THE OREGON PLAN for Salmon and Watersheds

Stock Assessment of Anadromous Salmonids, 1999

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SUMMARY

Objectives for Report Period

During FY 1999 we planned to (1) record all ocean fishery recoveries of adipose fin clipped plus coded-wire-tagged (Ad+CWT) coho salmon (*Oncorhynchus kisutch*) and chinook salmon (*O. tshawytscha*) that were reported during 1999 (recovered in 1998); (2) monitor and record escapement of Ad+CWT fish that returned during 1998 and early 1999; (3) calculate catch distribution, catch contribution, and recovery rate for coho and chinook salmon released for this project; (4) liberate groups of Ad+CWT coho and chinook salmon with all major production releases from Oregon Department of Fish and Wildlife (ODFW) hatcheries.

Accomplishments in Report Period

All objectives were accomplished. The 1998 return year recovery data was recorded and previous years recovery data was updated. During the fall of 1999 we released 4 groups of Ad+CWT spring chinook salmon with 4 tag codes, 11 groups of Ad+CWT fall chinook salmon with 11 tag codes, and 1 group of Ad+CWT winter chinook salmon with 1 tag code. In the spring of 2000 we released 9 groups of Ad+CWT coho salmon with 9 tag codes, and 1 group of spring chinook salmon with 1 tagcode.

Findings in Report Period

The 1995 brood coho salmon released from coastal hatcheries were recovered at an average rate of 0.5%, and ranged from 0.0% to 1.7% across all 12 release groups. The 1995 brood coho salmon released from Columbia River hatcheries were recovered at an average rate of 0.4%, and ranged from 0.0% to 0.7% across all 5 release groups. Recovery rate for the 1993 brood coastal fall chinook salmon averaged 0.8%, and ranged from 0.0% to 3.2% across all 12 release groups. Recovery rate for the 1993 brood coastal spring chinook salmon averaged 0.6%, and ranged from 0.2% to 2.1% across all 6 release groups.

INTRODUCTION

Evaluation of hatchery programs requires monitoring of activities in the hatchery, as well as, where, when and how many hatchery fish are caught or return to spawn. Fishery management plans for commercial and recreational salmon fisheries off the west coast of North America have emphasized the need for information concerning the distribution of salmon stocks in the ocean and the contribution of each of those stocks to various fisheries. Our objectives are to (1) monitor adult production from hatchery releases; (2) evaluate rearing and release strategies that will help to improve the survival rate of hatchery-produced smolts; and (3) establish a comprehensive long-term database that will provide information needed to address issues of biology, allocation, and conservation.

METHODS

The adipose fin clipped plus coded-wire-tag (Jefferts et.al. 1963) was chose as the method of marking because its use is well established in the region, there is a regionwide sampling program for this mark, and there is an established regional data reporting, storing, and access system. Tagging levels are based on producing a minimum of 30 actual tag recoveries per group. Based on historic

levels of survival, harvest, and sampling, the following levels of tagging should meet that goal; tag 25,000 for groups with expected survivals of 0.5% or higher, and tag 50,000 for groups with expected survivals of 0.5% or lower. These levels generally agree with Reisenbichler and Hartmann (1978) who recommended tagging 25,000 fish per group for estimation of fish contribution. However, the increasing complexity of fisheries management regimes requires much higher levels of tagging (Hankin and Mohr 1990).

Analysis of variance (ANOVA) was used to compare survival and contribution rates. Least significant difference test was used to compare individual means when the ANOVA showed a significant difference. Differences were considered statistically significant at $P \leq 0.05$.

Tagging

a) Determine groups to be tagged and number of fish to tag. This is a three step process. First, all production releases are identified, based on program intent (ongoing regular smolt production), number of fish released (50,000 or more), and fish of an acceptable size (at least 2.0 gm/fish). Second, groups with adequate tagging funded by other sources are eliminated from the list. Finally, the number of fish to tag is determined based on the expected survival, generally 25,000 to 50,000 fish per group.
b) The identified groups of fish are tagged based on the manufactures recommendations and standard techniques for coded-wire tagging (Jenkinson and Bilton 1981).
c) Pre-release checks of 500 fish per group (PSC 1995) are made at least 4 weeks after tagging (Blankenship 1981).
d) All release information is reported to the Pacific States Marine Fisheries Commission and is available on their on-line computer database.

Tag Recovery

a) Snouts collected from marked fish sampled in fisheries, hatcheries, and other recovery areas are frozen and transported to the ODFW Fish Identification head lab in Clackamas, Oregon.
b) Tags are recovered, read and stored using standard techniques. Tags recovered by other agencies are sent to the Clackamas lab for verification.
c) All recovery information is reported to the Pacific States Marine Fisheries Commission and is available on their on-line computer database.

RESULTS AND DISCUSSION

Catch information from all ocean fisheries and Oregon freshwater recovery areas is complete through the 1998 return year. Release and recovery information for 1986 to 1997 broods of Ad+CWT coho salmon released for stock assessment is presented in Appendix Table 1. Release and recovery information for 1984 to 1998 broods of Ad+CWT chinook salmon released for stock assessment is presented in Appendix Table 2. Data for prior brood years is available in the 1994 annual report (Lewis 1994).

In using the recovery data in this report several cautions need to be kept in mind. (1) Spawning ground recoveries of Ad+CWT fish are not expanded. Only the number of observed recoveries is available. (2) Most freshwater fisheries outside of the Columbia River system are not sampled. A program was begun in 1986 to estimate total catch and escapement of fall chinook salmon from Salmon River hatchery (Boechler and Jacobs 1987). This program addresses these cautions starting with the 1983 brood year. A similar program was started in 1992 for Elk

River hatchery fall chinook salmon. (3) The reduced ocean salmon fishing seasons of the last several years have the potential to bias estimates of total percent recovery for coastal stocks. Reduced ocean harvest should result in increased freshwater escapement. However, due to the cautions stated above this increased escapement will not be fully documented, especially for coastal stocks.

Ocean Percent Recovery Rate

The average percent ocean recovery of various coho and chinook salmon stocks is presented in Tables 1 and 2, respectively. These data are based on production and production scale experimental groups of Ad+CWT fish. Groups of Ad+CWT fish tagged for specific research experiments and not associated with production scale releases are not included in this data. Percent recovery is calculated as (total estimated recoveries/number of tagged fish released)*100. The stock groups in these tables are based on broodstock and release location. Average percent recovery is the simple average of the brood year percent recovery. Brood year percent recovery is the percent recovery of the Ad+CWT group representing that brood year. When more than one Ad+CWT group is available for a brood year the brood year percent recovery is calculated as the weighted average of the Ad+CWT groups. Percent recoveries are weighted by the total number of fish, both marked and unmarked, associated with each Ad+CWT group.

Overall average percent ocean recovery provides a long-term evaluation of the performance of an individual stock. Overall average percent ocean recovery for coho salmon stocks ranged from 0.01% to 1.33% (Table 1). The range in percent ocean recovery suggests differences between stocks. However, it is not appropriate to use to compare stocks because it represents different sets of brood years for different stocks, and percent recovery varies as much between brood years as between stocks. Therefore, statistical analysis was only performed on stock groups with data for all of the last ten completed brood years (recoveries through age 3). Big Creek coho had the highest percent ocean recovery, significantly higher than 5 of the 13 stocks analyzed (Table 1). Rogue River and Salmon River coho had the lowest percent ocean recovery, significantly lower than 8 of the 13 stocks analyzed (Table 1). Within the Columbia River, coho released below Bonneville Dam generally had higher percent ocean recovery than coho released above Bonneville Dam. Percent ocean recovery was generally higher for coho stocks from the Umpqua River and north-coast, Nehalem and Trask Rivers, than stocks from the Rogue River and mid-coast, Alsea and Salmon Rivers, (Table 1). Percent ocean recovery is a reflection of both survival and fisheries management. Salmon River hatchery coho have the lowest total percent recovery and the second lowest ocean percent recovery for the last 10 completed brood years (Table 1). Rogue River coho, the most southern Oregon hatchery coho program, had the lowest percent ocean recovery but the highest total percent recovery for the last 10 completed brood years. Ocean fisheries for coho have been very restricted since 1994. Ocean harvest of OPI coho salmon for the last 5 years, 1994 to 1998, has occurred almost exclusively in northern fisheries, from Oregon ocean catch area 2 (Figure 5) and north.

Percent ocean recovery for 1995 brood coho was below average for all stocks, and set or tied record lows for 8 of 17 stocks, and was at or below the 1994 brood ocean recovery rate for 9 of 17 stocks. Coho catch in the OPI was restricted in 1998 because of the low stock size predicted, based in part on the very low 1997 jack returns (second lowest since 1970, PFMC 1999). Oregon ocean fisheries landed catch of coho in 1998 (2,300) was lower than the 1997 catch (6,000). The 1998 coho salmon OPI area ocean exploitation rate index 6%, the second lowest since 1970 (PFMC 1999).

Table 1. Weighted average percent ocean recovery of coho salmon stocks tagged for stock assessment. Total percent recovery (both ocean and freshwater) is also reported. However, freshwater fisheries are only sampled in the Columbia River. Percent ocean recovery (1986-1995 brood years) is not significantly different for stock groups followed by the same letter.

Stock Group		Brood Years	Overall average % recovery	Percent recovery range	1995 percent recovery	1986 - 1995 brood average Ocean	1986 - 1995 brood average Total
				COLUMBIA RIVER COHO SALMON			
Big Creek	a	1980-1995	1.08	0.02 (2 yrs) to 4.25 (1986)	0.02	0.98	2.21
Sandy River	ab	1977-1995	1.33	0.01 (1994) to 4.31 (1985)	0.03	0.86	2.01
Bonneville	abc	1980-1995	0.79	0.02 (2 yrs) to 3.15 (1986)	0.02	0.66	2.01
Umatilla River	bcd	1985-1995	0.53	0.00 (2 yrs) to 2.47 (1986)	0.04	0.49	1.05
Klaskanine River [a]		1981-1994	1.12	0.02 (1994) to 3.94 (1985)	--	0.78 [a]	1.70 [a]
Yakima River [a]		1986-1994	0.33	0.00 (1991) to 1.11 (1986)	--	0.33 [a]	0.56 [a]
Wahkeena Pond [a]		1982-1992	0.38	0.00 (3 yrs) to 1.63 (1983)	--	0.25 [a]	1.06 [a]
Tualatin River [a]		1991-1995	0.01	0.00 (3 yrs) to 0.02 (1992)	0.01	0.01 [a]	0.03 [a]
				COASTAL RIVERS COHO SALMON			
Coos River	abc	1984-1995	1.01	0.00 (1992) to 4.30 (1985)	0.02	0.73	1.55
North Umpqua R.	abc	1980-1995	1.13	0.02 (1991) to 3.97 (1984)	0.03	0.69	1.04
Nehalem River	abc	1977-1995	0.85	0.02 (3 yrs) to 3.25 (1985)	0.02	0.68	1.27
Trask River	abc	1977-1995	0.77	0.01 (3 yrs) to 2.39 (1986)	0.04	0.66	1.35
South Umpqua R.	abc	1982-1995	0.93	0.00 (2 yrs) to 4.03 (1985)	0.00	0.66	0.75
Alsea River	bcd	1975-1995	1.25	<0.01 (1991) to 4.96 (1978)	0.02	0.48	0.91
Coquille River	cd	1980-1995	0.51	0.00 (4 yrs) to 1.84 (1985)	0.00	0.38	0.86
Salmon River	d	1976-1995	0.57	0.00 (1994) to 1.99 (1976)	0.04	0.19	0.49
Rogue River	d	1977-1995	1.09	0.00 (1995) to 5.98 (1978)	0.00	0.18	2.25
E Fk Trask River [a]		1983-1992	0.78	0.01 (1991) to 1.67 (1986)	--	0.70 [a]	1.05 [a]
Eel Lake [a]		1980-1992	0.91	0.00 (1992) to 3.80 (1980)	--	0.59 [a]	1.17 [a]
Smith River[a]		1976-86, 90-91, 94-95	0.94	0.00 (1995) to 2.82 (1984)	0.00	0.25 [a]	0.32 [a]
Siletz River [a]		1977-1993	0.68	<0.01 (1992) to 2.23 (1980)	--	0.24 [a]	0.36 [a]
Siuslaw River [a]		1986, 1990-95	0.11	0.00 (4 yrs) to 0.43 (1986)	0.00	0.11 [a]	0.15 [a]
Yaquina River [a]		1993-1995	0.04	0.02 (1994) to 0.07 (1993)	0.04	0.04 [a]	0.69 [a]

a = Does not include data from all ten years.

Overall average percent ocean recovery for fall chinook salmon stocks ranged from 0.05% to 1.45% (Table 2). Percent ocean recovery of 1993 brood fall chinook was lower than the 1992 brood for 14 of 18 stocks, was lower than the overall average for 14 of 18 stocks, and set 1 record low. In contrast, Elk River and Salmon River fall chinook stocks 1993 brood percent ocean recovery was higher than average, and substantially higher than the 1992 brood. There were no apparent geographic patterns in 1993 brood percent ocean recovery. Overall average percent ocean recovery of spring chinook salmon ranged from 0.00% to 1.13% (Table 2). Ocean recovery of the 1993 brood spring chinook was lower than the 1992 brood for all stocks, was less than the overall average for all stocks, and set no record highs or lows. Percent ocean recovery for 1993 brood spring chinook was higher for southern stocks. Statistical analysis of percent ocean recovery included both spring and fall chinook. Only 8 of the 23 stocks in Table 2 had data for the last 10 completed brood years (returns through age 5). Southern stocks (Chetco, Elk, North Umpqua and Rogue River) had significantly higher percent ocean recovery rates than Trask River stock (Table 2). Percent ocean recovery was not significantly different for Trask River spring and fall chinook stocks.

Table 2. Weighted average percent ocean recovery of chinook salmon stocks tagged for stock assessment. Total percent recovery (both ocean and freshwater) is also reported. Freshwater fisheries are only sampled in the Columbia River, Salmon River and Elk River. Percent ocean recovery (1984-1993 brood years) is not significantly different for stock groups followed by the same letter.

Stock Group		Brood Years	Overall average % recovery	Percent recovery range	1993 percent recovery	1984 - 1993 brood average Ocean	Total
			FALL CHINOOK SALMON				
Chetco River	a	1977-1993	1.18	0.05 (1988) to 2.79 (1985)	0.40	1.05	1.20
Rogue Stock Columbia Rel.	ab	1982-1993	1.12	0.08 (1991) to 2.63 (1982)	0.18	0.92	1.59
Elk River	ab	1977-1993	0.89	0.11 (1982) to 3.97 (1983)	1.13	0.79	1.26
Salmon River	bc	1976-80, 82-93	0.73	0.09 (1991) to 1.86 (1976)	0.85	0.53	1.74
Trask River	c	1982-1993	0.29	0.15 (1991) to 0.52 (1984)	0.18	0.29	0.47
Rogue River [a]		1977-86, 88-89, 91-93	1.45	0.02 (1979) to 7.73 (1983)	0.31	1.11 [a]	1.33 [a]
Hunter Creek [a]		1989, 92-93	0.85	0.15 (1989) to 1.90 (1992)	0.51	0.85 [a]	0.93 [a]
Coquille River [a]		1983-88, 90-93	0.75	0.04 (1991) to 3.39 (1985)	0.41	0.77 [a]	0.90 [a]
Pistol River [a]		1988-89, 91-93	0.72	0.23 (1988) to 1.59 (1992)	0.43	0.72 [a]	0.83 [a]
Winchuck River [a]		1988-89, 91-92	0.44	0.09 (1988) to 0.74 (1992)	--	0.44 [a]	0.50 [a]
Coos River [a]		1983-85, 87-93	0.36	0.14 (3 yrs) to 1.71 (1985)	0.14	0.37 [a]	0.71 [a]
Alsea River [a]		1978-81, 84-86, 91-92	0.34	0.02 (1981) to 0.68 (1978)	--	0.33 [a]	0.53 [a]
Lower Umpqua R.[a]		1991-1993	0.31	0.14 (1991) to 0.42 (1992)	0.37	0.31 [a]	0.32 [a]
Nestucca River [a]		1977-81, 91-92	0.47	0.04 (1991) to 0.98 (1980)	--	0.11 [a]	0.21 [a]
South Umpqua R.[a]		1985, 87-93	0.05	0.00 (2 yrs) to 0.18 (1987)	0.01	0.05 [a]	0.06 [a]
			SPRING CHINOOK SALMON				
North Umpqua R.	ab	1976-1993	1.13	0.02 (1991) to 4.64 (1983)	0.38	0.76	0.81
Rogue River	ab	1980-1993	0.85	0.16 (1989) to 2.99 (1983)	0.34	0.73	1.80
Trask River	c	1977-1993	0.25	0.02 (2 yrs) to 0.73 (1977)	0.08	0.19	0.33
Coquille River [a]		1983, 1985, 88-91	0.67	0.02 (1991) to 1.71 (1983)	--	0.46 [a]	0.53 [a]
Wilson River [a]		1990-1993	0.13	0.04 (1991) to 0.26 (1990)	0.07	0.13 [a]	0.24 [a]
Nestucca River [a]		1977-83, 91-93	0.23	0.01 (1982) to 0.97 (1977)	0.08	0.10 [a]	0.23 [a]
South Umpqua R.[a]		1989-1992	0.00	0.00 (2 yrs) to 0.01 (1990)	--	0.00 [a]	0.01 [a]
			WINTER CHINOOK SALMON				
Trask River [a]		1986-88, 90-93	0.20	0.03 (1987) to 0.32 (1993)	0.32	0.20 [a]	0.38 [a]

a = Does not include data from all ten years.

Percent ocean and freshwater recovery of coho salmon stocks released from Columbia River hatcheries show similar patterns (Figure 1). Percent recovery peaked in the 1983, 1986, and 1988 brood years. Overall, percent recovery of Columbia River hatchery coho salmon shows a decreasing trend from the 1986 peak to the 1990 brood year, and is low but stable since then. Ocean coho fisheries have been very restricted since the 1994 season, 1991 brood year. Coastal coho stocks show different patterns in percent recovery than the Columbia River stocks (Figure 2). However, both Columbia River and coastal coho salmon stocks show a declining trend in percent recovery since the mid 1980's. The one exception is Rogue River which has shown higher percent freshwater recovery since the 1990 brood year.

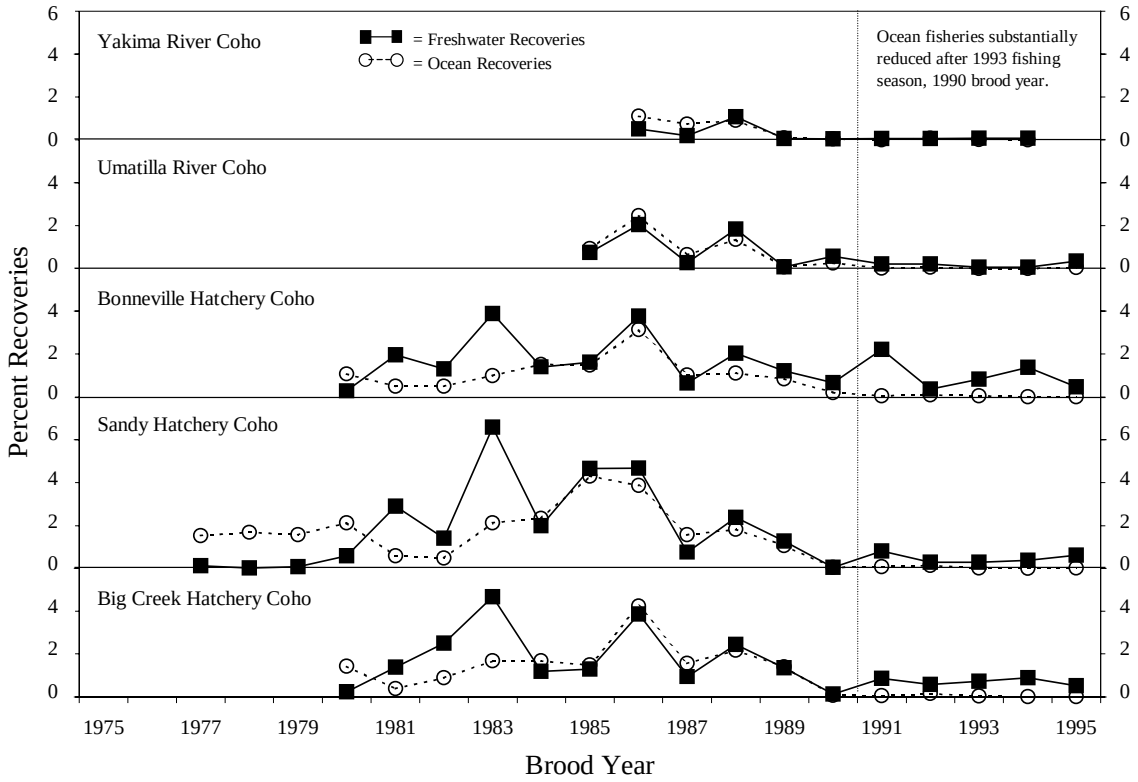

Figure 1. Weighted average percent recovery of Columbia River coho salmon stocks tagged for stock assessment.

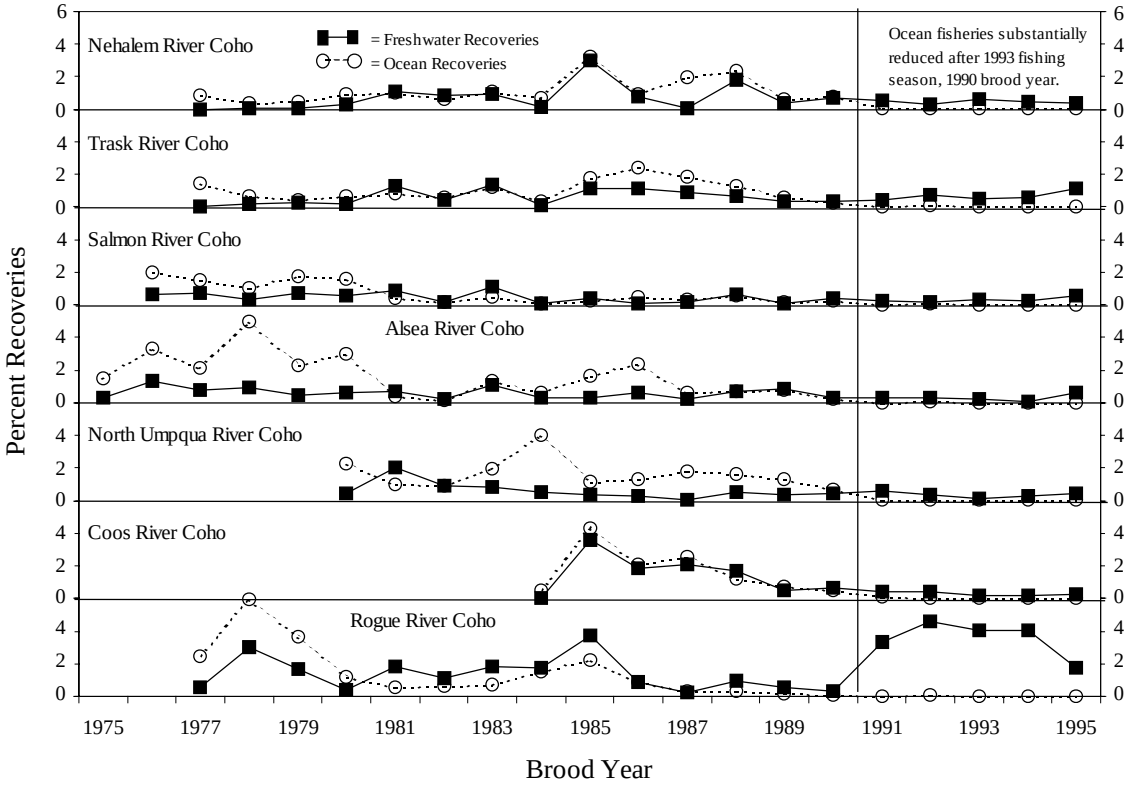

Figure 2. Weighted average percent recovery of coastal rivers coho salmon stocks tagged for stock assessment.

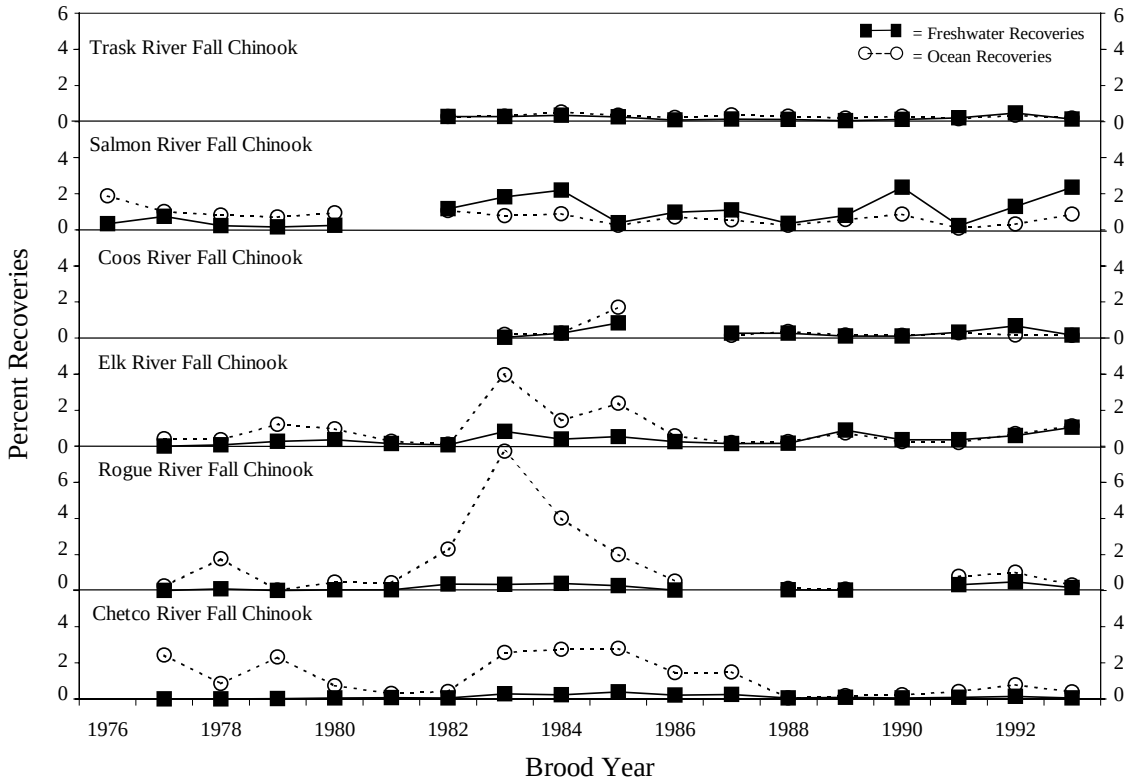

Figure 3. Weighted average percent recovery of fall chinook salmon stocks tagged for stock assessment.

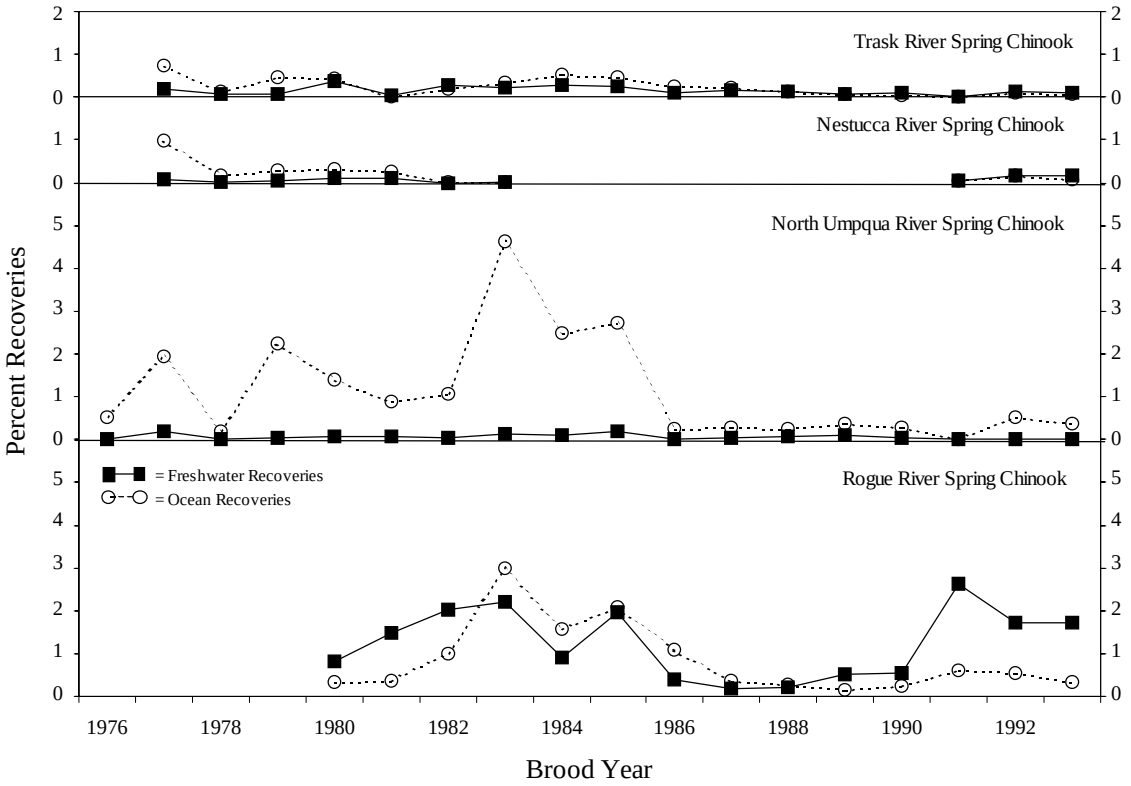

Figure 4. Weighted average percent recovery of spring chinook salmon stocks tagged for stock assessment.

Percent recovery of spring and fall chinook salmon shows the same decreasing trend since the mid 1980's seen in coho salmon (Figures 3 and 4). One exception is the Rogue spring chinook which have had a higher percent recovery since the 1990 brood year. This corresponds to the improved percent recovery seen in Rogue River coho salmon starting with the 1990 brood year. Another exception is Salmon River fall chinook which have shown an improved freshwater percent recovery since the 1980 brood year. This is partly explained by the improved sampling of the freshwater catch and escapement at Salmon River that began in 1986. In addition there does appear to be a trend toward higher percent recovery in the last 2 years for Salmon River fall chinook (Figure 3). The large variability in percent ocean recovery of North Umpqua spring chinook is not seen in their freshwater percent recovery (Figure 4). This is probably an artifact of the freshwater sampling for this stock. Recovery of Ad+CWT spring chinook is essentially limited to hatchery recoveries. Spring chinook adults for the hatchery broodstock are collected at Winchester Dam (several miles below the hatchery) and from fish entering the hatchery. Only returning hatchery fish needed for broodstock are collected at the dam, the remainder are allowed to continue up-river. Thus the number of Ad+CWT hatchery fish recovered is fairly consistent, and does not necessarily reflect the number of Ad+CWT hatchery fish in the run.

Ocean Recovery By Area

Coho ocean fisheries from Washington to California were closed in 1994 and very limited in 1995 through 1998. Since this would bias the calculation of catch distribution (percent of total ocean catch in each area) for these years this section has been changed to percent recovery by area. Average ocean percent recovery by area of coho and chinook salmon stocks is reported in Tables 3 and 4 respectively. These data are based on production and production scale experimental groups of Ad+CWT fish. Groups of Ad+CWT fish tagged for specific research experiments and not associated with production scale releases are not included in this data. The stock groups in these tables are based on broodstock and release location. Percent recovery by area is calculated as (total estimated recoveries in an area/number of tagged fish released)*100. Average percent recovery by area is the simple average of the last 10 completed brood years percent recoveries (coho 1986 through 1995, chinook 1984 through 1993). Brood year percent recovery by area is the percent recovery by area of the Ad+CWT group representing that brood year. When more than one Ad+CWT group is available for a brood year the brood year percent recovery by area is calculated as the weighted average of the Ad+CWT groups. Percent recoveries are weighted by the total number of fish, both marked and unmarked, associated with each Ad+CWT group. Ocean percent recovery by area is strongly influenced by fishing seasons and therefore does not necessarily reflect geographic distribution.

Oregon hatchery coho salmon were predominantly recovered in ocean fisheries from their release location and south (Table 3 and Figure 6). The proportion of ocean recoveries in areas from the release location and south averaged 0.78, and ranged from 0.61 to 0.90. Extremes of the range are Salmon River (0.61) and Coquille River (0.90). Although the general pattern is the same, release location determines in which specific fisheries a stock is recovered. Columbia River stocks are recovered more in Washington and less in California ocean fisheries than coastal stocks (Figure 6). Washington recoveries of coastal stocks tends to decrease and California recoveries increase as you move south (Figure 6). Canadian ocean recoveries are mainly in West Coast Vancouver Island fisheries, with very few in North Central British Columbia or Georgia Strait fisheries. Washington ocean recoveries are mainly in coastal, and not Puget Sound fisheries.

Table 3. Coho salmon average ocean recovery by area. Data are for the last ten completed brood years, 1986 to 1995. AK = Alaska, NCBC = North Central British Columbia, WCVI = West Coast Vancouver Island, GST = Georgia Strait, PS = Puget Sound, WA = Washington Coast, CA = California. Area of release is underlined.

							Oregon Ocean Catch Area[a]					
Stock Group	AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA
COLUMBIA RIVER COHO SALMON												
Yakima River [b]	0.00	0.00	0.02	0.00	0.00	0.07	0.02	0.03	0.08	0.07	0.01	0.04
Umatilla River	0.00	0.00	0.03	0.00	0.00	0.09	0.03	0.05	0.10	0.11	0.02	0.06
Bonneville	0.00	0.00	0.04	0.00	0.00	0.12	0.04	0.07	0.17	0.14	0.02	0.05
Wahkeena Pond [b]	0.00	0.00	0.01	0.00	0.01	0.06	0.00	0.01	0.03	0.07	0.00	0.07
Sandy River	0.00	0.00	0.05	0.00	0.00	0.15	0.05	0.09	0.25	0.21	0.02	0.04
Tualatin River [b]	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Big Creek	0.00	0.00	0.05	0.01	0.00	0.17	0.05	0.09	0.26	0.28	0.04	0.05
Klaskanine River [b]	0.00	0.00	0.06	0.00	0.01	0.11	0.04	0.09	0.15	0.18	0.02	0.13
COASTAL RIVERS COHO SALMON												
Nehalem River	0.00	0.00	0.05	0.00	0.00	0.08	0.03	0.05	0.09	0.15	0.04	0.21
Trask River	0.00	0.00	0.04	0.00	0.00	0.06	0.02	0.05	0.11	0.15	0.04	0.20
E Fk Trask River [b]	0.00	0.00	0.03	0.00	0.00	0.06	0.03	0.04	0.10	0.16	0.04	0.23
Salmon River	0.00	0.00	0.03	0.00	0.00	0.02	0.01	0.02	0.04	0.03	0.01	0.04
Siletz River [b]	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.01	0.04	0.06	0.01	0.09
Yaquina River [b]	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02
Alsea River	0.00	0.00	0.02	0.00	0.00	0.02	0.01	0.02	0.08	0.19	0.03	0.11
Siuslaw River [b]	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00	0.01	0.02	0.01	0.05
North Umpqua River	0.00	0.00	0.02	0.00	0.00	0.02	0.01	0.03	0.10	0.24	0.04	0.23
South Umpqua River	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.02	0.06	0.15	0.05	0.35
Smith River [b]	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.03	0.08	0.01	0.09
Eel Lake [b]	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.02	0.08	0.23	0.04	0.19
Coos River	0.00	0.00	0.04	0.00	0.01	0.01	0.01	0.03	0.06	0.17	0.04	0.35
Coquille River	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.02	0.09	0.04	0.22
Rogue River	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.12

a = Oregon ocean areas displayed in Figure 5. b = Does not include data from all ten years.

Ocean recoveries of Oregon coastal fall chinook salmon splits the stocks into three groups (Table 4 and Figure 7). Trask, Salmon and Alsea stocks are almost exclusively recovered in Alaska and British Columbia fisheries. Coos, Coquille, and Elk stocks are recovered more in Oregon and Washington and less in Alaska and British Columbia fisheries than the prior stocks. Rogue, Pistol, Chetco, and Winchuck stocks are rarely recovered in Alaska and British Columbia fisheries but are recovered in California fisheries more than the prior stocks. These grouping agree with hypothesized migration patterns for Oregon coastal fall chinook salmon (Nicholas and Hankin 1988). Rogue River fall chinook released in the Columbia River were recovered more in Oregon and Washington, and less in California ocean fisheries than fall chinook released in the Rogue River (Table 4). Canadian ocean recoveries of Trask to Alsea stocks are mainly in North Central British Columbia fisheries, of Umpqua to Elk stocks are in both North Central British Columbia and West Coast Vancouver Island fisheries, and of Rogue to Winchuck stocks are mainly in West Coast Vancouver Island fisheries (Table 4). Very few Oregon coastal fall chinook are recovered in the Georgia Strait Fisheries (Table 4). Washington recoveries of Oregon coastal fall chinook are mainly in coastal fisheries with very few in Puget Sound fisheries (Table 4).

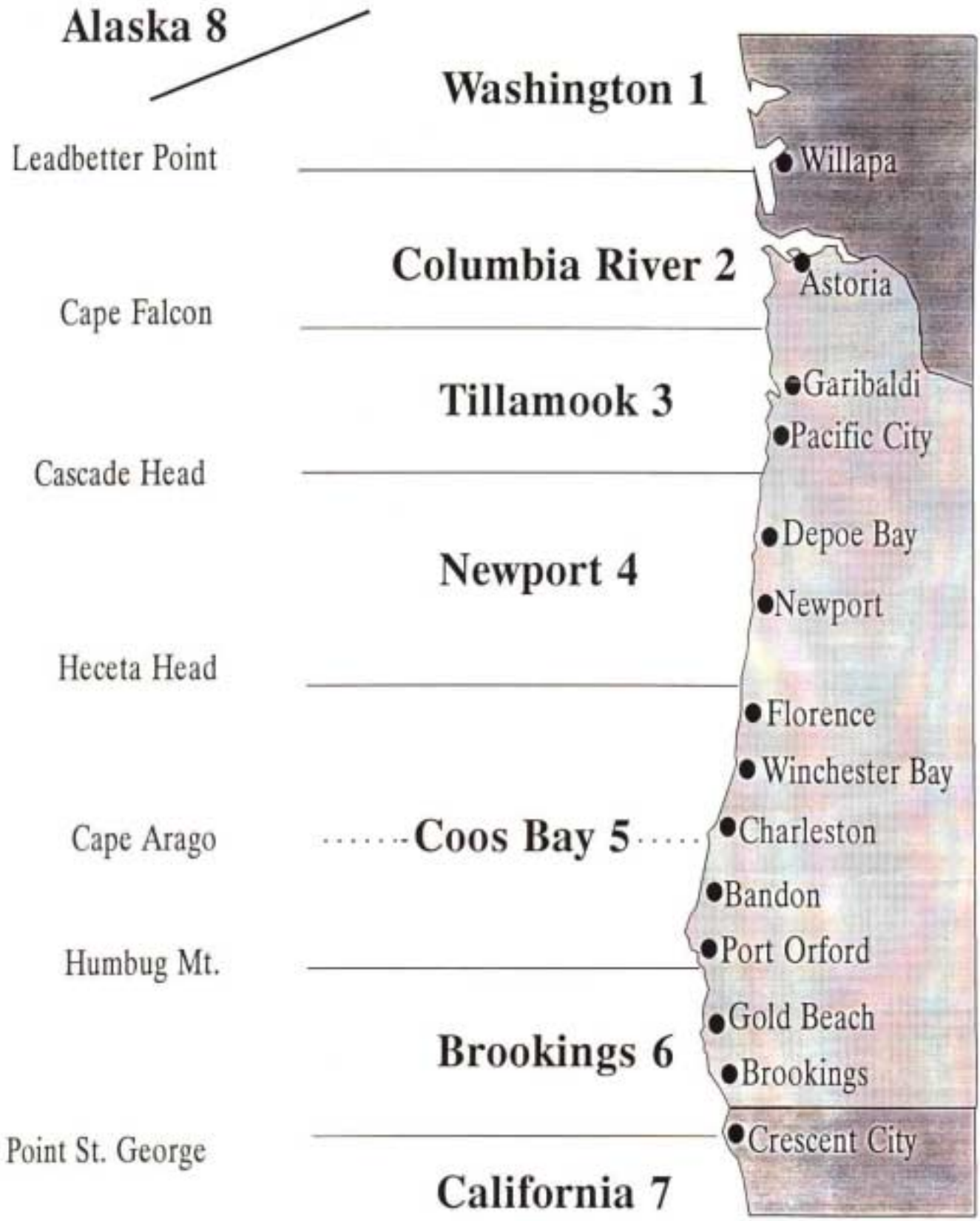

Figure 5. Catch areas for Oregon ocean salmon fisheries.

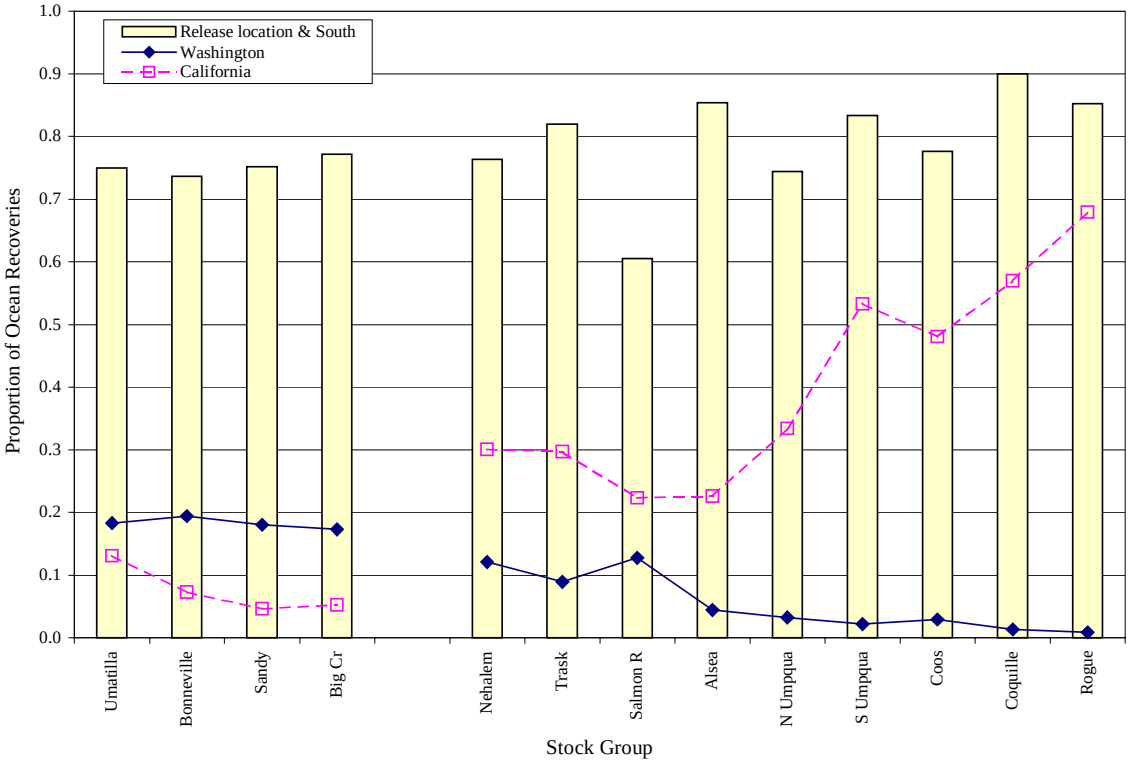

Figure 6. Coho salmon proportion of ocean recoveries in Washington, California, and release location and south. Data is for coho salmon stocks with Ad+CWT groups for all 1986 through 1995 brood years.

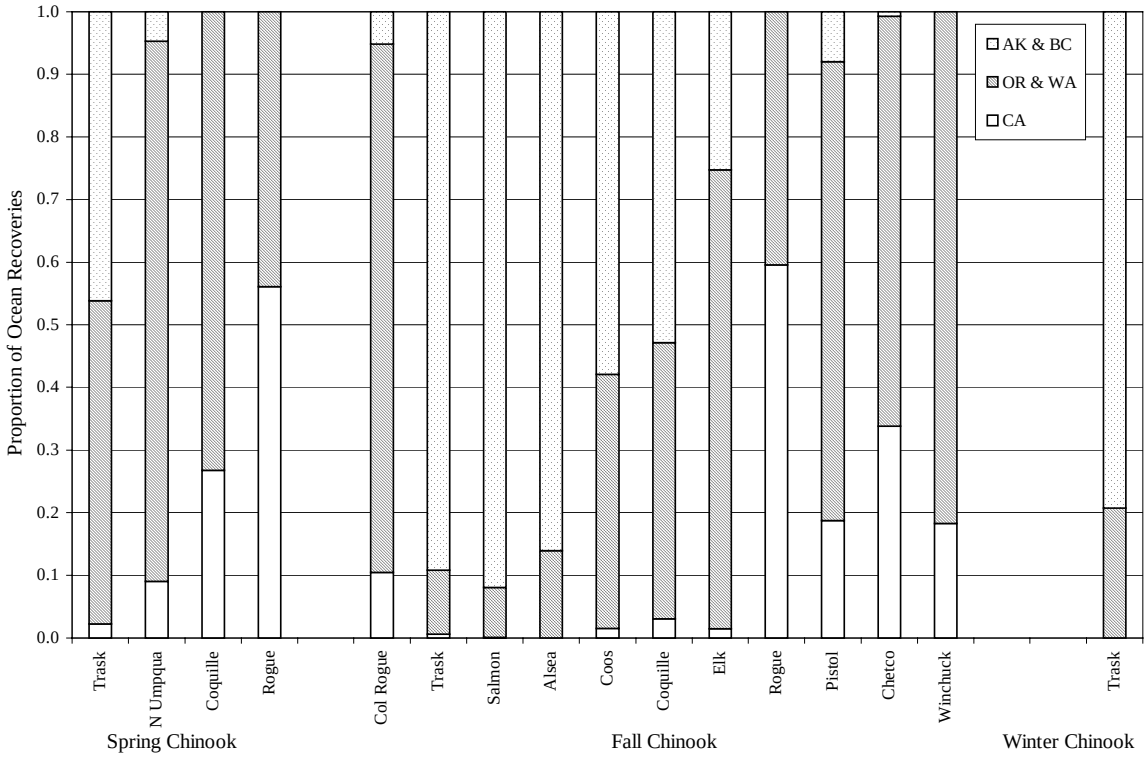

Figure 7. Chinook salmon proportion of ocean recoveries in northern (AK & BC), central (WA & OR), and southern (CA) fisheries. Data is for 1984 through 1993 brood years.

Nicholas and Hankin (1988) classified the migration patterns of the spring chinook salmon stocks in Table 4 as; Wilson, Trask and Nestucca Rivers north migrating, Umpqua River north and south migrating, and Rogue River south migrating. Ocean recovery by area data from Ad+CWT fish support these migration classifications (Table 4 and Figure 6). Although not classified by Nicholas and Hankin (1988), Coquille stock appears to have a north and south migration pattern. Spring chinook show a southward shift in their actual recovery areas in comparison to fall chinook from the same river. However, the tendency toward north, south, or north and south migration pattern is the same for fall chinook and spring chinook from the same basin (Table 4). The southern shift in actual catch areas may be related to the earlier return of spring chinook salmon to their natal rivers upon maturation. Recovery distribution with in Canadian and Washington fisheries for spring chinook is similar to that described for fall chinook.

Table 4. Chinook salmon average ocean recovery by area. Data are for the last ten completed brood years, 1984 to 1993. AK = Alaska, NCBC = North Central British Columbia, WCVI = West Coast Vancouver Island, GST = Georgia Strait, PS = Puget Sound, WA = Washington Coast, CA = California. Area of release is underlined.

							Oregon Ocean Catch Area[a]					
Stock Group	AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA
FALL CHINOOK SALMON												
Rogue Stock Columbia Rel.	0.00	0.00	0.04	0.00	0.00	0.09	0.01	0.06	0.29	0.31	0.02	0.10
Trask River	0.13	0.08	0.06	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
Nestucca River [b]	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Salmon River	0.21	0.19	0.09	0.00	0.00	0.01	0.00	0.03	0.01	0.00	0.00	0.00
Alsea River [b]	0.13	0.12	0.04	0.00	0.01	0.01	0.00	0.03	0.00	0.00	0.00	0.00
Lower Umpqua R.[b]	0.12	0.05	0.02	0.00	0.00	0.00	0.00	0.02	0.08	0.03	0.00	0.00
South Umpqua R.[b]	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00
Coos River [b]	0.06	0.08	0.07	0.00	0.00	0.02	0.00	0.02	0.06	0.05	0.00	0.01
Coquille River [b]	0.14	0.11	0.15	0.00	0.00	0.02	0.00	0.01	0.12	0.18	0.00	0.02
Elk River	0.06	0.06	0.08	0.00	0.00	0.03	0.00	0.02	0.15	0.36	0.02	0.01
Rogue River [b]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.09	0.30	0.05	0.66
Hunter Creek [b]	0.01	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.51	0.11	0.05	0.15
Pistol River [b]	0.00	0.00	0.05	0.00	0.00	0.02	0.00	0.01	0.37	0.07	0.06	0.14
Chetco River	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.13	0.40	0.14	0.35
Winchuck River [b]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.20	0.02	0.13	0.08
SPRING CHINOOK SALMON												
Wilson River [b]	0.03	0.00	0.00	0.00	0.00	0.01	0.00	0.06	0.02	0.00	0.00	0.01
Trask River	0.05	0.03	0.02	0.00	0.00	0.03	0.00	0.02	0.04	0.01	0.00	0.00
Nestucca River [b]	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.02	0.06	0.00	0.00	0.00
North Umpqua R.	0.01	0.01	0.02	0.00	0.00	0.03	0.00	0.02	0.26	0.33	0.01	0.07
South Umpqua R.[b]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coquille River [b]	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.09	0.22	0.01	0.12
Rogue River	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.18	0.03	0.41
WINTER CHINOOK SALMON												
Trask River [b]	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00

a = Oregon ocean areas displayed in Figure 5. b = Does not include data from all ten years.

Freshwater Percent Recovery Rate

The average percent freshwater recovery of various coho and chinook salmon stocks is presented in Tables 5 and 6, respectively. Freshwater percent recovery is calculated in the same way as ocean percent recovery. Calculation of a freshwater recovery rate is dependent on accurate and representative sampling/accounting in all freshwater recovery areas. Fish recovered at hatcheries are well sampled and accounted for. However, the proportion of the returning hatchery fish collected at hatcheries varies based on annual water flow, hatchery trap efficiency, and location of the hatchery in the basin. Freshwater fisheries are sampled in the Columbia Basin and for chinook in a few coastal basins (Salmon River, Elk River and Tillamook Bay in a few years). Spawning grounds are sampled to document the number of wild fish spawning and the proportion of hatchery fish in the spawning population. However, this sampling does not allow for estimation of the total number of Ad+CWT fish recovered, only the number of observed recoveries is reported. The one exception to this is for Salmon River Fall chinook where a mark-recapture program does provide the means of expanding observed Ad+CWT recoveries to estimates of total Ad+CWT fish present.

Table 5. Weighted average percent freshwater (FW) recovery of coho salmon stocks tagged for stock assessment. Total percent recovery is also reported. Freshwater fisheries are only sampled in the Columbia River. Percent freshwater recovery (1986-1995 brood) is not significantly different for stocks followed by the same letter (Columbia and Coastal stocks tested separately).

Stock Group		Brood Years	Overall average % recovery	Percent FW recovery range	1995 percent recovery	1986 - 1995 brood average FW	1986 - 1995 brood average Total
				COLUMBIA RIVER COHO SALMON			
Bonneville	A	1980-1995	1.50	0.28 (1980) to 3.90 (1983)	0.48	1.36	2.21
Big Creek	A	1980-1995	1.48	0.14 (1990) to 4.67 (1983)	0.53	1.24	2.01
Sandy River	A	1977-1995	1.57	0.02 (1978) to 6.58 (1983)	0.62	1.15	2.01
Umatilla River	B	1985-1995	0.58	0.05 (1994) to 2.05 (1986)	0.35	0.57	1.05
Klaskanine River [a]		1981-1994	1.66	0.20 (1990) to 4.00 (1983)	--	0.92 [a]	1.70 [a]
Wahkeena Pond [a]		1982-1992	1.07	0.00 (3 yrs) to 5.54 (1983)	--	0.80 [a]	0.56 [a]
Yakima River [a]		1986-1994	0.23	0.03 (1990) to 1.07 (1988)	--	0.23 [a]	1.06 [a]
Tualatin River [a]		1991-1995	0.03	0.00 (1993) to 0.09 (1994)	0.01	0.03 [a]	0.03 [a]
				COASTAL RIVERS COHO SALMON			
Rogue River	a	1977-1995	1.93	0.20 (1987) to 4.60 (1992)	1.72	2.06	1.55
Coos River	b	1984-1995	0.99	0.04 (1984) to 3.57 (1985)	0.23	0.82	1.04
Trask River	bc	1977-1995	0.63	0.00 (1977) to 1.41 (1983)	1.16	0.69	1.27
Nehalem River	bc	1977-1995	0.65	<0.01 (1977) to 2.96 (1985)	0.34	0.59	1.35
Coquille River	bc	1980-1995	0.59	<0.01 (2 yrs) to 2.17 (1981)	0.37	0.48	0.75
Alsea River	bc	1975-1995	0.54	0.03 (1994) to 1.31 (1976)	0.61	0.43	0.91
North Umpqua R.	bc	1980-1995	0.54	0.08 (1987) to 1.99 (1981)	0.46	0.35	0.86
Salmon River	bc	1976-1995	0.43	0.11 (1989) to 1.10 (1983)	0.56	0.30	0.49
South Umpqua R.	c	1982-1995	0.07	0.00 (2 yrs) to 0.19 (1988)	0.01	0.09	2.25
Yaquina River [a]		1993-1995	0.64	0.44 (1994) to 1.02 (1993)	0.47	0.64 [a]	1.05 [a]
Eel Lake [a]		1980-1992	0.64	0.00 (2 yrs) to 1.53 (1986)	--	0.58 [a]	1.17 [a]
E Fk Trask River [a]		1983-1992	0.33	0.08 (1984) to 0.64 (1986)	--	0.35 [a]	0.32 [a]
Siletz River [a]		1977-1993	0.29	0.08 (2 yrs) to 0.91 (1981)	--	0.12 [a]	0.36 [a]
Smith River[a]		1976-86, 90-91, 94-95	0.05	0.00 (2 yrs) to 0.18 (1990)	0.00	0.07 [a]	0.15 [a]
Siuslaw River [a]		1986, 1990-95	0.04	0.00 (3 yrs) to 0.13 (1990)	0.00	0.04 [a]	0.69 [a]

a = Does not include data from all ten years.

Table 6. Weighted average percent freshwater recovery of chinook salmon stocks tagged for stock assessment. Total percent recovery is also reported. Freshwater fisheries are only sampled in the Columbia River. Percent freshwater recovery (1984-1993 brood) is not significantly different for stocks followed by the same letter.

Stock Group		Brood Years	Overall average % recovery	Percent recovery range	1993 percent recovery	1984 - 1993 brood average FW	1984 - 1993 brood average Total
				FALL CHINOOK SALMON			
Salmon River	a	1976-80, 82-93	0.99	0.14 (1979) to 2.36 (2 yrs)	2.36	1.21	1.74
Rogue Stock Columbia Rel.	b	1982-1993	0.82	0.31 (1989) to 2.19 (1982)	0.38	0.67	1.59
Elk River	bc	1977-1993	0.38	0.01 (1977) to 1.06 (1993)	1.06	0.48	1.26
Trask River	cd	1982-1993	0.20	0.04 (1989) to 0.47 (1992)	0.13	0.19	0.47
Chetco River	cd	1977-1993	0.12	0.00 (2 yrs) to 0.40 (1985)	0.05	0.15	1.20
Coos River [a]		1983-85, 87-93	0.30	0.04 (1983) to 0.84 (1985)	0.17	0.33 [a]	0.71 [a]
Rogue River [a]		1977-86, 88-89, 91-93	0.18	0.00 (1979) to 0.48 (1992)	0.17	0.22 [a]	1.33 [a]
Alsea River [a]		1978-81, 84-86, 91-92	0.13	0.02 (1979) to 0.34 (1992)	--	0.19 [a]	0.53 [a]
Coquille River [a]		1983-88, 90-93	0.13	0.00 (1991) to 0.67 (1985)	0.02	0.14 [a]	0.90 [a]
Pistol River [a]		1988-89, 91-93	0.10	0.05 (1988) to 0.20 (1992)	0.06	0.10 [a]	0.83 [a]
Nestucca River [a]		1977-81, 91-92	0.09	0.01 (1978) to 0.21 (1980)	--	0.10 [a]	0.21 [a]
Hunter Creek [a]		1989, 92-93	0.08	0.02 (1989) to 0.15 (1992)	0.07	0.08 [a]	0.93 [a]
Winchuck River [a]		1988-89, 91-92	0.06	0.01 (1988) to 0.11 (1992)	--	0.06 [a]	0.50 [a]
Lower Umpqua R.[a]		1991-1993	0.01	0.00 (1992) to 0.01 (2 yrs)	0.01	0.01 [a]	0.32 [a]
South Umpqua R.[a]		1985, 87-93	0.00	0.00 (5 yrs) to 0.02 (1992)	0.00	0.00 [a]	0.06 [a]
				SPRING CHINOOK SALMON			
Rogue River	a	1980-1993	1.24	0.19 (1987) to 2.62 (1991)	1.73	1.08	1.80
Trask River	cd	1977-1993	0.15	0.02 (1991) to 0.36 (1980)	0.11	0.14	0.33
North Umpqua R.	d	1976-1993	0.06	0.00 (2 yrs) to 0.18 (1985)	0.02	0.06	0.81
Wilson River [a]		1990-1993	0.11	0.04 (1991) to 0.16 (1993)	0.16	0.11 [a]	0.24 [a]
Nestucca River [a]		1977-83, 91-93	0.08	0.00 (1982) to 0.18 (1993)	0.18	0.13 [a]	0.23 [a]
Coquille River [a]		1983, 1985, 88-91	0.07	0.00 (1990) to 0.30 (1985)	--	0.07 [a]	0.53 [a]
South Umpqua R.[a]		1989-1992	0.00	0.00 (2yrs) to <0.01 (1992)	--	0.00 [a]	0.01 [a]
				WINTER CHINOOK SALMON			
Trask River [a]		1986-88, 90-93	0.18	0.00 (2 yrs) to 0.48 (1992)	0.31	0.18 [a]	0.38 [a]

a = Does not include data from all ten years.

Overall average percent freshwater recovery for coho salmon ranged from 0.03% to 1.93% (Table 5). The 1995 brood coho percent freshwater recovery was below the long-term average for 14 of 17 stocks, and set record lows for 2 stocks. However, 1995 brood coho percent freshwater recovery rate was higher than the 1994 rate for 9 of 17 stocks. For these stocks the average freshwater recovery rate for the 1995 brood was 0.54%, more than double the 1994 brood rate 0.24%. The OPI ocean exploitation rate index decreased slightly, from 10% in 1994 to 6% in 1995 (PFMC 1999). This could explaining part, but not all, of the higher percent recovery for some 1995 brood coho stocks. Freshwater recovery rate tends to be higher for Columbia Basin stocks because Columbia Basin fisheries are sampled. This is clear from a comparison of the overall average percent ocean recovery (Table 1) and percent freshwater recovery (Table 5). Percent freshwater recovery is higher than ocean recovery for 7 of 8 Columbia River stocks, and 3 of 15 coastal stocks (Figure 6).

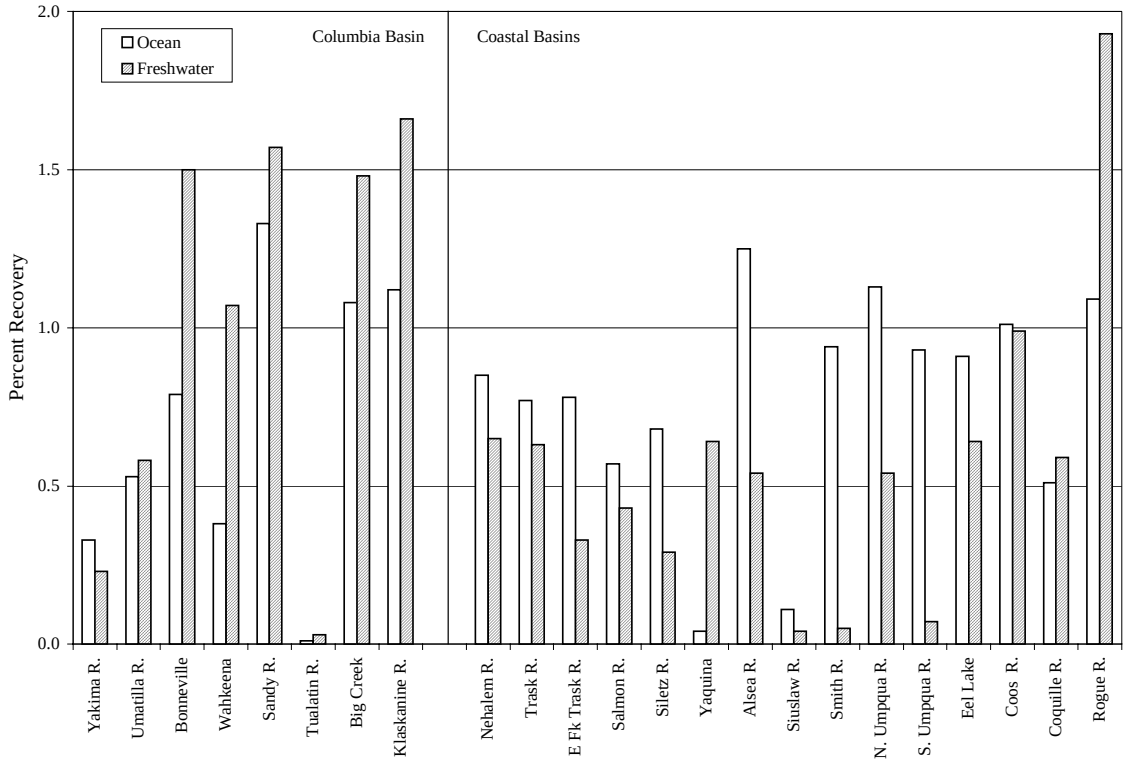

Figure 8. Comparison of overall average ocean and freshwater percent recovery of coho salmon stocks tagged for stock assessment.

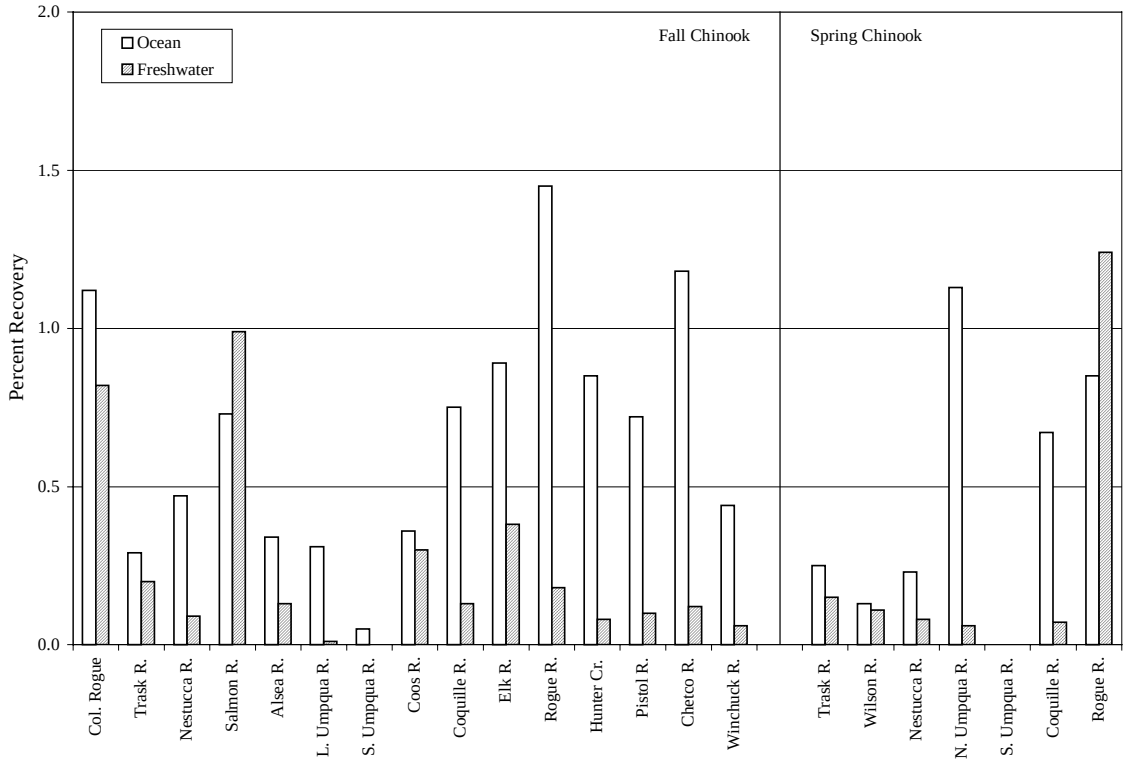

Figure 9. Comparison of overall average ocean and freshwater percent recovery of chinook salmon stocks tagged for stock assessment.

Generally freshwater fisheries are sampled in the Columbia Basin and are not sampled in coastal basins. Therefore, the statistical analysis was performed separately for these two areas. Statistical differences in coho percent freshwater recovery are reported in Table 5. Percent freshwater recovery was significantly higher for Columbia Basin coho released below Bonneville dam than for coho released above the dam (Table 5). Rogue River coho percent freshwater recovery was significantly higher than all other coastal stock, and Coos River coho was significantly higher than South Umpqua River coho (Table 5). These results are very different from those for ocean percent recovery (Table 1). This difference is most likely the result of differences in hatchery recovery efficiency, the proportion of migrating coho that enter the trap, and the location of the hatchery trap within the basin.

Overall average percent freshwater recovery for chinook salmon ranged from 0.00% to 1.24% (Table 6). The 1993 brood percent freshwater recovery was at or below the long-term average for 12 of 18 stocks, was at or below the 1992 brood rate for 12 of 18 stocks, and set 1 record low. However, the 1993 brood percent freshwater recovery rate also set or equaled record highs for 5 of 18 stocks. Of these 5 stocks 3 are of particular interest. Salmon River and Elk River fall chinook both had higher than average ocean and freshwater percent recovery (Tables 2 and 6). This improved survival is reflected in Figure 3, and the last 2 brood years suggest a possible increasing trend for these 2 stocks. Rogue River spring chinook also had higher than percent freshwater recovery for the 1993 brood. This continues a trend of improved survival since the 1991 brood year (Figure 4), that corresponds with improved survival of Rogue River stock coho (Figure 2). Freshwater fisheries are only sampled in the Columbia Basin, Salmon River and recently started in Elk River. Freshwater recovery rate exceeds ocean recovery rate for Salmon River stock fall chinook, the only coastal basin with complete accounting of hatchery returns over the last 10 brood years (Figure 7).

Statistical analysis of percent freshwater recovery included both spring and fall chinook, and the results are reported in Table 6. Only 8 of the 23 stocks in Table 6 had data for the last 10 completed brood years (returns through age 5). Unlike percent ocean recovery (Table 2), where southern stocks were significantly higher than northern stocks, there is no geographic pattern in percent freshwater recovery (Table 6). Percent freshwater recovery was not significantly different for Trask River spring and fall chinook stocks.

Freshwater Recovery By Area

Weighted average percent freshwater recoveries by area is calculated in the same way as percent ocean recovery by area. Average percent freshwater recovery by area for the last 10 completed brood years is reported in Table 7 for coho salmon and Table 8 for chinook salmon. Freshwater sport harvest is only available for the Columbia River system, for Salmon River (creel begun in 1986), and Elk River (creel begun in 1992). Recoveries on spawning grounds are not expanded for sampling rate and are thus not reported, except for Salmon River chinook where expansions are calculated. The “Other freshwater recoveries” column consists mostly of recoveries in test fisheries and lower river seining projects.

Percent recovery in freshwater harvest of Columbia River coho salmon ranges from about ½ to substantially higher than their percent recovery at the hatchery (Table 7). Because of the inability to estimate total survival to spawning grounds this data cannot be used to calculate freshwater exploitation rate. However, it does suggest the rate has probably been fairly high. Wahkeena Pond and Yakima River stocks do not have adult recovery sites and therefore have very

low hatchery returns in relation to harvest. Klaskanine hatchery coho are exposed to a terminal gillnet fishery in Youngs Bay and thus have a much higher catch and lower hatchery return than the other stocks. Gillnet catch above Bonneville Dam is very low for stocks released below the dam, however, it is 30% to 40% of the total gillnet catch of stocks released above the dam (Table 7). Coastal stocks are essentially only recovered at the hatchery. Siuslaw, South Umpqua, and Smith River stocks are all off station releases with limited adult recovery abilities, thus they appear to have almost no freshwater recoveries in Table 7. Salmon River coho salmon do have estimates of sport catch as a side effect of the sampling for fall chinook salmon. Since this sampling does not target coho salmon, recoveries are not expanded in all years. However, this minimum estimate of freshwater catch for Salmon River coho is 14.3% of the total estimated freshwater recoveries.

Table 7. Weighted average percent recovery, in various freshwater areas, of coho salmon stocks tagged for stock assessment. Data are for the last ten completed brood years, 1986 to 1995. NA = Data not available.

Stock Group	Esturay & river sport	Gillnet Catch Below Bonn.	Gillnet Catch Above Bonn.	Tribal ceremonial & subsistence	Hatchery returns	Spawning ground recoveries	Other freshwater recoveries
COLUMBIA RIVER COHO SALMON							
Bonneville	0.17	0.25	0.00	0.00	0.94	NA	0.00
Big Creek	0.20	0.29	0.00	0.00	0.75	NA	0.00
Sandy River	0.17	0.29	0.00	0.00	0.70	NA	0.00
Umatilla River	0.12	0.14	0.06	0.00	0.25	NA	0.00
Klaskanine River [b]	0.17	0.61	0.00	0.00	0.14	NA	0.00
Wahkeena Pond [b]	0.19	0.38	0.01	0.00	0.22	NA	0.01
Yakima River [b]	0.10	0.07	0.04	0.00	0.03	NA	0.00
Tualatin River [b]	0.03	0.00	0.00	0.00	0.00	NA	0.00
COASTAL RIVERS COHO SALMON							
Rogue River	NA	0.00	0.00	0.00	2.05	NA	0.01
Coos River	NA	0.00	0.00	0.00	0.80	NA	0.00
Trask River	NA	0.00	0.00	0.00	0.64	NA	0.00
Nehalem River	NA	0.00	0.00	0.00	0.55	NA	0.00
Coquille River	NA	0.00	0.00	0.00	0.47	NA	0.00
Alsea River	NA	0.00	0.00	0.00	0.41	NA	0.00
North Umpqua River	NA	0.00	0.00	0.00	0.31	NA	0.00
Salmon River	0.04	0.00	0.00	0.00	0.24	NA	0.00
South Umpqua River	NA	0.00	0.00	0.00	0.06	NA	0.00
Yaquina River [b]	NA	0.00	0.00	0.00	0.61	NA	0.00
Eel Lake [b]	NA	0.00	0.00	0.00	0.57	NA	0.00
E Fk Trask River [b]	NA	0.00	0.00	0.00	0.31	NA	0.00
Siletz River [b]	NA	0.00	0.00	0.00	0.10	NA	0.00
Smith River [b]	NA	0.00	0.00	0.00	0.07	NA	0.00
Siuslaw River [b]	NA	0.00	0.00	0.00	0.02	NA	0.00

a = Does not include data from all ten years.

Percent recovery in freshwater harvest of Rogue River stock fall chinook salmon released in the Columbia River is about 60% of their percent recovery at the hatchery (Table 8). As with Columbia River coho salmon stocks this suggests high freshwater harvest rates. Coastal chinook salmon are harvested extensively in freshwater fisheries that are generally not sampled. Percent recovery at the

hatchery of Salmon, Trask and Alsea River fall chinook is very similar (Table 8). However, percent recovery of Salmon River stock in all freshwater areas is 6 to 7 times that of Trask and Alsea River stocks, because of the sampling program in Salmon River. The high percent recovery on spawning grounds for Salmon River stock (Table 8) is partly an artifact of the sampling program. Fish that return to the hatchery in excess of spawning needs are secondarily tagged and released above the hatchery weir (including Ad+CWT fish) as part of a mark-recapture program. Thus, many fish that would have been recovered at the hatchery are actually recovered on the spawning grounds. The approximate freshwater exploitation rate for Salmon River fall chinook is 34% (estimated from Table 8).

Table 8. Weighted average percent recovery, in various freshwater areas, of chinook salmon stocks tagged for stock assessment. Data are for the last ten completed brood years, 1984 to 1993. NA = Data not available.

Stock Group	Esturay & river sport	Gillnet Catch Below Bonn.	Gillnet Catch Above Bonn.	Tribal ceremonial & subsistence	Hatchery returns	Spawning ground recoveries	Other freshwater recoveries
			FALL CHINOOK SALMON				
Salmon River	0.41	0.00	0.00	0.00	0.09	0.70	0.00
Rogue Stock	0.10	0.13	0.00	0.00	0.41	NA	0.00
Columbia Rel. Elk River	0.20 [b]	0.00	0.00	0.00	0.30	NA	0.00
Trask River	NA	0.00	0.00	0.00	0.14	NA	0.00
Chetco River	NA	0.00	0.00	0.00	0.07	NA	0.01
Coos River [a]	NA	0.00	0.00	0.00	0.32	NA	0.00
Rogue River [a]	NA	0.00	0.00	0.00	0.17	NA	0.02
Alsea River [a]	NA	0.00	0.00	0.00	0.19	NA	0.00
Coquille River [a]	NA	0.00	0.00	0.00	0.13	NA	0.00
Pistol River [a]	NA	0.00	0.00	0.00	0.03	NA	0.00
Nestucca River [a]	NA	0.00	0.00	0.00	0.06	NA	0.00
Hunter Creek [a]	NA	0.00	0.00	0.00	0.01	NA	0.00
Winchuck River [a]	NA	0.00	0.00	0.00	0.01	NA	0.00
Lower Umpqua R.[a]	NA	0.00	0.00	0.00	0.00	NA	0.00
South Umpqua R.[a]	NA	0.00	0.00	0.00	0.00	NA	0.00
			SPRING CHINOOK SALMON				
Rogue River	NA	0.00	0.00	0.00	1.07	NA	0.00
Trask River	NA	0.00	0.00	0.00	0.13	NA	0.00
North Umpqua R.	NA	0.00	0.00	0.00	0.06	NA	0.00
Wilson River [a]	NA	0.00	0.00	0.00	0.10	NA	0.00
Nestucca River [a]	NA	0.00	0.00	0.00	0.12	NA	0.00
Coquille River [a]	NA	0.00	0.00	0.00	0.07	NA	0.00
South Umpqua R.[a]	NA	0.00	0.00	0.00	0.00	NA	0.00
			WINTER CHINOOK SALMON				
Trask River [a]	NA	0.00	0.00	0.00	0.11	NA	0.00

a = Does not include data from all ten years. b = 1989-93 broods, freshwater creel begun in 1992.

The inadequacies of documenting freshwater returns of coastal chinook creates some interesting results in the spring chinook data. North Umpqua stock, which has the highest percent ocean recoveries (Table 2) has one of the lowest percent freshwater recoveries (Table 8). For brood years 1984 to 1993, Rogue and North Umpqua spring chinook have similar percent ocean recoveries (Table 2), are

both recovered predominately in Oregon and California ocean fisheries (Table 4), and both hatcheries are located fairly high in there respective basins. However, for the 1984 to 1993 brood years they have very different percent recovery at the hatchery (Rogue 1.07%, North Umpqua 0.06%, Table 8). This is probably an effect of the difference in adult recapture methods. Rogue stock is recovered at the base of an impassable dam, North Umpqua stock relies on collections at Winchester Dam and on fish swimming in with no in river barrier.

Oregon Contribution Rate

Contribution rate to Oregon ocean and freshwater fisheries, calculated as (number caught/1,000 pounds of fish released), is presented in Table 9 for coho salmon and in Table 10 for chinook salmon stocks. The method used to calculate the overall average Oregon contribution rate is the same as that used to calculate the overall average percent ocean recovery. Contribution rate is a reflection of both survival and catch distribution. Contribution rate, therefore, gives a more complete appraisal of the impact of particular fisheries on specific stocks.

Table 9. Weighted average Oregon ocean and freshwater (FW) contribution rate (adults caught/1,000 pounds released) for coho salmon stocks. Oregon ocean contribution rate (1986-1995 brood years) is not significantly different for stock groups followed by the same letter. NA = Data not available.

Stock Group		Brood Years	Average ocean contribution	Oregon ocean contribution range	1995 ocean cont.	1986 - 1995 brood average Ocean	1986 - 1995 brood average FW
			COLUMBIA RIVER COHO SALMON				
Big Creek	a	1980-1995	108.2	0.0 (2 yrs) to 470.2 (1986)	0.3	91.9	64.2
Sandy River	a	1977-1995	139.8	0.0 (2 yrs) to 468.6 (1986)	2.6	91.3	68.0
Bonneville	ab	1980-1995	78.8	0.0 (1991) to 306.5 (1986)	0.2	59.6	55.7
Umatilla River	abc	1985-1995	53.4	0.0 (3 yrs) to 278.0 (1986)	2.0	48.4	46.7
Klaskanine River [a]		1981-1994	92.5	0.0 (2 yrs) to 405.5 (1985)	--	55.3 [a]	91.2 [a]
Yakima River [a]		1986-1994	31.4	0.0 (3 yrs) to 105.9 (1986)	--	31.4 [a]	28.9 [a]
Wahkeena Pond [a]		1982-1992	42.2	0.0 (6 yrs) to 270.4 (1983)	--	15.7 [a]	85.3 [a]
Tualatin River [a]		1991-1995	0.7	0.0 (3 yrs) to 2.3 (1992)	1.1	0.7 [a]	3.8 [a]
			COASTAL RIVERS COHO SALMON				
Nehalem River	abc	1977-1995	61.2	0.0 (3 yrs) to 254.0 (1985)	0.0	48.5	NA
North Umpqua R.	bc	1980-1995	69.5	0.0 (1991) to 285.3 (1984)	1.0	43.5	NA
Trask River	bc	1977-1995	57.2	0.0 (3 yrs) to 174.8 (1977)	0.0	40.5	NA
Coos River	bc	1984-1995	59.2	0.0 (5 yrs) to 283.9 (1985)	0.0	38.3	NA
Alsea River	bc	1975-1995	100.5	0.0 (3 yrs) to 480.0 (1978)	0.2	36.8	NA
South Umpqua R.	bc	1982-1995	52.9	0.0 (4 yrs) to 321.8 (1985)	0.0	30.5	NA
Coquille River	bc	1980-1995	20.5	0.0 (5 yrs) to 94.0 (1985)	0.0	15.2	NA
Salmon River	c	1976-1995	43.9	0.0 (4 yrs) to 165.1 (1976)	0.0	11.3	2.4
Rogue River	c	1977-1995	32.9	0.0 (2 yrs) to 168.0 (1978)	0.0	7.3	NA
E Fk Trask River [a]		1983-1992	60.3	0.0 (1991) to 130.9 (1985)	--	52.6 [a]	NA
Eel Lake [a]		1980-1992	67.5	0.0 (2 yrs) to 254.6 (1980)	--	49.0 [a]	NA
Siletz River [a]		1977-1993	58.7	0.0 (2 yrs) to 174.6 (1979)	--	18.5 [a]	NA
Smith River[a]		1976-86, 90-91, 94-95	64.2	0.0 (3 yrs) to 232.3 (1979)	0.0	14.9 [a]	NA
Siuslaw River [a]		1986, 1990-95	6.2	0.0 (4 yrs) to 28.3 (1986)	0.0	6.2 [a]	NA
Yaquina River [a]		1993-1995	0.6	0.0 (1994) to 1.3 (1993)	0.4	0.6 [a]	NA

a = Does not include data from all ten years.

Table 10. Weighted average Oregon ocean and freshwater catch contribution rate (adults caught/1,000 pounds released) of chinook salmon stocks tagged for stock assessment. Oregon ocean contribution rate (1984-1993 brood years) is not significantly different for stock groups followed by the same letter. NA = Data not available.

Stock Group		Brood Years	Average ocean contribution	Oregon ocean contribution range	1993 ocean cont.	1984 - 1993 brood average Ocean	FW
				FALL CHINOOK SALMON			
Rogue Stock Columbia Rel.	a	1982-1993	146.6	7.7 (1991) to 462.0 (1984)	23.6	122.3	38.4
Chetco River	ab	1977-1993	85.4	3.2 (1988) to 195.1 (1979)	44.8	80.9	NA
Elk River	bc	1977-1993	59.3	4.3 (1982) to 244.4 (1985)	63.1	61.6	16.2 [b]
Trask River	d	1982-1993	5.2	0.0 (2 yrs) to 15.8 (1992)	0.0	5.7	NA
Salmon River	d	1976-80, 82-93	3.6	0.5 (1988) to 8.9 (1993)	8.9	4.4	49.8
Hunter Creek [a]		1989, 92-93	94.7	37.2(1993) to 123.5 (1989)	37.2	94.7 [a]	NA
Winchuck River [a]		1988-89, 91-92	69.7	25.0(1988) to 145.2 (1989)	--	69.7 [a]	NA
Rogue River [a]		1977-86, 88-89, 91-93	57.4	0.0 (1979) to 242.5 (1983)	28.4	53.6 [a]	NA
Pistol River [a]		1988-89, 91-93	48.8	28.6 (1988) to 91.1 (1992)	39.2	48.8 [a]	NA
Coquille River [a]		1983-88, 90-93	25.5	0.0 (2yrs) to 154.9 (1985)	6.7	25.3 [a]	NA
South Umpqua R.[a]		1985, 87-93	20.6	0.0 (4yrs) to 104.2 (1987)	0.0	20.6 [a]	NA
Coos River [a]		1983-85, 87-93	15.8	0.0 (1988) to 96.7 (1985)	2.9	16.5 [a]	NA
Lower Umpqua R.[a]		1991-1993	11.6	8.3 (1991) to 17.7 (1992)	8.9	11.6 [a]	NA
Alsea River [a]		1978-81, 84-86, 91-92	2.0	0.0 (4 yrs) to 8.8 (1985)	--	3.4 [a]	NA
Nestucca River [a]		1977-81, 91-92	1.0	0.0 (6 yrs) to 6.5 (1992)	--	3.3 [a]	NA
				SPRING CHINOOK SALMON			
North Umpqua R.	bcd	1976-1993	43.1	1.3 (1991) to 190.4 (1983)	19.6	36.2	NA
Rogue River	cd	1980-1993	33.0	6.0 (1991) to 113.5 (1983)	11.1	29.3	NA
Trask River	d	1977-1993	6.4	0.7 (1977) to 23.8 (1985)	3.4	8.5	NA
Coquille River [a]		1983, 1985, 88-91	51.6	2.2 (1991) to 152.6 (1985)	--	42.8 [a]	NA
Nestucca River [a]		1977-83, 91-93	5.7	0.0 (1982) to 13.8 (1977)	6.3	9.3 [a]	NA
Wilson River [a]		1990-1993	8.5	0.9 (1991) to 23.1 (1990)	1.0	8.5 [a]	NA
South Umpqua R.[a]		1989-1992	1.0	0.0 (3 yrs) to 3.2 (1992)	--	1.0 [a]	NA
				WINTER CHINOOK SALMON			
Trask River [a]		1986-88, 90-93	6.9	0.0 (1988) to 17.9 (1990)	5.8	6.9 [a]	NA

a = Does not include data from all ten years. b = 1989-93 broods, freshwater creel begun in 1992.

Coho ocean fisheries from Washington to California were closed in 1994 and very limited in 1995 through 1998. Therefore, Oregon ocean contribution rate for all coho salmon stocks was 0.00 for the 1991 brood and was very low for the 1992 through 1995 brood years. Contribution rates vary greatly between stocks and between brood years for individual stocks. Oregon ocean contribution rate for Columbia River coho salmon released above Bonneville dam is generally lower than that of stocks released below the dam (Table 9). Columbia River stocks released below Bonneville dam generally had higher Oregon ocean contribution rates than coastal stocks (Table 9). Statistically, Sandy and Big Creek coho Oregon ocean contribution rate was significant higher than all coastal coho stocks, except Nehalem. Only stocks with data for all of the last ten completed brood years were included in the statistical analysis. Further statistical comparisons are reported in Table 9. Northern coastal stocks tend to have higher Oregon ocean contribution rates than central and southern stocks, but there is some overlap.

Oregon ocean contribution rate for 1993 brood chinook salmon stocks was lower than the long-term average for 15 of 18 stocks, set record lows for 3 of 18 stocks, set 1 record high, and was lower than the 1992 brood for 16 of 18 stocks (Table 10). Comparisons between stocks are limited because only 8 of the 23 stocks have Ad+CWT groups representing all of the last 10 completed brood years (1984 through 1993). Statistically Rogue fall chinook released in the Columbia River had a significantly higher Oregon ocean contribution rate than all other stocks, except Chetco fall chinook. Trask and Salmon River stocks had the lowest Oregon ocean contribution rate, significantly lower than Rogue stock released in the Columbia River, Chetco, and Elk River stocks. There is a trend toward increasing Oregon ocean contribution rates from north to south (Table 10). This results from a combination of increasing percent recovered in Oregon ocean fisheries plus a trend toward increasing percent ocean recovery from north to south. Spring chinook salmon exhibit the same trend to higher Oregon ocean contribution rates for central and south coast stocks seen in fall chinook salmon. Oregon ocean contribution rate was not significantly different for Trask River spring and fall chinook stocks.

Oregon Coastal Hatchery Juvenile Salmon Releases

Oregon coastal hatchery release of coho and chinook salmon, summarized by year, species, and geographically by Federal ESU and gene conservation group (GCG) as defined in Kostow (1995) are reported in Tables 11 and 12. Release numbers are reported by three fish size/age categories (unfed fry, fry and fingerling, smolt). Location of release is reported through three groupings, total releases, off station releases, and out of basin releases. Off station releases are characterized by lack of rearing, acclimation, or adult re-capture at the release site. Fish released in a basin other than the released stocks basin of origin are reported as out of basin.

Release of hatchery coho smolts, fingerlings, and unfed fry in coastal basins has decreased substantially since 1990 (Table 11). The proposed 2000 coho smolt releases represent reductions of 40% to 90% from the 1990 releases for all coastal GCG’s, except the South Coast GCG which has remained stable at about 0.2 million smolts/year (Table 11). There are no planned fry and fingerling releases in 2000, except for two STEP programs in the Siuslaw Basin (Mid Coast GCG). These are a 9,600 fingerling release at Letz Creek, and a 50,000 fingerling release in Munsel Lake, an area with no historic coho population. Unfed fry releases have been eliminated in the South Coast GCG, and proposed releases in 2000 have declined about 95% from the 1990 releases in the North Coast, Mid Coast and Mid-South Coast GCG’s (Table 11). Proposed 2000 unfed fry releases in the Umpqua Basin GCG are higher than the actual releases in 1990 through 1999, and represent a substantial re-introduction/supplementation program. Off station releases of hatchery coho salmon have also been substantially reduced since 1990 (Table 11). The remaining proposed off station releases in 2000 include all the unfed fry releases, as well as the Letz Creek fingerling release and three smolt releases. The off station smolt releases proposed for 2000 are 25,000 in Euchre Creek (Siletz Basin), 25,000 in Sevenmile Creek (Coquille Basin), and 5,000 in South Slough (Coos Basin). Out of basin releases have been eliminated except for four unfed fry releases and one smolt release. The out of basin unfed fry releases proposed for 2000 are; 30,000 Trask River stock in Daley Lake, 4,300 Siletz River stock in Yaquina River, 2,100 Siletz River stock in Big Creek (a direct ocean tributary), and 20,000 Siletz River stock in Depoe Creek (a direct ocean tributary). The only proposed out of basin smolt release in 2000 is 200,000 Siletz River stock smolts at Salmon River hatchery.

Table 11. Coastal hatchery coho releases for the years 1990 through 1999, with proposed releases in year 2000. Off-station releases are characterized by lack of rearing, acclimation, or adult re-capture at the release site. Fish released in a basin other than the released stocks basin of origin are reported as out of basin.

Release Year	OREGON COAST ESU												SONCC ESU		
	North Coast GCG			Mid Coast GCG			Umpqua Basin GCG			Mid-South Coast GCG			South Coast GCG		
	Unfed Fry	Fry & Fing	Smolts	Unfed Fry	Fry & Fing	Smolts	Unfed Fry	Fry & Fing	Smolts	Unfed Fry	Fry & Fing	Smolts	Unfed Fry	Fry & Fing	Smolts
								Total Releases							
1990	595,971	117,264	1,887,650	906,386	575,307	2,582,418	40,194	0	433,235	1,247,731	572,656	306,029	29,690	41,619	177,308
1991	533,202	0	1,847,071	393,680	380,710	2,604,528	40,612	0	426,633	549,359	583,152	289,913	29,477	25,015	195,481
1992	29,193	53,913	2,156,888	608,694	383,340	2,656,221	359,780	0	318,407	730,395	293,302	315,037	31,915	47,176	208,340
1993	108,284	0	1,851,612	522,453	164,877	2,164,037	509,246	21,140	298,033	301,692	260,040	271,462	14,203	90,527	212,504
1994	29,855	0	2,091,227	146,827	254,598	2,312,372	589,380	0	283,908	477,508	50,745	273,231	8,511	0	208,161
1995	29,875	0	1,006,785	24,863	20,200	2,036,120	568,041	18,208	277,561	386,850	16,250	261,402	8,316	0	210,469
1996	28,341	0	837,617	52,788	46,108	1,920,975	521,520	0	287,623	325,977	0	110,493	7,667	0	204,363
1997	26,729	0	773,540	69,861	150,794	1,659,488	47,048	0	277,757	525,274	1,500	96,839	11,752	37,885	193,506
1998	23,529	49,450	405,175	0	67,073	599,262	186,005	0	309,678	73,157	0	136,866	12,012	12,000	214,121
1999	28,400	74,563	403,786	21,904	10,500	146,038	489,876	10,440	221,403	117,178	0	185,598	0	0	207,154
2000	*30,000*	*0*	*400,000*	*48,800*	*59,600*	*255,000*	*612,000*	*0*	*207,500*	*80,000*	*0*	*170,000*	*0*	*0*	*200,000*
								Off-Station Releases							
1990	595,971	0	0	903,826	535,613	1,108,607	40,194	0	190,230	1,206,539	568,652	98,406	29,690	41,619	0
1991	533,202	0	0	393,680	373,595	1,008,479	40,612	0	198,772	524,818	583,152	163,742	29,477	25,015	0
1992	29,193	53,913	0	608,694	383,340	888,967	359,780	0	133,872	730,395	293,302	164,437	31,915	47,176	0
1993	108,284	0	0	522,453	155,181	809,371	509,246	21,140	132,234	301,692	260,040	139,004	14,203	90,527	0
1994	29,855	0	0	146,827	230,550	887,180	589,380	0	129,253	413,487	50,745	134,743	8,511	0	0
1995	29,875	0	0	24,863	20,200	367,154	568,041	18,208	130,153	386,850	0	102,761	8,316	0	0
1996	28,341	0	0	42,368	46,108	99,407	521,520	0	123,367	281,222	0	33,908	7,667	0	0
1997	26,729	0	0	41,971	37,254	122,441	47,048	0	134,006	314,956	1,500	11,305	11,752	37,885	0
1998	23,529	49,450	0	0	0	50,821	186,005	0	136,232	73,157	0	36,113	12,012	12,000	0
1999	28,400	74,563	0	21,904	10,500	0	489,876	10,440	0	117,178	0	34,934	0	0	0
2000	*30,000*	*0*	*0*	*48,800*	*9,600*	*25,000*	*612,000*	*0*	*0*	*80,000*	*0*	*30,000*	*0*	*0*	*0*
								Out of Basin Releases							
1990	383,075	0	45,459	209,200	13,140	64,713	0	0	0	62,568	0	0	0	0	0
1991	276,017	0	44,660	269,005	7,115	23,390	0	0	0	63,320	0	0	0	0	0
1992	29,193	53,913	42,824	106,576	0	125,325	0	0	0	53,045	0	0	0	0	0
1993	108,284	0	0	558	39,455	64,165	0	0	0	15,083	0	0	0	0	0
1994	29,855	0	0	95,220	44,048	60,458	0	0	0	74,000	0	0	0	0	0
1995	29,700	0	0	23,488	20,200	360,809	0	0	0	0	0	0	0	0	0
1996	28,341	0	0	3,830	0	538,090	0	0	0	0	0	0	0	0	0
1997	26,729	0	0	36,890	0	360,367	0	0	0	16,170	1,500	0	0	0	0
1998	23,529	49,450	0	0	0	223,839	0	0	0	0	0	0	0	0	0
1999	28,400	74,563	0	20,082	10,500	111,052	0	0	0	0	0	0	0	0	0
2000	*30,000*	*0*	*0*	*26,600*	*0*	*200,000*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Release of hatchery chinook smolts, fry and fingerlings in coastal basins has remained fairly stable since 1990 (Table 12). Unfed fry releases proposed for 2000 are substantially below peak releases for the 1990 to 1999 release years in all GCG's (88% Nehalem/Ecola GCG, 36% North-Mid Coast GCG, 84% Umpqua Basin GCG, 91% Mid-South Coast GCG, 85% South Coast GCG). The two largest coastal chinook programs are 1.6 million Rogue River spring chinook smolts, and 1.8 million Coos River fall chinook fingerlings. The Nehalem/Ecola GCG has a very small hatchery chinook program in comparison to the other 4 coastal chinook GCG's (Table 12). Off station releases of smolts, and fingerlings have generally been reduced or are at very low levels in all GCG's (Table 12). However, for 2000 there are still substantial proposed off station releases of hatchery chinook, including all unfed fry releases in coastal GCG's. Out of basin releases of smolts, and fingerlings have been eliminated in the Umpqua Basin, Mid-South Coast, and South Coast GCG's (Table 12). The remaining out of basin releases proposed for 2000 include: Trask River stock fall chinook released in the Necanicum, Kilchis, Miami, Tillamook and Wilson Rivers; Elk River stock fall chinook unfed fry released in Garrison Lake, Euchre Creek and Floras Creek; and Trask River stock spring chinook released in the Wilson River.

Table 12. Coastal hatchery chinook releases for the years 1990 through 1999, with proposed releases in year 2000. Off-station releases are characterized by lack of rearing, acclimation, or adult re-capture at the release site. Fish released in a basin other than the released stocks basin of origin are reported as out of basin.

Release Year	OREGON COAST ESU												SONCC ESU		
	Nehalem/Ecola GCG			North-Mid Coast GCG			Umpqua Basin GCG			Mid-South Coast GCG			South Coast GCG		
	Unfed Fry	Fry & Fing	Smolts	Unfed Fry	Fry & Fing	Smolts	Unfed Fry	Fry & Fing	Smolts	Unfed Fry	Fry & Fing	Smolts	Unfed Fry	Fry & Fing	Smolts
							Total Releases								
1990	86,702	0	0	605,645	193,804	1,007,920	401,031	367,142	313,990	489,798	1,865,586	430,523	603,520	614,893	2,139,892
1991	165,286	0	10,000	486,217	212,361	925,025	229,419	509,290	425,749	390,370	802,191	516,249	190,145	122,056	2,059,896
1992	18,905	0	23,548	646,468	281,715	953,357	15,843	365,293	315,276	267,081	896,180	498,943	315,291	423,019	2,062,323
1993	9,380	0	26,000	738,614	196,581	868,502	198,814	491,055	406,676	553,622	1,157,968	561,396	70,845	0	2,043,478
1994	0	0	0	51,483	83,135	786,721	0	234,633	290,386	255,333	1,295,036	539,664	43,496	0	2,158,497
1995	0	0	0	155,175	104,067	836,087	172,990	506,965	353,950	1,154,707	1,053,678	626,550	33,298	14,394	1,902,669
1996	0	24,969	0	302,506	63,652	806,841	135,214	80,789	625,576	1,956,150	1,106,404	628,972	31,860	260,714	1,992,827
1997	14,922	0	21,742	528,979	58,404	877,668	0	336,399	202,700	2,316,270	923,178	539,413	10,443	444,855	1,976,969
1998	14,245	0	28,514	276,418	47,808	855,974	0	0	298,358	229,615	985,522	487,203	17,706	497,720	1,869,530
1999	19,542	0	26,995	354,427	0	883,317	33,004	61,468	401,018	361,196	1,726,605	566,567	54,298	49,989	1,866,472
2000	*20,000*	*0*	*25,000*	*471,400*	*80,000*	*938,000*	*65,000*	*548,500*	*412,000*	*212,200*	*1,825,000*	*517,000*	*90,950*	*200,000*	*1,847,000*
							Off-Station Releases								
1990	86,702	0	0	530,842	0	410,579	401,031	317,153	0	480,137	46,952	32,450	603,520	478,928	534,277
1991	165,286	0	10,000	471,824	67,493	394,062	229,419	499,740	110,057	381,044	65,328	16,652	190,145	26,576	394,844
1992	18,905	0	23,548	646,468	92,273	289,068	15,843	354,198	0	267,081	21,588	76,864	315,291	273,028	434,157
1993	9,380	0	26,000	661,012	35,104	347,063	198,814	477,642	103,539	553,622	18,644	53,723	70,845	0	439,913
1994	0	0	0	51,483	56,308	336,750	0	234,633	75,662	255,333	14,382	50,650	43,496	0	418,368
1995	0	0	0	155,175	104,067	324,284	172,990	496,966	51,920	1,154,707	100,322	31,960	33,298	0	230,802
1996	0	24,969	0	302,506	63,652	297,727	135,214	49,240	84,739	1,956,150	137,450	61,381	31,860	260,714	282,545
1997	14,922	0	21,742	528,979	45,143	346,053	0	322,272	102,348	2,316,270	95,109	64,947	10,443	186,227	233,621
1998	14,245	0	28,514	276,418	38,875	375,420	0	0	0	229,615	320,424	0	11,262	497,720	158,208
1999	19,542	0	26,995	336,298	0	277,805	33,004	0	0	361,196	70,096	100,465	54,298	49,989	164,741
2000	*20,000*	*0*	*25,000*	*471,400*	*55,000*	*305,000*	*65,000*	*403,500*	*0*	*212,200*	*0*	*90,000*	*90,950*	*200,000*	*150,000*
							Out of Basin Releases								
1990	86,702	0	0	297,748	0	193,980	0	0	0	103,112	0	0	97,500	0	0
1991	165,286	0	10,000	173,467	32,213	179,456	0	0	0	201,281	23,790	0	47,698	0	0
1992	18,905	0	23,548	427,388	43,704	180,016	0	0	0	117,327	0	0	0	0	0
1993	9,380	0	26,000	469,454	13,251	193,305	0	0	0	200,559	0	0	9,750	0	0
1994	0	0	0	33,458	56,308	168,392	0	0	0	202,253	0	0	10,676	0	0
1995	0	0	0	155,175	48,590	129,981	0	0	0	204,612	0	130,413	15,400	0	0
1996	0	24,969	0	290,303	3,696	109,799	0	0	0	200,173	8,505	101,306	9,906	0	0
1997	14,922	0	21,742	355,364	20,024	110,532	0	0	0	181,398	0	0	9,923	0	0
1998	14,245	0	28,514	102,906	18,661	109,178	0	0	0	200,400	0	0	10,000	0	0
1999	19,542	0	26,995	193,050	0	136,261	0	0	0	227,664	0	0	0	0	0
2000	*20,000*	*0*	*25,000*	*280,200*	*25,000*	*100,000*	*0*	*0*	*0*	*210,300*	*0*	*0*	*0*	*0*	*0*

Oregon Coastal Hatchery Adult Salmon Returns

Collection of salmon and steelhead at ODFW coastal facilities are summarized by species, age (adults versus jacks) and gene conservation group (GCG), as defined in Kostow (1995). Tables 13 and 14 contain the last 10 years return information for ODFW hatchery coho and chinook. Data from trapping of wild fish and recoveries of fish at hatcheries that did not release that species is also reported, when available.

The number of fish returning to a release facility is influenced by a variety of factors including number of fish released, post-release survival, harvest rate, water flow, homing affinity, and trap efficiency. Because of the number of variables and the interactions between variables hatchery return rates will not be used as an indication of survival but as an index of the potential for interaction of hatchery and wild adults in freshwater. Actual levels of interaction depend on further variables including run timing, spawning timing, hatchery location, and genetic composition.

Hatchery recoveries of adult coho have declined in the all the coastal GCG’s

except the South Coast GCG which has had improved returns for the last 6 years (Table 13). The lower returns are a combination of lower survivals (Figure 2) and reductions in the numbers of fish released (Table 11). These two trends are partially offset by the reduced ocean harvest rates since 1992.

Table 13. Adult and jack coho collections: at hatcheries that do not release coho; from wild spawning populations; and at coastal hatcheries that release coho. T = Total collected, W = wild coho (based on marks), B = Retained for broodstock.

	North Coast GCG						Mid Coast GCG						Umpqua Basin GCG						Mid-South Coast GCG						South Coast GCG					
	Non-Coho Hatch		Wild Coho Trapping		Coho Hatcheries		Non-Coho Hatch		Wild Coho Trapping		Coho Hatcheries		Non-Coho Hatch		Wild Coho Trapping		Coho Hatcheries		Non-Coho Hatch		Wild Coho Trapping		Coho Hatcheries		Non-Coho Hatch		Wild Coho Trapping		Coho Hatcheries	
Run Year	T	W	T	B	T	W	T	W	T	B	T	W	T	W	T	B	T	W	T	W	T	B	T	W	T	W	T	B	T	W
Adult Returns																														
1990-91	--	--	0	0	7,455	--	0	--	0	0	6,144	--	0	--	48	48	575	--	--	--	130	130	2,625	--	21	--	0	0	453	--
1991-92	--	--	0	0	20,061	--	0	--	123	27	14,469	--	0	--	176	176	972	--	--	--	262	262	7,211	--	25	--	0	0	2,209	--
1992-93	--	--	0	0	6,563	--	0	--	309	115	14,050	--	0	--	73	73	1,292	--	--	--	465	297	1,500	--	5	--	0	0	1,337	--
1993-94	--	--	0	0	8,208	--	0	--	0	0	10,663	--	0	--	160	160	679	--	--	--	232	203	2,164	--	0	--	0	0	756	--
1994-95	0	--	0	0	10,260	--	0	--	24	0	6,487	--	0	--	13	13	1,069	--	--	--	84	43	1,733	--	8	--	0	0	6,577	370
1995-96	9	--	0	0	11,457	--	0	--	0	0	5,083	--	0	--	7	7	1,210	--	194	--	268	268	244	--	5	--	0	0	8,698	209
1996-97	5	--	0	0	5,456	--	0	--	0	0	9,575	--	0	--	8	8	1,687	--	160	--	144	144	928	--	4	--	0	0	7,922	171
1997-98	0	--	0	0	3,413	--	0	--	0	0	5,498	--	0	--	0	0	431	--	53	--	110	110	221	--	14	--	0	0	7,934	310
1998-99	0	0	0	0	3,894	104	0	0	0	0	8,271	124	0	0	21	21	803		0	0	77	77	267		5	4	0	0	2,963	44
1999-00	63	55	0	0	5,040	44	0	0	0	0	3,622	197	0	0	0	0	970		0	0	63	63	473		19	16	0	0	4,350	47
Jack Returns																														
1990-91	--	--	0	0	6,240	--	0	--	0	0	1,348	--	0	--	1	1	29	--	--	--	7	7	706	--	2	--	0	0	33	--
1991-92	--	--	0	0	1,289	--	0	--	18	1	1,635	--	0	--	0	0	53	--	--	--	3	3	1,121	--	5	--	0	0	158	--
1992-93	--	--	0	0	2,923	--	0	--	17	0	1,650	--	0	--	0	0	133	--	--	--	23	23	1,864	--	10	--	0	0	79	--
1993-94	2	--	0	0	163	--	0	--	0	0	96	--	0	--	6	6	7	--	--	--	11	10	101	--	0	--	0	0	730	
1994-95	0	--	0	0	431	--	0	--	0	0	388	--	0	--	0	0	49	--	25	--	0	0	115	--	5	--	0	0	910	32
1995-96	0	--	0	0	589	--	0	--	0	0	910	--	0	--	0	0	43	--	55	--	26	26	96	--	1	--	0	0	767	6
1996-97	0	--	0	0	608	--	0	--	0	0	876	--	0	--	0	0	251	--	42	--	0	0	113	--	1	--	0	0	806	16
1997-98	0		0	0	347		0		0	0	796		0		0	0	56		4		2	2	181		1	1	0	0	725	16
1998-99	0	0	0	0	1,282	16	0	0	0	0	393	14	0	0	0	0	60		0	0	6	6	116		0	0	0	0	856	6
1999-00	1	1	0	0	865	1	0	0	0	0	57	8	0	0	0	0	60		0	0	4	4	144		4	4	0	0	993	21

Table 14. Adult and jack chinook collections: at hatcheries that do not release chinook; from wild spawning populations; and at coastal hatcheries that release chinook.

	Nehalem/Ecola GCG			North-Mid Coast GCG			Umpqua GCG			Mid-South Coast GCG			South Coast GCG		
Return Year	Wild Trapping	Non-Chinook hatcheries	Chinook hatcheries	Wild Trapping	Non-Chinook hatcheries	Chinook hatcheries	Wild Trapping	Non-Chinook hatcheries	Chinook hatcheries	Wild Trapping	Non-Chinook hatcheries	Chinook hatcheries	Wild Trapping	Non-Chinook hatcheries	Chinook hatcheries
Adult Returns															
1990-91	0	4	0	0	0	3,519	32	0	815	446	0	826	10	--	5,200
1991-92	0	0	0	0	0	2,616	45	0	707	381	0	1,039	117	--	4,511
1992-93	0	0	0	0	0	2,706	0	0	681	307	0	1,297	118	75	1,940
1993-94	0	28	0	0	0	1,474	0	0	669	140	0	1,213	78	9	9,980
1994-95	0	4	0	0	0	2,028	0	0	868	86	0	2,023	54	303	4,044
1995-96	0	0	0	13	0	1,983	0	0	694	474	0	3,415	49	366	54,571
1996-97	0	2	0	91	0	2,671	12	0	648	305	0	4,028	66	0	26,044
1997-98	0	0	0	75	0	1,273	0	0	300	31	0	2,722	44	13	28,169
1998-99	0	0	0	73	3	1,252	43	0	412	161	0	3,709	21	22	10,336
1999-00	0	0	0	103	82	1,885	0	0	672	122	0	3,789	42	7	16,728
Jack Returns															
1990-91	0	0	0	0	0	182	0	0	75	57	0	220	3	4	491
1991-92	0	0	0	0	0	106	4	0	21	50	0	1,067	19	11	314
1992-93	0	0	0	0	0	203	0	0	78	32	0	662	25	27	752
1993-94	0	2	0	0	0	12	0	0	25	0	0	286	9	26	2,864
1994-95	0	0	0	0	7	161	0	0	70	35	0	1,543	21	38	559
1995-96	0	0	0	1	6	83	0	0	20	16	0	1,116	2	31	1,436
1996-97	0	0	0	0	0	35	0	0	12	4	0	554	2	0	551
1997-98	0	0	0	0	0	18	0	0	18	0	0	1,132	2	6	729
1998-99	0	0	0	0	2	37	0	0	19	4	0	219	7	32	1,854
1999-00	0	0	0	0	7	122	0	0	147	6	0	1,144	7	1	975

Hatchery recoveries of adult chinook have declined in the North-Mid Coast GCG, are fairly stable in the Umpqua Basin GCG, and have increased in the Mid-South Coast and South Coast GCG's (Table 14). The increase in adult chinook recoveries in the South Coast GCG corresponds to increased coho recoveries in that GCG. There are essentially no hatchery recoveries of hatchery chinook in the Nehalem/Ecola GCG as there are very few hatchery chinook released in this GCG.

Hatchery Salmon Mass Marking

Coastal hatchery releases of chinook and coho smolts, by mark type are reported in Table 15. These are the smolts released in 1999 and represent the 1997 brood year coho and 1998 brood year chinook hatchery releases. Mass marking, adipose fin clip only, of coastal hatchery coho salmon began with the 1995 brood year and with the 1998 brood year for spring chinook salmon. Coastal hatchery fall chinook are not mass marked except for Necanicum River (100% Ad+CWT), Salmon River (100% Ad+CWT), Yaquina River (100% RV), and Rogue River (100% Ad+CWT) release groups. For mass marked groups, coho, spring chinook and selected fall chinook the number of fish reported in Table 15 in the "Unmarked" column represents poor quality marks or fish missed during marking.

Table 15. Coastal hatchery coho and chinook smolt releases by mark type. Releases are 1997 brood year coho salmon and 1998 brood year chinook salmon.

			Release Dates		# CWT	Number Released by Mark Type				Total
Hatchery	Stock	Release Site	First	Last	Groups	Ad+CWT	CWT Only	Ad Only	Unmarked	Release
				Coho Salmon						
Nehalem	N Fk Nehalem	Nehalem R, N Fk	03/01/99	04/15/99	4	53,112	53,153	107,382	908	214,556
Trask	Trask R	Trask R	04/16/99	04/21/99	1	26,220	0	161,840	1,170	189,230
Salmon River	Siletz R	Salmon R	05/06/99	05/07/99	2	25,694	25,759	58,394	1,208	111,054
Salmon River	Siletz R	Rock Cr. (Siletz)	03/15/99	03/29/99	0	0	0	34,444	542	34,986
Rock Cr.	Umpqua R	Rock Cr. (N Umpqua)	04/01/99	04/30/99	3	56,616	27,191	57,279	255	141,340
Butte Falls	Cow Cr.	Cow Cr. (S Umpqua)		05/07/99	1	28,365	52	39,579	476	68,472
Gardiner Cr.	Smith R	Step Cr. (Umpqua)	03/31/99	04/14/99	0	0	0	9,201	0	9,201
Noble Cr.	Coos R	Noble Cr. & S SL	03/30/99	03/31/99	1	25,624	0	98,283	370	124,276
Butte Falls	Coquille R	Coquille R	04/08/99	04/20/99	1	27,640	111	29,946	401	58,099
Cole Rivers	Rogue R	Rogue R	04/27/99	04/28/99	2	25,907	25,246	155,135	866	207,154
				Total:	15	269,179	131,512	751,483	6,195	1,158,368
				Fall Chinook Salmon [1]						
Nehalem	Trask River	Necanicum R		08/23/99	1	25,640	104	1,251	0	26,995
Trask R	Trask River	Trask R	08/14/99	08/15/99	1	26,232	953	1,457	37,548	66,190
Salmon R	Salmon R	Salmon R	08/18/99	08/20/99	1	190,423	3,383	4,775	398	198,979
[2] Salmon R	Yaquina R	Yaquina R		08/17/99	1	26,032	500	60,748	6,700	93,980
Gardiner Cr.	Smith R				1					
Noble Cr.	Coos R	Noble Cr. (Coos)		07/08/99	1	53,453	0	0	343,622	397,075
Priorli Cr.	Coos R	Morgan Cr. (Coos)	09/14/99	09/30/99	1	25,343	101	203	65,849	91,496
Butte Falls	Coquille R	Sevenmile Cr. (Coq)	09/08/99	09/09/99	1	25,928	155	412	27,761	54,256
Indian Cr.	Lower Rogue	Rogue R	07/15/99	09/16/99	3	62,947	385	1,175	3,557	68,065
Elk River	Elk R	Elk River	10/19/99	10/27/99	1	193,648	11,771	2,658	142,793	350,870
Elk River	Chetco R	Chetco River	09/20/99	09/28/99	1	24,594	1,557	1,349	137,241	164,741
				Total:	13	654,241	18,909	74,028	765,469	1,512,647
				Winter Chinook Salmon [1]						
Trask R	Trask River	Trask R		08/16/99	1	24,779	246	3,055	10,142	38,222
				Spring Chinook Salmon						
Tuffy Cr.	Trask River	Wilson R	07/26/99	08/17/99	1	24,873	229	77,458	1,578	104,138
Trask R	Trask River	Trask R	08/05/99	08/10/99	1	25,153	442	122,821	2,459	150,875
Cedar Cr.	Nestucca R	Nestucca River		07/19/99	1	25,604	240	93,956	0	119,800
Rock Cr.	Umpqua R	Rock Cr. (N Umpqua)	09/30/99	02/09/00	2	54,102	109	343,225	2,500	399,938
Cole Rivers	Rogue R	Rogue R	08/16/99	10/12/99	13	124,598	50,417	1,441,506	17,144	1,633,666
				Total:	18	254,330	51,438	2,078,966	23,681	2,408,417

1 = Non-CWT fish are not mass marked.
2 = Non-CWT fish are RV Clipped.

PLANS FOR FY 2000

We are planning to mark with Ad+CWT representative samples from all production groups of coho salmon released from Oregon hatcheries during FY 2000 to monitor recovery of hatchery salmon. We are planning releases of Ad+CWT coho salmon in Coos, Coquille, Nehalem, Rogue, Salmon, Trask, North Umpqua, and South Umpqua Rivers. We are planning releases of Ad+CWT fall chinook salmon in Chetco, Coos, Coquille, Elk, Necanicum, Rogue, Salmon, Trask, Umpqua, and Yaquina Rivers. We are also planning releases of Ad+CWT spring chinook salmon in Nestucca, North Umpqua, Rogue, Trask, and Wilson Rivers. We will continue to summarize catch and escapement information as data become available.

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APPENDIX

Release and Recovery Data for Ad+CWT-Marked Salmon
Released for Stock Assessment

Appendix Table 1. Coded-wire-tagged coho salmon released for stock assessment, release and recovery data, 1986-1997 brood years. Stock sources: N = Native; H = Hatchery; M = Mixed. NFH = National Fish Hatchery; AK = Alaska, NCBC = North Central British Columbia, WCVI = West Coast Vancouver Island, GST = Georgia Strait, PS = Puget Sound, WA = Washington Coast, CA = California. Oregon ocean areas are displayed in Figure 5.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
ALSEA RIVER																								
Fall Creek (Alsea River):																								
H 1986 074405	Fall Creek	Fall Cr	03/14/88	27,301	297,216	32.63	0	0	6	4	0	10	4	13	57	114	25	69	5	67	0	0	0	1.37
H 1986 074406	Fall Creek	Fall Cr	04/18/88	26,327	350,160	36.87	0	0	24	0	0	6	4	12	66	73	10	59	0	73	0	0	0	1.24
H 1986 074409	Fall Creek	Fall Cr	06/01/88	27,866	313,500	45.35	0	0	33	0	2	19	11	67	251	617	127	328	0	352	0	0	0	6.48
H 1987 074661	Fall Creek	Fall Cr	03/17/89	26,670	314,624	28.70	0	0	18	0	0	4	2	18	9	46	0	55	4	75	0	0	0	0.87
H 1987 074662	Fall Creek	Fall Cr	04/21/89	27,197	307,715	32.39	0	0	22	0	4	28	2	11	22	55	16	110	0	113	0	0	0	1.41
H 1987 074660	Salmon River	Alsea R	04/25/89	23,753	230,385	30.44	0	0	0	0	0	4	0	0	8	7	0	16	0	1	0	0	0	0.15
H 1987 074663	Fall Creek	Fall Cr	05/03/89	27,154	421,576	35.43	0	0	26	0	0	20	2	15	31	35	6	45	2	55	0	0	0	0.87
H 1988 074939	Fall Creek	Fall Cr	03/19/90	27,464	295,210	30.44	0	0	0	0	0	0	2	6	11	39	0	34	4	99	0	0	0	0.71
H 1988 074940	Fall Creek	Fall Cr	04/16/90	27,801	151,081	34.36	0	0	4	0	0	4	0	11	30	23	7	64	0	153	0	0	0	1.06
H 1988 074943	Fall Creek	Fall Cr	05/20/90	26,487	297,980	39.44	0	0	4	0	6	5	0	11	25	46	29	31	2	190	0	0	0	1.32
H 1988 074858	Fall Creek	Fall Cr	06/05/90	26,013	325,810	45.35	0	0	0	0	9	2	0	17	33	162	27	45	2	297	0	0	0	2.28
H 1989 074904	Fall Creek	Fall Cr	03/24/91	26,477	207,265	30.03	0	0	0	0	0	0	0	0	13	9	3	2	2	34	0	0	0	0.24
H 1989 074907	Fall Creek	Fall Cr	04/14/91	25,994	153,390	33.10	0	0	0	0	0	5	0	3	23	12	0	5	1	23	0	0	0	0.28
H 1989 074902	Fall Creek	Fall Cr	05/25/91	28,324	244,757	40.86	0	0	3	0	0	2	2	6	34	65	3	4	0	150	0	0	0	0.95
H 1989 074908	Fall Creek	Fall Cr	06/01/91	26,615	426,162	44.46	0	0	14	0	0	9	2	9	94	242	6	39	1	454	0	0	0	3.27
H 1990 074942	Fall Creek	Fall Cr	03/19/92	24,484	204,149	29.60	0	0	6	0	0	16	6	0	4	4	3	25	17	83	0	0	0	0.67
H 1990 074941	Fall Creek	Fall Cr	04/22/92	23,758	840,625	34.40	0	0	0	0	0	14	0	3	7	19	8	33	8	96	0	0	0	0.79
H 1990 074413	Fall Creek	Fall Cr	06/01/92	25,365	453,657	40.90	0	0	0	0	0	0	0	0	1	0	0	0	1	4	0	0	0	0.02
H 1991 076010	Fall Creek	Fall Cr	03/18/93	25,856	148,951	29.07	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0.12
H 1991 076011	Fall Creek	Fall Cr	04/20/93	26,032	141,679	36.28	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0.08
H 1991 076012	Fall Creek	Fall Cr	05/24/93	27,083	239,805	40.49	0	0	4	0	0	0	0	0	0	0	0	0	0	53	0	0	0	0.21
H 1991 076013	Fall Creek	Fall Cr	06/04/93	26,754	410,870	49.84	0	0	0	0	0	0	0	0	0	0	0	0	0	133	0	0	0	0.50
H 1992 070261	Fall Creek	Fall Cr	03/16/94	27,330	146,845	30.23	0	0	0	0	0	0	0	0	0	0	0	0	2	60	0	0	0	0.23
H 1992 070262	Fall Creek	Fall Cr	04/22/94	26,200	246,529	35.43	0	0	0	0	0	2	0	0	0	0	0	0	1	105	0	0	0	0.41
H 1992 070263	Fall Creek	Fall Cr	05/20/94	25,856	244,564	39.78	0	0	6	0	0	4	3	0	0	0	0	0	1	58	0	0	0	0.28
H 1992 070312	Fall Creek	Fall Cr	06/01/94	25,252	290,763	49.84	0	0	6	0	0	5	0	0	0	0	0	0	0	104	0	0	0	0.46
H 1993 075256	Fall Creek	Fall Cr	03/17/95	26,599	148,851	30.24	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	--	0.07
H 1993 075257	Fall Creek	Fall Cr	04/17/95	27,410	299,310	37.49	0	0	0	0	0	2	0	0	0	0	0	0	0	65	0	0	--	0.24
H 1993 075258	Fall Creek	Fall Cr	05/15/95	26,671	199,039	40.86	0	0	18	0	0	0	0	0	0	0	0	0	3	127	0	0	--	0.55
H 1993 075259	Fall Creek	Fall Cr	06/01/95	27,291	399,259	47.25	0	0	0	0	0	0	0	0	0	0	0	0	0	44	0	0	--	0.16
H 1994 070531	Fall Creek	Fall Cr	02/07/96	26,364	518,335	26.56	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	--	--	0.02
H 1994 070532	Fall Creek	Fall Cr	02/07/96	26,364	518,335	26.56	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	--	--	0.03
H 1994 070924	Fall Creek	Fall Cr	02/07/96	26,364	518,335	26.56	0	0	0	0	0	0	0	0	0	0	0	7	1	8	0	--	--	0.06
H 1994 075337	Fall Creek	Fall Cr	02/07/96	26,364	518,335	26.56	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	--	--	0.02

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
ALSEA RIVER (Continued)																								
Fall Creek (Alsea River):																								
H 1995 091733	Fall Creek	Fall Cr	03/17/97	27,481	148,000	31.72	0	0	0	0	0	1	0	0	0	0	0	0	0	61	--	--	--	0.23
H 1995 091734	Fall Creek	Fall Cr	04/15/97	27,001	250,214	36.58	0	0	0	0	0	6	2	0	0	0	0	0	0	154	--	--	--	0.60
H 1995 091735	Fall Creek	Fall Cr	05/15/97	28,157	249,391	42.39	0	0	0	0	0	7	0	0	0	0	0	0	0	249	--	--	--	0.91
H 1995 091736	Fall Creek	Fall Cr	06/02/97	28,764	300,260	46.28	0	0	0	0	2	5	0	0	0	0	0	0	0	179	--	--	--	0.65
H 1996 092015	Fall Creek	Fall Cr	04/17/98	26,798	99,809	37.18	--	--	--	--	--	--	--	--	--	--	--	--	16	--	--	--	--	0.06
H 1996 092006	Fall Creek	Fall Cr	05/16/98	27,454	78,780	43.20	--	--	--	--	--	--	--	--	--	--	--	--	6	--	--	--	--	0.02
ALSEA RIVER WILD																								
Alsea River & tribs (excluding Fall Creek):																								
N 1989 074911	Fall Creek	Fall Cr	05/01/91	27,813	29,249	39.44	0	0	2	0	0	0	0	0	22	54	3	13	4	32	0	0	0	0.47
N 1989 074913	Fall Creek	Fall Cr	05/01/91	26,178	28,079	39.44	0	0	0	0	0	0	2	6	19	63	3	16	7	27	0	0	0	0.55
N 1991 075953	Fall Creek	Fall Cr	05/15/93	7,795	8,197	39.78	0	0	0	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0.10
N 1992 076035	Fall Creek	Fall Cr	04/26/94	43,889	93,370	34.10	0	0	0	0	0	1	0	0	0	0	0	2	8	24	0	0	0	0.08
BIG CREEK																								
Big Creek:																								
H 1986 074231	Big Creek	Big Cr	05/02/88	25,759	91,500	30.23	5	0	66	6	7	64	9	49	117	173	30	78	38	468	0	0	0	4.31
H 1986 074226	Big Creek	Big Cr	06/01/88	22,279	53,823	45.35	0	0	63	5	4	203	65	163	503	473	73	96	23	1002	0	0	0	12.00
H 1986 074228	Big Creek	Big Cr	06/02/88	22,053	443,799	30.64	0	0	29	8	0	86	42	66	282	319	50	58	2	916	0	0	0	8.43
H 1987 074247	Big Creek	Big Cr	06/01/89	22,386	338,557	32.16	0	0	15	0	0	72	13	35	47	25	0	7	5	106	0	0	0	1.45
H 1987 074244	Big Creek	Big Cr	06/01/89	22,618	166,606	45.35	0	2	53	3	2	196	55	80	88	77	24	51	75	338	0	0	0	4.62
H 1988 074845	Big Creek	Big Cr	05/31/90	26,838	350,246	31.49	0	0	11	0	0	91	15	40	127	160	23	16	5	569	0	0	0	3.94
H 1988 074846	Big Creek	Big Cr	05/31/90	27,230	193,167	49.30	0	5	36	0	15	130	32	102	180	204	31	49	98	727	0	0	0	5.91
H 1989 075426	Big Creek	Big Cr	06/03/91	24,442	181,324	46.28	0	0	8	0	0	38	16	34	145	152	3	14	29	396	0	0	0	3.42
H 1989 075427	Big Creek	Big Cr	06/10/91	25,062	339,661	31.49	0	0	0	0	0	42	10	12	125	128	0	0	2	286	0	0	0	2.41
H 1990 075616	Big Creek	Big Cr	06/01/92	26,774	195,943	46.30	0	0	6	0	4	27	0	0	0	0	0	5	1	66	0	0	0	0.41
H 1990 075617	Big Creek	Big Cr	06/08/92	27,209	357,982	30.60	0	0	0	0	0	0	0	0	3	3	0	0	0	21	0	0	0	0.10
H 1991 071517	Big Creek	Big Cr	06/03/93	27,612	366,320	31.06	0	0	7	0	0	0	0	0	0	0	0	0	0	158	0	0	0	0.60
H 1991 071516	Big Creek	Big Cr	06/03/93	27,295	193,856	47.74	0	0	28	5	0	0	0	0	0	0	0	0	0	396	0	0	0	1.57
H 1992 070256	Big Creek	Big Cr	06/03/94	25,880	301,630	32.63	0	0	18	0	0	9	3	0	0	0	0	0	0	72	0	0	0	0.39
H 1992 070257	Big Creek	Big Cr	06/03/94	25,887	164,360	45.81	0	0	5	0	0	45	10	0	0	0	0	0	0	293	0	0	0	1.36
H 1993 070137	Big Creek	Big Cr	04/28/95	27,418	130,654	43.99	0	0	0	0	0	13	2	0	0	0	0	0	16	166	0	0	--	0.72
H 1993 070138	Big Creek	Big Cr	05/31/95	26,424	403,203	41.20	0	0	0	0	0	3	5	0	0	0	0	0	2	197	0	0	--	0.78
H 1994 070958	Big Creek	Big Cr	05/06/96	28,110	141,056	32.29	0	0	0	0	0	1	0	0	0	0	0	0	4	88	0	--	--	0.33
H 1994 070959	Big Creek	Big Cr	06/05/96	27,957	402,510	36.79	0	0	0	0	0	7	0	0	0	0	0	0	4	301	0	--	--	1.12
H 1995 070842	Big Creek	Big Cr	04/30/97	27,589	146,067	35.16	0	0	0	0	0	7	2	0	0	0	0	0	18	205	--	--	--	0.84
H 1995 070946	Big Creek	Big Cr	05/30/97	27,707	389,635	37.49	0	0	0	0	0	4	0	0	0	0	0	0	1	119	--	--	--	0.45

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
BIG CREEK (Continued)																								
Big Creek:																								
H 1996 092254	Big Creek	Big Cr	04/24/98	24,849	146,064	36.58	--	--	--	--	--	--	--	--	--	--	--	--	26	--	--	--	--	0.10
H 1996 092255	Big Creek	Big Cr	05/28/98	26,284	355,130	39.10	--	--	--	--	--	--	--	--	--	--	--	--	7	--	--	--	--	0.03
H 1997 092420	Big Creek	Big Cr	04/26/99	26,386	142,730	38.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092419	Big Creek	Big Cr	05/25/99	26,259	382,612	39.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BONNEVILLE																								
Tanner Creek:																								
H 1986 074237	Oxbow	Tanner Cr	04/26/88	25,318	791,190	34.89	0	3	82	8	11	162	33	102	246	128	29	70	22	1114	0	0	0	7.94
H 1986 074235	Bonneville	Tanner Cr	06/01/88	26,999	349,281	32.63	0	0	18	11	0	96	16	96	173	142	6	2	8	555	0	0	0	4.16
H 1986 074232	Bonneville	Tanner Cr	06/01/88	26,617	743,612	32.86	0	0	11	0	2	128	77	122	301	211	19	15	1	1007	0	0	0	7.12
H 1987 074706	Bonneville	Tanner Cr	04/20/89	27,798	803,669	25.62	0	0	20	4	3	62	22	56	40	71	9	71	14	257	0	0	0	2.26
H 1987 074705	Bonneville	Tanner Cr	05/24/89	27,575	601,362	31.06	0	2	16	0	0	78	11	24	14	44	4	10	1	91	0	0	0	1.07
H 1987 074703	Bonneville	Tanner Cr	06/01/89	27,821	353,971	37.48	0	0	38	0	0	94	16	25	24	22	2	14	12	118	0	0	0	1.31
H 1988 075029	Bonneville	Tanner Cr	04/25/90	25,430	701,632	33.10	0	0	30	0	6	35	29	22	60	105	12	45	5	643	0	0	0	3.90
H 1988 074946	Bonneville	Tanner Cr	06/01/90	24,266	597,479	31.71	0	0	4	0	2	22	6	14	76	74	15	40	1	460	0	0	0	2.94
H 1988 074945	Bonneville	Tanner Cr	06/19/90	26,793	351,062	46.75	0	0	4	0	12	18	8	32	43	65	3	10	1	333	0	0	0	1.97
H 1989 075550	Bonneville	Tanner Cr	04/30/91	26,352	812,205	32.63	0	0	0	0	0	28	5	6	19	18	0	0	1	77	0	0	0	0.58
H 1989 075551	Bonneville	Tanner Cr	05/31/91	21,331	629,299	31.49	0	0	12	0	0	51	26	28	125	76	0	0	1	488	0	0	0	3.78
H 1989 075549	Bonneville	Tanner Cr	05/31/91	21,680	282,901	42.38	0	0	10	0	0	51	9	15	84	51	4	2	3	300	0	0	0	2.44
H 1990 075748	Bonneville	Tanner Cr	04/27/92	26,749	819,660	36.90	0	0	11	0	0	16	13	3	6	8	0	5	7	252	0	0	0	1.20
H 1990 075747	Bonneville	Tanner Cr	04/27/92	28,692	345,410	41.60	0	0	0	0	0	89	26	3	13	5	14	44	60	441	0	0	0	2.42
H 1990 075749	Bonneville	Tanner Cr	06/01/92	27,001	1,011,595	30.60	0	0	0	0	0	3	5	0	0	0	0	2	0	15	0	0	0	0.09
H 1991 071533	Bonneville	Tanner Cr	05/17/93	27,011	344,180	31.94	3	0	6	0	0	2	0	0	0	0	0	0	10	688	0	0	0	2.62
H 1991 071534	Bonneville	Tanner Cr	06/08/93	28,042	767,584	33.10	0	0	14	0	0	0	0	0	0	0	0	0	0	573	0	0	0	2.09
H 1992 074936	Bonneville	Tanner Cr	04/19/94	26,606	871,511	28.52	0	0	0	0	0	8	3	0	0	0	0	2	6	65	0	0	0	0.32
H 1992 075130	Bonneville	Tanner Cr	05/31/94	11,937	165,957	38.11	0	0	18	0	0	5	3	0	0	0	0	0	2	86	0	0	0	0.96
H 1993 075445	Bonneville	Tanner Cr	04/26/95	26,529	274,691	33.35	0	0	0	0	0	8	6	0	0	0	0	4	18	227	0	0	--	0.99
H 1993 075446	Bonneville	Tanner Cr	06/09/95	25,407	1,004,506	40.50	0	0	3	0	0	2	6	0	0	0	0	0	0	200	0	0	--	0.83
H 1994 075413	Bonneville	Tanner Cr	02/12/96	23,615	332,739	29.92	0	0	0	0	0	0	0	0	0	0	0	0	1	14	0	--	--	0.06
H 1994 075414	Bonneville	Tanner Cr	06/07/96	25,080	887,011	36.19	0	0	0	0	0	6	2	0	0	0	0	0	0	472	0	--	--	1.91
H 1995 091817	Bonneville	Tanner Cr	04/24/97	28,488	332,386	40.49	0	0	0	0	0	10	2	0	0	0	0	0	11	316	--	--	--	1.19
H 1995 091819	Bonneville	Tanner Cr	05/12/97	27,842	782,863	31.06	0	0	0	0	0	3	0	0	0	0	0	0	0	56	--	--	--	0.21
H 1996 092307	Bonneville	Tanner Cr	04/30/98	20,478	292,480	45.36	--	--	--	--	--	--	--	--	--	--	--	--	4	--	--	--	--	0.02
H 1996 092303	Bonneville	Tanner Cr	06/04/98	21,814	698,556	37.80	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1997 092418	Bonneville	Tanner Cr	04/30/99	25,196	377,983	35.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092421	Bonneville	Tanner Cr	06/01/99	25,855	938,448	32.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
COLLAWASH RIVER																								
Clackamas River Late:																								
N 1986 074949	South Santiam	Collawash R	05/10/88	29,547	32,116	31.28	0	0	17	5	0	14	2	28	53	81	11	29	0	82	0	0	0	1.09
N 1987 074503	Eagle Cr NFH	Collawash R	05/01/89	15,395	16,800	22.68	0	0	0	0	0	8	3	21	7	9	5	5	0	0	0	0	0	0.38
COOS RIVER																								
Coos River:																								
N 1986 074313	Butte Falls	Coos R, S Fk	04/01/88	27,424	32,083	35.71	0	0	19	0	2	4	0	10	51	105	57	326	68	441	0	0	0	3.95
M 1987 074352	Butte Falls	Morgan Cr	04/06/89	26,772	29,340	40.86	7	5	51	0	14	20	8	33	44	166	27	497	330	312	0	0	0	5.66
M 1987 074355	Cole Rivers	Morgan Cr	05/03/89	23,702	55,622	39.10	0	5	36	0	0	20	4	50	29	123	19	235	193	264	0	0	0	4.13
H 1988 074841	Butte Falls	Noble Cr	04/03/90	22,383	24,984	36.57	0	3	9	0	6	0	3	23	32	104	27	92	87	340	0	0	0	3.24
M 1988 074848	Cole Rivers	Morgan Cr	04/19/90	27,976	62,056	33.35	0	0	0	0	0	0	8	4	13	95	18	177	57	382	0	0	0	2.70
H 1989 075238	Butte Falls	Noble Cr	04/05/91	20,207	33,305	34.89	0	0	0	0	0	0	0	2	41	91	12	34	2	113	0	0	0	1.46
N 1989 075428	Cole Rivers	Noble Cr	04/23/91	25,509	25,509	35.99	0	0	12	0	0	0	0	4	37	52	4	30	9	101	0	0	0	0.98
M 1990 075610	Noble Creek	Noble Cr	04/27/92	20,645	31,005	38.76	0	0	9	0	0	2	4	2	11	16	3	54	99	44	0	0	0	1.18
M 1991 076006	Butte Falls	Noble Cr	04/09/93	20,792	86,030	42.78	0	0	18	0	6	0	0	0	0	0	0	0	3	86	0	0	0	0.54
M 1992 070247	Butte Falls	Noble Cr	04/13/94	24,986	41,836	35.43	0	0	0	0	0	0	0	0	0	0	0	0	3	100	0	0	0	0.41
M 1993 075250	Noble Creek	Noble Cr	03/30/95	23,877	70,871	34.86	0	0	4	0	0	2	0	0	0	0	0	6	5	41	0	0	--	0.24
M 1994 075332	Noble Creek	Noble Cr	03/26/96	25,348	65,298	37.40	0	0	0	0	0	3	0	0	0	0	0	0	2	37	0	--	--	0.17
M 1995 071356	Cole Rivers	Noble Cr	03/31/97	26,158	70,540	37.17	0	0	0	0	4	0	0	0	0	0	0	0	30	29	--	--	--	0.24
M 1996 092001	Noble Creek	Noble Cr	03/31/98	26,861	73,799	39.10	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	0.00
M 1997 091921	Noble Creek	Noble Cr	03/30/99	25,624	118,648	36.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COQUILLE RIVER																								
Coquille River:																								
N 1986 074312	Butte Falls	Ferry Cr	05/09/88	27,858	99,918	50.39	0	0	6	0	0	0	0	0	29	94	48	266	220	339	0	0	0	3.60
N 1987 074350	Butte Falls	Ferry Cr	05/04/89	25,483	100,002	42.38	0	0	5	0	0	2	0	3	23	104	30	133	54	103	0	0	0	1.79
N 1988 074842	Bandon	Ferry Cr	04/19/90	25,076	99,477	40.86	0	0	8	0	0	5	0	3	5	24	11	97	7	102	0	0	0	1.04
H 1989 075239	Bandon	Coquille R	04/25/91	24,237	95,497	40.86	0	0	0	0	0	0	0	0	6	2	3	13	1	6	0	0	0	0.13
H 1990 075612	Bandon	Ferry Cr	04/29/92	26,175	49,075	44.00	0	0	0	0	0	5	0	0	3	5	7	60	39	264	0	0	0	1.46
H 1991 076004	Butte Falls	Coquille R	05/06/93	25,565	43,932	39.78	0	0	0	0	0	0	0	0	0	0	0	0	2	30	0	0	0	0.13
H 1992 070245	Bandon	Coquille R	05/06/94	23,398	49,153	43.61	0	0	0	0	0	0	0	0	0	0	0	0	2	6	0	0	0	0.03
H 1993 075248	Butte Falls	Sevenmile Cr	04/09/95	23,819	93,545	37.15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	--	0.00
M 1994 075736	Butte Falls	Sevenmile Cr	04/17/96	20,727	23,575	39.03	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	--	--	0.03
M 1995 070944	Bandon	Coquille R	04/21/97	22,687	26,299	39.44	0	0	0	0	0	0	0	0	0	0	0	0	39	44	--	--	--	0.37
M 1996 091962	Bandon	Ferry Cr	04/23/98	26,065	57,731	38.44	--	--	--	--	--	--	--	--	--	--	--	--	--	50	--	--	--	0.19
M 1997 091919	Butte Falls	Ferry Cr	04/20/99	27,640	28,751	42.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
EAST FORK TRASK RIVER																								
Trask River:																								
H 1986 074428	Trask R Pond	EF of SF Trask R	04/16/88	24,246	642,722	33.10	0	0	21	4	0	14	2	30	71	82	33	147	4	150	0	0	0	2.30
H 1987 074435	Trask R Pond	EF of SF Trask R	04/22/89	25,312	802,763	29.64	0	0	12	0	0	24	8	31	38	98	23	169	5	42	0	0	0	1.78
H 1988 075157	Trask R Pond	EF of SF Trask R	04/13/90	25,813	709,536	32.86	0	0	11	0	0	11	35	14	38	78	9	66	13	96	0	0	0	1.44
H 1989 074819	Trask R Pond	EF of SF Trask R	04/15/91	27,472	722,883	32.63	0	0	0	0	0	12	2	1	13	24	0	8	1	38	0	0	0	0.36
H 1990 075750	Trask R Pond	EF of SF Trask R	04/15/92	26,139	630,346	35.20	0	0	0	0	0	50	7	0	7	4	10	15	9	52	0	0	0	0.59
H 1991 074923	Trask R Pond	EF of SF Trask R	04/15/93	26,985	683,133	37.17	0	0	3	0	0	0	0	0	0	0	0	0	3	96	0	0	0	0.38
H 1992 075137	Trask R Pond	EF of SF Trask R	04/18/94	25,234	844,161	41.61	0	0	3	0	0	0	2	0	0	0	0	0	4	110	0	0	0	0.47
EEL LAKE																								
Eel Lake:																								
N 1986 074310	Butte Falls	Eel Lake	03/01/88	3,160	4,800	22.68	0	0	0	0	4	0	0	0	9	33	4	5	2	31	0	0	0	2.78
N 1986 074311	Butte Falls	Eel Lake	03/03/88	28,429	78,145	36.28	0	0	17	0	0	2	0	5	84	178	30	67	194	250	0	0	0	2.91
M 1987 074354	Butte Falls	Eel Lake	03/01/89	26,275	66,677	38.43	0	0	0	0	0	5	2	12	27	76	11	131	146	57	0	0	0	1.78
M 1987 074353	Butte Falls	Eel Lake	03/07/89	26,045	39,480	37.17	0	0	10	0	0	13	5	26	45	239	56	260	200	103	0	0	0	3.67
H 1988 074843	Butte Falls	Eel Lake	10/24/89	25,943	94,349	16.49	0	0	0	0	0	0	0	0	8	15	7	55	6	93	0	0	0	0.71
H 1988 074844	Butte Falls	Eel Lake	03/07/90	26,550	88,367	28.70	0	0	0	0	0	4	0	12	6	84	5	94	16	234	0	0	0	1.71
H 1989 075432	Butte Falls	Eel Lake	10/11/90	23,060	86,141	18.66	0	0	0	0	0	3	0	4	27	54	0	6	38	107	0	0	0	1.04
H 1989 075431	Butte Falls	Eel Lake	03/06/91	25,070	101,567	32.86	0	0	0	0	0	0	0	0	29	59	3	5	118	135	0	0	0	1.39
H 1990 075614	Butte Falls	Eel Lake	10/04/91	26,129	100,465	15.75	0	0	0	0	0	3	0	0	0	0	7	27	19	0	0	0	0	0.21
H 1990 075613	Butte Falls	Eel Lake	03/05/92	26,276	83,241	38.80	0	0	0	0	0	3	3	2	9	16	16	30	64	0	0	0	0	0.54
H 1991 076005	Butte Falls	Eel Lake	03/05/93	24,316	120,978	31.06	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04
H 1992 070246	Butte Falls	Eel Lake	03/04/94	26,200	122,950	34.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
KLASKANINE RIVER																								
Klaskanine River:																								
H 1986 073532	Klaskanine	Klaskanine R, NF	05/09/88	9,962	279,112	49.30	0	0	15	0	0	25	5	23	71	77	8	19	17	220	0	0	0	4.82
H 1986 073533	Klaskanine	Klaskanine R, NF	05/09/88	10,962	280,112	49.30	0	0	44	0	7	9	10	28	72	42	6	62	18	202	0	0	0	4.56
H 1986 073534	Klaskanine	Klaskanine R, NF	05/09/88	11,383	280,534	49.30	0	5	33	0	0	20	16	34	45	73	6	27	11	155	0	0	0	3.73
H 1987 074156	Klaskanine	Klaskanine R, NF	05/01/89	10,421	364,623	29.84	0	0	0	0	0	41	2	26	23	23	6	30	5	82	0	0	0	2.28
H 1987 074157	Klaskanine	Klaskanine R, NF	05/01/89	10,334	364,623	29.84	0	0	0	0	9	22	12	30	15	38	2	58	4	96	0	0	0	2.77
H 1987 074158	Klaskanine	Klaskanine R, NF	05/01/89	10,626	364,624	29.84	0	0	27	0	0	27	13	17	18	30	6	23	10	103	0	0	0	2.58
H 1988 074219	Klaskanine	Klaskanine R, NF	05/23/90	10,299	464,512	35.16	0	0	6	0	0	23	16	30	22	72	6	32	5	266	0	0	0	4.64
H 1988 074220	Klaskanine	Klaskanine R, NF	05/23/90	10,888	464,980	35.16	0	0	7	4	6	29	16	16	47	49	0	43	3	330	0	0	0	5.05
H 1988 074221	Klaskanine	Klaskanine R, NF	05/23/90	10,904	465,065	35.16	0	0	15	0	0	26	10	6	31	42	7	63	3	318	0	0	0	4.78
H 1989 074222	Klaskanine	Klaskanine R, NF	05/07/91	10,010	419,711	40.13	0	0	7	0	0	10	2	5	22	11	0	2	10	75	0	0	0	1.44
H 1989 074517	Klaskanine	Klaskanine R, NF	05/07/91	10,228	419,730	40.13	0	0	3	0	0	9	0	28	13	20	0	8	15	79	0	0	0	1.71
H 1989 074518	Klaskanine	Klaskanine R, NF	05/07/91	9,921	419,456	40.13	0	0	0	0	0	12	5	8	35	26	0	0	6	62	0	0	0	1.55

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
KLASKANINE RIVER (Continued)																								
Klaskanine River:																								
H 1990 074520	Klaskanine	Klaskanine R, NF	05/11/92	10,874	341,002	33.10	0	0	0	0	0	20	3	2	0	0	0	2	2	22	0	0	0	0.47
H 1990 074644	Klaskanine	Klaskanine R, NF	05/11/92	10,627	340,755	33.10	0	0	0	0	0	14	0	0	1	2	0	0	0	17	0	0	0	0.32
H 1990 074645	Klaskanine	Klaskanine R, NF	05/11/92	9,640	339,701	33.10	0	0	0	0	0	2	3	1	0	3	0	2	0	21	0	0	0	0.33
H 1991 074832	Klaskanine	Klaskanine R, NF	05/16/93	25,977	848,853	33.35	5	0	3	0	1	0	0	0	0	0	0	0	0	74	0	0	0	0.32
H 1992 070362	Klaskanine	Klaskanine R, NF	04/15/94	26,574	831,887	37.48	0	0	7	0	0	5	3	0	0	0	0	0	2	67	0	0	0	0.32
H 1994 075415	Klaskanine	Klaskanine R, NF	04/07/96	24,974	837,355	44.88	0	0	0	0	0	3	3	0	0	0	0	0	16	108	0	--	--	0.52
Kalama River:																								
H 1993 075262	Klaskanine	Klaskanine R, NF	04/04/95	26,279	1,201,313	43.99	0	2	0	0	0	8	3	0	0	0	0	0	28	94	0	0	--	0.51
NEHALEM RIVER																								
Fishhawk Lake (Nehalem River):																								
H 1986 074242	Nehalem	Nehalem R, NF	03/23/88	25,893	186,437	36.87	0	0	9	4	0	24	2	10	47	74	16	80	49	14	0	0	0	1.27
H 1987 074249	Nehalem	Nehalem R, NF	04/14/89	24,338	70,000	29.45	0	0	26	0	0	75	11	35	58	76	26	171	13	9	0	0	0	2.05
H 1990 074932	Nehalem	Nehalem R, NF	02/14/92	26,918	137,075	23.70	0	0	0	0	0	24	6	3	1	4	12	37	85	71	0	0	0	0.90
H 1990 074935	Nehalem	Nehalem R, NF	04/13/92	26,918	626,476	35.20	0	4	35	0	0	69	22	2	17	8	12	69	43	150	0	0	0	1.60
H 1993 075251	Nehalem	Nehalem R, NF	01/30/95	26,823	214,335	25.31	0	0	0	0	0	6	0	0	0	0	0	0	1	26	0	0	--	0.12
H 1993 075252	Nehalem	Nehalem R, NF	04/15/95	26,559	575,648	31.05	0	0	6	0	0	13	3	0	0	3	0	3	13	191	0	0	--	0.87
H 1996 092003	Nehalem	Nehalem R, NF	03/31/98	24,934	76,980	32.63	--	--	--	--	--	--	--	--	--	--	--	--	118	--	--	--	--	0.47
H 1996 092002	Nehalem	Nehalem R, NF	04/24/98	24,110	63,749	31.72	--	--	--	--	--	--	--	--	--	--	--	--	62	--	--	--	--	0.26
North Fork Nehalem & tribs:																								
H 1986 074238	Nehalem	Nehalem R, NF	03/02/88	25,991	67,433	37.48	0	0	12	0	2	8	0	10	57	65	26	63	226	94	0	0	0	2.17
H 1986 074241	Nehalem	Nehalem R, NF	03/28/88	24,998	487,339	32.86	0	0	11	0	0	10	4	18	36	55	6	90	45	187	0	0	0	1.85
H 1988 074552	Nehalem	Nehalem R, NF	04/16/90	23,479	631,967	32.86	0	0	41	0	6	13	34	55	57	154	36	151	0	416	0	0	0	4.10
H 1989 075424	Nehalem	Nehalem R, NF	03/04/91	27,549	171,905	32.16	0	3	4	0	0	15	2	3	38	49	14	14	31	68	0	0	0	0.87
H 1989 075425	Nehalem	Nehalem R, NF	04/11/91	27,086	563,940	31.06	0	0	6	0	0	15	0	21	48	53	6	25	12	93	0	0	0	1.03
H 1991 074918	Nehalem	Nehalem R, NF	03/03/93	27,486	130,299	26.99	0	0	0	0	0	0	0	0	0	0	0	0	0	46	0	0	0	0.17
H 1991 074920	Nehalem	Nehalem R, NF	04/13/93	26,938	565,166	31.06	0	0	4	0	2	0	0	0	0	0	0	0	0	170	0	0	0	0.65
H 1992 070316	Nehalem	Nehalem R, NF	02/28/94	26,148	212,527	31.71	0	0	0	0	0	3	3	0	0	0	0	4	6	57	0	0	0	0.28
H 1992 070317	Nehalem	Nehalem R, NF	04/15/94	26,169	626,987	31.94	0	0	0	0	0	4	3	0	0	0	0	9	1	88	0	0	0	0.40
H 1994 075339	Nehalem	Nehalem R, NF	03/15/96	26,472	136,681	30.53	0	0	0	0	0	1	0	0	0	0	0	4	9	70	0	--	--	0.32
H 1994 075410	Nehalem	Nehalem R, NF	04/15/96	25,233	499,838	31.61	0	0	0	0	0	5	0	0	0	0	0	0	6	113	0	--	--	0.49
H 1995 071331	Nehalem	Nehalem R, NF	03/14/97	25,458	113,282	31.72	0	0	0	0	0	0	0	0	0	0	0	0	1	49	--	--	--	0.20
H 1995 091732	Nehalem	Nehalem R, NF	04/15/97	25,715	462,874	32.87	0	0	0	0	0	0	0	0	0	0	0	6	2	92	--	--	--	0.39
H 1997 091924	Nehalem	Nehalem R, NF	03/15/99	26,279	77,743	31.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 091925	Nehalem	Nehalem R, NF	04/15/99	26,780	83,015	35.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
NESTUCCA RIVER																								
Trask River:																								
H 1990 075731	Cedar Creek	Three R	05/21/92	23,847	42,824	42.80	0	0	0	0	0	3	1	4	7	3	0	15	0	39	0	0	0	0.30
NORTH UMPQUA RIVER																								
Umpqua River:																								
H 1986 073559	Rock Creek	Rock Cr	04/15/88	26,092	186,936	44.46	0	4	6	0	3	9	0	13	32	147	20	105	8	74	0	0	0	1.61
H 1987 074751	Rock Creek	Rock Cr	04/24/89	25,363	146,001	39.78	0	0	0	0	0	14	2	25	72	140	26	184	0	27	0	0	0	1.93
H 1987 074748	Rock Creek	Umpqua R	04/25/89	24,619	69,453	39.10	0	0	10	0	0	2	12	25	29	139	18	188	0	3	0	0	0	1.73
H 1988 074809	Rock Creek	Rock Cr	04/20/90	26,194	117,500	41.23	0	5	8	0	0	9	5	9	99	210	35	232	0	176	0	0	0	3.01
H 1988 074808	Rock Creek	Rock Cr	05/16/90	25,418	117,530	44.90	0	0	4	0	0	1	0	20	46	85	18	56	0	78	0	0	0	1.21
H 1989 075242	Rock Creek	Rock Cr	04/19/91	27,758	75,881	40.49	0	0	0	0	0	12	0	10	84	125	13	37	0	74	0	0	0	1.28
H 1989 075241	Rock Creek	Rock Cr	05/15/91	27,150	151,981	46.28	0	0	44	0	0	3	0	8	64	217	12	50	1	115	0	0	0	1.89
M 1990 074937	Rock Creek	Rock Cr	04/04/92	26,151	77,713	45.40	0	0	9	0	0	26	5	3	25	23	26	162	8	172	1	0	0	1.76
M 1990 074938	Rock Creek	Rock Cr	05/07/92	25,964	77,480	45.40	0	0	0	0	0	7	0	0	10	14	7	39	0	61	0	0	0	0.53
H 1991 071422	Rock Creek	Rock Cr	04/21/93	25,267	76,916	43.19	0	0	6	0	0	0	0	0	0	0	0	0	0	208	0	0	0	0.85
H 1991 071423	Rock Creek	Rock Cr	05/19/93	25,763	76,685	46.28	0	0	8	0	0	0	0	0	0	0	0	0	0	96	0	0	0	0.40
H 1992 070319	Rock Creek	Rock Cr	04/11/94	27,419	75,382	40.13	0	0	4	0	0	4	0	0	1	0	0	0	5	125	0	0	0	0.51
H 1992 070320	Rock Creek	Rock Cr	05/16/94	26,532	73,758	44.03	0	0	6	0	0	2	3	0	0	0	0	6	0	61	0	0	0	0.29
H 1993 075260	Rock Creek	Rock Cr	04/09/95	25,380	69,180	45.31	0	0	4	0	0	2	2	0	0	0	0	0	2	33	0	0	--	0.17
H 1993 075261	Rock Creek	Rock Cr	05/04/95	25,252	63,313	46.71	0	1	0	0	0	4	0	0	0	1	0	5	0	34	0	0	--	0.18
H 1994 075411	Rock Creek	Rock Cr	04/05/96	23,623	77,743	44.88	0	0	0	0	0	0	0	0	7	0	0	7	2	74	0	--	--	0.38
H 1994 075412	Rock Creek	Rock Cr	05/06/96	25,097	76,075	45.33	0	0	0	0	0	0	0	0	0	0	0	3	1	49	1	--	--	0.22
H 1995 091811	Rock Creek	Rock Cr	04/04/97	24,700	52,321	45.35	0	0	0	0	0	6	0	0	0	0	0	4	9	112	--	--	--	0.53
H 1995 091812	Rock Creek	Rock Cr	04/28/97	24,930	52,452	45.35	0	0	0	0	0	1	0	0	0	5	0	0	5	105	--	--	--	0.47
H 1996 092004	Rock Creek	Rock Cr	04/01/98	27,017	73,804	45.36	--	--	--	--	--	--	--	--	--	--	--	--	20	--	--	--	--	0.07
H 1996 092005	Rock Creek	Rock Cr	05/04/98	27,375	69,761	45.82	--	--	--	--	--	--	--	--	--	--	--	--	4	--	--	--	--	0.01
H 1997 091926	Rock Creek	Rock Cr	04/01/99	28,062	42,896	42.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 091918	Rock Creek	Rock Cr	04/30/99	28,440	71,242	45.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROGUE RIVER																								
Rogue River:																								
H 1986 074058	Cole Rivers	Rogue R	04/27/88	25,337	96,684	35.43	0	0	0	0	0	0	0	0	3	20	67	246	126	211	0	0	0	2.66
H 1986 074059	Cole Rivers	Rogue R	06/02/88	25,967	96,082	40.86	0	0	0	0	0	0	0	0	2	25	14	77	9	99	0	0	0	0.87
H 1987 074060	Cole Rivers	Rogue R	05/02/89	22,315	49,260	30.85	0	0	0	0	0	0	0	0	2	10	7	76	2	61	0	0	0	0.71
H 1987 074550	Cole Rivers	Rogue R	06/01/89	23,668	49,048	42.38	0	0	0	0	0	0	0	0	0	5	10	27	0	25	0	0	0	0.28
H 1988 074847	Cole Rivers	Rogue R	05/01/90	27,338	177,310	35.16	0	0	0	0	0	0	0	0	4	12	23	52	3	260	0	0	0	1.29
H 1989 075531	Cole Rivers	Rogue R	04/19/91	26,184	47,850	31.28	0	0	0	0	0	3	0	1	0	14	3	12	12	128	0	0	0	0.66
H 1990 075615	Cole Rivers	Rogue R	04/30/92	27,154	208,340	42.80	0	0	0	0	0	0	0	0	0	0	3	14	5	81	0	0	0	0.38

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
ROGUE RIVER (Continued)																								
Rogue River:																								
H 1991 071527	Cole Rivers	Rogue R	04/27/93	51,398	52,721	44.46	0	0	6	0	0	0	0	0	0	0	0	0	144	1507	0	0	0	3.22
H 1991 071528	Cole Rivers	Rogue R	04/27/93	51,413	52,576	44.90	0	0	0	0	0	0	0	0	0	0	0	3	151	1567	2	0	0	3.35
H 1991 071526	Cole Rivers	Rogue R	04/27/93	50,706	52,682	47.74	0	0	0	0	0	0	0	0	0	0	0	2	212	1573	0	0	0	3.52
H 1991 075950	Cole Rivers	Rogue R	04/28/93	26,269	26,894	46.75	0	0	0	0	0	0	0	0	0	0	0	5	101	732	0	0	0	3.19
H 1992 076356	Cole Rivers	Rogue R	04/27/94	25,477	26,306	42.79	0	0	0	0	0	3	0	0	0	0	6	0	136	1090	0	0	0	4.85
H 1992 076357	Cole Rivers	Rogue R	04/27/94	25,150	25,904	42.79	0	0	0	0	0	0	0	0	0	0	0	6	106	1071	0	0	0	4.70
H 1992 076358	Cole Rivers	Rogue R	04/27/94	23,816	24,530	42.79	0	0	0	0	0	0	0	0	1	0	0	8	100	1045	0	0	0	4.85
H 1992 076354	Cole Rivers	Rogue R	04/28/94	25,626	26,571	43.20	0	0	0	0	0	1	4	0	1	0	0	14	88	1038	0	0	0	4.47
H 1992 076355	Cole Rivers	Rogue R	04/28/94	25,555	26,497	43.20	0	0	0	0	0	0	0	0	0	0	0	4	88	930	0	0	0	4.00
H 1992 076359	Cole Rivers	Rogue R	04/28/94	24,911	25,622	45.82	0	0	0	0	0	0	0	0	1	0	2	7	91	1085	0	0	0	4.76
H 1992 076360	Cole Rivers	Rogue R	04/28/94	25,712	26,447	45.82	0	0	0	0	0	0	0	0	0	0	3	11	105	1145	0	0	0	4.92
H 1993 070643	Cole Rivers	Rogue R	05/01/95	25,624	25,988	43.61	0	0	0	0	0	0	0	0	0	0	0	4	83	1019	0	0	--	4.32
H 1993 070644	Cole Rivers	Rogue R	05/01/95	26,143	26,514	43.61	0	0	0	0	0	0	0	0	0	0	0	0	80	917	0	0	--	3.81
H 1993 070641	Cole Rivers	Rogue R	05/01/95	25,224	26,220	44.04	0	0	0	0	0	1	0	0	0	0	3	0	93	1014	0	0	--	4.40
H 1993 070642	Cole Rivers	Rogue R	05/01/95	25,529	26,537	44.04	0	0	0	0	0	0	0	0	0	0	0	0	97	872	0	0	--	3.80
H 1993 070646	Cole Rivers	Rogue R	05/02/95	26,783	26,907	43.20	0	0	0	0	0	2	0	0	0	0	3	6	69	1005	0	0	--	4.05
H 1993 070640	Cole Rivers	Rogue R	05/02/95	25,485	26,015	44.91	0	0	0	0	0	0	0	0	0	0	0	0	107	938	1	0	--	4.10
M 1994 071221	Cole Rivers	Rogue R	04/29/96	104,419	107,441	41.98	0	0	0	0	0	0	0	0	0	2	7	4	408	3947	1	--	--	4.18
M 1994 071116	Cole Rivers	Rogue R	04/30/96	96,712	96,922	39.23	0	0	0	0	0	3	0	0	0	0	8	27	301	3454	0	--	--	3.92
M 1995 071044	Cole Rivers	Rogue R	04/29/97	26,907	166,790	43.20	0	0	0	0	0	0	0	0	0	0	0	0	114	350	--	--	--	1.72
H 1996 092263	Cole Rivers	Rogue R	04/27/98	27,950	187,896	45.36	--	--	--	--	--	--	--	--	--	--	--	--	102	--	--	--	--	0.36
H 1997 092541	Cole Rivers	Rogue R	04/28/99	25,859	180,994	44.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SALMON RIVER																								
Salmon River:																								
H 1986 074362	Salmon River	Salmon R	04/07/88	26,249	528,528	33.10	0	7	35	0	0	9	0	8	32	16	2	14	4	28	0	0	0	0.59
H 1987 074658	Salmon River	Salmon R	04/30/89	26,102	486,196	32.16	0	0	3	0	0	12	0	10	9	3	10	35	10	28	0	0	0	0.46
H 1988 074818	Salmon River	Salmon R	04/30/90	26,708	301,080	43.61	0	0	0	0	0	9	2	20	31	31	0	48	88	79	0	0	0	1.15
H 1989 074831	Salmon River	Salmon R	05/01/91	26,235	505,175	35.16	0	0	4	0	0	6	0	6	15	14	0	3	3	27	0	0	0	0.30
H 1990 074922	Salmon River	Salmon R	04/30/92	27,226	255,933	38.10	0	0	6	0	0	11	5	1	15	2	7	11	27	74	0	0	0	0.58
H 1991 076008	Salmon River	Salmon R	05/07/93	25,548	405,164	39.78	0	0	10	0	0	0	0	0	0	0	0	0	0	70	0	0	0	0.31
H 1992 070260	Salmon River	Salmon R	05/04/94	19,553	403,118	42.78	0	0	0	0	0	5	4	0	0	0	0	2	13	25	0	0	0	0.25
H 1993 075253	Salmon River	Salmon R	04/30/95	25,050	316,281	42.35	0	0	8	0	0	2	0	0	0	0	0	0	4	87	0	0	--	0.40
H 1994 075331	Salmon River	Salmon R	04/30/96	25,993	322,200	40.43	0	0	0	0	0	0	0	0	0	0	0	0	8	52	0	--	--	0.23
H 1995 071240	Salmon River	Salmon R	04/30/97	21,356	200,206	50.96	2	0	0	0	0	6	0	0	0	0	0	0	10	109	--	--	--	0.59
H 1996 091960	Salmon River	Salmon R	04/28/98	24,902	118,361	48.77	--	--	--	--	--	--	--	--	--	--	--	--	18	--	--	--	--	0.07

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
SANDY RIVER																								
Sandy River:																								
H 1986 074726	Sandy	Cedar Cr	05/02/88	26,994	55,633	30.64	0	7	145	9	6	170	53	160	314	293	39	61	100	1203	0	0	0	9.48
H 1986 074728	Sandy	Cedar Cr	05/03/88	25,470	56,635	29.84	0	0	133	4	4	161	28	169	301	304	17	19	69	1321	1	0	0	9.94
H 1986 074426	Sandy	Cedar Cr	05/31/88	27,577	558,925	29.84	0	0	6	0	3	141	48	104	377	290	25	36	24	1242	0	0	0	8.33
H 1987 074445	Sandy	Cedar Cr	04/30/89	27,505	58,996	30.03	0	2	35	0	18	137	49	68	75	64	11	57	16	260	0	0	0	2.88
H 1987 074454	Sandy	Cedar Cr	04/30/89	27,494	55,041	30.44	0	0	49	0	9	155	47	75	65	61	16	67	13	266	0	0	0	2.99
H 1987 074446	Sandy	Cedar Cr	05/31/89	25,751	831,194	31.94	0	0	59	3	0	95	17	58	78	49	6	25	1	181	0	0	0	2.22
H 1988 074849	Sandy	Cedar Cr	05/07/90	25,652	104,580	30.03	0	0	53	4	9	86	58	86	146	203	34	138	23	1329	0	0	0	8.46
H 1988 074851	Sandy	Cedar Cr	05/31/90	27,266	317,782	30.64	0	0	20	0	7	41	29	39	100	100	13	13	10	485	0	0	0	3.14
H 1988 074856	Sandy	Cedar Cr	05/31/90	24,243	315,622	30.85	0	0	19	0	0	93	27	37	82	149	20	19	5	475	0	0	0	3.82
H 1989 075540	Sandy	Cedar Cr	05/01/91	25,450	64,209	29.07	0	5	4	0	0	13	0	10	6	22	0	0	6	67	0	0	0	0.52
H 1989 075541	Sandy	Cedar Cr	05/01/91	26,963	63,346	29.64	0	0	3	0	0	6	6	8	6	26	0	2	7	66	0	0	0	0.48
H 1989 075543	Sandy	Cedar Cr	06/06/91	26,586	55,261	30.23	0	0	0	0	0	90	30	32	242	136	3	2	13	655	0	0	0	4.52
H 1989 075547	Sandy	Cedar Cr	06/06/91	25,863	58,240	30.44	0	0	3	3	0	87	30	31	222	128	6	4	8	579	0	0	0	4.26
H 1990 075720	Sandy	Cedar Cr	05/01/92	28,699	29,130	29.80	0	0	10	0	0	62	30	3	4	3	0	18	3	139	0	0	0	0.95
H 1990 075724	Sandy	Cedar Cr	05/01/92	28,368	28,797	29.80	0	0	3	0	0	71	21	1	12	2	4	10	2	145	0	0	0	0.96
H 1990 075725	Sandy	Cedar Cr	06/02/92	28,377	355,669	30.00	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0.01
H 1990 075726	Sandy	Cedar Cr	06/02/92	27,553	369,409	30.00	0	0	0	0	0	6	0	0	0	0	0	0	0	2	0	0	0	0.03
H 1991 075951	Sandy	Cedar Cr	05/02/93	52,320	247,121	30.44	0	0	27	4	0	0	0	0	0	0	0	5	1	473	0	0	0	0.97
H 1991 071531	Sandy	Cedar Cr	06/02/93	27,473	259,210	30.23	0	0	13	4	0	0	0	0	0	0	0	0	0	219	0	0	0	0.86
H 1991 071532	Sandy	Cedar Cr	06/02/93	27,003	260,055	30.23	0	0	23	0	0	0	0	0	0	0	0	0	0	197	0	0	0	0.81
H 1992 075126	Sandy	Cedar Cr	04/04/94	22,071	54,611	22.68	0	0	0	0	0	11	3	0	0	0	0	0	0	50	0	0	0	0.29
H 1992 074933	Sandy	Cedar Cr	04/04/94	23,758	170,622	24.00	0	0	0	0	0	7	3	2	0	0	0	0	1	49	0	0	0	0.26
H 1992 070239	Sandy	Cedar Cr	05/03/94	48,070	272,188	30.23	0	0	20	0	0	24	0	0	0	0	0	0	1	65	0	0	0	0.23
H 1992 074934	Sandy	Cedar Cr	06/01/94	22,862	59,590	30.44	0	0	33	0	0	25	4	0	0	0	0	0	0	120	0	0	0	0.80
H 1992 075127	Sandy	Cedar Cr	06/01/94	23,046	241,271	30.85	0	0	23	0	0	25	0	0	0	0	0	0	0	109	0	0	0	0.68
H 1993 070552	Sandy	Cedar Cr	04/09/95	50,982	54,686	32.87	0	0	4	0	0	22	0	0	0	0	0	0	12	259	0	0	--	0.58
H 1993 070551	Sandy	Cedar Cr	05/03/95	55,510	57,924	30.04	0	0	0	0	0	6	0	0	0	0	0	0	0	49	0	0	--	0.10
H 1994 070839	Sandy	Cedar Cr	03/27/96	27,601	70,156	30.53	0	0	0	0	0	0	2	0	0	0	0	0	9	36	0	--	--	0.17
H 1994 070840	Sandy	Cedar Cr	03/27/96	27,221	69,120	31.17	0	0	0	0	0	0	0	0	0	0	0	3	7	38	0	--	--	0.18
H 1994 070837	Sandy	Cedar Cr	05/06/96	27,133	124,717	30.53	0	0	0	0	0	0	0	0	0	0	4	0	13	106	0	--	--	0.45
H 1994 070838	Sandy	Cedar Cr	05/06/96	27,393	124,797	31.38	0	0	0	0	0	6	0	0	0	0	0	0	16	131	0	--	--	0.56
H 1995 070843	Sandy	Cedar Cr	04/07/97	27,492	194,817	29.26	0	0	0	0	0	2	0	0	0	0	0	0	4	141	--	--	--	0.53
H 1995 070844	Sandy	Cedar Cr	04/07/97	27,459	195,252	29.45	0	0	0	0	0	6	7	0	0	0	0	0	4	161	--	--	--	0.65
H 1995 091838	Sandy	Cedar Cr	05/05/97	29,337	233,740	30.03	0	0	0	0	0	2	7	0	0	0	0	0	1	211	--	--	--	0.75
H 1996 092332	Sandy	Cedar Cr	04/15/98	29,251	135,391	29.65	--	--	--	--	--	--	--	--	--	--	--	--	14	--	--	--	--	0.05
H 1996 092333	Sandy	Cedar Cr	05/14/98	29,770	120,211	31.28	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	0.00
H 1997 092432	Sandy	Cedar Cr	04/15/99	26,383	364,796	30.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092433	Sandy	Cedar Cr	05/14/99	27,760	232,964	31.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
SILETZ RIVER																								
Siletz River:																								
H 1986 074363	Salmon River	Rock Cr, L	03/22/88	25,827	513,634	28.17	0	0	0	0	0	6	0	8	25	26	10	47	0	42	0	0	0	0.63
H 1986 074403	Salmon River	Siletz R	05/10/88	26,363	496,245	32.63	0	0	0	6	2	0	0	4	12	19	7	38	0	0	0	0	0	0.33
H 1987 074659	Salmon River	Rock Cr, L	03/14/89	24,115	440,944	28.89	0	0	19	0	0	17	2	4	9	35	12	32	0	26	0	0	0	0.65
H 1988 074816	Salmon River	Siletz R	03/13/90	28,148	522,081	29.64	0	0	8	0	0	3	0	9	17	50	3	87	3	43	0	0	0	0.79
H 1988 074817	Salmon River	Siletz R	03/13/90	26,453	522,080	30.03	0	0	0	0	0	4	7	17	27	46	3	65	4	68	0	0	0	0.91
H 1989 074829	Salmon River	Rock Cr, L	03/12/91	25,229	528,833	30.85	0	0	5	0	0	5	0	0	30	15	0	9	0	41	0	0	0	0.42
H 1989 074830	Salmon River	Siletz R	04/26/91	24,505	458,606	32.63	0	0	0	0	0	6	0	1	7	5	0	6	0	2	0	0	0	0.11
H 1990 074921	Salmon River	Rock Cr, L	03/17/92	26,985	403,303	31.30	0	0	0	0	0	9	4	7	1	10	0	31	7	91	0	0	0	0.59
H 1990 074919	Salmon River	Siletz R	05/05/92	26,460	376,541	30.90	0	0	0	0	0	0	0	0	0	0	3	6	0	3	0	0	0	0.05
H 1991 071519	Salmon River	Rock Cr, L	03/23/93	24,852	371,014	31.06	0	0	4	0	0	0	0	0	0	0	0	0	0	45	0	0	0	0.20
H 1991 071520	Salmon River	Siletz R	04/07/93	25,560	374,192	31.06	0	0	3	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0.03
H 1992 070259	Salmon River	Rock Cr, L	03/22/94	25,062	420,338	35.16	0	0	0	0	0	0	0	0	0	0	0	0	1	34	0	0	0	0.14
H 1992 070258	Salmon River	Rock Cr, L	04/27/94	24,402	400,492	38.11	0	0	0	0	0	0	0	1	0	0	0	0	0	6	0	0	0	0.03
H 1993 075254	Salmon River	Rock Cr, L	04/11/95	25,878	312,144	39.75	0	0	0	0	0	0	0	0	0	0	0	5	0	23	0	0	--	0.11
SILETZ RIVER, SALMON RIVER RELEASE																								
Siletz River:																								
H 1996 092150	Salmon River	Salmon & Siletz	05/06/98	11,092	112,378	42.79	--	--	--	--	--	--	--	--	--	--	--	--	6	--	--	--	--	0.05
H 1996 092151	Salmon River	Salmon R	05/15/98	15,955	162,282	53.36	--	--	--	--	--	--	--	--	--	--	--	--	16	--	--	--	--	0.10
H 1997 091923	Salmon River	Salmon R	05/07/99	25,694	85,402	41.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SIUSLAW RIVER																								
Coos River:																								
M 1986 074055	Cole Rivers	Munsel Lake	05/17/88	26,740	70,908	40.13	0	0	7	0	0	0	0	0	15	43	9	41	0	0	0	0	0	0.43
Tahkenitch Lake:																								
N 1990 075817	Fall Creek	Siuslaw R	02/24/92	26,081	27,360	31.50	0	0	6	0	0	9	11	2	6	2	4	36	2	31	0	0	0	0.42
N 1991 076009	Fall Creek	Siuslaw R	03/22/93	25,013	54,782	27.49	0	0	0	0	0	0	0	0	0	0	0	0	1	14	0	0	0	0.06
N 1992 070363	Fall Creek	Siuslaw R	02/17/94	24,585	51,319	28.34	0	0	2	0	0	5	0	0	2	0	0	11	7	8	0	0	0	0.14
N 1993 070763	Fall Creek	Siuslaw R	02/09/95	25,273	54,407	31.48	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	--	0.00
N 1994 075338	Fall Creek	Siuslaw R	03/07/96	25,091	48,758	29.14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	--	0.00
Siuslaw River:																								
H 1995 076113	Fall Creek	Siuslaw R	02/18/97	29,181	45,670	31.28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	--	--	0.00
SMITH RIVER																								
Umpqua River:																								
H 1986 073558	Rock Creek	Smith R	04/18/88	25,555	109,921	41.23	0	0	0	0	4	0	0	17	30	88	9	75	1	2	0	0	0	0.88
N 1990 075019	Gardiner Cr	Gardiner Cr	03/11/92	14,671	14,671	50.39	0	0	0	0	0	5	5	0	7	8	0	12	0	27	0	0	0	0.44
H 1991 074453	Gardiner Cr	Gardiner Cr	03/17/93	12,140	12,201	45.36	0	5	0	0	0	0	0	0	0	0	0	0	1	19	0	0	0	0.21

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
SMITH RIVER (Continued)																								
Smith River:																								
M 1994 070451	Gardiner Cr	Gardiner Cr	04/08/96	10,336	10,438	56.69	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0	--	--	0.08
M 1995 092125	Gardiner Cr	Gardiner Cr	04/15/97	12,674	12,674	45.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	--	--	0.00
SOUTH UMPQUA RIVER																								
Umpqua River:																								
H 1986 074314	Butte Falls	Umpqua R, S Fk	04/27/88	1,303	112,722	44.46	0	0	0	0	0	0	0	0	0	3	4	30	0	0	0	0	0	2.84
H 1987 074351	Butte Falls	Umpqua R, S Fk	04/28/89	24,485	42,438	45.35	9	0	11	0	0	5	0	21	28	86	23	206	0	2	0	0	0	1.60
H 1988 074840	Butte Falls	Umpqua R, S Fk	04/11/90	25,237	139,471	39.10	0	0	0	0	0	4	0	8	61	110	22	155	0	49	0	0	0	1.62
H 1989 075240	Butte Falls	Umpqua R, S Fk	04/10/91	25,075	142,487	39.78	0	0	0	0	0	7	0	18	59	101	10	35	0	12	0	0	0	0.97
M 1990 075609	Butte Falls	Umpqua R, S Fk	04/23/92	26,287	133,916	45.40	0	0	2	0	0	13	2	0	11	9	3	27	0	31	0	0	0	0.37
Cow Creek (South Umpqua):																								
N 1986 074056	Rock Creek	Cow Cr	04/19/88	23,964	35,904	44.46	0	0	0	0	2	0	0	0	11	95	25	64	40	76	0	0	0	1.31
M 1991 076007	Butte Falls	Umpqua R, S Fk	05/07/93	27,462	132,234	44.46	0	0	3	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0.09
M 1992 070248	Butte Falls	Umpqua R, S Fk	05/13/94	24,893	129,253	44.46	0	0	0	0	0	5	0	0	0	0	0	0	0	14	0	0	0	0.08
M 1993 075249	Butte Falls	Umpqua R, S Fk	05/10/95	22,051	130,153	43.99	0	0	0	0	0	0	2	0	0	0	0	1	0	34	0	0	--	0.17
M 1994 070533	Butte Falls	Umpqua R, S Fk	05/07/96	21,216	123,367	39.72	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	--	--	0.08
M 1995 070945	Butte Falls	Umpqua R, S Fk	05/07/97	22,656	134,006	45.82	0	0	0	0	0	0	0	0	0	0	0	0	0	2	--	--	--	0.01
M 1996 091963	Butte Falls	Umpqua R, S Fk	05/08/98	27,952	131,897	44.47	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	0.00
M 1997 091920	Butte Falls	Umpqua R, S Fk	05/07/99	28,365	68,472	47.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRASK RIVER																								
Trask River:																								
H 1986 074432	Trask	Trask R	04/15/88	25,634	200,162	43.19	0	0	28	4	0	35	13	26	116	152	42	197	15	288	0	0	0	3.57
H 1986 074431	Trask	Trask R	05/01/88	25,272	192,461	43.61	0	0	40	0	0	38	10	54	96	146	44	178	6	288	0	0	0	3.56
H 1987 074438	Trask	Trask R	04/15/89	26,822	189,010	39.10	0	2	30	0	0	47	18	43	82	137	38	253	19	287	0	0	0	3.56
H 1987 074437	Trask	Trask R	05/02/89	27,367	204,105	38.76	0	0	27	3	0	19	2	48	44	70	26	134	14	161	0	0	0	2.00
H 1988 075155	Trask	Trask R	04/20/90	25,566	148,522	40.49	0	0	20	0	0	38	19	54	95	86	12	68	37	160	0	0	0	2.30
H 1988 075156	Trask	Trask R	05/07/90	25,272	153,428	44.46	0	0	24	0	0	2	14	28	47	58	15	101	15	111	0	0	0	1.64
H 1989 075556	Trask	Trask R	04/22/91	25,964	167,089	37.48	0	0	4	0	0	9	0	18	53	31	13	18	11	95	0	0	0	0.97
H 1989 075557	Trask	Trask R	05/07/91	24,235	176,594	41.23	0	0	10	0	0	19	10	7	34	56	8	10	4	74	0	0	0	0.96
H 1990 075752	Trask	Trask R	04/20/92	25,404	201,631	43.20	0	0	4	0	0	29	7	1	4	10	0	27	22	102	0	0	0	0.81
H 1990 075751	Trask	Trask R	05/08/92	24,679	205,964	45.40	0	0	0	0	0	5	5	0	3	3	0	29	7	47	0	0	0	0.40
H 1991 074927	Trask	Trask R	04/20/93	27,004	202,093	45.35	0	0	0	0	0	0	0	0	0	0	0	1	3	126	0	0	0	0.48
H 1991 074924	Trask	Trask R	05/10/93	26,597	206,125	46.75	0	0	3	0	0	0	0	0	0	0	0	0	2	113	0	0	0	0.44
H 1992 075138	Trask	Trask R	04/07/94	25,506	205,293	44.90	0	0	0	0	0	32	11	0	0	0	0	2	7	253	0	0	0	1.20
H 1992 075139	Trask	Trask R	05/02/94	25,073	202,255	43.61	0	0	0	0	0	3	0	0	0	0	0	0	1	115	0	0	0	0.47
H 1993 070853	Trask	Trask R	04/07/95	214,790	216,610	44.42	0	5	0	0	0	13	2	6	0	0	0	0	201	902	0	0	--	0.53

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
TRASK RIVER																								
Trask River:																								
H 1994 071137	Trask	Trask R	04/17/96	26,357	201,098	44.44	0	0	0	0	0	3	0	0	0	0	0	0	25	132	0	--	--	0.61
H 1995 071318	Trask	Trask R	04/16/97	23,229	144,533	47.25	0	0	0	0	0	10	0	0	0	0	0	0	41	229	--	--	--	1.21
H 1996 091961	Trask	Trask R	04/16/98	25,297	212,525	45.36	4	--	--	--	--	--	--	--	--	--	--	--	95	--	--	--	--	0.39
H 1997 091917	Trask	Trask R	04/21/99	26,220	189,230	50.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TROJAN POND																								
Sandy River:																								
H 1989 075539	Trojan Pond	Columbia R-1	05/20/91	27,206	120,655	27.65	0	0	0	0	0	6	2	4	15	7	0	0	3	18	0	0	0	0.20
H 1991 076126	Trojan Pond	Columbia R-1	04/30/93	27,809	263,571	32.16	0	0	16	0	0	2	0	0	0	0	0	0	0	41	0	0	0	0.21
TUALATIN RIVER																								
Big Creek:																								
H 1991 076025	Big Creek	Tualatin R	05/03/93	26,885	60,052	30.85	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0.04
H 1992 075154	Big Creek	Tualatin R	05/16/94	26,533	60,239	29.45	0	0	0	0	0	1	4	0	0	0	0	0	0	1	0	0	0	0.02
H 1993 075263	Big Creek	Tualatin R	05/03/95	26,303	59,250	32.61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0.00
H 1994 075334	Big Creek	Tualatin R	05/13/96	26,426	59,919	32.06	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	--	--	0.09
H 1995 091813	Big Creek	Tualatin R	04/29/97	25,222	60,000	31.72	0	0	0	0	0	1	2	0	0	0	0	0	0	2	--	--	--	0.02
H 1996 092417	Big Creek	Tualatin R	04/27/98	27,506	60,152	32.40	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
UMATILLA RIVER																								
Tanner Creek:																								
H 1986 074357	Cascade	Umatilla R	03/28/88	18,963	73,651	26.21	0	0	40	0	0	66	21	59	96	128	18	20	32	361	0	0	0	4.43
H 1986 074356	Cascade	Umatilla R	03/28/88	20,592	68,208	26.99	0	0	64	9	4	78	11	59	132	102	26	50	44	381	0	0	0	4.66
H 1986 074358	Cascade	Umatilla R	03/28/88	18,513	61,606	28.89	0	0	11	6	0	93	29	62	137	69	23	28	28	342	0	0	0	4.47
H 1987 074611	Cascade	Umatilla R	03/31/89	26,739	84,672	23.74	0	0	7	0	0	71	9	36	20	23	4	46	20	52	0	0	0	1.08
H 1987 074610	Cascade	Umatilla R	03/31/89	26,416	72,627	26.21	0	0	7	0	0	38	2	15	38	33	4	56	18	63	0	0	0	1.04
H 1987 074609	Cascade	Umatilla R	03/31/89	27,062	75,970	26.37	0	0	0	0	0	4	8	11	19	18	0	31	10	52	0	0	0	0.57
H 1988 074814	Cascade	Umatilla R	03/28/90	28,033	67,309	33.59	0	3	0	0	6	53	13	27	71	90	16	62	30	486	0	0	0	3.06
H 1988 074813	Cascade	Umatilla R	04/02/90	26,881	654,227	31.06	0	0	18	0	0	34	19	32	71	100	12	66	49	433	0	0	0	3.10
H 1988 074815	Cascade	Umatilla R	04/12/90	27,226	65,096	40.49	0	2	7	0	0	54	11	46	77	148	27	98	39	580	0	0	0	4.00
H 1989 075535	Cascade	Umatilla R	03/25/91	24,584	152,974	29.45	0	0	0	0	0	15	2	0	11	2	0	0	4	15	0	0	0	0.20
H 1989 075533	Cascade	Umatilla R	03/26/91	25,407	377,967	27.16	0	0	0	0	0	10	2	0	9	0	0	0	3	15	0	0	0	0.15
H 1989 075534	Cascade	Umatilla R	03/26/91	25,338	378,485	27.16	0	0	0	0	0	4	0	0	10	3	0	0	7	18	0	0	0	0.17
H 1990 075622	Cascade	Umatilla R	03/18/92	27,458	244,550	28.70	0	0	4	0	4	19	1	0	3	6	0	18	3	149	0	0	0	0.75
H 1990 075621	Cascade	Umatilla R	03/18/92	27,705	244,615	28.90	0	0	0	0	0	42	8	2	9	12	10	18	1	193	0	0	0	1.06
H 1990 075620	Cascade	Umatilla R	03/20/92	27,908	472,221	29.40	0	0	3	0	0	16	12	0	1	14	4	11	2	134	0	0	0	0.71

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
UMATILLA RIVER (Continued)																								
Tanner Creek:																								
H 1991 071522	Cascade	Umatilla R	04/07/93	27,821	218,618	25.92	0	0	0	0	0	0	0	0	0	0	0	0	2	71	0	0	0	0.26
H 1991 071523	Cascade	Umatilla R	04/07/93	27,984	219,266	25.92	0	4	0	0	0	2	0	0	0	0	0	0	0	43	0	0	0	0.18
H 1991 071521	Cascade	Umatilla R	04/09/93	28,273	454,794	25.77	0	0	0	0	0	0	0	0	0	0	0	0	2	54	0	0	0	0.20
H 1992 070337	Cascade	Umatilla R	04/07/94	27,166	418,222	25.06	0	0	5	0	0	6	0	0	0	0	0	0	4	47	0	0	0	0.23
H 1992 070339	Cascade	Umatilla R	04/07/94	27,010	232,778	26.52	0	0	0	0	0	5	6	0	0	0	0	0	2	42	0	0	0	0.20
H 1992 070338	Cascade	Umatilla R	04/07/94	27,452	233,105	26.68	0	0	0	0	0	16	0	0	0	0	0	0	4	62	0	0	0	0.30
H 1993 070559	Cascade	Umatilla R	03/31/95	26,498	497,449	31.26	0	0	0	0	0	0	0	0	0	0	0	0	1	9	0	0	--	0.04
H 1993 070557	Cascade	Umatilla R	04/04/95	26,421	250,970	30.83	0	0	0	0	0	0	0	0	0	0	0	0	1	15	0	0	--	0.06
H 1993 070558	Cascade	Umatilla R	04/04/95	26,381	251,135	30.83	0	0	0	0	0	0	0	0	0	0	0	0	1	22	0	0	--	0.09
H 1994 071150	Oxbow	Umatilla R	03/25/96	26,860	465,769	25.07	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	--	--	0.02
H 1994 071146	Cascade	Umatilla R	04/03/96	26,319	500,005	24.93	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	--	--	0.07
H 1994 071145	Cascade	Umatilla R	04/12/96	25,878	511,609	24.13	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	--	--	0.07
H 1995 071361	Klaskanine	Umatilla R	03/10/97	11,057	31,921	25.06	0	0	0	0	0	0	0	0	0	0	0	0	0	4	--	--	--	0.04
H 1995 071362	Klaskanine	Umatilla R	03/10/97	2,681	8,209	25.06	0	0	0	0	0	0	0	0	0	0	0	0	0	4	--	--	--	0.15
H 1995 071363	Klaskanine	Umatilla R	03/10/97	7,890	22,889	25.06	0	0	0	0	0	0	0	0	0	0	0	0	0	1	--	--	--	0.01
H 1995 091805	Klaskanine	Umatilla R	03/10/97	7,903	10,503	25.06	0	0	0	0	0	0	0	0	0	0	0	0	1	1	--	--	--	0.03
H 1995 091753	Gnat Creek	Umatilla R	04/05/97	26,822	853,688	29.64	0	0	0	0	0	9	2	0	0	0	0	0	9	112	--	--	--	0.49
H 1996 092308	Oxbow	Umatilla R	03/27/98	26,759	528,360	27.83	--	--	--	--	--	--	--	--	--	--	--	--	2	--	--	--	--	0.01
H 1996 092309	Cascade	Umatilla R	04/02/98	26,791	526,082	27.00	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	0.00
H 1996 092313	Cascade	Umatilla R	04/02/98	25,967	525,304	27.00	--	--	--	--	--	--	--	--	--	--	--	--	4	--	--	--	--	0.02
H 1997 092423	Cascade	Umatilla R	03/24/99	26,537	465,314	28.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092424	Cascade	Umatilla R	04/02/99	27,136	477,588	25.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092425	Cascade	Umatilla R	04/02/99	26,753	505,650	25.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Umatilla River:																								
H 1995 071360	Oxbow	Umatilla R	04/03/97	24,807	438,153	28.34	3	0	0	0	0	7	0	0	0	6	0	0	1	53	--	--	--	0.28
WAHKEENA POND																								
Sandy River:																								
H 1988 074209	Wahkeena Pond	Wahkeena Pond	05/15/90	4,422	351,022	30.85	0	0	0	0	0	27	0	3	12	20	0	23	1	257	0	0	0	7.76
H 1988 074210	Wahkeena Pond	Wahkeena Pond	05/15/90	4,273	351,022	30.85	0	0	4	0	6	2	0	0	8	17	0	23	3	201	0	0	0	6.18
H 1988 074211	Wahkeena Pond	Wahkeena Pond	05/15/90	4,422	351,022	30.85	0	0	0	0	0	12	0	3	4	22	3	18	2	203	0	0	0	6.04
H 1992 071529	Wahkeena Pond	Columbia R-2	04/30/94	23,472	1,503,732	23.14	0	0	0	0	0	3	0	0	0	0	0	0	1	2	0	0	0	0.03
Tanner Creek:																								
H 1986 073514	Wahkeena Pond	Wahkeena Pond	06/03/88	10,864	21,698	15.64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
H 1986 073515	Wahkeena Pond	Wahkeena Pond	06/03/88	10,386	20,743	15.64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
H 1986 073516	Wahkeena Pond	Wahkeena Pond	06/03/88	10,882	21,734	15.64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
H 1987 074146	Wahkeena Pond	Wahkeena Pond	06/16/89	10,335	200,704	29.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00

Appendix Table 1. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
WAHKEENA POND (Continued)																								
Tanner Creek:																								
H 1987 074147	Wahkeena Pond	Wahkeena Pond	06/16/89	8,220	198,535	29.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
H 1987 074148	Wahkeena Pond	Wahkeena Pond	06/16/89	10,389	200,759	29.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
H 1989 074861	Wahkeena Pond	Wahkeena Pond	03/31/91	10,154	366,918	23.74	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0.03
H 1989 074862	Wahkeena Pond	Wahkeena Pond	03/31/91	9,794	366,539	23.74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
H 1989 074863	Wahkeena Pond	Wahkeena Pond	03/31/91	10,027	366,787	23.74	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0.03
H 1990 074045	Wahkeena Pond	Wahkeena Pond	05/12/92	9,456	633,436	28.90	0	0	5	0	0	4	3	0	0	3	0	5	0	20	0	0	0	0.42
H 1990 074046	Wahkeena Pond	Wahkeena Pond	05/12/92	9,241	633,211	28.90	0	0	0	0	0	10	0	2	4	0	0	0	0	6	0	0	0	0.24
H 1990 074047	Wahkeena Pond	Wahkeena Pond	05/12/92	9,376	633,353	28.90	0	0	0	0	0	13	0	0	0	0	0	2	0	21	0	0	0	0.38
H 1991 073728	Wahkeena Pond	Columbia R-2	04/22/93	11,910	749,707	25.20	0	0	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0.32
H 1991 074853	Wahkeena Pond	Columbia R-2	04/22/93	12,535	750,071	25.20	0	0	3	0	0	0	0	0	0	0	0	0	0	47	0	0	0	0.40
YAKIMA RIVER																								
Tanner Creek:																								
H 1986 074359	Cascade	Yakima R	04/25/88	22,628	57,838	33.10	0	0	6	0	0	27	2	14	78	40	4	12	0	68	0	0	0	1.11
H 1986 074360	Cascade	Yakima R	04/26/88	22,448	62,930	32.39	0	0	34	0	4	38	6	20	82	46	6	12	0	100	0	0	0	1.55
H 1986 074361	Cascade	Yakima R	04/26/88	21,520	60,180	32.86	0	5	28	0	0	50	18	50	96	41	3	14	0	146	0	0	0	2.10
H 1987 074606	Cascade	Yakima R	03/14/89	26,572	78,395	24.78	0	0	25	0	2	62	6	28	33	49	8	27	15	46	0	0	0	1.13
H 1987 074607	Cascade	Yakima R	03/14/89	28,033	71,488	25.92	0	0	0	0	0	67	12	31	30	38	16	52	4	78	0	0	0	1.17
H 1987 074608	Cascade	Yakima R	03/14/89	26,913	68,880	26.99	0	0	0	0	0	45	0	3	6	24	4	17	1	14	0	0	0	0.42
H 1988 074811	Cascade	Yakima R	03/13/90	27,300	219,247	28.70	0	0	3	0	0	29	4	8	14	61	10	14	4	142	0	0	0	1.06
H 1988 074810	Cascade	Yakima R	03/13/90	27,052	212,672	29.26	0	0	3	0	0	48	31	40	71	105	10	99	38	417	0	0	0	3.19
H 1988 074812	Cascade	Yakima R	03/14/90	27,179	213,571	28.89	0	0	0	0	0	19	12	25	47	53	3	37	40	239	0	0	0	1.75
H 1989 075538	Cascade	Yakima R	03/06/91	25,267	252,022	23.50	0	0	0	0	0	8	6	0	16	0	0	0	0	14	0	0	0	0.17
H 1989 075537	Cascade	Yakima R	03/07/91	25,882	246,908	25.06	0	0	0	0	0	2	0	0	3	0	0	0	0	6	0	0	0	0.04
H 1989 075536	Cascade	Yakima R	03/08/91	26,783	191,501	25.77	0	0	4	0	0	5	9	3	14	8	0	0	0	25	0	0	0	0.25
H 1990 075625	Cascade	Yakima R	03/09/92	27,289	154,219	29.10	0	0	0	0	0	5	2	2	0	4	0	1	0	12	0	0	0	0.10
H 1990 075624	Cascade	Yakima R	03/10/92	27,249	223,344	27.50	0	0	0	0	0	5	6	3	1	0	0	4	0	17	0	0	0	0.13
H 1990 075623	Cascade	Yakima R	03/12/92	28,255	320,244	27.30	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0.02
H 1991 071524	Cascade	Yakima R	03/17/93	27,423	214,419	23.14	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0.07
H 1991 071525	Cascade	Yakima R	03/17/93	27,754	214,601	23.14	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0.01
H 1991 071530	Cascade	Yakima R	03/17/93	28,091	214,821	23.14	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0.07
H 1992 070340	Cascade	Yakima R	05/06/94	25,468	269,107	31.94	0	0	0	0	0	9	4	0	0	0	0	0	0	13	0	0	0	0.10
H 1992 070341	Cascade	Yakima R	05/06/94	25,985	269,408	31.94	0	0	0	0	0	10	3	0	0	0	0	0	0	16	0	0	0	0.11
H 1992 070342	Cascade	Yakima R	05/06/94	26,901	172,059	35.99	0	0	6	0	0	33	6	0	0	0	0	0	0	12	0	0	0	0.21
H 1993 070554	Cascade	Yakima R	04/26/95	22,851	186,464	31.48	0	0	0	0	0	3	0	0	0	0	0	4	0	13	0	0	--	0.09
H 1993 070555	Cascade	Yakima R	04/26/95	20,031	183,732	31.48	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	--	0.08
H 1993 070556	Cascade	Yakima R	04/26/95	19,133	195,420	31.48	0	0	0	0	0	5	0	0	0	0	0	0	0	13	0	0	--	0.09

Appendix Table 1. Concluded.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
YAKIMA RIVER (Continued)																								
Tanner Creek:																								
H 1994 071147	Cascade	Yakima R	04/30/96	26,733	193,628	29.92	0	0	0	0	0	1	0	0	0	0	0	0	0	21	0	--	--	0.08
H 1994 071148	Cascade	Yakima R	04/30/96	26,135	193,275	29.92	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	--	--	0.13
H 1994 071149	Cascade	Yakima R	04/30/96	26,538	193,476	29.92	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	--	--	0.03
H 1996 092310	Cascade	Yakima R	05/16/98	27,046	224,253	41.23	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1996 092311	Cascade	Yakima R	05/16/98	26,878	224,137	41.23	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	0.00
H 1996 092312	Cascade	Yakima R	05/16/98	26,821	224,082	41.23	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1997 092426	Cascade	Yakima R	05/17/99	26,593	204,017	26.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092427	Cascade	Yakima R	05/17/99	25,864	247,724	26.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YAQUINA RIVER																								
Siletz River:																								
H 1993 075255	Salmon River	Yaquina R	04/15/95	25,432	306,402	42.75	0	0	0	0	0	7	3	0	0	0	0	8	9	250	0	0	--	1.09
H 1994 071224	Salmon River	Yaquina R	04/18/96	19,559	263,167	43.57	0	0	0	0	0	2	0	0	0	0	0	3	8	132	0	--	--	0.74
H 1994 075416	Salmon River	Yaquina R	05/20/96	21,377	276,214	44.88	0	0	0	0	0	3	0	0	0	0	0	0	6	31	0	--	--	0.19
H 1995 091714	Salmon River	Yaquina R	05/05/97	20,055	216,654	51.54	0	0	0	0	2	9	0	0	0	0	0	3	4	83	--	--	--	0.50
H 1995 091713	Salmon River	Yaquina R	05/05/97	20,254	193,889	53.36	0	0	0	0	0	0	2	0	0	0	0	0	13	92	--	--	--	0.53

Appendix Table 2. Coded-wire-tagged chinook salmon released for stock assessment, release and recovery data, 1984-1998 brood years. Stock sources: N = Native; H = Hatchery; M = Mixed. NFH = National Fish Hatchery; AK = Alaska, NCBC = North Central British Columbia, WCVI = West Coast Vancouver Island, GST = Georgia Strait, PS = Puget Sound, WA = Washington Coast, CA = California. Oregon ocean areas are displayed in Figure 5.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON																								
ALSEA RIVER																								
Fall Creek (Alsea River):																								
H 1984 072838	Fall Creek	Fall Cr	09/16/85	16,876	65,535	36.29	17	33	7	0	0	0	0	17	2	0	0	0	0	1	3	8	3	0.54
H 1984 072805	Fall Creek	Fall Cr	10/15/85	26,521	105,400	53.98	18	49	9	0	0	0	0	0	2	0	0	0	0	3	3	20	4	0.41
H 1985 073044	Fall Creek	Fall Cr	08/25/86	25,974	151,832	37.79	38	37	31	0	9	6	0	18	0	4	0	0	4	3	10	23	0	0.70
H 1986 074425	Fall Creek	Fall Cr	08/24/87	26,883	36,697	37.17	48	32	12	0	0	4	0	3	0	0	0	0	1	27	32	6	0	0.61
H 1991 075801	Fall Creek	Fall Cr	08/10/92	21,100	101,587	31.10	3	17	0	0	0	3	0	0	0	0	0	0	0	11	11	3	0	0.23
H 1992 076028	Fall Creek	Fall Cr	08/27/93	23,089	103,583	34.62	53	12	0	0	0	0	0	2	0	0	0	0	6	29	43	0	0	0.63
H 1994 070416	Fall Creek	Fall Cr	08/18/95	24,562	103,214	38.11	36	23	0	0	0	0	0	3	0	0	0	0	0	2	13	--	--	0.31
H 1995 071349	Fall Creek	Fall Cr	08/15/96	29,121	100,278	41.17	63	19	0	0	0	0	0	3	0	0	0	0	0	29	--	--	--	0.39
CHETCO RIVER, JACK CREEK																								
Chetco River:																								
M 1988 074804	Jack Creek	Jack Cr	06/15/89	27,579	98,868	7.56	0	0	0	0	0	0	0	0	0	5	2	10	5	0	2	1	0	0.09
M 1989 074824	Jack Creek	Jack Cr	07/04/90	27,487	31,255	9.07	0	0	0	0	0	0	0	0	16	0	4	6	0	1	0	0	0	0.10
M 1990 074925	Jack Creek	Jack Cr	06/28/91	23,514	24,665	8.40	0	0	0	0	0	3	0	0	86	17	29	84	12	19	12	1	0	1.12
CHETCO RIVER																								
Chetco River:																								
M 1984 072931	Elk River	Chetco R	10/01/85	26,028	276,592	34.36	0	0	8	0	0	11	0	6	74	238	66	313	4	14	25	12	1	2.97
N 1985 073608	Elk River	Chetco R	10/06/86	20,703	346,935	37.48	0	0	0	0	0	0	0	8	22	263	45	240	4	10	63	6	0	3.19
M 1986 074707	Elk River	Chetco R	08/12/87	25,073	37,900	35.97	0	0	7	0	0	2	0	0	5	182	12	46	6	5	29	0	0	1.17
M 1986 074704	Elk River	Chetco R	08/12/87	25,471	36,598	39.09	0	0	6	0	0	8	0	4	33	281	14	133	6	26	37	0	0	2.15
M 1987 074417	Elk River	Chetco R	09/29/88	26,957	32,116	36.57	0	0	0	0	4	0	0	0	17	238	20	121	31	18	21	1	0	1.75
M 1988 074837	Elk River	Chetco R	09/01/89	26,140	33,469	28.89	0	0	0	0	0	0	0	0	0	9	2	2	20	5	7	1	0	0.18
M 1988 074834	Elk River	Chetco R	09/29/89	27,027	300,746	34.36	0	0	0	0	0	0	0	0	3	0	3	4	2	0	3	0	0	0.06
M 1988 074835	Elk River	Chetco R	10/04/89	27,823	96,637	38.76	0	0	0	0	0	0	0	0	0	0	0	0	7	1	6	1	0	0.05
M 1988 074836	Elk River	Chetco R	10/23/89	25,931	32,412	40.86	0	0	25	0	0	0	0	2	18	5	7	2	12	6	10	0	0	0.34
M 1989 075420	Elk River	Chetco R	09/14/90	25,470	37,990	31.28	0	0	0	0	0	0	0	2	22	0	6	14	6	11	9	0	0	0.27
M 1989 075422	Elk River	Chetco R	09/17/90	26,922	400,327	34.10	0	0	0	0	0	3	0	0	19	3	23	0	9	5	11	0	0	0.27
M 1989 075421	Elk River	Chetco R	10/16/90	26,037	35,750	36.28	0	0	0	0	0	0	0	0	16	0	2	19	1	0	7	0	0	0.17
M 1990 075605	Elk River	Chetco R	09/19/91	25,143	165,654	39.78	0	0	0	0	0	2	0	0	18	0	11	20	0	7	2	1	0	0.24
M 1990 075606	Elk River	Chetco R	09/20/91	25,648	36,773	33.35	0	0	0	0	0	0	0	0	28	0	24	15	2	5	2	0	0	0.30
M 1990 075607	Elk River	Chetco R	10/17/91	25,605	191,526	40.13	0	0	2	0	0	1	0	0	20	0	23	11	1	2	2	2	0	0.25

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
CHETCO RIVER (Continued)																								
Chetco River:																								
H 1991 075807	Elk River	Chetco R	10/06/92	22,981	236,360	39.10	0	0	0	0	0	0	0	0	25	0	54	23	1	0	25	0	0	0.56
H 1991 075808	Elk River	Chetco R	11/05/92	23,236	153,149	41.23	0	0	0	0	0	0	0	0	15	4	51	14	0	3	14	0	0	0.43
M 1992 076034	Elk River	Chetco R	10/15/93	24,669	357,829	41.23	0	0	0	0	0	0	0	0	85	7	53	46	1	17	16	0	0	0.91
M 1993 075245	Elk River	Chetco R	10/06/94	25,933	330,254	37.15	0	0	0	0	0	0	0	0	39	3	53	9	0	2	7	5	--	0.46
M 1994 070123	Elk River	Chetco R	09/28/95	24,971	165,717	41.61	0	0	0	0	0	2	0	4	14	20	41	0	0	1	5	--	--	0.35
M 1995 071330	Elk River	Chetco R	09/28/96	24,109	226,309	40.43	0	0	0	0	0	0	0	0	0	3	30	9	0	2	--	--	--	0.18
M 1996 091847	Elk River	Chetco R	09/26/97	25,050	233,621	35.43	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
M 1997 091858	Elk River	Chetco R	09/30/98	26,994	158,208	37.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M 1998 091907	Elk River	Chetco R	09/28/99	24,594	164,741	35.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COOS RIVER																								
Coos River:																								
N 1984 073040	Butte Falls	Morgan Cr	09/30/85	25,353	60,237	48.25	11	11	4	0	0	9	0	3	10	21	0	0	26	0	23	14	0	0.52
N 1985 073609	Butte Falls	Coos R, S Fk	09/09/86	26,674	27,220	36.57	31	81	89	5	0	19	0	31	107	83	2	8	0	95	91	28	10	2.55
N 1987 074349	Butte Falls	Morgan Cr	09/25/88	26,119	70,166	33.10	12	9	13	0	0	0	0	0	3	0	0	0	15	8	24	19	0	0.39
N 1988 074839	Butte Falls	Morgan Cr	09/13/89	25,755	56,029	28.52	12	44	28	0	0	5	0	0	0	0	0	5	7	21	37	1	1	0.63
N 1989 075224	Noble Creek	Noble Cr	05/22/90	52,328	272,125	5.78	16	27	0	0	0	2	0	0	6	4	0	0	28	3	11	3	0	0.19
N 1989 075237	Butte Falls	Noble Cr	09/12/90	26,099	63,490	27.65	3	27	35	0	5	2	0	0	21	0	0	0	19	21	9	5	1	0.57
M 1990 075529	Priorli Cr	Morgan Cr	06/03/91	52,274	177,232	5.15	12	15	14	0	0	2	0	0	0	0	0	0	11	2	15	17	0	0.17
M 1990 074820	Priorli Cr	Morgan Cr	09/27/91	26,732	75,638	45.44	11	12	28	0	0	4	0	0	22	0	0	0	8	5	14	7	0	0.42
M 1991 076002	Cole Rivers	Noble Cr	10/02/92	25,335	51,946	36.57	13	16	16	0	0	0	0	17	12	0	0	0	7	18	50	8	0	0.62
M 1992 075943	Noble Creek	Noble Cr	05/29/93	52,672	52,848	6.30	34	0	5	0	0	0	0	0	3	3	0	0	83	79	32	12	0	0.48
M 1992 070249	Cole Rivers	Noble Cr	10/08/93	26,724	50,835	42.78	32	3	0	0	0	4	0	8	17	0	0	0	91	80	64	22	1	1.20
M 1993 074957	Noble Creek	Noble Cr	06/19/94	55,429	516,882	6.45	33	16	0	0	0	0	0	0	2	0	0	0	19	37	37	9	--	0.28
M 1993 075244	Cole Rivers	Morgan Cr	09/22/94	26,153	92,850	50.34	52	36	0	0	0	2	0	5	9	0	0	2	10	11	11	5	--	0.55
M 1994 070352	Noble Creek	Noble Cr	06/11/95	50,812	394,655	5.34	17	12	0	0	0	0	0	0	0	0	0	0	9	10	15	--	--	0.12
M 1994 070647	Cole Rivers	Morgan Cr	09/24/95	26,045	103,534	39.78	21	9	2	0	0	0	0	0	0	0	0	0	5	2	9	--	--	0.18
M 1995 070821	Noble Creek	Noble Cr	06/19/96	53,620	399,167	8.80	11	21	0	0	0	0	0	1	0	0	0	0	20	30	--	--	--	0.15
M 1995 071334	Cole Rivers	Morgan Cr	09/29/96	23,556	94,405	44.44	24	3	0	0	0	0	0	0	0	3	0	0	7	6	--	--	--	0.18
M 1996 071141	Noble Creek	Noble Cr	06/14/97	53,725	409,066	7.43	--	--	--	--	--	--	--	--	--	--	--	--	8	--	--	--	--	0.01
M 1996 091846	Cole Rivers	Morgan Cr	09/17/97	24,059	98,963	50.39	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	0.00
M 1997 070922	Noble Creek	Noble Cr	06/27/98	54,163	425,100	9.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M 1997 091855	Priorli Cr	Morgan Cr	09/27/98	24,943	103,618	45.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M 1998 092026	Noble Creek	Noble Cr	07/08/99	53,453	397,075	12.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M 1998 091906	Priorli Cr	Morgan Cr	09/30/99	25,343	91,496	46.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
COQUILLE RIVER																								
Coquille River:																								
N 1984 073038	Cole Rivers	Ferry Cr	09/15/85	27,026	28,239	50.38	9	6	22	0	0	0	0	9	25	14	0	5	0	1	1	2	0	0.35
N 1985 073542	Cole Rivers	Ferry Cr	09/26/86	26,741	26,850	60.47	60	81	136	2	0	8	0	8	197	361	12	42	8	67	83	19	2	4.06
N 1986 073337	Cole Rivers	Coquille R	09/15/87	27,277	109,750	33.08	8	23	14	0	0	6	0	0	5	0	0	0	1	2	2	3	0	0.23
N 1987 074334	Cole Rivers	Ferry Cr	09/14/88	26,940	26,940	45.35	81	73	100	0	0	24	0	0	21	50	0	0	27	23	46	4	0	1.67
M 1988 074802	Cole Rivers	Coquille R	09/07/89	27,609	75,035	39.78	42	74	85	0	0	22	0	0	12	1	0	2	0	7	1	0	0	0.89
M 1990 075611	Bandon	Coquille R	10/07/91	25,570	54,613	37.17	19	5	11	0	0	0	0	0	0	0	0	0	3	0	13	3	0	0.21
M 1991 076003	Bandon	Ferry Cr	09/15/92	26,605	55,787	31.70	4	0	0	0	0	0	0	0	0	0	0	6	0	0	0	1	0	0.04
N 1992 070244	Sevenmile	Sevenmile Cr	09/28/93	25,714	53,723	30.23	30	0	0	0	0	0	0	0	16	13	0	0	0	1	2	1	0	0.25
N 1993 075247	Butte Falls	Sevenmile Cr	09/17/94	23,420	50,650	28.87	69	15	2	0	0	0	0	0	10	0	0	0	0	0	3	1	--	0.43
N 1994 075336	Butte Falls	Sevenmile Cr	09/18/95	22,554	31,960	34.36	70	48	0	0	0	1	0	0	0	0	0	0	0	0	1	--	--	0.53
M 1995 070943	Bandon	Coquille R	09/26/96	21,288	48,529	31.38	9	3	0	0	0	0	0	0	0	0	0	0	0	4	--	--	--	0.08
M 1996 091853	Butte Falls	Sevenmile Cr	09/12/97	27,456	54,970	33.35	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	0.00
M 1997 091902	Butte Falls	Sevenmile Cr	09/29/98	28,204	59,405	33.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M 1998 091914	Butte Falls	Sevenmile Cr	09/09/99	25,928	54,256	28.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ELK RIVER																								
Elk River:																								
M 1984 072920	Elk River	Elk R	10/12/85	26,424	38,645	39.43	5	47	61	0	0	12	0	15	75	135	21	8	31	24	23	20	4	1.82
M 1985 072924	Elk River	Elk R	09/16/86	25,361	37,308	33.85	11	45	33	0	4	11	0	12	129	328	13	20	42	46	31	13	0	2.91
M 1986 072937	Elk River	Elk R	10/06/87	23,389	32,084	43.18	0	3	5	0	0	19	0	7	20	77	2	0	26	11	15	7	0	0.82
H 1987 074415	Elk River	Elk R	09/19/88	25,276	175,235	33.35	3	9	22	0	0	2	0	0	1	16	0	0	1	12	11	8	0	0.34
H 1988 074833	Elk River	Elk R	09/29/89	27,315	184,617	34.89	8	5	15	0	0	2	0	0	21	17	0	0	3	11	24	6	0	0.41
H 1989 075423	Elk River	Elk R	10/18/90	25,861	334,809	42.38	6	11	45	0	3	9	0	2	36	78	0	0	49	63	76	35	6	1.62
H 1990 075663	Elk River	Elk R	10/26/91	37,216	38,923	42.78	2	18	15	0	0	3	0	0	0	30	0	0	38	10	33	21	0	0.46
H 1990 075701	Elk River	Elk R	10/26/91	35,168	37,136	44.46	8	9	17	0	0	2	0	0	14	44	1	0	65	19	46	28	1	0.72
H 1990 075702	Elk River	Elk R	10/26/91	33,859	36,472	44.90	14	3	12	0	0	2	0	3	51	42	0	0	26	16	44	39	0	0.74
H 1990 075703	Elk River	Elk R	10/26/91	34,621	35,512	46.75	8	9	19	0	0	0	0	0	54	36	0	0	10	19	44	32	0	0.67
H 1990 075608	Elk River	Elk R	10/26/91	25,494	35,103	47.74	8	8	10	0	0	1	0	0	5	24	0	0	21	13	43	29	2	0.64
H 1990 075704	Elk River	Elk R	10/26/91	34,753	35,688	48.25	10	0	6	0	0	1	0	0	24	19	0	0	5	10	42	81	5	0.58
H 1991 074009	Elk River	Elk R	09/30/92	32,302	43,604	32.86	12	4	12	0	0	0	0	0	3	36	3	0	24	30	48	15	0	0.58
H 1991 074951	Elk River	Elk R	09/30/92	31,716	43,265	33.84	14	7	7	0	0	0	0	4	0	41	1	0	15	19	101	25	4	0.75
H 1991 074953	Elk River	Elk R	09/30/92	34,807	44,497	35.71	14	3	6	0	0	4	0	0	6	34	3	2	9	20	114	24	2	0.69
H 1991 074948	Elk River	Elk R	10/21/92	27,672	34,560	39.44	12	4	0	0	0	0	0	0	9	36	2	0	15	25	38	20	1	0.59
H 1991 074010	Elk River	Elk R	11/01/92	30,898	35,961	42.38	3	4	0	0	0	0	0	0	3	23	1	4	12	10	22	7	1	0.29
H 1991 075806	Elk River	Elk R	11/01/92	11,737	18,905	45.35	0	0	0	0	0	0	0	0	4	19	0	0	9	5	20	4	0	0.52

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
ELK RIVER (Continued)																								
Elk River:																								
H 1992 070425	Elk River	Elk R	11/16/93	32,475	37,098	50.39	48	5	0	0	2	0	0	7	74	102	7	0	75	77	58	26	5	1.50
H 1992 070426	Elk River	Elk R	11/17/93	34,191	35,693	51.54	14	8	8	0	0	0	0	0	53	89	11	0	44	61	46	32	5	1.09
H 1992 070424	Elk River	Elk R	11/22/93	35,468	37,902	49.84	3	4	10	3	0	2	0	0	106	69	4	0	23	63	32	26	4	0.98
H 1992 076033	Elk River	Elk R	11/28/93	26,665	36,301	52.73	23	5	0	0	0	4	0	2	40	74	1	0	43	49	43	14	7	1.14
H 1992 070422	Elk River	Elk R	11/29/93	35,509	36,954	52.73	29	3	9	0	0	10	0	1	132	95	4	0	20	50	48	31	3	1.23
H 1992 070423	Elk River	Elk R	11/29/93	36,278	36,967	53.35	58	7	3	0	0	6	0	0	129	136	3	0	48	136	94	31	1	1.80
H 1993 070522	Elk River	Elk R	10/26/94	37,690	44,431	48.72	140	32	5	0	0	2	0	0	29	338	0	0	64	65	158	89	--	2.45
H 1993 075246	Elk River	Elk R	10/26/94	23,419	98,070	48.72	76	31	0	0	0	7	0	3	23	111	3	0	58	51	99	64	--	2.25
H 1993 070521	Elk River	Elk R	10/26/94	38,190	44,589	49.25	133	26	15	0	0	3	0	5	48	223	0	0	117	48	121	85	--	2.16
H 1993 070523	Elk River	Elk R	10/26/94	36,060	42,546	49.25	57	33	0	0	4	2	0	0	30	195	0	0	85	78	97	46	--	1.74
H 1993 070524	Elk River	Elk R	10/26/94	36,155	48,066	49.25	127	25	2	0	0	7	0	0	34	201	0	0	46	75	181	123	--	2.27
H 1993 070525	Elk River	Elk R	10/26/94	39,120	50,898	49.79	108	66	11	0	0	11	0	0	31	222	2	0	26	87	210	103	--	2.24
H 1994 070854	Elk River	Elk R	10/11/95	194,243	325,889	49.84	313	110	4	0	4	11	0	2	36	543	0	3	155	112	591	--	--	0.97
H 1995 070951	Elk River	Elk R	09/15/96	174,479	321,567	36.49	232	92	13	0	0	1	0	6	15	828	2	0	276	577	--	--	--	1.17
H 1996 092148	Elk River	Elk R	09/14/97	175,967	322,931	30.64	--	--	--	--	--	--	--	--	--	--	--	--	53	--	--	--	--	0.03
H 1997 091857	Elk River	Elk R	10/13/98	25,504	44,455	52.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092449	Elk River	Elk R	10/13/98	163,690	283,815	52.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092810	Elk River	Elk R	10/27/99	193,648	350,870	54.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTER CREEK																								
Hunter Creek & tribs:																								
N 1989 074826	Hunter Creek	Hunter Cr	07/03/90	17,460	17,460	4.32	0	0	4	0	0	1	0	0	21	0	0	0	0	1	2	1	0	0.17
M 1992 070355	Elk River	Hunter Cr	12/01/93	19,182	21,357	52.73	3	0	5	0	0	6	0	0	225	33	25	67	10	6	11	2	0	2.05
M 1993 070759	Elk River	Hunter Cr	10/28/94	25,340	26,867	47.69	3	0	0	0	0	2	0	0	60	37	2	24	0	2	12	3	--	0.57
M 1994 070932	Elk River	Hunter Cr	10/18/95	23,918	26,944	60.47	0	0	0	0	0	5	0	1	42	26	2	0	0	5	5	--	--	0.36
M 1995 071355	Elk River	Hunter Cr	10/18/96	21,288	24,115	54.73	3	0	0	0	0	2	0	0	5	9	0	9	1	1	--	--	--	0.14
NECANICUM RIVER																								
Trask River:																								
H 1997 091862	Nehalem	Necanicum R	08/25/98	27,582	27,900	24.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 091912	Nehalem	Necanicum R	08/23/99	25,640	26,995	27.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NESTUCCA RIVER																								
Nestucca River:																								
H 1991 074821	Cedar Creek	Three R	07/09/92	25,308	144,550	18.50	0	10	0	0	0	0	0	0	0	0	0	0	0	5	4	2	0	0.08
H 1992 076027	Cedar Creek	Nestucca R	08/26/93	24,520	115,830	22.68	36	0	0	0	0	0	0	8	0	0	0	0	1	8	26	4	0	0.34

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
PISTOL RIVER																								
Pistol River & tribs:																								
N 1988 074805	Pistol River	Pistol R	07/21/89	8,244	10,852	11.33	0	0	10	0	0	0	0	3	3	0	0	3	1	2	0	1	0	0.28
N 1989 075243	Pistol River	Pistol R	10/02/90	23,817	29,524	37.48	0	0	31	0	0	10	0	2	84	3	4	20	2	7	17	3	0	0.77
M 1991 071462	Elk River	Pistol R	11/04/92	21,967	22,273	55.31	4	0	4	0	0	11	0	4	77	4	25	27	3	5	11	0	0	0.80
M 1992 070360	Elk River	Pistol R	12/02/93	18,877	19,480	56.69	0	0	0	0	0	1	0	0	165	35	24	75	7	18	12	1	0	1.79
M 1993 070760	Elk River	Pistol R	11/01/94	25,368	35,734	41.96	0	0	0	0	0	3	0	0	60	27	8	11	4	4	5	2	--	0.49
M 1994 071057	Elk River	Pistol R	10/12/95	5,166	6,343	49.30	0	0	0	0	0	0	0	0	5	3	0	0	0	0	0	--	--	0.15
ROGUR RIVER, COLUMBIA RIVER, BIG CREEK RELEASE																								
Rogue River:																								
N 1984 073224	Big Creek	Big Cr	05/30/85	11,039	11,149	5.95	0	0	0	0	0	6	2	18	36	52	1	23	3	18	28	0	0	1.69
N 1984 073225	Big Creek	Big Cr	05/30/85	9,497	9,593	5.95	0	0	10	0	0	2	0	20	35	27	0	14	2	3	21	0	0	1.41
N 1984 073226	Big Creek	Big Cr	05/30/85	10,485	10,591	5.95	0	0	0	0	0	9	0	9	37	72	9	45	9	25	18	1	1	2.24
N 1984 073227	Big Creek	Big Cr	05/30/85	8,731	8,819	5.95	0	0	0	0	0	3	0	19	32	32	0	5	3	7	31	2	0	1.53
N 1984 073228	Big Creek	Big Cr	05/30/85	9,785	9,884	5.95	0	0	0	0	0	6	1	13	26	14	5	10	2	15	25	2	0	1.22
N 1984 073229	Big Creek	Big Cr	10/11/85	9,802	10,253	47.23	0	0	28	0	0	27	0	10	115	125	6	14	4	29	182	14	0	5.65
N 1984 073230	Big Creek	Big Cr	10/11/85	9,584	10,025	47.23	0	0	23	0	0	47	0	19	105	157	13	33	4	40	180	13	0	6.62
N 1984 073231	Big Creek	Big Cr	10/11/85	9,932	10,389	47.23	0	0	33	0	5	42	0	23	102	128	9	27	6	35	161	9	0	5.84
N 1984 073232	Big Creek	Big Cr	10/11/85	10,130	10,596	47.23	0	0	21	3	2	27	0	36	130	87	11	31	19	50	157	12	0	5.78
N 1984 073233	Big Creek	Big Cr	10/11/85	9,865	10,319	47.23	0	0	17	0	0	25	0	25	39	137	6	44	3	26	181	22	0	5.32
N 1985 073347	Big Creek	Big Cr	05/27/86	10,555	10,591	6.46	0	0	0	0	0	0	0	0	5	6	0	12	0	6	0	0	0	0.27
N 1985 073348	Big Creek	Big Cr	05/27/86	10,245	10,279	6.46	0	0	0	0	0	2	1	0	20	6	0	0	0	6	6	1	0	0.41
N 1985 073349	Big Creek	Big Cr	05/27/86	10,126	10,160	6.46	0	0	0	0	0	0	0	0	15	8	0	2	0	2	3	0	0	0.30
N 1985 073350	Big Creek	Big Cr	05/27/86	10,615	10,651	6.46	0	0	6	0	0	0	0	0	3	6	0	6	0	4	6	0	0	0.29
N 1985 073351	Big Creek	Big Cr	05/27/86	10,579	10,615	6.46	0	0	0	0	0	0	0	3	8	18	0	0	0	4	1	0	0	0.32
N 1985 073434	Big Creek	Big Cr	08/19/86	10,613	10,649	33.59	0	0	4	0	0	6	5	3	66	114	8	22	4	75	28	2	0	3.18
N 1985 073435	Big Creek	Big Cr	08/19/86	10,275	10,309	33.59	0	0	18	0	7	11	3	14	62	126	4	49	3	46	47	0	0	3.80
N 1985 073436	Big Creek	Big Cr	08/19/86	10,257	10,291	33.59	0	0	14	0	0	2	0	23	76	88	3	24	20	37	31	4	5	3.19
N 1985 073437	Big Creek	Big Cr	08/19/86	10,683	10,719	33.59	0	0	4	0	0	19	0	4	50	132	5	34	3	46	36	2	0	3.14
N 1985 073438	Big Creek	Big Cr	08/19/86	10,857	10,893	33.59	0	0	15	0	0	7	0	16	65	120	11	51	8	42	39	2	0	3.46
N 1985 073439	Big Creek	Big Cr	10/03/86	7,648	7,674	44.90	0	0	0	0	0	7	0	12	40	88	3	29	0	10	38	4	1	3.03
N 1985 073440	Big Creek	Big Cr	10/03/86	8,427	8,455	44.90	0	0	9	0	0	20	0	13	51	83	2	8	1	16	31	7	0	2.86
N 1985 073441	Big Creek	Big Cr	10/03/86	8,160	8,188	44.90	0	0	7	0	0	4	0	13	33	70	2	14	0	15	27	3	0	2.30
N 1985 073442	Big Creek	Big Cr	10/03/86	8,430	8,458	44.90	0	0	0	0	0	13	0	19	64	43	1	28	2	26	35	8	0	2.84
N 1985 073443	Big Creek	Big Cr	10/03/86	8,074	8,100	44.90	0	0	12	0	3	5	3	14	39	66	4	45	1	13	26	2	0	2.89
N 1986 073453	Big Creek	Big Cr	05/29/87	10,393	10,750	6.21	0	0	0	0	0	7	0	0	0	3	0	0	9	5	7	0	0	0.30
N 1986 073454	Big Creek	Big Cr	05/29/87	10,329	10,683	6.21	0	0	0	0	0	5	0	0	3	11	0	0	3	1	1	1	0	0.24

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
ROGUR RIVER, COLUMBIA RIVER, BIG CREEK RELEASE (Continued)																								
Rogue River:																								
N 1986 073455	Big Creek	Big Cr	05/29/87	10,316	10,670	6.21	0	0	4	0	0	2	0	0	6	4	2	0	2	2	6	0	0	0.27
N 1986 073456	Big Creek	Big Cr	05/29/87	10,370	10,726	6.21	0	0	3	0	0	0	0	0	7	29	2	6	0	2	3	2	0	0.52
N 1986 073457	Big Creek	Big Cr	05/29/87	10,180	10,529	6.21	0	0	4	0	0	2	2	0	11	11	0	0	1	6	2	1	0	0.39
N 1986 073463	Big Creek	Big Cr	08/17/87	10,861	10,861	36.29	0	0	0	0	0	35	7	12	25	186	9	18	36	45	91	2	0	4.29
N 1986 073501	Big Creek	Big Cr	08/17/87	10,483	10,483	36.29	0	0	0	0	0	19	1	36	47	128	13	38	26	48	39	1	0	3.78
N 1986 073502	Big Creek	Big Cr	08/17/87	9,941	9,941	36.29	0	0	0	0	0	5	5	10	24	102	10	15	26	24	43	9	0	2.75
N 1986 073503	Big Creek	Big Cr	08/17/87	10,198	10,198	36.29	0	0	0	0	0	7	2	25	41	148	9	47	25	20	43	9	0	3.69
N 1986 073504	Big Creek	Big Cr	08/17/87	10,704	10,704	36.29	0	0	11	0	0	15	8	20	45	197	5	21	22	58	43	2	0	4.18
N 1986 073458	Big Creek	Big Cr	10/05/87	11,102	11,102	43.18	0	0	10	3	0	22	4	0	80	90	5	27	12	19	58	12	0	3.08
N 1986 073459	Big Creek	Big Cr	10/05/87	10,880	10,880	43.18	0	0	22	0	0	20	2	9	26	106	2	5	21	25	56	0	0	2.70
N 1986 073460	Big Creek	Big Cr	10/05/87	10,401	10,401	43.18	0	0	5	0	0	28	5	1	35	54	4	19	21	24	47	4	0	2.37
N 1986 073461	Big Creek	Big Cr	10/05/87	9,923	9,923	43.18	0	0	27	0	3	9	5	17	14	107	9	38	17	21	62	0	0	3.32
N 1986 073462	Big Creek	Big Cr	10/05/87	10,493	10,493	43.18	0	0	15	0	0	23	0	14	37	68	0	30	10	14	46	1	0	2.46
H 1987 073535	Big Creek	Big Cr	05/19/88	10,829	11,197	5.74	0	0	0	0	0	0	0	0	6	0	0	0	0	1	3	0	0	0.09
H 1987 073536	Big Creek	Big Cr	05/19/88	9,730	10,061	5.74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
H 1987 073537	Big Creek	Big Cr	05/19/88	10,486	10,843	5.74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
H 1987 073538	Big Creek	Big Cr	05/19/88	10,373	10,726	5.74	0	0	0	0	0	2	2	0	4	4	0	0	1	1	0	0	0	0.13
H 1987 073539	Big Creek	Big Cr	05/19/88	10,433	10,788	5.74	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0.04
H 1987 074141	Big Creek	Big Cr	08/22/88	10,350	10,728	34.36	0	0	11	0	0	23	2	10	40	84	0	23	20	22	29	5	0	2.60
H 1987 074142	Big Creek	Big Cr	08/22/88	10,088	10,456	34.36	0	0	10	0	0	12	2	13	44	91	8	5	20	14	42	0	0	2.59
H 1987 074143	Big Creek	Big Cr	08/22/88	10,052	10,419	34.36	0	0	15	3	5	10	0	12	37	98	3	6	20	10	41	1	0	2.60
H 1987 074144	Big Creek	Big Cr	08/22/88	10,143	10,513	34.36	0	2	0	0	0	21	5	19	36	48	7	11	21	26	32	1	0	2.26
H 1987 074145	Big Creek	Big Cr	08/22/88	9,982	10,346	34.36	0	0	4	0	0	29	4	4	28	106	3	3	18	15	34	1	0	2.49
H 1987 074136	Big Creek	Big Cr	10/04/88	9,433	9,777	44.90	0	0	22	0	0	44	7	24	64	91	2	20	36	59	79	4	0	4.79
H 1987 074137	Big Creek	Big Cr	10/04/88	9,157	9,491	44.90	0	0	18	7	0	44	4	10	34	41	13	17	32	54	74	1	0	3.81
H 1987 074138	Big Creek	Big Cr	10/04/88	9,244	9,581	44.90	0	0	17	0	0	42	14	18	44	95	12	27	23	39	103	5	0	4.75
H 1987 074139	Big Creek	Big Cr	10/04/88	9,225	9,562	44.90	0	0	13	3	9	33	10	10	46	92	6	11	22	57	84	4	0	4.34
H 1987 074140	Big Creek	Big Cr	10/04/88	9,046	9,376	44.90	0	0	25	0	0	63	6	31	32	72	3	27	21	43	63	4	0	4.31
H 1988 073346	Big Creek	Big Cr	05/23/89	10,923	10,970	6.39	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.01
H 1988 073540	Big Creek	Big Cr	05/23/89	10,402	10,446	6.39	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.02
H 1988 074159	Big Creek	Big Cr	05/23/89	10,117	10,160	6.39	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	0.05
H 1988 074160	Big Creek	Big Cr	05/23/89	10,261	10,305	6.39	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0.03
H 1988 074161	Big Creek	Big Cr	05/23/89	10,070	10,113	6.39	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	0	0.05
H 1988 074162	Big Creek	Big Cr	08/21/89	10,409	10,440	35.43	0	0	5	6	0	22	5	10	38	31	0	6	14	62	49	0	0	2.38
H 1988 074163	Big Creek	Big Cr	08/21/89	10,779	10,811	35.43	0	0	15	0	0	8	2	20	42	14	6	6	10	27	27	0	0	1.64
H 1988 074201	Big Creek	Big Cr	08/21/89	10,556	10,588	35.43	0	0	16	4	0	13	2	10	33	10	3	8	12	63	23	1	0	1.88

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
ROGUR RIVER, COLUMBIA RIVER, BIG CREEK RELEASE (Continued)																								
Rogue River:																								
H 1988 074202	Big Creek	Big Cr	08/21/89	10,808	10,840	35.43	0	0	10	0	0	20	0	11	20	44	6	4	8	43	41	2	0	1.93
H 1988 074203	Big Creek	Big Cr	08/21/89	9,914	9,944	35.43	0	0	0	0	0	22	2	7	33	13	0	6	11	50	42	0	0	1.88
H 1988 074204	Big Creek	Big Cr	08/21/89	10,452	10,483	35.43	0	2	4	4	0	14	2	7	24	23	0	5	8	40	29	1	0	1.56
H 1988 074205	Big Creek	Big Cr	08/21/89	10,300	10,331	35.43	0	0	0	0	0	7	2	5	16	22	3	3	8	69	48	1	0	1.79
H 1988 074206	Big Creek	Big Cr	08/21/89	9,635	9,664	35.43	0	2	24	0	0	16	14	19	34	35	2	2	15	61	41	0	0	2.75
H 1988 074207	Big Creek	Big Cr	08/21/89	10,382	10,413	35.43	0	0	4	0	0	41	0	11	52	20	3	7	8	36	32	0	0	2.06
H 1988 074208	Big Creek	Big Cr	08/21/89	10,326	10,357	35.43	0	0	10	0	0	20	2	9	50	34	6	16	14	60	37	0	0	2.50
H 1989 074338	Big Creek	Big Cr	06/05/90	10,067	27,703	7.31	0	0	0	0	0	0	0	0	9	4	0	0	1	5	4	0	0	0.23
H 1989 074339	Big Creek	Big Cr	06/05/90	10,132	27,770	7.31	0	0	0	0	0	0	0	0	8	0	0	0	3	5	3	0	0	0.19
H 1989 074340	Big Creek	Big Cr	06/05/90	10,040	27,676	7.31	0	0	0	0	0	2	0	0	10	0	0	0	2	1	0	0	0	0.15
H 1989 074341	Big Creek	Big Cr	06/05/90	9,859	27,490	7.31	0	0	5	0	0	0	0	0	8	0	0	0	0	0	1	0	0	0.14
H 1989 074342	Big Creek	Big Cr	06/05/90	10,058	27,695	7.31	0	0	0	0	0	0	0	0	7	0	0	0	0	2	8	0	0	0.17
H 1989 074343	Big Creek	Big Cr	06/05/90	9,904	27,537	7.31	0	0	0	0	0	2	1	0	6	0	0	4	1	0	0	1	0	0.15
H 1989 074344	Big Creek	Big Cr	06/05/90	9,841	27,471	7.31	0	0	0	0	0	2	0	0	16	0	0	4	0	2	1	0	0	0.25
H 1989 074345	Big Creek	Big Cr	06/05/90	10,167	27,807	7.31	0	0	0	0	0	4	0	0	6	0	0	6	1	1	2	0	0	0.20
H 1989 074346	Big Creek	Big Cr	06/05/90	10,547	28,198	7.31	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0.06
H 1989 074511	Big Creek	Big Cr	08/17/90	10,176	22,184	31.28	0	0	0	0	0	5	2	0	61	3	0	0	10	23	33	4	0	1.39
H 1989 074512	Big Creek	Big Cr	08/17/90	10,387	22,397	31.28	0	0	3	0	0	15	4	5	100	3	0	0	15	27	24	1	0	1.90
H 1989 074513	Big Creek	Big Cr	08/17/90	10,561	22,574	31.28	0	0	3	3	0	16	2	10	90	3	0	2	7	44	44	1	0	2.13
H 1989 074514	Big Creek	Big Cr	08/17/90	10,583	22,596	31.28	0	3	5	0	0	22	0	2	98	0	0	10	12	48	31	1	0	2.19
H 1989 074515	Big Creek	Big Cr	08/17/90	10,392	22,402	31.28	0	0	0	0	0	32	0	4	97	9	0	10	14	45	35	3	0	2.40
H 1989 074516	Big Creek	Big Cr	08/17/90	9,977	21,982	31.28	0	0	0	0	0	14	0	0	63	2	0	6	12	32	17	3	0	1.49
H 1990 075650	Big Creek	Big Cr	07/05/91	51,183	249,042	12.22	0	0	0	0	0	15	2	0	44	7	0	6	24	39	35	6	0	0.35
H 1990 075651	Big Creek	Big Cr	08/12/91	50,783	300,645	25.06	0	0	0	0	0	20	4	0	83	0	0	5	39	96	93	16	0	0.70
H 1990 075652	Big Creek	Big Cr	08/23/91	51,043	236,247	35.71	0	0	0	0	0	19	7	4	227	4	3	14	51	147	183	22	0	1.33
H 1991 075716	Big Creek	Big Cr	08/06/92	52,014	217,625	20.90	0	0	0	0	0	0	0	0	7	0	0	10	10	43	66	0	0	0.26
H 1991 075717	Big Creek	Big Cr	08/14/92	52,017	297,258	23.70	0	0	4	0	0	0	0	0	21	0	0	15	9	74	108	2	0	0.45
H 1991 075653	Big Creek	Big Cr	08/26/92	51,786	248,504	30.60	0	0	4	0	0	4	0	6	39	4	0	2	19	125	208	3	0	0.80
H 1992 075737	Big Creek	Big Cr	08/25/93	51,797	242,691	27.82	2	0	2	4	0	0	0	14	181	13	4	51	45	271	176	3	0	1.48
H 1992 070232	Big Creek	Big Cr	08/25/93	52,453	202,027	27.99	0	0	0	3	0	22	0	28	204	27	3	27	44	274	200	11	0	1.61
H 1993 070755	Big Creek	Big Cr	08/04/94	54,731	553,793	23.97	0	0	0	0	0	3	0	0	48	11	3	14	45	61	86	4	--	0.50
H 1993 070756	Big Creek	Big Cr	08/22/94	54,317	250,878	29.82	0	1	0	0	0	1	0	0	89	12	0	36	53	69	98	2	--	0.66
H 1994 070540	Big Creek	Big Cr	08/11/95	26,051	166,503	22.12	0	0	0	0	0	6	0	0	20	16	0	0	5	21	25	--	--	0.36
H 1994 070541	Big Creek	Big Cr	08/11/95	26,215	166,707	22.23	0	4	0	0	0	0	0	0	18	6	0	0	5	19	20	--	--	0.27
H 1994 070542	Big Creek	Big Cr	08/29/95	26,881	175,032	29.45	0	0	0	0	0	0	0	0	22	2	0	0	0	20	41	--	--	0.32
H 1994 070543	Big Creek	Big Cr	08/30/95	26,178	500,356	29.07	0	0	0	0	0	0	0	3	23	9	0	0	6	12	18	--	--	0.27
H 1995 071352	Big Creek	Big Cr	08/26/96	26,791	521,952	31.49	0	0	0	0	0	0	2	0	7	8	0	0	1	9	--	--	--	0.10

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
ROGUR RIVER, COLUMBIA RIVER, KLASKANINE RIVER RELEASE																								
Rogue River:																								
H 1995 071353	Klaskanine	Klaskanine R, NF	07/31/96	25,322	26,178	20.22	0	0	0	0	0	0	0	0	2	4	0	0	1	19	--	--	--	0.10
H 1996 092143	Klaskanine	Klaskanine R, NF	10/31/97	9,593	195,247	32.86	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1996 092144	Klaskanine	Klaskanine R, NF	10/31/97	27,222	408,713	32.86	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1997 092517	Klaskanine	Klaskanine R, NF	09/30/98	26,701	216,635	25.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092518	Klaskanine	Klaskanine R, NF	11/04/98	26,571	445,342	28.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092760	Klaskanine	Klaskanine R, NF	09/28/99	25,977	208,232	27.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092759	Klaskanine	Klaskanine R, NF	11/03/99	25,124	494,968	32.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROGUE RIVER																								
Rogue River:																								
N 1984 073039	Cole Rivers	Rogue R	09/06/85	26,779	36,805	38.41	0	0	0	0	0	4	2	12	51	318	35	653	28	50	26	0	0	4.40
N 1985 073543	Indian Cr	Indian Cr	06/15/86	18,826	156,100	25.20	0	0	0	0	0	0	0	0	17	83	26	103	17	18	31	0	0	1.57
N 1985 073541	Cole Rivers	Rogue R	09/04/86	27,168	55,213	41.98	0	0	0	0	0	2	0	2	37	395	53	657	3	9	16	1	0	4.32
N 1986 073529	Indian Cr	Indian Cr	08/26/87	9,346	51,950	25.20	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0.03
N 1986 073530	Indian Cr	Indian Cr	08/26/87	9,346	51,950	25.20	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	0.05
N 1986 073531	Indian Cr	Indian Cr	08/26/87	9,347	51,951	25.20	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0.03
N 1986 074057	Cole Rivers	Rogue R	09/15/87	27,449	58,656	43.60	0	0	0	0	0	0	0	0	9	283	33	196	1	4	10	1	0	1.96
H 1988 075140	Indian Cr	Rogue R	08/10/89	25,193	96,458	22.68	0	0	0	0	0	0	0	2	3	0	3	32	0	2	9	0	0	0.20
Lower Rogue:																								
N 1988 075141	Indian Cr	Indian Cr	09/22/89	53,193	69,000	30.23	0	0	0	0	0	8	0	0	12	9	3	12	0	3	18	0	0	0.12
N 1989 074827	Indian Cr	Lobster Cr	06/25/90	27,025	27,278	9.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
N 1989 074828	Indian Cr	Indian Cr	08/22/90	26,908	42,996	26.68	0	0	0	0	0	0	0	0	13	0	0	17	3	6	3	1	0	0.16
N 1991 075129	Indian Cr	Rogue R	08/24/92	25,476	30,240	30.20	0	0	0	0	0	0	0	0	17	0	1	180	5	58	21	0	0	1.11
M 1992 076120	Indian Cr	Rogue R	09/23/93	13,638	14,236	38.11	0	0	0	0	0	0	0	0	29	19	5	86	20	34	11	0	0	1.50
H 1993 070761	Indian Cr	Rogue R	09/01/94	27,081	28,855	27.13	0	0	0	0	0	0	0	0	30	13	3	39	20	10	16	0	--	0.48
M 1994 075417	Indian Cr	Rogue R	08/31/95	22,910	53,817	28.70	0	0	0	0	0	0	0	0	8	0	3	9	8	29	2	--	--	0.26
M 1995 075335	Indian Cr	Rogue R	09/10/96	24,037	39,546	34.00	0	0	0	0	0	0	0	0	0	13	0	12	4	0	--	--	--	0.12
M 1996 092154	Indian Cr	Rogue R	07/16/97	10,559	25,638	22.68	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
M 1996 092153	Indian Cr	Rogue R	08/08/97	11,176	22,799	28.34	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
M 1996 092152	Indian Cr	Rogue R	08/26/97	9,898	22,707	34.36	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
M 1997 091861	Indian Cr	Rogue R	07/16/98	22,569	23,137	22.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M 1997 092636	Indian Cr	Rogue R	07/31/98	24,000	24,672	25.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M 1997 092637	Indian Cr	Rogue R	09/11/98	24,531	26,358	37.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M 1998 091910	Indian Cr	Rogue R	07/15/99	16,483	19,476	22.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M 1998 092543	Indian Cr	Rogue R	08/12/99	20,429	21,348	28.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
M 1998 092818	Indian Cr	Rogue R	09/16/99	26,036	27,241	39.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
SALMON RIVER																								
Salmon River:																								
H 1984 073051	Salmon River	Salmon R	08/14/85	24,015	99,436	29.82	55	63	16	0	0	5	0	7	5	2	0	0	89	89	226	91	10	2.74
H 1984 073052	Salmon River	Salmon R	09/03/85	23,803	106,422	41.22	87	119	42	0	0	0	0	11	8	0	0	0	47	79	261	146	11	3.41
H 1985 073329	Salmon River	Salmon R	08/13/86	24,355	90,246	29.06	17	25	12	0	0	0	0	1	2	0	0	0	12	11	41	33	12	0.68
H 1985 073330	Salmon River	Salmon R	08/15/86	26,465	91,905	30.22	21	37	5	0	0	0	0	0	3	0	0	0	7	15	18	42	2	0.57
H 1986 073342	Salmon River	Salmon R	08/12/87	31,811	32,673	41.22	111	114	56	0	0	4	0	11	0	0	0	0	44	18	104	111	14	1.85
H 1986 074321	Salmon River	Salmon R	08/12/87	25,370	26,058	41.22	62	80	19	0	0	2	0	6	0	0	0	0	18	28	92	80	1	1.53
H 1986 074322	Salmon River	Salmon R	08/12/87	26,272	26,985	41.22	36	58	38	0	0	2	2	8	0	0	0	0	30	34	64	103	22	1.51
H 1986 074323	Salmon River	Salmon R	08/12/87	25,779	26,479	41.22	67	81	14	0	0	0	0	9	0	0	0	0	60	30	84	96	8	1.74
H 1986 074324	Salmon River	Salmon R	08/12/87	28,864	30,007	41.22	75	48	47	0	0	0	0	33	0	0	0	0	28	40	107	130	8	1.79
H 1987 074629	Salmon River	Salmon R	08/15/88	38,126	39,567	32.39	56	46	32	0	0	0	0	5	0	2	0	0	48	90	156	117	0	1.45
H 1987 074635	Salmon River	Salmon R	08/15/88	37,394	38,808	32.39	72	57	54	0	0	0	2	4	0	0	0	0	35	24	132	158	7	1.46
H 1987 074636	Salmon River	Salmon R	08/15/88	38,362	39,812	32.39	46	80	69	0	0	2	0	5	0	0	0	0	124	58	108	155	1	1.69
H 1987 074637	Salmon River	Salmon R	08/15/88	39,718	41,219	32.39	71	94	65	4	8	13	0	3	2	3	0	3	66	65	118	174	6	1.75
H 1987 074638	Salmon River	Salmon R	08/15/88	39,869	41,376	32.39	54	103	65	8	0	11	0	14	0	0	0	0	88	44	144	199	4	1.84
H 1988 075131	Salmon River	Salmon R	08/14/89	31,653	34,094	33.84	18	23	30	0	0	4	0	2	0	0	0	0	17	20	96	29	0	0.76
H 1988 075132	Salmon River	Salmon R	08/14/89	28,922	33,856	33.84	2	10	34	0	0	2	0	2	0	0	0	0	4	5	11	7	0	0.27
H 1988 075133	Salmon River	Salmon R	08/14/89	27,015	33,511	33.84	13	18	45	0	0	0	0	0	0	0	0	0	8	21	47	20	6	0.66
H 1988 075134	Salmon River	Salmon R	08/14/89	29,325	33,764	33.84	20	46	33	0	0	0	0	2	0	0	0	0	4	15	41	37	9	0.71
H 1988 075135	Salmon River	Salmon R	08/14/89	28,200	33,335	33.84	17	20	21	0	0	0	0	0	0	0	0	0	58	5	48	31	1	0.71
H 1988 075136	Salmon River	Salmon R	08/14/89	27,241	33,568	33.84	17	10	35	0	0	0	0	0	0	0	0	0	0	6	56	17	1	0.52
H 1989 075458	Salmon River	Salmon R	08/14/90	39,099	41,531	28.70	44	97	47	0	0	3	0	12	0	0	0	0	7	42	77	113	4	1.14
H 1989 075461	Salmon River	Salmon R	08/14/90	41,509	43,010	28.70	42	103	94	0	0	0	0	16	0	0	0	0	58	116	88	140	11	1.61
H 1989 075462	Salmon River	Salmon R	08/14/90	41,699	41,889	28.70	44	135	75	0	5	0	0	2	6	0	0	0	14	91	53	154	24	1.45
H 1989 075459	Salmon River	Salmon R	08/15/90	38,685	41,956	28.70	42	81	63	0	0	0	0	2	0	0	0	0	22	40	68	121	8	1.16
H 1989 075460	Salmon River	Salmon R	08/15/90	42,370	43,097	28.70	59	104	74	0	0	4	0	9	8	0	0	0	52	72	80	159	9	1.49
H 1990 075705	Salmon River	Salmon R	08/15/91	40,225	42,776	31.06	116	175	65	0	0	6	0	22	0	0	0	0	161	113	274	312	8	3.11
H 1990 075706	Salmon River	Salmon R	08/15/91	41,394	44,019	31.06	91	158	49	0	0	2	0	12	2	0	1	0	120	167	417	323	33	3.32
H 1990 075707	Salmon River	Salmon R	08/15/91	37,516	39,896	31.06	93	141	81	0	0	0	0	12	2	0	0	0	75	114	368	292	7	3.16
H 1990 075708	Salmon River	Salmon R	08/15/91	39,382	41,880	31.06	122	138	77	0	0	0	0	15	1	0	0	0	11	183	380	387	7	3.35
H 1990 075709	Salmon River	Salmon R	08/15/91	25,592	27,215	31.06	67	57	61	0	0	0	0	0	0	0	0	0	61	66	234	225	11	3.06
H 1991 071559	Salmon River	Salmon R	08/05/92	36,151	38,888	32.40	13	4	0	0	0	0	0	3	0	0	0	0	0	10	37	18	0	0.24
H 1991 071560	Salmon River	Salmon R	08/05/92	37,763	39,080	32.40	24	4	6	0	0	0	0	0	0	0	0	0	0	11	21	29	1	0.25
H 1991 071561	Salmon River	Salmon R	08/05/92	38,597	40,195	32.40	28	0	0	0	0	0	0	0	0	0	0	0	0	29	63	38	0	0.41
H 1991 071562	Salmon River	Salmon R	08/05/92	39,060	40,335	32.40	12	0	3	0	0	0	0	0	47	0	0	0	25	7	47	25	0	0.42
H 1991 071563	Salmon River	Salmon R	08/05/92	33,341	34,686	32.40	14	10	0	0	0	0	0	0	0	0	0	0	3	22	10	26	0	0.25

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
SALMON RIVER (Continued)																								
Salmon River:																								
H 1992 070417	Salmon River	Salmon R	08/17/93	34,476	40,325	30.03	72	19	0	0	0	0	0	16	4	0	0	3	86	159	89	119	5	1.66
H 1992 070418	Salmon River	Salmon R	08/17/93	32,518	40,711	30.03	77	13	0	0	0	4	0	14	0	0	0	0	49	145	122	98	8	1.63
H 1992 070419	Salmon River	Salmon R	08/17/93	33,634	40,652	30.03	72	17	3	0	0	0	0	8	0	0	0	0	29	189	141	71	7	1.60
H 1992 070420	Salmon River	Salmon R	08/17/93	28,386	40,658	30.03	56	7	0	0	0	0	0	4	0	0	0	0	52	164	116	99	0	1.75
H 1992 070421	Salmon River	Salmon R	08/17/93	40,339	42,829	30.03	103	12	0	0	0	0	0	5	0	0	0	0	35	152	137	113	0	1.38
H 1993 070461	Salmon River	Salmon R	08/10/94	37,513	41,109	32.38	183	46	0	0	0	7	0	26	0	0	0	0	77	111	247	186	--	2.35
H 1993 070462	Salmon River	Salmon R	08/10/94	38,497	42,187	32.38	211	73	0	0	0	0	0	8	0	0	0	0	111	132	292	169	--	2.59
H 1993 070459	Salmon River	Salmon R	08/15/94	32,486	40,990	32.38	233	22	3	0	0	0	0	22	0	0	0	0	107	142	453	178	--	3.57
H 1993 070460	Salmon River	Salmon R	08/15/94	36,872	40,992	32.38	268	80	2	0	0	5	0	32	5	0	0	0	226	210	467	314	--	4.36
H 1993 070463	Salmon River	Salmon R	08/15/94	38,686	41,296	32.38	248	53	3	0	0	0	0	23	0	0	3	0	162	136	405	197	--	3.18
H 1994 070962	Salmon River	Salmon R	08/15/95	172,256	205,215	30.23	359	236	0	0	0	0	0	26	0	0	0	0	47	155	659	--	--	0.86
H 1995 071252	Salmon River	Salmon R	08/16/96	171,301	186,780	32.29	98	80	0	0	0	0	0	12	0	0	0	0	48	210	--	--	--	0.26
H 1996 092149	Salmon River	Salmon R	08/15/97	194,096	203,986	31.49	5	--	--	--	--	--	--	--	--	--	--	--	145	--	--	--	--	0.08
H 1997 092447	Salmon River	Salmon R	08/17/98	179,888	205,489	34.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092817	Salmon River	Salmon R	08/20/99	190,423	198,979	33.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRASK RIVER																								
Trask River:																								
H 1984 073239	Trask	Trask R	07/15/85	10,270	55,973	7.60	12	10	4	0	0	0	0	0	0	0	0	0	1	2	10	6	4	0.48
H 1984 073240	Trask	Trask R	07/15/85	9,621	55,308	7.60	15	14	10	0	0	0	0	0	0	0	0	0	0	3	8	16	1	0.70
H 1984 073241	Trask	Trask R	07/15/85	9,318	54,996	7.60	37	25	7	4	3	2	0	0	0	0	0	0	0	0	10	19	4	1.19
H 1984 073242	Trask	Trask R	07/15/85	10,224	55,926	7.60	20	13	11	0	0	0	0	0	0	0	0	0	0	0	10	4	5	0.62
H 1984 073243	Trask	Trask R	07/15/85	10,167	55,867	7.60	18	14	2	0	0	0	0	4	3	0	0	9	1	3	9	7	3	0.72
H 1984 073244	Trask	Trask R	08/15/85	9,270	10,289	15.17	31	35	14	0	0	0	0	5	5	0	0	0	0	2	25	18	2	1.48
H 1984 073245	Trask	Trask R	08/15/85	9,294	10,315	15.17	17	39	25	0	0	0	0	3	3	0	0	0	1	3	24	18	3	1.46
H 1984 073246	Trask	Trask R	08/15/85	9,410	10,444	15.17	40	20	3	0	0	5	0	2	0	3	0	0	0	3	16	16	2	1.17
H 1984 073247	Trask	Trask R	08/15/85	8,181	9,080	15.17	8	9	3	0	3	0	0	4	0	0	0	0	0	4	19	10	4	0.78
H 1984 073248	Trask	Trask R	09/13/85	9,625	13,354	24.92	24	18	7	0	0	0	0	0	0	0	0	0	0	6	14	22	3	0.98
H 1984 073249	Trask	Trask R	09/13/85	9,838	13,580	24.92	25	22	4	0	0	0	0	3	0	4	0	0	2	2	19	10	3	0.96
H 1984 073250	Trask	Trask R	09/13/85	10,248	14,014	24.92	33	12	3	0	0	0	0	0	0	0	0	0	0	1	13	16	3	0.79
H 1984 073053	Trask	Trask R	10/11/85	23,655	99,909	47.74	29	48	22	0	0	5	0	14	0	0	0	0	2	5	36	44	21	0.96
H 1985 074102	Trask	Trask R	07/16/86	29,724	267,423	8.19	27	17	15	0	0	0	0	0	0	0	0	0	0	3	8	22	1	0.31
H 1985 074104	Trask	Trask R	08/14/86	29,688	81,066	17.49	76	88	25	0	0	0	0	23	0	0	0	0	2	12	41	88	4	1.21
H 1985 073042	Trask	Trask R	10/14/86	23,635	99,994	47.23	29	28	22	0	0	0	0	3	0	0	0	0	1	4	26	53	6	0.73
H 1986 073517	Trask	Trask R	07/15/87	10,640	46,532	8.56	15	4	2	0	0	0	0	3	0	0	0	0	1	0	1	2	0	0.26
H 1986 073518	Trask	Trask R	07/15/87	10,189	46,074	8.56	8	0	3	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0.15

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
TRASK RIVER (Continued)																								
Trask River:																								
H 1986 073519	Trask	Trask R	07/15/87	10,296	46,183	8.56	9	8	0	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0.23
H 1986 073520	Trask	Trask R	07/15/87	10,004	45,887	8.56	11	5	2	0	0	0	0	0	0	0	0	0	0	1	5	3	0	0.27
H 1986 073521	Trask	Trask R	08/18/87	9,956	10,726	18.88	2	6	2	0	0	0	0	0	0	0	0	0	1	1	5	2	1	0.20
H 1986 073522	Trask	Trask R	08/18/87	8,859	9,545	18.88	8	4	9	0	3	0	0	0	0	0	0	0	0	1	3	1	0	0.33
H 1986 073523	Trask	Trask R	08/18/87	8,793	9,473	18.88	17	5	17	0	0	0	0	0	0	0	0	0	0	1	9	3	0	0.59
H 1986 073524	Trask	Trask R	08/18/87	9,431	10,161	18.88	17	0	3	0	0	2	0	0	0	0	0	9	0	0	6	1	1	0.41
H 1986 073527	Trask	Trask R	09/14/87	9,799	10,391	28.35	12	0	21	0	0	2	0	9	0	0	0	0	0	1	7	4	0	0.57
H 1986 073525	Trask	Trask R	09/14/87	9,622	10,204	28.69	14	8	6	0	0	0	0	0	0	0	0	0	1	4	4	1	0	0.39
H 1986 073526	Trask	Trask R	09/14/87	9,947	10,548	28.69	3	8	2	0	0	0	0	0	0	0	0	0	0	1	0	4	1	0.19
H 1986 073528	Trask	Trask R	09/14/87	9,254	9,813	29.06	18	8	4	0	0	0	0	3	0	0	0	0	0	1	8	2	1	0.49
H 1986 073560	Trask	Trask R	10/14/87	25,618	92,664	44.03	38	16	8	0	0	3	0	0	0	0	0	0	0	5	12	10	1	0.36
H 1987 074149	Trask	Trask R	07/20/88	10,656	62,356	9.30	9	8	8	0	0	0	0	0	0	0	0	0	0	2	2	3	0	0.30
H 1987 074150	Trask	Trask R	07/20/88	9,896	61,584	9.30	22	9	3	0	0	0	0	4	0	0	0	0	0	3	1	4	0	0.46
H 1987 074151	Trask	Trask R	07/20/88	10,480	62,177	9.30	20	13	13	0	0	0	0	3	0	0	0	3	0	4	6	9	0	0.68
H 1987 074152	Trask	Trask R	07/20/88	10,493	62,190	9.30	10	10	16	0	0	0	0	6	0	0	0	0	1	0	3	7	0	0.51
H 1987 074153	Trask	Trask R	07/20/88	10,659	62,359	9.30	12	4	3	0	0	0	0	0	0	0	0	0	0	4	5	7	0	0.33
H 1987 074154	Trask	Trask R	08/15/88	9,654	21,966	22.45	15	0	15	0	0	2	0	2	0	0	0	0	0	8	11	11	0	0.66
H 1987 074155	Trask	Trask R	08/15/88	10,153	22,474	22.45	23	22	16	0	0	0	0	0	0	0	0	0	0	10	8	11	0	0.89
H 1987 073726	Trask	Trask R	09/15/88	14,335	90,990	31.71	10	13	40	0	0	0	0	0	0	0	0	0	0	3	7	8	0	0.57
H 1988 074212	Trask	Trask/Necanicum	07/17/89	9,414	83,642	9.07	5	0	14	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0.25
H 1988 074213	Trask	Trask/Necanicum	07/17/89	9,981	84,254	9.07	0	8	9	0	0	0	0	0	0	0	0	0	0	2	8	0	0	0.27
H 1988 074214	Trask	Trask/Necanicum	07/17/89	9,610	83,854	9.07	2	3	3	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0.14
H 1988 074215	Trask	Trask R	08/16/89	9,403	20,870	19.30	8	15	14	0	0	0	0	0	0	5	0	0	0	3	9	0	0	0.57
H 1988 074216	Trask	Trask R	08/16/89	9,192	20,640	19.30	15	5	5	0	0	0	0	0	0	0	0	2	2	8	19	3	0	0.64
H 1988 074217	Trask	Trask R	09/20/89	9,721	17,705	32.86	19	53	39	0	0	0	0	7	0	0	0	0	1	5	28	0	0	1.56
H 1988 074218	Trask	Trask R	09/20/89	9,813	17,801	32.86	23	33	30	0	0	0	0	14	0	0	0	0	2	3	28	1	0	1.37
H 1989 074519	Trask	Trask R	08/13/90	8,883	29,328	16.92	3	14	13	0	0	0	0	2	0	0	0	0	0	3	0	2	0	0.42
H 1989 074903	Trask	Trask R	08/13/90	9,002	29,463	16.92	3	17	3	0	0	0	0	0	0	0	0	0	0	4	2	4	0	0.37
H 1989 073727	Trask	Trask R	09/18/90	15,189	50,314	29.84	5	0	6	0	0	0	0	0	0	0	0	0	0	1	0	5	0	0.11
H 1989 074905	Trask	Trask R	09/18/90	8,666	43,219	29.84	3	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.17
H 1989 074906	Trask	Trask R	09/18/90	9,082	43,672	29.84	5	0	6	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.13
H 1990 075744	Trask	Trask R	08/16/91	22,288	56,529	18.44	40	12	9	0	0	0	0	0	0	0	0	0	0	1	17	11	2	0.41
H 1990 075745	Trask	Trask R	09/17/91	22,474	97,941	31.28	22	29	12	0	0	0	0	9	0	0	0	0	0	1	8	10	6	0.43
H 1991 074917	Trask	Trask R	08/03/92	9,878	30,096	13.70	3	1	3	0	0	0	0	2	0	0	0	0	0	0	3	8	1	0.21
H 1991 075039	Trask	Trask R	08/03/92	9,858	30,076	13.70	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0	0.10
H 1991 074048	Trask	Trask R	09/16/92	9,489	44,635	27.70	10	10	0	0	0	0	0	10	0	0	0	0	0	1	9	17	0	0.60
H 1991 074049	Trask	Trask R	09/16/92	9,630	44,779	27.70	4	4	0	0	0	0	0	3	0	0	0	0	0	0	10	13	0	0.35

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
TRASK RIVER (Continued)																								
Trask River:																								
H 1992 070242	Trask	Trask R	08/17/93	26,168	62,601	17.05	46	0	0	0	0	0	0	16	0	0	0	0	1	21	56	4	1	0.55
H 1992 070241	Trask	Trask R	09/20/93	25,593	95,360	31.06	68	4	0	0	0	0	0	27	0	0	0	0	0	23	107	13	2	0.95
H 1993 070458	Trask	Trask R	08/15/94	22,304	61,072	21.18	37	4	0	0	0	0	0	0	0	0	0	0	0	13	11	5	--	0.31
H 1994 075418	Trask	Trask R	08/20/95	24,881	58,217	27.16	61	20	0	0	0	0	0	8	0	0	0	0	0	3	36	--	--	0.51
H 1995 070960	Trask	Trask R	08/16/96	24,372	82,655	28.95	10	17	0	0	0	0	0	0	0	0	0	0	0	12	--	--	--	0.16
H 1996 091850	Trask	Trask R	08/19/97	25,695	66,986	26.99	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	0.00
H 1997 091863	Trask	Trask R	08/16/98	26,289	53,296	25.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 091911	Trask	Trask R	08/15/99	26,232	66,190	25.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UMPQUA RIVER, SOUTH FORK																								
Umpqua River:																								
N 1985 073104	Rock Creek	Umpqua R, S Fk	09/11/86	17,053	46,394	56.70	2	5	4	0	0	0	0	0	0	7	0	3	0	0	0	0	0	0.12
Cow Creek (South Umpqua):																								
N 1987 074331	Umpqua R	Cow Cr	05/06/88	25,670	36,515	4.16	8	0	5	0	0	2	0	0	8	23	0	0	1	0	0	1	0	0.19
N 1988 074612	Rock Creek	Cow Cr	05/15/89	25,391	96,328	2.37	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01
N 1989 075457	Rock Creek	Umpqua R	05/29/90	54,124	60,000	2.27	2	5	12	0	0	0	0	0	11	0	0	0	0	1	0	0	0	0.06
N 1990 074243	Umpqua R	Umpqua R, S Fk	05/24/91	59,954	72,619	1.61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
M 1991 075813	Rock Creek	Umpqua R, S Fk	05/28/92	43,321	98,330	5.19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
H 1992 076031	Rock Creek	Umpqua R, S Fk	06/03/93	25,753	26,050	7.52	4	0	0	0	0	0	0	4	4	0	0	0	0	2	2	0	2	0.07
M 1993 070332	Rock Creek	Umpqua R, S Fk	06/23/94	25,741	129,898	4.83	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0.01
M 1994 075447	Rock Creek	Umpqua R, S Fk	06/19/95	25,692	200,612	5.58	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	--	--	0.00
UMPQUA RIVER, LOWER																								
Cow Creek (South Umpqua):																								
N 1991 075761	Rock Creek	Umpqua R	09/02/92	23,457	91,713	39.80	8	5	4	0	0	0	0	5	4	8	0	0	2	0	1	0	0	0.16
M 1992 076032	Rock Creek	Umpqua R	10/07/93	23,743	103,539	45.35	47	7	2	0	0	1	0	4	30	8	0	0	0	0	0	1	0	0.42
M 1993 070333	Rock Creek	Umpqua R	10/06/94	25,593	75,662	47.69	34	27	6	0	0	1	0	2	20	5	0	0	0	1	0	1	--	0.38
M 1994 075117	Rock Creek	Umpqua R	10/04/95	24,598	51,920	46.28	33	20	0	0	0	3	0	0	0	9	0	0	0	0	10	--	--	0.30
M 1995 070534	Gardiner Cr	Gardiner Cr	05/21/96	31,239	31,549	5.67	41	11	0	0	0	0	0	0	0	2	0	0	1	4	--	--	--	0.19
M 1995 071118	Gardiner Cr	Winchester Bay	06/29/96	48,758	49,240	22.23	138	136	6	0	0	0	0	0	7	8	0	0	3	23	--	--	--	0.66
M 1995 070752	Rock Creek	Umpqua R	10/04/96	80,680	84,739	52.19	54	39	2	0	0	1	0	5	3	11	0	0	0	20	--	--	--	0.17
M 1996 074859	Gardiner Cr	Gardiner Cr	06/25/97	13,901	14,127	7.69	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
M 1996 092123	Gardiner Cr	Winchester Bay	06/28/97	71,372	72,978	7.69	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	0.00
Smith River:																								
N 1997 070941	Gardiner Cr	Winchester Bay	07/04/98	24,617	75,381	7.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N 1998 091908	Gardiner Cr						--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
FALL CHINOOK SALMON (Continued)																								
WINCHUCK RIVER																								
Winchuck River & tribs:																								
N 1988 074803	Winchuck R	Winchuck R	07/15/89	19,908	35,411	10.08	0	0	0	0	0	0	0	2	3	1	5	6	0	0	1	1	0	0.10
N 1989 074823	Winchuck R	Winchuck R	07/11/90	27,192	40,891	5.15	0	0	0	0	0	0	0	0	42	3	0	16	1	1	4	0	0	0.25
M 1991 071463	Elk River	Winchuck R	10/26/92	21,731	22,375	53.35	0	0	0	0	0	0	0	4	44	4	69	29	0	3	17	0	0	0.78
M 1992 070359	Elk River	Winchuck R	10/20/93	9,021	9,537	44.46	0	0	0	0	0	0	0	0	40	3	15	9	1	1	8	0	0	0.85
YAQUINA RIVER																								
Yaquina River:																								
N 1996 092147	Yaquina Bay	Yaquina R	08/28/97	24,388	123,743	40.49	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
N 1997 091856	Yaquina Bay	Yaquina R	08/14/98	26,099	103,831	28.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N 1998 091909	Salmon River	Yaquina R	08/17/99	26,032	93,980	22.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SPRING CHINOOK SALMON																								
COQUILLE RIVER																								
Coquille River:																								
N 1985 073216	Butte Falls	Ferry Cr	09/17/86	8,533	8,568	30.42	0	0	0	0	0	2	0	0	11	76	6	28	0	6	19	1	0	1.75
N 1988 074838	Butte Falls	Coquille R	09/15/89	26,442	42,243	37.48	0	0	0	0	0	4	2	0	37	25	0	56	0	2	2	1	0	0.49
M 1989 075236	Butte Falls	Coquille R, S Fk	09/13/90	26,044	32,500	45.35	0	0	0	0	0	0	0	2	24	35	0	0	0	5	5	0	0	0.27
M 1990 075738	Bandon	Coquille R, S Fk	10/01/91	15,643	15,643	36.87	0	0	0	0	0	0	0	0	8	0	0	11	0	0	0	0	0	0.12
N 1991 074854	Butte Falls	Coquille R, S Fk	09/20/92	12,308	13,028	34.10	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0.02
EAST FORK TRASK RIVER																								
Trask River:																								
H 1993 070336	Trask R Pond	Trask & Wilson R	08/17/94	25,561	172,229	42.35	19	7	0	0	0	0	0	8	11	2	0	0	1	2	47	25	--	0.48
H 1994 070957	Trask R Pond	Trask R	08/18/95	25,438	91,539	48.25	17	0	0	0	0	0	0	11	0	4	0	0	0	4	15	--	--	0.20
H 1995 071138	Trask R Pond	Trask & Wilson R	08/19/96	26,215	199,685	37.71	8	0	0	0	0	0	0	0	2	0	0	0	0	1	--	--	--	0.04
H 1996 091814	Trask R Pond	Trask & Wilson R	08/20/97	26,002	194,552	38.76	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1997 091816	Trask R Pond	Trask & Wilson R	07/30/98	25,934	206,468	32.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 091904	Trask R Pond	Trask R	08/10/99	25,153	150,875	50.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NORTH UMPQUA RIVER																								
Umpqua River:																								
H 1984 073036	Rock Creek	Rock Cr	09/03/85	28,353	28,495	60.47	0	7	17	0	0	12	2	7	79	148	10	32	0	1	6	4	0	1.15
H 1984 073037	Rock Creek	Rock Cr	03/03/86	25,602	214,048	82.47	5	21	29	0	0	40	0	24	201	315	18	28	0	0	20	9	0	2.77
H 1985 073103	Rock Creek	Rock Cr	09/03/86	27,398	35,709	62.11	0	0	7	0	0	9	0	18	160	209	16	150	0	3	15	3	0	2.15
H 1985 073054	Rock Creek	Rock Cr	03/02/87	25,026	203,035	74.33	0	0	5	0	0	7	0	6	116	464	13	101	0	1	29	20	0	3.04
H 1986 073557	Rock Creek	Rock Cr	09/02/87	24,641	157,590	52.73	0	3	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0.02
H 1986 073556	Rock Creek	Rock Cr	02/19/88	23,503	138,678	68.71	0	0	0	0	4	2	0	0	17	72	0	17	0	0	2	0	0	0.49

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
SPRING CHINOOK SALMON (Continued)																								
NORTH UMPQUA RIVER (Continued)																								
Umpqua River:																								
H 1987 074332	Rock Creek	Rock Cr	08/31/88	25,537	159,694	48.77	0	0	0	0	0	0	0	0	0	4	0	0	0	0	2	0	0	0.02
H 1987 074333	Rock Creek	Rock Cr	03/01/89	25,027	102,788	82.46	0	0	0	0	0	5	0	5	9	116	7	21	0	4	13	4	0	0.74
H 1988 074727	Rock Creek	Rock Cr	09/12/89	24,652	170,469	50.96	0	0	0	3	0	0	0	5	15	6	0	0	0	2	1	0	0	0.13
H 1988 074801	Rock Creek	Rock Cr	03/09/90	23,088	157,522	65.73	0	2	4	0	5	12	0	0	51	5	0	15	0	5	14	7	0	0.52
H 1989 075234	Rock Creek	Rock Cr	09/14/90	26,238	156,465	56.00	0	0	4	0	0	0	0	0	11	0	0	0	0	1	1	0	0	0.06
H 1989 075235	Rock Creek	Rock Cr	03/06/91	26,927	153,391	75.59	6	3	5	0	0	9	0	3	156	4	0	3	0	2	33	11	0	0.87
M 1990 074914	Rock Creek	Rock Cr	09/27/91	20,146	162,318	55.99	0	0	0	0	0	4	0	0	21	4	0	5	0	1	6	2	0	0.21
M 1990 074916	Rock Creek	Rock Cr	02/27/92	22,579	165,633	78.20	2	2	15	0	0	6	0	0	51	10	0	2	0	1	7	6	0	0.45
M 1991 075763	Rock Creek	Rock Cr	09/23/92	25,495	149,643	60.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
M 1991 075762	Rock Creek	Rock Cr	03/01/93	20,432	148,134	78.19	0	0	0	0	0	0	0	4	5	0	0	2	0	2	2	0	0	0.07
H 1992 076030	Rock Creek	Rock Cr	09/17/93	24,502	155,003	58.14	0	0	0	0	0	0	0	0	13	0	0	0	0	0	2	0	0	0.06
H 1992 076029	Rock Creek	Rock Cr	03/13/94	24,170	147,185	76.87	0	0	0	0	0	6	0	2	204	19	2	8	0	3	5	1	0	1.03
H 1993 070357	Rock Creek	Rock Cr	10/10/94	25,150	67,539	57.34	9	0	0	0	4	0	0	1	23	0	0	0	0	1	1	0	--	0.16
H 1993 070358	Rock Creek	Rock Cr	02/17/95	24,029	235,551	76.75	0	0	1	0	0	0	0	0	77	17	0	10	0	0	1	4	--	0.46
H 1994 075448	Rock Creek	Rock Cr	10/02/95	25,512	66,477	57.41	0	0	0	0	0	0	0	0	14	0	0	0	0	0	3	--	--	0.07
H 1994 075863	Rock Creek	Rock Cr	02/05/96	25,240	232,367	74.80	6	0	0	0	0	2	0	0	50	22	0	6	0	0	3	--	--	0.35
H 1995 071332	Rock Creek	Rock Cr	10/02/96	25,849	73,826	56.81	6	0	0	0	0	0	0	1	0	0	0	0	0	0	--	--	--	0.03
H 1995 071333	Rock Creek	Rock Cr	11/19/96	25,360	234,644	32.06	6	7	3	0	0	0	0	0	3	7	0	5	0	0	--	--	--	0.12
H 1996 091849	Rock Creek	Rock Cr	09/28/97	23,652	100,352	56.69	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1996 091848	Rock Creek	Rock Cr	02/06/98	23,538	147,308	75.60	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1997 091859	Rock Creek	Rock Cr	10/02/98	24,965	151,050	57.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 091860	Rock Creek	Rock Cr	02/12/99	26,526	27,710	68.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 091928	Rock Creek	Rock Cr	02/09/00	26,819	251,282	67.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 091927	Rock Creek	Rock Cr	10/03/99	27,284	148,656	56.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NESTUCCA RIVER																								
Nestucca River:																								
H 1991 074822	Cedar Creek	Nestucca R	07/23/92	26,389	139,112	27.20	0	2	0	0	0	0	0	13	0	0	0	0	0	1	7	5	1	0.11
H 1992 076026	Cedar Creek	Nestucca R	08/18/93	21,947	73,096	41.23	5	0	0	0	0	3	0	0	27	0	0	0	0	3	18	17	0	0.33
H 1993 070530	Cedar Creek	Nestucca R	07/28/94	25,440	102,442	36.85	3	2	0	0	0	2	0	0	13	0	0	0	2	7	28	10	--	0.26
H 1994 075453	Cedar Creek	Nestucca R	07/24/95	25,997	126,327	36.57	5	0	0	0	0	0	0	4	0	0	0	0	0	3	23	--	--	0.13
H 1995 071143	Cedar Creek	Nestucca R	07/23/96	25,702	112,312	33.00	14	0	0	0	0	0	0	2	1	0	0	0	0	4	--	--	--	0.08
H 1996 091815	Cedar Creek	Nestucca R	07/21/97	25,658	120,651	35.99	--	--	--	--	--	--	--	--	--	--	--	--	3	--	--	--	--	0.01
H 1997 091852	Cedar Creek	Nestucca R	07/20/98	26,283	122,222	35.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 091905	Cedar Creek	Nestucca R	07/19/99	25,604	119,800	32.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
SPRING CHINOOK SALMON (Continued)																								
ROGUE RIVER																								
Rogue River:																								
H 1984 073410	Cole Rivers	Rogue R	08/15/85	10,719	31,499	42.38	0	0	0	0	0	0	0	0	21	53	21	95	22	20	66	2	0	2.80
H 1984 073407	Cole Rivers	Rogue R	08/15/85	10,211	29,536	45.81	0	0	0	0	0	0	0	2	11	114	11	63	23	12	64	1	0	2.95
H 1984 073404	Cole Rivers	Rogue R	08/15/85	9,832	30,245	47.23	0	0	0	0	0	0	0	2	5	55	11	164	35	25	66	2	0	3.71
H 1984 073403	Cole Rivers	Rogue R	09/12/85	10,126	33,237	58.88	0	0	0	0	0	0	0	0	8	67	7	87	10	14	63	7	0	2.60
H 1984 073409	Cole Rivers	Rogue R	09/12/85	10,153	34,560	59.67	0	0	0	0	0	0	0	0	4	66	11	73	14	16	55	5	0	2.40
H 1984 073406	Cole Rivers	Rogue R	09/12/85	10,290	28,364	61.29	0	0	0	0	0	2	0	0	9	51	4	42	10	8	62	5	0	1.88
H 1984 073402	Cole Rivers	Rogue R	10/15/85	10,291	39,459	80.99	0	0	0	0	0	0	0	0	6	57	17	66	12	6	58	9	0	2.24
H 1984 073408	Cole Rivers	Rogue R	10/15/85	10,494	34,393	80.99	0	0	0	0	0	2	0	0	11	47	5	53	15	5	54	9	1	1.92
H 1984 073405	Cole Rivers	Rogue R	10/15/85	10,145	31,312	87.20	0	0	0	0	0	3	0	2	10	54	1	69	10	6	53	7	0	2.12
H 1985 073923	Cole Rivers	Rogue R	08/14/86	10,504	35,090	28.89	0	0	0	0	0	0	0	0	16	25	8	151	19	79	147	1	0	4.25
H 1985 073925	Cole Rivers	Rogue R	08/15/86	10,361	272,163	27.98	0	0	0	0	0	0	0	0	0	26	11	192	20	77	131	1	0	4.42
H 1985 073924	Cole Rivers	Rogue R	08/15/86	10,358	36,220	29.26	0	0	0	0	0	0	0	0	0	33	13	194	25	87	136	2	0	4.73
H 1985 074002	Cole Rivers	Rogue R	09/18/86	9,909	38,206	47.23	0	0	0	0	0	0	0	0	4	26	18	114	13	42	139	3	0	3.62
H 1985 073419	Cole Rivers	Rogue R	09/18/86	10,087	36,900	48.76	0	0	0	0	0	0	0	9	4	66	18	90	12	50	117	3	0	3.66
H 1985 074003	Cole Rivers	Rogue R	09/19/86	10,123	38,564	48.25	0	0	0	0	0	0	0	0	16	51	11	155	11	53	174	7	0	4.72
H 1985 074001	Cole Rivers	Rogue R	10/15/86	10,103	36,623	62.11	0	0	0	0	0	0	0	0	6	55	13	136	7	29	127	3	0	3.72
H 1985 073927	Cole Rivers	Rogue R	10/15/86	10,508	469,520	63.87	0	0	0	0	0	2	0	3	22	57	11	119	5	29	142	7	0	3.78
H 1985 073926	Cole Rivers	Rogue R	10/15/86	10,104	36,644	67.70	0	0	0	0	0	0	0	0	7	64	7	113	9	34	142	3	0	3.75
H 1986 074123	Cole Rivers	Rogue R	08/20/87	10,987	40,090	31.04	0	0	0	0	0	0	0	0	1	87	6	126	9	27	25	5	0	2.60
H 1986 074117	Cole Rivers	Rogue R	08/20/87	10,988	39,744	31.27	0	0	0	0	0	0	0	0	0	39	7	96	14	32	32	5	0	2.05
H 1986 074110	Cole Rivers	Rogue R	08/20/87	10,604	39,915	31.69	0	0	0	0	0	0	0	0	4	79	10	109	15	31	29	2	0	2.63
H 1986 073505	Cole Rivers	Rogue R	09/15/87	10,439	39,303	43.18	0	0	0	0	0	0	0	0	3	23	4	74	2	6	13	2	0	1.22
H 1986 073508	Cole Rivers	Rogue R	09/16/87	10,428	39,880	44.03	0	0	0	0	0	0	0	0	0	20	7	39	3	12	16	2	0	0.95
H 1986 073511	Cole Rivers	Rogue R	09/16/87	10,405	41,286	44.90	0	0	0	0	0	0	0	0	4	27	2	40	2	5	13	3	0	0.92
H 1986 074124	Cole Rivers	Rogue R	10/15/87	10,783	40,194	53.98	0	0	0	0	0	0	0	0	0	44	9	26	1	7	8	3	0	0.91
H 1986 074118	Cole Rivers	Rogue R	10/15/87	10,526	39,318	56.70	0	0	0	0	0	0	0	0	7	57	6	34	0	9	15	4	0	1.25
H 1986 074112	Cole Rivers	Rogue R	10/15/87	10,337	39,875	57.41	0	0	0	0	0	0	0	0	0	26	4	37	1	2	11	4	0	0.82
H 1987 074615	Cole Rivers	Rogue R	08/18/88	10,463	41,884	34.36	0	0	0	0	0	0	0	0	4	51	8	8	0	7	14	1	0	0.89
H 1987 074613	Cole Rivers	Rogue R	08/18/88	10,543	42,624	35.43	0	0	0	0	0	0	0	0	0	23	4	15	2	3	20	1	0	0.64
H 1987 074614	Cole Rivers	Rogue R	08/18/88	10,591	42,361	35.99	0	0	0	0	0	0	0	0	8	30	0	10	0	5	20	1	0	0.70
H 1987 074618	Cole Rivers	Rogue R	09/15/88	9,928	42,030	50.39	0	0	0	0	0	0	0	0	0	12	3	2	1	3	5	2	0	0.28
H 1987 074617	Cole Rivers	Rogue R	09/15/88	9,829	42,320	50.96	0	0	0	0	0	0	0	0	3	5	0	8	0	1	4	1	0	0.22
H 1987 074616	Cole Rivers	Rogue R	09/15/88	9,850	41,897	53.35	0	0	0	0	0	0	0	0	0	3	4	9	1	2	10	4	0	0.34
H 1987 074621	Cole Rivers	Rogue R	10/19/88	10,499	42,042	65.73	0	0	0	0	0	0	0	0	6	21	2	39	2	3	24	1	0	0.93
H 1987 074620	Cole Rivers	Rogue R	10/19/88	10,510	41,848	67.69	0	0	0	0	0	0	0	0	1	28	3	7	0	1	20	1	0	0.58
H 1987 074619	Cole Rivers	Rogue R	10/19/88	9,997	42,523	69.77	0	0	0	0	0	0	0	0	0	15	1	16	1	1	15	0	0	0.49

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
SPRING CHINOOK SALMON (Continued)																								
ROGUE RIVER (Continued)																								
Rogue River:																								
H 1988 072336	Cole Rivers	Rogue R	08/16/89	10,394	182,209	33.10	0	0	0	0	0	0	0	0	6	1	3	18	2	6	8	4	0	0.46
H 1988 073758	Cole Rivers	Rogue R	08/16/89	10,358	182,296	33.10	0	0	0	0	0	0	0	0	0	7	0	21	6	9	9	5	0	0.55
H 1988 072337	Cole Rivers	Rogue R	08/16/89	10,510	182,208	33.35	0	0	0	0	0	0	0	0	8	0	7	11	2	4	10	6	0	0.46
H 1988 074230	Cole Rivers	Rogue R	09/15/89	9,770	137,843	50.96	0	0	0	0	0	0	0	0	3	9	0	10	2	3	5	5	0	0.38
H 1988 074233	Cole Rivers	Rogue R	09/15/89	10,342	138,066	50.96	0	0	0	0	0	0	0	0	0	17	0	8	1	2	3	11	0	0.41
H 1988 074229	Cole Rivers	Rogue R	09/15/89	9,076	137,697	52.13	0	0	0	0	0	0	0	0	3	24	0	8	1	9	4	6	0	0.61
H 1988 073643	Cole Rivers	Rogue R	10/17/89	9,949	179,190	70.86	0	0	0	0	0	0	0	0	5	10	3	18	1	7	6	13	0	0.63
H 1988 074234	Cole Rivers	Rogue R	10/17/89	10,225	179,210	70.86	0	0	0	0	0	0	0	0	11	11	0	4	0	1	4	15	0	0.45
H 1988 074236	Cole Rivers	Rogue R	10/17/89	10,342	179,105	70.86	0	0	0	0	0	0	0	0	3	0	0	9	0	5	6	12	0	0.34
H 1989 075144	Cole Rivers	Rogue R	08/16/90	9,866	53,869	37.48	0	0	0	0	0	0	0	0	8	0	0	0	1	5	51	2	0	0.68
H 1989 075142	Cole Rivers	Rogue R	08/16/90	9,602	54,581	38.76	0	0	0	0	0	0	0	0	21	0	0	0	2	0	41	0	0	0.67
H 1989 075143	Cole Rivers	Rogue R	08/16/90	9,975	54,010	39.10	0	0	0	0	0	0	0	0	11	0	0	0	0	1	44	0	0	0.56
H 1989 075147	Cole Rivers	Rogue R	09/14/90	10,237	45,339	52.73	0	0	0	0	0	0	0	0	8	3	0	0	0	1	45	0	0	0.56
H 1989 075146	Cole Rivers	Rogue R	09/14/90	10,074	45,167	53.99	0	0	0	0	0	0	0	0	16	0	0	10	0	1	43	0	0	0.69
H 1989 075145	Cole Rivers	Rogue R	09/14/90	9,888	45,155	54.64	0	0	0	0	0	0	0	0	2	0	0	4	1	3	43	1	0	0.55
H 1989 075150	Cole Rivers	Rogue R	10/16/90	9,625	40,845	70.86	0	0	0	0	0	0	0	0	5	0	0	8	0	0	65	0	0	0.81
H 1989 075149	Cole Rivers	Rogue R	10/16/90	9,538	41,112	73.15	0	0	0	0	0	0	0	0	22	0	0	5	0	2	40	1	0	0.73
H 1989 075148	Cole Rivers	Rogue R	10/16/90	9,625	41,218	74.35	0	0	0	0	0	0	0	0	11	0	0	4	0	1	52	2	0	0.73
H 1990 075313	Cole Rivers	Rogue R	08/13/91	10,462	207,311	32.39	0	0	0	0	0	0	0	0	0	0	0	6	4	33	22	12	0	0.74
H 1990 075312	Cole Rivers	Rogue R	08/13/91	10,566	208,244	34.10	0	0	0	0	0	0	0	0	7	0	0	11	4	35	10	5	0	0.68
H 1990 075314	Cole Rivers	Rogue R	08/13/91	9,996	207,326	35.99	0	0	0	0	0	0	0	0	18	3	0	13	5	19	13	16	0	0.87
H 1990 075320	Cole Rivers	Rogue R	09/10/91	9,793	43,167	56.69	0	0	0	0	0	0	0	0	39	0	0	6	0	11	19	10	1	0.88
H 1990 075319	Cole Rivers	Rogue R	09/11/91	10,384	43,342	55.99	0	0	0	0	0	0	0	0	18	0	0	19	5	5	13	9	0	0.66
H 1990 075318	Cole Rivers	Rogue R	09/12/91	10,376	43,256	55.99	0	0	0	0	0	0	0	0	31	9	0	22	6	20	10	10	0	1.04
H 1991 075907	Cole Rivers	Rogue R	08/18/92	10,489	10,637	28.70	0	0	0	0	0	0	0	0	0	0	0	91	16	4	296	11	0	3.99
H 1991 075906	Cole Rivers	Rogue R	08/18/92	10,448	10,536	31.71	0	0	0	0	0	4	0	0	4	0	0	69	12	10	309	25	0	4.14
H 1991 075908	Cole Rivers	Rogue R	08/18/92	10,527	10,576	32.39	0	0	0	0	0	0	0	0	17	0	0	101	11	7	316	22	0	4.50
H 1991 075909	Cole Rivers	Rogue R	09/08/92	10,220	10,364	45.81	0	0	0	0	0	0	0	0	0	3	0	61	4	9	266	17	0	3.52
H 1991 075910	Cole Rivers	Rogue R	09/09/92	10,134	10,609	44.03	0	0	0	0	0	0	0	0	3	0	0	52	7	1	220	18	0	2.97
H 1991 075911	Cole Rivers	Rogue R	09/10/92	10,135	10,574	47.74	0	0	0	0	0	0	0	0	18	0	0	4	8	6	160	17	0	2.10
H 1991 075912	Cole Rivers	Rogue R	10/13/92	10,252	10,597	66.69	0	0	0	0	0	0	0	0	18	0	0	22	5	4	189	22	1	2.55
H 1991 075913	Cole Rivers	Rogue R	10/13/92	10,235	10,542	67.69	0	0	0	0	0	0	0	0	5	0	0	39	4	4	199	24	0	2.69
H 1991 075914	Cole Rivers	Rogue R	10/13/92	9,775	10,523	71.99	0	0	0	0	0	0	0	0	0	0	0	37	2	0	186	15	0	2.46
H 1992 076344	Cole Rivers	Rogue R	08/18/93	10,000	56,561	28.52	0	0	0	0	0	0	0	0	15	0	3	11	3	50	112	15	0	2.09
H 1992 076343	Cole Rivers	Rogue R	08/18/93	10,316	55,862	28.70	0	0	0	0	0	0	0	4	56	4	0	32	3	61	122	17	0	2.90
H 1992 076342	Cole Rivers	Rogue R	08/18/93	10,160	56,770	29.45	0	0	0	0	0	0	0	0	14	0	0	34	5	62	110	10	0	2.31

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
SPRING CHINOOK SALMON (Continued)																								
ROGUE RIVER (Continued)																								
Rogue River:																								
H 1992 076347	Cole Rivers	Rogue R	09/20/93	10,170	90,150	48.77	0	0	0	0	0	0	0	0	32	4	2	11	1	25	107	31	1	2.10
H 1992 076346	Cole Rivers	Rogue R	09/21/93	10,288	90,089	47.74	0	0	0	0	0	0	0	0	27	9	0	15	2	32	109	28	0	2.16
H 1992 076348	Cole Rivers	Rogue R	09/22/93	9,841	90,077	49.30	0	0	0	0	0	0	0	0	20	0	0	40	0	23	108	22	0	2.16
H 1992 076349	Cole Rivers	Rogue R	10/20/93	9,235	10,554	56.69	0	0	0	0	0	0	0	0	52	0	0	34	2	19	104	25	1	2.57
H 1992 076350	Cole Rivers	Rogue R	10/20/93	8,897	10,596	58.14	0	0	0	0	0	0	0	0	33	5	0	19	2	20	128	31	0	2.68
H 1992 076345	Cole Rivers	Rogue R	10/20/93	9,830	10,454	65.73	0	0	0	0	0	0	0	0	14	3	0	30	1	18	108	29	0	2.07
H 1993 070630	Cole Rivers	Rogue R	08/15/94	10,356	10,407	35.41	0	0	0	0	0	0	0	0	12	0	0	51	3	27	187	30	--	2.99
H 1993 070629	Cole Rivers	Rogue R	08/16/94	10,425	10,479	39.75	0	0	0	0	0	0	0	0	15	3	0	43	2	21	169	33	--	2.74
H 1993 070628	Cole Rivers	Rogue R	08/17/94	10,310	10,358	37.45	0	0	0	0	0	0	0	0	9	0	0	15	3	13	151	24	--	2.09
H 1993 070639	Cole Rivers	Rogue R	09/19/94	10,320	10,418	58.08	0	0	0	0	0	0	0	0	10	0	0	6	1	4	105	33	--	1.54
H 1993 070638	Cole Rivers	Rogue R	09/20/94	10,156	10,407	55.25	0	0	0	0	0	0	0	0	3	2	0	13	0	9	99	32	--	1.56
H 1993 070637	Cole Rivers	Rogue R	09/21/94	10,131	10,421	55.25	0	0	0	0	0	0	0	0	11	3	0	21	3	5	97	30	--	1.68
H 1993 070636	Cole Rivers	Rogue R	10/12/94	10,269	10,408	73.04	0	0	0	0	0	0	0	0	8	3	5	14	0	7	125	43	--	2.00
H 1993 070634	Cole Rivers	Rogue R	10/12/94	10,247	10,343	78.07	0	0	0	0	0	0	0	0	17	0	5	12	3	4	143	54	--	2.32
H 1993 070635	Cole Rivers	Rogue R	10/13/94	10,401	10,449	76.75	0	0	0	0	0	0	0	0	14	3	0	16	1	5	100	39	--	1.71
H 1994 075959	Cole Rivers	Rogue R	08/21/95	10,096	56,444	35.34	0	0	0	0	0	0	0	0	0	2	0	4	3	7	25	--	--	0.41
H 1994 075962	Cole Rivers	Rogue R	08/21/95	10,157	56,351	36.79	0	0	0	0	0	0	0	0	0	4	0	4	0	7	14	--	--	0.29
H 1994 075956	Cole Rivers	Rogue R	08/21/95	10,289	56,319	38.03	0	0	0	0	0	0	0	0	0	0	0	3	0	7	24	--	--	0.33
H 1994 075963	Cole Rivers	Rogue R	09/13/95	9,396	143,704	48.21	0	0	0	0	0	0	0	0	1	0	0	4	0	2	12	--	--	0.20
H 1994 075955	Cole Rivers	Rogue R	09/13/95	10,127	143,657	51.29	0	0	0	0	0	0	0	0	12	0	0	4	0	1	10	--	--	0.27
H 1994 075961	Cole Rivers	Rogue R	09/13/95	10,042	143,787	51.29	0	0	0	0	0	0	0	0	0	0	0	3	2	5	9	--	--	0.19
H 1994 076001	Cole Rivers	Rogue R	10/18/95	10,087	56,261	71.47	0	0	0	0	0	0	0	0	6	0	0	7	0	5	27	--	--	0.45
H 1994 075958	Cole Rivers	Rogue R	10/19/95	10,054	56,241	69.47	0	0	0	0	0	0	0	0	6	0	0	0	0	5	21	--	--	0.32
H 1994 075321	Cole Rivers	Rogue R	10/19/95	9,738	55,840	72.04	0	0	0	0	0	0	0	0	0	0	0	0	1	1	19	--	--	0.22
H 1995 071052	Cole Rivers	Rogue R	08/14/96	9,652	56,915	34.52	0	0	0	0	0	0	0	0	3	0	3	0	2	9	--	--	--	0.18
H 1995 071054	Cole Rivers	Rogue R	08/14/96	10,382	56,553	34.52	0	0	0	0	0	0	0	0	0	0	0	3	1	9	--	--	--	0.13
H 1995 071053	Cole Rivers	Rogue R	08/15/96	10,073	56,430	34.26	0	0	0	0	0	0	0	0	0	0	0	6	0	4	--	--	--	0.10
H 1995 071061	Cole Rivers	Rogue R	09/11/96	9,988	128,491	47.90	0	0	0	0	0	0	0	0	0	0	0	0	0	10	--	--	--	0.10
H 1995 071055	Cole Rivers	Rogue R	09/11/96	10,280	128,454	53.94	0	0	0	0	0	0	0	1	0	0	0	2	1	4	--	--	--	0.08
H 1995 071056	Cole Rivers	Rogue R	09/12/96	10,302	128,519	53.75	0	0	0	0	0	0	0	0	0	5	0	0	0	9	--	--	--	0.14
H 1995 071062	Cole Rivers	Rogue R	10/13/96	10,217	56,379	70.79	0	0	0	0	0	0	0	0	0	2	0	8	0	16	--	--	--	0.25
H 1995 071343	Cole Rivers	Rogue R	10/14/96	10,236	56,683	64.39	0	0	0	0	0	0	0	0	0	5	0	4	0	11	--	--	--	0.20
H 1995 071063	Cole Rivers	Rogue R	10/14/96	10,207	56,489	67.79	0	0	0	0	0	0	0	0	4	6	4	0	0	21	--	--	--	0.34
H 1996 070145	Cole Rivers	Rogue R	08/15/97	9,847	215,990	35.43	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	0.01
H 1996 070146	Cole Rivers	Rogue R	08/15/97	10,411	281,177	35.60	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	0.01
H 1996 070147	Cole Rivers	Rogue R	08/15/97	9,412	280,358	36.93	--	--	--	--	--	--	--	--	--	--	--	4	2	--	--	--	--	0.06

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
SPRING CHINOOK SALMON (Continued)																								
ROGUE RIVER (Continued)																								
Rogue River:																								
H 1996 092142	Cole Rivers	Rogue R	09/11/97	10,611	192,881	48.82	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1996 092140	Cole Rivers	Rogue R	09/11/97	10,497	192,338	50.79	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1996 092141	Cole Rivers	Rogue R	09/11/97	10,512	193,501	52.01	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	0.01
H 1996 092139	Cole Rivers	Rogue R	10/12/97	10,251	56,674	69.13	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1996 092138	Cole Rivers	Rogue R	10/12/97	10,243	56,560	73.38	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1996 070620	Cole Rivers	Rogue R	10/13/97	10,070	56,359	69.34	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1997 092459	Cole Rivers	Rogue R	08/11/98	10,494	245,440	33.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092458	Cole Rivers	Rogue R	08/12/98	10,385	245,352	32.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092460	Cole Rivers	Rogue R	08/13/98	10,583	245,454	34.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092462	Cole Rivers	Rogue R	09/16/98	10,401	200,417	52.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092461	Cole Rivers	Rogue R	09/16/98	10,530	199,463	53.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092463	Cole Rivers	Rogue R	09/18/98	10,388	199,466	51.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092503	Cole Rivers	Rogue R	10/10/98	10,531	54,637	70.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092502	Cole Rivers	Rogue R	10/11/98	10,524	54,612	69.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1997 092501	Cole Rivers	Rogue R	10/12/98	10,157	54,551	69.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092804	Cole Rivers	Rogue R	08/19/99	10,440	245,820	40.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092805	Cole Rivers	Rogue R	08/19/99	10,332	245,538	40.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092806	Cole Rivers	Rogue R	08/19/99	10,220	246,109	41.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092801	Cole Rivers	Rogue R	09/16/99	10,393	152,149	50.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092802	Cole Rivers	Rogue R	09/16/99	10,552	151,676	50.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092803	Cole Rivers	Rogue R	09/16/99	10,390	151,673	53.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092808	Cole Rivers	Rogue R	09/17/99	10,249	76,257	53.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092809	Cole Rivers	Rogue R	09/17/99	10,334	76,315	53.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092807	Cole Rivers	Rogue R	09/17/99	10,411	76,265	55.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092761	Cole Rivers	Rogue R	10/11/99	10,516	54,202	72.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092763	Cole Rivers	Rogue R	10/12/99	10,269	54,328	71.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 092762	Cole Rivers	Rogue R	10/12/99	10,492	53,961	71.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SOUTH UMPQUA RIVER																								
Umpqua River:																								
H 1989 074239	Rock Creek	Umpqua R, S Fk	05/29/90	37,910	39,082	5.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
H 1989 074240	Rock Creek	Umpqua R, S Fk	05/29/90	36,256	37,377	5.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
M 1990 075809	Umpqua R	Umpqua R, S Fk	05/23/91	15,076	43,951	1.84	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.01
M 1990 075810	Umpqua R	Umpqua R, S Fk	05/23/91	14,078	42,916	1.84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
M 1991 075718	Rock Creek	Umpqua R, S Fk	05/29/92	46,610	56,753	5.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
M 1991 075719	Rock Creek	Umpqua R, S Fk	05/29/92	18,370	22,368	5.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.01
H 1992 070449	Rock Creek	Umpqua R, S Fk	05/25/93	81,984	84,825	6.98	0	0	0	0	0	0	0	0	4	0	0	0	0	3	0	1	0	0.01

Appendix Table 2. Continued.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
SPRING CHINOOK SALMON (Continued)																								
TRASK RIVER																								
Trask River:																								
H 1984 073217	Trask	Trask R	08/15/85	9,440	9,864	23.02	8	0	16	0	0	14	0	4	21	6	0	0	2	6	29	15	0	1.28
H 1984 073218	Trask	Trask R	08/15/85	9,752	10,190	23.02	3	4	27	0	0	22	0	0	4	4	0	5	1	4	16	12	1	1.06
H 1984 073219	Trask	Trask R	08/15/85	9,866	10,309	23.02	5	3	7	0	0	14	0	9	5	22	1	0	0	4	21	8	0	1.00
H 1984 073220	Trask	Trask R	08/15/85	9,357	9,777	23.02	5	14	13	0	0	6	0	4	7	7	0	0	3	6	23	9	0	1.04
H 1984 073221	Trask	Trask R	09/13/85	9,981	13,642	35.97	4	7	12	0	0	6	0	0	9	7	1	0	0	3	12	5	1	0.67
H 1984 073222	Trask	Trask R	09/13/85	9,713	13,352	35.97	6	3	0	0	0	7	0	1	2	0	0	0	0	4	10	4	0	0.38
H 1984 073223	Trask	Trask R	09/13/85	9,772	13,414	35.97	9	13	6	0	0	2	0	2	2	9	0	0	0	2	25	10	2	0.84
H 1984 073055	Trask	Trask R	10/11/85	23,717	90,525	58.14	26	23	21	0	0	17	0	6	8	19	2	0	0	3	23	25	4	0.75
H 1985 074101	Trask	Trask R	08/14/86	31,446	71,772	25.20	19	14	11	0	0	30	0	0	43	13	2	0	1	0	17	46	8	0.65
H 1985 073041	Trask	Trask R	10/15/86	25,323	91,253	62.99	19	28	0	0	0	20	0	4	54	4	0	0	1	1	13	43	10	0.78
H 1986 073450	Trask	Trask R	08/19/87	10,454	13,170	29.26	9	5	0	0	0	4	0	0	0	0	0	0	0	1	13	6	2	0.38
H 1986 073451	Trask	Trask R	08/19/87	10,578	13,295	29.26	2	3	0	0	0	7	0	21	0	0	0	0	0	0	7	16	0	0.53
H 1986 073452	Trask	Trask R	08/19/87	10,347	13,063	29.26	6	0	0	0	0	9	0	0	0	0	0	0	0	0	4	8	0	0.26
H 1986 073447	Trask	Trask R	09/14/87	9,135	12,851	39.09	0	4	0	0	0	8	3	4	3	0	0	0	0	0	2	4	1	0.32
H 1986 073448	Trask	Trask R	09/14/87	9,383	13,101	39.09	2	3	0	0	0	0	0	0	0	0	0	0	0	0	9	8	0	0.23
H 1986 073449	Trask	Trask R	09/14/87	9,064	12,780	39.09	2	3	0	0	0	1	0	15	1	0	0	11	0	1	4	5	0	0.47
H 1986 074225	Trask	Trask R	10/15/87	25,402	91,966	62.11	12	6	10	0	0	24	0	5	13	1	0	0	0	1	6	9	0	0.34
H 1987 074418	Trask	Trask R	09/16/88	24,066	90,909	33.84	18	9	0	0	0	3	0	10	11	2	0	0	0	1	20	16	2	0.38
H 1988 074807	Trask	Trask R	08/16/89	26,588	62,519	27.65	6	6	0	0	0	2	0	0	5	0	0	0	0	6	17	10	0	0.20
H 1988 074806	Trask	Trask R	09/20/89	26,076	71,825	43.61	14	4	17	0	0	5	0	0	5	0	0	0	1	1	14	17	1	0.30
H 1989 075435	Trask	Trask R	07/16/90	25,504	134,955	16.37	3	0	2	0	0	0	0	6	0	0	0	0	0	2	6	8	0	0.11
H 1989 074909	Trask	Trask R	08/13/90	9,087	16,056	34.89	3	0	0	0	0	2	0	0	3	0	0	0	0	0	7	9	1	0.28
H 1989 074910	Trask	Trask R	08/13/90	8,752	15,699	34.89	3	2	0	0	0	0	0	0	3	0	0	0	0	1	4	1	0	0.16
H 1989 074912	Trask	Trask R	09/17/90	9,514	15,347	57.41	3	0	3	0	0	2	0	8	3	0	0	0	0	0	4	5	0	0.29
H 1989 074915	Trask	Trask R	09/17/90	9,294	15,110	57.41	3	0	0	0	0	0	0	0	4	0	0	0	0	1	1	3	0	0.13
H 1990 074928	Trask	Trask R	07/15/91	23,757	88,366	23.14	7	0	0	0	0	0	0	6	0	0	0	0	0	1	10	9	0	0.14
H 1990 073119	Trask	Trask R	08/15/91	20,670	30,131	35.43	2	0	0	0	0	2	0	3	4	0	0	0	0	3	12	7	0	0.16
H 1990 071703	Trask	Trask R	09/17/91	19,762	30,444	59.67	7	0	0	0	0	0	0	6	0	0	0	0	1	2	16	22	0	0.27
H 1991 075802	Trask	Trask R	07/14/92	26,396	119,857	20.30	4	0	0	0	0	0	0	3	0	0	0	0	0	0	2	1	0	0.04
H 1991 075803	Trask	Trask R	08/03/92	24,521	29,279	28.30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0.03
H 1991 075804	Trask	Trask R	09/16/92	25,554	29,844	49.80	3	0	0	0	0	0	0	0	0	0	0	0	0	1	12	9	0	0.10
H 1992 071424	Trask	Trask R	07/14/93	22,528	98,851	18.44	10	2	0	0	0	0	0	0	0	0	0	4	2	4	15	7	0	0.20
H 1992 070348	Trask	Trask R	08/17/93	9,593	14,104	26.99	4	4	0	0	0	0	0	6	3	0	0	4	0	1	8	4	0	0.35
H 1992 070347	Trask	Trask R	08/17/93	9,140	14,074	28.34	2	0	0	0	0	0	0	0	0	0	0	9	1	6	5	4	0	0.30
H 1992 070350	Trask	Trask R	09/15/93	9,147	13,562	38.11	5	0	0	0	0	0	0	4	5	0	0	0	1	1	5	3	2	0.28
H 1992 070349	Trask	Trask R	09/15/93	9,088	13,626	40.13	6	0	0	0	0	0	0	6	7	0	0	0	1	1	6	6	0	0.36

Appendix Table 2. Concluded.

STOCK GROUP, stock, (source H, N, M), brood, tagcode	Hatchery	Release Site	Release Date	Number Released Ad+CWT	Number Released Total	Size (gm)	Ocean Catch AK	NCBC	WCVI	GST	PS	WA	Oregon Areas 1&2	3	4	5	6&7	CA	Freshwater Recoveries 2	3	4	5	6+	% Surv.
SPRING CHINOOK SALMON (Continued)																								
TRASK RIVER (Continued)																								
Trask River:																								
H 1993 070334	Trask	Trask R	08/15/94	19,416	28,259	43.16	6	0	0	0	0	0	0	9	0	0	0	0	1	4	13	10	--	0.22
H 1993 070335	Trask	Trask R	09/15/94	21,132	29,934	52.08	11	0	0	0	0	0	0	0	5	0	0	0	0	1	14	5	--	0.17
H 1994 070427	Trask	Trask R	08/09/95	26,600	29,938	42.38	0	0	0	0	0	0	0	2	6	0	0	0	0	0	1	--	--	0.03
H 1994 070762	Trask	Trask R	08/09/95	20,435	22,821	43.19	3	0	0	0	0	0	0	2	0	0	0	0	0	0	4	--	--	0.04
H 1995 071329	Trask	Trask R	08/15/96	21,506	23,352	42.74	8	0	0	0	0	0	0	2	0	0	0	0	0	1	--	--	--	0.05
H 1995 071239	Trask	Trask R	08/15/96	28,872	31,116	46.27	0	0	0	0	0	0	0	4	2	0	0	0	0	1	--	--	--	0.02
H 1996 091844	Trask	Trask R	08/19/97	22,681	23,657	44.90	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1996 092024	Trask	Trask R	08/19/97	28,738	30,570	49.30	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1997 091854	Trask	Trask R	08/18/98	26,316	38,367	52.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILSON RIVER																								
Trask River:																								
H 1990 074931	Tuffy Creek	Wilson R	08/07/91	23,524	90,960	38.43	5	0	3	0	0	7	0	44	2	0	0	0	1	2	14	13	0	0.39
H 1991 074825	Tuffy Creek	Wilson & Kilchis	08/05/92	26,516	102,935	36.30	9	0	0	0	0	0	0	2	0	0	0	0	0	0	7	4	0	0.08
H 1992 070353	Tuffy Creek	Wilson R	08/12/93	21,674	88,778	38.43	3	2	0	0	0	3	0	4	12	0	0	4	0	6	11	7	2	0.25
H 1993 070331	Tuffy Creek	Wilson R	08/08/94	19,351	80,402	45.31	11	0	0	0	0	1	0	2	0	0	0	0	0	2	10	18	--	0.23
H 1994 070956	Tuffy Creek	Wilson R	08/17/95	26,639	109,083	34.89	6	0	0	0	0	0	0	4	0	0	0	0	0	0	10	--	--	0.08
H 1998 091903	Tuffy Creek	Wilson R	08/17/99	24,873	104,138	40.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WINTER CHINOOK SALMON																								
TRASK RIVER																								
Trask River:																								
N 1986 073725	Trask	Trask R	10/14/87	12,912	12,912	44.03	17	0	2	0	0	3	0	6	0	0	0	0	0	1	12	17	0	0.45
H 1987 073724	Trask	Trask R	09/15/88	14,701	47,969	22.34	2	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0.03
H 1988 073757	Trask	Trask R	10/19/89	5,803	5,891	40.13	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.14
H 1990 074926	Trask	Trask R	09/17/91	26,406	43,562	23.02	29	22	3	0	0	0	0	24	0	0	0	0	0	1	11	12	0	0.39
H 1991 075805	Trask	Trask R	09/15/92	24,619	46,661	21.90	12	4	0	0	0	0	0	8	0	0	0	0	0	5	15	21	0	0.26
H 1992 070243	Trask	Trask R	09/15/93	26,207	51,877	24.38	59	6	0	0	0	0	0	13	0	0	0	0	1	25	92	8	0	0.78
H 1993 070740	Trask	Trask R	08/18/94	27,579	47,598	22.88	67	14	0	0	0	0	0	8	0	0	0	0	0	27	14	44	--	0.63
H 1994 075419	Trask	Trask R	08/09/95	22,074	50,383	19.98	35	2	0	0	0	0	0	0	0	0	0	0	0	4	13	--	--	0.24
H 1995 071319	Trask	Trask R	08/15/96	26,185	35,719	21.17	17	9	0	0	0	0	0	2	0	0	0	0	0	7	--	--	--	0.13
H 1996 091851	Trask	Trask R	08/19/97	25,801	49,100	20.71	--	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	0.00
H 1997 091901	Trask	Trask R	08/18/98	26,707	49,381	23.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
H 1998 091913	Trask	Trask R	08/16/99	24,779	38,222	22.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--