

THE OREGON PLAN *for* *Salmon and* *Watersheds*



Stock Assessment of Anadromous Salmonids, 2004

Report Number: OPSW-ODFW-2005-04

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SUMMARY

Objectives for Report Period

During FY 2004 we planned to (1) record all ocean fishery recoveries of coded-wire-tagged (CWT) coho salmon (*Oncorhynchus kisutch*) and chinook salmon (*O. tshawytscha*) that were reported during 2004 (recovered in 2003); (2) monitor and record escapement of CWT fish that returned during 2003 and early 2004; (3) calculate catch distribution, catch contribution, and recovery rate for coho and chinook salmon released for this project; (4) liberate groups of 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 2003 return year recovery data was recorded and previous years recovery data was updated. During the current reporting period (October 1st, 2004 to March 31st, 2005) we marked with an adipose fin clip and a coded-wire tag (Ad+CWT) 3 groups of 25,000 spring chinook salmon. During this period we released 3 groups of Ad+CWT coho salmon, and 1 group of Ad+CWT spring chinook salmon that were funded by this project.

Findings in Report Period

The 2000 brood coho salmon released from coastal hatcheries were recovered at an average rate of 2.1%, and ranged from 0.9% to 3.6% across all 7 release groups. The 2000 brood coho salmon released from Columbia River hatcheries were recovered at an average rate of 2.8%, and ranged from 0.7% to 5.3% across all 5 release groups. Recovery rate for the 1998 brood coastal hatchery fall chinook salmon averaged 1.0%, and ranged from 0.1% to 2.6% across all 10 release groups. Recovery rate for the 1998 brood coastal hatchery spring chinook salmon averaged 0.8%, and ranged from 0.3% to 1.6% across all 5 release groups.

INTRODUCTION

Evaluation of hatchery programs requires monitoring of activities both within the hatchery and outside the hatchery. Post release monitoring includes; 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 clip 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 region wide 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 for tagging (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. Oregon 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 2003 return year. Release and recovery information for 1991 to 2001 broods of Ad+CWT coho salmon released for stock assessment is presented in Appendix Table 1. Release and recovery information for 1989 to 2001 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 CWT fish are not expanded. Only the number of observed recoveries is available. (2) Most freshwater fisheries outside of the Columbia Basin 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 recent 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.

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. Percent ocean recovery (1991-2000 brood years) is not significantly different for stock groups followed by the same letter.

Stock Group		Brood Years	Overall average		Percent recovery range	2000 percent recovery	1991 - 2000 brood average		
			% recovery				Ocean	Total	
COLUMBIA RIVER COHO SALMON									
Sandy River	a	1977-2000	1.16	0.01 (1994)	to 4.31 (1985)	1.08	0.28	1.29	
Bonneville	a	1980-2000	0.72	0.02 (2 yrs)	to 3.15 (1986)	1.26	0.27	2.13	
Big Creek	ab	1980-2000	0.91	0.01 (1996)	to 4.25 (1986)	1.13	0.21	1.79	
Umatilla River	cd	1985-2000	0.40	0.00 (3 yrs)	to 2.47 (1986)	0.28	0.07	0.35	
COASTAL RIVERS COHO SALMON									
Trask River	ab	1977-2000	0.70	0.01 (3 yrs)	to 2.39 (1986)	0.72	0.22	2.90	
North Umpqua R.	abc	1980-2000	0.93	0.02 (1991)	to 3.97 (1984)	0.81	0.17	0.49	
Salmon River ^a	bcd	1976-2000	0.50	0.00 (1994)	to 1.99 (1976)	0.84	0.13	0.76	
Nehalem River	bcd	1977-2000	0.70	0.02 (4 yrs)	to 3.25 (1985)	0.27	0.09	0.93	
Coos River	cd	1984-2000	0.74	0.00 (1992)	to 4.31 (1985)	0.29	0.07	0.60	
Coquille River	cd	1980-2000	0.40	0.00 (4 yrs)	to 1.84 (1985)	0.27	0.04	1.03	
Rogue River	d	1977-2000	0.88	0.00 (1995)	to 5.98 (1978)	0.13	0.03	4.03	

a = Represents a combination of Salmon River (1991-1996) and Siletz River (1996-2000) stocks.

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 0.40% to 1.16% (Table 1). In general, within the Columbia River, coho released below Bonneville Dam had higher percent ocean recovery than coho released above Bonneville Dam. Percent ocean recovery, for the 1991 through 2000 broods, generally declined from north coast coho programs to south coast coho programs (Table 1). The range in overall average 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). Results of the statistical analysis of percent ocean recovery for the 11 groups of coho salmon is presented in Table 1. Percent ocean recovery is a reflection of both survival and fisheries management. Rogue River coho, the most southern Oregon hatchery coho program, had the lowest percent ocean recovery but the highest total percent recovery for the 1991 to 2000 broods. Ocean fisheries for coho have been very restricted since 1994. Ocean harvest of OPI coho during the 1995 to 2003 seasons was predominantly in northern areas.

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 (1989-1998 brood years) is not significantly different for stock groups followed by the same letter.

Stock Group	Brood Years	Overall average % recovery	Percent recovery range	1998 percent recovery	1989 - 1998 brood average			
					Ocean	Total		
FALL CHINOOK SALMON								
Elk River	a 1977-1998	0.90	0.11 (1982) to 3.97 (1983)	1.46	0.77	1.63		
Salmon River	b 1976-80, 82-98	0.65	0.11 (1991) to 1.86 (1976)	0.56	0.46	1.68		
Chetco River	bcd 1977-1998	0.98	0.03 (1996) to 2.80 (1985)	0.09	0.30	0.35		
Trask River	bcd 1982-1998	0.31	0.15 (1991) to 0.63 (1997)	0.38	0.29	0.52		
Rogue Stock Columbia Rel.	cd 1982-1998	0.82	0.05 (1996) to 2.64 (1982)	0.23	0.22	0.62		
Coos River	d 1983-85, 87-98	0.28	0.05 (1996) to 1.71 (1985)	0.30	0.15	0.44		
Lower Umpqua R. ^a	1991-1998	0.41	0.07 (1996) to 1.14 (1998)	1.14	0.41 ^a	0.47 ^a		
Rogue River ^a	1977-86, 88-89, 91-98	1.16	0.02 (1979) to 7.73 (1983)	0.34	0.37 ^a	0.71 ^a		
Coquille River ^a	1983-88, 90-98	0.61	0.04 (1991) to 3.41 (1985)	0.47	0.27 ^a	0.29 ^a		
SPRING CHINOOK SALMON								
North Umpqua R.	bc 1976-1998	0.99	0.02 (1991) to 4.64 (1983)	1.27	0.38	0.43		
Rogue River	bcd 1980-1997	0.67	0.05 (1996) to 2.99 (1983)	0.27	0.26	1.45		
E Fk Trask Pd ^a	1993-1998	0.15	0.04 (1996) to 0.43 (1998)	0.43	0.15 ^a	0.30 ^a		
Nestucca River ^a	1977-83, 91-98	0.21	0.01 (1982) to 0.97 (1977)	0.42	0.15 ^a	0.27 ^a		
Wilson R ^a	1990-94, 1998	0.12	0.04 (1994) to 0.26 (1990)	0.17	0.12 ^a	0.23 ^a		
Trask River ^a	1977-1997	0.21	0.02 (2 yrs) to 0.73 (1977)	--	0.07 ^a	0.14 ^a		
WINTER CHINOOK SALMON								
Trask River ^a	1986-88, 90-98	0.21	0.03 (1987) to 0.48 (1997)	0.23	0.24 ^a	0.47 ^a		

a = Does not include data from all ten years.

Percent ocean recovery for 2000 brood coho salmon was below average for 7 of 11 stocks, but was higher than the 1999 brood ocean recovery rate for all 11 stocks. Estimated harvest, landed catch and non-retention mortality, of coho salmon in OPI ocean fisheries in 2003 was 281,800 (PFMC 2005). This was the highest OPI coho salmon ocean harvest since the 1992 harvest of 324,000 (PFMC 2005). The 2003 coho salmon ocean exploitation rate, based on OPI abundance was 22% (PFMC 2005).

Overall average percent ocean recovery for fall chinook salmon stocks ranged

from 0.3% to 1.2% (Table 2). Percent ocean recovery of 1998 brood fall chinook was lower than the 1997 brood for 5 of the 9 stocks, but set 1 new record high (Lower Umpqua). Compared to the overall average percent ocean recovery, the 1998 brood was lower for 5 of the 9 stocks. In general, the last 10 completed brood years average percent ocean recovery, was higher for south coast fall chinook stocks than for north coast fall chinook stocks. Overall average percent ocean recovery of spring chinook salmon ranged from 0.1% to 1.0% (Table 2). Ocean recovery of the 1998 brood spring chinook was higher than the 1997 brood for all stocks, and was higher than the overall average for 3 of 4 stocks. Percent ocean recovery for spring chinook was higher for southern stocks. Statistical analysis of percent ocean recovery included both spring and fall chinook. Only 8 of the 16 stocks in Table 2 had data for the last 10 completed brood years (returns through age 5). Statistical results are reported in Table 2.

Percent recovery, ocean and freshwater, of coho salmon stocks released from Columbia River hatcheries show similar patterns (Figure 1). Percent recovery peaked in the 1983, 1986, 1988 and 1998 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 was low but stable from 1990 through 1996. Since the 1996 brood year percent recovery, particularly freshwater, has been increasing and exceeded 5.0% for the 1998 brood year Bonneville hatchery coho. Coastal coho stocks show different patterns in percent recovery than the Columbia River stocks (Figure 2). However, percent recovery of both Columbia River and coastal coho salmon stocks declined from the mid 1980's through mid 1990's, and has been increasing since about the 1995 or 1996 brood year. Improved percent recovery of Rogue River stock coho salmon began earlier than for other coho stocks, started with the 1991 brood year, and reached approximately 8% for the 1998 brood. Trask River stock coho has shown an exceptional increase in percent recoveries since the 1994 brood year. Trask hatchery coho freshwater percent recovery exceeded 10% for the 1998 brood and approached 6% for the 1999 brood (Figure 2).

Percent recovery of spring and fall chinook salmon has generally decreased since the mid 1980's, however, the 1997 brood had slight to moderate increases over recent years for almost all stocks (Figures 3 and 4). Rogue spring chinook have shown an increase in percent recovery since the 1991 brood year. This corresponds to the improved percent recovery seen in Rogue River coho salmon starting with the 1990 brood year. Salmon River fall chinook have shown improved freshwater percent recovery since the 1980 brood. This is partly explained by the improved sampling of the freshwater catch and escapement that began in 1986. The variability in percent ocean recovery of North Umpqua spring chinook is not seen in their freshwater percent recovery (Figure 4). This is an artifact of the freshwater sampling for this stock. 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 fish needed for broodstock are collected at the dam, the remainder are allowed to continue up-river. Thus, the number of Ad+CWT fish recovered is fairly consistent, and does not necessarily reflect the number of Ad+CWT 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 1999. Since this would bias the calculation of catch distribution for these years (percent of total ocean catch in each area), this analysis has been changed to percent recovery by area. Average ocean percent recovery by area for coho and chinook salmon stocks is reported in Tables 3 and 4 respectively. Data are based on production and production scale experimental groups of Ad+CWT fish. Groups of Ad+CWT fish tagged for specific experiments and

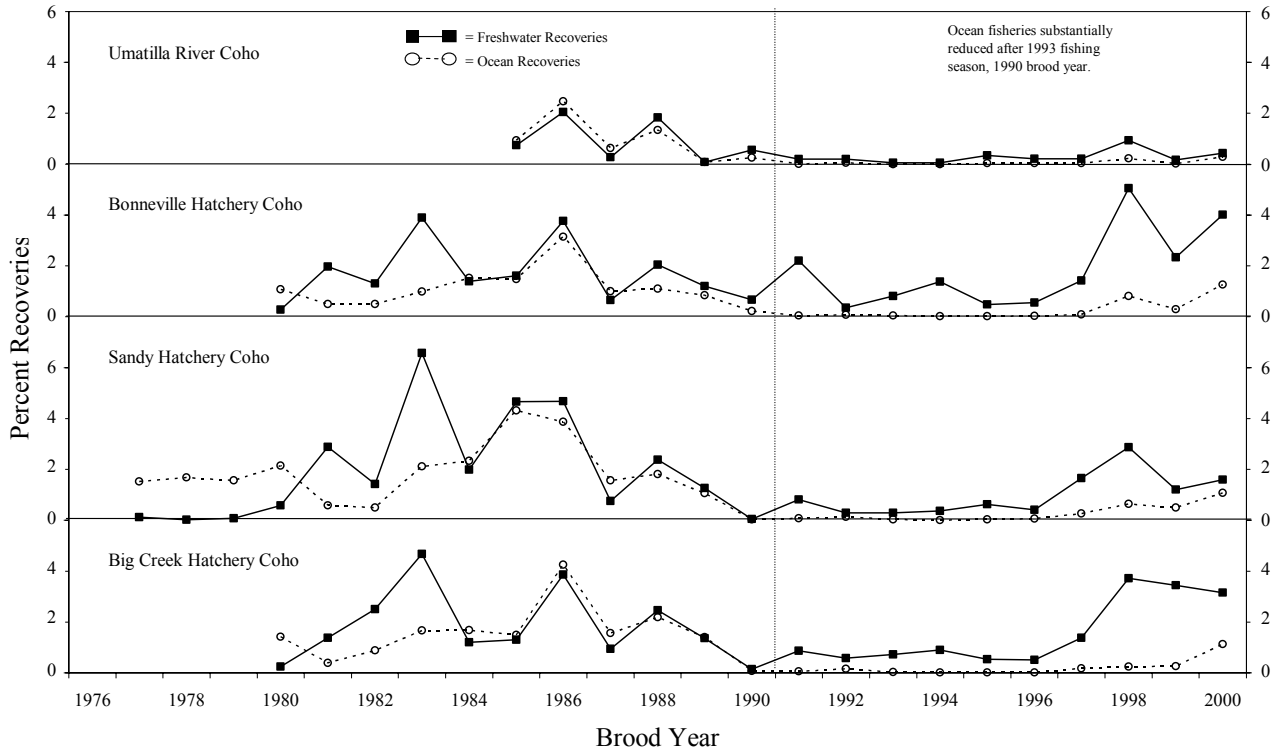


Figure 1. Weighted average percent recovery of Columbia River coho salmon stocks tagged for stock assessment.

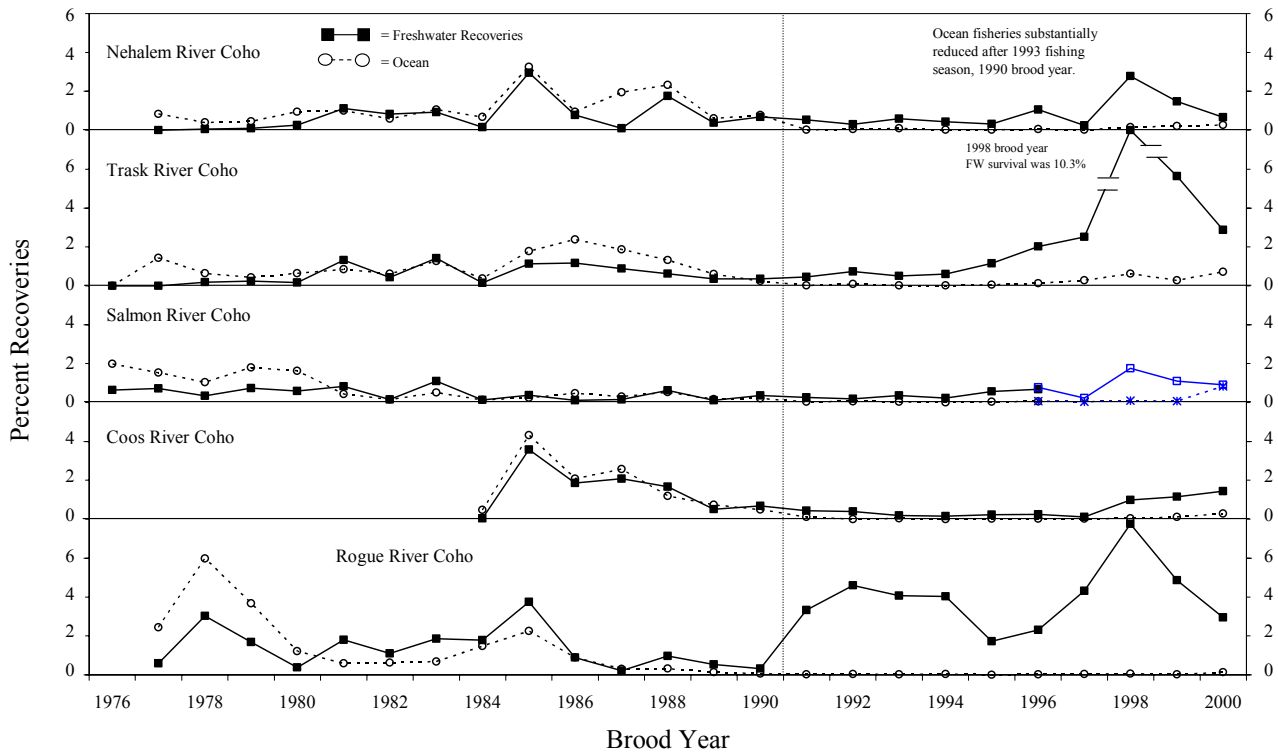


Figure 2. Weighted average percent recovery of coastal rivers coho salmon stocks tagged for stock assessment. Salmon River coho is Salmon River stock for 1976-1996 and Siletz River stock for 1996-2000 brood years.

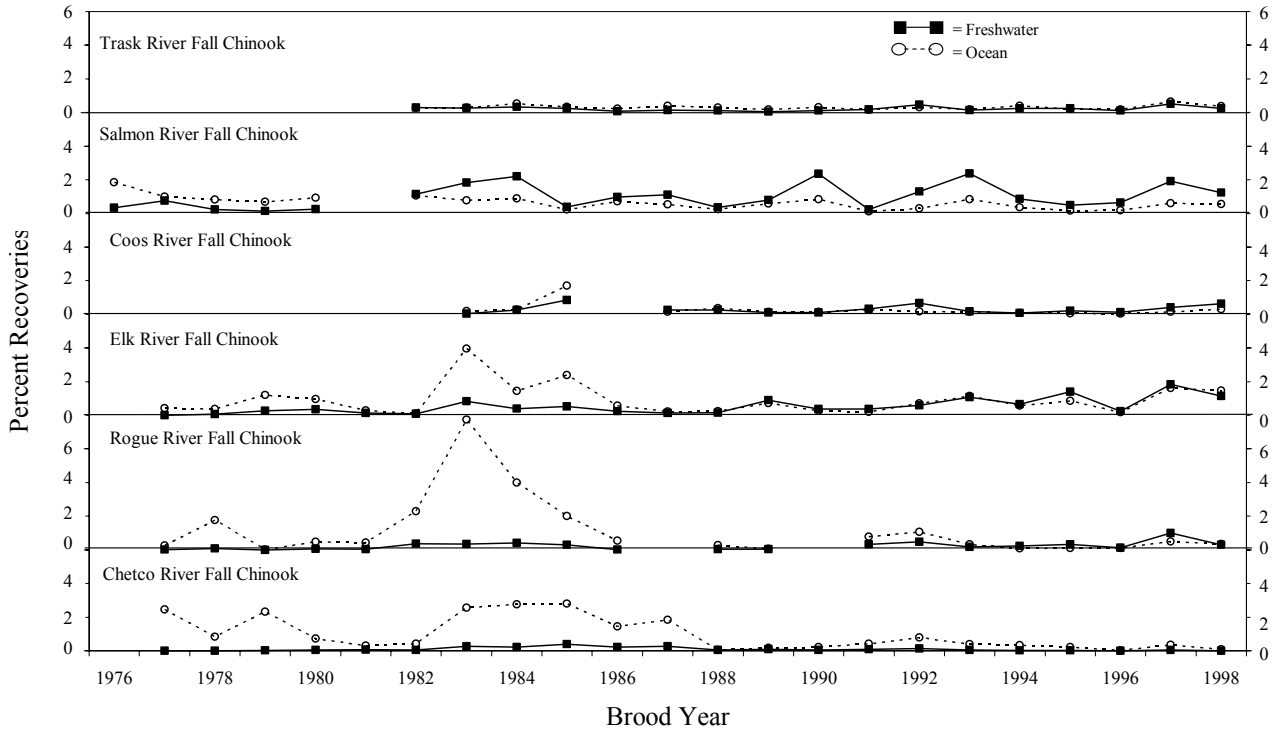


Figure 3. Weighted average percent recovery of fall chinook salmon stocks tagged for stock assessment.

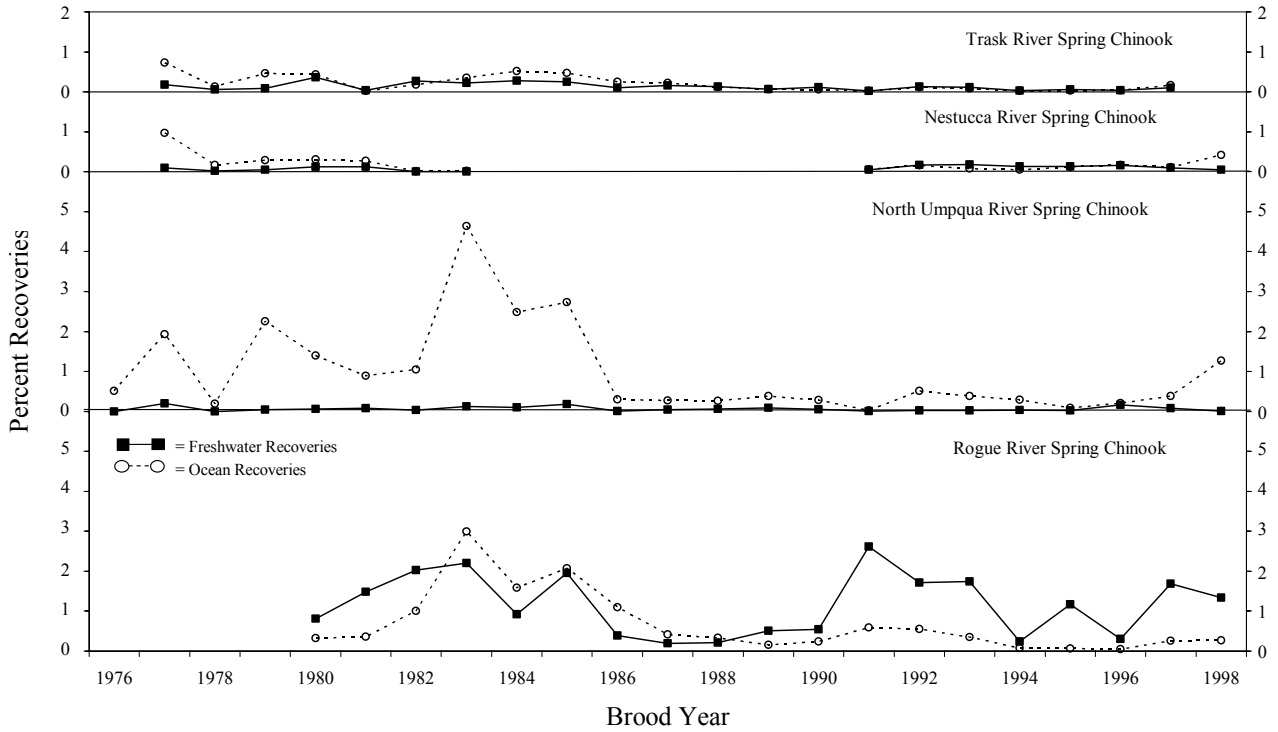


Figure 4. Weighted average percent recovery of spring chinook salmon stocks tagged for stock assessment.

not associated with production scale releases are not included. 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 1991 through 2000, chinook 1989 through 1998). 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 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.

Table 3. Coho salmon average ocean recovery by area. Data are for the last ten completed brood years, 1991 to 2000. 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.

Stock Group	AK	NCBC	WCVI	GST	PS	WA	Oregon Ocean Catch Area ^a					CA
							1&2	3	4	5	6&7	
COLUMBIA RIVER COHO SALMON												
Umatilla River	0.00	0.00	0.00	0.00	0.00	0.03	<u>0.01</u>	0.01	0.01	0.01	0.00	0.00
Bonneville	0.00	0.00	0.01	0.00	0.00	0.11	<u>0.06</u>	0.01	0.04	0.04	0.00	0.00
Sandy River	0.00	0.01	0.02	0.00	0.00	0.12	<u>0.05</u>	0.02	0.04	0.04	0.00	0.00
Big Creek	0.00	0.00	0.01	0.00	0.00	0.08	<u>0.03</u>	0.01	0.04	0.03	0.00	0.00
COASTAL RIVERS COHO SALMON												
Nehalem River	0.00	0.00	0.00	0.00	0.00	0.04	0.01	<u>0.01</u>	0.02	0.01	0.00	0.01
Trask River	0.00	0.00	0.00	0.00	0.00	0.10	0.04	<u>0.01</u>	0.03	0.03	0.00	0.01
Salmon River ^b	0.00	0.00	0.01	0.00	0.00	0.04	0.01	<u>0.01</u>	<u>0.03</u>	0.03	0.00	0.00
North Umpqua River	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.01	<u>0.04</u>	<u>0.05</u>	0.00	0.01
Coos River	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.00	<u>0.03</u>	0.00	0.00
Coquille River	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	<u>0.03</u>	0.00	0.00
Rogue River	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	<u>0.00</u>	0.01

a = Oregon ocean areas displayed in Figure 5.

b = Represents a combination of Salmon River (1991-1996) and Siletz River (1996-2000) stocks.

Historically about 80% of Oregon hatchery coho salmon were recovered in ocean fisheries from their release location and south (Lewis 1998). Changes in ocean fisheries management have result in a decline in the proportion of ocean recoveries in areas from the release location and south, which averaged 0.49, and ranged from 0.36 to 0.71 for the 1991 to 2000 broods (Table 3, Figure 6). Extremes of the range are Trask River (0.36 and Coquille River (0.71). 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 (Table 3). Washington ocean recoveries are mainly in coastal, not Puget Sound fisheries. Recoveries in Washington ocean fisheries exceeded recoveries in areas from the release location and south for Trask River stock (Figure 6).

Table 4. Chinook salmon average ocean recovery by area. Data are for the last ten completed brood years, 1989 to 1998. AK = Alaska, NCBC = North Central British Columbia, WCVI = West Coast Vancouver Island, GST = Georgia Strait, PS = Puget Sound, WA = Washington Coast, CA = California. Release area is underlined.

Stock Group	AK	NCBC	WCVI	GST	PS	WA	Oregon Ocean Catch Area ^a					CA
							1&2	3	4	5	6&7	
FALL CHINOOK SALMON												
Rogue Stock Columbia Rel.	0.00	0.00	0.01	0.00	0.00	0.02	<u>0.00</u>	0.01	0.13	0.02	0.00	0.02
Trask River	0.18	0.06	0.02	0.00	0.00	0.00	0.00	<u>0.04</u>	0.00	0.00	0.00	0.00
Salmon River	0.25	0.13	0.04	0.00	0.00	0.00	0.00	0.03	<u>0.01</u>	0.00	0.00	0.00
Lower Umpqua R. ^b	0.21	0.10	0.01	0.00	0.00	0.01	0.00	0.01	0.04	<u>0.02</u>	0.00	0.00
Coos River	0.06	0.04	0.01	0.00	0.00	0.01	0.00	0.01	0.02	<u>0.00</u>	0.00	0.00
Coquille River ^b	0.16	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.02	<u>0.01</u>	0.00	0.00
Elk River	0.15	0.07	0.04	0.00	0.00	0.03	0.00	0.01	0.09	<u>0.35</u>	0.00	0.00
Rogue River ^b	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.05	<u>0.01</u>	0.23
Chetco River	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.02	<u>0.14</u>	0.05
SPRING CHINOOK SALMON												
Wilson R ^b	0.04	0.01	0.00	0.00	0.00	0.01	0.00	<u>0.05</u>	0.02	0.00	0.00	0.00
Trask River ^b	0.02	0.00	0.00	0.00	0.00	0.00	0.00	<u>0.02</u>	0.01	0.00	0.00	0.00
E Fk Trask Pd ^b	0.06	0.01	0.02	0.00	0.00	0.01	0.00	<u>0.03</u>	0.01	0.01	0.00	0.00
Nestucca River ^b	0.04	0.02	0.01	0.00	0.00	0.02	0.00	<u>0.01</u>	0.04	0.00	0.00	0.00
North Umpqua R.	0.01	0.00	0.02	0.00	0.00	0.02	0.00	0.01	0.20	<u>0.07</u>	0.00	0.02
Rogue River	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.02	<u>0.01</u>	0.15
WINTER CHINOOK SALMON												
Trask River ^b	0.16	0.04	0.00	0.00	0.00	0.00	0.00	<u>0.03</u>	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.

Ocean recoveries of Oregon coastal fall chinook salmon splits the stocks into three groups (Table 4 and Figure 7). Trask and Salmon River stocks are almost exclusively recovered in Alaska and British Columbia fisheries. Umpqua, Coos, Coquille, and Elk stocks are recovered more in Oregon and Washington and less in Alaska and British Columbia fisheries than the more northern stocks. Rogue and Chetco 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 Rogue River fall chinook released in the Rogue River (Table 4 and Figure 7). Canadian ocean recoveries of Oregon coastal fall chinook stocks are mainly in North Central British Columbia fisheries and 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). The large percent recovery of Elk River stock fall chinook in Oregon catch area 5, is an artifact of a late season ocean fishery near the mouth of the Elk River, targeting returning hatchery fish.

Nicholas and Hankin (1988) classified the migration patterns of the spring chinook salmon stocks in Table 4 as; Trask and Nestucca Rivers north migrating, Umpqua River north and south migrating, and Rogue River south migrating. Ocean recoveries of Ad+CWT fish by area, support these migration classifications (Table

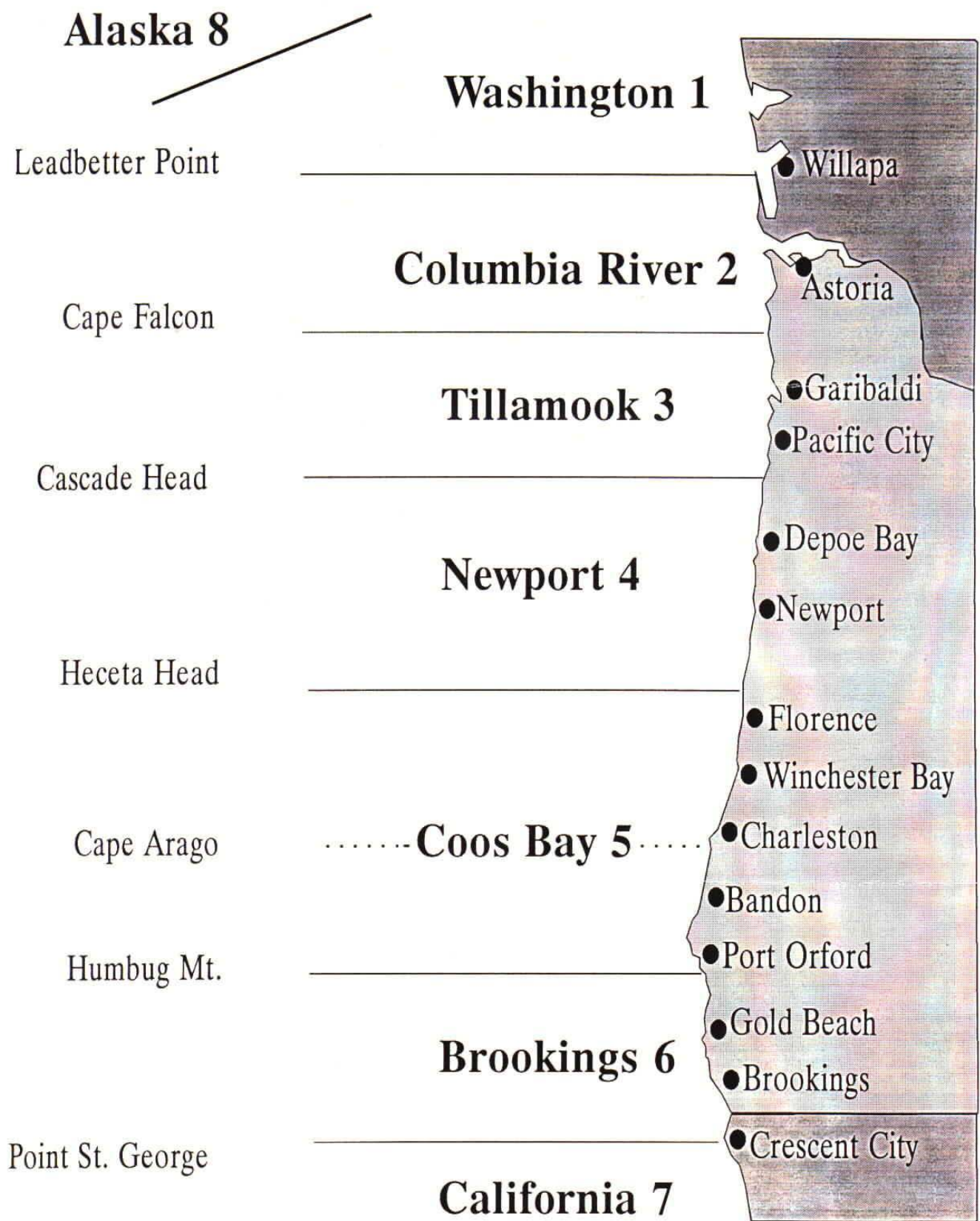


Figure 5. Catch areas for Oregon ocean salmon fisheries.

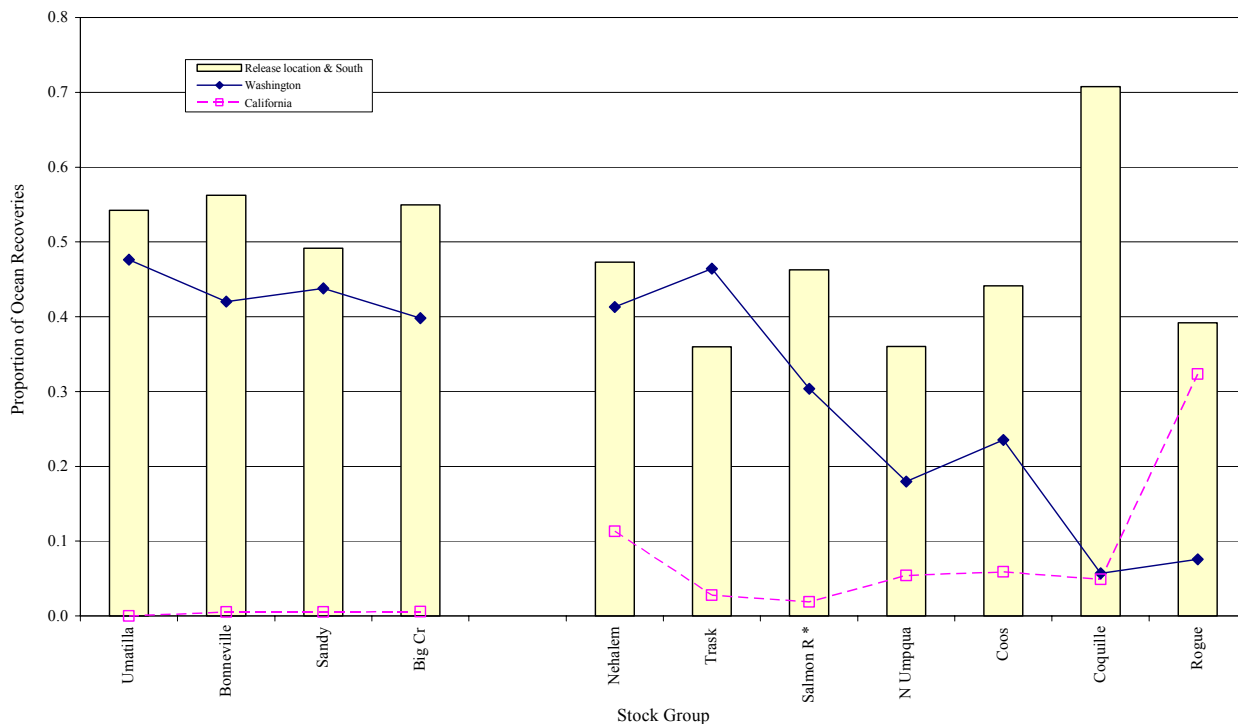


Figure 6. Coho salmon proportion of ocean recoveries in Washington, California, and release location and south. Data is for the 1991 through 2000 brood years. * = Combination of data from 2 stocks, Salmon River and Siletz River.

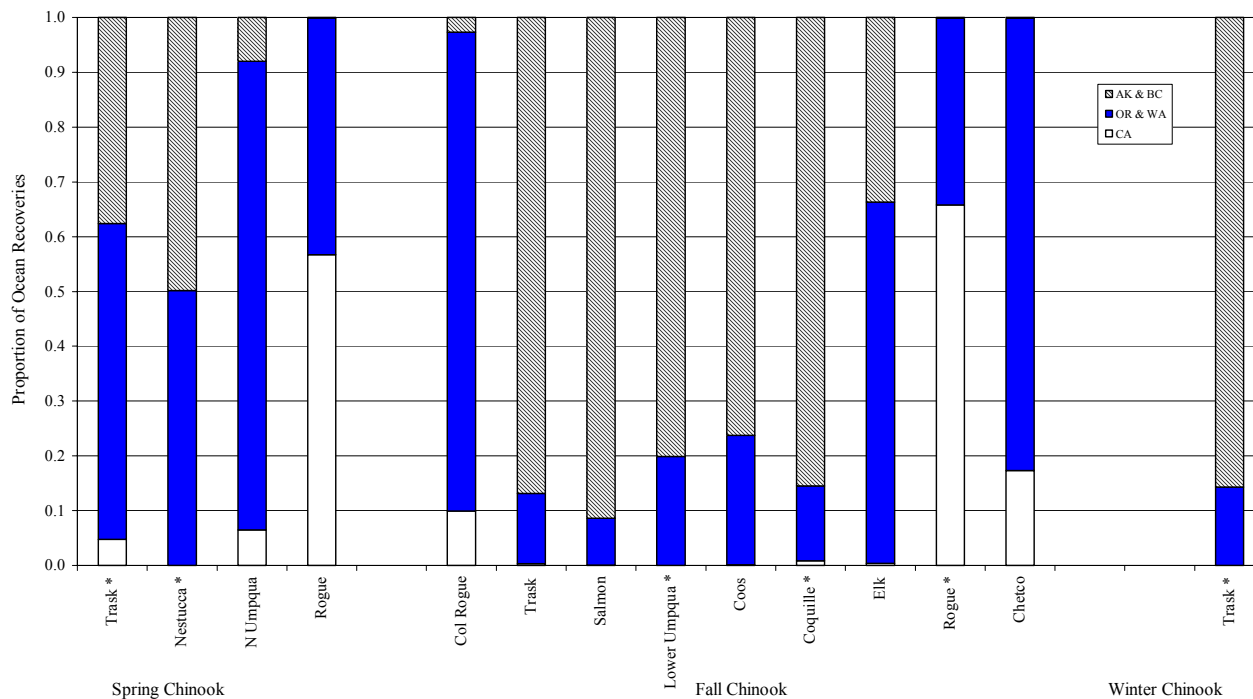


Figure 7. Chinook salmon proportion of ocean recoveries in northern (AK & BC), central (WA & OR), and southern (CA) fisheries. Data is for 1989 through 1998 brood years. * = Does not contain data for all 10 years.

4 and Figure 6). Spring chinook show a shift southward 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 within Canadian and Washington fisheries for spring chinook is similar to that described for fall chinook. Ocean recoveries by area is very similar for Trask River winter chinook and fall chinook stocks (Table 4).

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 in all freshwater recovery areas. Fish recovered at hatcheries are well sampled. 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 some 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. Thus, differences in freshwater recovery rate for different groups can reflect differences in survival, differences in sampling, or both.

Overall average percent freshwater recovery for hatchery coho salmon ranged from 0.5% to 2.5% (Table 5). Coho 2000 brood year percent freshwater recovery was higher than the long-term average for 8 of the 11 stocks, and was higher than the 1999 brood year for 6 of 11 stocks. There is no consistent pattern between the 1999 and 2000 broods. However, both are generally lower than the 1998 brood percent freshwater recovery which set record highs for 5 of the 11 stocks. Of particular note were 1998 brood Trask stock (10.3%), Rogue Stock (7.8%) and Bonneville stock (5.1%). Historically, freshwater recovery rate tends to be higher for Columbia Basin stocks because Columbia Basin fisheries are sampled. Percent freshwater recovery is higher than percent ocean recovery for all 4 Columbia River stocks, and for all 7 coastal stocks except North Umpqua (Figure 8). This is likely an artifact of the hatchery recovery methods for the North Umpqua coho program.

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 higher for Columbia Basin coho released below Bonneville dam than for coho released above the dam, and this difference was statistically significant (Table 5). Trask River and Rogue River hatchery coho had significantly higher percent freshwater recovery than all other coastal coho stocks. The differences in the ratio of ocean to freshwater percent recovery shown in Table 8 are 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.

Table 5. Weighted average percent freshwater (FW) recovery of coho salmon stocks tagged for stock assessment. Total percent recovery is also reported. Percent freshwater recovery (1991-2000 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		2000 percent recovery	1991 - 2000 brood average		
						FW	Total	
COLUMBIA RIVER COHO SALMON								
Bonneville	A	1980-2000	1.78	0.28 (1980)	to 5.05 (1998)	4.01	1.86	2.13
Big Creek	AB	1980-2000	1.71	0.14 (1990)	to 4.67 (1983)	3.15	1.58	1.79
Sandy River	B	1977-2000	1.57	0.02 (1978)	to 6.58 (1983)	1.60	1.01	1.29
Umatilla River	C	1985-2000	0.52	0.05 (1994)	to 2.05 (1986)	0.43	0.28	0.35
COASTAL RIVERS COHO SALMON								
Rogue River	a	1977-2000	2.45	0.20 (1987)	to 7.76 (1998)	2.96	4.00	4.03
Trask River	b	1977-2000	1.47	0.00 (1977)	to 10.29 (1998)	2.87	2.68	2.90
Coquille River	c	1980-2000	0.90	0.00 (2 yrs)	to 4.17 (1998)	2.21	0.98	1.03
Nehalem River	c	1977-2000	0.77	0.00 (1977)	to 2.96 (1985)	0.66	0.84	0.93
Salmon River ^a	c	1976-2000	0.53	0.11 (1989)	to 1.76 (1998)	0.91	0.63	0.76
Coos River	c	1984-2000	0.93	0.04 (1984)	to 3.57 (1985)	1.45	0.54	0.60
North Umpqua R.	c	1980-2000	0.48	0.03 (1999)	to 1.99 (1981)	0.29	0.32	0.49

a = Represents a combination of Salmon River (1991-1996) and Siletz River (1996-2000) stocks.

Table 6. Weighted average percent freshwater recovery of chinook salmon stocks tagged for stock assessment. Percent freshwater recovery (1989-1998 brood) is not significantly different for stocks followed by the same letter.

Stock Group	Brood Years	Overall average % recovery	Percent recovery range		1998 percent recovery	1989 - 1998 brood average		
						FW	Total	
FALL CHINOOK SALMON								
Salmon River	a	1976-80, 82-98	1.00	0.14 (1979)	to 2.37 (1993)	1.24	1.23	1.68
Elk River	a	1977-1998	0.54	0.01 (1977)	to 1.83 (1997)	1.13	0.86	1.63
Rogue Stock	b	1982-1998	0.67	0.11 (1995)	to 2.19 (1982)	0.47	0.41	0.62
Columbia Rel.								
Coos River	b	1983-85, 87-98	0.30	0.04 (1983)	to 0.84 (1985)	0.62	0.29	0.44
Trask River	b	1982-1998	0.22	0.04 (1989)	to 0.51 (1997)	0.24	0.23	0.52
Chetco River	b	1977-1998	0.10	0.00 (4 yrs)	to 0.40 (1985)	0.00	0.05	0.35
Rogue River ^a		1977-86, 88-89, 91-98	0.23	0.00 (1979)	to 0.99 (1997)	0.31	0.34 ^a	0.71 ^a
Lower Umpqua R. ^a		1991-1998	0.06	0.00 (1992)	to 0.12 (1998)	0.12	0.06 ^a	0.47 ^a
Coquille River ^a		1983-88, 90-98	0.09	0.00 (1991)	to 0.67 (1985)	0.02	0.03 ^a	0.29 ^a
SPRING CHINOOK SALMON								
Rogue River	a	1980-1998	1.16	0.19 (1987)	to 2.62 (1991)	1.34	1.19	1.45
North Umpqua R.	b	1976-1998	0.06	0.00 (2 yrs)	to 0.20 (1977)	0.01	0.05	0.43
Trask River ^a		1977-1997	0.13	0.02 (1991)	to 0.36 (1980)	--	0.07 ^a	0.14 ^a
E Fk Trask Pd ^a		1993-1998	0.15	0.04 (1997)	to 0.30 (1993)	0.12	0.15 ^a	0.30 ^a
Wilson R. ^a		1990-94, 1998	0.11	0.04 (1991)	to 0.16 (1993)	0.12	0.11 ^a	0.23 ^a
Nestucca River ^a		1977-83, 91-98	0.09	0.00 (2 yrs)	to 0.18 (1993)	0.05	0.12 ^a	0.27 ^a
WINTER CHINOOK SALMON								
Trask River ^a		1986-88, 90-98	0.19	0.00 (2 yrs)	to 0.48 (1992)	0.23	0.23 ^a	0.47 ^a

a = Does not include data from all ten years.

Overall average percent freshwater recovery for chinook salmon ranged from 0.1% to 1.2% (Table 6). The hatchery chinook 1998 brood year percent freshwater recovery was above the long-term average for 9 of 15 stocks and set 1 record high, but was below the 1997 brood year rate for 10 of 14 stocks. 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 3 of the 15 stocks in Figure 9, and is substantially higher for Salmon River fall chinook and Rogue River spring chinook salmon. Salmon River is the only coastal basin with complete accounting of hatchery returns over the last 10 brood years. Rogue River spring chinook return to the Cole Rivers hatchery trap, which is located at the base of an impassable dam across the Rogue River.

Statistical analysis of percent freshwater recovery included both spring and fall chinook, and the results are reported in Table 6. Only 8 of the 16 stocks in Table 6 had data for all of the last 10 completed brood years (returns through age 5). Unlike percent ocean recovery (Table 2), which was significantly higher for southern stocks versus northern stocks, there is no geographic pattern in percent freshwater recovery (Table 6). Salmon River fall chinook and Elk River fall chinook (North migrating stock), and Rogue River spring chinook (South migrating stock) had significantly higher percent freshwater recovery than all other groups (Table 6).

Freshwater Recovery By Area

Weighted average percent freshwater recovery 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 coho released below Bonneville Dam averages about 1/3 of their total freshwater percent recovery (Table 7). Because of the inability to estimate total survival to spawning grounds this data cannot be used to calculate freshwater exploitation rate. Gillnet catch above Bonneville Dam is very low for stocks released below the dam, however, it is about 1/2 of the total gillnet catch of stocks released above the dam (Table 7). Freshwater recovery areas for coastal hatchery coho are essentially only sampled at the hatchery. Salmon River coho 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 about 2% of the total estimated freshwater recoveries.

Percent recovery in freshwater harvest of Rogue River stock fall chinook salmon released in the Columbia River is over 1/2 of their percent recovery at the hatchery (Table 8). Coastal chinook salmon are harvested extensively in freshwater fisheries that are generally not sampled. Percent recovery at the hatchery of Salmon River fall chinook is about 1/4 that of Trask River fall chinook (Table 8). However, percent recovery of Salmon River stock in all freshwater areas is 5 times that of Trask stock, because of the sampling program in Salmon River. The high percent recovery on spawning grounds for Salmon River stock fall chinook (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

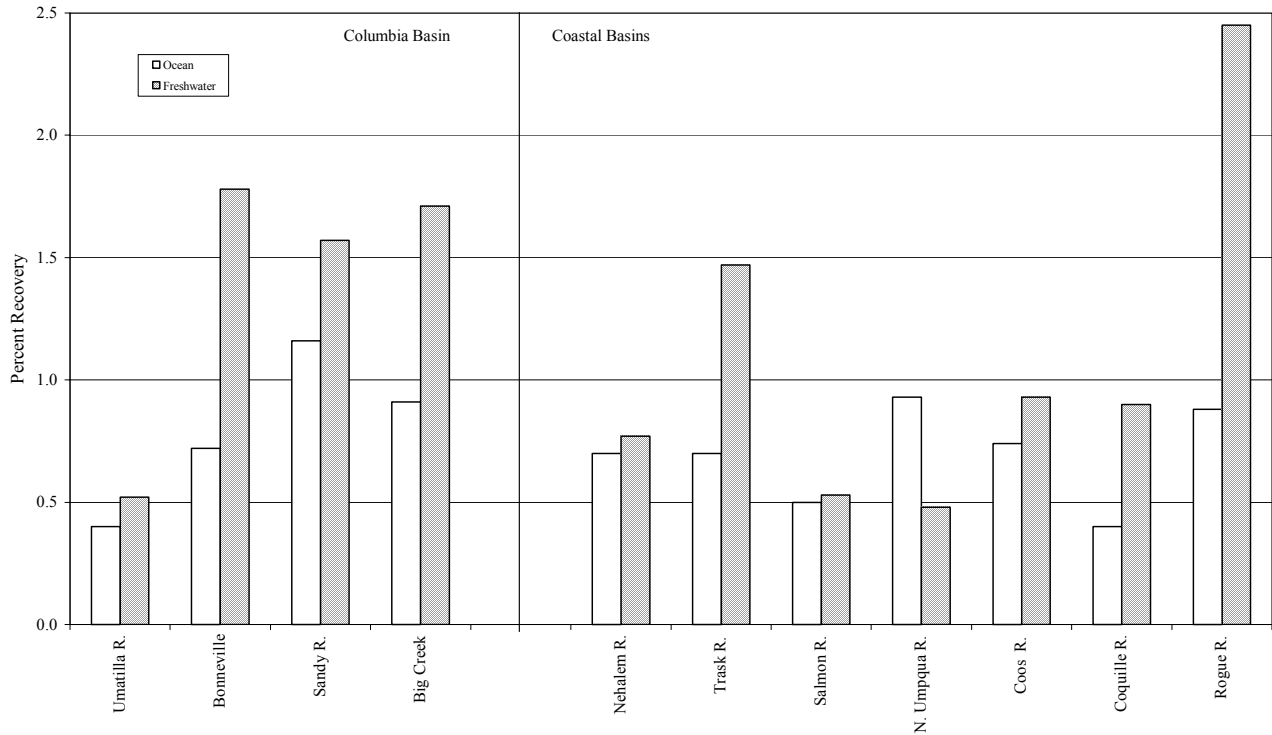


Figure 8. Comparison of overall average ocean and freshwater percent recovery of coho salmon stocks tagged for stock assessment.

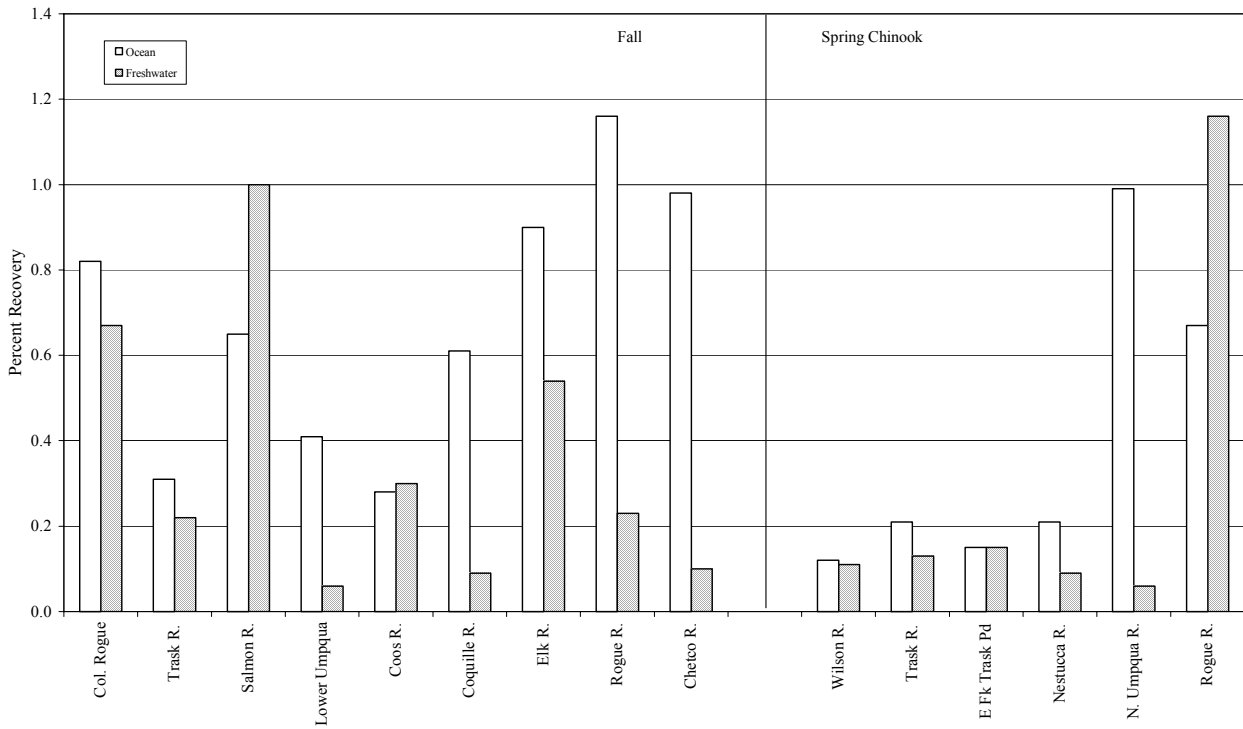


Figure 9. Comparison of overall average ocean and freshwater percent recovery of chinook salmon stocks tagged for stock assessment.

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, 1991 to 2000. NA = Data not available.

Stock Group	Estuary & river sport	Gillnet Catch		Tribal ceremonial & subsistence	Hatchery returns	Spawning ground recoveries	Other freshwater recoveries
		Below Bonn.	Above Bonn.				
COLUMBIA RIVER COHO SALMON							
Bonneville	0.23	0.11	0.00	0.00	1.52	NA	0.00
Big Creek	0.13	0.51	0.00	0.00	0.95	NA	0.00
Sandy River	0.14	0.15	0.00	0.00	0.72	NA	0.00
Umatilla River	0.08	0.04	0.02	0.00	0.15	NA	0.00
COASTAL RIVERS COHO SALMON							
Rogue River	NA	0.00	0.00	0.00	3.99	NA	0.00
Trask River	NA	0.00	0.00	0.00	2.68	NA	0.00
Coquille River	NA	0.00	0.00	0.00	0.98	NA	0.00
Nehalem River	NA	0.00	0.00	0.00	0.82	NA	0.00
Salmon River ^a	0.01	0.00	0.00	0.00	0.58	NA	0.00
Coos River	NA	0.00	0.00	0.00	0.53	NA	0.00
North Umpqua R.	NA	0.00	0.00	0.00	0.28	NA	0.00

a = Represents a combination of Salmon River (1991-1996) and Siletz River (1996-2000) stocks.

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, 1989 to 1998. NA = Data not available.

Stock Group	Estuary & river sport	Gillnet Catch		Tribal ceremonial & subsistence	Hatchery returns	Spawning ground recoveries	Other freshwater recoveries
		Below Bonn.	Above Bonn.				
FALL CHINOOK SALMON							
Salmon River	0.44	0.00	0.00	0.00	0.05	0.73	0.00
Elk River	0.26	0.00	0.00	0.00	0.52	NA	0.00
Rogue Stock Columbia Rel.	0.05	0.09	0.00	0.00	0.25	NA	0.00
Coos River	NA	0.00	0.00	0.00	0.28	NA	0.00
Trask River	NA	0.00	0.00	0.00	0.18	NA	0.00
Chetco River	NA	0.00	0.00	0.00	0.01	NA	0.00
Rogue River ^a	NA	0.00	0.00	0.00	0.23	NA	0.01
Lower Umpqua R. ^a	NA	0.00	0.00	0.00	0.03	NA	0.00
Coquille River ^a	NA	0.00	0.00	0.00	0.02	NA	0.00
SPRING CHINOOK SALMON							
Rogue River	NA	0.00	0.00	0.00	1.18	NA	0.00
North Umpqua R.	NA	0.00	0.00	0.00	0.03	NA	0.00
E Fk Trask Pd ^a	NA	0.00	0.00	0.00	0.13	NA	0.00
Nestucca River ^a	NA	0.00	0.00	0.00	0.12	NA	0.00
Wilson River ^a	NA	0.00	0.00	0.00	0.10	NA	0.00
Trask River ^a	NA	0.00	0.00	0.00	0.07	NA	0.00
WINTER CHINOOK SALMON							
Trask River ^a	NA	0.00	0.00	0.00	0.16	NA	0.00

a = Does not include data from all ten years.

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 36% (estimated from Table 8). Although we are missing spawning ground data for Elk River fall chinook their approximate freshwater exploitation rate is about 30%.

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 overall percent ocean recoveries (Table 2) has the lowest percent freshwater recoveries (Table 6). Rogue and North Umpqua spring chinook programs are both at hatcheries located fairly high in their respective basins. For brood years 1989 to 1998 North Umpqua stock percent ocean recovery was about 1.5 times that of Rogue River stock (Table 2). However, for that same time period, percent recovery at the hatchery was about 40 times higher for Rogue River stock (Rogue 1.18%, North Umpqua 0.03%, 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 partial collections at Winchester Dam and on fish swim ins at Rock Creek Hatchery.

Oregon Contribution Rate

Contribution rate to Oregon ocean and freshwater fisheries, calculated as (adults 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 overall average percent ocean recovery rate. 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.

Coho ocean fisheries from Washington to California were closed in 1994 and very limited in 1995 through 1999. 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 1996 brood years. The 2003 OPI ocean coho fishery harvested about twice number of coho retained in 2002, and was the largest catch since 1992 (PFMC 2005). These recent harvest rates are still well below historic levels. Thus, the Oregon ocean contribution rate for the 2000 brood year was higher than the 1999 brood for all 11 stocks, but was above the long-term average for only 6 of 11 stocks (Table 9). Oregon ocean contribution rate for stocks released above Bonneville dam is generally lower than that of stocks released below the dam, but only for Sandy and Bonneville stocks was the difference statistically significant (Table 9). Columbia River stocks released below Bonneville dam had higher Oregon ocean contribution rates than coastal stocks, and Northern coastal stocks tend to have higher Oregon ocean contribution rates than southern coastal stocks. Statistically significant differences in Oregon ocean contribution rates for coho salmon stocks are reported in Table 9.

Oregon ocean contribution rate for 1998 brood chinook salmon stocks was lower than the long-term average for 8 of 15 stocks, but set 2 record highs, and was higher than the 1997 brood for 9 of 15 stocks (Table 10). Comparisons between stocks are limited because only 8 of the 15 stocks have data for all of the last 10 completed broods (1989 through 1998). Statistically, Elk stock fall chinook, had significantly higher Oregon ocean contribution rates than all other stocks (Table 10). There is a trend toward increasing Oregon ocean contribution rates from north to south (Table 10). This results from a combination of southern stocks having a higher survival to ocean fisheries, and a higher percent of their ocean recoveries in Oregon fisheries, than northern 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 (1991-2000 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	2000 ocean cont.	1991 - 2000 brood average		
						Ocean	FW	
COLUMBIA RIVER COHO SALMON								
Bonneville	a	1980-2000	69.2	0.0 (1991) to 306.3 (1986)	115.7	20.0	44.7	
Sandy River	a	1977-2000	119.3	0.0 (2 yrs) to 467.6 (1986)	93.6	19.7	43.4	
Big Creek	ab	1980-2000	90.5	0.0 (2 yrs) to 475.2 (1986)	95.0	14.0	75.5	
Umatilla R.	bc	1985-2000	39.9	0.0 (3 yrs) to 278.5 (1986)	24.2	5.4	21.3	
COASTAL RIVERS COHO SALMON								
North Umpqua R	ab	1980-2000	59.4	0.0 (1991) to 285.5 (1984)	81.7	13.7	NA	
Trask River	abc	1977-2000	49.8	0.0 (3 yrs) to 176.5 (1977)	38.4	10.8	NA	
Salmon River ^a	bc	1976-2000	39.2	0.0 (4 yrs) to 165.4 (1979)	68.0	8.9	NA	
Coos River	bc	1984-2000	45.6	0.0 (5 yrs) to 285.0 (1985)	51.7	6.4	NA	
Nehalem River	bc	1977-2000	50.7	0.0 (3 yrs) to 253.8 (1985)	25.5	6.0	NA	
Coquille River	bc	1980-2000	17.6	0.0 (5 yrs) to 94.1 (1985)	29.6	4.0	NA	
Rogue River	c	1977-2000	26.9	0.0 (3 yrs) to 172.6 (1978)	11.5	2.3	NA	

a = Represents a combination of Salmon River (1991-1996) and Siletz River (1996-2000) stocks.

Table 10. Weighted average Oregon ocean and freshwater catch contribution rate (adults caught/1,000 pounds released) of chinook salmon stocks. Oregon ocean contribution rate (1989-1998 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	1998 ocean cont.	1989 - 1998 brood average		
						Ocean	FW	
FALL CHINOOK SALMON								
Elk River	a	1977-1998	57.3	4.3 (1982) to 244.2 (1985)	65.0	45.0	21.3	
Rogue Stock Columbia Rel.	b	1982-1998	91.8	3.4 (1996) to 293.6 (1984)	28.0	29.5	22.5	
Chetco River	b	1977-1998	70.0	3.2 (1988) to 194.6 (1985)	7.3	27.7	NA	
Trask River	d	1982-1998	5.3	0.0 (2 yrs) to 17.5 (1997)	3.5	6.0	NA	
Coos River	d	1983-85, 87-98	11.4	0.0 (2 yrs) to 97.0 (1985)	7.3	5.0	NA	
Salmon River	d	1976-80, 82-98	3.7	0.4 (1988) to 8.9 (1993)	6.7	4.7	57.6	
Rogue River ^a		1977-86, 88-89, 91-98	48.5	0.0 (1979) to 242.8 (1983)	26.9	18.2 ^a	NA	
Lower Umpqua R. ^a		1991-1998	9.5	0.0 (1997) to 20.2 (1998)	20.2	9.5 ^a	NA	
Coquille River ^a		1983-88, 90-98	18.3	0.0 (5yrs) to 155.0 (1985)	11.3	4.9 ^a	NA	
SPRING CHINOOK SALMON								
North Umpqua R.	bc	1976-1998	39.1	1.3 (1991) to 192.6 (1983)	63.2	19.3	NA	
Rogue River	cd	1980-1998	25.3	0.3 (1996) to 113.4 (1983)	11.4	10.5	NA	
Nestucca River ^a		1977-83, 91-98	5.7	0.0 (1982) to 18.7 (1998)	18.7	7.1 ^a	NA	
Wilson River ^a		1990-94, 1998	7.0	1.0 (1993) to 23.1 (1990)	5.0	7.0 ^a	NA	
E Fk Trask Pd ^a		1993-1998	4.8	1.3 (1996) to 8.8 (1993)	8.1	4.8 ^a	NA	
Trask River ^a		1977-1997	5.5	0.7 (1977) to 20.5 (1985)	--	4.2 ^a	NA	
WINTER CHINOOK SALMON								
Trask River ^a		1986-88, 90-98	5.5	0.0 (3 yrs) to 18.1 (1990)	7.4	6.4 ^a	NA	

a = Does not include data from all ten years.

Oregon Coastal Hatchery Juvenile Salmon Releases

Oregon coastal hatchery release of coho, chinook and steelhead are reported in Tables 11 through 13 respectively. These releases are summarized by year, species, and geographically by Federal ESU and gene conservation area (GCA) as defined by ODFW. In the spring of 2005 the State of Oregon assessed Oregon Plan for Salmon and Watersheds (OPSW) implementation and species status for Oregon coastal coho salmon (Nicholas et.al 2005). Oregon coastal coho salmon population structure was re-examined as part of that process, resulting in some changes to the GCA's (Chilcote et.al. 2005). First, the population groupings are now designated as Geographical Strata (GS). Second, the Siltcoos, Tahkenitch, and Tenmile lakes coho populations were designated as a separate GS, instead of as part of the Mid-Coast GCA. Otherwise, the GCA and GS groupings match.

Table 11. Coastal hatchery coho releases for calendar years 1995 through 2004, with proposed releases in 2005. 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 GS			Mid Coast GS			Umpqua GS			Mid-South Coast GS			South Coast GCA		
	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															
1995	175	0	1,006,785	24,863	29,062	2,041,184	568,041	0	277,561	386,850	16,250	261,402	8,316	0	210,469
1996	0	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	0	0	773,540	69,766	152,294	1,659,488	47,048	0	277,757	525,274	32,406	96,839	11,752	0	193,506
1998	0	0	405,170	0	66,186	599,262	186,005	0	309,678	70,956	0	136,866	10,290	0	214,121
1999	0	0	403,786	21,904	10,500	146,038	551,139	0	219,047	98,256	0	182,421	0	0	207,154
2000	0	0	406,037	8,436	15,750	20,875	657,271	0	214,901	213,619	0	176,232	0	0	174,181
2001	0	0	399,282	10,532	9,000	247,018	399,251	0	76,851	127,349	0	172,569	0	0	209,736
2002	0	0	406,283	0	0	235,606	416,755	0	115,178	122,464	0	191,207	0	0	208,103
2003	0	0	199,059	0	20,000	241,028	488,930	0	146,170	66,856	0	163,031	0	0	210,892
2004	0	0	201,034	0	19,140	258,553	586,148	0	147,008	92,528	0	97,104	0	0	205,000
2005	0	0	200,000	0	20,000	250,000	180,000	0	142,500	75,000	0	170,000	0	0	200,000
Off-Station Releases															
1995	175	0	0	24,863	29,062	367,154	669,379	0	130,153	386,850	0	102,761	8,316	0	0
1996	0	0	0	42,368	46,108	99,407	567,672	0	123,367	281,222	0	33,908	7,667	0	0
1997	0	0	0	41,876	66,186	122,441	47,048	0	134,006	314,956	32,406	11,305	11,752	0	0
1998	0	0	0	0	0	50,821	186,005	0	136,232	70,956	0	36,113	10,290	0	0
1999	0	0	0	21,904	10,500	0	554,805	0	0	98,256	0	34,976	0	0	0
2000	0	0	0	8,436	15,750	425	657,271	0	19,480	213,619	0	32,879	0	0	0
2001	0	0	0	10,532	9,000	1,401	635,032	0	0	127,349	0	28,093	0	0	0
2002	0	0	0	0	0	0	416,755	0	0	122,464	0	32,458	0	0	0
2003	0	0	0	0	20,000	0	450,000	0	24,373	66,856	0	25,517	0	0	0
2004	0	0	0	0	19,140	0	506,093	0	11,003	92,528	0	29,058	0	0	0
2005	0	0	0	0	20,000	0	100,000	0	20,000	75,000	0	37,500	0	0	0
Out of Basin Releases															
1995	0	0	0	23,488	29,062	365,873	0	0	0	0	0	0	0	0	0
1996	0	0	0	3,830	0	538,090	0	0	0	0	0	0	0	0	0
1997	0	0	0	36,890	0	360,367	0	0	0	16,170	1,500	0	0	0	0
1998	0	0	0	0	0	223,839	0	0	0	0	0	0	0	0	0
1999	0	0	0	20,082	10,500	111,052	0	0	0	0	0	0	0	0	0
2000	0	0	0	7,176	15,750	20,450	0	0	0	0	0	0	0	0	0
2001	0	0	0	9,000	9,000	198,107	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	192,945	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	20,000	196,291	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	19,140	215,653	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	20,000	200,000	0	0	0	0	0	0	0	0	0

Release numbers are reported by three fish size/age categories (unfed fry, fry and fingerlings, smolts). 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 closed water body, one from which

they are assumed not to migrate to the ocean, are not included in Tables 11 through 13. Fish released in a basin other, than that stocks basin of origin are reported as out of basin releases.

Table 12. Coastal hatchery chinook releases for the years 1995 through 2004, with proposed releases in 2005. 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												SOUTHERN OREGON ESU		
	Nehalem/Ecola GCA			North-Mid Coast GCA			Umpqua Basin GCA			Mid-South Coast GCA			South Coast GCA		
	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															
1995	0	0	0	62,327	58,941	854,190	172,990	506,965	353,950	950,527	1,076,570	626,550	98,765	14,394	1,902,669
1996	0	24,969	0	157,223	63,652	824,904	135,214	80,789	625,576	1,756,127	1,106,404	628,972	42,062	0	1,992,827
1997	14,922	0	21,742	529,173	52,106	883,828	0	336,399	202,700	2,135,142	1,111,127	539,413	15,339	258,628	2,008,561
1998	14,245	0	28,514	468,353	40,713	863,069	0	0	298,358	35,745	1,127,010	557,739	19,373	0	1,869,530
1999	19,542	0	26,995	354,543	17,009	866,308	9,056	68,744	401,018	133,932	1,726,605	566,567	74,793	19,476	1,846,996
2000	19,153	0	26,079	618,824	25,725	929,747	61,953	327,161	483,447	71,036	1,858,574	543,833	18,064	27,885	755,975
2001	15,479	0	25,110	260,935	55,123	1,007,233	326,322	175,200	422,422	93,351	2,348,475	533,691	115,329	0	2,126,678
2002	20,000	0	26,240	215,522	54,903	906,549	129,777	489,747	402,778	91,779	2,589,624	523,552	73,952	0	2,179,665
2003	0	0	25,989	248,718	43,413	967,455	275,123	196,680	410,267	114,805	1,782,114	524,293	93,854	54,452	2,137,121
2004	20,000	0	25,968	290,757	0	909,789	388,749	463,000	415,381	973,628	2,545,614	523,979	81,972	29,684	2,157,066
2005	10,000	0	25,000	426,400	0	1,018,000	150,000	200,000	412,000	115,700	2,590,000	517,000	95,950	0	1,847,000
Off-Station Releases															
1995	0	0	0	62,327	58,941	342,387	172,990	496,966	51,920	950,527	123,214	31,960	98,765	14,394	230,802
1996	0	24,969	0	157,223	63,652	315,790	135,214	49,240	84,739	1,756,127	137,450	61,381	42,062	0	282,545
1997	14,922	0	21,742	529,173	38,845	352,213	0	322,272	102,348	2,135,142	156,082	64,947	15,339	0	265,213
1998	14,245	0	28,514	468,353	31,780	382,515	0	0	0	35,745	396,704	70,536	19,373	0	158,208
1999	19,542	0	26,995	354,543	17,009	329,485	9,056	68,744	0	133,932	187,329	111,010	74,793	0	164,741
2000	19,153	0	26,079	618,824	25,725	380,987	61,953	327,161	85,207	71,036	228,779	107,764	18,064	0	158,150
2001	15,479	0	25,110	260,935	55,123	439,454	326,322	175,200	0	93,351	238,409	101,243	115,329	0	228,338
2002	20,000	0	26,240	215,522	54,903	338,894	129,777	489,747	0	94,314	69,059	146,801	73,952	0	155,941
2003	0	0	25,989	256,462	43,413	416,642	275,123	196,680	0	114,805	230,000	96,265	93,854	0	153,681
2004	20,000	0	25,968	290,757	0	391,304	388,749	463,000	0	973,628	905,614	101,230	81,972	0	158,810
2005	10,000	0	25,000	426,400	0	460,000	150,000	200,000	70,000	115,700	947,500	100,000	41,150	0	150,000
Out of Basin Releases															
1995	0	0	0	62,052	15,369	136,179	0	0	0	432	0	130,413	15,400	0	0
1996	0	24,969	0	145,020	3,696	118,799	0	0	0	150	8,505	101,306	9,906	0	0
1997	14,922	0	21,742	355,558	13,726	110,532	0	0	0	270	0	0	9,923	0	0
1998	14,245	0	28,514	229,139	11,566	116,273	0	0	0	400	0	0	10,000	0	0
1999	19,542	0	26,995	193,166	0	136,261	0	0	0	400	0	0	10,000	0	0
2000	19,153	0	26,079	344,308	25,725	101,784	0	0	0	0	0	0	9,743	0	0
2001	15,479	0	25,110	103,374	16,228	114,347	0	0	0	300	0	0	9,630	0	0
2002	20,000	0	26,240	138,550	16,978	105,237	0	0	0	0	0	0	9,857	0	0
2003	0	0	25,989	128,500	0	116,388	0	0	0	0	0	0	9,860	0	0
2004	20,000	0	25,968	130,087	0	119,496	0	0	0	0	0	0	2,940	0	0
2005	10,000	0	25,000	186,400	0	125,000	0	0	0	300	0	0	10,000	0	0

Coastwide total releases of hatchery coho (unfed fry through smolts) has decreased from 4.8 million in 1995 to 1.6 million in 2004, with a planned released in 2005 of 1.2 million (Table 11). The 1995 release was already substantially lower than the over 9.0 million hatchery coho juveniles released by ODFW in 1990 (Lewis 2000). The Lakes GS is not shown in Table 11, as there are no planned releases and only 1 historic release of hatchery coho for the years 1995 through 2005 (Table 11). That one release was 1,500 fingerlings released in 1997 in Woahink Lake (tributary of Siltcoos Lake). There are no planned coho fry and fingerling releases in 2005, except for one STEP program that releases 20,000 fry in North Fork Depoe Creek. This is a tributary to Depoe Bay, an area historically not considered to have a wild coho population (Kostow 1995), but currently considered a dependent population (Chilcote et.al 2005). Unfed fry releases have been eliminated in all but the Umpqua GS and Mid-South Coast GS (Table 11). Proposed 2005 unfed fry releases in the these two GS are 255,000 which is about ¼ of the combined actual releases for the Umpqua GS and Mid-South Coast GS in the

Table 13. Coastal hatchery steelhead releases for years 1995 through 2004, with proposed releases in 2005. 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			KLAMATH MOUNTAIN PROVINCE ESU					
	North-Mid Coast GCA			Cape Blanco to Border GCA			Upper Rogue GCA		
	Unfed Fry	Fry & Fing	Smolts	Unfed Fry	Fry & Fing	Smolts	Unfed Fry	Fry & Fing	Smolts
Total Releases									
1995	281,521	0	1,429,555	500	0	52,481	70,397	0	460,271
1996	160,595	17,627	1,429,511	300	0	51,789	60,763	0	614,867
1997	246,789	16,717	1,311,273	325	0	42,895	59,458	0	557,280
1998	83,701	0	1,252,913	400	0	45,425	42,336	0	567,608
1999	202,209	0	1,284,760	306	0	47,622	0	0	416,605
2000	100,180	0	1,334,173	310	0	50,951	0	0	647,161
2001	125,589	0	1,351,966	200	0	71,173	0	0	454,959
2002	69,650	15,461	1,366,568	0	0	49,610	0	0	429,718
2003	174,020	177	1,165,429	300	0	44,449	0	0	499,989
<u>2004</u>	<u>199,859</u>	<u>0</u>	<u>1,197,906</u>	<u>300</u>	<u>0</u>	<u>46,006</u>	<u>0</u>	<u>200</u>	<u>525,755</u>
2005	110,300	0	1,331,000	600	0	50,000	0	0	484,000
Off-Station Releases									
1995	169,665	0	891,103	500	0	52,481	70,397	0	88,710
1996	50,121	17,627	890,167	300	0	51,789	60,763	0	190,427
1997	246,789	12,667	836,910	325	0	42,895	59,458	0	170,454
1998	83,701	0	798,906	400	0	45,425	42,336	0	170,334
1999	202,209	0	850,356	306	0	47,622	0	0	96,520
2000	100,028	0	768,177	310	0	50,951	0	0	209,473
2001	120,114	0	899,945	200	0	71,173	0	0	99,368
2002	69,650	15,461	904,423	0	0	49,610	0	0	115,530
2003	174,020	177	761,336	300	0	44,449	0	0	124,594
<u>2004</u>	<u>199,859</u>	<u>0</u>	<u>851,306</u>	<u>300</u>	<u>0</u>	<u>46,006</u>	<u>0</u>	<u>0</u>	<u>152,922</u>
2005	110,300	0	956,000	600	0	50,000	0	0	132,000
Out of Basin Releases									
1995	15,954	0	470,324	100	0	0	0	0	0
1996	5,834	0	301,417	0	0	0	0	0	0
1997	4,555	0	259,647	0	0	0	0	0	0
1998	4,537	0	215,689	0	0	0	0	0	0
1999	5,220	0	211,433	0	0	0	0	0	0
2000	5,170	0	221,950	0	0	0	0	0	0
2001	5,916	0	238,537	0	0	0	0	0	0
2002	4,600	0	223,895	0	0	0	0	0	0
2003	5,075	0	178,364	0	0	0	0	0	0
<u>2004</u>	<u>1,744</u>	<u>0</u>	<u>170,150</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
2005	1,700	0	190,000	0	0	0	0	0	0

early 1995 (Table 11). Off station releases of hatchery coho salmon have been reduced from over 5.0 million in 1990 (Lewis 2000) to 0.7 million in 2004, with planned off station releases of 252,500 in 2005 (Table 11). Off station releases have been eliminated from the North Coast GS, Lakes GS and South Coast GCA. Out of basin releases have been eliminated in all areas except the Mid Coast GS (Table 11). The remaining out of basin releases are Siletz River stock coho released in Depoe Bay (20,000 fingerling) and Salmon River (200,000 smolts). Releases of excess fry and fingerling coho in closed water bodies are not reported in Table 11. Release of excess hatchery coho in closed water bodies averaged 157,000 for the 1995 through 2004 release years, and ranged from 28,000 to 394,000.

Coastwide total release of hatchery chinook smolts has remained fairly stable since 1995 (Table 12). Fry and fingerling releases occur predominately in the Mid-South Coast GCA and secondarily in the Umpqua GCA (Table 12). There has been an increasing trend in chinook fry and fingerling release over the last 10 years in the Mid-South Coast GCA. Unfed fry releases coastwide have fluctuated between 0.5 million and 2.7 million over the last ten years, but there has been clear pattern in the fluctuations (Table 12). The two largest coastal chinook programs planned for 2004 are 1.6 million Rogue River spring chinook smolts, and

2.6 million Coos River fall chinook fingerlings. The Nehalem/Ecola GCA has a very small hatchery chinook program in comparison to the other 4 coastal chinook GCAs (Table 12). Substantial off station releases of hatchery chinook occur in all GCAs, except the Nehalem/Ecola GCA (Table 12). This is planned to continue for the 2005 release year. Out of basin releases of smolts, and fingerlings have been eliminated in the Umpqua Basin, Mid-South Coast, and South Coast GCAs (Table 12). The remaining out of basin releases proposed for 2005 include: Trask River stock fall chinook released in the Necanicum River and in Tillamook Bay tributaries; Elk River stock fall chinook unfed fry released in Euchre Creek and Floras Creek; and Trask River stock spring chinook released in the Wilson River. Releases of excess fry and fingerling chinook in closed water bodies are not reported in Table 12. Release of excess hatchery chinook in closed water bodies averaged 492,000 for the 1995 through 2004 release years, and ranged from 41,000 to 813,000.

Hatchery steelhead juvenile releases on the Oregon Coast are predominately smolts and are mainly released in the North-Mid Coast GCA (Table 13). Fingerling releases were rare during 1995 through 2004, and none are planned for 2005. Unfed fry releases have been reduced from over 3.6 million in 1990 to 0.2 million in 2004, and have been essentially limited to the North-Mid Coast GCA in recent years (Table 13). Smolt releases have been reduced slightly since 1993, as have off station releases (Lewis 2003). The most dramatic reductions have been in out of basin releases, with planned releases in 2005 only 26% of the smolt and 1% of the un-fed fry actual out of basin releases in 1993 (Lewis 2003). The remaining proposed out of basin releases in 2005 are; 40,000 Nehalem River stock winter steelhead smolts in the Necanicum River, 130,000 Nestucca River stock winter and summer steelhead smolts in the Tillamook Basin, 20,000 Alsea River stock winter steelhead smolts in the Yaquina River, 1,000 Nestucca River stock winter steelhead unfed fry in the Tillamook Basin, 400 Alsea River stock winter steelhead unfed fry in the Yaquina River, and 300 Alsea River stock winter steelhead unfed fry in Big Creek (direct tributary to the Pacific Ocean north of Newport). Releases of excess fry and fingerling steelhead as well as grade out and precocial steelhead in closed water bodies is not reported in Table 13. Release of hatchery steelhead in closed water bodies averaged 351,000 for the 1995 through 2004 release years, and ranged from 221,000 to 419,000.

Oregon Coastal Hatchery Adult Salmon Returns

Collections of returning salmon and steelhead at ODFW coastal facilities were summarized by species, age (adults versus jacks) and geographically in the same manner as coastal hatchery releases (see above section). Tables 14 through 16 contain the last 10 years adult return information for ODFW hatchery coho, chinook and steelhead. 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 should not be used as an estimate of survival. They can be used as an index of potential interactions between hatchery and wild adults in freshwater. Actual levels of interaction depend on further variables including run timing, spawning timing, hatchery location, abundance of wild fish, and genetic variables.

Hatchery recoveries of adult coho in the 2004-05 run year were about average for the last 10 year in the Mid-South Coast GS and the South Coast GCA, and well below average elsewhere (Table 14). Hatchery coho jack returns in 2003-04 had been down substantially from prior years, and these low jack returns continued in

Table 14. 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.

Run Year	North Coast GS						Mid Coast GS						Umpqua GS						Mid-South Coast GS						South Coast GCA					
	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	
	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																														
1995-96	9	--	0	0	11,457	--	0	--	0	0	5,083	--	--	--	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	--	--	--	8	8	1,687	--	160	--	144	144	928	--	4	--	0	0	7,922	171
1997-98	0	--	0	0	3,413	--	0	--	0	0	5,647	--	--	--	0	0	431	--	53	--	110	110	221	--	14	--	0	0	7,934	310
1998-99	0	0	0	0	3,903	104	0	0	0	0	8,281	104	--	--	21	21	803		0	0	66	66	301		5	4	0	0	2,963	59
1999-00	63	55	0	0	5,040	44	0	0	0	0	3,622	197	--	--	0	0	970		0	0	63	63	473	60	19	16	0	0	4,350	47
2000-01	196	196	0	0	4,801	120	0	0	0	0	366	60	--	--	0	0	1,102		0	0			1,036		31	30	0	0	9,276	332
2001-02	41	34	0	0	22,536	204	0	0	0	0	1,531	130	--	--	0	0	832		0	0	61	61	2,033		125	31	0	0	12,738	801
2002-03	202	199	0	0	14,895	178	28	18	0	0	3,889	427	0	0	258	258	492	266	0	0	138	138	2,337	42	47	12	0	0	11,587	589
2003-04	50	49	0	0	6,488	333	41	39	0	0	1,949	91	0	0	242	242	1,057	243	0	0	132	132	3,474	62	20	20	0	0	6,654	748
2004-05	69	69	0	0	3,572	128	11	11	0	0	908	10	0	0	0	0	333	--	0	0	93	93	1,182	79	18	18	0	0	8,286	933
Jack Returns																														
1995-96	0	--	0	0	589	--	0	0	0	0	910	--	--	--	0	0	43	--	55	--	26	26	96	--	1	--	0	0	767	6
1996-97	0	--	0	0	608	--	0	0	0	0	876	--	--	--	0	0	251	--	42	--	0	0	113	--	1	--	0	0	806	16
1997-98	0	0	0	0	347		0	0	0	0	795		--	--	0	0	56		4		2	2	181		1	1	0	0	725	16
1998-99	0	0	0	0	1,301	16	0	0	0	0	394	13	--	--	0	0	60		0	0	6	6	116		0	0	0	0	865	8
1999-00	1	1	0	0	861	0	0	0	0	0	57	8	--	--	0	0	60		0	0	4	4	144	1	4	4	0	0	993	21
2000-01	5	5	0	0	6,616	27	0	0	0	0	53	11	--	--	0	0	35		0	0			1,086		17	17	0	0	2,608	118
2001-02	26	26	0	0	1,655	12	0	0	0	0	70	24	0	0	0	0	11		0	0	2	2	322		7	6	0	0	1,168	67
2002-03	13	13	0	0	2,010	6	5	5	0	0	554	26	0	0	8	8	7	6	0	0	2	2	411	11	9	9	0	0	2,028	253
2003-04	3	3	0	0	254	28	3	3	0	0	35	11	0	0	7	7	45	5	0	0	0	0	334	50	10	7	0	0	1,471	76
2004-05	2	2	0	0	281	3	2	2	0	0	85	10	0	0	0	0	7	--	0	0	1	1	146	9	2	2	0	0	404	38

2004-05 (Table 14). Significant numbers of unmarked "wild" coho are handled at coho producing hatcheries on the Oregon Coast. Over the last 4 run years in the Mid Coast GS, the number of wild coho adults tracks returning to coho hatcheries well with the total number of coho adults handled at those hatcheries. However, this is not true for the North Coast GS and the South Coast GCA (Table 14). Collection of wild coho for inclusion in hatchery broodstocks ("Wild Trapping" Column) only occurs in the Umpqua GS and the Mid-South Coast GS (Table 14). Data for the Umpqua GS don't reflect actual returns as these fish are mostly collected at Winchester Dam, several miles below the hatchery, and only enough fish for broodstock needs are collected. Counts of hatchery and wild coho passing Winchester Dam (North Umpqua R.) provide a better assessment of actual run size.

Hatchery recoveries of adult chinook in the 2004-05 run year are comparable to the 2003-04 run year, except for in the Mid-South Coast GCA which was up substantially (Table 15). This is due to a nearly doubling of hatchery returns from the Coos Basin fall chinook program. Returns in 2004-05 of hatchery chinook to other programs in the Mid-South Coast GCA are comparable to the returns in 2003-04. Adult hatchery chinook returns in the South Coast GCA have been relatively low for the last two years. This is likely the result of the very low smolt release in 2000 (Table 12). A water supply failure during incubation caused the loss of about 2/3 of the Cole Rivers Hatchery spring chinook eggs that year. An additional 300,000 smolts were released each year for the next 4 years to make-up for those losses. There are essentially no recoveries of hatchery chinook in the Nehalem/Ecola GCA, as there are very few hatchery chinook released in this GCA. Chinook salmon jack recoveries at Oregon coastal hatcheries in 2004-05 were the highest for the last 10 years in the North-Mid Coast and Mid-South Coast GCA's, and were near the highest for the South Coast GCA (Table 15). As explained for adult coho hatchery returns at Umpqua GCA hatcheries, due to the collection methods the number of adult and jack chinook collected does not necessarily reflect the total returns.

Table 15. Adult and jack chinook collections: at hatcheries that do not release chinook; from wild populations; and at coastal hatcheries that release chinook.

Return Year	Nehalem/Ecola GCA			North-Mid Coast GCA			Umpqua GCA			Mid-South Coast GCA			South Coast GCA		
	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															
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
2000-01	0	8	0	118	64	1,889	0	0	850	60	0	3,313	0	103	23,068
2001-02	0	0	0	75	24	2,561	0	0	1,377	165	0	7,444	74	202	24,390
2002-03	0	3	0	43	0	3,144	34	108	716	137	0	8,470	28	125	21,615
2003-04	0	0	0	85	0	3,499	0	0	736	306	0	9,056	108	563	14,441
2004-05	0	5	0	142	81	3,701	74	54	570	146	0	14,797	69	41	15,984
Jack Returns															
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
2000-01	0	2	0	0	4	183	0	0	81	4	0	1,373	0	4	1,209
2001-02	0	0	0	0	0	246	0	0	278	18	0	2,637	0	10	846
2002-03	0	0	0	0	0	172	0	0	12	6	0	3,253	1	238	1,616
2003-04	0	0	0	1	0	184	0	0	70	21	0	2,563	4	26	1,951
2004-05	0	1	0	0	0	249	0	5	11	5	0	3,728	3	0	1,837

Table 16. Adult and jack steelhead collections: at hatcheries that do not release steelhead; from wild populations; and coastal hatcheries that release steelhead. T = Total collected, W = wild coho (based on marks), B = Retained for broodstock.

Run Year	North-Mid Coast GCA						Cape Blanco to Border GCA						Upper Rogue GCA					
	Wild Steelhead Trapping		Non-Steelhead Hatcheries		Steelhead Hatcheries		Wild Steelhead Trapping		Non-Steelhead Hatcheries		Steelhead Hatcheries		Wild Steelhead Trapping		Non-Steelhead Hatcheries		Steelhead Hatcheries	
	T	B	T	W	T	W	T	B	T	W	T	W	T	B	T	W	T	W
Adult Returns																		
1995-96	181	181	2	--	6,166	--	0	0	0	--	130	--	0	0	0	--	9,494	--
1996-97	409	212	6	--	8,610	--	0	0	0	--	89	--	0	0	0	--	10,333	--
1997-98	502	318	0	0	5,249	260	0	0	6	6	98	0	0	0	0	0	8,486	209
1998-99	697	280	46	1	10,775	297	0	0	0	0	106	31	0	0	0	0	5,905	379
1999-00	1,182	432	26	0	7,509	428	0	0	0	0	104	10	0	0	0	0	6,873	192
2000-01	953	410	28	0	7,450	328	0	0	0	0	104	0	0	0	0	0	9,143	467
2001-02	1,292	478	93	6	18,034	437	0	0	0	0	97	0	196	196	0	0	20,292	763
2002-03	1,154	328	87	2	10,247	470	0	0	0	0	95	0	30	30	0	0	19,027	714
2003-04	1,678	530	49	0	15,753	516	0	0	0	0	99	0	0	0	0	0	16,744	683
2004-05	1,169	388	56	14	11,892	268	0	0	0	0	80	0	0	0	0	0	8,222	448
Jack Returns																		
1995-96	0	0	0	--	89	--	0	0	0	--	0	--	0	0	0	--	0	--
1996-97	3	0	0	--	149	--	0	0	0	--	0	--	0	0	0	--	0	--
1997-98	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0
1998-99	4	0	0	0	128	0	0	0	0	0	0	0	0	0	0	0	0	0
1999-00	8	1	0	0	69	0	0	0	0	0	0	0	0	0	0	0	0	0
2000-01	29	7	0	0	242	3	0	0	0	0	0	0	0	0	0	0	0	0
2001-02	25	1	0	0	96	0	0	0	0	0	0	0	0	0	0	0	0	0
2002-03	57	0	0	0	233	0	0	0	0	0	0	0	0	0	0	0	0	0
2003-04	51	1	0	0	176	0	0	0	0	0	0	0	0	0	0	0	0	0
2004-05	7	0	0	0	72	0	0	0	0	0	0	0	0	0	0	0	0	0

Adult steelhead hatchery returns in the 2004-05 return year were generally average in comparison to the last 10 years (Table 16). However, they are down compared to the very strong 2001-02 through 2003-04 run years. Hatchery returns for the Cape Blanco to Border GCA are from the Chetco River smolt releases. There is no adult collection facility in the Chetco River so "hatchery returns" for this program are from broodstock seining efforts in the lower Chetco River. Seining is only done for broodstock needs and therefore, the "hatchery returns" do not reflect total

returns. Very few jack steelhead are collected, but for the North-Mid Coast GCA the 2004-05 jack steelhead returns are down substantially from returns in recent years (Table 16). Wild steelhead handled at Siletz Falls account for over 50%, on average, of the total wild steelhead trapping in the North-Mid Coast GCA.

Hatchery Salmon Mass Marking

Table 17. Coastal hatchery mass marked salmon and steelhead smolt releases in 2004 by mark type. Data in italics is preliminary due to missing final release information and/or missing mark quality data.

Release Basin	Stock	Brood	Release Dates		# CWT Groups	Fin Clip	Number Released by Mark Type				Total Release
			First	Last			With a CWT		Without a CWT		
							Fin Clipped	Unmarked	Fin Clipped	Unmarked	
Coho Salmon											
Nehalem	Fishhawk Lake	2002	03/01/04	04/15/04	2	AD	44,775	49	55,729	99	100,652
Trask	Trask R	2002	03/15/04	04/12/04	2	ADRM	48,785	0	51,074	523	100,382
Salmon	Siletz R	2002	04/14/04	04/15/04	1	AD	24,181	47	190,557	868	215,653
Siletz	Siletz R	2002		06/01/04	0	AD	0	0	149	1	150
Umpqua	Umpqua R	2002	03/31/04	04/19/04	1	AD ¹	25,410	0	59,506	967	85,883
Umpqua	Cow Cr (S Umpqua)	2002	03/31/04	04/08/04	1	AD	27,241	0	33,344	540	61,125
Coos	Coos R	2002		03/30/04	1	AD	26,210	95	27,974	438	54,717
Coquille	Coquille R	2002	04/07/04	04/13/04	1	AD	13,255	0	28,666	466	42,387
Rogue	Rogue R	2002	05/03/04	05/05/04	2	AD	26,860	26,751	148,765	2,624	205,000
					11		236,717	26,942	595,764	6,526	865,949
Spring Chinook Salmon											
Wilson	Trask River	2003	05/19/04	07/28/04	1	AD	27,015	147	91,863	532	119,557
Trask	Trask River	2003	08/09/04	08/10/04	1	AD	27,159	300	138,087	800	166,346
Nestucca	Nestucca R	2003		07/20/04	1	AD	24,663	449	87,992	291	113,395
Umpqua	Umpqua R	2002	02/02/04	02/22/04	1	AD	22,400	240	232,408	10,196	265,244
Umpqua	Umpqua R	2003	09/16/04	09/30/04	1	AD	25,616	93	122,251	2,177	150,137
Rogue R	Rogue R	2003	08/09/04	10/14/04	4	AD	118,130	54,296	1,743,644	28,429	1,944,499
					9		244,983	55,525	2,416,245	42,425	2,759,178
Summer Steelhead											
Wilson	Nestucca R	2003	03/31/04	04/13/04	0	ADRV	0	0	35,467	1,027	36,494
Nestucca	Nestucca R	2003		04/13/04	0	ADRV	0	0	64,476	5,650	70,126
Siletz	Siletz R	2003	03/30/04	03/31/04	0	AD	0	0	54,391	1,024	55,415
Umpqua	Umpqua R	2002	03/01/04	04/14/04	0	AD	0	0	91,591	0	91,591
Rogue	Rogue R	2003	04/27/04	04/28/04	0	AD ¹	0	0	218,787	8,752	227,539
					0		0	0	464,712	16,453	481,165
Winter Steelhead											
Necanicum	N Fk Nehalem & Tribs	2003	03/29/04	03/30/04	0	AD	0	0	39,851	147	39,998
Nehalem	N Fk Nehalem & Tribs	2003	04/01/04	04/15/04	0	AD	0	0	54,645	201	54,846
Nehalem	Fishhawk Lk	2003	04/01/04	04/15/04	0	AD	0	0	41,537	0	41,537
Kilchis	Nestucca R	2003	04/07/04	04/08/04	0	ADLM	0	0	28,756	1,530	30,286
Wilson	Nestucca R	2003	04/09/04	04/11/04	0	ADLM	0	0	46,030	2,448	48,478
Wilson	Wilson R	2003	04/22/04	04/26/04	0	AD	0	0	45,910	0	45,910
Nestucca	Nestucca R	2003		04/06/04	0	ADLM	0	0	42,974	6,638	49,612
Nestucca	Nestucca R (Wild)	2003		04/20/04	0	ADRM	0	0	39,942	5,312	45,254
Siletz	Siletz R (Wild)	2003	04/22/04	04/23/04	0	ADLM	0	0	27,838	1,306	29,144
Yaquina	Alea R	2003		03/29/04	0	AD	0	0	14,894	0	14,894
Alea	Alea R	2003	03/31/04	04/14/04	0	ADLM	0	0	75,640	0	75,640
Alea	Alea R (Wild)	2003	03/31/04	04/14/04	0	ADRM	0	0	14,342	42	14,384
Siuslaw	Siuslaw R	2003	04/13/04	04/15/04	0	AD	0	0	87,584	3,600	91,184
Tenmile Lakes	Tenmile Lakes	2003		04/21/04	0	ADLV	0	0	23,151	645	23,796
Umpqua	Cow Cr (S Umpqua)	2002	01/26/04	04/02/04	0	AD	0	0	93,505	0	93,505
Coos	Coos R	2003	04/13/04	04/30/04	0	ADLV	0	0	187,485	1,588	189,073
Coquille	Coquille R	2003	04/05/04	04/21/04	0	AD	0	0	49,202	0	49,202
Coquille	South Fk Coquille R	2003	04/16/04	04/16/04	0	AD	0	0	77,778	0	77,778
Rogue R-4	Rogue R	2002	04/28/04	04/29/04	0	AD ¹	0	0	145,294	0	145,294
Applegate R	Applegate R	2002	04/13/04	04/15/04	0	AD ¹	0	0	152,922	0	152,922
Chetco River	Chetco R	2003	03/25/04	03/26/04	0	AD	0	0	46,006	0	46,006
					0		0	0	1,335,286	23,457	1,358,743

1 = Portions of this release group have an additional fin clip.

Coastal hatchery releases of mass marked chinook, coho, and steelhead smolts, by mark type are reported in Table 17. These are the smolts released in 2004, and represent the 2002 brood year (coho and some steelhead) and 2003 brood year (chinook and most steelhead) 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, with a few exceptions, and are thus not reported in Table 17. For mass marked groups the number of fish reported in Table 17 in the "Without a CWT" "Unmarked" column represents poor quality marks or fish missed during marking. Coastal hatchery coho salmon smolts released in 2004 were about 99.3% marked. However, because of double index tagging (fish marked with a CWT but no fin clip) only 96.2% had an externally visible mark (Table 17). Coastal hatchery spring chinook salmon smolts released in 2004 were about 98.5% marked, and 96.5% had an externally visible mark, an adipose fin clip (Table 17). Coastal hatchery summer steelhead releases in 2004 were 96.6% marked, and winter steelhead releases in 2004 were 98.3% marked (Table 17).

PLANS FOR FY 2005

In FY 2005 we are planning to mark with Ad+CWT representative samples from all hatchery production groups of salmon released from Oregon coastal hatcheries (released during 2005 and 2006) to monitor recovery of hatchery salmon. Exceptions are hatchery fall chinook in the Nestucca River and coho in the Coquille River, where logistical issues currently preclude Ad+CWT marking. We are planning releases of Ad+CWT coho salmon in Coos, Nehalem, Salmon, Trask, and North Umpqua Rivers. We are planning releases of Ad+CWT fall chinook salmon in Chetco, Coos, Coquille, Necanicum, Rogue, Trask, Umpqua, and Yaquina Rivers. We are also planning releases of Ad+CWT spring chinook salmon in Nestucca, North Umpqua, Trask and Wilson Rivers. We will continue to summarize catch and escapement information as data become available. Other sources of funding will pay for Ad+CWT marking of juvenile hatchery coho and spring chinook salmon in the Rogue River, and juvenile hatchery fall chinook salmon in the Elk and Salmon Rivers.

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APPENDIX

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

Appendix Table 1. Coho salmon CWT release & recovery data, 1991-2001 broods. Column "Number Released CWT" is Ad+CWT for 1991 to 1994 brood years, and is Ad+CWT plus CWT only for 1995 to 2001 brood years. Source: 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,			Ocean Catch																				
stock, (source H, N, M),			Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.	
brood, tagcode	Hatchery	Release Site		CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5
ALSEA RIVER																							
Fall Creek (Alsea River):																							
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	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	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	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	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	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	2	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	4	3	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	5	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	18	0	0	0	0.07
H	1993 075257	Fall Creek	Fall Cr	04/17/95	27,410	299,310	37.49	0	0	0	0	2	0	0	0	0	0	0	65	0	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	3	127	0	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	44	0	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	6	0	0	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	8	0	0	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	7	1	8	0	0	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	6	0	0	0	0.02
H	1995 091733	Fall Creek	Fall Cr	03/17/97	27,481	148,000	31.72	0	0	0	0	1	0	0	0	0	0	0	61	0	0	0	0.23
H	1995 091734	Fall Creek	Fall Cr	04/15/97	27,001	250,214	36.58	0	0	0	0	6	2	0	0	0	0	0	154	0	0	0	0.60
H	1995 091735	Fall Creek	Fall Cr	05/15/97	28,157	249,391	42.39	0	0	0	0	7	0	0	0	0	0	0	249	0	0	0	0.91
H	1995 091736	Fall Creek	Fall Cr	06/02/97	28,764	300,260	46.28	0	0	0	0	3	5	0	0	0	0	0	179	0	0	0	0.65
H	1996 092015	Fall Creek	Fall Cr	04/17/98	26,798	99,809	37.18	0	0	0	0	0	0	0	4	0	0	16	94	0	0	0	0.43
H	1996 092006	Fall Creek	Fall Cr	05/16/98	27,454	78,780	43.20	0	0	0	0	0	0	0	0	1	0	0	6	43	0	0	0.18
ALSEA RIVER WILD																							
Alsea River & tribs (excluding Fall Creek):																							
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	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	1	0	0	0	0	2	8	24	0	0	0	0.08
BIG CREEK																							
Big Creek:																							
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	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	396	0	0	0	1.57

Appendix Table 1. Continued.

STOCK GROUP,				Ocean Catch																						
stock, (source H, N, M),				Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.			
brood,	tagcode	Hatchery	Release Site		CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+	
BIG CREEK (Continued)																										
Big Creek:																										
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	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	0	293	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	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	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	0	4	88	0	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	0	4	301	0	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	0	18	206	0	0	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	0	1	120	0	0	0.45
H	1996	092254	Big Creek	Big Cr	04/24/98	24,849	146,064	36.58	0	0	0	0	0	3	3	2	2	0	0	0	0	26	201	0	0	0.95
H	1996	092255	Big Creek	Big Cr	05/28/98	26,284	355,130	39.10	0	0	0	0	0	1	0	0	0	0	0	0	0	7	82	0	0	0.34
H	1997	092420	Big Creek	Big Cr	04/26/99	26,386	142,730	38.76	0	0	0	0	0	4	7	2	6	4	0	0	0	27	363	0	0	1.57
H	1997	092419	Big Creek	Big Cr	05/25/99	26,259	382,612	39.10	0	0	0	0	0	18	8	0	14	15	0	0	0	9	346	0	0	1.56
H	1998	092434	Big Creek	Big Cr	04/17/00	25,603	145,353	38.44	0	0	0	0	0	49	7	2	11	2	0	3	110	627	0	0	--	3.17
H	1998	092431	Big Creek	Big Cr	05/15/00	25,513	398,106	39.10	0	0	0	0	0	26	15	0	13	2	0	0	150	906	0	0	--	4.36
H	1999	092731	Big Creek	Big Cr	04/16/01	27,026	145,147	36.00	0	0	0	0	0	34	12	4	9	2	0	11	122	708	0	--	--	3.34
H	1999	092732	Big Creek	Big Cr	05/16/01	26,766	392,038	37.18	0	0	0	0	0	42	7	9	4	7	0	0	62	906	0	--	--	3.87
H	2000	093242	Big Creek	Big Cr	04/01/02	26,833	144,690	35.94	0	0	0	0	0	50	19	24	64	43	0	0	120	581	--	--	--	3.36
H	2000	093243	Big Creek	Big Cr	05/01/02	27,141	396,208	37.42	0	0	0	0	0	114	61	24	88	59	0	0	103	807	--	--	--	4.63
H	2001	091929	Big Creek	Big Cr	04/01/03	27,165	143,575	35.72	0	0	0	0	0	0	0	0	0	0	0	0	39	--	--	--	--	0.14
H	2001	091930	Big Creek	Big Cr	05/01/03	27,052	393,511	37.49	0	0	0	0	0	0	0	0	0	0	0	0	40	--	--	--	--	0.15
BONNEVILLE																										
Tanner Creek:																										
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	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	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	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	0	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	324	0	0	0	1.22
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	0	0	0.21
H	1996	092307	Bonneville	Tanner Cr	04/30/98	20,478	292,480	45.36	0	0	0	0	0	20	4	0	5	1	0	0	4	255	0	0	0	1.41
H	1996	092303	Bonneville	Tanner Cr	06/04/98	21,814	698,556	37.80	0	0	0	0	0	0	0	0	0	0	0	0	0	63	0	0	0	0.29
H	1997	092418	Bonneville	Tanner Cr	04/30/99	25,196	377,983	35.16	0	0	0	0	0	14	11	1	12	8	0	0	11	528	0	0	0	2.32
H	1997	092421	Bonneville	Tanner Cr	06/01/99	25,855	938,448	32.39	0	0	0	0	0	6	2	0	2	3	0	0	0	298	0	0	0	1.20

Appendix Table 1. Continued.

STOCK GROUP,			Ocean Catch																							
stock, (source H, N, M),			Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.				
brood, tagcode	Hatchery	Release Site		CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+		
BONNEVILLE (Continued)																										
Tanner Creek:																										
H	1998	092726	Bonneville	Tanner Cr	05/02/00	26,133	394,966	34.89	0	0	0	0	0	42	26	6	10	10	0	0	42	824	0	0	--	3.67
H	1998	092715	Bonneville	Tanner Cr	06/02/00	26,888	781,116	37.80	0	0	0	0	0	145	63	16	15	42	0	0	9	1595	0	0	--	7.01
H	1999	093012	Bonneville	Tanner Cr	04/30/01	24,631	416,801	35.72	0	0	0	0	0	41	19	2	12	4	5	0	19	751	0	--	--	3.46
H	1999	092733	Bonneville	Tanner Cr	05/31/01	26,292	832,854	32.40	0	0	0	0	0	41	13	2	13	6	0	0	0	516	0	--	--	2.25
H	2000	093345	Bonneville	Tanner Cr	04/01/02	26,933	398,943	34.57	0	0	0	0	0	169	93	28	100	71	0	0	45	1355	--	--	--	6.91
H	2000	093014	Bonneville	Tanner Cr	05/01/02	25,439	799,266	31.24	0	0	0	0	0	90	53	16	65	43	0	0	15	862	--	--	--	4.50
H	2001	093459	Bonneville	Tanner Cr	04/28/03	26,735	400,590	36.00	0	0	0	0	0	0	0	0	0	0	0	0	21	--	--	--	--	0.08
H	2001	091931	Bonneville	Tanner Cr	06/05/03	25,979	842,886	34.89	0	0	0	0	0	0	0	0	0	0	0	0	1	--	--	--	--	0.00
COOS RIVER																										
Coos River:																										
M	1991	076006	Butte Falls	Noble Cr	04/09/93	20,792	86,030	42.78	0	0	20	0	4	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	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	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	0	0	0.24
M	1996	092001	Noble Creek	Noble Cr	03/31/98	26,861	73,799	39.10	0	0	0	0	0	3	0	0	0	3	0	0	1	63	0	0	0	0.26
M	1997	091921	Noble Creek	Noble Cr	03/30/99	25,624	118,648	36.28	0	0	0	0	0	0	0	0	2	2	0	0	8	24	0	0	0	0.14
M	1998	092335	Noble Creek	Noble Cr	04/05/00	28,133	122,350	41.24	0	0	0	0	0	0	0	2	0	8	0	0	60	215	0	0	--	1.01
H	1999	092955	Noble Creek	Noble Cr	03/30/01	26,343	119,024	38.77	0	0	0	0	0	16	0	5	2	5	0	0	108	194	0	--	--	1.25
M	2000	093230	Noble Creek	Noble Cr	03/18/02	28,983	126,617	21.46	0	0	0	0	0	10	0	11	6	54	0	3	71	352	--	--	--	1.75
M	2001	093448	Noble Creek	Noble Cr	03/30/03	25,653	110,063	43.20	0	0	0	0	0	0	0	0	0	0	0	0	38	--	--	--	--	0.15
COQUILLE RIVER																										
Coquille River:																										
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	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	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	0	0	0.37
M	1996	091962	Bandon	Ferry Cr	04/23/98	26,065	57,731	38.44	0	0	0	0	0	0	0	0	1	3	0	0	51	179	0	0	0	0.90
M	1997	091919	Butte Falls	Ferry Cr	04/20/99	27,640	28,751	42.78	0	0	0	0	0	0	0	0	8	2	0	0	75	473	0	0	0	2.02
M	1998	092435	Bandon	Ferry Cr	04/18/00	24,844	26,207	41.61	0	0	0	0	0	4	0	0	0	9	0	0	617	423	0	0	--	4.24
M	1999	092957	Bandon	Ferry Cr	04/27/01	25,688	25,737	37.80	0	0	0	0	0	0	0	0	3	0	0	0	11	11	0	--	--	0.10
M	2000	093235	Bandon	Ferry Cr	04/24/02	29,044	29,632	40.79	0	0	0	0	0	1	2	0	14	61	0	0	81	562	--	--	--	2.48
M	2001	091940	Bandon	Ferry Cr	04/16/03	25,873	26,951	36.52	0	0	0	0	0	0	0	0	0	0	0	0	52	--	--	--	--	0.20

Appendix Table 1. Continued.

STOCK GROUP,				Ocean Catch																					
stock, (source H, N, M),				Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.		
brood, tagcode Hatchery		Release Site			CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+
EAST FORK TRASK RIVER																									
Trask River:																									
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	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	4	110	0	0	0.47	
EEL LAKE																									
Eel Lake:																									
H	1991	076005	Butte Falls	Eel Lk	03/05/93	24,316	120,978	31.06	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0.04		
H	1992	070246	Butte Falls	Eel Lk	03/04/94	26,200	122,950	34.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00		
KLASKANINE RIVER																									
Klaskanine River:																									
H	1991	074832	Klaskanine	Klaskanine R, NF	05/16/93	25,977	848,853	33.35	6	0	3	0	1	0	0	0	0	0	0	74	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	2	67	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	16	108	0	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	28	94	0	0	0.51	
METHOW RIVER																									
Tanner Creek:																									
H	1998	092721	Winthrop NFH	Methow R (WA)	05/15/00	26,470	199,763	26.68	0	0	0	0	0	29	5	2	9	5	0	0	1	106	0	0	0.59
H	1999	093011	Leavenworth NFH	Methow R (WA)	05/15/01	25,576	26,083	23.87	0	0	0	0	0	1	0	0	0	0	0	0	4	2	--	--	0.03
H	2000	093326	Winthrop NFH	Methow R (WA)	04/30/02	24,302	25,053	23.26	0	0	0	0	0	62	11	23	25	30	0	0	0	75	--	--	0.93
NEHALEM RIVER																									
North Fork Nehalem & tribs:																									
H	1991	074918	Nehalem	Nehalem R, N Fk	03/03/93	27,486	130,299	26.99	0	0	0	0	0	0	0	0	0	0	0	0	46	0	0	0.17	
H	1991	074920	Nehalem	Nehalem R, N Fk	04/13/93	26,938	565,166	31.06	0	0	6	0	0	0	0	0	0	0	0	0	170	0	0	0.65	
H	1992	070316	Nehalem	Nehalem R, N Fk	02/28/94	26,148	212,527	31.71	3	0	0	0	0	3	3	0	0	0	4	6	57	0	0	0.29	
H	1992	070317	Nehalem	Nehalem R, N Fk	04/15/94	26,169	626,987	31.94	0	0	0	0	0	4	3	0	0	0	9	1	88	0	0	0.40	
H	1994	075339	Nehalem	Nehalem R, N Fk	03/15/96	26,472	136,681	30.53	0	0	0	0	0	1	0	0	0	0	4	9	70	0	0	0.32	
H	1994	075410	Nehalem	Nehalem R, N Fk	04/15/96	25,233	499,838	31.61	0	0	0	0	0	5	0	0	0	0	6	113	0	0	0.49		
H	1995	071331	Nehalem	Nehalem R, N Fk	03/14/97	25,458	113,282	31.72	0	0	0	0	0	0	0	0	0	0	1	49	0	0	0.20		
H	1995	091732	Nehalem	Nehalem R, N Fk	04/15/97	25,715	462,874	32.87	0	0	0	0	0	0	0	0	0	0	6	2	92	0	0	0.39	
H	1997	091924	Nehalem	Nehalem R, N Fk	03/15/99	26,279	77,743	31.49	0	0	0	0	0	0	2	1	2	2	0	6	61	0	0	0.28	
H	1997	091925	Nehalem	Nehalem R, N Fk	04/15/99	26,780	83,015	35.16	0	0	0	0	0	0	1	0	0	1	0	1	61	0	0	0.24	
H	1998	092723	Nehalem	Nehalem R, N Fk	03/15/00	25,691	78,430	30.24	0	0	0	0	0	13	9	0	3	4	0	5	67	504	0	0	2.35
H	1998	092724	Nehalem	Nehalem R, N Fk	04/12/00	26,126	79,036	32.87	0	0	0	0	4	31	2	0	3	7	0	50	819	0	0	3.51	
H	2000	093238	Nehalem	Nehalem R, N Fk	03/15/02	23,521	77,399	29.26	0	0	0	0	0	19	5	11	25	4	0	3	134	--	--	0.85	
H	2000	093239	Nehalem	Nehalem R, N Fk	04/15/02	24,165	76,352	31.45	0	0	0	0	0	28	13	4	14	5	0	7	173	--	--	1.01	

Appendix Table 1. Continued.

STOCK GROUP,				Ocean Catch																		
stock, (source H, N, M),		Release Site	Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.
brood, tagcode	Hatchery			CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4	
NEHALEM RIVER (Continued)																						
North Fork Nehalem & tribs:																						
H	2001 091944	Nehalem	Nehalem R, N Fk	03/17/03	25,714	47,704	30.65	0	0	0	0	0	0	0	0	0	0	3	--	--	--	0.01
H	2001 091943	Nehalem	Nehalem R, N Fk	04/14/03	25,238	54,000	31.28	0	0	0	0	0	0	0	0	0	0	16	--	--	--	0.06
Fishhawk Lake (Nehalem River):																						
H	1993 075251	Nehalem	Nehalem R, N Fk	01/30/95	26,823	214,335	25.31	0	0	0	0	7	0	0	0	0	0	1	26	0	0	0.13
H	1993 075252	Nehalem	Nehalem R, N Fk	04/15/95	26,559	575,648	31.05	0	0	6	0	13	3	0	0	3	0	3	13	191	0	0.87
H	1996 092003	Nehalem	Nehalem R, N Fk	03/31/98	24,934	76,980	32.63	0	0	0	0	6	2	0	4	1	0	118	153	0	0	1.14
H	1996 092002	Nehalem	Nehalem R, N Fk	04/24/98	24,110	63,749	31.72	0	0	0	0	0	0	0	1	0	9	62	186	0	0	1.07
H	1999 092960	Nehalem	Nehalem R, N Fk	03/15/01	24,643	76,472	29.65	0	0	0	0	12	2	2	7	10	0	5	121	254	0	1.68
H	1999 092961	Nehalem	Nehalem R, N Fk	04/16/01	24,777	77,197	32.17	0	0	0	0	29	11	7	9	11	0	0	83	269	0	1.69
NORTH UMPQUA RIVER																						
Umpqua River:																						
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	208	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	96	0	0	0.40
H	1992 070319	Rock Creek	Rock Cr	04/11/94	27,419	75,382	40.13	0	0	4	0	4	0	0	1	0	0	5	125	0	0	0.51
H	1992 070320	Rock Creek	Rock Cr	05/16/94	26,532	73,758	44.03	0	0	6	0	2	3	0	0	0	6	0	61	0	0	0.29
H	1993 075260	Rock Creek	Rock Cr	04/09/95	25,380	69,180	45.31	0	0	4	0	2	2	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	4	0	0	1	0	4	0	34	0	0	0.17
H	1994 075411	Rock Creek	Rock Cr	04/05/96	23,623	77,743	44.88	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	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	6	0	0	0	0	0	4	9	112	0	0.53
H	1995 091812	Rock Creek	Rock Cr	04/28/97	24,930	52,452	45.35	0	0	0	0	1	0	0	0	5	0	5	105	0	0	0.47
H	1996 092004	Rock Creek	Rock Cr	04/01/98	27,017	73,804	45.36	0	0	0	0	4	3	1	16	4	0	11	20	189	0	0.92
H	1996 092005	Rock Creek	Rock Cr	05/04/98	27,375	69,761	45.82	0	0	0	0	6	0	0	0	2	0	4	69	0	0	0.30
H	1997 091926	Rock Creek	Rock Cr	04/01/99	28,062	42,896	42.78	0	0	0	0	5	3	0	27	4	0	7	46	0	0	0.33
H	1997 091918	Rock Creek	Rock Cr	04/30/99	28,440	71,242	45.35	0	0	0	0	15	12	0	34	26	3	9	96	0	0	0.69
H	1998 092725	Rock Creek	Rock Cr	04/10/00	25,578	52,353	46.28	0	0	0	0	29	14	4	8	35	0	9	0	79	0	0.70
H	1998 092661	Butte Falls	Rock Cr	04/28/00	23,718	65,350	45.82	0	0	0	0	3	18	0	2	14	0	4	37	0	0	0.33
M	1999 093208	Rock Creek	Rock Cr	03/29/01	24,929	50,219	36.58	0	0	0	0	11	0	2	5	6	0	1	6	0	--	0.12
M	2000 093236	Rock Creek	Rock Cr	04/16/02	28,954	60,658	38.12	0	0	0	0	45	17	21	82	93	0	1	88	--	--	1.20
M	2001 091941	Rock Creek	Rock Cr	04/12/03	25,859	60,242	46.43	0	0	0	0	0	0	0	0	0	0	2	--	--	--	0.01
Cow Creek (South Umpqua):																						
M	2000 093234	Rock Creek	Rock Cr	04/16/02	28,680	54,520	38.05	0	0	0	0	28	25	20	56	80	0	2	72	--	--	0.99
M	2001 091939	Rock Creek	Rock Cr	04/29/03	27,274	61,555	45.77	0	0	0	0	0	0	0	0	0	0	2	--	--	--	0.01

Appendix Table 1. Continued.

STOCK GROUP,				Ocean Catch																					
stock, (source H, N, M),				Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.		
brood,	tagcode	Hatchery	Release Site		CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+
ROGUE RIVER																									
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	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	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	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	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	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	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	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	1	4	0	1	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	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	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	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	4	83	1019	0	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	80	917	0	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	3	0	93	1014	0	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	97	872	0	0	0	3.80	
H	1993	070646	Cole Rivers	Rogue R	05/02/95	26,783	26,907	43.20	0	0	0	0	2	0	0	0	0	3	6	69	1005	0	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	107	938	1	0	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	2	7	7	408	3947	1	0	0	4.19	
M	1994	071116	Cole Rivers	Rogue R	04/30/96	96,712	96,922	39.23	0	0	0	0	3	0	0	0	0	8	27	301	3454	0	0	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	114	350	0	0	0	1.72
H	1996	092263	Cole Rivers	Rogue R	04/27/98	27,950	187,896	45.36	0	0	0	0	0	0	0	0	0	4	102	541	0	0	0	2.31	
H	1997	092541	Cole Rivers	Rogue R	04/28/99	25,859	180,994	44.46	0	0	0	0	0	0	0	0	6	0	4	108	1007	0	0	0	4.35
M	1998	092910	Cole Rivers	Rogue R	04/26/00	26,262	146,457	43.20	0	0	0	0	0	0	0	3	10	0	0	342	1695	0	0	--	7.81
M	1999	093150	Cole Rivers	Rogue R	05/01/01	26,956	182,876	44.47	0	0	0	0	2	0	0	3	0	0	0	121	1191	0	--	--	4.89
M	2000	093306	Cole Rivers	Rogue R	04/30/02	33,560	174,744	44.82	0	0	0	0	3	5	0	7	26	0	3	221	772	--	--	--	3.09
M	2001	093520	Cole Rivers	Rogue R	04/22/03	27,497	182,776	42.79	0	0	0	0	0	0	0	0	0	0	160	--	--	--	--	0.58	
SALMON RIVER																									
Salmon River:																									
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	70	0	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	5	4	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	4	87	0	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	8	52	0	0	0	0.23	
H	1995	071240	Salmon River	Salmon R	04/30/97	21,356	200,206	50.96	2	0	0	0	6	0	0	0	0	0	10	109	0	0	0	0.59	
H	1996	091960	Salmon River	Salmon R	04/28/98	24,902	118,361	48.77	0	0	0	0	6	2	0	7	0	0	18	152	0	0	0	0.74	

Appendix Table 1. Continued.

STOCK GROUP,				Ocean Catch																								
stock, (source H, N, M),		Release Site	Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.						
brood, tagcode Hatchery				CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+				
SANDY RIVER																												
Sandy River:																												
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	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	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	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	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	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	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	29	0	0	25	4	0	0	0	0	0	0	0	0	0	120	0	0	0	0.78
H	1992 075127	Sandy	Cedar Cr	06/01/94	23,046	241,271	30.85	0	0	24	0	0	25	0	0	0	0	0	0	0	0	0	0	109	0	0	0	0.69
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	0	0	12	259	0	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	0	0	0	49	0	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	0	0	9	36	0	0	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	0	0	0	3	7	38	0	0	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	0	0	4	0	13	106	0	0	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	0	0	16	131	0	0	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	0	0	4	141	0	0	0	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	0	0	4	161	0	0	0	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	0	0	1	211	0	0	0	0.75	
H	1996 092332	Sandy	Cedar Cr	04/15/98	29,251	135,391	29.65	0	0	0	0	0	14	5	0	2	0	0	0	0	14	150	0	0	0	0	0.63	
H	1996 092333	Sandy	Cedar Cr	05/14/98	29,770	120,211	31.28	0	0	0	0	0	11	3	0	0	2	0	0	0	1	70	0	0	0	0	0.29	
H	1997 092432	Sandy	Cedar Cr	04/15/99	26,383	364,796	30.44	0	0	0	0	0	47	15	0	23	9	0	0	24	481	0	0	0	0	0	2.27	
H	1997 092433	Sandy	Cedar Cr	05/14/99	27,760	232,964	31.71	0	0	0	0	0	11	20	0	2	3	0	0	9	352	0	0	0	0	0	1.43	
H	1998 092727	Sandy	Cedar Cr	04/18/00	26,254	402,526	30.24	0	0	0	0	0	80	26	5	10	19	0	0	19	728	0	0	--	--	--	3.38	
H	1998 092728	Sandy	Cedar Cr	05/15/00	26,491	332,020	30.77	0	0	0	0	0	110	35	2	25	32	0	0	11	761	0	0	--	--	--	3.68	
H	1999 093218	Sandy	Cedar Cr	04/19/01	26,426	365,588	30.65	0	33	0	0	7	59	23	6	18	24	0	0	11	382	0	--	--	--	--	2.13	
H	1999 092748	Sandy	Cedar Cr	05/16/01	70,665	70,665	31.13	0	0	0	0	0	136	41	16	31	30	0	6	8	827	0	--	--	--	--	1.55	
H	1999 093221	Sandy	Cedar Cr	05/16/01	26,462	254,724	31.50	0	0	0	0	0	37	16	0	12	18	0	4	4	209	0	--	--	--	--	1.13	
H	2000 093353	Sandy	Cedar Cr	04/18/02	27,633	518,036	30.59	0	0	0	0	0	104	49	32	49	54	0	0	21	462	--	--	--	--	--	2.79	
H	2000 093354	Sandy	Cedar Cr	05/16/02	26,889	316,698	32.33	0	0	41	0	5	97	36	33	46	49	0	0	8	358	--	--	--	--	--	2.50	
H	2001 093462	Sandy	Cedar Cr	04/17/03	27,745	471,251	30.79	0	0	0	0	0	0	0	0	0	0	0	0	53	--	--	--	--	--	--	0.19	
H	2001 093463	Sandy	Cedar Cr	05/14/03	27,936	273,689	30.69	0	0	0	0	0	0	0	0	0	0	0	0	20	--	--	--	--	--	--	0.07	
SILETZ RIVER																												
Siletz River:																												
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	0	45	0	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	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	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	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	0	0	0.11	

Appendix Table 1. Continued.

STOCK GROUP,				Ocean Catch																					
stock, (source H, N, M),		Release Site	Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.			
brood, tagcode	Hatchery			CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+	
SILETZ RIVER, SALMON RIVER RELEASE																									
Siletz River:																									
H	1996 092150	Salmon River	Salmon & Siletz	05/06/98	11,092	112,378	42.79	0	0	0	0	0	0	0	0	0	0	4	6	57	0	0	0	0.60	
H	1996 092151	Salmon River	Salmon R	05/15/98	15,955	162,282	53.36	0	0	0	0	10	0	2	2	0	0	0	16	130	0	0	0	1.00	
H	1997 091923	Salmon River	Salmon R	05/07/99	25,694	85,402	41.45	0	0	0	0	0	0	6	5	0	0	0	4	53	0	0	0	0.26	
H	1998 092722	Salmon River	Salmon R	06/02/00	9,318	9,626	51.54	0	0	0	0	0	0	3	6	0	0	0	8	156	0	0	--	1.86	
H	1999 092959	Salmon River	Salmon R	05/01/01	24,146	173,834	43.20	0	0	0	0	10	0	2	0	6	0	0	2	260	0	--	--	1.16	
H	2000 093237	Salmon River	Salmon R	05/03/02	24,880	167,800	39.37	0	0	0	0	61	17	29	62	39	0	0	46	181	--	--	--	1.75	
H	2001 091942	Salmon River	Salmon R	05/02/03	23,904	196,291	44.04	0	0	0	0	0	0	0	0	0	0	0	5	--	--	--	--	0.02	
SIUSLAW RIVER																									
Tahkenitch Lake:																									
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	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	3	0	5	0	0	2	0	0	11	7	8	0	0	0	0.15	
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	1	0	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	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	0	0.00	
SMITH RIVER																									
Umpqua River:																									
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	1	19	0	0	0	0.21	
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	7	0	38	0	0	0	0.44	
M	1995 092125	Gardiner Cr	Gardiner Cr	04/15/97	12,674	12,674	45.35	0	0	0	0	3	0	0	0	0	0	0	5	59	0	0	0	0.53	
SOUTH UMPQUA RIVER																									
Umpqua River:																									
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	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	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	2	0	0	0	0	4	0	34	0	0	0	0.18	
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	17	0	0	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	2	0	0	0	0.01	
M	1996 091963	Butte Falls	Umpqua R, S Fk	05/08/98	27,952	131,897	44.47	0	0	0	0	0	0	0	0	2	0	0	1	6	0	0	0	0.03	
M	1997 091920	Butte Falls	Umpqua R, S Fk	05/07/99	28,365	68,472	47.24	0	0	0	0	9	0	0	10	11	0	0	4	25	0	0	0	0.21	
M	1998 092436	Butte Falls	Umpqua R, S Fk	05/05/00	25,103	62,624	44.04	0	0	0	0	6	2	2	2	5	13	0	3	2	27	0	0	--	0.25

Appendix Table 1. Continued.

STOCK GROUP,				Ocean Catch																																								
stock, (source H, N, M),		Release Site	Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.																						
brood, tagcode Hatchery				CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+																				
TRASK RIVER																																												
Trask River:																																												
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.48
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	0	0	0	0	0	0	0	0	2	113	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	2	7	253	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	1	115	0	0	0	0	0	0	0	0	0	0	0	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	7	0	0	0	0	0	0	0	0	0	0	0	201	902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.53	
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	0	0	0	0	0	0	0	25	132	0	0	0	0	0	0	0	0	0	0	0	0	0	0.61		
H	1995 071318	Trask	Trask R	04/16/97	23,229	144,533	47.25	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	41	229	0	0	0	0	0	0	0	0	0	0	0	0	0	1.21		
H	1996 091961	Trask	Trask R	04/16/98	25,297	212,525	45.36	4	0	0	0	0	12	5	1	4	7	0	0	0	0	0	0	0	0	0	95	432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.21	
H	1997 091917	Trask	Trask R	04/21/99	26,220	189,230	50.39	0	0	0	0	0	19	15	4	22	13	0	0	0	0	0	0	0	0	0	122	540	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.80	
H	1998 092304	Trask	Trask R	04/13/00	26,550	196,385	47.75	0	0	0	0	4	64	36	17	13	23	0	8	738	2007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.96		
H	1999 092954	Trask	Trask R	04/12/01	25,824	194,634	50.97	0	0	0	0	0	43	13	2	11	4	0	6	110	1419	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.23	
H	2000 093233	Trask	Trask R	04/15/02	25,786	201,749	46.66	0	0	0	0	0	88	35	10	30	27	0	0	201	561	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.69	
H	2001 093451	Trask	Trask R	03/17/03	25,934	48,981	34.03	0	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.15	
H	2001 091945	Trask	Trask R	04/11/03	27,016	48,374	34.52	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.07	
TROJAN POND																																												
Sandy River:																																												
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	0	0	0	0	0	0	0	41	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	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	0	0	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	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	
H	1996 092417	Big Creek	Tualatin R	04/27/98	27,506	60,152	32.40	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	
UMATILLA RIVER																																												
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	0	0	0	0	0	0	0	2	71	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	43	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	2	54	0	0	0	0	0	0	0	0	0	0	0	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	0	0	4	47	0	0	0	0	0	0	0	0	0	0	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	3	42	0	0	0	0	0	0	3	42	0	0	0	0	0	0	0	0	0	0	0	0	0.21		
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	0	0	4	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0.30	

Appendix Table 1. Continued.

STOCK GROUP,				Ocean Catch																			
stock, (source H, N, M),		Release Site	Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.	
brood, tagcode	Hatchery			CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5
UMATILLA RIVER (Continued)																							
Tanner Creek:																							
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	1	9	0	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	1	15	0	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	1	22	0	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	6	0	0	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	18	0	0	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	18	0	0	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	4	0	0	0	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	4	0	0	0	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	1	0	0	0	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	1	1	0	0	0	0.03
H	1995 091753	Gnat Creek	Umatilla R	04/05/97	26,822	853,688	29.64	0	0	0	0	9	2	0	0	0	0	9	112	0	0	0	0.49
H	1996 092308	Oxbow	Umatilla R	03/27/98	26,759	528,360	27.83	0	0	0	0	3	0	0	0	0	0	2	33	0	0	0	0.14
H	1996 092309	Cascade	Umatilla R	04/02/98	26,791	526,082	27.00	0	0	0	0	6	0	1	1	4	0	1	48	0	0	0	0.23
H	1996 092313	Cascade	Umatilla R	04/02/98	25,967	525,304	27.00	0	0	0	0	11	0	2	5	1	0	4	79	0	0	0	0.39
H	1997 092423	Cascade	Umatilla R	03/24/99	26,537	465,314	28.70	0	0	0	0	3	2	0	8	0	0	5	46	0	0	0	0.24
H	1997 092424	Cascade	Umatilla R	04/02/99	27,136	477,588	25.20	0	0	0	0	4	2	0	0	2	0	1	77	0	0	0	0.32
H	1997 092425	Cascade	Umatilla R	04/02/99	26,753	505,650	25.62	0	0	0	0	2	7	0	0	0	0	0	41	0	0	0	0.19
H	1998 092717	Pendelton Acc	Umatilla R	03/15/00	26,422	513,288	27.00	0	0	0	0	25	2	0	0	5	0	27	125	0	0	--	0.70
H	1998 092718	Cascade	Umatilla R	03/15/00	26,068	222,462	27.00	0	0	0	0	14	0	5	2	2	0	9	81	0	0	--	0.43
H	1998 092719	Cascade	Umatilla R	04/28/00	26,370	798,210	29.84	0	0	0	0	41	7	8	8	21	0	25	324	0	0	--	1.65
H	1999 093007	Cascade	Umatilla R	03/14/01	26,599	478,739	25.92	0	0	0	0	2	3	2	0	0	0	1	18	0	--	--	0.10
H	1999 093009	Cascade	Umatilla R	03/14/01	26,058	223,025	25.92	0	0	0	0	0	0	0	0	0	0	1	54	0	--	--	0.21
H	1999 093008	Cascade	Umatilla R	04/28/01	26,474	745,497	33.11	0	0	0	0	0	3	2	0	4	0	0	58	0	--	--	0.25
H	2000 093016	Oxbow	Umatilla R	03/07/02	26,629	542,475	29.04	0	0	0	0	9	5	0	0	0	0	3	26	--	--	--	0.16
H	2000 093010	Cascade	Umatilla R	03/07/02	26,437	27,185	30.79	0	0	0	0	15	5	8	15	18	0	11	133	--	--	--	0.78
H	2000 093017	Cascade	Umatilla R	04/05/02	26,244	829,698	31.90	0	0	0	0	48	11	19	9	29	0	22	144	--	--	--	1.07
H	2001 091934	Cascade	Umatilla R	03/05/03	26,086	222,680	27.83	0	0	0	0	0	0	0	0	0	0	6	--	--	--	--	0.02
H	2001 091933	Cascade	Umatilla R	03/05/03	26,989	515,859	28.71	0	0	0	0	0	0	0	0	0	0	5	--	--	--	--	0.02
H	2001 091935	Cascade	Umatilla R	04/10/03	27,298	591,349	30.24	0	0	0	0	0	0	0	0	0	0	2	--	--	--	--	0.01
Umatilla River:																							
H	1995 071360	Oxbow	Umatilla R	04/03/97	24,807	438,153	28.34	3	0	0	0	7	0	0	0	6	0	1	53	0	0	0	0.28
WAHKEENA POND																							
Tanner Creek:																							
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	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	47	0	0	0	0.40
Sandy River:																							
H	1992 071529	Wahkeena Pond	Columbia R-2	04/30/94	23,472	1,503,732	23.14	0	0	0	0	3	0	0	0	0	0	1	2	0	0	0	0.03

Appendix Table 1. Continued.

STOCK GROUP,				Ocean Catch																					
stock, (source H, N, M),				Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.		
brood, tagcode	Hatchery	Release Site	Date		CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+
WENATCHEE RIVER																									
Tanner Creek:																									
H	1998 092720	Leavenworth NFH	Icicle Cr	05/24/00	26,367	498,716	23.87	0	0	0	0	0	29	26	3	5	12	0	0	0	142	0	0	--	0.82
YAKIMA RIVER																									
Tanner Creek:																									
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	9	4	0	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	10	3	0	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	33	6	0	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	3	0	0	0	0	0	4	0	13	0	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	16	0	0	0	0.08	
H	1993 070556	Cascade	Yakima R	04/26/95	19,133	195,420	31.48	0	0	0	0	5	0	0	0	0	0	0	0	13	0	0	0	0.09	
H	1994 071147	Cascade	Yakima R	04/30/96	26,733	193,628	29.92	0	0	0	0	1	0	0	0	0	0	0	0	21	0	0	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	34	0	0	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	9	0	0	0	0.03	
H	1996 092310	Cascade	Yakima R	05/16/98	27,046	224,253	41.23	0	0	0	0	13	5	2	0	0	0	0	0	30	0	0	0	0.18	
H	1996 092311	Cascade	Yakima R	05/16/98	26,878	224,137	41.23	0	0	0	0	3	0	0	2	0	0	0	1	30	0	0	0	0.13	
H	1996 092312	Cascade	Yakima R	05/16/98	26,821	224,082	41.23	0	0	0	0	13	5	0	3	0	0	0	0	50	0	0	0	0.26	
H	1997 092426	Cascade	Yakima R	05/17/99	26,593	204,017	26.68	0	0	0	0	11	5	0	12	5	0	0	1	64	0	0	0	0.37	
H	1997 092427	Cascade	Yakima R	05/17/99	25,864	247,724	26.68	0	0	0	0	3	11	0	14	9	0	0	0	111	0	0	0	0.57	
YAQUINA RIVER																									
Siletz River:																									
H	1993 075255	Salmon River	Yaquina R	04/15/95	25,432	306,402	42.75	0	0	0	0	7	3	0	0	0	0	7	9	250	0	0	0	1.09	
H	1994 071224	Salmon River	Yaquina R	04/18/96	19,559	263,167	43.57	0	0	0	0	2	0	0	0	0	0	3	8	132	0	0	0	0.74	
H	1994 075416	Salmon River	Yaquina R	05/20/96	21,377	276,214	44.88	0	0	0	0	3	0	0	0	0	0	0	6	31	0	0	0	0.19	
H	1995 091714	Salmon River	Yaquina R	05/05/97	20,055	216,654	51.54	0	0	0	2	9	0	0	0	0	0	3	4	83	0	0	0	0.50	
H	1995 091713	Salmon River	Yaquina R	05/05/97	20,254	193,889	53.36	0	0	0	0	0	2	0	0	0	0	0	13	92	0	0	0	0.53	

Appendix Table 2. Chinook salmon CWT release & recovery data, 1989-2001 broods. Source: N=Native; H=Hatchery; M=Mixed. 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,				Ocean Catch																						
stock, (source H, N, M),				Release	Number Released		Size	Oregon Areas										Freshwater Recoveries					%			
brood, tagcode		Hatchery	Release Site	Date	Ad+CWT	Total	(gm)	AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4	5	6+	Surv.	
FALL CHINOOK SALMON																										
ALSEA RIVER																										
Fall Creek (Alsea River):																										
H	1991	075801	Fall Creek	Fall Cr	08/10/92	21,100	101,587	31.10	3	17	0	0	0	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	0.63	
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	2	13	3	0	0.33	
H	1995	071349	Fall Creek	Fall Cr	08/15/96	29,121	100,278	41.17	107	18	0	0	0	2	0	3	0	0	0	0	29	67	0	0	0.78	
CHETCO RIVER, JACK CREEK																										
Chetco River:																										
M	1989	074824	Jack Creek	Jack Cr	07/04/90	27,487	31,255	9.07	0	0	0	0	0	0	0	17	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	78	13	29	84	12	19	12	1	0	1.12
CHETCO RIVER																										
Chetco River:																										
M	1989	075420	Elk River	Chetco R	09/14/90	25,470	37,990	31.28	0	0	0	0	0	0	3	22	0	6	14	6	11	9	0	0	0.28	
M	1989	075421	Elk River	Chetco R	10/16/90	26,037	35,750	36.28	0	0	0	0	0	0	0	16	0	2	19	1	0	7	0	0	0.17	
M	1989	075422	Elk River	Chetco R	09/17/90	26,922	400,327	34.10	0	0	0	0	3	0	0	19	3	23	0	9	5	11	0	0	0.27	
M	1990	075605	Elk River	Chetco R	09/19/91	25,143	165,654	39.78	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	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	12	0	23	11	1	2	2	2	0	0.25
H	1991	075807	Elk River	Chetco R	10/06/92	22,981	236,360	39.10	0	0	0	0	0	0	0	21	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	15	0	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	85	3	53	48	1	17	16	0	0	0.92	
M	1993	075245	Elk River	Chetco R	10/06/94	25,933	330,254	37.15	0	0	0	0	0	0	0	39	3	53	9	0	2	7	5	0	0.46	
M	1994	070123	Elk River	Chetco R	09/28/95	24,971	165,717	41.61	0	0	0	0	2	0	4	14	20	42	0	0	1	5	0	0	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	3	35	13	0	2	3	1	0	0	0.24	
M	1996	091847	Elk River	Chetco R	09/26/97	25,050	233,621	35.43	0	0	0	0	0	0	0	3	0	4	0	0	0	1	0	0	0.03	
M	1997	091858	Elk River	Chetco R	09/30/98	26,994	158,208	37.80	0	0	0	0	2	0	0	5	15	56	17	1	2	11	0	0	0.40	
M	1998	091907	Elk River	Chetco R	09/28/99	24,594	164,741	35.43	0	0	0	0	0	0	2	0	0	12	8	0	0	0	0	0	0.09	
M	1999	092355	Elk River	Chetco R	09/20/00	24,916	158,150	34.89	0	0	0	0	0	0	0	2	0	14	77	0	2	3	--	--	0.39	
M	2000	092939	Elk River	Chetco R	09/19/01	25,587	156,088	35.91	0	0	0	0	0	0	0	6	0	3	12	0	0	--	--	--	0.09	
M	2001	092945	Elk River	Chetco R	09/19/02	21,442	155,941	33.60	0	0	0	0	0	0	0	0	0	0	0	0	--	--	--	--	0.00	

Appendix Table 2. Continued.

STOCK GROUP,			Ocean Catch																							
stock, (source H, N, M),			Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.				
brood, tagcode	Hatchery	Release Site		Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+		
FALL CHINOOK SALMON (Continued)																										
COOS RIVER																										
Coos River:																										
N	1989	075224	Noble Creek	Noble Cr	05/22/90	52,328	272,125	5.78	15	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	22	0	0	0	19	21	9	5	1	0.57
M	1990	074820	Priorli Cr	Morgan Cr	09/27/91	26,732	75,638	45.44	8	12	28	0	0	4	0	0	22	0	0	0	8	5	14	7	0	0.42
M	1990	075529	Priorli Cr	Morgan Cr	06/03/91	52,274	177,232	5.15	11	15	14	0	0	2	0	0	0	0	0	0	11	2	15	17	0	0.17
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	070249	Cole Rivers	Noble Cr	10/08/93	26,724	50,835	42.78	32	3	0	0	0	0	0	4	17	0	0	0	91	80	69	22	1	1.22
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	1993	074957	Noble Creek	Noble Cr	06/19/94	55,429	516,882	6.45	33	17	0	0	0	0	0	0	2	0	0	0	19	37	37	9	0	0.28
M	1993	075244	Cole Rivers	Morgan Cr	09/22/94	26,153	92,850	50.34	52	37	0	0	0	2	0	5	9	0	0	2	10	11	11	5	2	0.56
M	1994	070352	Noble Creek	Noble Cr	06/11/95	50,812	394,655	5.34	17	12	0	0	0	2	0	0	0	0	0	0	9	10	15	6	0	0.14
M	1994	070647	Cole Rivers	Morgan Cr	09/24/95	26,045	103,534	39.78	24	9	2	0	0	4	0	0	0	0	0	0	5	2	9	4	0	0.23
M	1995	070821	Noble Creek	Noble Cr	06/19/96	53,620	399,167	8.80	11	10	0	0	0	0	0	1	0	0	0	0	20	30	68	11	2	0.29
M	1995	071334	Cole Rivers	Morgan Cr	09/29/96	23,556	94,405	44.44	27	3	0	0	0	0	0	0	0	3	0	0	7	6	19	6	0	0.31
M	1996	071141	Noble Creek	Noble Cr	06/14/97	53,725	409,066	7.43	8	2	0	0	0	1	0	0	3	0	0	0	8	19	24	1	0	0.12
M	1996	091846	Cole Rivers	Morgan Cr	09/17/97	24,059	98,963	50.39	27	0	0	0	0	0	0	0	5	0	0	0	1	19	25	3	0	0.33
M	1997	070922	Noble Creek	Noble Cr	06/27/98	54,163	425,100	9.07	50	5	0	0	0	11	0	0	0	1	0	0	56	87	75	10	0	0.54
M	1997	091855	Priorli Cr	Morgan Cr	09/27/98	24,943	103,618	45.36	37	5	0	0	0	2	0	2	3	0	0	0	14	28	37	11	0	0.56
M	1998	091906	Priorli Cr	Morgan Cr	09/30/99	25,343	91,496	46.28	52	42	3	0	0	11	0	6	7	0	0	0	34	23	62	11	--	0.99
M	1998	092026	Noble Creek	Noble Cr	07/08/99	53,453	397,075	12.96	74	43	0	0	0	7	7	5	0	2	0	0	102	120	96	26	--	0.90
M	1999	091915	Priorli Cr	Morgan Cr	09/26/00	29,293	95,480	44.47	69	37	9	0	0	30	0	10	2	4	0	0	47	73	87	--	--	1.26
M	1999	092027	Noble Creek	Noble Cr	06/19/00	53,409	506,989	9.65	136	88	14	0	0	23	0	10	12	10	0	0	215	193	325	--	--	1.92
H	2000	091938	Cole Rivers	Morgan Cr	09/30/01	28,809	89,156	45.31	0	14	0	0	0	7	0	0	6	11	0	0	59	52	--	--	--	0.52
H	2000	092356	Priorli Cr	Morgan Cr	06/09/01	26,145	153,346	8.12	4	0	26	0	0	0	0	2	7	0	0	0	48	51	--	--	--	0.53
H	2000	092357	Priorli Cr	Morgan Cr	06/09/01	23,453	150,503	8.12	11	14	0	0	0	2	0	2	0	0	0	0	50	35	--	--	--	0.49
M	2001	071117	Priorli Cr	Morgan Cr	06/10/02	30,939	895,230	10.08	0	0	0	0	0	0	0	0	0	5	0	0	39	--	--	--	--	0.14
M	2001	076139	Noble Creek	Noble Cr	06/14/02	30,053	680,510	7.82	0	0	0	0	0	0	0	0	0	0	0	0	81	--	--	--	--	0.27
M	2001	092103	Priorli Cr	Daniels Cr	09/28/02	27,437	92,364	45.82	2	0	0	0	0	0	0	0	0	0	0	0	48	--	--	--	--	0.18
COQUILLE RIVER																										
Coquille River:																										
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	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	0.43
N	1994	075336	Butte Falls	Sevenmile Cr	09/18/95	22,554	31,960	34.36	69	48	0	0	0	1	0	0	0	0	0	0	0	1	2	0	0	0.54
M	1995	070943	Bandon	Coquille R	09/26/96	21,288	48,529	31.38	12	5	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0.13
M	1996	091853	Butte Falls	Sevenmile Cr	09/12/97	27,456	54,970	33.35	19	6	3	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0.12

Appendix Table 2. Continued.

STOCK GROUP,				Ocean Catch																						
stock, (source H, N, M),				Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.			
brood, tagcode	Hatchery	Release Site			Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+	
FALL CHINOOK SALMON (Continued)																										
COQUILLE RIVER (Continued)																										
Coquille River:																										
M	1997	091902	Butte Falls	Sevenmile Cr	09/29/98	28,204	59,405	33.85	65	18	7	0	0	3	0	16	3	0	0	2	2	11	0	0	0.45	
M	1998	091914	Butte Falls	Sevenmile Cr	09/09/99	25,928	54,256	28.17	64	31	5	0	0	5	5	2	8	3	0	0	2	2	0	--	0.49	
M	1999	091916	Cole Rivers	Sevenmile Cr	10/03/00	28,132	96,200	39.10	41	35	0	0	0	4	5	7	28	5	0	0	1	1	3	--	0.46	
M	2000	092944	Butte Falls	Sevenmile Cr	09/30/01	28,674	95,255	33.55	0	0	0	0	0	0	0	6	25	11	0	4	1	7	--	--	0.19	
M	2001	092108	Sevenmile	Sevenmile Cr	09/23/02	28,639	95,466	36.73	0	0	0	0	0	0	0	0	0	0	0	0	--	--	--	--	0.00	
ELK RIVER																										
Elk River:																										
H	1989	075423	Elk River	Elk R	10/18/90	25,861	334,809	42.38	4	11	45	0	3	9	0	2	36	78	0	0	49	63	76	35	6	1.61
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	44	29	2	0.65
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	19	9	17	0	0	2	0	0	14	44	1	0	65	19	46	28	1	0.75
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	50	36	0	0	10	19	44	32	0	0.67
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	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	11	22	7	1	0.29
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	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	20	102	25	4	0.76
H	1991	074953	Elk River	Elk R	09/30/92	34,807	44,497	35.71	12	3	6	0	0	4	0	0	6	34	3	2	9	20	115	24	2	0.69
H	1991	075806	Elk River	Elk R	11/01/92	11,737	18,905	45.35	0	0	0	0	0	0	0	4	19	0	0	9	5	20	4	0	0.52	
H	1992	070422	Elk River	Elk R	11/29/93	35,509	36,954	52.73	29	3	6	0	0	4	0	1	128	95	4	0	20	50	48	31	3	1.22
H	1992	070423	Elk River	Elk R	11/29/93	36,278	36,967	53.35	58	7	3	0	0	0	0	0	129	132	3	0	48	136	94	31	1	1.82
H	1992	070424	Elk River	Elk R	11/22/93	35,468	37,902	49.84	3	4	7	3	0	2	0	0	106	56	4	0	23	63	32	26	4	0.98
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	78	58	26	5	1.51
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	076033	Elk River	Elk R	11/28/93	26,665	36,301	52.73	23	5	0	0	0	0	0	2	40	65	1	0	43	49	43	14	7	1.14
H	1993	070521	Elk River	Elk R	10/26/94	38,190	44,589	49.25	132	26	16	0	0	4	0	5	48	223	0	0	117	48	121	85	1	2.16
H	1993	070522	Elk River	Elk R	10/26/94	37,690	44,431	48.72	133	31	5	0	0	3	0	0	29	338	0	0	64	65	158	86	1	2.44
H	1993	070523	Elk River	Elk R	10/26/94	36,060	42,546	49.25	57	34	0	0	3	2	0	0	30	195	0	0	85	78	97	47	3	1.75
H	1993	070524	Elk River	Elk R	10/26/94	36,155	48,066	49.25	124	28	2	0	0	10	0	0	34	201	0	0	46	75	181	124	6	2.30
H	1993	070525	Elk River	Elk R	10/26/94	39,120	50,898	49.79	117	70	11	0	0	11	0	0	28	223	2	0	26	87	210	105	10	2.31
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	66	2	2.26
H	1994	070854	Elk River	Elk R	10/11/95	194,243	325,889	49.84	327	110	3	0	5	23	0	2	36	563	0	3	155	112	602	395	24	1.22
H	1995	070951	Elk River	Elk R	09/15/96	174,479	321,567	36.49	330	83	32	0	0	23	0	8	18	991	2	0	276	579	1315	276	10	2.26
H	1996	092148	Elk River	Elk R	09/14/97	175,967	322,931	30.64	94	19	12	0	0	5	0	1	0	175	0	0	53	112	192	76	0	0.43
H	1997	091857	Elk River	Elk R	10/13/98	25,504	44,455	52.74	71	25	7	0	0	14	2	0	32	134	0	2	60	117	297	45	0	3.19

Appendix Table 2. Continued.

STOCK GROUP,				Ocean Catch																						
stock, (source H, N, M),				Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.			
brood, tagcode	Hatchery	Release Site	Date		Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+	
FALL CHINOOK SALMON (Continued)																										
ELK RIVER (Continued)																										
Elk River:																										
H	1997	092449	Elk River	Elk R	10/13/98	163,690	283,815	52.74	593	312	98	0	2	171	15	71	218	1220	2	5	390	868	1485	197	7	3.49
H	1998	092810	Elk River	Elk R	10/27/99	193,648	350,870	54.64	465	344	100	0	0	333	34	161	408	904	10	30	508	662	779	241	--	2.59
H	1999	093052	Elk River	Elk R	10/20/00	198,583	328,032	48.46	274	235	87	0	0	156	26	52	238	593	7	29	342	300	552	--	--	1.46
H	2000	075941	Elk River	Elk R	10/22/01	198,756	330,883	33.13	11	0	7	0	0	23	0	8	38	105	0	7	250	216	--	--	--	0.33
H	2001	093526	Elk River	Elk R	09/17/02	207,703	312,650	38.21	0	0	0	0	0	0	0	0	0	0	0	0	71	--	--	--	--	0.03
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	22	0	0	0	0	1	2	1	0	0.18
M	1992	070355	Elk River	Hunter Cr	12/01/93	19,182	21,357	52.73	3	0	5	0	0	6	0	0	221	29	25	72	10	6	11	2	0	2.07
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	26	0	2	12	3	0	0.58
M	1994	070932	Elk River	Hunter Cr	10/18/95	23,918	26,944	60.47	0	0	0	0	0	2	0	1	42	26	2	0	0	5	5	4	0	0.39
M	1995	071355	Elk River	Hunter Cr	10/18/96	21,288	24,115	54.73	3	0	0	0	0	6	0	0	5	9	2	12	1	1	6	0	0	0.21
NECANICUM RIVER																										
Trask River:																										
H	1997	091862	Nehalem	Necanicum R	08/25/98	27,582	27,900	24.00	91	40	0	0	0	1	0	5	0	0	0	0	0	0	4	3	0	0.52
H	1998	091912	Nehalem	Necanicum R	08/23/99	25,640	26,995	27.32	95	32	0	0	0	2	0	2	0	0	0	0	0	3	3	1	--	0.54
H	1999	092712	Nehalem	Necanicum R	08/25/00	25,293	25,989	24.00	52	46	0	0	0	7	0	0	0	0	0	0	0	6	1	--	--	0.51
H	2000	092943	Nehalem	Necanicum R	09/05/01	22,897	25,110	24.33	4	0	0	0	0	0	0	2	0	0	0	0	0	0	--	--	--	0.03
H	2001	092107	Nehalem	Necanicum R	09/04/02	25,181	26,240	29.65	0	0	0	0	0	0	0	0	0	0	0	0	0	--	--	--	--	0.00
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
PISTOL RIVER																										
Pistol River & tribs:																										
N	1989	075243	Pistol River	Pistol R	10/02/90	23,817	29,524	37.48	0	0	31	0	0	11	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	4	0	0	77	0	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	27	24	77	7	18	12	1	0	1.81
M	1993	070760	Elk River	Pistol R	11/01/94	25,368	35,734	41.96	0	0	0	0	0	0	0	0	60	24	8	11	4	4	5	2	0	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	1	0	0.17

Appendix Table 2. Continued.

STOCK GROUP,				Ocean Catch																					
stock, (source H, N, M),				Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.		
brood, tagcode	Hatchery	Release Site			Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+
FALL CHINOOK SALMON (Continued)																									
ROGUR RIVER, COLUMBIA RIVER, BIG CREEK RELEASE																									
Rogue River:																									
H	1989	074338	Big Creek	Big Cr	06/05/90	10,067	27,703	7.31	0	0	0	0	0	0	0	0	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	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	10	0	0	0	2	1	0	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	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	7	0	0	0	0	2	8	0	0	0	0.17	
H	1989	074343	Big Creek	Big Cr	06/05/90	9,904	27,537	7.31	0	0	0	0	2	1	0	6	0	0	4	1	0	0	1	0.15	
H	1989	074344	Big Creek	Big Cr	06/05/90	9,841	27,471	7.31	0	0	0	0	2	0	0	16	0	0	4	0	2	1	0	0.25	
H	1989	074345	Big Creek	Big Cr	06/05/90	10,167	27,807	7.31	0	0	0	0	4	0	0	6	0	0	6	1	1	2	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	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	5	2	0	62	3	0	0	10	23	33	4	0	1.40
H	1989	074512	Big Creek	Big Cr	08/17/90	10,387	22,397	31.28	0	0	3	0	15	4	5	100	3	0	0	15	28	24	1	0	1.91
H	1989	074513	Big Creek	Big Cr	08/17/90	10,561	22,574	31.28	0	0	3	3	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	22	0	3	98	0	0	10	12	49	31	1	0	2.21
H	1989	074515	Big Creek	Big Cr	08/17/90	10,392	22,402	31.28	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	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	15	3	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	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	15	7	0	214	0	3	14	51	147	183	22	0	1.33
H	1991	075653	Big Creek	Big Cr	08/26/92	51,786	248,504	30.60	0	0	4	0	0	0	2	39	0	0	2	19	125	208	3	0	0.80
H	1991	075716	Big Creek	Big Cr	08/06/92	52,014	217,625	20.90	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	21	0	0	15	9	74	108	2	0	0.45
H	1992	070232	Big Creek	Big Cr	08/25/93	52,453	202,027	27.99	0	0	0	3	11	0	28	204	23	3	27	44	274	197	16	0	1.61
H	1992	075737	Big Creek	Big Cr	08/25/93	51,797	242,691	27.82	2	0	2	4	0	0	14	177	9	4	51	45	271	181	11	0	1.51
H	1993	070755	Big Creek	Big Cr	08/04/94	54,731	553,793	23.97	0	0	0	0	0	0	0	48	11	3	14	45	74	104	5	0	0.56
H	1993	070756	Big Creek	Big Cr	08/22/94	54,317	250,878	29.82	0	1	0	0	1	0	0	89	12	0	36	53	69	119	4	0	0.71
H	1994	070540	Big Creek	Big Cr	08/11/95	26,051	166,503	22.12	0	0	0	0	3	0	0	20	16	0	0	5	21	27	1	0	0.37
H	1994	070541	Big Creek	Big Cr	08/11/95	26,215	166,707	22.23	0	4	0	0	0	0	0	18	6	0	0	5	19	27	9	0	0.34
H	1994	070542	Big Creek	Big Cr	08/29/95	26,881	175,032	29.45	0	0	0	0	0	0	0	22	2	0	0	0	20	44	2	0	0.35
H	1994	070543	Big Creek	Big Cr	08/30/95	26,178	500,356	29.07	0	0	0	0	0	0	3	23	9	0	0	6	12	18	4	0	0.29
H	1995	071352	Big Creek	Big Cr	08/26/96	26,791	521,952	31.49	0	0	0	0	0	2	0	7	8	0	0	1	9	20	0	0	0.18
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	1	0	0	2	4	0	0	1	19	23	1	0	0.20
H	1996	092143	Klaskanine	Klaskanine R, NF	10/31/97	9,593	195,247	32.86	0	0	0	0	1	0	0	0	0	0	0	0	1	18	2	0	0.23
H	1996	092144	Klaskanine	Klaskanine R, NF	10/31/97	27,222	408,713	32.86	0	0	1	0	0	0	0	2	8	0	3	0	31	69	6	0	0.46

Appendix Table 2. Continued.

STOCK GROUP,			Ocean Catch																							
stock, (source H, N, M),			Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.				
brood, tagcode	Hatchery	Release Site		Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+		
FALL CHINOOK SALMON (Continued)																										
ROGUR RIVER, COLUMBIA RIVER, KLASKANINE RIVER RELEASE (Continued)																										
Rogue River:																										
H	1997	092517	Klaskanine	Klaskanine R, NF	09/30/98	26,701	216,635	25.77	0	0	11	0	0	14	0	13	31	2	0	0	5	66	144	1	0	1.09
H	1997	092518	Klaskanine	Klaskanine R, NF	11/04/98	26,571	445,342	28.17	0	0	0	0	0	0	0	4	0	0	0	0	3	16	1	0	0.09	
H	1998	092759	Klaskanine	Klaskanine R, NF	11/03/99	25,124	494,968	32.63	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	--	0.00	
H	1998	092760	Klaskanine	Klaskanine R, NF	09/28/99	25,977	208,232	27.49	0	0	2	0	0	22	7	42	71	29	0	11	6	109	297	2	--	2.37
H	1999	093048	Klaskanine	Klaskanine R, NF	08/24/00	27,239	202,783	23.50	0	0	14	0	0	38	8	41	98	90	3	41	62	265	308	--	--	3.57
H	1999	093049	Klaskanine	Klaskanine R, NF	09/26/00	26,762	205,709	28.89	0	0	2	0	0	57	12	54	58	70	0	48	17	143	317	--	--	2.93
H	2000	093312	Klaskanine	Klaskanine R, NF	08/23/01	26,898	198,308	23.43	0	0	2	0	0	6	0	15	22	4	2	8	37	112	--	--	--	0.79
H	2000	093313	Klaskanine	Klaskanine R, NF	09/20/01	27,000	471,605	26.76	0	0	2	0	0	2	3	7	36	4	5	12	12	188	--	--	--	1.01
H	2001	093532	Klaskanine	Klaskanine R, NF	08/22/02	21,587	416,675	19.64	0	0	0	0	0	0	0	0	0	0	0	1	--	--	--	--	0.00	
H	2001	093533	Klaskanine	Klaskanine R, NF	08/02/02	26,560	203,853	12.33	0	0	0	0	0	0	0	0	0	0	0	0	--	--	--	--	0.00	
ROGUE RIVER																										
Lower Rogue:																										
N	1989	074827	Indian Cr Pd	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 Pd	Indian Cr	08/22/90	26,908	42,996	26.68	0	0	0	0	0	0	0	13	0	0	17	3	6	3	1	0	0.16	
N	1991	075129	Indian Cr Pd	Rogue R	08/24/92	25,476	30,240	30.20	0	0	0	0	0	0	0	17	0	1	180	5	58	21	0	0	1.11	
M	1992	076120	Indian Cr Pd	Rogue R	09/23/93	13,638	14,236	38.11	0	0	0	0	0	0	0	29	6	5	91	20	34	11	0	0	1.53	
H	1993	070761	Indian Cr Pd	Rogue R	09/01/94	27,081	28,855	27.13	0	0	0	0	0	0	0	30	13	3	41	20	10	16	2	0	0.50	
M	1994	075417	Indian Cr Pd	Rogue R	08/31/95	22,910	53,817	28.70	0	0	0	0	0	0	0	8	0	3	9	8	29	17	0	0	0.32	
M	1995	075335	Indian Cr Pd	Rogue R	09/10/96	24,037	39,546	34.00	0	0	0	0	0	0	0	10	0	10	5	55	20	0	0	0	0.43	
M	1996	092152	Indian Cr Pd	Rogue R	08/26/97	9,898	22,707	34.36	0	0	0	0	0	0	0	5	0	3	0	5	1	0	0	0	0.14	
M	1996	092153	Indian Cr Pd	Rogue R	08/08/97	11,176	22,799	28.34	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0.09	
M	1996	092154	Indian Cr Pd	Rogue R	07/16/97	10,559	25,638	22.68	0	0	0	0	0	0	0	0	0	3	15	0	18	8	1	0	0.43	
M	1997	091861	Indian Cr Pd	Rogue R	07/16/98	22,569	23,137	22.68	0	0	0	0	0	0	0	4	42	9	95	110	117	6	0	0	1.70	
M	1997	092636	Indian Cr Pd	Rogue R	07/31/98	24,000	24,672	25.77	0	0	0	0	0	0	0	16	54	8	39	110	132	32	0	0	1.65	
M	1997	092637	Indian Cr Pd	Rogue R	09/11/98	24,531	26,358	37.80	0	0	0	0	0	6	0	10	22	3	38	91	71	36	2	0	1.15	
M	1998	091910	Indian Cr Pd	Rogue R	07/15/99	16,483	19,476	22.68	0	0	0	0	0	0	0	5	42	0	50	44	21	11	0	--	1.05	
M	1998	092543	Indian Cr Pd	Rogue R	08/12/99	20,429	21,348	28.34	0	0	0	0	0	0	5	2	8	6	28	10	32	27	0	--	0.58	
M	1998	092818	Indian Cr Pd	Rogue R	09/16/99	26,036	27,241	39.44	3	0	0	0	0	0	0	10	23	3	21	14	22	14	0	--	0.42	
M	1999	092710	Indian Cr Pd	Rogue R	07/20/00	25,876	27,884	17.51	0	0	0	0	0	0	4	52	92	14	319	57	87	18	--	--	2.50	
M	1999	093054	Indian Cr Pd	Rogue R	08/08/00	22,512	24,259	28.35	0	0	0	0	0	0	3	11	50	10	167	7	48	17	--	--	1.39	
M	1999	093055	Indian Cr Pd	Rogue R	09/15/00	26,799	28,662	34.89	0	0	0	0	0	0	0	26	16	1	214	19	33	5	--	--	1.17	
M	2000	090117	Indian Cr Pd	Rogue R	07/26/01	22,940	24,636	18.14	0	0	6	0	0	0	0	17	16	9	175	75	21	--	--	--	1.39	
M	2000	090118	Indian Cr Pd	Rogue R	09/05/01	19,102	19,753	25.20	0	0	0	0	0	0	0	3	10	3	45	26	10	--	--	--	0.53	
M	2000	092941	Indian Cr Pd	Rogue R	07/16/01	25,710	27,861	12.96	0	0	0	0	0	0	0	2	7	7	195	13	8	--	--	--	0.90	
M	2001	092105	Indian Cr Pd	Rogue R	07/28/02	24,407	26,011	24.52	0	0	0	0	0	0	0	0	0	0	0	23	--	--	--	--	0.09	

Appendix Table 2. Continued.

STOCK GROUP,				Ocean Catch																						
stock, (source H, N, M),		Release Site	Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.				
brood, tagcode	Hatchery			Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+		
FALL CHINOOK SALMON (Continued)																										
SALMON RIVER																										
Salmon River:																										
H	1989 075458	Salmon River	Salmon R	08/14/90	39,099	41,531	28.70	41	97	47	0	0	3	0	12	0	0	0	0	0	7	42	77	114	4	1.14
H	1989 075459	Salmon River	Salmon R	08/15/90	38,685	41,956	28.70	46	81	63	0	0	0	0	2	0	0	0	0	0	22	41	68	121	8	1.17
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	0	53	72	80	159	9	1.49
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	0	59	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	3	6	0	0	0	0	14	91	53	154	24	1.45
H	1990 075705	Salmon River	Salmon R	08/15/91	40,225	42,776	31.06	114	175	59	0	0	6	0	22	0	0	0	0	0	161	113	274	312	8	3.09
H	1990 075706	Salmon River	Salmon R	08/15/91	41,394	44,019	31.06	88	159	49	0	0	2	0	12	3	0	1	0	0	120	167	417	323	33	3.33
H	1990 075707	Salmon River	Salmon R	08/15/91	37,516	39,896	31.06	104	141	81	0	0	0	0	12	2	0	0	0	0	75	114	368	292	7	3.20
H	1990 075708	Salmon River	Salmon R	08/15/91	39,382	41,880	31.06	117	139	77	0	0	0	0	15	1	0	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	58	61	0	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	0	10	37	18	0	0.24
H	1991 071560	Salmon River	Salmon R	08/05/92	37,763	39,080	32.40	21	4	6	0	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	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	0	25	7	47	25	0	0.42
H	1991 071563	Salmon River	Salmon R	08/05/92	33,341	34,686	32.40	55	10	0	0	0	0	0	0	0	0	0	0	0	3	22	10	26	0	0.38
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	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	70	13	0	0	0	0	0	14	0	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	0	29	189	141	71	18	1.63
H	1992 070420	Salmon River	Salmon R	08/17/93	28,386	40,658	30.03	41	8	0	0	0	0	0	4	0	0	0	0	0	52	164	116	99	0	1.76
H	1992 070421	Salmon River	Salmon R	08/17/93	40,339	42,829	30.03	80	12	0	0	0	0	0	5	0	0	0	0	0	35	152	137	113	0	1.37
H	1993 070459	Salmon River	Salmon R	08/15/94	32,486	40,990	32.38	238	22	3	0	0	0	0	22	0	0	0	0	0	107	142	453	178	0	3.59
H	1993 070460	Salmon River	Salmon R	08/15/94	36,872	40,992	32.38	263	83	2	0	0	5	0	32	5	0	0	0	0	226	211	467	314	0	4.37
H	1993 070461	Salmon River	Salmon R	08/10/94	37,513	41,109	32.38	184	46	0	0	0	7	0	26	0	0	0	0	0	77	111	247	186	8	2.38
H	1993 070462	Salmon River	Salmon R	08/10/94	38,497	42,187	32.38	211	72	0	0	0	0	0	8	0	0	0	0	0	111	132	292	169	13	2.62
H	1993 070463	Salmon River	Salmon R	08/15/94	38,686	41,296	32.38	233	50	3	0	0	0	0	23	0	0	3	0	0	162	136	405	197	0	3.17
H	1994 070962	Salmon River	Salmon R	08/15/95	172,256	205,215	30.23	378	231	0	0	0	0	0	30	0	0	0	0	0	48	155	659	621	9	1.24
H	1995 071252	Salmon River	Salmon R	08/16/96	171,301	186,780	32.29	197	43	3	0	0	2	0	24	0	0	0	0	0	48	210	400	197	6	0.66
H	1996 092149	Salmon River	Salmon R	08/15/97	194,096	203,986	31.49	238	75	0	0	0	7	2	19	2	0	0	0	0	145	368	584	172	0	0.83
H	1997 092447	Salmon River	Salmon R	08/17/98	179,888	205,489	34.89	694	248	18	0	0	11	0	96	13	4	0	0	0	279	847	1818	491	11	2.53
H	1998 092817	Salmon River	Salmon R	08/20/99	190,423	198,979	33.84	680	271	0	0	0	13	0	79	14	3	0	0	0	144	606	1216	395	--	1.80
H	1999 093053	Salmon River	Salmon R	08/27/00	196,302	199,089	40.00	620	496	19	0	0	8	1	188	10	0	0	0	0	186	1435	1232	--	--	2.15
H	2000 093315	Salmon River	Salmon R	08/25/01	205,725	207,468	32.35	32	77	0	0	0	6	3	63	3	0	0	0	0	6	199	443	--	--	0.42
H	2001 093534	Salmon River	Salmon R	08/16/02	207,374	208,878	33.11	0	0	0	0	0	0	0	0	0	0	0	0	0	12	--	--	--	--	0.01

Appendix Table 2. Continued.

STOCK GROUP,				Ocean Catch																						
stock, (source H, N, M),				Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.			
brood, tagcode	Hatchery	Release Site			Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+	
FALL CHINOOK SALMON (Continued)																										
TRASK RIVER																										
Trask River:																										
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	1	0	5	0	0.11		
H	1989	074519	Trask	Trask R	08/13/90	8,883	29,328	16.92	3	14	13	0	0	0	2	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	4	2	4	0	0.37		
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	0.17		
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	1	0	0	0.13		
H	1990	075744	Trask	Trask R	08/16/91	22,288	56,529	18.44	39	12	9	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	27	29	12	0	0	0	9	0	0	0	0	1	8	10	6	0.45		
H	1991	074048	Trask	Trask R	09/16/92	9,489	44,635	27.70	10	10	0	0	0	0	10	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	3	0	0	0	0	0	10	13	0	0.35		
H	1991	074917	Trask	Trask R	08/03/92	9,878	30,096	13.70	3	1	3	0	0	0	2	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	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0	0.10		
H	1992	070241	Trask	Trask R	09/20/93	25,593	95,360	31.06	64	4	0	0	0	0	27	0	0	0	0	23	107	13	2	0.94		
H	1992	070242	Trask	Trask R	08/17/93	26,168	62,601	17.05	46	0	0	0	0	0	16	0	0	0	0	1	21	56	4	1	0.55	
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	13	11	5	1	0.32		
H	1994	075418	Trask	Trask R	08/20/95	24,881	58,217	27.16	62	22	0	0	0	0	12	0	0	0	0	3	36	20	1	0.64		
H	1995	070960	Trask	Trask R	08/16/96	24,372	82,655	28.95	24	19	6	0	0	0	2	0	0	0	0	12	35	12	1	0.46		
H	1996	091850	Trask	Trask R	08/19/97	25,695	66,986	26.99	32	2	0	0	0	0	2	0	0	0	1	9	12	6	0	0.28		
H	1997	091863	Trask	Trask R	08/16/98	26,289	53,296	25.77	116	18	3	0	0	3	0	26	0	0	0	6	59	52	16	0	1.14	
H	1998	091911	Trask	Trask R	08/15/99	26,232	66,190	25.62	72	20	0	0	0	0	5	0	0	0	3	1	18	30	14	--	0.62	
H	1999	092711	Trask	Trask R	08/14/00	25,775	61,814	25.34	60	65	0	0	0	0	21	0	0	0	0	5	32	100	--	--	1.10	
H	2000	092942	Trask	Trask R	08/11/01	24,121	65,822	24.06	8	7	0	0	0	2	0	0	0	0	0	5	47	--	--	--	0.29	
H	2001	092106	Trask	Trask R	08/11/02	25,154	113,203	24.39	0	0	0	0	0	0	0	0	0	0	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	1	0	0	0.42	
M	1993	070333	Rock Creek	Umpqua R	10/06/94	25,593	75,662	47.69	34	30	6	0	0	2	0	2	17	5	0	0	1	0	1	0	0.39	
M	1994	075117	Rock Creek	Umpqua R	10/04/95	24,598	51,920	46.28	33	16	0	0	0	0	0	9	9	0	0	0	10	3	0	0	0.34	
M	1995	070534	Gardiner Cr	Gardiner Cr	05/21/96	31,239	31,549	5.67	45	14	0	0	0	3	0	0	0	2	0	4	5	7	0	0	0.26	
M	1995	070752	Rock Creek	Umpqua R	10/04/96	80,680	84,739	52.19	132	44	5	0	0	9	2	6	11	14	2	0	3	20	10	5	2	0.34
M	1995	071118	Gardiner Cr	Winchester Bay	06/29/96	48,758	49,240	22.23	166	113	9	0	0	14	0	0	10	11	0	0	3	23	13	49	0	0.86
M	1996	074859	Gardiner Cr	Gardiner Cr	06/25/97	13,901	14,127	7.69	16	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.16
M	1996	092123	Gardiner Cr	Winchester Bay	06/28/97	71,372	72,978	7.69	18	0	4	0	0	2	2	0	3	7	0	0	1	0	33	19	0	0.13

Appendix Table 2. Continued.

STOCK GROUP,			Ocean Catch																							
stock, (source H, N, M),			Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.				
brood, tagcode	Hatchery	Release Site		Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+		
FALL CHINOOK SALMON (Continued)																										
UMPQUA RIVER, LOWER (Continued)																										
Smith River:																										
N	1997	070941	Gardiner Cr	Winchester Bay	07/04/98	24,617	75,381	7.56	85	22	4	0	0	1	0	0	0	0	0	0	5	21	1	0	0.56	
N	1998	091908	Gardiner Cr	Winchester Bay	07/03/99	38,632	38,632	11.63	230	151	0	0	0	24	0	10	10	0	0	0	1	37	6	1	--	1.26
N	1999	093050	Gardiner Cr	Winchester Bay	07/22/00	63,527	85,207	26.68	346	195	21	0	0	66	12	44	52	27	0	5	39	34	37	--	1.40	
N	2000	092025	Gardiner Cr	Umpqua R	06/06/01	40,252	41,200	12.49	11	47	32	0	0	0	0	0	15	0	0	0	2	7	--	--	--	0.28
N	2000	093314	Gardiner Cr	Umpqua R	06/29/01	131,209	134,000	18.84	90	66	43	0	1	66	22	28	121	56	0	3	9	45	--	--	--	0.42
M	2001	092109	Winchester NP	Umpqua R	06/19/02	76,460	124,748	14.17	0	0	0	0	0	0	0	0	2	11	0	0	6	--	--	--	0.02	
M	2001	093514	Gardiner Cr	Smith R	06/05/02	22,284	24,625	6.05	0	0	0	0	0	0	0	0	0	0	0	0	2	--	--	--	0.01	
UMPQUA RIVER, SOUTH FORK																										
Cow Creek (South Umpqua):																										
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	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	0.00	
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	0.00	
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	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	1	0	0.01
M	1999	093051	Canyonville	Canyon Cr	05/30/00	30,162	74,596	6.89	4	0	2	0	0	2	0	0	3	0	0	0	0	0	0	--	--	0.04
WINCHUCK RIVER																										
Winchuck River & tribs:																										
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	0	40	0	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	16	9	1	1	8	0	0	0.86
YAQUINA RIVER																										
Yaquina River:																										
N	1996	092147	Yaquina Bay	Yaquina R	08/28/97	24,388	123,743	40.49	50	4	3	0	0	0	0	1	0	0	0	0	8	10	3	0	0.34	
N	1997	091856	Yaquina Bay	Yaquina R	08/14/98	26,099	103,831	28.00	177	46	3	0	0	2	0	21	0	0	0	0	47	115	5	0	1.65	
N	1998	091909	Salmon River	Yaquina R	08/17/99	26,032	93,980	22.68	73	79	2	0	0	0	0	0	0	0	0	1	10	3	1	--	0.65	
N	1999	092709	Salmon River	Yaquina R	09/14/00	25,331	26,480	30.24	47	15	0	0	0	0	0	7	3	0	0	0	8	5	--	--	0.34	
N	2000	092940	Salmon River	Yaquina R	09/27/01	24,216	143,972	28.64	4	0	0	0	0	0	0	3	0	0	0	0	1	20	--	--	0.12	
M	2001	092104	Yaquina Bay	Yaquina R	09/24/02	23,945	153,809	32.40	0	0	0	0	0	0	0	0	0	0	0	0	--	--	--	--	0.00	

Appendix Table 2. Continued.

STOCK GROUP,			Ocean Catch																				
stock, (source H, N, M),			Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.	
brood, tagcode	Hatchery	Release Site		Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5
SPRING CHINOOK SALMON																							
COQUILLE RIVER																							
Coquille River:																							
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	0	0	0	0	0	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	0	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	0	0	0	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	6	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0.40
H	1995	071138	Trask R Pond	Wilson & Trask R	08/19/96	26,215	199,685	37.71	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0.16
H	1996	091814	Trask R Pond	Wilson & Trask R	08/20/97	26,002	194,552	38.76	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0.10
H	1997	091816	Trask R Pond	Wilson & Trask R	07/30/98	25,934	206,468	32.40	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0.08
H	1998	091904	Trask R Pond	Trask R	08/10/99	25,595	150,875	50.39	35	13	22	0	0	16	3	16	2	2	0	0	0	0	0.54
H	1999	092951	Trask R Pond	Trask R	08/09/00	26,716	144,799	44.91	26	1	7	0	0	28	0	24	14	9	0	0	0	0	0.57
NORTH UMPQUA RIVER																							
Umpqua River:																							
H	1989	075234	Rock Creek	Rock Cr	09/14/90	26,238	156,465	56.00	0	0	4	0	0	0	0	0	0	0	0	0	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	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	0	0	5	0	1	0.21
M	1990	074916	Rock Creek	Rock Cr	02/27/92	22,579	165,633	78.20	2	2	15	0	0	2	0	0	47	10	0	2	0	1	0.45
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	0.07
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	0.00
H	1992	076029	Rock Creek	Rock Cr	03/13/94	24,170	147,185	76.87	0	0	0	0	0	2	0	2	200	15	2	8	0	3	1.03
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	0.06
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	0.16
H	1993	070358	Rock Creek	Rock Cr	02/17/95	24,029	235,551	76.75	0	0	2	0	0	0	0	0	77	17	0	10	0	0	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	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	47	22	0	10	0	0	0.38
H	1995	071332	Rock Creek	Rock Cr	10/02/96	25,849	73,826	56.81	6	0	0	0	0	2	0	1	0	0	0	0	0	0	0.04
H	1995	071333	Rock Creek	Rock Cr	11/19/96	25,360	234,644	32.06	7	3	3	0	0	0	0	0	3	7	0	6	0	0	0.13
H	1996	091848	Rock Creek	Rock Cr	02/06/98	23,538	147,308	75.60	0	0	0	0	0	8	0	0	6	39	2	8	0	13	0.51
H	1996	091849	Rock Creek	Rock Cr	09/28/97	23,652	100,352	56.69	0	0	0	0	0	14	0	0	3	10	0	1	0	1	0.17
H	1997	091859	Rock Creek	Rock Cr	10/02/98	24,965	151,050	57.42	0	0	6	0	0	4	0	4	18	38	0	4	0	3	0.37
H	1997	091860	Rock Creek	Rock Cr	02/12/99	26,526	27,710	68.71	0	0	6	0	0	10	0	16	87	69	4	3	0	3	0.87
H	1998	091927	Rock Creek	Rock Cr	10/03/99	27,340	148,656	56.69	0	0	0	0	0	18	0	20	58	14	2	9	0	0	0.50
H	1998	091928	Rock Creek	Rock Cr	02/09/00	26,872	251,282	67.70	3	0	35	0	0	32	11	21	194	106	6	33	2	0	1.73

Appendix Table 2. Continued.

STOCK GROUP,			Ocean Catch																			%				
stock, (source H, N, M),			Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries									
brood, tagcode	Hatchery	Release Site		Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+	Surv.	
SPRING CHINOOK SALMON (Continued)																										
NORTH UMPQUA RIVER (Continued)																										
Umpqua River:																										
H	1999	091936	Rock Creek	Rock Cr	02/15/01	26,645	277,495	61.29	2	0	6	0	0	16	16	29	120	126	7	74	1	0	5	--	--	1.51
H	1999	091937	Rock Creek	Rock Cr	10/02/00	25,972	146,958	52.74	0	0	8	0	0	15	0	6	24	43	0	4	0	2	0	--	--	0.40
M	2000	093231	Rock Creek	Rock Cr	10/22/01	25,442	144,882	55.11	0	0	8	0	0	6	6	5	48	18	3	59	0	0	--	--	--	0.62
M	2000	093232	Rock Creek	Rock Cr	02/04/02	26,165	267,495	70.65	0	0	2	0	0	6	0	0	33	20	6	13	0	0	--	--	--	0.33
M	2001	093446	Rock Creek	Rock Cr	02/22/03	22,348	265,079	70.98	0	0	0	0	0	0	0	0	0	0	0	0	1	--	--	--	--	0.00
M	2001	093447	Rock Creek	Rock Cr	10/29/02	25,463	135,283	50.40	0	0	0	0	0	0	0	0	0	0	0	0	0	--	--	--	--	0.00
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	0	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	0.26
H	1994	075453	Cedar Creek	Nestucca R	07/24/95	25,997	126,327	36.57	5	0	0	0	0	3	0	4	0	0	0	0	0	3	23	7	1	0.18
H	1995	071143	Cedar Creek	Nestucca R	07/23/96	25,702	112,312	33.00	19	0	0	0	0	6	0	2	4	0	0	0	0	4	25	4	0	0.25
H	1996	091815	Cedar Creek	Nestucca R	07/21/97	25,658	120,651	35.99	23	2	4	0	0	10	0	1	4	0	0	0	3	14	18	6	0	0.33
H	1997	091852	Cedar Creek	Nestucca R	07/20/98	26,283	122,222	35.72	5	2	16	0	0	2	2	0	3	0	0	0	7	2	14	0	0	0.20
H	1998	091905	Cedar Creek	Nestucca R	07/19/99	25,844	119,800	32.86	14	38	9	0	0	12	2	3	21	9	0	0	2	11	1	0	--	0.47
H	1999	092953	Cedar Creek	Nestucca R	07/17/00	26,319	113,401	31.72	16	9	93	0	0	40	0	4	20	1	0	0	13	3	22	--	--	0.84
H	2000	093229	Cedar Creek	Nestucca R	07/23/01	26,127	119,664	34.84	3	0	10	0	0	4	0	6	7	0	0	0	1	0	--	--	--	0.12
H	2001	093445	Cedar Creek	Nestucca R	07/15/02	27,036	103,969	32.17	0	0	0	0	0	0	0	0	0	0	0	0	0	--	--	--	--	0.00
ROGUE RIVER																										
Rogue River:																										
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	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	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	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	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	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	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	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	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	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	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	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	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

Appendix Table 2. Continued.

STOCK GROUP,			Ocean Catch																									
stock, (source H, N, M),			Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.						
brood, tagcode	Hatchery	Release Site		Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+				
SPRING CHINOOK SALMON (Continued)																												
ROGUE RIVER (Continued)																												
Rogue River:																												
H	1990	075320	Cole Rivers	Rogue R	09/10/91	9,793	43,167	56.69	0	0	0	0	0	0	0	0	0	0	39	0	0	6	0	11	19	10	1	0.88
H	1991	075906	Cole Rivers	Rogue R	08/18/92	10,448	10,536	31.71	0	0	0	0	0	0	0	0	0	0	0	0	69	12	10	309	25	0	4.14	
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	0	88	16	4	296	11	0	3.96	
H	1991	075908	Cole Rivers	Rogue R	08/18/92	10,527	10,576	32.39	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	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	3	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	14	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	14	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	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	37	2	0	186	15	0	2.46				
H	1992	076342	Cole Rivers	Rogue R	08/18/93	10,160	56,770	29.45	0	0	0	0	0	0	14	0	0	34	5	62	110	10	0	2.31				
H	1992	076343	Cole Rivers	Rogue R	08/18/93	10,316	55,862	28.70	0	0	0	0	0	0	5	56	0	0	25	3	61	122	17	0	2.84			
H	1992	076344	Cole Rivers	Rogue R	08/18/93	10,000	56,561	28.52	0	0	0	0	0	0	15	0	3	11	3	50	112	15	0	2.09				
H	1992	076345	Cole Rivers	Rogue R	10/20/93	9,830	10,454	65.73	0	0	0	0	0	0	14	3	0	30	1	18	108	29	0	2.07				
H	1992	076346	Cole Rivers	Rogue R	09/21/93	10,288	90,089	47.74	0	0	0	0	0	0	0	27	0	0	15	2	32	109	28	0	2.16			
H	1992	076347	Cole Rivers	Rogue R	09/20/93	10,170	90,150	48.77	0	0	0	0	0	0	0	32	0	2	11	1	25	107	31	1	2.10			
H	1992	076348	Cole Rivers	Rogue R	09/22/93	9,841	90,077	49.30	0	0	0	0	0	0	0	20	0	0	41	0	23	108	22	0	2.17			
H	1992	076349	Cole Rivers	Rogue R	10/20/93	9,235	10,554	56.69	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	33	1	0	19	2	20	128	31	0	2.68			
H	1993	070628	Cole Rivers	Rogue R	08/17/94	10,310	10,358	37.45	0	0	0	0	0	0	0	9	0	0	17	3	13	151	24	0	2.10			
H	1993	070629	Cole Rivers	Rogue R	08/16/94	10,425	10,479	39.75	0	0	0	0	0	0	0	15	3	0	46	2	21	169	33	0	2.77			
H	1993	070630	Cole Rivers	Rogue R	08/15/94	10,356	10,407	35.41	0	0	0	0	0	0	0	12	0	0	57	3	27	187	30	1	3.06			
H	1993	070634	Cole Rivers	Rogue R	10/12/94	10,247	10,343	78.07	0	0	0	0	0	0	0	17	0	5	12	3	4	143	54	0	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	14	3	0	16	1	5	100	39	1	1.72			
H	1993	070636	Cole Rivers	Rogue R	10/12/94	10,269	10,408	73.04	0	0	0	0	0	0	0	8	3	6	17	0	7	125	43	1	2.04			
H	1993	070637	Cole Rivers	Rogue R	09/21/94	10,131	10,421	55.25	0	0	0	0	0	0	0	11	3	0	16	3	5	97	30	1	1.64			
H	1993	070638	Cole Rivers	Rogue R	09/20/94	10,156	10,407	55.25	0	0	0	0	0	0	0	3	2	0	13	0	9	99	32	1	1.57			
H	1993	070639	Cole Rivers	Rogue R	09/19/94	10,320	10,418	58.08	0	0	0	0	0	0	0	10	0	0	6	1	4	105	33	0	1.54			
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	1	1	19	3	1	0.26				
H	1994	075955	Cole Rivers	Rogue R	09/13/95	10,127	143,657	51.29	0	0	0	0	0	0	0	9	0	0	4	0	1	10	3	0	0.30			
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	3	0	7	24	3	0	0.36			
H	1994	075958	Cole Rivers	Rogue R	10/19/95	10,054	56,241	69.47	0	0	0	0	0	0	0	6	0	0	0	0	5	21	8	0	0.40			
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	3	0	0.44		
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	3	2	5	9	3	0	0.22			
H	1994	075962	Cole Rivers	Rogue R	08/21/95	10,157	56,351	36.79	0	0	0	0	0	0	0	5	0	4	0	7	14	4	0	0	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	1	0	0	4	0	2	12	6	0	0.27			
H	1994	076001	Cole Rivers	Rogue R	10/18/95	10,087	56,261	71.47	0	0	0	0	0	0	0	6	0	0	7	0	5	27	6	0	0.51			

Appendix Table 2. Continued.

STOCK GROUP,			Ocean Catch																											
stock, (source H, N, M),			Release Date	Number Released		Size (gm)	Oregon Areas										Freshwater Recoveries					% Surv.								
brood, tagcode	Hatchery	Release Site		Ad+CWT	Total		AK	NCBC	WCVI	GST	PS	WA	1&2	3	4	5	6&7	CA	2	3	4		5	6+						
SPRING CHINOOK SALMON (Continued)																														
ROGUE RIVER (Continued)																														
Rogue River:																														
H	1995 071052	Cole Rivers	Rogue R	08/14/96	9,652	56,915	34.52	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	1	2	9	60	11	0	0.92	
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	0	0	0	0	8	0	4	52	15	0	0.78	
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	0	0	0	3	1	9	65	14	0	0.89		
H	1995 071055	Cole Rivers	Rogue R	09/11/96	10,280	128,454	53.94	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	1	4	78	33	0	1.17	
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	0	0	0	0	0	5	0	0	9	50	40	0	1.01	
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	0	0	0	0	10	68	23	0	1.01	
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	0	0	0	0	0	3	0	8	0	16	130	59	2	2.13
H	1995 071063	Cole Rivers	Rogue R	10/14/96	10,207	56,489	67.79	0	0	0	0	0	0	0	0	0	0	0	0	0	4	6	4	5	0	21	104	58	0	1.98
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	0	0	0	0	5	0	4	0	11	116	51	0	1.83	
H	1996 070145	Cole Rivers	Rogue R	08/15/97	9,847	215,990	35.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	4	35	0	0.46	
H	1996 070146	Cole Rivers	Rogue R	08/15/97	10,411	281,177	35.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	5	31	0	0.40	
H	1996 070147	Cole Rivers	Rogue R	08/15/97	9,412	280,358	36.93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	2	5	27	4	0.53	
H	1996 070620	Cole Rivers	Rogue R	10/13/97	10,070	56,359	69.34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	30	5	0.40	
H	1996 092138	Cole Rivers	Rogue R	10/12/97	10,243	56,560	73.38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0.34	
H	1996 092139	Cole Rivers	Rogue R	10/12/97	10,251	56,674	69.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	28	4	0.32
H	1996 092140	Cole Rivers	Rogue R	09/11/97	10,497	192,338	50.79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	18	3	0.25	
H	1996 092141	Cole Rivers	Rogue R	09/11/97	10,512	193,501	52.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	14	3	0	0.17	
H	1996 092142	Cole Rivers	Rogue R	09/11/97	10,611	192,881	48.82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13	2	0.15	
H	1997 092458	Cole Rivers	Rogue R	08/12/98	10,385	245,352	32.87	0	0	0	0	0	3	0	0	3	0	0	13	0	58	114	1	0	58	114	1	0	1.85	
H	1997 092459	Cole Rivers	Rogue R	08/11/98	10,494	245,440	33.85	0	0	0	0	0	0	0	0	0	0	17	0	18	3	69	99	5	0	2.01				
H	1997 092460	Cole Rivers	Rogue R	08/13/98	10,583	245,454	34.10	0	0	0	0	0	0	0	0	1	0	0	17	1	72	115	2	0	1.97					
H	1997 092461	Cole Rivers	Rogue R	09/16/98	10,530	199,463	53.36	0	0	0	0	0	0	0	6	12	0	12	1	44	125	7	0	1.97						
H	1997 092462	Cole Rivers	Rogue R	09/16/98	10,401	200,417	52.74	0	0	0	0	0	0	0	2	18	4	6	1	31	135	8	0	1.97						
H	1997 092463	Cole Rivers	Rogue R	09/18/98	10,388	199,466	51.54	0	0	0	0	0	0	0	5	4	0	15	4	28	94	8	0	1.52						
H	1997 092501	Cole Rivers	Rogue R	10/12/98	10,157	54,551	69.78	0	0	0	0	0	0	0	10	20	0	7	1	27	159	17	0	2.37						
H	1997 092502	Cole Rivers	Rogue R	10/11/98	10,524	54,612	69.78	0	0	0	0	0	0	4	7	18	0	12	2	33	163	25	0	2.51						
H	1997 092503	Cole Rivers	Rogue R	10/10/98	10,531	54,637	70.87	0	0	0	0	0	0	0	4	12	0	20	0	33	174	14	0	2.48						
H	1998 092761	Cole Rivers	Rogue R	10/11/99	10,634	54,202	72.45	0	0	0	0	0	0	5	4	45	0	27	5	12	248	64	--	3.86						
H	1998 092762	Cole Rivers	Rogue R	10/12/99	10,610	53,961	71.99	0	0	5	0	0	0	0	0	0	36	2	36	3	14	214	52	--	3.41					
H	1998 092763	Cole Rivers	Rogue R	10/12/99	10,385	54,328	71.08	0	0	0	0	4	0	0	14	6	2	22	7	14	237	56	--	3.49						
H	1998 092801	Cole Rivers	Rogue R	09/16/99	10,548	152,149	50.28	0	0	0	0	0	0	0	2	8	0	18	1	6	111	27	--	1.64						
H	1998 092802	Cole Rivers	Rogue R	09/16/99	10,710	151,676	50.67	0	0	0	0	0	0	0	6	3	0	5	1	9	131	32	--	1.75						
H	1998 092803	Cole Rivers	Rogue R	09/16/99	10,545	151,673	53.61	0	0	0	0	0	0	0	2	8	0	12	3	7	97	32	--	1.53						
H	1998 092804	Cole Rivers	Rogue R	08/19/99	10,574	245,820	40.10	0	0	0	0	3	0	0	0	3	0	2	3	6	56	8	--	0.77						
H	1998 092805	Cole Rivers	Rogue R	08/19/99	10,464	245,538	40.67	0	0	0	0	0	0	0	9	5	14	6	22	89	10	--	1.48							
H	1998 092806	Cole Rivers	Rogue R	08/19/99	10,351	246,109	41.23	0	0	0	0	0	0	5	6	0	3	19	2	11	71	7	--	1.20						
H	1999 093044	Cole Rivers	Rogue R	09/15/00	33,988	34,170	62.22	0	0	0	0	0	0	0	26	32	3	115	9	28	236	--	--	1.32						

