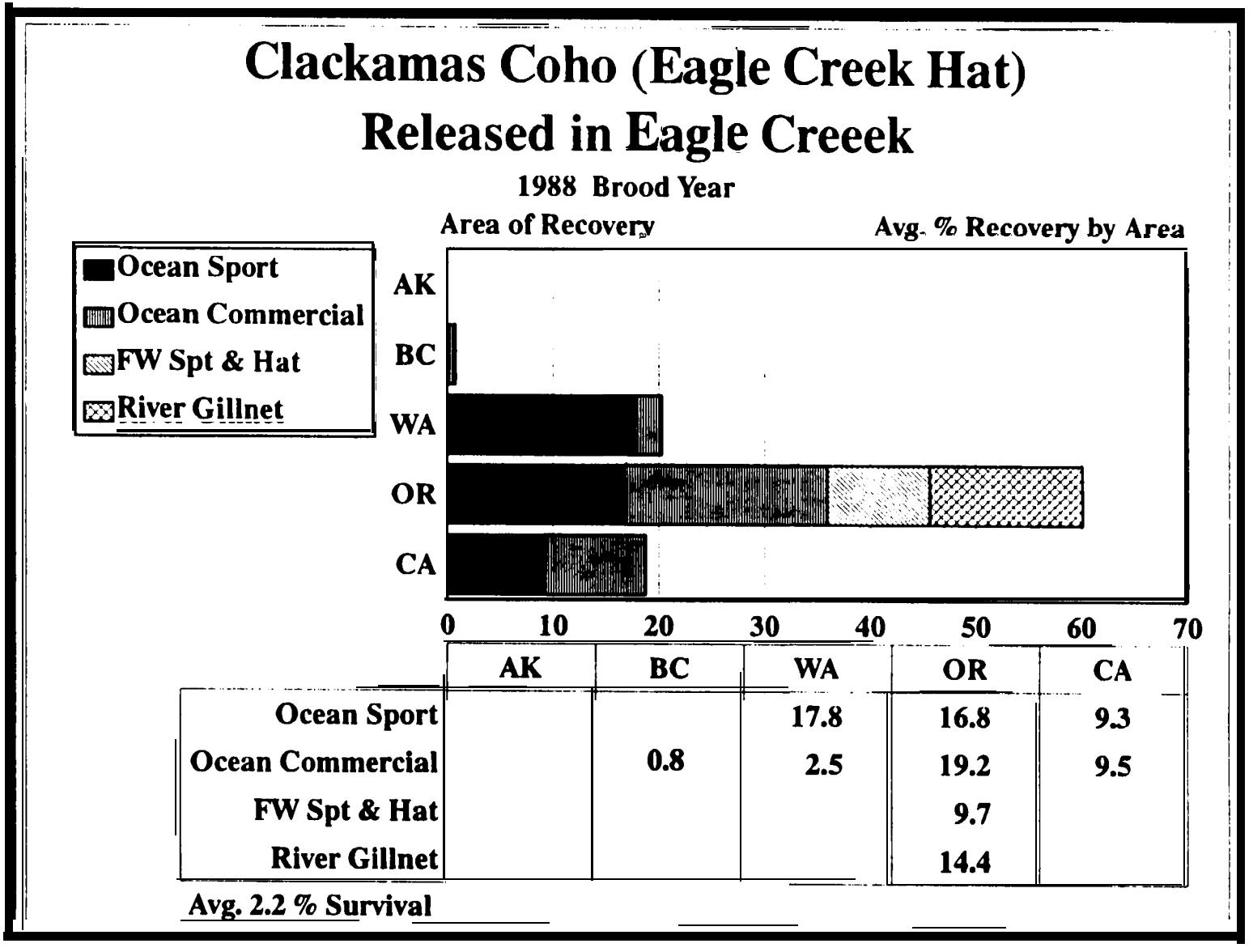

Late Clackamas Coho (Eagle Creek Hat)
Released in Collawash R
1987 Brood Year
Area of Recovery
Avg. % Recovery by Area
Ocean Sport
Ocean Commercial
AK
BC
WA
OR
CA
0
20
40
60
80
100
AK BC WA OR CA
Ocean Sport 13.8 44.9 8.5
Ocean Commercial 32.7
Avg. 0.4 % Survival

Figure 16.

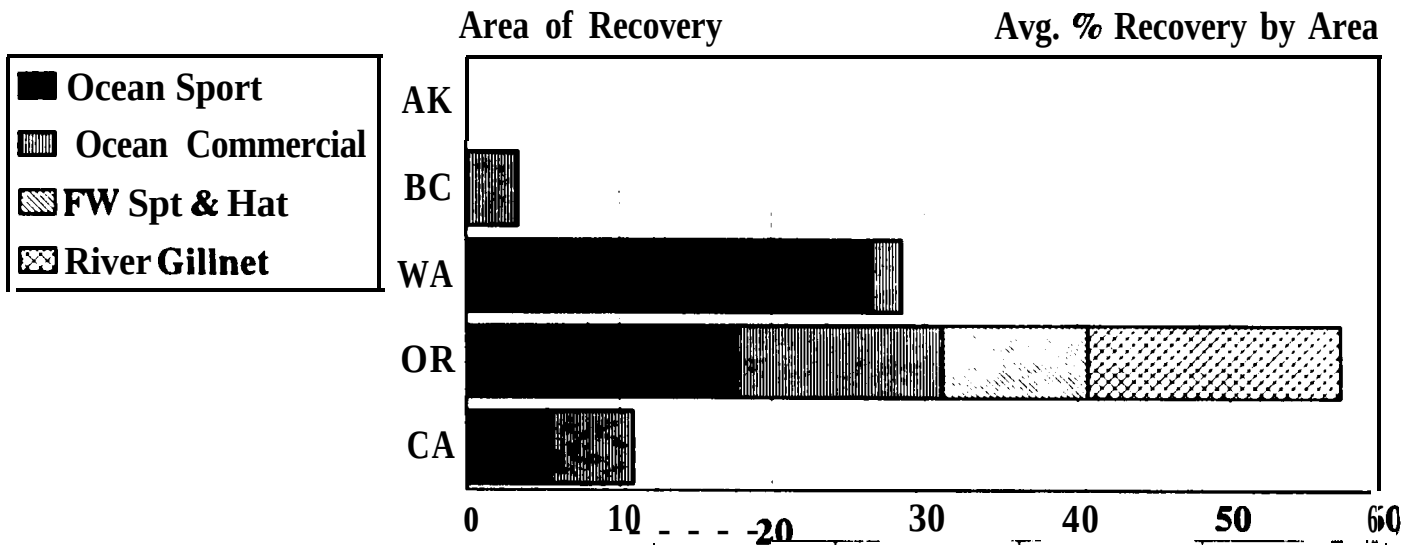


	AK	BC	WA	OR	CA
Ocean Sport			17.8	16.8	9.3
Ocean Commercial		0.8	2.5	19.2	9.5
FW Spt & Hat				9.7	
River Gillnet				14.4	

Figure 17.

Sandy Coho (Eagle Creek Hat)
Released in Eagle Creek

1988 Brood Year



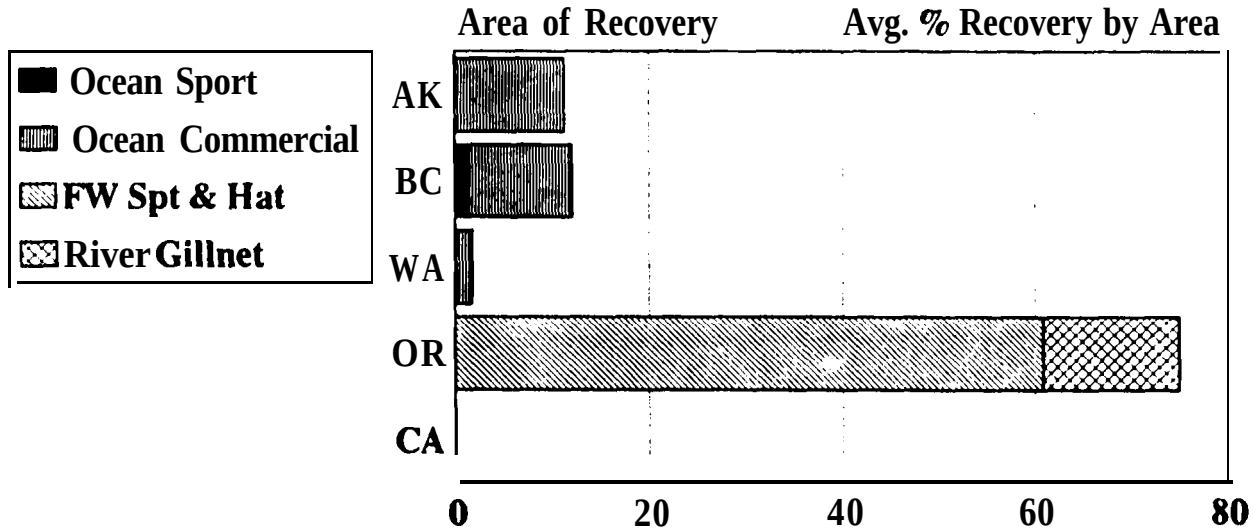
	AK	BC	WA	OR	CA
Ocean Sport			26.7	17.8	5.5
Ocean Commercial		3.4	1.9	13.4	5.4
FW Spt & Hat				9.5	
River Gillnet				16.6	

Avg. 4.7 % Survival

Figure 18.

S Santiam Spring Chinook (Clackamas Hat) Released in Clackamas R

1984 - 1986 Brood Year



	AK	BC	WA	OR	CA
Ocean Sport		1.5	0.1		
Ocean Commercial	113	10.6	1.7		
FW Spt & Hat				60.9	
River Gillnet				14	

Avg. 0.8 % Survival

Figure 19.

Marion Forks Hatchery

Marion Forks Hatchery is located on the North Santiam River 10 miles east of Idana on Highway 22. Marion Forks Hatchery rears and releases spring chinook salmon, winter steelhead and cutthroat.

The 1982 to 1986 brood years of spring chinook salmon released in the North Santiam River survived at an average rate of 1.0% and contributed primarily to the Oregon freshwater sport and Columbia River gillnet fisheries (Figure 20).

The 1984 brood of spring chinook salmon reared at Marion Forks Hatchery and released in the South Santiam River survived at a rate of 1.1% and contributed primarily to the Alaska and British Columbia ocean commercial, Oregon freshwater sport and Columbia River gillnet fisheries (Figure 21).

The 1984 to 1986 brood years of spring chinook salmon reared at Marion Forks Hatchery and released in the McKenzie River survived at a rate of 1.2% and contributed primarily to the Alaska and British Columbia ocean commercial, Oregon freshwater sport and Columbia River gillnet fisheries (Figure 22).

The 1983 brood of spring chinook salmon reared at Marion Forks Hatchery and released in the Willamette River survived at a rate of 1.0% and contributed primarily to the Alaska and British Columbia ocean commercial, Oregon freshwater sport and Columbia River gillnet fisheries (Figure 23).

The winter steelhead and cutthroat trout released by the Marion Forks Hatchery were not coded-wire tagged for evaluation.

South Santiam Hatchery

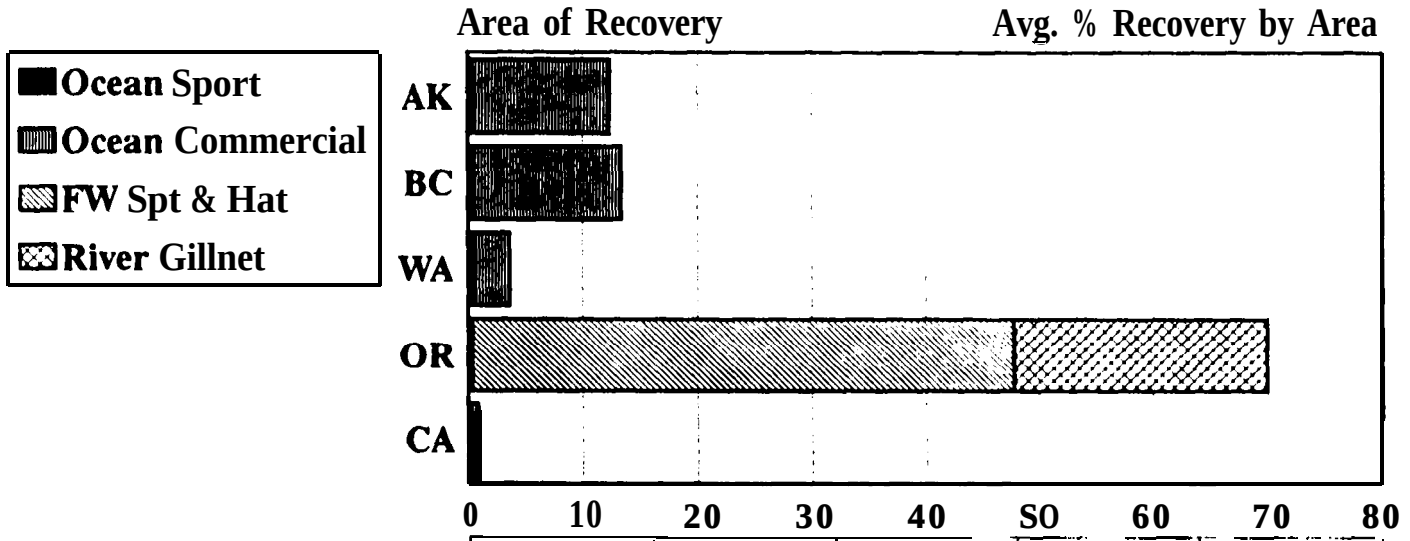
The South Santiam Hatchery is located below Foster Dam on the South Santiam River near Sweet Home. South Santiam Hatchery rears and releases spring chinook salmon and summer steelhead trout.

The 1984 to 1986 brood years of spring chinook salmon reared at South Santiam Hatchery and released in the South Santiam River survived at a rate of 1.0% and contributed primarily to the Alaska and British Columbia ocean commercial, Oregon freshwater sport and Columbia River gillnet fisheries (Figure 24).

The 1985 to 1986 brood years of Clackamas stock coho salmon reared at South Santiam Hatchery and released in the Collawash River survived at a rate of 1.0% and contributed primarily to the Alaska, British Columbia and Oregon ocean commercial, Oregon freshwater sport and Columbia River gillnet fisheries (Figure 25).

N. Santiam Spring Chinook (Marion Forks Hat) Released in Santiam R

1982 - 1986 Brood Year



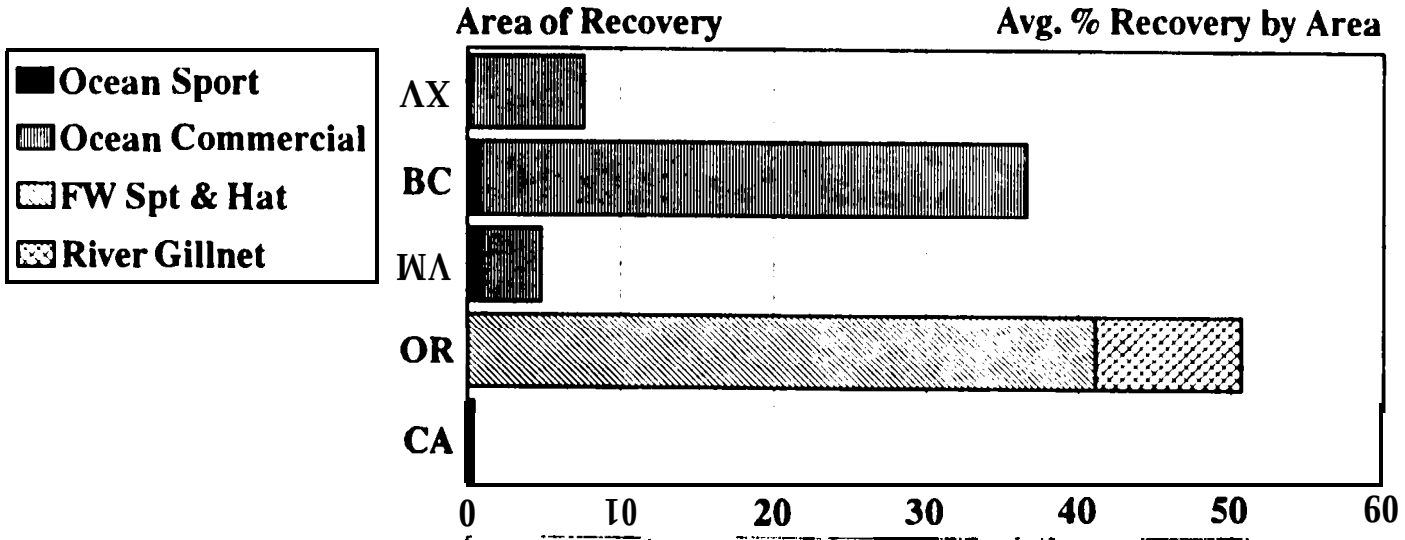
	AK	BC	WA	OR	CA
Ocean Sport	0.4	03	0.4	0	0
Ocean Commercial	12	13.1	3.2	0.3	0.8
FW Spt & Hat				47.5	
River Gillnet				22.1	

Avg. 1.0 % Survival

Figure 20.

S. Santiam Spring Chinook (Marion Forks Hat) Released in Santiam R

1984 Brood Year



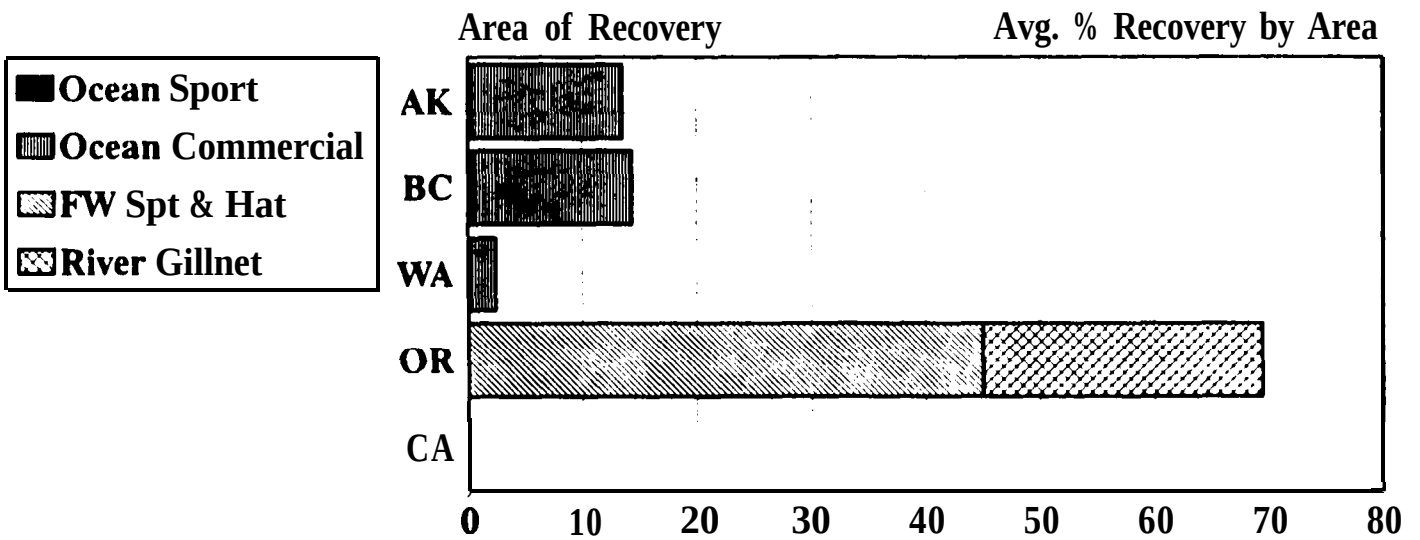
	AK	BC	WA	OR	CA
Ocean Sport	0.2	0.8	0.9	0	0.4
Ocean Commercial	7.4	35.8	3.9	0	
FW Spt & Hat				41.1	
River Gillnet				9.6	

Avg. 1.1 % Survival

Figure 21.

McKenzie Spring Chinook
Released in McKenzie R

1984 - 1986 Brood Year



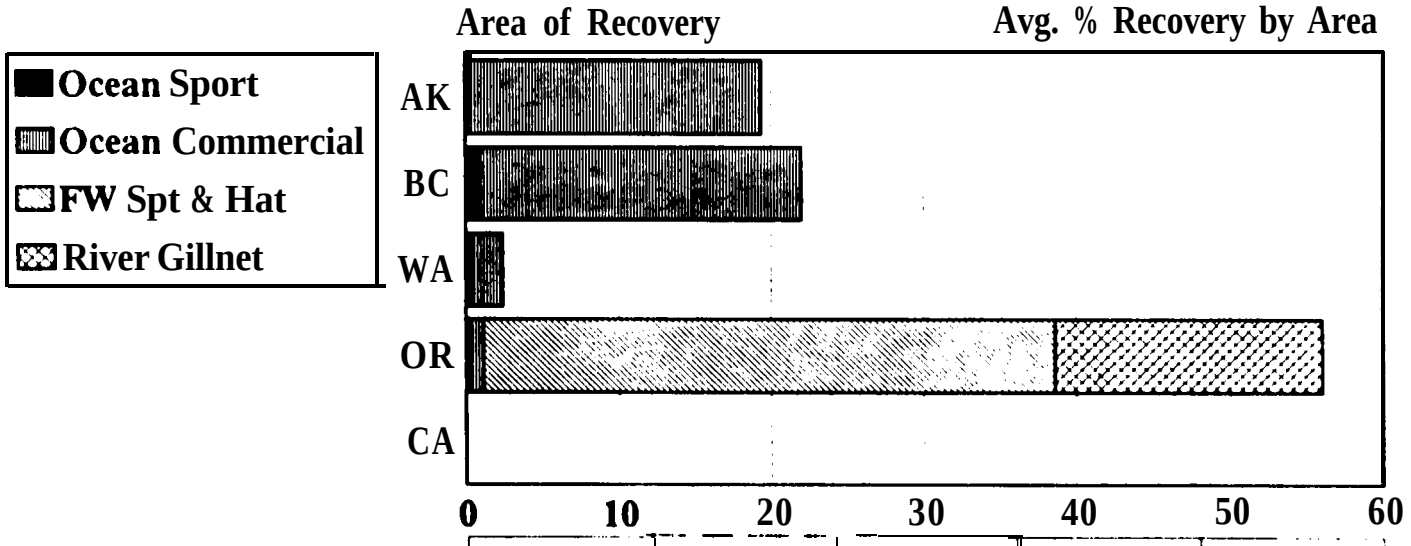
	AK	BC	WA	OR	CA
Ocean Sport	0.4	0.5	0.1		
Ocean Commercial	13.2	13.9	23		
FW Spt & Hat				45	
River Gillnet				24.5	

Avg. 1.2 % Survival

Figure 22.

Willamette Spring Chinook (Marion Forks Hat) Released in Santiam R

1983 Brood Year



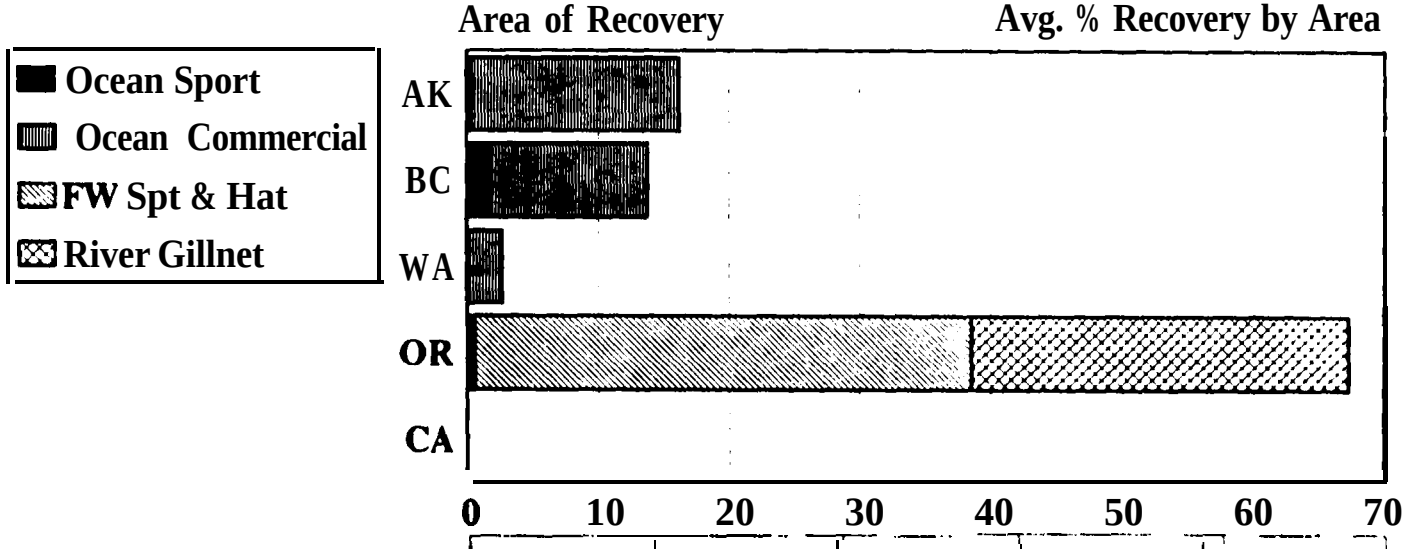
	AK	BC	WA	OR	CA
Ocean Sport	0.2	1	0.3	0.2	0
Ocean Commercial	19.2	21	2.1	0.9	
FW Spt & Hat				37.5	
River Gillnet				17.5	

Avg. 1.0 % Survival

Figure 23.

S Santiam Spring Chinook (S Santiam Hat) Released in S Santiam R

1984 - 1986 Brood Year



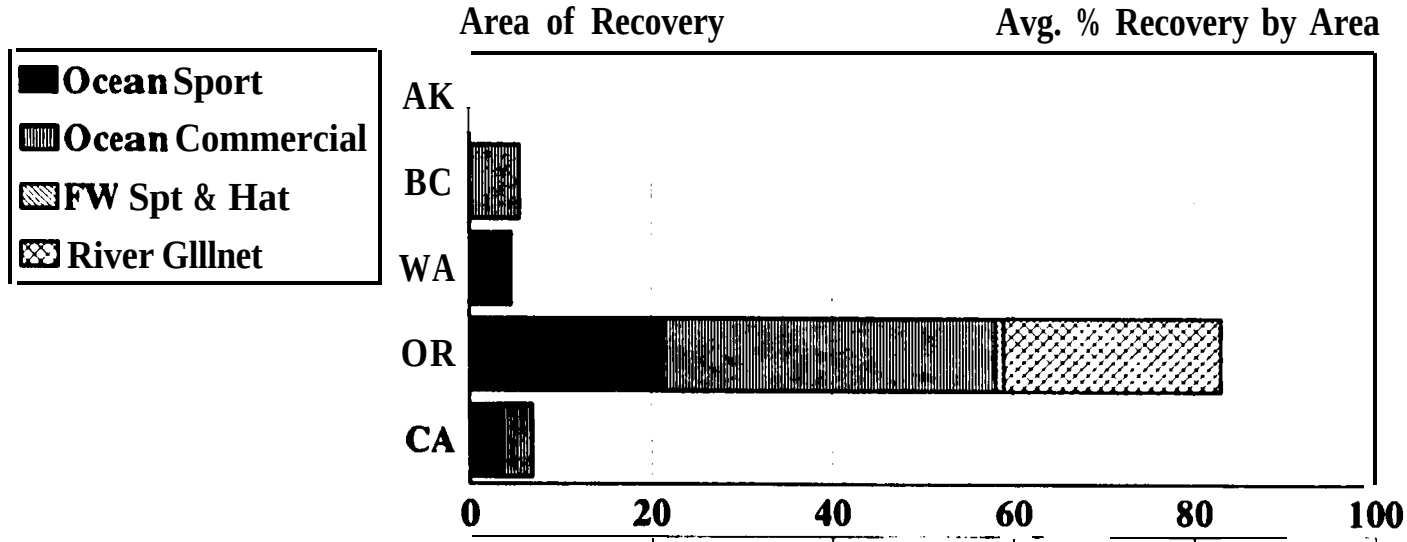
	AK	BC	WA	OR	CA
Ocean Sport	0.4	1.7		0.3	
Ocean Commercial	15.8	12.1	2.7	0.3	
FW Spt & Hat				37.9	
River Gillnet				28.8	

Avg. 1.0% Survival

Figure 24.

Clackamas Coho (S Santiam Hat)
Released in Collawash R

1985 - 1986 Brood Year



	AK	BC	WA	OR	CA
Ocean Sport			4.6	21.4	3.5
Ocean Commercial		5.5		36.7	3.4
FW Spt & Hat				0.9	
River Gillnet				24	

Avg. 1.0 % Survival

Figure 25.

The winter steelhead trout released by the South Santiam Hatchery were not coded-wire tagged to permit evaluation.

Stayton Rearing Pond

Stayton Pond, a refurbished gravel pit located south of Stayton is operated as a satellite of the South Santiam Hatchery. Tule fall chinook are reared and released from Stayton Pond. The 1982 to 1986 brood of tule fall chinook released from Stayton pond survived an average rate of 0.9% and contributed primarily to the British Columbia, Washington and Oregon ocean sport and commercial fisheries and the Columbia River gillnet fishery (Figure 26).

Roaring River Hatchery

Roaring River Hatchery rears and releases winter steelhead and rainbow trout. None of these fish have been coded-wire tagged for evaluation.

McKenzie Hatchery

McKenzie Hatchery is located on the McKenzie River off Highway 126 18 miles east of Springfield. McKenzie Hatchery rears and releases spring chinook salmon and summer steelhead trout. The 1984 to 1986 brood years of spring chinook salmon released in the McKenzie River survived at a rate of 1.2% and contributed primarily to the Alaska and British Columbia ocean commercial, Oregon freshwater sport and Columbia River gillnet fisheries (Figure 27).

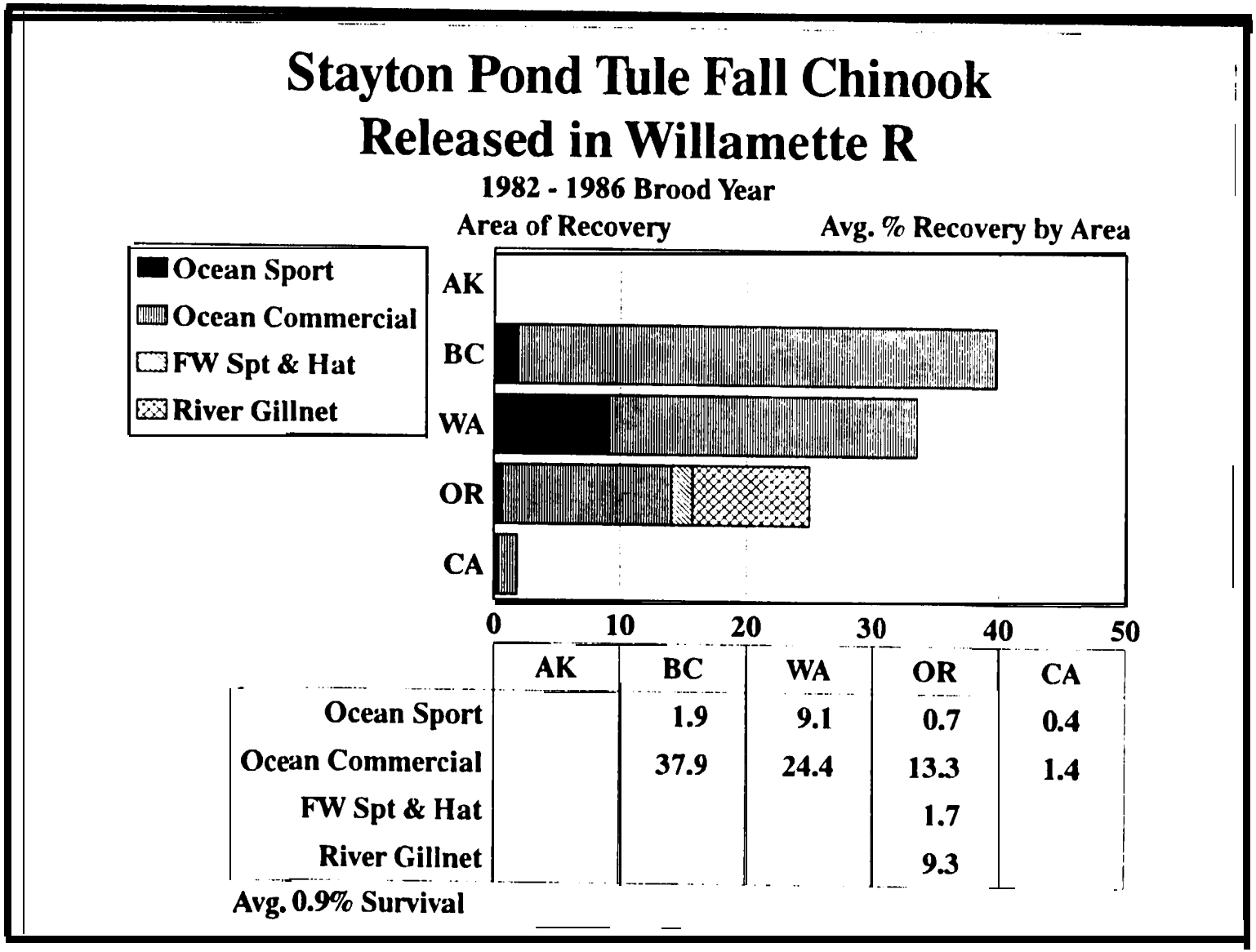
None of the summer steelhead released from McKenzie Hatchery have been coded-wire tagged for evaluation.

Leaburg Hatchery

Leaburg Hatchery is located on the McKenzie River off Highway 126, 16 miles east of Springfield. McKenzie Hatchery rears and releases summer steelhead and rainbow trout. None of these fish have been coded-wire tagged for evaluation.

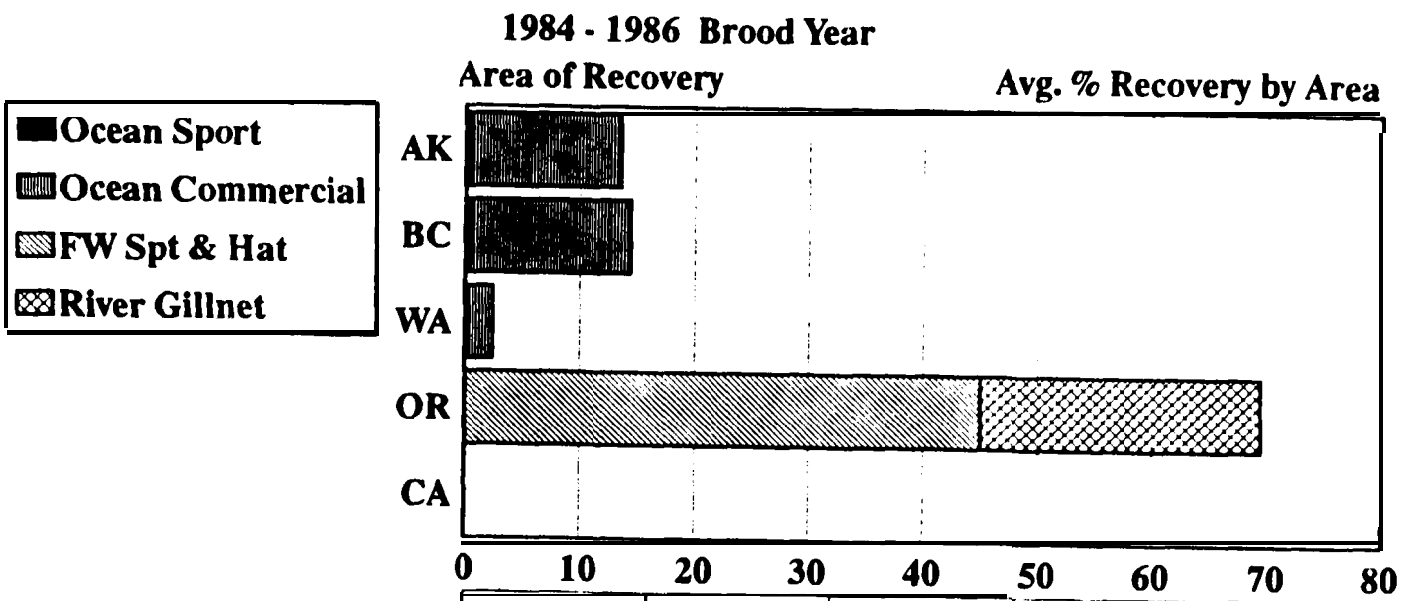
Willamette Hatchery

Willamette Hatchery is located on the Willamette River 1 mile east of Oakridge off Highway 58. Willamette Hatchery rears and releases spring chinook salmon, summer and winter steelhead and rainbow trout.



	AK	BC	WA	OR	CA
Ocean Sport		1.9	9.1	0.7	0.4
Ocean Commercial		37.9	24.4	13.3	1.4
FW Spt & Hat				1.7	
River Gillnet				9.3	

Figure 26.



	AK	BC	WA	OR	CA
Ocean Sport	0.4	0.5	0.1		
Ocean Commercial	13.2	13.9	2.3		
FW Spt & Hat				45	
River Gillnet				24.5	

Avg. 1.2 % Survival

Figure 27.

The 1984 to 1986 brood years of spring chinook salmon reared at Willamette Hatchery and released in the Willamette River survived at a rate of 1.4% and contributed primarily to the Alaska and British Columbia ocean commercial, Oregon freshwater sport and Columbia River gillnet fisheries (Figure 28).

Sandy Hatchery

Sandy Hatchery is located on the Sandy River 1 mile northeast of Sandy off Highway 26. Sandy Hatchery rears and releases coho salmon, rainbow and brook trout.

The 1984 to 1988 brood years of coho released in the Sandy River survived at an average rate of 5.1% and contributed primarily to the Washington and Oregon ocean sport and commercial fisheries and the Columbia River gillnet fishery (Figure 29).

None of the rainbow or brook trout released by Sandy Hatchery were coded-wire tagged for evaluation.

Cascade Hatchery

The Cascade Hatchery is located off Highway 84 near Bonneville Dam. Cascade Hatchery rears and releases coho salmon that are presently all trucked and released in the Yakima and Umatilla River systems.

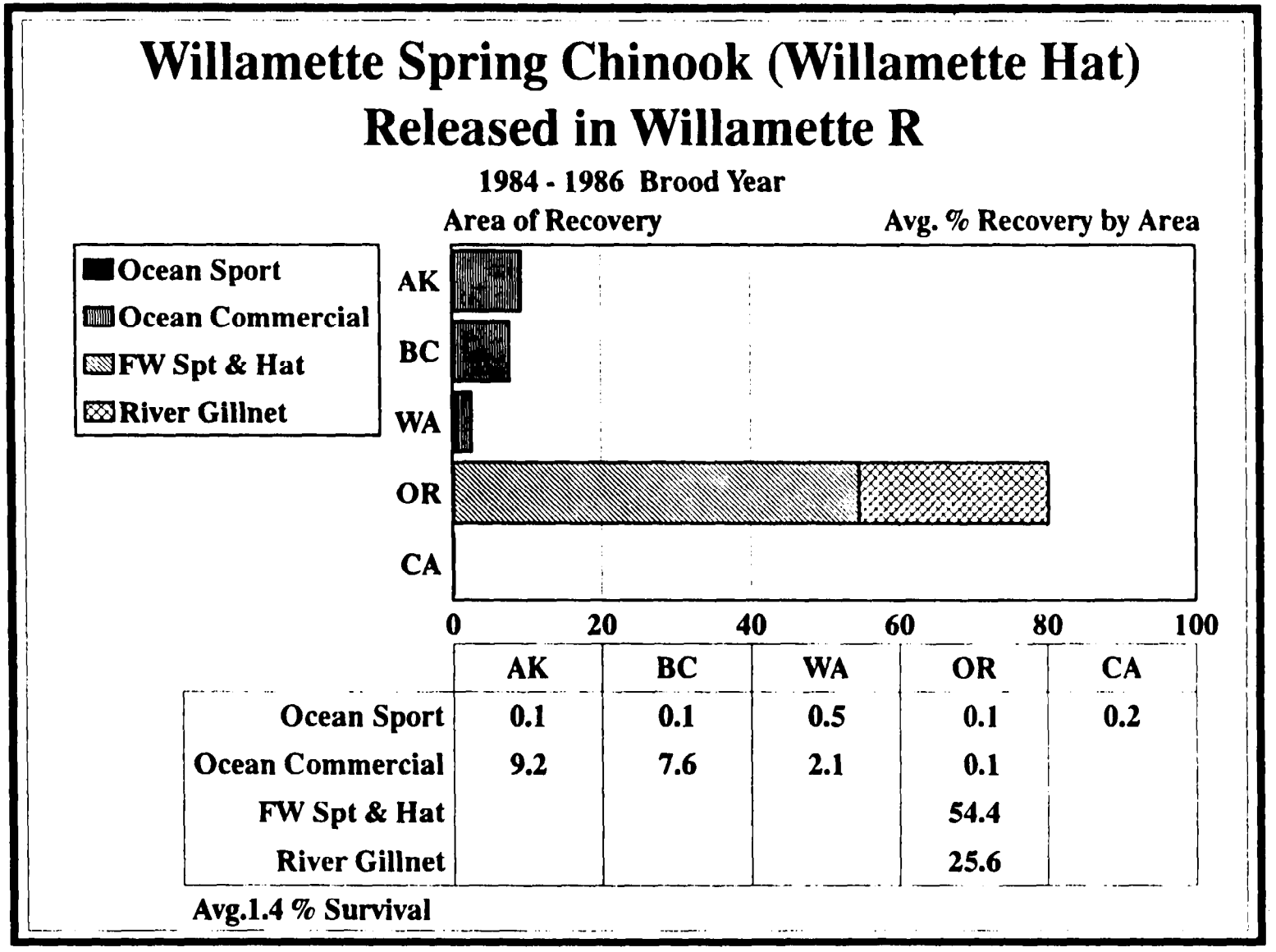
The 1985 to 1988 brood years of coho released in the Umatilla River survived at an average rate of 2.4% and contributed primarily to the Washington, Oregon and California ocean sport and commercial fisheries and the Columbia River gillnet fishery (Figure 30).

The 1986 to 1988 brood years of coho released in the Yakima River survived at an average rate of 1.5% and contributed primarily to the Washington, Oregon and California ocean sport and commercial fisheries and the Columbia River gillnet fishery (Figure 31).

Bonneville Hatchery

Bonneville Hatchery is located on the Columbia River below Bonneville Dam just off Highway 84. Bonneville Hatchery rears and releases tule and up river bright fall chinook, spring chinook and coho salmon.

The 1983 to 1986 brood years of tule fall chinook survived at an average rate of 0.9% and contributed primarily to the British Columbia, Washington and Oregon ocean sport and commercial fisheries and the Columbia River gillnet fishery (Figure 32).



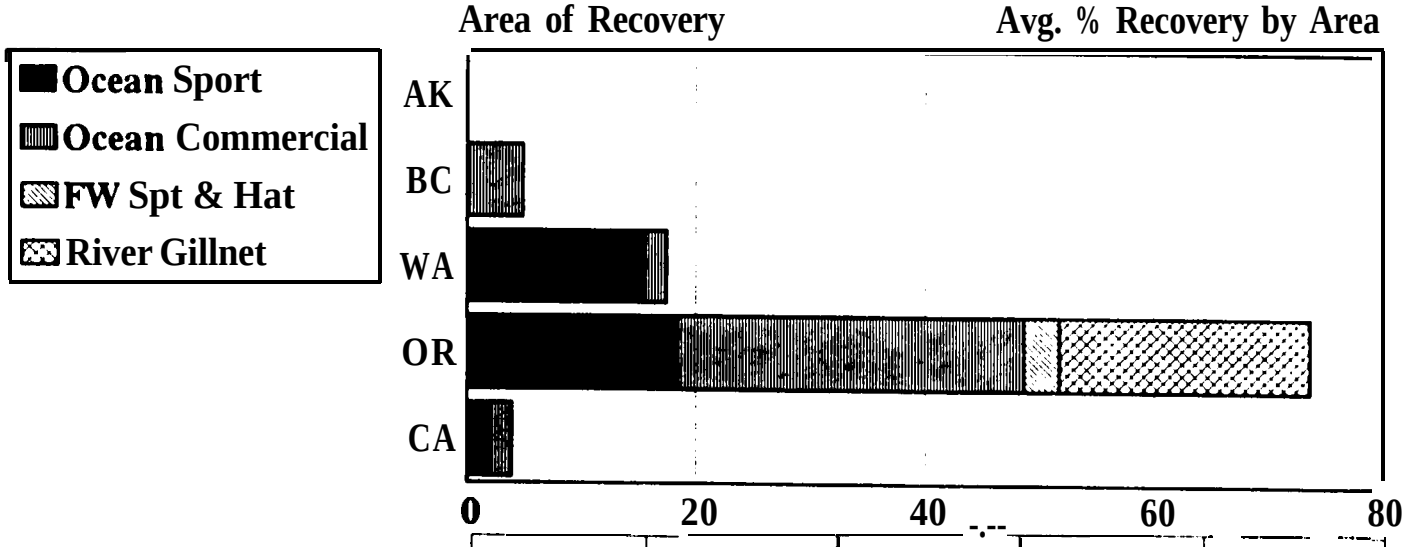
	AK	BC	WA	OR	CA
Ocean Sport	0.1	0.1	0.5	0.1	0.2
Ocean Commercial	9.2	7.6	2.1	0.1	
FW Spt & Hat				54.4	
River Gillnet				25.6	

Avg.1.4 % Survival

Figure 28.

Sandy R Coho (Sandy R Hat)
Released in Sandy R

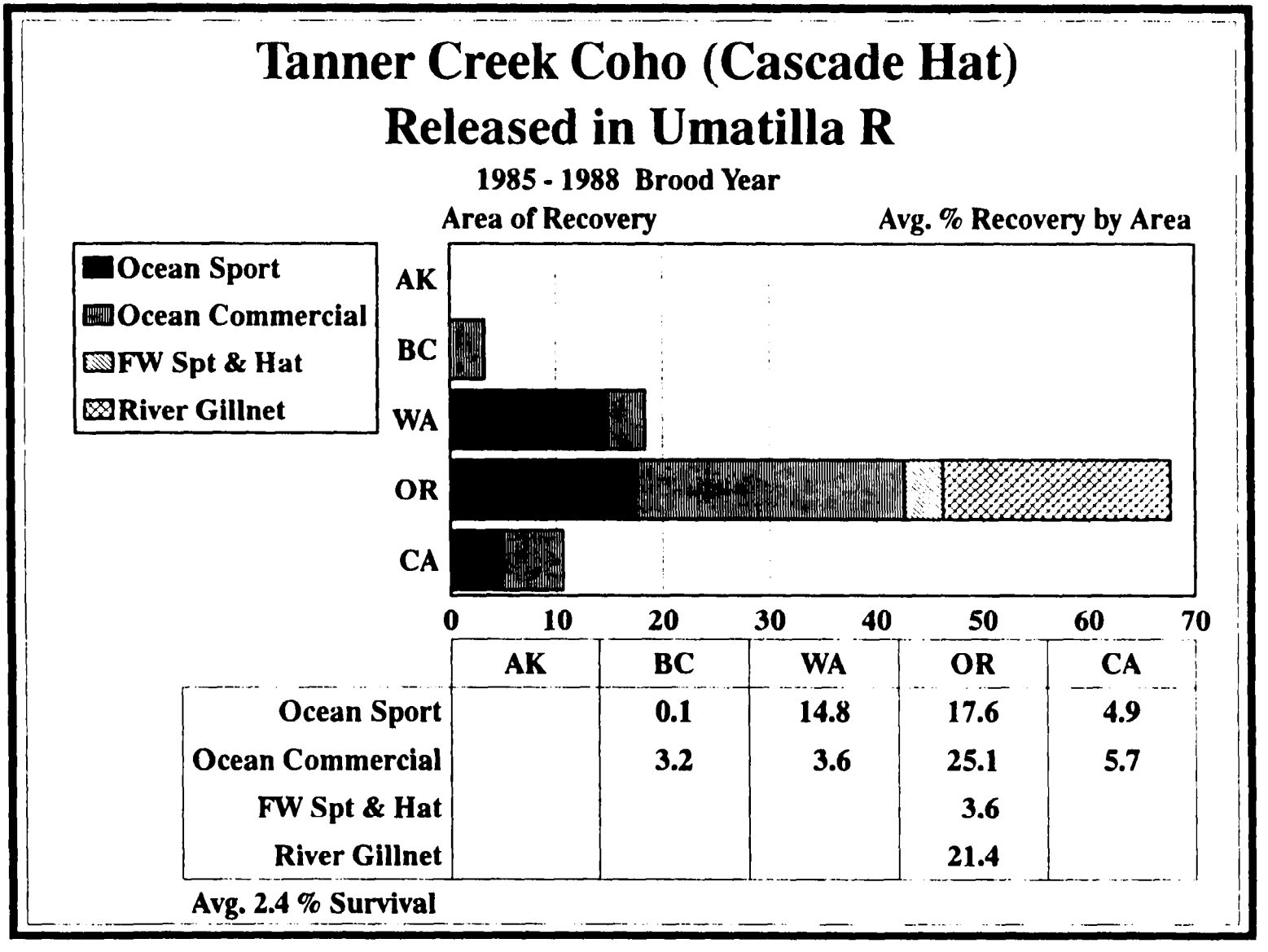
1985 - 1988 Brood Year



	AK	BC	WA	OR	CA
Ocean Sport			15.6	18.5	1.9
Ocean Commercial		4.8	1.9	30.2	2
FW Spt & Hat				3.1	
River Gillnet				21.9	

Avg. 5.1% Survival

Figure 29.



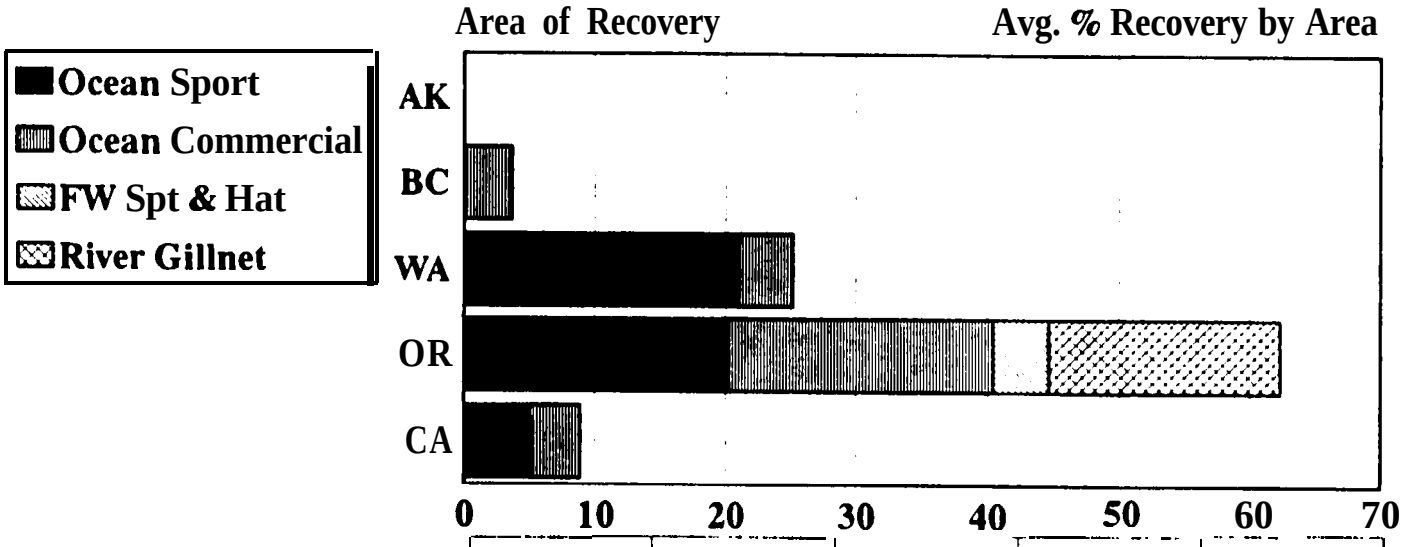
	AK	BC	WA	OR	CA
Ocean Sport		0.1	14.8	17.6	4.9
Ocean Commercial		3.2	3.6	25.1	5.7
FW Spt & Hat				3.6	
River Gillnet				21.4	

Avg. 2.4 % Survival

Figure 30.

Tanner Creek Coho (Cascade Hat) Released in Yakima R

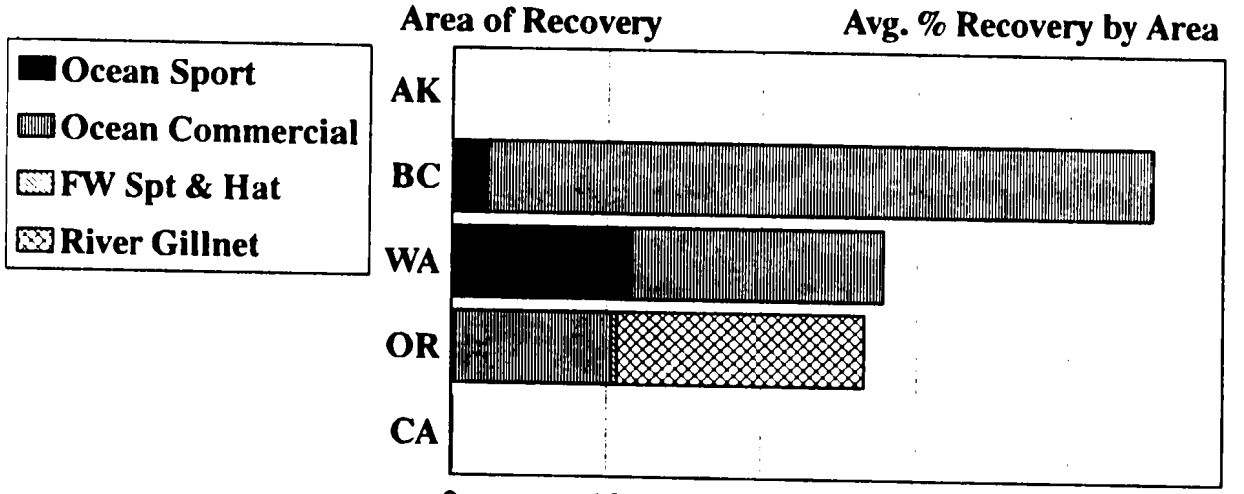
1986 - 1988 Brood Year



	AK	BC	WA	OR	CA
Ocean Sport		0.2	21.1	203	5.1
Ocean Commercial		3.5	4.1	20.1	3.8
FW Spt & Hat				43	
River Gillnet				17.7	

Avg. 1.5 % Survival

Figure 31.



	AK	BC	WA	OR	CA
Ocean Sport		2.3	11.7	0.3	
Ocean Commercial		43.1	16.2	10	0.1
FW Spt & Hat				0.4	
River Gillnet				15.9	

Avg. 0.9 % Survival

Figure 32.

The 1982 to 1986 brood years of up river bright fall chinook survived at an average rate of 2.1% and contributed primarily to the Alaska and British Columbia ocean commercial fisheries and the Columbia River gillnet fishery (Figure 33).

The 1982 to 1986 brood years of up river bright fall chinook released in the Umatilla River survived at an average rate of 1.5% and contributed primarily to the Alaska and British Columbia ocean commercial fisheries and the Columbia River gillnet fishery (Figure 34).

The 1984 to 1986 brood Carson stock spring chinook reared at Bonneville hatchery and released in the Umatilla river survived at an average rate of 0.2%. The contributed primarily to the Columbia River freshwater sport and gillnet fisheries (Figure 35).

The 1986 brood of up river bright summer chinook released in the Columbia River at Bonneville Hatchery survived at an average rate of 0.2% and contributed primarily to the Alaska and British Columbia ocean commercial fisheries and the Columbia River gillnet fishery (Figure 36).

The 1984 to 1988 brood years of coho survived at an average rate of 3.5% and contributed primarily to the Washington, Oregon and California ocean sport and commercial fisheries and the Columbia River gillnet fishery (Figure 37).

Oxbow Hatchery

Oxbow Hatchery is located on the Columbia River 2 miles east of Cascade Locks off Highway 84. Oxbow Hatchery rears coho and spring chinook salmon. Part of the coho reared in the Herman Creek ponds are trucked to Bonneville Hatchery for extended rearing and acclimation prior to release at Bonneville. The remainder of the coho started at Oxbow are stocked in Wahkeena Pond for extended rearing and released from that location. Wahkeena Pond is operated as a satellite of Oxbow Hatchery.

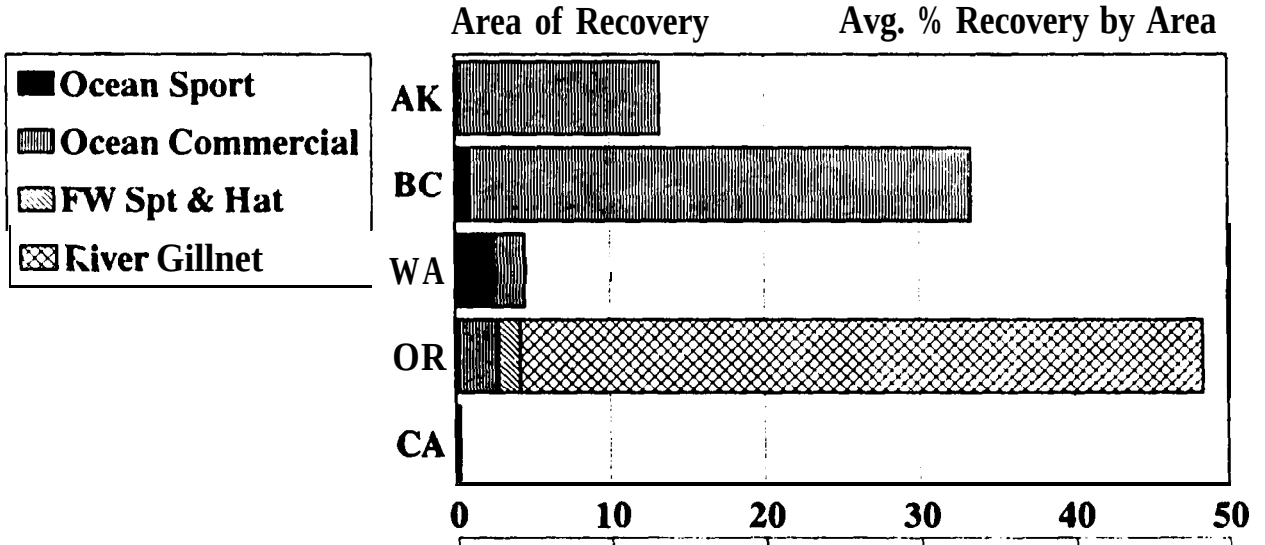
The 1983 brood Carson stock spring chinook reared at Oxbow Hatchery and released in Lookingglass Creek survived at a rate of 0.1% and contributed primarily to the California ocean commercial fishery and the Columbia River gillnet fishery (Figure 38).

Wahkeena Pond

Wahkeena Pond is a natural lake rearing location located near Rooster Rock State Park off Highway 84. Coho stocked in Wahkeena Pond are fed daily by the crew from Oxbow Hatchery.

Bonneville URB Fall Chinook

1982 - 1986 Brood Year



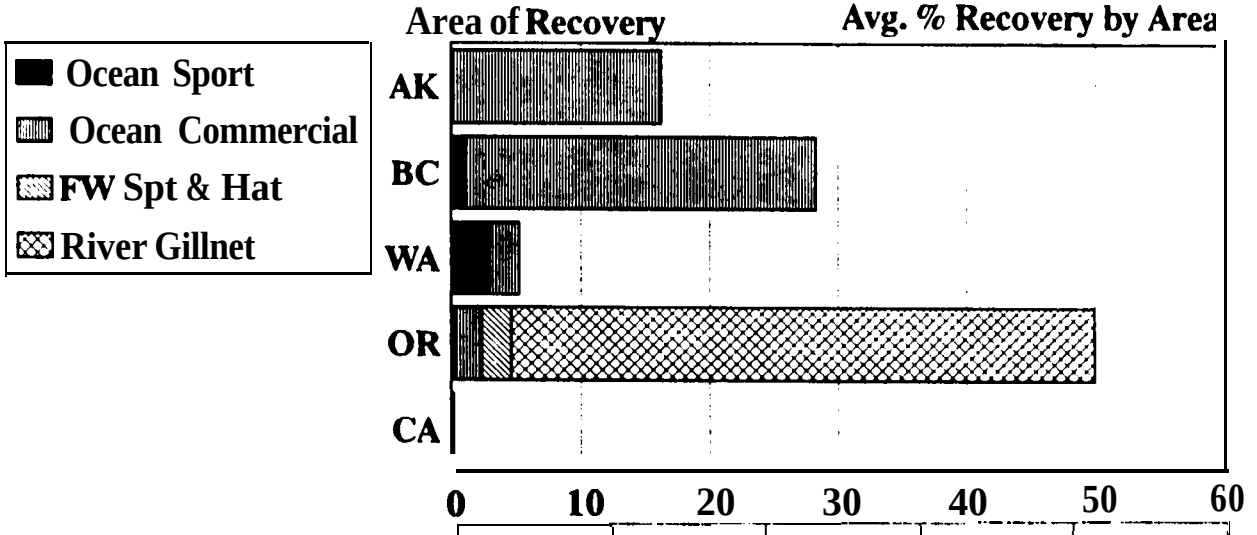
	AK	BC	WA	OR	CA
Ocean Sport	0.2	1	2.5	0.3	0.2
Ocean Commercial	13.1	32.4	2	2.5	0.1
FW Spt & Hat				1.4	
River Gillnet				44.2	

Avg. 2.1 % Survival

Figure 33.

Bonneville URB Fall Chinook
Released in Umatilla R

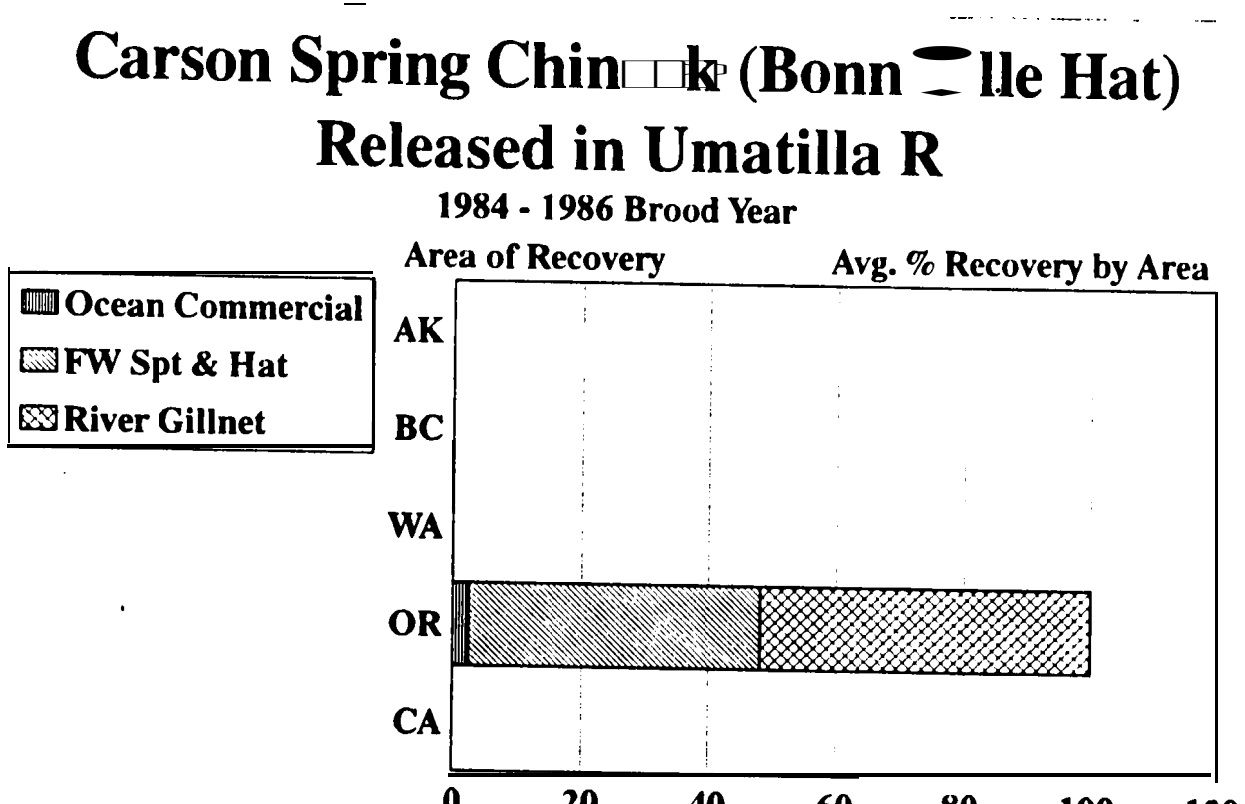
1982 - 1986 Brood Year



	AK	BC	WA	OR	CA
Ocean Sport	0.2	1.2	3	0.4	0.1
Ocean Commercial	16.1	27.1	2.3	2	0.1
FW Spt & Hat				2.3	
River Gillnet				45.3	

Ave. 1.5 % Survival

Figure 34.



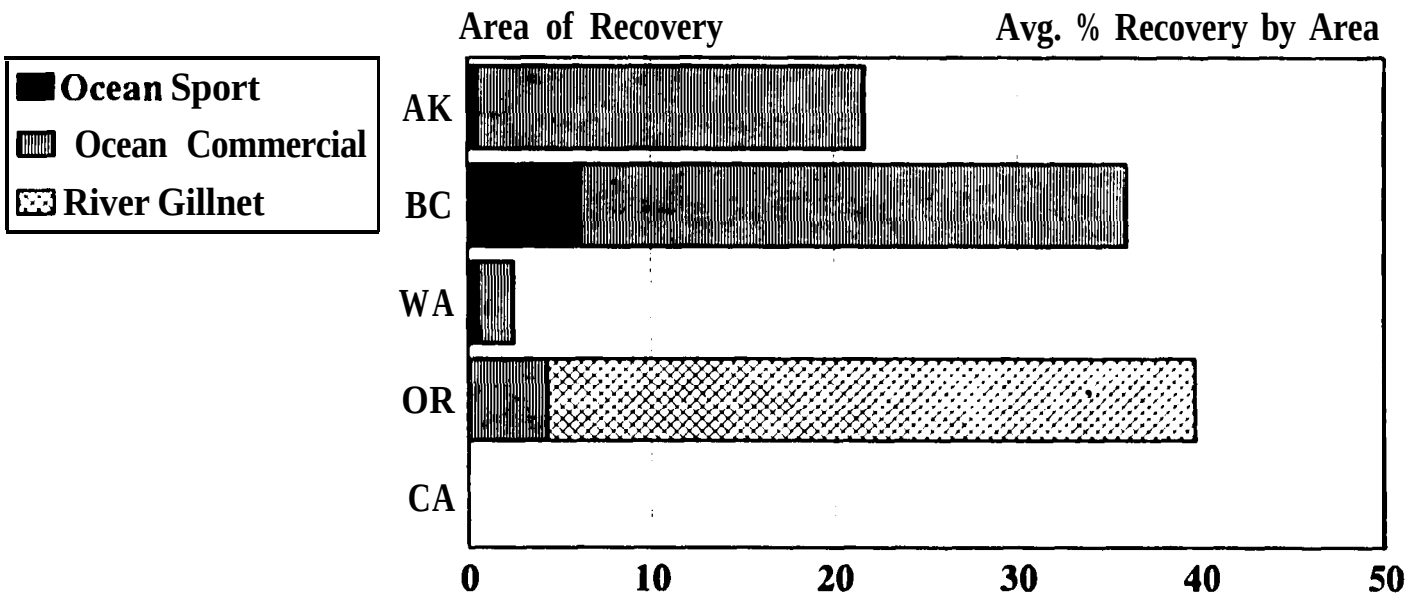
	AK	BC	WA	OR	CA
Ocean Commercial				2.5	
FW Spt & Hat				45.6	
River Gillnet				51.9	

Avg. 0.2 % Survival

Figure 35.

Upriver Brite Summer Chinook (Bonneville Hat) Released in Tanner Creek

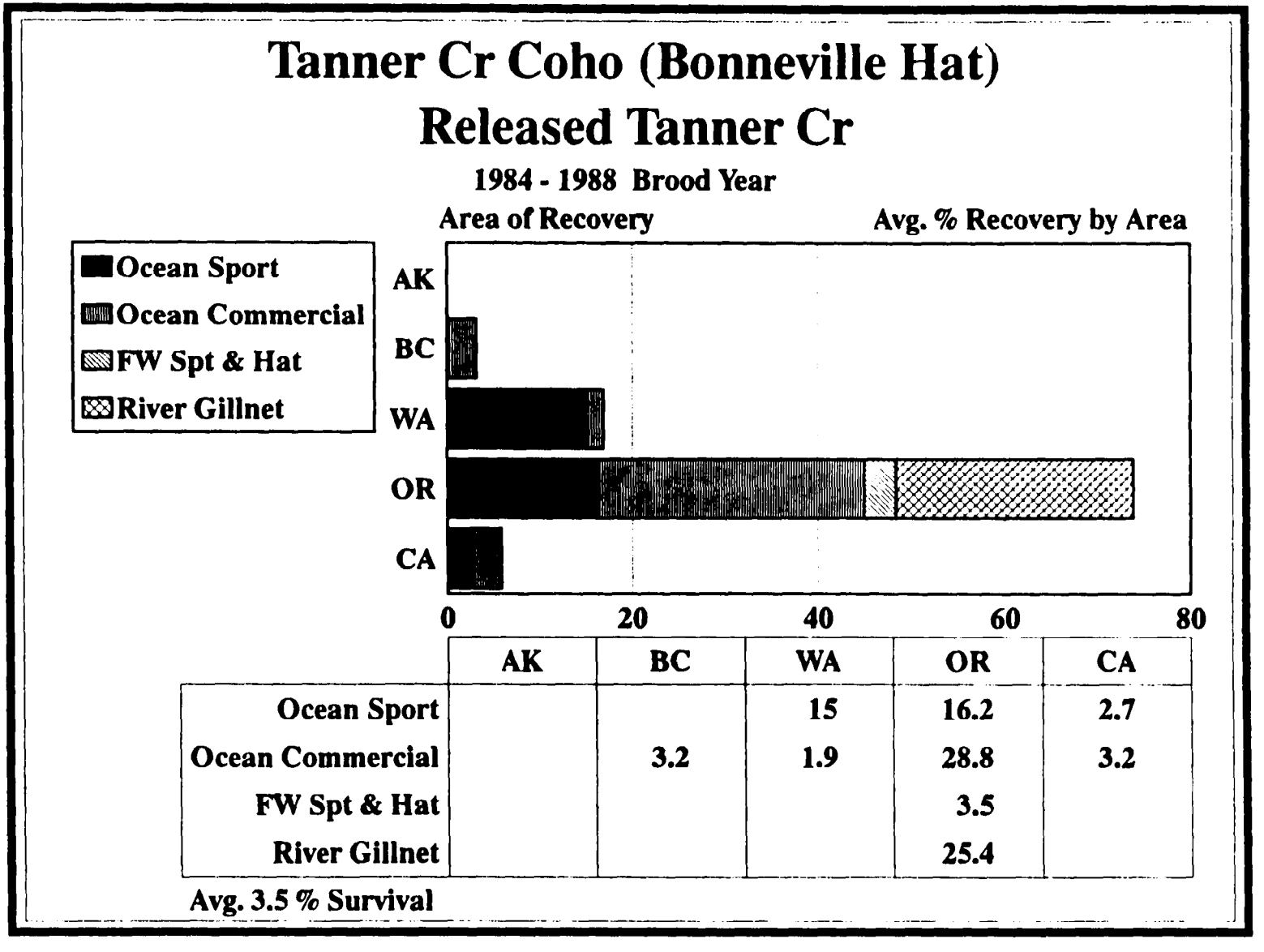
1986 Brood Year



	AK	BC	WA	OR	CA
Ocean Sport	0.6	6.2	0.6		
Ocean Commercial	21.1	29.8	1.9	4.3	
River Gillnet				35.4	

Avg. 0.2 % Survival

Figure 36.



	AK	BC	WA	OR	CA
Ocean Sport			15	16.2	2.7
Ocean Commercial		3.2	1.9	28.8	3.2
FW Spt & Hat				3.5	
River Gillnet				25.4	

Avg. 3.5 % Survival

Figure 37.

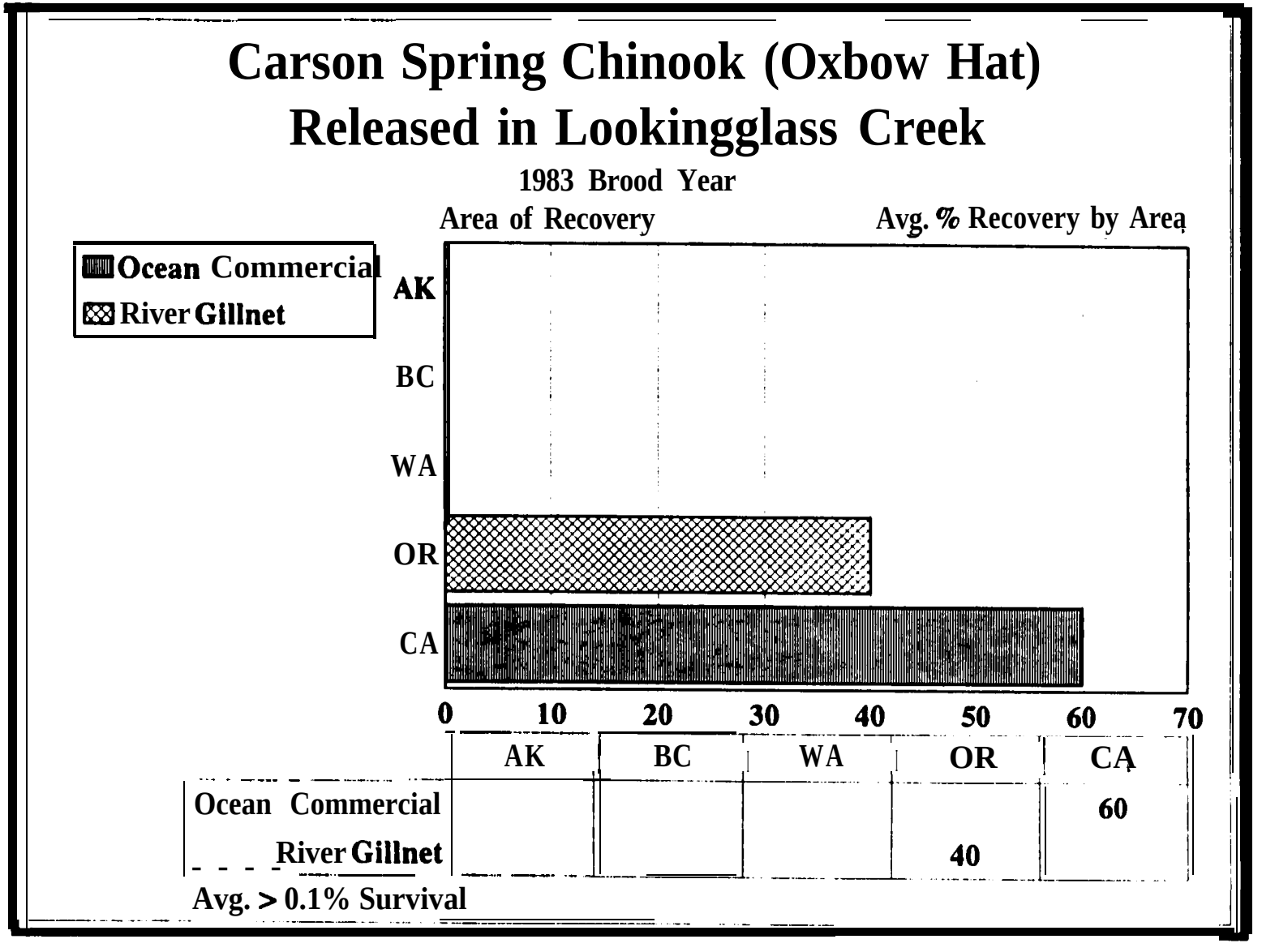

Carson Spring Chinook (Oxbow Hat)
Released in Lookingglass Creek
1983 Brood Year
Area of Recovery
Avg. % Recovery by Area
Ocean Commercial
River Gillnet
AK
BC
WA
OR
CA
0
10
20
30
40
50
60
70
AK
BC
WA
OR
CA
Ocean Commercial
60
River Gillnet
40
Avg. > 0.1% Survival

Figure 38.

The 1984 to 1988 brood years of coho reared in Wahkeena Pond survived at an average rate of 3.5% and contributed primarily to the Washington, Oregon and California ocean sport and commercial fisheries and the Columbia River gillnet fishery (Figure 39).

Round Butte Hatchery

Round Butte Hatchery is located at the base of Round Butte Dam on the Deschutes River east of Madras. Round Butte Hatchery rears and releases spring chinook, summer steelhead and brown trout.

The 1982 to 1986 brood years of spring chinook reared at Round Butte hatchery and released in the Deschutes River survived at an average rate of 1.4% and contributed primarily to the freshwater sport fishery in the Columbia and Deschutes Rivers (Figure 40).

The summer steelhead and brown trout released from Round Butte Hatchery have not been coded-wire tagged for evaluation.

Oak Springs Hatchery is located on the Deschutes River 3 miles north of Maupin. Oak Springs Hatchery rears and releases summer and winter steelhead and rainbow trout. None of these fish have been coded-wire tagged for evaluation.

Wizard Falls Hatchery

Wizard Falls Hatchery is located on the Metrolis River 2 miles north of Camp Sherman off Highway 20. Wizard Falls Hatchery rears and releases Atlantic and kokanne salmon, brown, brook and rainbow trout. None of these fish have been coded-wire tagged for evaluation.

Fall River Hatchery

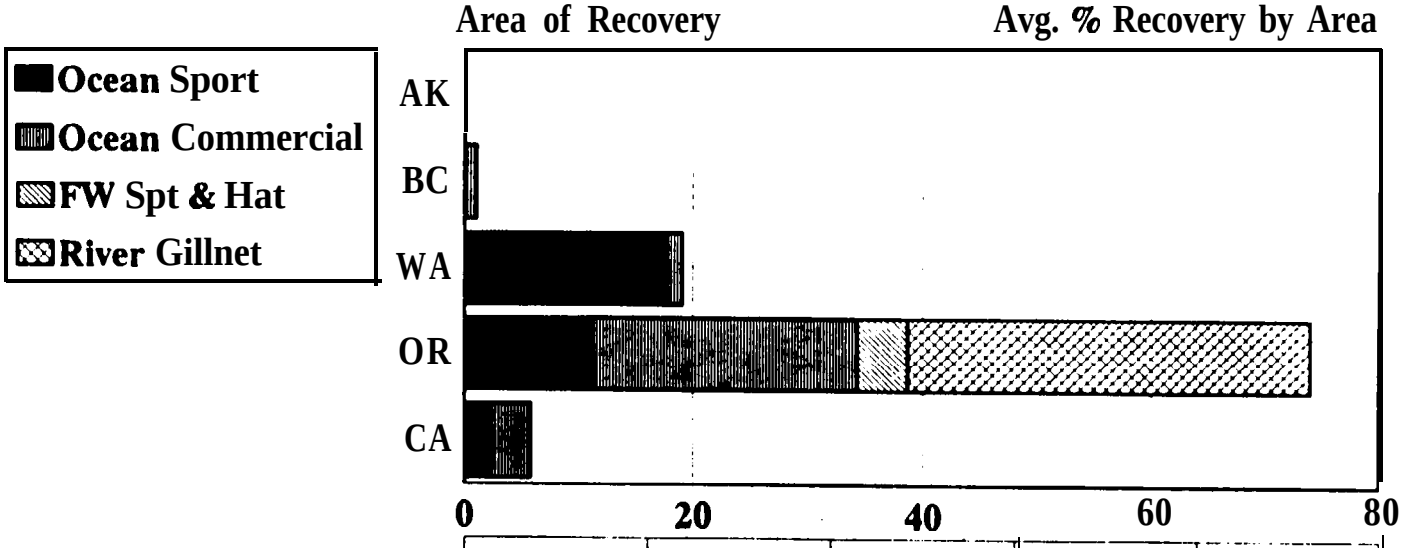
Fall River Hatchery is located on Fall River,a tributary of the Deschutes River south east of Bend. Fall River Hatchery rears and releases cutthroat, brook and rainbow trout. None of these fish have been coded-wire tagged for evaluation.

Irrigon Hatchery

Irrigon Hatchery is located on the Columbia River off Highway 730 near Irrigon. Irrigon rears and releases spring and fall chinook salmon, summer steelhead and rainbow trout.

Tanner Creek Coho (Wahkeena Pond)
Released in Columbia River R

1984 + 1988 Brood Year



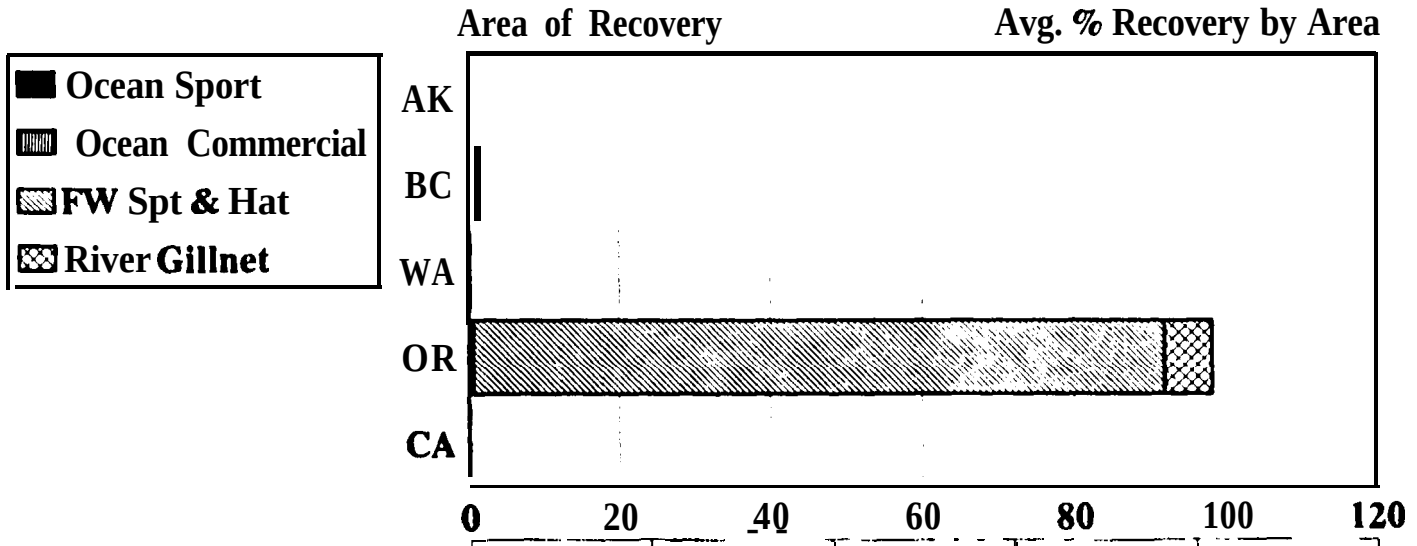
	AK	BC	WA	OR	CA
Ocean Sport			17.8	113	2.5
Ocean Commercial		1.1	1.3	23	33
FW Spt & Hat				4.4	
River Gillnet				353	

Avg. 3.5 % Survival

Figure 39.

Deschutes Spring Chinook (Round Butte Hat) Released in Deschutes R

1982 - 1986 Brood Year



	AK	BC	WA	OR	CA
Ocean Sport			0.1	0.1	
Ocean Commercial		1.4	0.1	0.5	0.1
FW Spt & Hat				91.4	
River Gillnet				6.3	

Avg. 1.4 % Survival

Figure 40.

The 1984 to 1986 up river bright fall chinook reared at Irrigon hatchery and released in the Umatilla River survived at an average rate of 1.5% and contributed primarily to the Alaska and British Columbia ocean commercial fisheries and the Columbia River gillnet fishery (Figure 41).

The 1987 brood summer steelhead released in the Umatilla River survived at a rate of 0.5% and contributed primarily to the Columbia River freshwater sport and gillnet fisheries Figure 42).

The 1985 to 1987 brood Imnaha stock summer steelhead reared at Irrigon hatchery and released in Little Sheep Creek survived at a rate of 0.5% and contributed primarily to the Columbia River freshwater sport and gillnet fisheries (Figure 43).

Umatilla Hatchery

Umatilla Hatchery, constructed in 1990 is located on the Columbia River adjacent to the Irrigon Hatchery. Umatilla Hatchery rears Columbia up river bright fall chinook salmon and summer steelhead trout. Representative groups of these fish have been coded-wire tagged but no completed recovery data is available at the present time.

Lookingglass Hatchery

Lookingglass Hatchery is located on Lookingglass Creek, a tributary to the Grande Ronde River north of Elgin. Lookingglass Hatchery rears and releases spring chinook salmon.

The 1982 to 1986 brood Lookingglass stock spring chinook released in Lookingglass Creek survived at an average rate of 0.1% and contributed primarily to the freshwater sport and Columbia river gillnet fisheries (Figure 44).

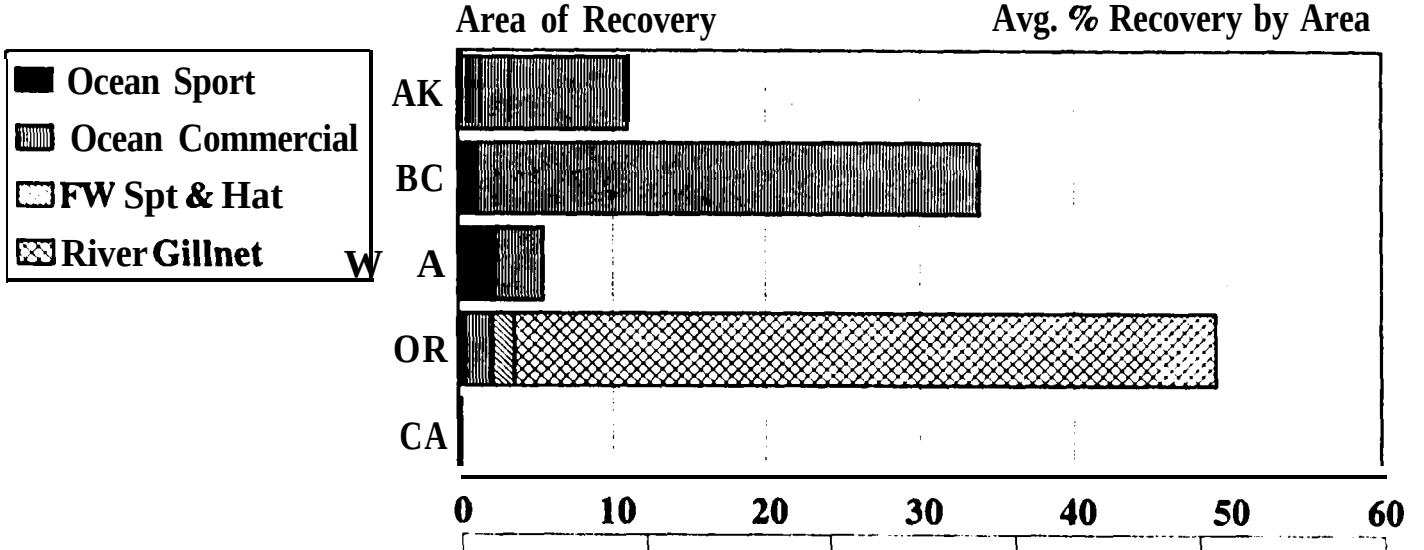
The 1982 to 1986 Lookingglass stock spring chinook released in the Imnaha river also survived at an average rate of 0.1% and contributed to the freshwater sport and Columbia River sport fisheries (Figure 45).

The 1982 to 1986 Carson stock spring chinook reared at Lookingglass hatchery and released in the Grande Ronde River survived at an average rate of 0.1% and contributed primarily to the Columbia river gillnet fishery (Figure 46)

The 1983 brood of Washington Fall Creek stock spring chinook released in Lookingglass Creek survived at a rate of 0.4% and contributed primarily to the freshwater sport and gillnet fisheries (Figure 47).

Umatilla URB Fall Chinook (Irrigon Hat) Released in Umatilla R

1984 - 1986 Brood Year



	AK	BC	WA	OR	CA
Ocean Sport	0.1	1.3	2.4	0.5	0.2
Ocean Commercial	10.9	32.6	3.1	1.7	
FW Spt & Hat				1.4	
River Gillnet				45.7	

Avg. 1.5 % Survival

Figure 41.

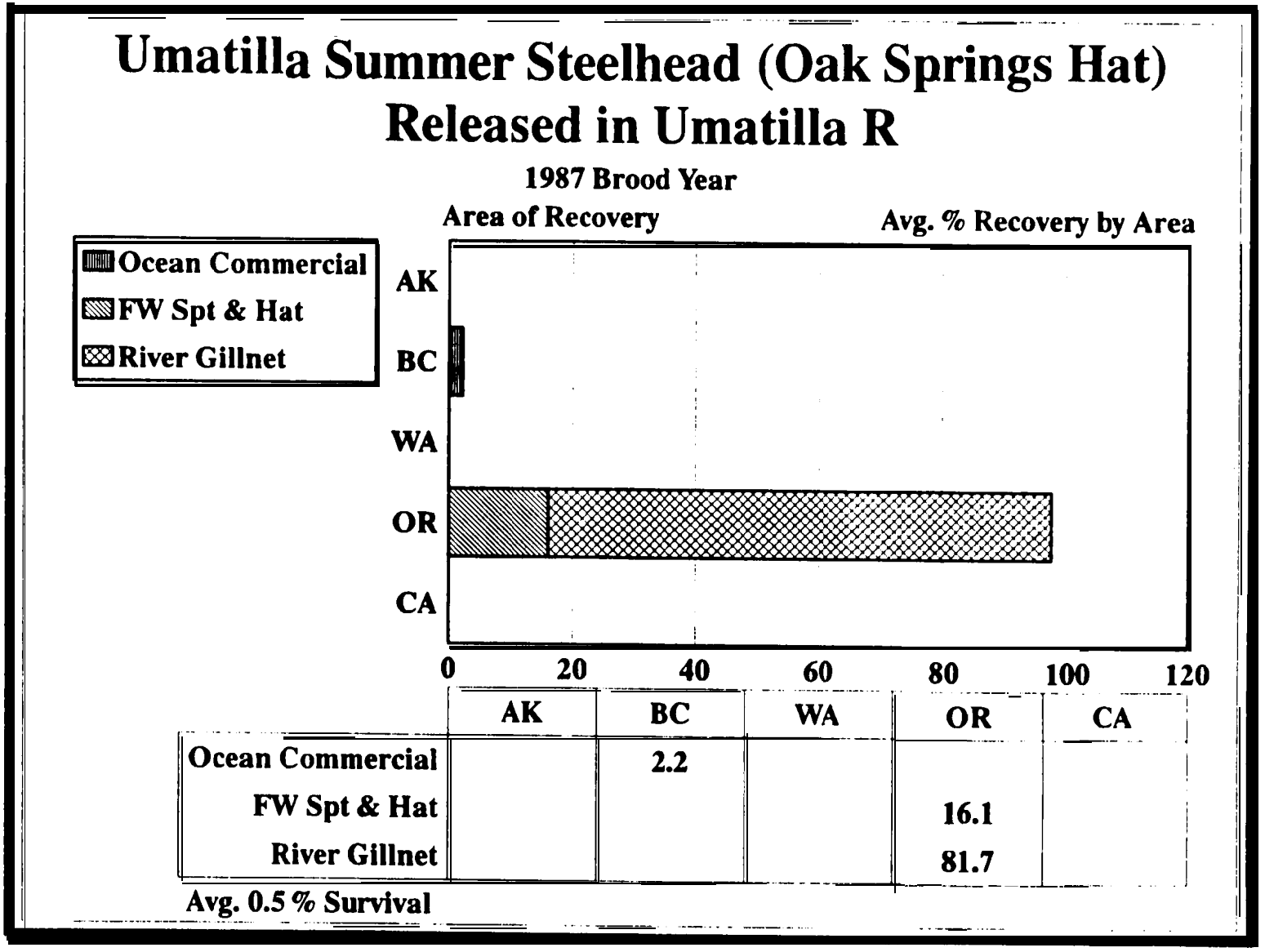
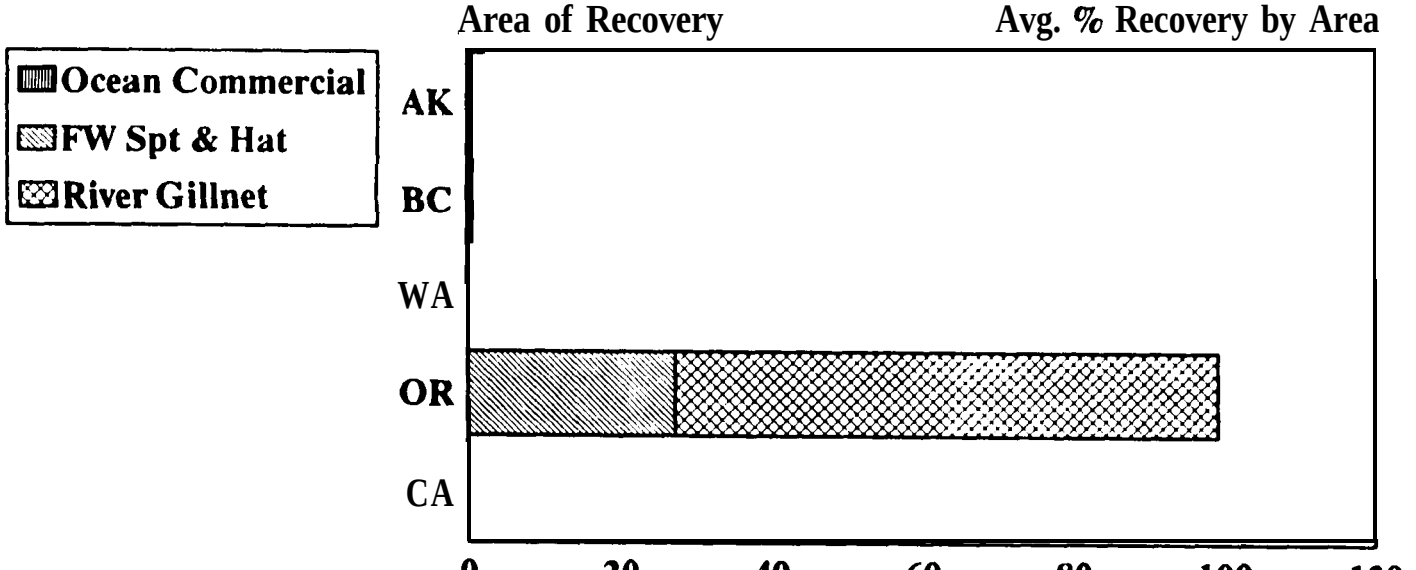

Umatilla Summer Steelhead (Oak Springs Hat)
Released in Umatilla R
1987 Brood Year
Area of Recovery
Avg. % Recovery by Area
Ocean Commercial
FW Spt & Hat
River Gillnet
AK
BC
WA
OR
CA
0
20
40
60
80
100
120
AK
BC
WA
OR
CA
Ocean Commercial
2.2
FW Spt & Hat
16.1
River Gillnet
81.7
Avg. 0.5 % Survival

Figure 42.

Imnaha Summer Steelhead (Irrigon Hat) Released in Little Sheep Creek

1985 - 1987 Brood Year



	AK	BC	WA	OR	CA
Ocean Commercial		0.7			
FW Spt & Hat				27.4	
River Gillnet				71.9	

Avg. 0.5 % Survival

Figure 43.

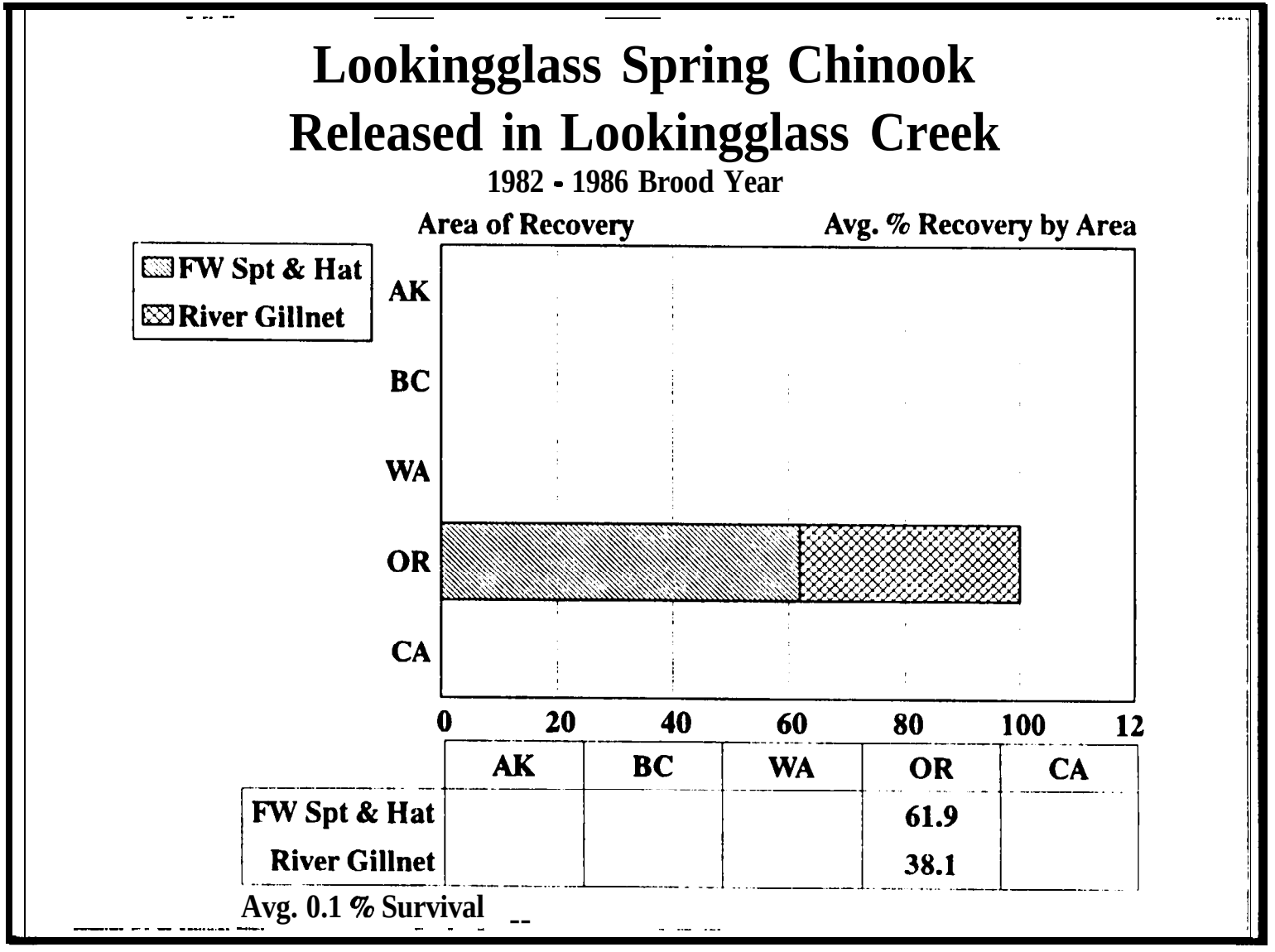
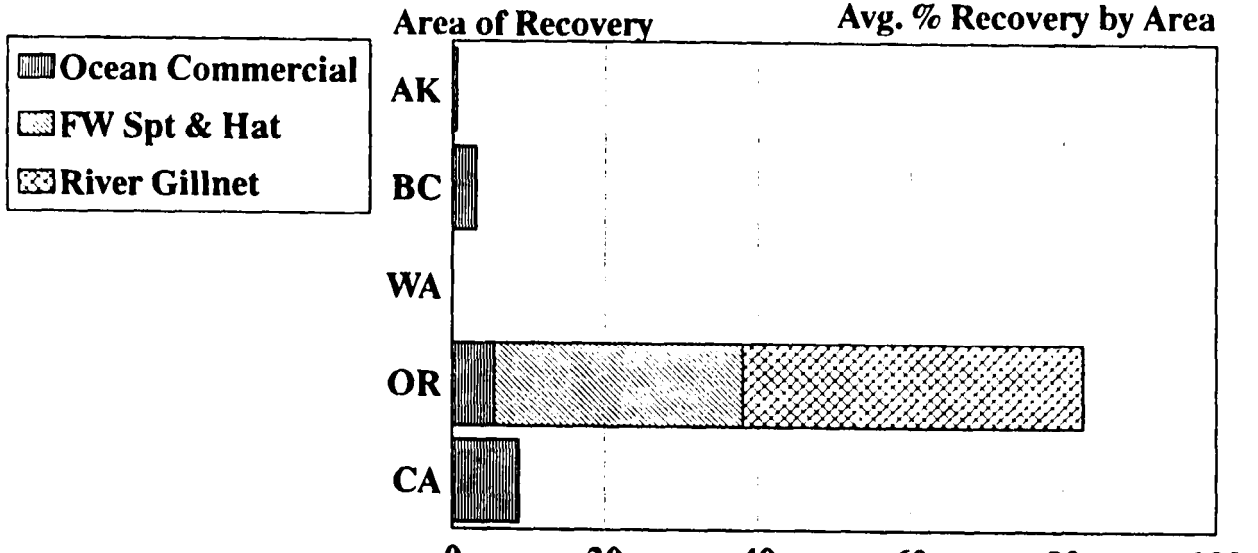

Lookingglass Spring Chinook
Released in Lookingglass Creek
1982 - 1986 Brood Year
Area of Recovery
Avg. % Recovery by Area
FW Spt & Hat
River Gillnet
AK
BC
WA
OR
CA
0
20
40
60
80
100
12
AK
BC
WA
OR
CA
FW Spt & Hat
61.9
River Gillnet
38.1
Avg. 0.1 % Survival

Figure 44.

Imnaha Spring Chinook (Lookingglass Hat) Released in Imnaha R

1982 - 1986 Brood Year



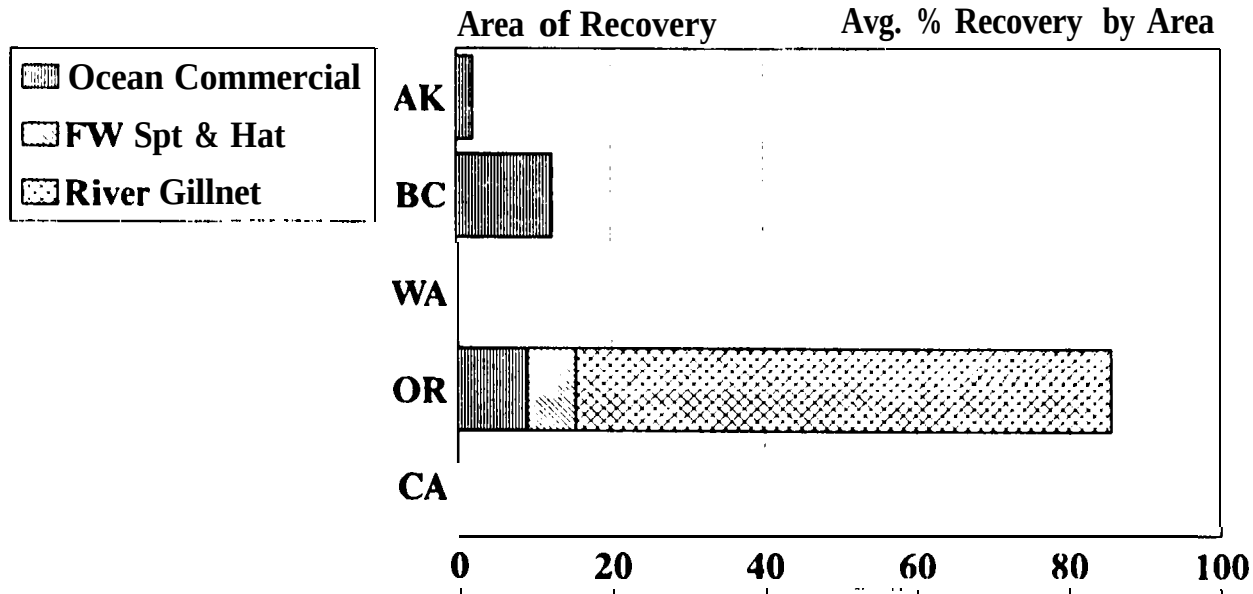
	AK	BC	WA	OR	CA
Ocean Commercial	0.5	3.1		5.5	8.8
FW Spt & Hat				32.6	
River Gillnet				44.5	

Avg. 0.1 % Survival

Figure 45.

Carson Spring Chinook (Lookingglass Hat) Released in Grande Ronde R

1982 - 1986 Brood Year



	AK	BC	WA	OR	CA
Ocean Commercial	2.1	12.5		9.1	
FW Spt & Hat				6.3	
River Gillnet				70.1	

Avg. 0.1 % Survival

Figure 46.

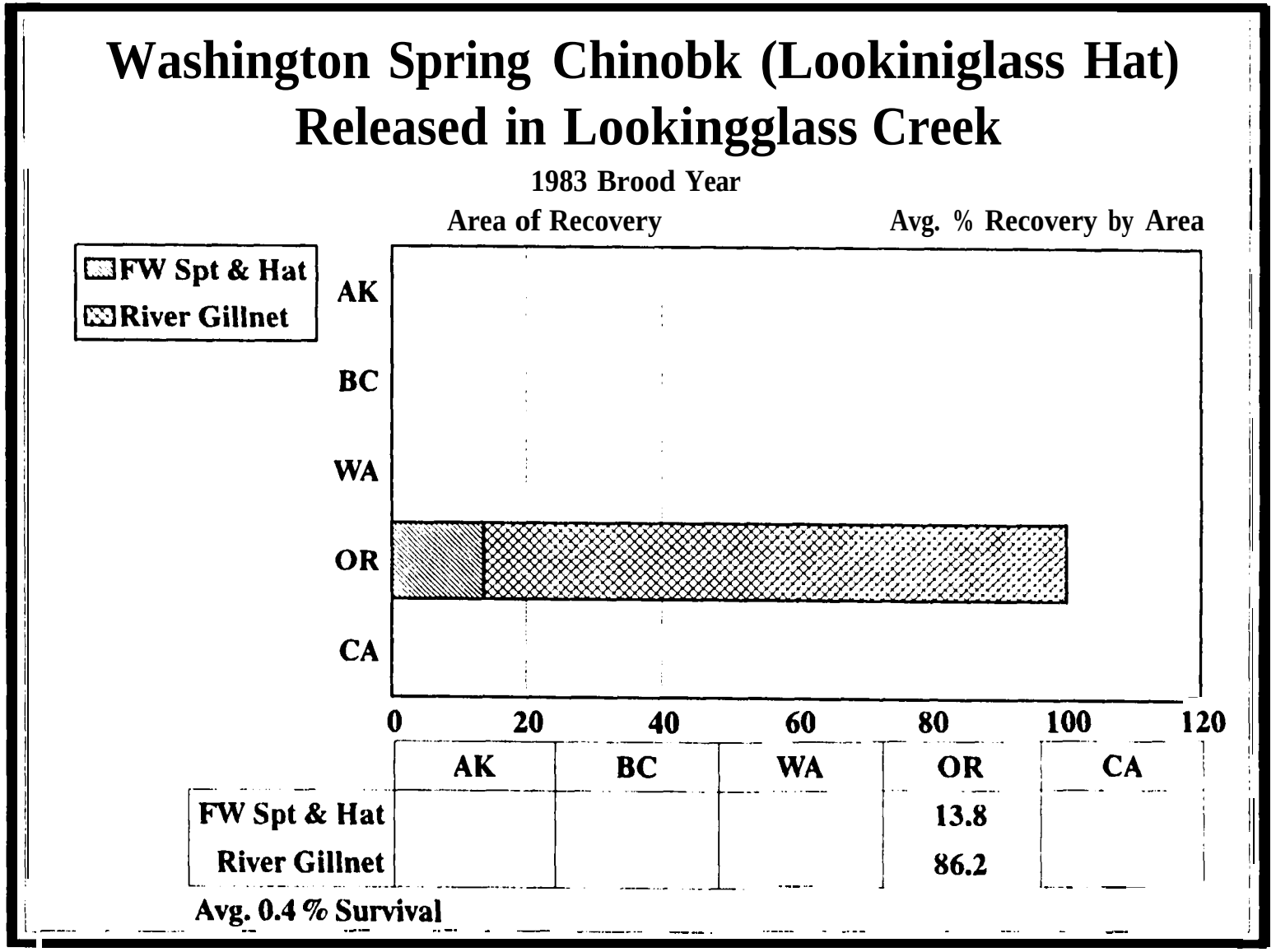

Washington Spring Chinobk (Lookiniglass Hat)
Released in Lookingglass Creek
1983 Brood Year
Area of Recovery
Avg. % Recovery by Area
FW Spt & Hat
River Gillnet
AK
BC
WA
OR
CA
0
20
40
60
80
100
120
AK
BC
WA
OR
CA
FW Spt & Hat
13.8
River Gillnet
86.2
Avg. 0.4 % Survival

Figure 47.

The 1985 to 1986 brood Rapid River stock of spring chinook reared at Lookingglass hatchery and released in Lookingglass Creek survived at an average rate of 0.1% and contributed primarily to the freshwater sport and hatchery return (Figure 48).

Wallowa Hatchery

Wallowa Hatchery is located on the Wallowa River near Enterprise. The Wallowa Hatchery rears and releases spring chinook salmon, summer steelhead and rainbow trout.

The 1985 to 1987 brood years of Wallowa summer steelhead released in Spring Creek, tributary to the Wallowa River survived at an average rate of 0.8% and contributed primarily to the freshwater sport and Columbia River gillnet fisheries (Figure 49).

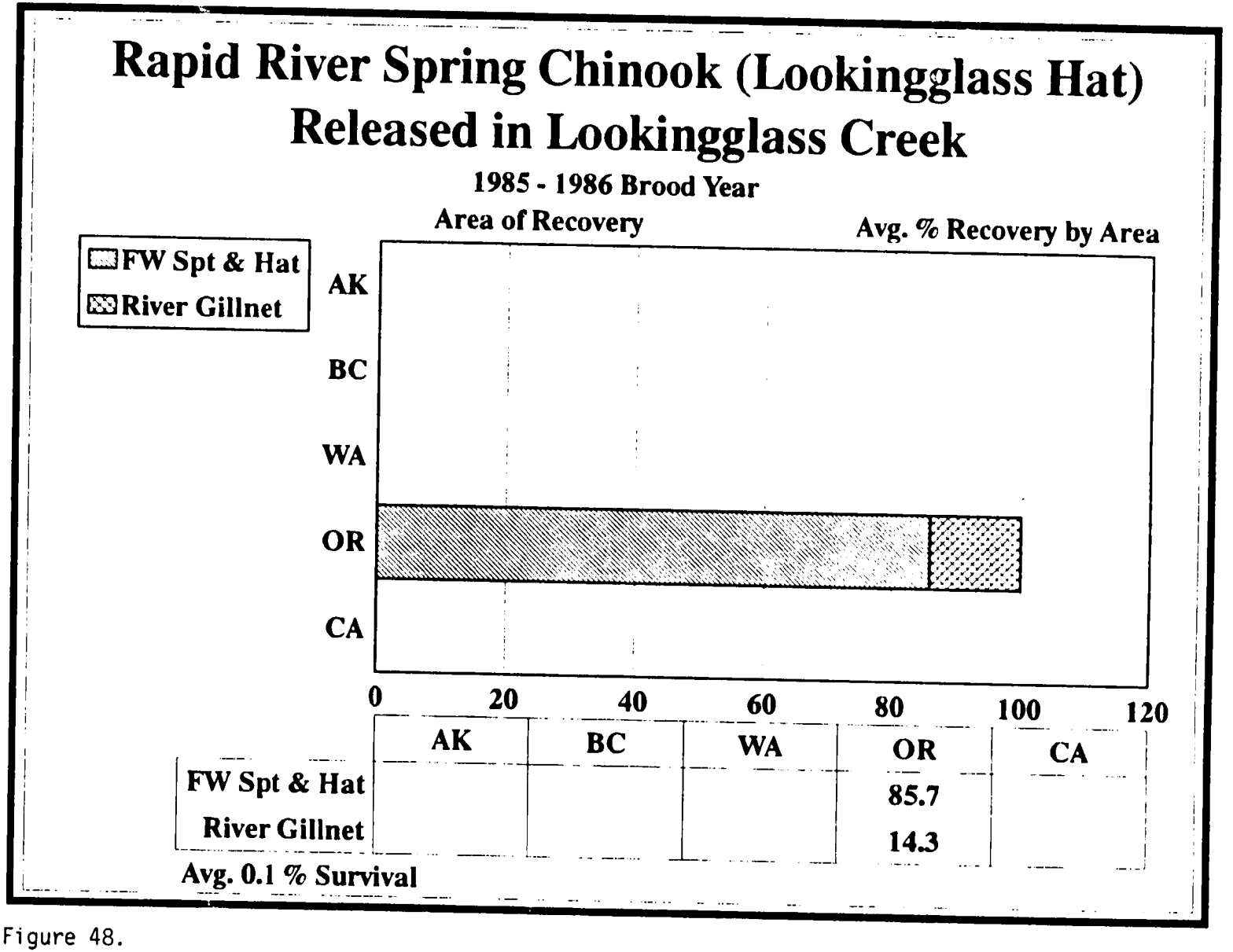

Rapid River Spring Chinook (Lookingglass Hat)
Released in Lookingglass Creek
1985 - 1986 Brood Year
Area of Recovery
Avg. % Recovery by Area
FW Spt & Hat
River Gillnet
AK
BC
WA
OR
CA
0
20
40
60
80
100
120
AK
BC
WA
OR
CA
FW Spt & Hat
85.7
River Gillnet
14.3
Avg. 0.1 % Survival

Figure 48.

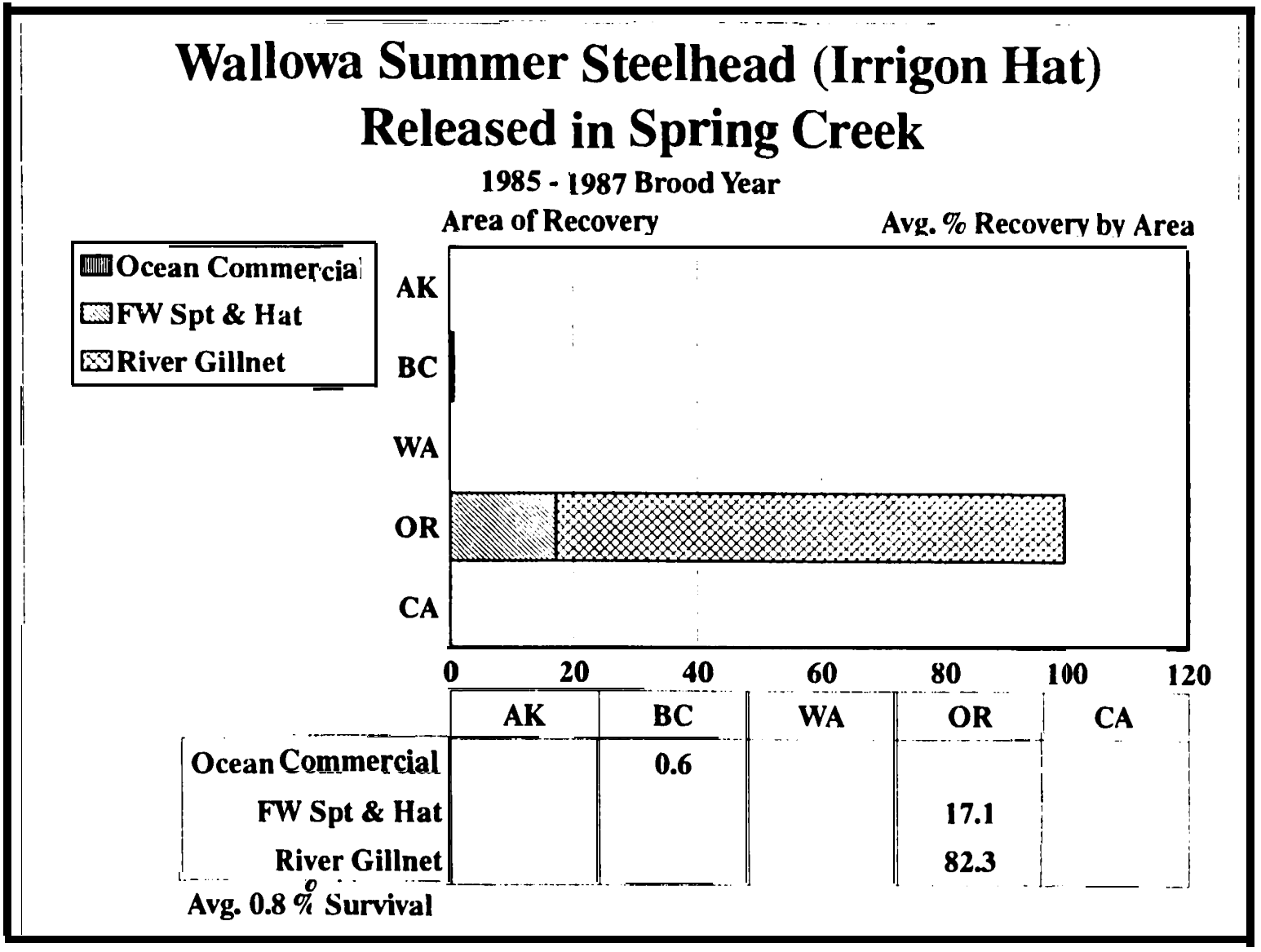

Wallowa Summer Steelhead (Irrigon Hat)
Released in Spring Creek
1985 - 1987 Brood Year
Area of Recovery
Avg. % Recovery by Area
Ocean Commercial
FW Spt & Hat
River Gillnet
AK
BC
WA
OR
CA
0
20
40
60
80
100
120
AK
BC
WA
OR
CA
Ocean Commercial
0.6
FW Spt & Hat
17.1
River Gillnet
82.3
Avg. 0.8 % Survival

Figure 49.

APPENDIX

Appendix Table 1 Average Percent Recovery (by Fishery) for the Last 5 Completed Brood years
(Chinook 1982 to 1986 broods; Coho 1984 to 1988 broods, Steelhead 1983 to 1987 broods)
Data downloaded Oct 1992 (through "Finalized" 1991 returns)

										Percent Recovery for All Areas																		
Hatchery	Sp	Stock	Release site	Br	Tagged	AD Clip Only	Untagged	Total Released	% SURV	AK SPT	AK COM	Total AK	BC SPT	BC COM	Total BC	WA SPT	WA TR	Total WA	OR SPT	OR TR	OR FW SPR	OR GNE	Total OR	CA SPT	CA TR	Total CA
Fall Chinook																												
Butte Falls	Chf	Coos R	Coos R, S Fk	83	24,729	617	26,926	52,272	0.2	0.0	6.1	6.1	0.0	36.9	36.9	0.0	4.0	4.0	10.1	34.8	0.0	0.0	44.9	0.0	6.1	6.1
Butte Falls	Chf	Coos R	Coos R, S Fk	84	25,353	2,145	32,739	60,237	0.5	0.0	17.3	17.3	5.9	14.4	20.3	0.0	12.9	12.9	3.0	45.0	1.5	0.0	49.4	0.0	0.0	0.0
Butte Falls	Chf	Coos R	Coos R, S Fk	85	26,674	437	109	27,220	2.5	0.0	8.5	8.5	0.0	37.6	37.6	2.0	3.3	5.2	6.1	40.2	0.0	0.6	46.9	0.0	1.7	1.7
Butte Falls	Chf	Coos R	Coos R, S Fk	AV	26,674	437	109	27,220	1.1	0.0	10.6	10.6	2.0	29.6	31.6	0.7	6.7	7.4	6.4	40.0	0.5	0.2	47.1	0.0	3.3	3.3
Bonneville	Chf	Tanner Cr	Tanner Cr	82	200,762	3,588	2,143,419	2,347,769	0.5	0.0	0.0	0.0	6.0	50.8	56.8	9.5	15.6	25.1	0.6	8.3	0.0	9.2	18.1	0.0	0.0	0.0
Bonneville	Chf	Tanner Cr	Tanner Cr	83	321,814	2,604	4,147,076	4,471,494	0.0	0.0	0.0	0.0	0.0	62.5	62.5	25.0	0.0	25.0	0.0	0.0	0.0	12.5	12.5	0.0	0.0	0.0
Bonneville	Chf	Tanner Cr	Tanner Cr	84	317,321	6,996	552,982	877,301	2.7	0.0	0.0	0.0	2.3	36.6	38.8	8.4	14.4	22.8	0.7	8.4	1.6	27.4	38.1	0.1	0.2	0.3
Bonneville	Chf	Tanner Cr	Tanner Cr	86	421,391	5,200	9,457,658	9,884,249	0.1	0.0	0.0	0.0	1.0	22.4	22.5	4.1	34.7	38.8	0.0	23.5	0.0	14.3	37.8	0.0	0.0	0.0
Bonneville	Chf	Tanner Cr	Tanner Cr	AV	421,391	5,200	9,457,658	9,884,249	0.9	0.0	0.0	0.0	2.3	43.1	45.4	11.7	16.2	27.9	0.3	10.0	0.4	15.8	26.6	0.0	0.1	0.1
Bonneville	Chf	URB	Tanner Cr	82	199,260	5,045	2,592	206,897	1.2	0.2	19.9	20.1	0.2	24.8	25.0	1.3	0.0	1.3	0.0	0.7	1.5	51.3	53.5	0.0	0.0	0.0
Bonneville	Chf	URB	Tanner Cr	83	306,916	2,969	394,928	704,813	2.0	0.2	10.6	10.9	1.8	30.2	32.0	3.5	2.2	5.7	0.3	3.6	1.0	46.3	51.3	0.1	0.1	0.2
Bonneville	Chf	URB	Tanner Cr	84	50,346	194	51,106	101,646	3.5	0.1	4.5	4.6	1.4	40.1	41.5	3.2	3.9	7.1	0.7	2.2	0.2	43.4	46.5	0.3	0.0	0.3
Bonneville	Chf	URB	Tanner Cr	85	427,615	7,040	1,407,671	1,842,326	2.6	0.4	13.8	14.2	0.3	31.0	31.3	2.7	1.2	3.9	0.3	1.3	2.4	46.2	50.1	0.4	0.0	0.4
Bonneville	Chf	URB	Tanner Cr	86	582,442	4,208	515,408	1,102,058	1.0	0.1	16.8	16.9	1.5	36.1	37.6	1.8	2.7	4.5	0.3	4.4	1.8	33.9	40.4	0.1	0.4	0.4
Bonneville	Chf	URB	Tanner Cr	Av	582,442	4,208	515,408	1,102,058	2.1	0.2	13.1	13.3	1.0	32.4	33.5	2.5	2.0	4.5	0.3	2.5	1.4	44.2	48.4	0.2	0.1	0.3
Bonneville	Chf	URB	Umatilla R	82	196,692	4,328	1,042,438	1,243,458	0.8	0.2	36.7	36.8	0.8	16.1	16.9	0.8	0.5	1.3	0.0	0.2	1.9	43.0	45.0	0.0	0.0	0.0
Bonneville	Chf	URB	Umatilla R	83	298,747	3,438	862,227	1,164,412	0.8	0.2	9.0	9.1	0.5	28.7	29.2	1.9	1.1	3.0	0.2	2.8	0.8	54.6	58.4	0.0	0.3	0.3
Bonneville	Chf	URB	Umatilla R	84	237,594	5,939	3,030,639	3,274,172	0.9	0.1	14.1	14.2	0.5	24.1	24.6	1.3	2.0	3.3	0.0	1.6	1.3	54.7	57.6	0.0	0.3	0.3
Bonneville	Chf	URB	Umatilla R	85	100,127	1,260	110,119	211,506	2.2	0.5	10.5	11.0	3.2	28.6	31.8	5.8	3.0	8.8	0.5	2.1	4.6	41.1	48.3	0.0	0.0	0.0
Bonneville	Chf	URB	Umatilla R	86	158,960	1,146	40,235	200,341	2.8	0.0	10.5	10.6	0.8	38.2	39.0	5.3	4.8	10.1	1.3	3.0	2.7	33.0	40.1	0.3	0.0	0.3
Bonneville	Chf	URB	Umatilla R	Av	158,960	1,146	40,235	200,341	1.5	0.2	16.1	16.3	1.2	27.1	28.3	3.0	2.3	5.3	0.4	2.0	2.3	45.3	49.9	0.1	0.1	0.2
Big Cr	Chf	Big Cr	Big Cr	86	309,516	3,038	8,379,938	8,692,492	0.2	0.0	0.0	0.0	0.0	37.5	37.5	10.9	32.8	43.8	0.0	15.6	0.0	2.3	18.0	0.0	0.8	0.8
Big Cr	Chf	Rogue R	Big Cr	82	97,796	3,510	5,561	106,867	4.7	0.0	0.0	0.0	0.0	5.4	5.4	4.7	1.7	6.4	4.1	41.6	0.8	32.2	78.7	1.6	7.9	9.5
Big Cr	Chf	Rogue R	Big Cr	83	114,492	535	312	115,339	2.4	0.0	0.0	0.0	0.0	3.8	3.8	6.3	1.8	8.1	3.4	40.3	3.4	25.6	72.7	0.7	14.7	15.4
Big Cr	Chf	Rogue R	Big Cr	84	98,850	2,768	0	101,618	3.6	0.0	0.0	0.0	0.2	3.6	3.8	5.1	5.0	10.0	1.9	51.2	1.3	24.0	78.5	0.2	7.4	7.7
Big Cr	Chf	Rogue R	Big Cr	85	145,544	244	244	146,032	2.0	0.0	0.0	0.0	0.5	2.7	3.1	4.9	1.5	6.4	4.0	63.0	1.4	9.5	78.0	0.7	11.9	12.6
Big Cr	Chf	Rogue R	Big Cr	86	156,574	590	1,180	158,344	2.2	0.0	0.0	0.0	0.8	2.6	3.3	8.9	2.0	11.0	3.9	66.0	2.4	3.6	76.0	3.9	5.8	9.7
Big Cr	Chf	Rogue R	Big Cr	Av	156,574	590	1,180	158,344	3.0	0.0	0.0	0.0	0.3	3.6	3.9	6.0	2.4	8.4	3.5	52.4	1.9	19.0	76.7	1.4	9.5	11.0
Cole R	Chf	Coquille R	Coquille R	83	25,390	1,252	89,701	116,343	0.6	0.0	8.7	8.7	2.9	41.3	44.2	0.0	0.0	0.0	3.7	43.5	0.0	0.0	47.1	0.0	0.0	0.0
Cole R	Chf	Coquille R	Coquille R	84	27,026	383	830	28,239	0.3	0.0	10.1	10.1	0.0	31.9	31.9	0.0	0.0	0.0	8.0	44.2	0.0	0.0	52.1	5.8	0.0	5.8
Cole R	Chf	Coquille R	Coquille R	85	26,741	109	0	26,850	4.0	0.1	7.1	7.3	0.4	23.5	23.9	0.3	0.6	0.9	3.9	59.3	0.0	0.0	63.2	1.3	3.3	4.7
Cole R	Chf	Coquille R	Coquille R	86	27,277	0	82,473	109,750	0.2	0.0	18.0	18.0	7.3	55.3	62.6	0.0	10.7	10.7	0.0	8.7	0.0	0.0	8.7	0.0	0.0	0.0
Cole R	Chf	Coquille R	Coquille R	Av	27,277	0	82,473	109,750	1.3	0.0	11.0	11.0	2.7	38.0	40.7	0.1	2.8	2.9	3.9	38.9	0.0	0.0	42.8	1.8	0.8	2.6

Appendix Table 1 (Cont) Average Percent Recovery (by Fishery) for the Last 5 Completed Brood years
(Chinook 1982 to 1986 broods; Coho 1984 to 1988 broods; Steelhead 1983 to 1987 broods)
Data downloaded Oct 1992 (through "Finalized" 1991 returns)

										Percent Recovery for All Areas																
Hatchery	Sp	Stock	Release site	Br	Tagged	AD Clip Only	Untagged	Total Released	% SURV	AK SPT	AK COM	Total AK	BC SPT	BC COM	Total BC	WA SPT	WA TR	Total WA	OR SPT	OR TR	OR FW SPR	OR GNE	Total OR	CA SPT	CA TR	Total CA
Cole R	Chf	Rogue R	Rogue R-4	82	26,775	240	1,057	28,072	2.5	0.0	0.0	0.0	0.0	0.9	0.9	0.0	0.0	0.0	3.2	45.6	0.0	1.7	[illegible]	5.1	43.5	[illegible]
Cole R	Chf	Rogue R	Rogue R-4	83	24,295	246	5,126	29,667	8.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	3.2	45.9	0.4	0.0	[illegible]	2.4	48.0	[illegible]
Cole R	Chf	Rogue R	Rogue R-4	84	26,779	329	9,697	36,805	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.6	1.5	35.5	0.0	1.1	[illegible]	0.6	60.7	[illegible]
Cole R	Chf	Rogue R	Rogue R-4	85	27,168	255	27,790	55,213	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	1.8	39.8	0.1	1.7	[illegible]	5.6	50.8	[illegible]
Cole R	Chf	Rogue R	Rogue R-4	86	27,449	0	31,207	58,656	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	57.4	0.0	0.4	[illegible]	9.7	27.9	[illegible]
Cole R	Chf	Rogue R	Rogue R-4	Av	27,449	0	31,207	58,656	4.2	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.1	0.1	2.9	44.8	0.1	1.0	[illegible]	4.7	46.2	[illegible]
Elk R	Chf	Chetco	Chetco R	82	30,499	0	282,474	312,973	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3	15.1	62.9	0.0	0.0	[illegible]	6.9	12.8	[illegible]
Elk R	Chf	Chetco	Chetco R	83	26,570	134	33,214	59,918	2.8	0.0	0.0	0.0	0.0	1.5	1.5	0.3	0.3	0.6	5.8	62.8	0.4	0.2	[illegible]	1.0	27.7	[illegible]
Elk R	Chf	Chetco	Chetco R	84	26,028	640	249,924	276,592	2.9	0.0	0.0	0.0	0.0	1.2	1.2	0.0	1.3	1.3	4.0	48.3	0.6	0.0	[illegible]	1.7	42.9	[illegible]
Elk R	Chf	Chetco	Chetco R	85	20,703	1,321	324,911	346,935	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	51.1	2.8	0.0	[illegible]	5.7	35.6	[illegible]
Elk R	Chf	Chetco	Chetco R	86	150,125	5,308	66,674	222,107	1.6	0.0	0.0	0.0	0.0	1.4	1.4	0.0	1.1	1.1	2.7	67.0	6.6	0.5	[illegible]	2.2	18.5	[illegible]
Elk R	Chf	Chetco	Chetco R	Av	150,125	5,308	66,674	222,107	2.2	0.0	0.0	0.0	0.0	0.8	0.8	0.1	1.0	1.1	6.5	58.4	2.1	0.1	[illegible]	3.5	27.5	[illegible]
Elk R	Chf	Elk R	Elk R	82	104,671	238	344,421	449,330	0.2	0.0	14.3	14.3	0.0	29.7	[illegible]	0.0	0.6	0.6	0.0	43.4	10.9	0.0	[illegible]	0.0	1.1	[illegible]
Elk R	Chf	Elk R	Elk R	83	79,358	589	147,911	227,858	4.3	0.0	2.7	2.7	0.7	29.1	[illegible]	0.4	2.1	[illegible]	3.0	55.6	2.8	0.0	[illegible]	0.0	3.5	[illegible]
Elk R	Chf	Elk R	Elk R	84	242,215	4,239	125,638	372,092	2.2	0.1	3.8	[illegible]	0.6	23.3	[illegible]	0.4	4.1	[illegible]	0.9	64.7	0.4	0.0	[illegible]	0.1	1.6	[illegible]
Elk R	Chf	Elk R	Elk R	85	295,873	3,835	148,375	448,083	2.1	0.1	2.6	[illegible]	0.6	13.3	[illegible]	0.4	2.3	[illegible]	2.0	76.1	0.2	0.0	[illegible]	0.4	2.1	[illegible]
Elk R	Chf	Elk R	Elk R	86	69,582	7,588	75,508	152,678	0.8	0.0	7.6	7.6	1.4	25.5	[illegible]	0.0	7.4	7.4	0.2	54.7	1.7	0.0	[illegible]	0.0	1.5	[illegible]
Elk R	Chf	Elk R	Elk R	Av	69,582	7,588	75,508	152,678	1.9	0.0	6.2	6.2	0.7	24.2	[illegible]	0.2	3.3	3.5	1.2	58.9	3.2	0.0	[illegible]	0.1	2.0	[illegible]
Fall Cr	Chf	Fall Cr	Fall Cr	84	43,397	309	127,229	170,935	0.4	0.0	25.1	[illegible]	8.0	55.9	[illegible]	0.0	0.0	0.0	0.0	9.5	1.5	0.0	[illegible]	0.0	0.0	[illegible]
Fall Cr	Chf	Fall Cr	Fall Cr	85	25,974	1,163	124,695	151,832	0.7	0.7	30.1	[illegible]	5.6	39.1	[illegible]	6.3	2.7	[illegible]	2.7	8.3	2.2	2.2	[illegible]	0.0	0.0	[illegible]
Fall Cr	Chf	Fall Cr	Fall Cr	86	26,883	589	9,125	36,697	0.6	0.0	50.1	[illegible]	4.0	39.1	[illegible]	0.0	0.0	0.0	0.0	3.0	1.9	1.9	[illegible]	0.0	0.0	[illegible]
Fall Cr	Chf	Fall Cr	Fall Cr	Av	26,883	589	9,125	36,697	0.6	0.2	35.1	[illegible]	5.9	44.7	[illegible]	2.1	0.9	3.0	0.9	6.9	1.8	1.4	[illegible]	0.0	0.0	[illegible]
Imgon	Chf	URB	Umatilla R	84	88,396	2,214	116,205	206,815	3.1	0.1	5.5	[illegible]	2.2	39.2	[illegible]	4.4	7.2	[illegible]	0.9	1.8	0.5	38.3	[illegible]	0.0	0.0	[illegible]
Imgon	Chf	URB	Umatilla R	85	209,145	4,658	1,815,799	2,029,602	0.5	0.0	11.0	[illegible]	1.0	27.4	[illegible]	1.3	0.5	[illegible]	0.3	1.8	1.3	55.5	[illegible]	0.0	0.0	[illegible]
Imgon	Chf	Wash Brights	Umatilla R	86	122,996	4,589	1,351,245	1,478,830	0.8	0.3	16.2	[illegible]	0.9	31.4	[illegible]	1.6	1.6	[illegible]	0.4	1.4	2.4	43.3	[illegible]	0.6	0.0	[illegible]
Imgon	Chf	URB	Umatilla R	Av	209,145	4,658	1,815,799	2,029,602	1.5	0.1	10.9	[illegible]	1.3	32.6	[illegible]	2.4	3.1	[illegible]	0.5	1.7	1.4	45.7	[illegible]	0.2	0.0	[illegible]
Indian Cr	Chf	Rogue R	Indian Cr	85	18,826	1,845	135,629	156,100	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	43.9	1.2	7.7	[illegible]	2.8	39.0	[illegible]
Indian Cr	Chf	Rogue R	Indian Cr	86	28,039	657	127,155	155,851	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	28.0	0.0	0.0	[illegible]	56.0	0.0	[illegible]
Indian Cr	Chf	Rogue R	Indian Cr	Av	28,039	657	127,155	155,851	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6	36.0	0.6	3.9	[illegible]	29.4	19.5	[illegible]
Klaskanine	Chf	Big Cr	Klaskanine R, N F	86	194,657	10,463	3,555,480	3,760,600	0.2	0.0	0.0	0.0	0.0	41.3	[illegible]	2.2	13.8	[illegible]	0.0	9.4	0.0	31.9	[illegible]	0.7	0.7	[illegible]
Rock Cr	Chf	Umpqua R	Umpqua R, S Fk	85	17,053	0	29,341	46,394	0.1	0.0	9.7	[illegible]	0.0	42.7	[illegible]	0.0	0.0	0.0	23.4	9.7	0.0	0.0	[illegible]	14.5	0.0	[illegible]

Appendix Table 1 (Cont). Average Percent Recovery (by Fishery) for the Last 5 Completed Brood years
(Chinook 1982 to 1986 broods; Coho 1984 to 1988 broods; Steelhead 1983 to 1987 broods)
Data downloaded Oct. 1992 (through "Finalized" 1991 returns)

Percent Recovery for All Areas

Hatchery	Sp	Stock	Release site	Br	Tagged	AD Clip Only	Untagged	Total Released	% SURV	AK SPT	AK COM	Total AK	BC SPT	BC COM	Total BC	WA SPT	WA TR	Total WA	OR SPT	OR TR	OR FW SPR	OR GNE	Total OR	CA SPT	CA TR	Total CA
SF Klask	Chf	Rogue R	Klaskanine R, S F	84	49,936	864	31,057	81,857	7.3	0.0	0.1	0.1	0.1	2.3	2.4	6.1	2.5	8.6	1.6	45.9	1.1	27.1	75.7	0.4	12.8	13.2
SF Klask	Chf	Rogue R	Klaskanine R, S F	85	30,069	2,848	218,545	251,462	0.8	0.0	0.0	0.0	0.0	2.5	2.5	0.0	0.9	0.9	4.7	56.4	0.4	32.1	93.6	1.3	1.7	2.9
SF Klask	Chf	Rogue R	Klaskanine R, S F	86	2,760	20	17,220	20,000	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.6	0.0	33.4	100.0	0.0	0.0	0.0
SF Klask	Chf	Rogue R	Klaskanine R, S F	Av	2,760	20	17,220	20,000	2.8	0.0	0.0	0.0	0.0	1.6	1.7	2.0	1.1	3.2	2.1	56.3	0.5	30.9	89.8	0.6	4.8	5.4
SF Klask	Chf	Tanner Cr	Klaskanine R, S F	82	105,139	1,366	2,373,849	2,480,354	0.1	0.0	0.0	0.0	6.1	48.0	54.1	3.1	10.2	13.3	0.0	6.1	0.0	22.4	28.5	4.1	0.0	4.1
SF Klask	Chf	Tanner Cr	Klaskanine R, S F	83	106,911	1,080	2,759,106	2,867,097	0.1	0.0	0.0	0.0	0.0	34.8	34.8	0.0	21.7	21.7	0.0	2.9	0.0	40.6	43.5	0.0	0.0	0.0
SF Klask	Chf	Tanner Cr	Klaskanine R, S F	84	101,415	1,036	2,892,321	2,994,772	1.6	0.1	0.4	0.5	2.8	38.2	41.0	8.1	10.5	18.6	0.3	6.0	0.7	34.9	41.9	0.0	0.0	0.0
SF Klask	Chf	Tanner Cr	Klaskanine R, S F	85	99,043	5,583	2,904,840	3,009,466	0.1	0.0	0.0	0.0	0.0	53.8	53.8	6.7	5.8	12.5	0.0	4.8	1.0	27.9	33.7	0.0	0.0	0.0
SF Klask	Chf	Tanner Cr	Klaskanine R, S F	86	135,975	6,576	1,199,910	1,342,461	0.1	0.0	0.0	0.0	12.9	29.0	41.9	4.8	3.2	8.1	0.0	11.3	3.2	35.5	50.0	0.0	0.0	0.0
SF Klask	Chf	Tanner Cr	Klaskanine R, S F	Av	135,975	6,576	1,199,910	1,342,461	0.4	0.0	0.1	0.1	4.4	40.8	45.1	4.1	10.3	14.4	0.1	6.2	1.0	32.3	39.5	0.8	0.0	0.8
Salmon R	Chf	Salmon R	Salmon R	82	25,734	230	24,375	50,339	2.3	0.0	34.1	34.1	0.0	40.0	40.0	0.0	0.0	0.0	0.0	0.8	25.1	0.0	25.9	0.0	0.0	0.0
Salmon R	Chf	Salmon R	Salmon R	83	26,150	754	79,990	106,894	2.6	0.0	27.9	27.9	0.0	33.0	33.0	0.7	0.0	0.7	2.2	1.2	35.1	0.0	38.5	0.0	0.0	0.0
Salmon R	Chf	Salmon R	Salmon R	84	47,818	2,414	155,626	205,858	3.1	0.0	21.8	21.8	0.0	33.7	33.7	0.0	0.7	0.7	2.4	2.0	39.4	0.0	43.8	0.0	0.0	0.0
Salmon R	Chf	Salmon R	Salmon R	85	50,820	1,908	129,423	182,151	0.6	0.0	22.4	22.4	2.2	41.6	43.8	0.0	0.0	0.0	1.1	1.7	31.0	0.0	33.8	0.0	0.0	0.0
Salmon R	Chf	Salmon R	Salmon R	86	138,096	909	3,197	142,202	1.6	0.2	27.3	27.5	1.2	32.4	33.6	0.0	0.6	0.6	0.6	4.0	33.8	0.0	38.5	0.0	0.0	0.0
Salmon R	Chf	Salmon R	Salmon R	Av	138,096	909	3,197	142,202	2.0	0.0	26.7	26.8	0.7	36.1	36.8	0.1	0.2	0.4	1.3	1.9	32.9	0.0	36.1	0.0	0.0	0.0
Stayton Pd	Chf	Tanner Cr	Willamette R & Tr	82	156,703	8,435	6,746,936	6,912,074	0.5	0.0	0.0	0.0	6.7	47.7	54.4	8.4	20.8	29.2	2.7	9.7	0.0	4.0	16.4	0.0	0.0	0.0
Stayton Pd	Chf	Tanner Cr	Willamette R & Tr	83	148,072	7,678	5,014,857	5,170,607	0.2	0.0	0.0	0.0	0.0	38.5	38.5	11.2	22.4	33.6	0.0	13.0	1.9	6.8	21.7	0.0	6.2	6.2
Stayton Pd	Chf	Tanner Cr	Willamette R & Tr	84	180,562	13,543	4,340,089	4,534,194	3.4	0.0	0.2	0.2	2.9	40.6	43.5	9.3	13.2	22.4	0.7	7.1	1.4	23.8	33.0	0.2	0.6	0.8
Stayton Pd	Chf	Tanner Cr	Willamette R & Tr	85	183,215	12,040	4,738,291	4,933,546	0.2	0.0	0.0	0.0	0.0	40.6	40.6	10.9	26.6	37.5	0.0	8.6	1.6	11.7	21.9	0.0	0.0	0.0
Stayton Pd	Chf	Tanner Cr	Willamette R & Tr	86	196,944	1,733	5,570,245	5,768,922	0.1	0.0	0.0	0.0	0.0	22.2	22.2	5.6	38.9	44.4	0.0	27.8	3.7	0.0	31.5	1.9	0.0	1.9
Stayton Pd	Chf	Tanner Cr	Willamette R & Tr	Av	196,944	1,733	5,570,245	5,768,922	0.9	0.0	0.0	0.0	1.9	37.9	39.8	9.1	24.4	33.5	0.7	13.3	1.7	9.3	24.9	0.4	1.4	1.8
Trask	Chf	Trask R	Trask R	82	140,776	6,143	314,748	461,667	0.5	0.0	56.5	56.5	0.4	39.9	40.3	0.4	1.2	1.6	0.0	0.0	0.4	1.2	1.6	0.0	0.0	0.0
Trask	Chf	Trask R	Trask R	83	140,873	3,045	331,025	474,943	0.6	0.3	49.2	49.5	0.3	41.6	42.0	1.6	0.0	1.6	1.6	3.9	1.0	0.3	6.8	0.0	0.0	0.0
Trask	Chf	Trask R	Trask R	84	139,121	8,711	362,173	510,005	0.9	0.0	42.7	42.7	2.6	42.5	45.1	0.9	1.5	2.4	0.6	4.8	1.7	0.6	7.6	0.0	2.2	2.2
Trask	Chf	Trask R	Trask R	85	83,047	2,560	362,876	448,483	0.6	0.0	41.1	41.1	6.9	41.1	48.0	0.0	0.0	0.0	0.3	4.3	6.3	0.0	10.9	0.0	0.0	0.0
Trask	Chf	Trask R	Trask R	86	142,408	5,721	210,072	358,201	0.3	0.5	56.7	57.2	6.5	27.4	34.0	0.5	0.5	0.9	0.0	1.9	3.3	1.4	6.6	0.0	1.4	1.4
Trask	Chf	Trask R	Trask R	Av	142,408	5,721	210,072	358,201	0.6	0.2	49.3	49.4	3.3	38.5	41.8	0.7	0.6	1.3	0.5	3.0	2.5	0.7	6.7	0.0	0.7	0.7

Appendix Table 1 (Cont). Average Percent Recovery (by Fishery) for the Last 5 Completed Brood years
(Chinook 1982 to 1986 broods; Coho 1984 to 1988 broods; Steelhead 1983 to 1987 broods)
Data downloaded Oct 1992 (through "Finalized" 1991 returns)

										Percent Recovery for All Areas																
Hatchery	Sp	Stock	Release site	Br	Tagged	AD Clip Only	Untagged	Total Released	% SURV	AK SPT	AK COM	Total AK	BC SPT	BC COM	Total BC	WA SPT	WA TR	Total WA	OR SPT	OR TR	OR FW SPR	OR GNET	Total OR	CA SPT	CA TR	Total CA
Spring Chinook																										
Butte Falls	Chs	Coquille R	Coquille R, S Fk	83	15,865	92	5,486	21,443	1.7	0.0	0.4	0.4	0.0	11.0	11.0	0.0	3.8	3.8	1.9	61.1	0.0	0.0	63.0	0.0	21.9	21.9
Butte Falls	Chs	Coquille R	Coquille R, S Fk	85	8,533	35	0	8,568	1.7	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7	4.3	70.3	0.0	0.0	74.6	4.3	19.5	23.8
Butte Falls	Chs	Coquille R	Coquille R, S Fk	Av	8,533	35	0	8,568	1.7	0.0	0.2	0.2	0.0	5.5	5.5	0.8	1.9	2.7	3.1	65.7	0.0	0.0	68.8	2.1	20.7	22.8
Bonneville	Chs	Carson	Lookingglass Cr	84	145,231	9,038	248	154,517	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0
Bonneville	Chs	Carson	Hood R	86	50,744	1,015	98,180	149,939	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	64.5	28.0	100.0	0.0	0.0	0.0
Bonneville	Chs	Carson	Umatilla R	86	156,649	4,100	47,360	208,109	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.4	27.6	100.0	0.0	0.0	0.0
Bonneville	Chs	Carson	Umatilla R	Av	156,649	4,100	47,360	208,109	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	45.6	51.9	100.0	0.0	0.0	0.0
Clackamas	Chs	Clackamas E	Clackamas R	84	57,522	3,284	388,520	449,326	0.3	0.0	5.9	5.9	3.4	11.2	14.6	0.0	0.0	0.0	0.0	0.0	73.7	5.9	79.6	0.0	0.0	0.0
Clackamas	Chs	Clackamas E	Clackamas R	85	78,409	4,789	694,890	778,088	0.1	0.0	8.9	8.9	0.0	3.6	3.6	0.0	0.0	0.0	0.0	0.0	58.9	28.6	87.5	0.0	0.0	0.0
Clackamas	Chs	Clackamas E	Clackamas R	86	69,409	2,498	0	71,907	0.5	0.0	18.5	18.5	2.4	22.6	25.0	0.0	6.9	6.9	0.0	0.0	44.4	5.2	49.6	0.0	0.0	0.0
Clackamas	Chs	S Santiam R	Clackamas R	86	15,553	285	0	15,838	2.3	0.0	11.9	11.9	0.0	5.2	5.2	0.3	0.0	0.3	0.0	0.0	66.5	16.2	82.8	0.0	0.0	0.0
Clackamas	Chs	S Santiam R	Clackamas R	Av	15,553	285	0	15,838	0.8	0.0	11.3	11.3	1.5	10.6	12.1	0.1	1.7	1.8	0.0	0.0	60.9	14.0	74.9	0.0	0.0	0.0
Cole R	Chs	Rogue R	Rogue R-4	82	291,919	1,857	331,393	625,169	4.3	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	4.7	60.7	0.0	0.3	65.7	6.8	27.4	34.2
Cole R	Chs	Rogue R	Rogue R 4	83	273,331	4,871	133,689	411,891	4.2	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	2.3	53.2	0.0	0.0	55.5	1.2	43.1	44.3
Cole R	Chs	Rogue R	Rogue R-4	84	244,868	5,687	691,387	941,942	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	2.9	48.9	0.0	0.2	52.0	1.8	46.1	47.9
Cole R	Chs	Rogue R	Rogue R-4	85	214,349	3,760	1,328,905	1,547,014	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	2.5	30.6	0.0	0.0	33.1	3.1	63.5	66.6
Cole R	Chs	Rogue R	Rogue R-4	86	221,817	1,038	606,826	829,681	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.2	44.8	0.0	0.0	46.0	10.5	43.4	53.9
Cole R	Chs	Rogue R	Rogue R-4	Av	221,817	1,038	606,826	829,681	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	2.7	47.6	0.0	0.1	50.5	4.7	44.7	49.4
Lookingglass	Chs	Carson	Grande Ronde R	82	100,029	4,108	675,424	779,561	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.4	0.0	63.6	100.0	0.0	0.0	0.0
Lookingglass	Chs	Carson	Grande Ronde R	83	409,356	22,533	397,581	829,470	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0
Lookingglass	Chs	Carson	Grande Ronde R	84	351,859	10,656	352,845	715,360	0.0	0.0	8.3	8.3	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	25.0	16.7	41.7	0.0	0.0	0.0
Lookingglass	Chs	Carson	Grande Ronde R	85	78,857	1,717	3,720	84,294	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0
Lookingglass	Chs	Carson	Grande Ronde R	Av	78,857	1,717	3,720	84,294	0.1	0.0	2.1	2.1	0.0	12.5	12.5	0.0	0.0	0.0	0.0	9.1	6.3	70.1	85.4	0.0	0.0	0.0
Lookingglass	Chs	Imnaha	Imnaha R	82	23,970	831	119	24,920	0.1	0.0	2.6	2.6	0.0	15.6	15.6	0.0	0.0	0.0	0.0	2.3	7.8	46.7	56.8	0.0	0.0	0.0
Lookingglass	Chs	Imnaha	Imnaha R	83	108,952	2,730	4,088	115,770	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	12.5	18.8	56.3	0.0	43.8	43.8
Lookingglass	Chs	Imnaha	Imnaha R	84	34,563	441	260	35,264	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.1	68.9	100.0	0.0	0.0	0.0
Lookingglass	Chs	Imnaha	Lookingglass Cr	85	105,354	1,708	16,471	123,533	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.6	68.4	100.0	0.0	0.0	0.0
Lookingglass	Chs	Imnaha	Imnaha R	86	186,350	11,331	1,825	199,506	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	20.0	100.0	0.0	0.0	0.0
Lookingglass	Chs	Imnaha	Imnaha R	Av	186,350	11,331	1,825	199,506	0.1	0.0	0.5	0.5	0.0	3.1	3.1	0.0	0.0	0.0	0.0	5.5	32.6	44.5	82.6	0.0	8.8	8.8

Appendix Table 1 (Cont) Average Percent Recovery (by Fishery) for the Last 5 Completed Brood years
(Chinook 1982 to 1986 broods; Coho 1984 to 1988 broods; Steelhead 1983 to 1987 broods)
Data downloaded Oct. 1992 (through "Finalized" 1991 returns)

										Percent Recovery for All Areas																
Hatchery	Sp	Stock	Release site	Br	Tagged	AD Clip Only	Untagged	Total Released	% SURV	AK SPT	AK COM	Total AK	BC SPT	BC COM	Total BC	WA SPT	WA TR	Total WA	OR SPT	OR TR	OR FW SPR	OR GNL	Total OR	CA SPT	CA TR	Total CA
Lookingglass	Chs	Lookingglass	Lookingglass Cr	82	41,513	1,958	783	44,254	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*****	100.0	0.0	0.0	0.0
Lookingglass	Chs	Lookingglass	Lookingglass Cr	84	41,973	107	5,628	47,708	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0
Lookingglass	Chs	Lookingglass	Lookingglass Cr	85	401,705	7,830	172,557	582,092	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.7	14.3	100.0	0.0	0.0	0.0
Lookingglass	Chs	Lookingglass	Lookingglass Cr	86	86,213	870	13,835	100,918	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lookingglass	Chs	Lookingglass	Lookingglass Cr	Av	86,213	870	13,835	100,918	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.4	28.6	75.0	0.0	0.0	0.0
Lookingglass	Chs	Rapid R (Id)	Lookingglass Cr	85	99,742	494	292,880	393,116	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lookingglass	Chs	Rapid R (Id)	Lookingglass Cr	86	325,705	9,127	3,327	338,159	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	285.7	42.9	[illegible]	14.3	0.0	14.3
Lookingglass	Chs	Rapid R (Id)	Lookingglass Cr	Av	325,705	9,127	3,327	338,159	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	142.9	21.4	164.3	7.1	0.0	7.1
Lookingglass	Chs	WA Fall Cr	Lookingglass Cr	83	75,227	2,766	147,560	225,553	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	86.2	100.0	0.0	0.0	0.0
Marion Fks	Chs	N Santiam R	Santiam R	82	102,536	2,297	267,309	372,142	0.1	0.0	9.7	9.7	0.0	17.2	17.2	0.0	5.4	5.4	0.0	0.0	47.3	20.4	67.7	0.0	0.0	0.0
Marion Fks	Chs	N Santiam R	Santiam R	84	31,494	545	161,166	193,205	1.3	1.1	23.4	24.5	0.0	23.0	23.0	0.0	2.4	2.4	0.0	0.0	26.4	23.7	50.0	0.0	0.0	0.0
Marion Fks	Chs	N Santiam R	Santiam R	85	63,554	2,046	118,077	183,677	0.6	0.2	1.4	1.6	0.0	5.0	5.0	1.1	3.8	5.0	0.0	1.1	54.5	29.6	85.3	0.0	3.2	3.2
Marion Fks	Chs	N Santiam R	Santiam R	86	51,655	9,841	159	61,655	1.9	0.1	13.4	13.5	1.2	7.1	8.3	0.5	1.2	1.7	0.0	0.0	61.8	14.6	76.4	0.0	0.0	0.0
Marion Fks	Chs	N Santiam R	Santiam R	Av	51,655	9,841	159	61,655	1.0	0.4	12.0	12.3	0.3	13.1	13.4	0.4	3.2	3.6	0.0	0.3	47.5	22.1	69.9	0.0	0.8	0.8
Marion Fks	Chs	S Santiam R	Santiam R	84	63,288	723	50,783	114,794	1.1	0.2	7.4	7.6	0.8	35.8	36.6	0.9	3.9	4.8	0.0	0.0	41.1	9.6	50.7	0.4	0.0	0.4
Marion Fks	Chs	Willamette R	Santiam R	83	103,118	3,598	336,060	442,776	1.0	0.2	19.2	19.4	1.0	21.0	22.0	0.3	2.1	2.4	0.2	0.9	37.5	17.5	56.2	0.0	0.0	0.0
McKenzie	Chs	McKenzie R	McKenzie R-1	84	56,906	5,169	241	62,316	1.0	0.3	17.3	17.7	0.0	20.5	20.5	0.0	3.7	3.7	0.0	0.0	39.1	19.0	58.1	0.0	0.0	0.0
McKenzie	Chs	McKenzie R	McKenzie R-1	85	58,030	4,244	330,223	392,497	1.1	0.5	5.4	5.9	0.0	11.8	11.8	0.3	1.6	1.9	0.0	0.0	39.7	40.7	80.4	0.0	0.0	0.0
McKenzie	Chs	McKenzie R	McKenzie R-1	86	58,352	3,098	0	61,450	1.5	0.5	16.9	17.4	1.6	9.4	11.1	0.0	1.6	1.6	0.0	0.0	56.1	13.8	69.9	0.0	0.0	0.0
McKenzie	Chs	McKenzie R	McKenzie R-1	Av	58,352	3,098	0	61,450	1.2	0.4	13.2	13.7	0.5	13.9	14.3	0.1	2.3	2.4	0.0	0.0	45.0	24.5	69.5	0.0	0.0	0.0
Oxbow	Chs	Carson	Lookingglass Cr	83	70,213	3,202	75,129	148,544	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	40.0	0.0	60.0	60.0
Round Butte	Chs	Deschutes R	Deschutes R-2/OR	82	265,058	7,486	966	273,510	0.8	0.0	0.0	0.0	0.0	2.9	2.9	0.5	0.0	0.5	0.5	0.0	87.8	8.3	96.6	0.0	0.0	0.0
Round Butte	Chs	Deschutes R	Deschutes R-2/OR	83	269,475	6,560	1,204	277,239	0.8	0.0	0.0	0.0	0.0	2.6	2.6	0.0	0.0	0.0	0.0	1.0	85.7	10.2	96.9	0.0	0.5	0.5
Round Butte	Chs	Deschutes R	Deschutes R-2/OR	84	125,615	2,835	433	128,883	1.4	0.0	0.0	0.0	0.0	1.4	1.4	0.0	0.0	0.0	0.0	0.5	91.5	6.5	98.0	0.0	0.0	0.0
Round Butte	Chs	Deschutes R	Deschutes R-2/OR	85	112,898	4,267	148,697	265,862	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	95.4	3.7	100.0	0.0	0.0	0.0
Round Butte	Chs	Deschutes R	Deschutes R-2/OR	86	109,809	5,533	150	115,492	2.1	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.4	0.4	0.0	0.0	96.6	2.7	99.3	0.0	0.0	0.0
Round Butte	Chs	Deschutes R	Deschutes R-2/OR	Av	109,809	5,533	150	115,492	1.4	0.0	0.0	0.0	0.0	1.4	1.4	0.1	0.1	0.2	0.1	0.5	91.4	6.3	98.3	0.0	0.1	0.1

Appendix Table 1 (Cont). Average Percent Recovery (by Fishery) for the Last 5 Completed Brood years
(Chinook 1982 to 1986 broods; Coho 1984 to 1988 broods; Steelhead 1983 to 1987 broods)
Data downloaded Oct 1992 (through "Finalized" 1991 returns)

										Percent Recovery for All Areas																	
Hatchery	Sp	Stock	Release site	Br	Tagged	AD Clip Only	Untagged	Total Released	% SURV	AK SPT	AK COM	Total AK	BC SPT	BC COM	Total BC	WA SPT	WA TR	Total WA	OR SPT	OR TR	OR SPR	OR GNET	Total OR	CA SPT	CA TR	Total CA
Rock Cr	Chs	Umpqua R	Rock Cr (N Umpqua	82	49,729	1,813	155,887	207,429	1.1	0.0	0.0	0.0	0.0	8.4	8.4	5.0	2.6	7.6	3.7	72.5	0.1	0.3	76.6	1.7	5.7	7.4
Rock Cr	Chs	Umpqua R	Rock Cr (N Umpqua	83	50,784	644	143,995	195,423	4.6	0.0	0.2	0.2	0.0	5.4	5.4	3.0	2.5	5.5	6.3	76.5	0.0	0.0	84.8	0.4	3.6	4.0
Rock Cr	Chs	Umpqua R	Rock Cr (N Umpqua	84	53,955	607	187,981	242,543	2.5	0.0	0.7	0.7	0.0	7.6	7.6	1.0	4.6	5.6	4.9	76.7	0.0	0.0	81.6	1.0	3.6	4.6
Rock Cr	Chs	Umpqua R	Rock Cr (N Umpqua	85	52,424	444	185,876	238,744	2.8	0.0	0.0	0.0	0.0	0.8	0.8	0.4	0.4	0.8	5.2	77.2	0.0	0.1	82.5	3.0	12.9	15.9
Rock Cr	Chs	Umpqua R	Rock Cr (N Umpqua	86	48,144	4,403	243,721	296,268	0.2	0.0	0.0	0.0	0.0	2.8	2.8	1.9	4.7	6.6	11.4	65.9	0.0	0.0	77.3	4.7	8.5	13.2
Rock Cr	Chs	Umpqua R	Rock Cr (N Umpqua	Av	48,144	4,403	243,721	296,268	2.2	0.0	0.2	0.2	0.0	5.0	5.0	2.3	3.0	5.2	6.3	74.1	0.0	0.1	80.5	2.2	6.9	9.1
S Sant	Chs	Imgon H	Santiam R, S Fk	84	13,282	524	131	13,937	0.8	1.5	22.4	23.9	0.0	4.3	4.3	0.0	4.3	4.3	0.0	0.0	31.0	36.6	67.6	0.0	0.0	0.0
S Sant	Chs	S Santiam R	Santiam R, S Fk	84	41,284	2,599	116,619	160,502	0.8	0.0	11.2	11.2	2.3	19.9	22.2	0.0	3.0	3.0	0.0	0.0	43.9	19.8	63.8	0.0	0.0	0.0
S Sant	Chs	S Santiam R	Santiam R, S Fk	85	25,956	106	119,373	145,435	1.4	0.0	19.2	19.2	4.5	18.7	23.2	0.0	1.3	1.3	1.3	0.0	19.4	35.5	56.2	0.0	0.0	0.0
S Sant	Chs	S Santiam R	Santiam R, S Fk	86	23,728	1,647	0	25,375	1.1	0.0	10.5	10.5	0.0	5.5	5.5	0.0	2.1	2.1	0.0	1.2	57.4	23.2	81.9	0.0	0.0	0.0
S Sant	Chs	S Santiam R	Santiam R, S Fk	Av	23,728	1,647	0	25,375	1.0	0.4	15.8	16.2	1.7	12.1	13.8	0.0	2.7	2.7	0.3	0.3	37.9	28.8	67.3	0.0	0.0	0.0
Trask	Chs	Trask R	Nestucca R	82	51,623	524	128,687	180,834	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trask	Chs	Trask R	Nestucca R	83	50,395	1,618	166,838	218,851	0.0	0.0	85.7	85.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	14.3	0.0	0.0	0.0
Trask	Chs	Trask R	Nestucca R	Av	50,395	1,618	166,838	218,851	0.0	0.0	92.9	92.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	7.1	0.0	0.0	0.0
Trask	Chs	Trask R	Trask R	82	91,881	3,824	82,896	178,601	0.5	2.1	26.2	28.3	2.1	34.6	36.6	0.0	7.9	7.9	0.5	17.8	8.9	0.0	27.2	0.0	0.0	0.0
Trask	Chs	Trask R	Trask R	83	93,919	1,934	79,869	175,722	0.6	1.8	26.6	28.4	0.8	28.7	29.4	0.0	8.6	8.6	1.3	18.0	7.4	0.0	26.8	0.0	6.9	6.9
Trask	Chs	Trask R	Trask R	84	91,598	4,707	74,768	171,073	0.8	0.4	11.9	12.3	1.2	34.7	35.9	0.0	15.5	15.5	2.0	29.4	4.2	0.0	36.7	0.0	0.6	0.6
Trask	Chs	Trask R	Trask R	85	56,769	168	106,088	163,025	0.7	0.4	15.7	16.1	0.0	20.4	20.4	2.2	15.3	17.5	4.7	38.9	2.4	0.0	46.0	0.0	0.0	0.0
Trask	Chs	Trask R	Trask R	86	84,363	726	85,137	170,226	0.4	0.0	17.7	17.7	3.4	17.7	21.1	0.0	24.9	24.9	12.5	17.7	2.6	0.0	32.8	0.0	3.4	3.4
Trask	Chs	Trask R	Trask R	Av	84,363	726	85,137	170,226	0.6	0.9	19.6	20.5	1.5	27.2	28.7	0.4	14.4	14.8	4.2	24.4	5.1	0.0	33.7	0.0	2.2	2.2
Willamette	Chs	MF Willamette	Willamette R, Mid	84	105,496	3,084	636,877	745,457	1.0	0.2	8.1	8.3	0.0	10.5	10.5	0.2	3.0	3.2	0.0	0.2	37.0	41.0	78.1	0.0	0.0	0.0
Willamette	Chs	MF Willamette	Willamette R, Mid	85	165,003	4,707	1,137,547	1,307,257	2.1	0.1	7.5	7.6	0.0	6.6	6.6	0.5	0.1	0.6	0.2	0.0	54.4	30.6	85.2	0.0	0.1	0.1
Willamette	Chs	MF Willamette	Willamette R, Mid	86	82,848	3,792	6,578	93,218	0.5	0.0	6.8	6.8	0.0	3.7	3.7	0.0	1.2	1.2	0.0	0.0	70.5	16.8	87.3	0.9	0.0	0.9
Willamette	Chs	MF Willamette	Willamette R, Mid	86	76,070	3,890	1,392	81,352	2.0	0.1	14.2	14.3	0.5	9.7	10.1	1.5	4.2	5.8	0.0	0.1	55.6	14.2	69.9	0.0	0.0	0.0
Willamette	Chs	MF Willamette	Willamette R, Mid	Av	76,070	3,890	1,392	81,352	1.4	0.1	9.2	9.2	0.1	7.6	7.7	0.5	2.1	2.7	0.1	0.1	54.4	25.6	80.3	0.2	0.0	0.2
Summer Chinook																										
Bonneville	Chsu	URB	Tanner Cr	86	100,456	2,311	328,451	431,218	0.2	0.6	21.1	21.7	6.2	29.8	36.0	0.6	1.9	2.5	0.0	4.3	0.0	35.4	39.8	0.0	0.0	0.0
Winter Chinook																										
Trask	Chw	Trask R	Trask R	86	12,912	0	0	12,912	0.5	0.0	53.1	53.1	0.0	8.8	8.8	0.0	0.0	0.0	0.0	17.6	8.8	11.8	38.2	0.0	0.0	0.0

Appendix Table 1 (Cont) Average Percent Recovery (by Fishery) for the Last 5 Completed Brood years
(Chinook 1982 to 1986 broods; Coho 1984 to 1988 broods, Steelhead 1983 to 1987 broods)
Data downloaded Oct 1992 (through "Finalized" 1991 returns)

										Percent Recovery for All Areas																
Hatchery	Sp	Stock	Release site	Br	Tagged	AD Clip Only	Untagged	Total Released	% SURV	AK SPT	AK COM	Total AK	BC SPT	BC COM	Total BC	WA SPT	WA TR	Total WA	OR SPT	OR TR	OR FW SPR	OR GNET	Total OR	CA SPT	CA TR	Total CA
Coho																										
Butte Falls	Coho	Coos R	Coos R, S Fk	84	26,196	850	40,737	67,783	0.5	0.0	0.0	0.0	0.0	2.3	2.3	1.7	0.0	1.7	20.2	45.5	0.0	0.0	65.7	5.7	24.5	30.2
Butte Falls	Coho	Coos R	Coos R, S Fk	85	10,989	351	58	11,398	7.9	0.0	0.2	0.2	0.0	0.8	0.8	0.0	0.0	0.0	14.8	42.4	0.0	0.0	57.2	9.9	31.9	41.8
Butte Falls	Coho	Coos R	Coos R, S Fk	86	27,424	0	4,659	32,083	4.0	0.0	0.0	0.0	0.5	2.7	3.3	1.4	0.3	1.7	22.2	16.8	0.0	0.0	39.0	18.7	37.3	56.0
Butte Falls	Coho	Coos R	Coos R, S Fk	87	26,772	270	2,298	29,340	5.6	0.0	0.9	0.9	0.0	6.4	6.4	3.3	1.0	4.3	22.9	8.5	0.0	0.1	31.5	32.5	24.4	56.9
Butte Falls	Coho	Coos R	Coos R, S Fk	88	22,383	761	1,840	24,984	3.2	0.0	0.0	0.0	1.1	2.9	4.0	2.5	0.0	2.5	29.6	24.2	13.6	0.0	67.3	12.5	13.6	26.1
Butte Falls	Coho	Coos R	Coos R, S Fk	Av	22,383	761	1,840	24,984	4.2	0.0	0.2	0.2	0.3	3.0	3.4	1.8	0.3	2.1	21.9	27.5	2.7	0.0	52.1	15.9	26.3	42.2
Butte Falls	Coho	Coquille R	Coquille R	84	23,784	991	59,064	83,839	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.8	54.0	1.5	0.0	76.2	10.9	12.8	23.8
Butte Falls	Coho	Coquille R	Coquille R	85	24,081	2,952	72,832	99,865	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	44.5	0.0	0.0	55.1	10.8	36.1	46.9
Butte Falls	Coho	Coquille R	Coquille R	86	27,858	0	72,060	99,918	3.6	0.0	0.0	0.0	0.0	1.4	1.4	0.4	0.0	0.4	19.5	19.3	0.0	0.0	38.7	18.3	41.1	59.4
Butte Falls	Coho	Coquille R	Coquille R	87	25,483	368	74,131	100,002	1.8	0.0	0.0	0.0	0.0	1.7	1.7	0.7	0.0	0.7	31.4	21.7	0.0	0.0	53.1	18.7	25.7	44.4
Butte Falls	Coho	Coquille R	Coquille R	88	25,076	1,184	73,217	99,477	1.0	0.0	0.0	0.0	0.0	4.7	4.7	0.0	2.9	2.9	9.4	15.3	10.6	0.0	35.3	24.2	32.8	57.0
Butte Falls	Coho	Coquille R	Coquille R	Av	25,076	1,184	73,217	99,477	2.0	0.0	0.0	0.0	0.0	1.6	1.6	0.2	0.6	0.8	17.9	30.9	2.4	0.0	51.2	16.6	29.7	46.3
Butte Falls	Coho	Eel Lake	Eel Lk	85	54,041	1,286	44,603	99,930	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1	0.8	23.2	54.1	0.1	0.1	77.6	5.7	15.9	21.7
Butte Falls	Coho	Eel Lake	Eel Lk	86	31,589	161	51,195	82,945	2.9	0.0	0.0	0.0	0.0	4.1	4.1	2.7	0.0	2.7	25.4	51.3	0.0	0.0	76.8	4.5	12.1	16.6
Butte Falls	Coho	Eel Lake	Eel Lk	87	52,320	265	53,572	106,157	2.5	0.0	0.0	0.0	0.0	0.9	0.9	1.8	0.2	2.0	33.5	19.5	0.1	0.0	53.0	18.9	25.2	44.1
Butte Falls	Coho	Eel Lake	Eel Lk	88	52,493	733	129,490	182,716	1.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.2	23.3	19.7	8.0	0.0	51.0	18.4	29.4	47.8
Butte Falls	Coho	Eel Lake	Eel Lk	Av	52,493	733	129,490	182,716	2.4	0.0	0.0	0.0	0.0	1.2	1.2	1.6	0.1	1.7	26.3	36.1	2.0	0.0	64.6	11.9	20.7	32.6
Butte Falls	Coho	Umpqua R	Umpqua R, S Fk	84	25,723	796	184,281	210,800	0.5	0.0	0.0	0.0	0.0	3.5	3.5	0.0	0.0	0.0	21.0	37.8	0.0	0.0	58.7	13.4	24.4	37.8
Butte Falls	Coho	Umpqua R	Umpqua R, S Fk	85	25,480	1,991	99,215	126,686	4.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	25.5	53.1	0.2	0.2	79.0	6.3	13.8	20.1
Butte Falls	Coho	Umpqua R	Umpqua R, S Fk	86	1,303	0	111,419	112,722	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.9	0.0	0.0	0.0	18.9	27.0	54.1	81.1
Butte Falls	Coho	Umpqua R	Umpqua R, S Fk	87	24,485	124	17,829	42,438	1.6	0.0	2.6	2.6	0.0	2.6	2.6	1.3	0.0	1.3	30.3	10.0	0.0	0.0	40.3	23.2	29.8	53.0
Butte Falls	Coho	Umpqua R	Umpqua R, S Fk	88	25,237	701	113,533	139,471	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7	33.0	16.5	10.3	0.2	60.1	18.2	20.0	38.2
Butte Falls	Coho	Umpqua R	Umpqua R, S Fk	Av	25,237	701	113,533	139,471	2.1	0.0	0.5	0.5	0.0	1.3	1.3	0.8	0.0	0.8	25.7	23.5	2.1	0.1	51.4	17.6	28.4	46.0
Bonneville	Coho	Tanner Cr	Tanner Cr	84	58,241	2,998	1,684,704	1,745,941	2.9	0.0	0.0	0.0	0.0	1.6	1.6	12.8	1.2	14.0	12.3	36.5	3.7	25.8	78.3	1.6	2.4	4.1
Bonneville	Coho	Tanner Cr	Tanner Cr	85	104,398	2,573	1,849,151	1,956,122	3.0	0.0	0.0	0.0	0.0	0.9	0.9	9.4	0.1	9.5	14.7	38.1	1.3	31.0	85.1	2.5	2.0	4.5
Bonneville	Coho	Tanner Cr	Tanner Cr	86	78,934	0	1,805,149	1,884,083	6.9	0.0	0.0	0.0	0.0	3.7	3.7	14.7	2.6	17.3	17.1	28.1	2.4	28.6	76.1	1.5	1.3	2.8
Bonneville	Coho	Tanner Cr	Tanner Cr	87	83,194	1,415	1,674,393	1,759,002	1.7	0.0	0.0	0.0	0.0	7.5	7.5	21.4	4.8	26.2	21.3	21.8	1.4	10.0	54.5	5.0	6.9	11.9
Bonneville	Coho	Tanner Cr	Tanner Cr	88	76,489	2,742	1,570,942	1,650,173	3.1	0.0	0.0	0.0	0.0	2.6	2.6	16.8	0.9	17.7	15.8	17.3	8.7	31.7	73.5	2.6	3.5	6.1
Bonneville	Coho	Tanner Cr	Tanner Cr	Av	76,489	2,742	1,570,942	1,650,173	3.5	0.0	0.0	0.0	0.0	3.2	3.2	15.0	1.9	16.9	18.2	28.8	3.5	25.4	72.9	2.7	3.2	5.9
Big Cr	Coho	Tanner Cr	Big Cr	84	31,202	475	814,426	846,103	4.6	0.0	0.0	0.0	0.0	3.8	3.8	10.7	0.5	11.2	17.6	37.3	2.7	22.8	80.5	1.6	2.9	4.5

Appendix Table 1 (Cont) Average Percent Recovery (by Fishery) for the Last 5 Completed Brood years
(Chinook 1982 to 1986 broods; Coho 1984 to 1988 broods. Steelhead 1983 to 1987 broods)
Data downloaded Oct 1992 (through "Finalized" 1991 returns)

Percent Recovery for All Areas

Hatchery	sp	Stock	Release site	Br	Tagged	AD Clip Only	Untagged	Total Released	% SURV	AK SPT	AK COM	AK Total	BC SPT	BC COM	BC Total	WA SPT	WA TR	WA Total	OR SPT	OR TR	OR FW SPR	OR GNET	OR Total	CA SPT	CA TR	CA Total
Big Cr	Coho	Big Cr	Big Cr	84	75,433	2,275	416,201	493,909	2.8	0.0	0.0	0.0	0.0	3.8	3.8	.9.9	0.9	10.8	18.0	36.3	3.1	25.1	82.5	0.8	2.1	[illegible]
Big Cr	Coho	Big Cr	Big Cr	85	76,521	2,499	363,471	442,491	2.7	0.0	0.0	0.0	0.0	0.1	0.1	6.1	0.0	6.1	12.7	43.1	0.9	33.1	[illegible]	2.1	1.8	[illegible]
Big Cr	Coho	Big Cr	Big Cr	86	70,091	1,785	517,246	589,122	8.1	0.0	0.0	0.0	0.0	3.1	3.1	10.6	2.2	12.9	22.3	28.7	2.7	26.0	79.7	2.7	1.6	[illegible]
Big Cr	Coho	Big Cr	Big Cr	87	100,126	1,297	484,641	586,064	2.4	0.0	0.0	0.0	0.0	6.9	6.9	25.6	4.0	29.6	26.1	21.5	1.4	8.9	[illegible]	3.0	2.6	[illegible]
Big Cr	Coho	Big Cr	Big Cr	88	108,636	2,100	523,697	634,433	4.1	0.0	0.0	0.0	0.2	2.3	2.4	25.6	1.3	27.0	25.5	19.4	7.1	15.2	[illegible]	2.5	0.8	[illegible]
Big Cr	Coho	Big Cr	Big Cr	Av	108,636	2,100	523,697	634,433	4.0	0.0	0.0	0.0	0.0	3.2	3.3	15.6	1.7	17.3	20.9	29.8	3.0	21.7	75.4	2.2	1.8	[illegible]
Cascade	Coho	Tanner Cr	Umahlla R	85	60.059	2,079	98,951	181 889	1.6	0.0	0.0	0.0	0.0	3.4	3.4	9.9	0.0	9.9	.13.2	..36.9	1.9	28.4	[illegible]	3.4	3.0	[illegible]
Cascade	Coho	Tanner Cr	Umatilla R	86	58,068	5,246	140,151	203,465	4.1	0.0	0.0	0.0	0.4	4.8	5.3	14.8	4.7	19.5	18.5	29.9	0.5	21.5	70.4	2.9	1.9	[illegible]
Cascade	Coho	Tanner Cr	Umatilla R	87	80.217	2.672	150,360	233.269	0.9	0.0	0.0	0.0	0.0	2.5	2.5	15.0	8.0	23.0	21.3	18.7	5.1	7.2	[illegible]	6.4	13.7	[illegible]
Cascade	Coho	Tanner Cr	Umatilla R	88	82,140	1,304	703,188	786,632	3.1	0.0	0.0	0.0	0.0	2.1	2.1	19.3	1.6	20.9	17.3	14.9	7.0	28.6	[illegible]	4.9	4.3	[illegible]
Cascade	Coho	Tanner Cr	Umatilla R	Av	82,140	1,304	703,188	786,632	2.4	0.0	0.0	0.0	0.1	3.2	3.3	14.8	3.6	18.4	17.6	25.1	3.6	21.4	[illegible]	4.9	5.7	[illegible]
Cascade	Coho	Tanner Cr	Yakima R, Lower	86	66,596	3.437	110,885	180,948	1.6	0.0	0.0	0.0	0.6	6.3	6.9	17.8	2.8	20.4	171	31.1	0.7	20.1	[illegible]	2.9	0.8	[illegible]
Cascade	Coho	Tanner Cr	Yakima R, Lower	87	81.518	685	136,560	218.763	0.9	0.0	0.0	0.0	0.0	3.7	3.7	23.7	6.7	30.4	27.2	14.6	0.9	9.7	[illegible]	6.8	6.6	[illegible]
Cascade	Coho	Tanner Cr	Yakima R, Lower	88	81,531	1.304	502.655	645.490	2.0	0.0	0.0	0.0	0.0	0.4	0.4	21.8	2.8	[illegible]	16.5	14.5	11.1	23.3	[illegible]	5.5	3.9	[illegible]
Cascade	Coho	Tanner Cr	Yakima R, Lower	Av	81,531	1,304	562,655	645,490	1.5	0.0	0.0	0.0	0.2	3.5	3.7	21.1	4.1	25.2	20.3	20.1	4.3	17.7	[illegible]	5.1	3.8	[illegible]
Cole R	Coho	Coos R	Munsel Lk	86	26,740	228	43,940	70,908	0.4	0.0	0.0	0.0	0.0	6.1	6.1	0.0	0.0	0.0	26.1	32.2	0.0	0.0	[illegible]	12.1	23.5	[illegible]
Cole R	Coho	Coos R	Morgan Cr (Coos R	85	23,398	754	31,166	55,622	4.1	0.0	0.0	0.0	0.0	7.9	7.9	2.7	1.4	4.0	31.4	11.7	0.0	0.0	[illegible]	24.1	20.9	[illegible]
							33,676	62,056	2.7	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	24.6	14.7	7.5	0.0	[illegible]	21.1	30.1	[illegible]
Cole R	Coho	Coos R	Morgan Cr (Coos R	Av	27,976	404	33,676	62,056	3.4	0.0	0.0	0.0	0.0	3.9	3.9	2.3	0.7	3.0	28.0	13.2	3.8	0.0	[illegible]	22.6	25.5	[illegible]
Cole R	Coho	Eel Lake	Eel Lk	84	25,294	2,215	163,879	191,388	1.2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	22.7	67.6	0.0	0.0	[illegible]	4.6	4.1	[illegible]
Cole R	Coho	Rogue R	Rogue R-4	84	23.752	1,268	161,196	186,216	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	14.8	0.0	0.0	[illegible]	44.2	25.9	[illegible]
Cole R	Coho	Rogue R	Rogue R-4	85	53.402	1,527	151,404	206,333	6.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	12.3	17.6	0.0	4.4	[illegible]	26.6	38.9	[illegible]
Cole R	Coho	Rogue R	Rogue R-4	86	51.304								0.0	0.0	0.0	0.0	0.0	0.0	20.2	7.3	0.0	4.7	[illegible]	32.1	35.8	[illegible]
Cole R	Coho	Rogue R	Rogue R-4	87	45,983	5,691	1,440 / 46,634	148,932 / 96,308	1.8 / 0.5	0.0 / 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.3	8.5	0.0	0.7	[illegible]	45.8	28.8	[illegible]
Cole R	Coho	Rogue R	Rogue R-4	88	27.338	395	149,577	177,310	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.8	7.1	6.0	4.1	[illegible]	36.0	16.1	[illegible]
Cole R	Coho	Rogue R	Rogue R-4	Av	27,338	395	149,577	177,310	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.9	11.1	1.2	2.8	[illegible]	36.9	29.1	[illegible]
Eagle Cr	Coho	Clackamas E	Eagle Creek	88	25,119	0	378,713	403,832	2.2	0.0	0.0	0.0	0.0	0.8	0.8	17.8	2.5	20.4	16.8	19.2	9.7	14.4	[illegible]	9.3	9.5	[illegible]
Eagle Cr	Coho	Clackamas L	Collawash R	87	15,395	1,315	90	16,800	0.4	0.0	0.0	0.0	0.0	0.0	0.0	13.8	0.0	13.8	44.9	32.7	0.0	0.0	77.7	8.5	0.0	[illegible]
Eagle Cr	Coho	Sandy R	Eagle Creek	88	25,100	0	583,861	608,961	4.7	0.0	0.0	0.0	0.0	3.4	3.4	20.7	1.9	[illegible]	17.8	13.4	9.5	16.5	[illegible]	5.5	5.4	[illegible]
Fall Cr	Coho	Alsea	Fall Cr (Alsea R)	84	25.830	855	18,651	45,336	1.9	0.0	0.0	0.0	0.0	7.3	7.3	7.3	2.3	9.6	27.0	43.7	0.0	0.0	70.7	7.3	5.0	[illegible]

Appendix Table 1 (Cont) Average Percent Recovery (by Fishery) for the Last 5 Completed Rood years
(Chinook 1982 to 1986 broods, Coho 1964 to 1988 broods, Steelhead 1983 to 1987 broods)
Data downloaded Oct 1992 (through "Finalized" 1991 returns)

Percent Recovery for All Areas

Hatchery	Sp	Stock	Release site	Br	Tagged	AD Clip Only	Untagged	Total Released	% SURV	AK SPT	AK COM	Total AK	BC SPT	BC COM	Total BC	WA SPT	WA TR	Total WA	OR SPT	OR TR	OR FW SPR	OR GNET	Total OR	CA SPT	CA TR	Total CA
Fall Cr	Coho	Fall Cr	Fall Cr (Alsea R)	84	250,544	6,399	515,809	772,752	0.8	0.0	0.0	0.0	0.0	1.2	1.2	2.5	0.2	2.7	26.8	54.1	0.0	0.0	[illegible]	8.1	7.1	[illegible]
Fall Cr	Coho	Fall Cr	Fall Cr (Alsea R)	85	73,989	5,846	870,275	950,110	2.0	0.0	0.0	0.0	0.0	0.6	0.6	0.3	0.0	0.3	20.5	55.6	0.2	0.0	[illegible]	6.9	15.9	[illegible]
Fall Cr	Coho	Fall Cr	Fall Cr (Alsea R)	86	81,494	2,517	876,865	960,876	3.1	0.0	0.0	0.0	3.1	2.4	5.5	2.0	0.1	2.1	29.6	40.6	0.2	0.2	[illegible]	12.7	9.2	[illegible]
Fall Cr	Coho	Fall Cr	Fall Cr (Alsea R)	87	154,590	3,608	1,264,947	1,423,145	0.8	0.0	0.0	0.0	0.0	11.1	11.1	6.5	3.0	[illegible]	28.6	16.0	0.4	0.0	[illegible]	17.1	17.3	[illegible]
Fall Cr	Coho	Fall Cr	Fall Cr (Alsea R)	88	159,834	5,150	998,720	1,163,704	1.3	0.0	0.0	0.0	0.0	1.0	1.0	3.2	0.6	[illegible]	41.5	22.9	10.7	0.0	[illegible]	8.9	11.2	[illegible]
Fall Cr	Coho	Fall Cr	Fall Cr (Alsea R)	Av	159,834	5,150	998,720	1,163,704	1.6	0.0	0.0	0.0	0.6	3.3	3.9	2.9	0.8	3.7	29.4	37.9	2.3	0.0	[illegible]	10.7	12.1	[illegible]
Klaskanine	Coho	Klaskanine	Klaskanine R	84	30,286	454	1,067,388	1,098,128	1.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	1.1	[illegible]	18.1	30.3	3.9	40.2	[illegible]	1.4	0.0	[illegible]
Klaskanine	Coho	Klaskanine	Klaskanine R	85	31,600	439	1,111,614	1,143,653	8.6	0.0	0.0	0.0	0.0	1.8	1.8	5.8	0.0	[illegible]	11.9	34.3	1.2	38.8	[illegible]	1.3	4.9	[illegible]
Klaskanine	Coho	Klaskanine	Klaskanine R	86	32,307	0	807,451	839,758	4.4	0.0	0.0	0.0	0.9	6.0	[illegible]	9.9	0.0	[illegible]	12.9	25.7	2.3	34.3	[illegible]	4.9	3.0	[illegible]
Klaskanine	Coho	Klaskanine	Klaskanine R	87	31,381	93	1,062,396	1,093,870	2.5	0.0	0.0	0.0	0.0	3.5	[illegible]	11.7	1.8	[illegible]	20.7	13.2	1.2	33.2	[illegible]	6.1	8.5	[illegible]
Klaskanine	Coho	Klaskanine	Klaskanine R	88	32,091	169	1,362,297	1,394,557	4.8	0.0	0.0	0.0	0.3	2.1	2.4	14.7	2.0	[illegible]	13.6	11.5	9.7	36.6	[illegible]	5.6	3.9	[illegible]
Klaskanine	Coho	Klaskanine	Klaskanine R	Av	31,762	321	799,961	832,044	4.2	0.0	0.0	0.0	0.2	2.7	2.9	9.5	1.0	[illegible]	15.4	23.0	3.7	36.6	[illegible]	3.9	4.1	[illegible]
Klaskanine	Coho	Tanner Cr	Klaskanine R	84	31,762	321	799,961	832,044	2.2	0.0	0.0	0.0	0.0	2.6	2.6	8.9	0.0	[illegible]	12.8	21.4	2.4	46.9	[illegible]	1.7	3.3	[illegible]
Klaskanine	Coho	Tanner Cr	Klaskanine R, N F	85	54,976	1,461	470,006	526,443	5.5	0.0	0.0	0.0	0.0	0.6	0.6	8.6	0.0	[illegible]	12.0	32.0	1.4	41.5	[illegible]	1.8	2.2	[illegible]
Nehalem	Coho	Fishhawk	Nehalem R, N Fk	84	73,759	7,305	486,549	567,613	0.8	0.0	[illegible]	[illegible]	0.0	0.9	0.9	7.1	0.0	7.1	25.4	54.3	0.0	0.9	[illegible]	7.4	4.1	[illegible]
Nehalem	Coho	Fishhawk	Nehalem R, N Fk	85	26,322	0	205,308	231,630	5.3	0.0	0.0	0.0	0.4	5.9	[illegible]	5.1	0.8	[illegible]	18.0	55.1	0.3	0.0	[illegible]	5.8	8.6	[illegible]
Nehalem	Coho	Fishhawk	Nehalem R, N Fk	86	25,893	745	159,799	166,437	1.3	0.0	0.0	0.0	0.0	5.2	[illegible]	8.9	0.0	[illegible]	25.5	30.8	0.0	0.0	[illegible]	13.7	15.9	[illegible]
Nehalem	Coho	Fishhawk	Nehalem R, N Fk	67	24,336	247	45,415	70,000	2.5	0.0	0.0	0.0	0.0	5.4	[illegible]	8.1	7.7	[illegible]	28.7	16.3	0.0	0.0	[illegible]	24.8	10.9	[illegible]
Nehalem	Coho	Fishhawk	Nehalem R, N Fk	Av	24,338	247	45,415	70,000	2.5	0.0	0.0	0.0	0.1	4.4	[illegible]	7.3	2.1	[illegible]	23.9	39.1	0.1	0.2	[illegible]	12.9	9.9	[illegible]
Nehalem	Coho	N Fk Nehalem	Nehalem R, N Fk	85	50,374	837	300,166	351,377	6.8	0.0	0.0	0.0	0.0	2.9	[illegible]	4.7	1.3	[illegible]	26.8	51.3	0.8	0.0	[illegible]	0.9	11.3	[illegible]
Nehalem	Coho	N Fk Nehalem	Nehalem R, N Fk	86	50,989	1,514	502,269	554,772	1.9	0.0	0.0	0.0	0.0	4.7	[illegible]	5.7	0.1	[illegible]	24.2	26.1	0.0	0.0	[illegible]	17.8	19.3	[illegible]
Nehalem	Coho	N Fk Nehalem	Nehalem R, N Fk	88	23,479	1,016	607,472	631,967	4.0	0.0	0.0	0.0	2.1	5.1	[illegible]	4.7	0.7	[illegible]	29.6	27.1	4.5	0.0	[illegible]	13.6	12.7	[illegible]
Nehalem	Coho	N Fk Nehalem	Nehalem R, N Fk	Av	23,479	1,016	607,472	631,967	4.2	0.0	0.0	0.0	0.7	4.2	[illegible]	5.0	0.7	[illegible]	26.8	35.5	1.8	0.0	[illegible]	10.8	14.5	[illegible]
Rock Cr	Coho	Cow Cr -S Ump	Cow Cr	86	23,964	521	11,419	35,904	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	22.8	43.9	0.0	0.0	[illegible]	22.8	9.6	[illegible]
															1.0	1.8	0.9	[illegible]	25.9	46.3	0.0	0.0	[illegible]	10.1	14.1	[illegible]
															0.7	1.0	0.2	1.2	18.1	54.0	0.0	0.0	[illegible]	6.2	19.7	[illegible]
Rock Cr	Coho	Umpqua	Umpqua R	Smith R	85	[illegible]	[illegible]	178,289	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0	0.0	1.8	[illegible]	20.5	44.2	0.0	0.0	[illegible]	9.4	24.1	[illegible]
Rock Cr	Coho	Umpqua R	Smith R	Av	25,555	942	83,424	109,921	2.0	0.0	0.0	0.0	0.2	0.4	0.6	0.9	1.0	[illegible]	21.5	48.2	0.0	0.0	[illegible]	8.5	19.3	[illegible]
Rock Cr	Coho	Umpqua R	Umpqua R	84	26,320	266	125,461	152,067	4.3	0.0	0.0	0.0	0.0	1.5	1.5	0.2	0.2	0.4	22.7	49.1	0.0	0.0	[illegible]	10.7	15.6	[illegible]
Rock Cr	Coho	Umpqua R	Umpqua R	85	26,808	171	144,474	171,453	1.5	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	2.2	17.1	64.6	0.0	0.3	[illegible]	1.6	14.1	[illegible]
Rock Cr	Coho	Umpqua R	Umpqua R	86	26,092	832	160,012	186,936	1.6	0.0	0.0	0.0	0.0	2.9	2.9	3.5	0.0	[illegible]	18.8	43.8	0.0	0.6	[illegible]	13.9	16.5	[illegible]
Rock Cr	Coho	Umpqua R	Umpqua R	a7	49,982	950	164,522	215,454	1.9	0.0	0.0	0.0	0.0	0.7	0.7	2.1	0.2	[illegible]	36.5	19.2	0.0	0.0	[illegible]	20.4	21.0	[illegible]
Rock Cr	Coho	Umpqua R	Umpqua R	88	51,612	1,044	182,374	235,030	2.1	0.0	0.0	0.0	0.0	1.8	1.8	0.8	0.5	1.3	31.9	23.0	11.7	0.3	[illegible]	14.7	15.3	[illegible]
Rock Cr	Coho	Umpqua R	Umpqua R	Av	51,612	1,044	162,374	235,030	2.3	0.0	0.0	0.0	0.0	1.4	1.4	1.8	0.2	1.9	25.4	39.9	2.3	0.3	[illegible]	12.2	16.5	[illegible]

Appendix Table 1 (Cont) Average Percent Recovery (by Fishery) for the Last 5 Completed Brood years
(Chinook 1982 to 1986 broods; Coho 1984 to 1988 broods; Steelhead 1983 to 1987 broods)
Data downloaded Oct. 1992 (through "Finalized" 1991 returns)

										Percent Recovery for All Areas																	
Hatchery	Sp	Stock	Release site	Br	Tagged	AD Clip Only	Untagged	Total Released	% SURV	AK SPT	AK COM	Total AK	BC SPT	BC COM	Total BC	WA SPT	WA TR	Total WA	OR SPT	OR TR	OR FW SPR	OR GNET	Total OR	CA SPT	CA TR	Total CA
SF Klask	Coho	Big Cr	Youngs R	86	25,223	515	113,243	138,981	3.1	0.0	0.7	0.7	0.0	2.8	2.8	10.4	1.2	11.6	22.4	17.7	0.8	37.2	78.0	4.6	2.2	6.8
SF Klask	Coho	Clackamas E	Youngs R	88	47,705	2,420	338,352	388,477	8.1	0.0	0.0	0.0	0.0	1.4	1.4	13.8	1.7	15.5	10.0	7.9	7.0	50.3	75.2	3.9	4.0	7.9
SF Klask	Coho	Klaskanine	Youngs R	84	14,401	0	0	14,401	0.3	0.0	0.0	0.0	0.0	0.0	0.0	9.6	7.2	16.7	14.3	52.2	0.0	16.7	83.2	0.0	0.0	0.0
SF Klask	Coho	Klaskanine	Youngs R	88	27,126	64	752,130	779,320	5.7	0.0	0.0	0.0	0.7	2.5	3.2	12.6	0.6	13.3	17.7	11.8	6.4	39.6	75.4	4.1	4.0	8.1
SF Klask	Coho	Klaskanine	Youngs R	Av	27,126	64	752,130	779,320	3.0	0.0	0.0	0.0	0.3	1.3	1.6	11.1	3.9	15.0	16.0	32.0	3.2	28.2	79.4	2.1	2.0	4.1
SF Klask	Coho	Sandy R	Youngs R	87	54,358	1,649	410,804	466,811	2.0	0.0	0.0	0.0	0.3	5.1	5.4	15.5	3.1	18.6	17.8	13.5	0.2	39.5	70.0	2.6	2.4	5.0
SF Klask	Coho	Tanner Cr	Youngs R	84	58,825	409	330,127	389,361	1.0	0.0	0.0	0.0	0.0	3.7	3.7	6.3	1.8	8.0	17.6	23.7	2.1	41.7	85.0	1.9	1.2	3.1
SF Klask	Coho	Tanner Cr	Youngs R	87	28,369	114	246,517	275,000	7.0	0.0	0.0	0.0	0.0	2.7	2.7	16.3	1.4	17.8	18.4	17.9	1.1	27.8	65.1	5.5	8.9	14.4
SF Klask	Coho	Tanner Cr	Youngs R	Av	28,369	114	246,517	275,000	4.0	0.0	0.0	0.0	0.0	3.2	3.2	11.3	1.6	12.9	18.1	20.8	1.6	34.7	75.2	3.7	5.1	8.8
S Santiam	Coho	Clackamas L	Collawash R	85	36,354	321	55	36,730	0.9	0.0	0.0	0.0	0.0	4.2	4.2	2.2	0.0	2.2	22.6	39.9	0.9	25.6	88.1	2.6	2.0	4.6
S Santiam	Coho	Clackamas L	Collawash R	86	29,547	2,168	401	32,116	1.1	0.0	0.0	0.0	0.0	6.9	6.9	6.9	0.0	6.9	20.2	33.5	0.9	22.4	77.1	4.4	4.8	9.1
S Santiam	Coho	Clackamas L	Collawash R	Av	29,547	2,168	401	32,116	1.0	0.0	0.0	0.0	0.0	5.5	5.5	4.6	0.0	4.6	21.4	36.7	0.9	24.0	83.1	3.5	3.4	6.9
Salmon R	Coho	Salmon R	Salmon R (Oregon)	84	26,206	0	432,169	458,375	0.3	0.0	0.0	0.0	0.0	21.2	21.2	5.5	0.0	5.5	18.5	34.2	10.3	0.0	68.0	0.0	10.3	10.3
Salmon R	Coho	Salmon R	Salmon R (Oregon)	85	24,470	827	228,816	254,113	0.6	0.0	0.0	0.0	0.0	8.5	8.5	5.4	0.0	5.4	29.2	33.2	8.5	0.0	70.8	0.0	15.3	15.3
Salmon R	Coho	Salmon R	Salmon R (Oregon)	86	26,249	840	501,439	528,528	0.6	0.0	0.0	0.0	4.9	25.2	30.1	4.1	4.1	8.1	26.0	22.8	1.7	0.0	50.5	0.0	11.3	11.3
Salmon R	Coho	Salmon R	Salmon R (Oregon)	87	26,102	261	459,833	486,196	0.5	0.0	0.0	0.0	3.2	0.0	3.2	11.1	2.3	13.3	28.2	7.9	7.9	0.0	44.0	20.2	19.1	39.3
Salmon R	Coho	Salmon R	Salmon R (Oregon)	88	26,708	514	273,858	301,080	1.1	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.9	4.3	11.2	29.4	31.7	0.0	72.3	14.6	8.7	23.3
Salmon R	Coho	Salmon R	Salmon R (Oregon)	Av	26,708	514	273,858	301,080	0.6	0.0	0.0	0.0	1.6	11.0	12.6	5.9	1.5	7.4	22.6	25.5	12.0	0.0	65.1	7.0	12.9	19.9
Salmon R	Coho	Siletz R	Siletz R	85	25,161	0	431,443	456,604	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	51.4	5.7	0.0	85.7	5.7	8.6	14.3
Salmon R	Coho	Siletz R	Siletz R	86	52,190	2,511	955,178	1,009,879	0.5	0.0	0.0	0.0	0.0	2.7	2.7	3.0	1.0	4.0	26.8	25.8	0.0	0.0	52.6	21.1	19.6	40.7
Salmon R	Coho	Siletz R	Siletz R	87	24,115	0	416,829	440,944	0.6	0.0	0.0	0.0	0.0	14.7	14.7	2.2	10.8	13.0	26.4	19.3	0.0	0.0	47.8	13.0	11.5	24.5
Salmon R	Coho	Siletz R	Siletz R	88	54,601	247	989,313	1,044,161	0.8	0.0	0.0	0.0	0.0	2.0	2.0	2.8	0.0	2.8	26.7	19.1	10.6	0.0	56.4	15.1	23.7	38.8
Salmon R	Coho	Siletz R	Siletz R	Av	54,601	247	989,313	1,044,161	0.5	0.0	0.0	0.0	0.0	4.8	4.8	2.0	2.9	4.9	27.6	28.9	4.1	0.0	61.6	13.7	15.9	29.6
Sandy	Coho	Sandy R	Cedar Cr (Sandy R	84	326,835	3,869	463,869	794,573	3.8	0.0	0.0	0.0	0.0	3.4	3.4	9.8	1.1	10.9	14.9	35.8	3.1	29.6	83.4	0.9	1.3	2.2
Sandy	Coho	Sandy R	Cedar Cr (Sandy R	85	404,526	10,805	474,355	889,686	6.2	0.0	0.0	0.0	0.0	1.6	1.6	11.1	0.5	11.6	14.9	41.9	2.3	24.3	83.4	1.5	1.8	3.3
Sandy	Coho	Sandy R	Cedar Cr (Sandy R	86	237,559	11,765	757,485	1,006,809	8.8	0.0	0.0	0.0	0.1	3.5	3.6	12.5	2.6	15.1	16.7	29.7	1.5	31.0	78.9	1.6	0.8	2.4
Sandy	Coho	Sandy R	Cedar Cr (Sandy R	87	134,253	2,034	924,257	1,060,544	2.4	0.0	0.0	0.0	0.0	12.7	12.7	23.1	3.3	26.4	27.0	19.6	0.7	6.6	53.9	3.0	4.0	7.0
Sandy	Coho	Sandy R	Cedar Cr (Sandy R	88	180,411	8,913	766,028	955,352	4.1	0.0	0.0	0.0	0.0	3.0	3.0	21.6	2.0	23.6	19.1	23.8	8.1	18.1	69.2	2.3	1.8	4.1
Sandy	Coho	Sandy R	Cedar Cr (Sandy R	Av	180,411	8,913	766,028	955,352	5.1	0.0	0.0	0.0	0.0	4.8	4.8	15.6	1.9	17.5	18.5	30.2	3.1	21.9	73.8	1.9	2.0	3.8
Siletz	Coho	Siletz R	Rock Cr, L (Silet	84	129,046	1,474	344,233	474,753	0.5	0.0	0.0	0.0	0.0	4.0	4.0	4.3	0.8	5.1	26.5	47.9	0.5	0.0	74.9	3.5	12.6	16.0
Siletz	Coho	Siletz R	Rock Cr, L (Silet	85	71,226	8,145	418,016	497,387	1.4	0.0	0.0	0.0	0.5	0.6	1.2	1.7	0.0	1.7	24.5	53.0	0.3	0.0	77.8	7.0	12.3	19.3
Siletz	Coho	Siletz R	Rock Cr, L (Silet	Av	71,226	8,145	418,016	497,387	0.9	0.0	0.0	0.0	0.3	2.3	2.6	3.0	0.4	3.4	25.5	50.4	0.4	0.0	79.3	5.2	12.4	17.6

Appendix Table 1 (Cont). Average Percent Recovery (by Fishery) for the Last 5 Completed Brood years
(Chinook 1982 to 1986 broods; Coho 1984 to 1988 broods; Steelhead 1983 to 1987 broods)
Data downloaded Oct. 1992 (through "Finalized" 1991 returns)

										Percent Recovery for All Areas																
Hatchery	Sp	Stock	Release site	Br	Tagged	AD Clip Only	Untagged	Total Released	% SURV	AK SPT	AK COM	Total AK	BC SPT	BC COM	Total BC	WA SPT	WA TR	Total WA	OR SPT	OR TR	OR FW SPR	OR GNET	Total OR	CA SPT	CA TR	Total CA
Trask EF Pd	Coho	Trask R	Trask R, E Fk of	84	31,252	157	729,395	760,804	0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	2.5	26.6	46.1	0.0	0.0	74.9	18.5	4.1	[illegible]
Trask EF Pd	Coho	Trask R	Trask R, E Fk of	85	31,624	726	726,680	759,030	1.6	0.0	0.0	0.0	0.0	4.7	4.7	3.5	0.0	3.5	22.1	54.4	0.2	0.0	76.7	3.2	11.9	[illegible]
Trask EF Pd	Coho	Trask R	Trask R, E Fk of	86	24,246	1,884	616,592	642,722	2.3	0.0	0.0	0.0	1.9	5.1	7.1	3.6	0.7	4.4	27.9	25.0	0.0	0.0	52.9	11.9	23.8	[illegible]
Trask EF Pd	Coho	Trask R	Trask R, E Fk of	87	25,312	1,038	776,413	802,763	1.8	0.0	0.0	0.0	0.0	2.9	2.9	5.7	0.5	6.2	31.0	18.1	0.0	0.0	49.0	12.6	29.2	[illegible]
Trask EF Pd	Coho	Trask R	Trask R, E Fk of	88	25,813	0	683,723	709,536	1.4	0.0	0.0	0.0	0.0	3.7	3.7	5.4	0.7	6.0	26.8	28.1	11.4	0.0	66.3	12.3	9.7	[illegible]
Trask EF Pd	Coho	Trask R	Trask R, E Fk of	Av	25,813	0	683,723	709,536	1.5	0.0	0.0	0.0	0.4	3.3	3.7	4.1	0.4	4.5	27.7	34.3	2.3	0.0	64.3	11.7	15.7	27.4
Trask	Coho	Trask R	Trask R	84	51,304	258	347,910	399,472	0.5	0.0	0.0	0.0	0.0	1.6	1.6	3.7	0.5	4.2	20.7	48.9	1.6	0.0	71.2	12.5	10.4	[illegible]
Trask	Coho	Trask R	Trask R	85	52,720	2,258	314,804	369,782	2.9	0.0	0.0	0.0	0.0	2.0	2.0	6.4	0.4	6.8	21.6	53.4	0.3	0.4	75.7	3.9	11.7	[illegible]
Trask	Coho	Trask R	Trask R	86	50,906	3,620	338,097	392,623	3.6	0.0	0.0	0.0	0.0	5.9	5.9	6.1	0.5	6.6	24.6	31.9	0.8	0.0	57.4	14.0	16.2	[illegible]
Trask	Coho	Trask R	Trask R	87	54,189	339	338,587	393,115	2.8	0.0	0.0	0.0	0.0	5.9	5.9	7.7	0.3	7.9	32.4	16.3	0.6	0.0	49.2	15.9	21.0	[illegible]
Trask	Coho	Trask R	Trask R	88	50,838	246	250,866	301,950	1.9	0.0	0.0	0.0	0.0	5.7	5.7	6.8	1.4	8.2	28.2	25.7	9.7	0.4	64.1	11.7	10.3	[illegible]
Trask	Coho	Trask R	Trask R	Av	50,838	246	250,866	301,950	2.3	0.0	0.0	0.0	0.0	4.2	4.2	6.1	0.6	6.7	25.5	35.2	2.6	0.2	63.5	11.6	13.9	[illegible]
Wahk Pd	Coho	Tanner Cr	Wahkeena Pond	84	49,498	0	2,831,185	2,880,683	0.5	0.0	0.0	0.0	0.0	1.6	1.6	14.1	1.2	15.3	15.1	40.1	1.4	24.5	81.0	0.8	1.4	[illegible]
Wahk Pd	Coho	Tanner Cr	Wahkeena Pond	88	13,117	184	1,039,765	1,053,066	6.6	0.0	0.0	0.0	0.0	0.6	0.6	21.6	1.5	23.0	7.5	5.9	7.3	46.2	66.9	4.1	5.3	[illegible]
Wahk Pd	Coho	Tanner Cr	Wahkeena Pond	Av	13,117	184	1,039,765	1,053,066	3.5	0.0	0.0	0.0	0.0	1.1	1.1	17.8	1.3	19.1	11.3	23.0	4.4	35.3	74.0	2.5	3.3	[illegible]
Summer Steelhead																										
Imgon	STS	Imnaha	Sheep Cr, L (Gran	85	54,290	576	60,530	115,396	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	86.7	100.0	0.0	0.0	[illegible]
Imgon	STS	Imnaha	Sheep Cr, L (Gran	86	47,836	3,461	42,441	93,738	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.1	68.9	100.0	0.0	0.0	[illegible]
Imgon	STS	Imnaha	Sheep Cr, L (Gran	87	54,874	741	191,379	246,994	0.5	0.0	0.0	0.0	0.0	2.1	2.1	0.0	0.0	0.0	0.0	0.0	37.8	60.1	97.9	0.0	0.0	[illegible]
Imgon	STS	Imnaha	Sheep Cr, L (Gran	Av	54,874	741	191,379	246,994	0.5	0.0	0.0	0.0	0.0	0.7	0.7	0.0	0.0	0.0	0.0	0.0	27.4	71.9	99.3	0.0	0.0	[illegible]
Imgon	STS	Wallowa R	Spring Cr (Wallow	85	107,435	7,129	79,988	194,552	1.3	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	19.1	80.4	99.5	0.0	0.0	[illegible]
Imgon	STS	Wallowa R	Spring Cr (Wallow	86	198,485	4,632	386,001	589,118	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	89.8	100.0	0.0	0.0	[illegible]
Imgon	STS	Wallowa R	Spring Cr (Wallow	87	158,709	2,875	360,841	522,425	0.4	0.0	0.0	0.0	0.0	1.2	1.2	0.0	0.0	0.0	0.0	0.0	22.1	76.6	98.8	0.0	0.0	[illegible]
Imgon	STS	Wallowa R	Spring Cr (Wallow	Av	158,709	2,875	360,841	522,425	0.8	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0	0.0	0.0	0.0	17.1	82.3	99.4	0.0	0.0	[illegible]
Oak Sp	STS	Umatilla R	Umatilla R	87	58,067	685	2,554	61,306	0.5	0.0	0.0	0.0	0.0	2.2	2.2	0.0	0.0	0.0	0.0	0.0	16.1	81.7	97.8	0.0	0.0	[illegible]