



CODED-WIRE TAGGING OF WILD COHO SALMON (Oncorhynchus kisutch)  
STOCKS IN SOUTHEASTERN ALASKA, 1984-1985

By:

Leon D. Shaul  
Phillip L. Gray  
and  
Jerrold F. Koerner

November 1987

## ADF&G TECHNICAL DATA REPORTS

This series of reports is designed to facilitate prompt reporting of data from studies conducted by the Alaska Department of Fish and Game, especially studies which may be of direct and immediate interest to scientists of other agencies.

The primary purpose of these reports is presentation of data. Description of programs and data collection methods is included only to the extent required for interpretation of the data. Analysis is generally limited to that necessary for clarification of data collection methods and interpretation of the basic data. No attempt is made in these reports to present analysis of the data relative to its ultimate or intended use.

Data presented in these reports is intended to be final, however, some revisions may occasionally be necessary. Minor revision will be made via errata sheets. Major revisions will be made in the form of revised reports.

CODED-WIRE TAGGING OF WILD COHO SALMON (*Oncorhynchus kisutch*)  
STOCKS IN SOUTHEASTERN ALASKA, 1984-1985<sup>1</sup>

By  
Leon D. Shaul  
Phillip L. Gray  
and  
Jerrold F. Koerner

Technical Data Report No. 218  
Alaska Department of Fish and Game  
Division of Commercial Fisheries  
Juneau, Alaska

November 1987

<sup>1</sup>This investigation was partially financed by the Anadromous Fish Conservation Act (P.L. 89-304 as amended) under Project No. AFC-67.

## TABLE OF CONTENTS

	<u>Page</u>
LIST OF TABLES . . . . .	i
LIST OF FIGURES . . . . .	ii
LIST OF APPENDICES . . . . .	iii
ABSTRACT . . . . .	v
INTRODUCTION . . . . .	1
SMOLT AND JUVENILE TAGGING . . . . .	5
Methods . . . . .	5
Results and Discussion . . . . .	5
Southeastern Alaska Systems . . . . .	8
Ford Arm Lake Juveniles . . . . .	8
Speel Lake Juveniles . . . . .	8
Salmon Bay Lake Juveniles . . . . .	8
Warm Chuck Lake Juveniles . . . . .	8
Chilkat River Juveniles . . . . .	8
Unuk River and Chickamin River Juveniles . . . . .	9
Auke Lake Smolts . . . . .	9
Hugh Smith Lake Smolts . . . . .	9
Berners River Juveniles . . . . .	9
Yakutat Systems . . . . .	9
Situk River . . . . .	10
Lost River . . . . .	10
Akwe River . . . . .	12
Tsiu-Tsivat Rivers . . . . .	13
Italio River Exploratory Trapping . . . . .	14
FISHERY CONTRIBUTION, ESCAPEMENT, HARVEST RATES, MIGRATORY TIMING, SMOLT OUTMIGRATION, AND SURVIVAL RATES . . . . .	15
Methods and Procedures . . . . .	15
Tag Recovery from Fisheries . . . . .	15
Escapement Enumeration and Sampling . . . . .	16
Results . . . . .	16
Fishery Recoveries . . . . .	16
Escapement . . . . .	16

TABLE OF CONTENTS (Continued)

	<u>Page</u>
Auke Creek Weir . . . . .	16
Hugh Smith Lake Weir . . . . .	16
Berners River Survey . . . . .	18
Harvest by Gear Type . . . . .	18
Harvest by Area . . . . .	21
Harvest Rates . . . . .	21
Migratory Timing . . . . .	27
Southern Outside and Northern Areas . . . . .	27
Southeast Quadrant . . . . .	30
Smolt Outmigration . . . . .	30
Survival Rates . . . . .	30
Discussion . . . . .	33
ACKNOWLEDGMENTS . . . . .	35
LITERATURE CITED . . . . .	36
APPENDICES . . . . .	38

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Summary of coded-wire tagging of wild coho salmon in South-eastern Alaska (excluding Yakutat), 1 July 1984 - 30 June 1985 . . . . .	6
2. Summary of wild coho salmon coded-wire tagged in the Yakutat area, 1984 . . . . .	7
3. Total adult escapement and estimated number of coded-wire tagged wild coho salmon escaping to systems in Southeastern Alaska, 1984 . . . . .	17
4. Estimated harvest and percent by gear type, escapement, and total return of coho salmon returning to Auke Lake, 1978, 1980, 1981, 1982, 1983, and 1984 . . . . .	19
5. Estimated harvest and percent by gear type, escapement, and total return of coho salmon returning to Hugh Smith Lake, 1982-1984 . . . . .	20
6. Estimated total return, harvest by area, and escapement of coho salmon returns to Auke Lake, 1978, 1980, 1982, 1983, and 1984 . . . . .	22
7. Estimated total return, harvest by area, and escapement of coho salmon returns to Hugh Smith Lake, 1982-1984 . . . . .	23
8. Estimated harvest rate by area for coho salmon returns to Auke Lake, 1978, 1980, 1981, 1982, 1983, and 1984 . . . . .	25
9. Estimated harvest rate by area for coho salmon returns to Hugh Smith Lake, 1982, 1983, and 1984 . . . . .	26
10. Estimated smolt outmigration from Auke and Hugh Smith Lakes, 1976-1983 . . . . .	32

## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Annual commercial catch of coho salmon in Southeastern Alaska and decade averages, in millions of fish, 1980-1986 . . . . .	2
2. Wild coho salmon coded-wire tagging locations in Southeastern Alaska, 1976-1985 . . . . .	3
3. Yakutat area streams where wild coho salmon were tagged, 1984 . .	4
4. Wild coho salmon coded-wire tagging locations on the Situk and Lost River systems, 1984 . . . . .	11
5. Weekly proportion of the total coho salmon troll catch (line graphs) and estimated troll catch of coded-wire tagged Auke Lake and Chilkat River coho salmon (bar graphs) in southern outside and northern areas, 1984 . . . . .	28
6. Weekly proportion of the total coho salmon troll catch (line graph) and estimated troll catch of coded-wire tagged Hugh Smith Lake coho salmon (bar graph) in southern outside and northern areas, 1984 . . . . .	29
7. Weekly proportion of the total commercial coho salmon catch (line graphs) and estimated catch of coded-wire tagged Hugh Smith Lake and Chickamin River coho salmon (bar graphs) in the southeast quadrant (District 101, 102, and 105-108), 1984 . . . . .	31

## LIST OF APPENDICES

<u>Appendix Table</u>	<u>Page</u>
1. Pacific Marine Fisheries Commission (PMFC) area groupings of Southeastern Alaska regulatory districts . . . . .	39
2. Statistical weeks used in recording and compiling Southeastern Alaska commercial fisheries catch data . . . . .	40
3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 . . . . .	41
4. Summary of recoveries of coded-wire tagged Southeastern Alaska coho salmon in British Columbia fisheries, 1984 . . . . .	55
5. Wild coho salmon escapement counts at the Auke Creek weir, 1971-1984 . . . . .	56
6. Berners River coho salmon escapement surveys, 1960-1986 . . . . .	57
7. Estimated harvest by area, gear type, and escapement of Auke Lake coho salmon, 1984 . . . . .	60
8. Estimated harvest by area, gear type, and escapement of Hugh Smith Lake coho salmon, 1984 . . . . .	61
9. Estimated harvest distribution of Chilkat River coho salmon by area and gear type, 1984 . . . . .	63
10. Estimated harvest distribution of Chickamin River coho salmon by area and gear type, 1984 . . . . .	64
11. Recoveries of coded-wire tagged wild coho salmon returning to Reflection and McDonald Lakes from area-specific fishery samples, 1983-1984 . . . . .	65

LIST OF APPENDICES (Continued)

<u>Appendix Figure</u>	<u>Page</u>
1. Northern Southeastern Alaska statistical areas . . . . .	66
2. Central Southeastern Alaska statistical areas . . . . .	67
3. Southern Southeastern Alaska statistical areas . . . . .	68
4. Southeastern Alaska and Yakutat troll statistical areas . . . . .	69

## ABSTRACT

During 1 July 1984 - 30 June 1985, Southeastern Alaska coho salmon (*Oncorhynchus kisutch*) investigations were directed primarily at tagging rearing fish and smolts. A total of 24,970 coho salmon smolts and 114,181 rearing juveniles was coded-wire tagged in 10 systems in Southeastern Alaska and four systems near Yakutat. Wild coho salmon that were tagged as juveniles and smolts in Southeastern Alaska in 1982 and 1983 returned from the ocean as adults in 1984. Tags were recovered from commercial and sport catches and from the escapement to two systems: Auke and Hugh Smith Lakes. In addition, tagged Chilkat River, Chickamin River, Reflection Lake, and McDonald Lake fish were recovered from the fisheries. Resulting data were analyzed to estimate escapement, fishery contribution by area and gear type, harvest rates, migratory timing, survival rates, and smolt abundance. Total 1984 harvest rate estimates for Auke and Hugh Smith Lakes were 38.8% and 66.2%, respectively. The highest estimated harvest rate for the Auke Lake stock (56.7%) occurred in 1978 followed by much lower estimates (16.0% in 1980 and 27.0% in 1981) that coincided with a period of increased troll fishery restrictions; harvest rate estimates during 1982-1984 have ranged from 37.5-44.4% (average 40.2%). Total harvest rate estimates for the Hugh Smith Lake stocks during 1982-1984 have ranged from 60.9%-66.2% (average 63.8%). That stock has been exploited by four gear types in a broad area from Yakutat to central British Columbia. The Hugh Smith Lake stock displayed a more southern distribution in 1984 compared with 1982 and 1983.

KEY WORDS: Coho salmon, coded-wire tag, migration patterns, migratory timing, harvest rates, Southeastern Alaska.

## INTRODUCTION

The coho salmon (*Oncorhynchus kisutch*) is an important species to commercial, sport and subsistence fisheries in Southeastern Alaska. The annual commercial harvest and decade averages since 1890 are shown in Figure 1. Annual catches increased until the early 1950s, while a peak decade average of 2.05 million occurred in the 1940s. The commercial catch remained at a depressed level, averaging 1.10 million fish annually from the mid-1950s to early 1980s, followed by a resurgence in the early to mid-1980s to 2.21 million fish (1981-1986 average). The 1986 commercial harvest of 3.31 million coho salmon (preliminary) was the largest on record. In recent years commercial fisheries have accounted for the vast majority of the total harvest, while sport and subsistence fisheries have taken only about 3%. The 1970-1984 average harvest by gear type as a percentage of the total commercial catch was as follows: troll-60%; purse seine-20%; drift gillnet-13%; and set gill net-7%.

The majority of the coho salmon harvested in Southeastern Alaska are produced in over 2,000 endemic streams. Important contributions are also made by the Canadian portions of three major transboundary rivers (Stikine, Taku and Alsek) and by streams along the British Columbia coast. Management of fisheries for coho salmon in Southeastern Alaska is complicated by the scattered distribution of the resource and highly mixed stock nature of most of the fisheries. Effective management requires an understanding of the migratory characteristics, status, productivity, harvest rates and contribution to the fisheries of contributing stocks or groups of stocks.

In order to better understand the migratory nature of wild coho salmon stocks and the effects of the fisheries, a juvenile and smolt marking program was initiated in 1972. In initial studies, fish were marked with fluorescent pigment (Gray et al. 1978), while coded-wire tagging equipment was employed in more recent studies beginning in 1976. To date, wild coho salmon have been marked in 21 systems throughout the main part of Southeastern Alaska (Figure 2) and four systems near Yakutat (Figure 3).

The majority of Southeastern Alaska coho salmon that were tagged as 1+ rearing juveniles returned as adults 2 years later (Gray et al. 1981). Most fish tagged as outmigrating smolts returned to spawn the following year.

This report includes an analysis of 1984 tag recovery data and a summary of tag-release data for wild stocks for the period of 1 July 1984 - 30 June 1985. Coded-wire tag data for the Salmon Lake stock near Sitka was reported by Schmidt (1985 and 1986). Tag recovery data and contribution estimates for hatchery stocks is currently being prepared for publication in the ADF&G Technical Data Report Series (Clark et al; Alaska Department of Fish and Game, personal communication).

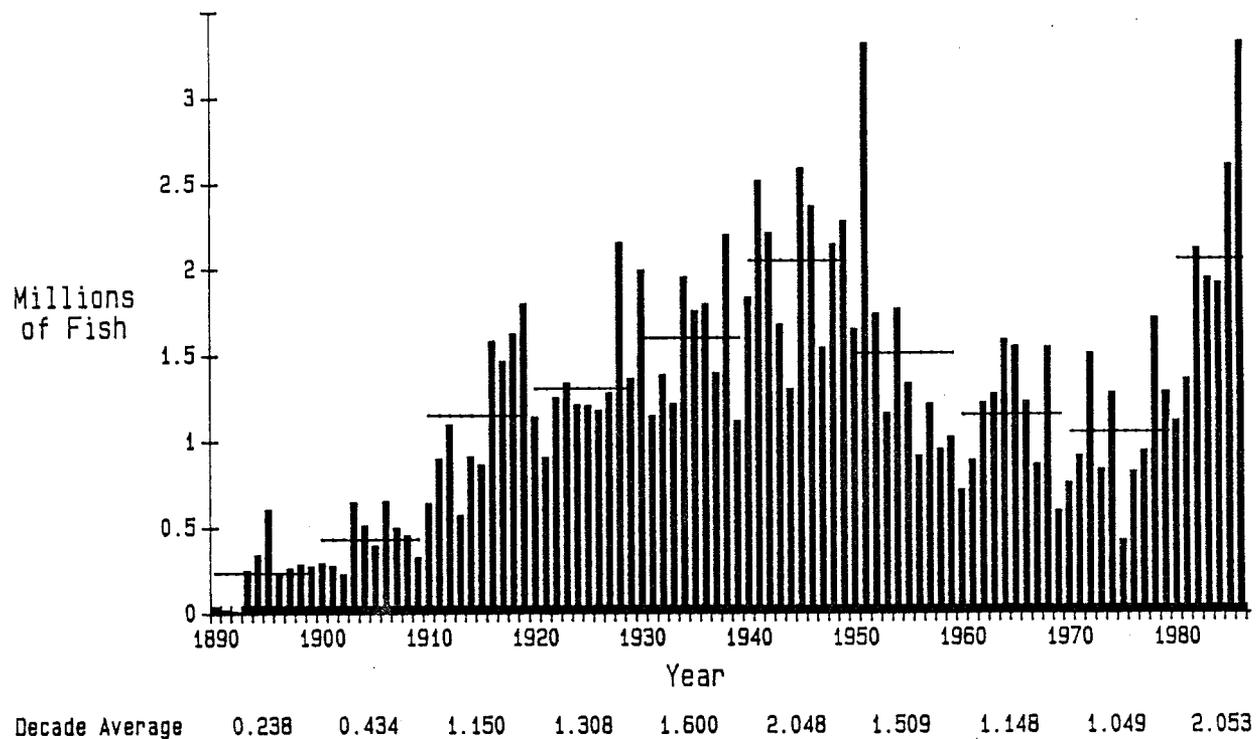
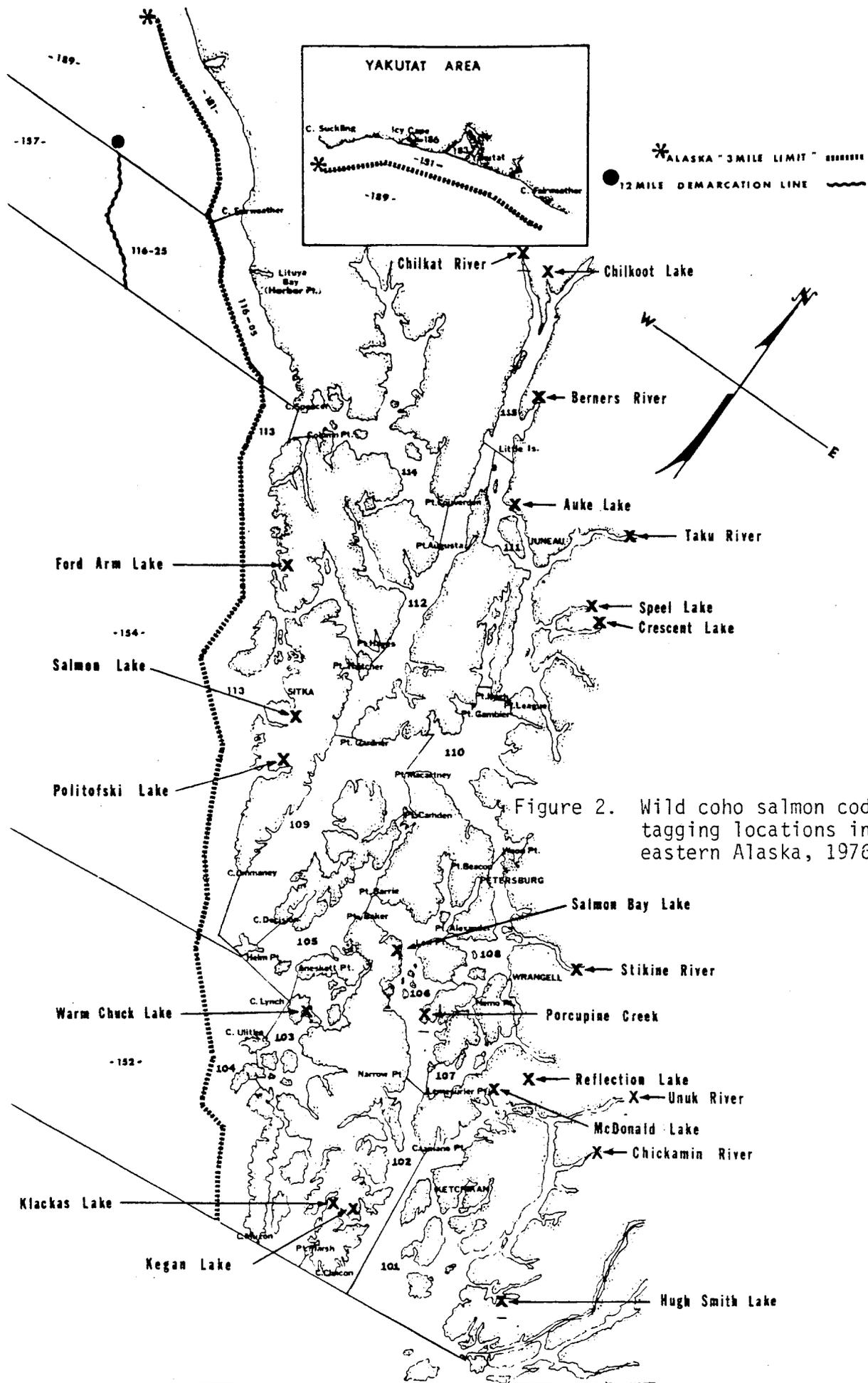


Figure 1. Annual commercial catch of coho salmon in Southeastern Alaska and decade averages, in millions of fish, 1890-1986.



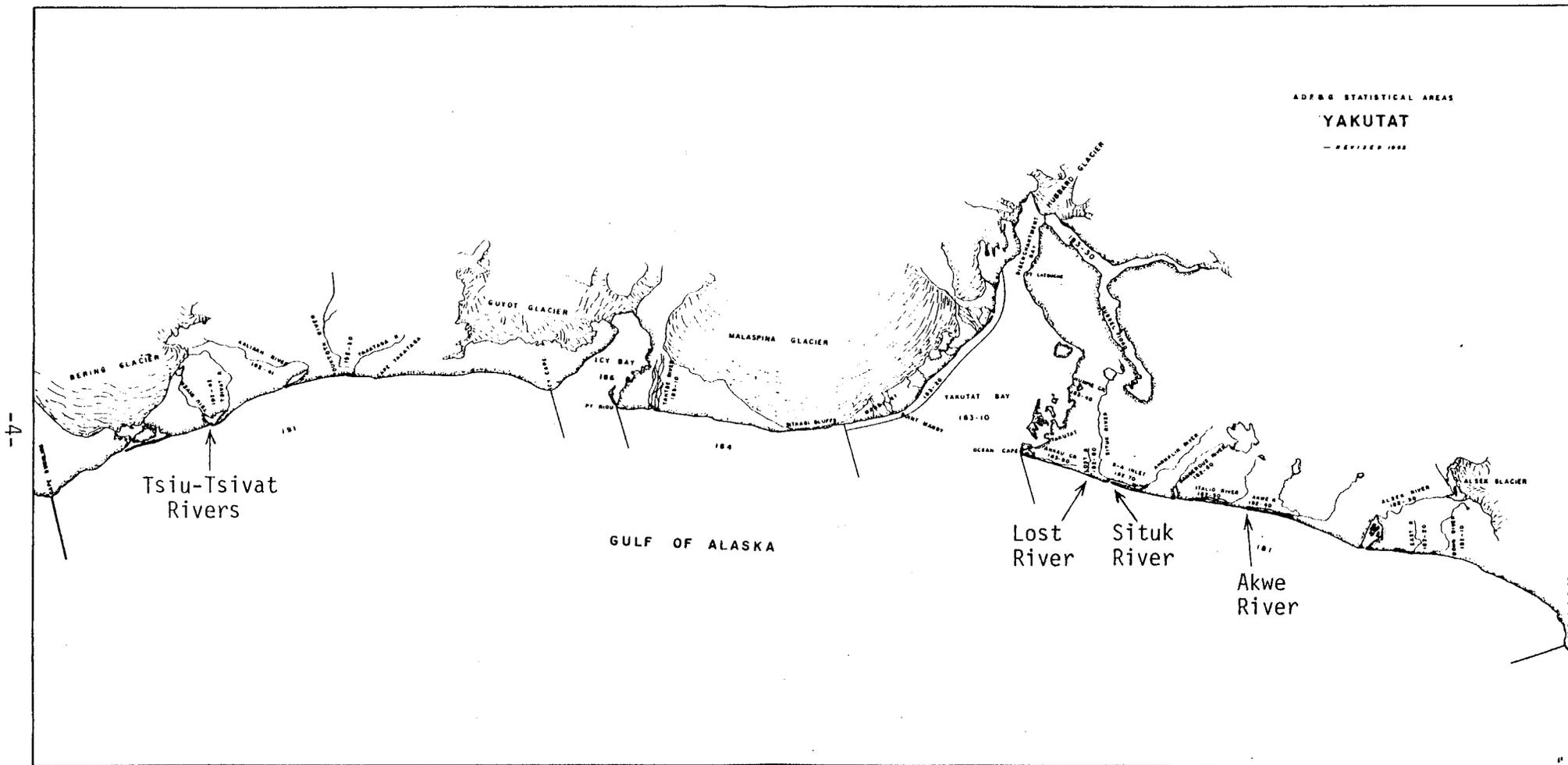


Figure 3. Yakutat area streams where wild coho salmon were coded-wire tagged, 1984.

## SMOLT AND JUVENILE TAGGING

Wild coho salmon smolts and rearing juveniles were coded-wire tagged in 10 systems in Southeastern Alaska and four systems nears Yakutat. The Southeastern Alaska systems included: Auke and Speel Lakes in Stephens Passage; the Berners and Chilkat Rivers in Lynn Canal; Ford Arm Lake on the central outside coast; Warm Chuck Lake on the southern outside coast; Salmon Bay Lake in the central inside area (south of Petersburg); the Unuk and Chickamin Rivers in Behm Canal; and Hugh Smith Lake in Boca de Quadra (Figure 2). Yakutat systems where coho salmon were tagged included the Situk, Lost, Akwe and Tsiu-Tsivat Rivers (Figure 3).

### Methods

Outmigrating smolts were captured for tagging at Auke and Hugh Smith Lakes with smolt weirs that were operated at the outlets of both systems. Smolts were captured in the lower Situk River with a small mesh beach seine (Kissner 1985). Wire-mesh minnow traps were used to capture age-1+ and older juveniles on other systems. Fifty traps baited with salmon roe were checked and set four times daily at 2-hour intervals at Ford Arm Lake, Speel Lake, Salmon Bay Lake, Warm Chuck Lake, Berners River, Lost River, Akwe River and Tsiu-Tsivat Rivers. Traps were moved frequently to maintain the highest possible catch rates. Juveniles were held in pens before tagging until a total of 1,000 to 4,000 was captured, but not for a period longer than 4 days. On the Unuk and Chickamin Rivers, traps were checked once daily and captured fish were tagged and released daily. Gray et al. (1986) describes the minnow trapping method in detail. Outmigrating smolts captured by weir and beach seine were tagged and released daily. A description of the coded-wire tagging technique under field conditions is found in Koerner (1977).

Stratified sampling was conducted to recover tags from commercial and sport catches, while tagged fish returning to their streams of origin were sampled and enumerated whenever possible at weir sites and during stream surveys. The result is a broad spectrum of information on the biological characteristics and harvest patterns of specific stocks.

### Results and Discussion

A total of 81,570 wild coho salmon was coded-wire tagged in Southeastern Alaska systems (excluding Salmon Lake near Sitka) during 1 July 1984 - 30 June 1985 (Figure 2). Tagging at Salmon Lake was reported by Schmidt (1985). In addition, a total of 57,581 wild coho salmon was tagged in four Yakutat area systems (Figure 3). The number of fish and code(s) used at Southeastern Alaska locations are listed in Table 1. Yakutat tagging data is summarized in Table 2.

Most surviving age-1+ juveniles tagged in 1984 returned as adults in 1986. Juveniles tagged on the Unuk and Chickamin Rivers during the spring of 1985 may return in 1986 or 1987, depending on whether or not they outmigrated in 1985. Most surviving smolts tagged at Auke and Hugh Smith Lakes in 1985 returned in 1986, while most rearing juveniles tagged on the Berners River in 1985 will return in 1987. Smolts tagged at the Situk River in 1984 returned in 1985.

Table 1. Summary of coded-wire tagging of wild coho salmon in Southeastern Alaska (excluding Yakutat), 1 July 1984-30 June 1985.<sup>1</sup>

Location	Dates	Number Tagged	Code	Adult Return Year
Ford Arm Lake	7/02-13	7,662	4-24-35(5,629) 4-23-28(2,033)	1986 1986
Speel Lake	7/16-27	12,394	4-24-33(5,712) 4-23-29(2,574) 4-23-11(2,447) 4-23-12(1,661)	1986 1986 1986 1986
Salmon Bay Lake	8/01-20	4,943	4-23-24	1986
Warm Chuck Lake	8/21-9/01	6,774	4-23-25(5,059) 4-23-18(1,715)	1986 1986
Chilkat River <sup>2</sup> (Ponds)	10/01-31	14,542	4-23-10(4,262) 4-23-62(1,620) 4-24-16(1,692) 4-24-17(1,792) 4-24-18(1,038) 4-24-19(2,018) 4-24-20( 805) 4-24-21(1,315)	1986 1986 1986 1986 1986 1986 1986 1986
Unuk River <sup>3</sup>	3/15-4/30	6,085	4-21-47	1985, 1986
Chickamin River <sup>3</sup>	3/15-4/16	3,790	4-20-63	1985, 1986
Auke Lake	5/12-6/22	5,502	3-18-40	1986
Hugh Smith Lake	4/27-5/30	9,833	4-24-51(3,102) 4-24-50(5,352) 4-24-52(1,379)	1986 1986 1986
Berners River	6/17-28	10,110	4-24-46	1987

<sup>1</sup> Wild coho salmon tagging at Salmon Lake (near Sitka) by the ADF&G, Sport Fish Division was reported by Schmidt (1985).

<sup>2</sup> Tagged by the ADF&G, FRED Division (Josephson 1986).

<sup>3</sup> Tagged by the ADF&G, Sport Fish Division (Kissner 1985).

Table 2. Summary of wild coho salmon coded-wire tagged in the Yakutat area, 1984.

Location	Dates	Mean Length (mm)	Code	Number Tagged <sup>1</sup>
Situk River	25 May- 22 June	106.0	4-24-01	9,699 <sup>2</sup>
Lost River (Ophir Creek-Coast Guard Lake)	6-10 July	74.3	4-21-27	4,947
			4-23-32	1,854
			Subtotal	6,798
Lost River (Tawah Creek)	13-27 July	81.4	4-23-20	9,512
			4-23-33	614
			Subtotal	10,126
Lost River (Total)	6-27 July	78.3	Total	16,924
Akwe River	3-17 August	80.7	4-24-37	10,037
			4-23-34	1,515
			Total	11,552
Tsiu-Trivat Rivers	23 August- 9 September	79.3	4-24-38	8,973
			4-23-09	5,108
			4-23-08	4,191
			4-21-28	1,134
			Total	19,406
Total	25 May- 9 September	-	All Codes	57,581

<sup>1</sup> Numbers of fish tagged are adjusted to account for observed tag loss in recapture samples.

<sup>2</sup> Tagged by the ADF&G, Sport Fish Division (Kissner 1985).

## Southeastern Alaska Systems:

Ford Arm Lake Juveniles. A total of 7,662 juvenile coho salmon was trapped and tagged at Ford Arm Lake during 2-13 July (Figure 2). Of the total, 2,996 were captured in the lake, 2,071 were trapped in the outlet stream, and 2,595 came from the small pond near the head of the lake. The average catch-per-trap was 5.4 for the lake, 4.6 for the outlet, and 9.1 for the pond. The mean length of fish sampled from the lake was 90.4 mm (N=356) while the mean length of fish sampled from the pond was 77.0 mm (N=333). Of the total number tagged from the lake, 906 were 62-79 mm, 1,510 were 80-100 mm, and 580 were larger than 100 mm. Of the total number tagged from the outlet, 543 were 62-79 mm, 1,283 were 80-100 mm, and 245 were larger than 100 mm. Of the total number tagged from the pond, 1,717 were 62-79 mm, 792 were 80-100 mm, and 86 were larger than 100 mm. Totals by size group for all areas were 3,166 from 62-79 mm, 3,585 from 80-100 mm, and 911 larger than 100 mm. The temperature of the lake during the tagging period remained near 12°C.

Speel Lake Juveniles. A total of 12,394 juvenile coho salmon was trapped and tagged at Speel Lake during 16-27 July (Figure 2). Overall, catches averaged 9.4 juvenile coho salmon ( $\geq 62$  mm) per trap. Tagged fish averaged 81.9 mm (N=790) with a range of 62-128 mm. Of the total number tagged, 6,290 were 62-79 mm, 5,016 were 80-100 mm, and 1,088 were larger than 100 mm. The lake surface temperature during the period averaged 14.5°C.

Salmon Bay Lake Juveniles. A total of 4,943 juvenile coho salmon was trapped and tagged at Salmon Bay Lake during 1-20 August (Figure 2). The overall catch rate averaged 2.5 per trap. Tagged fish averaged 84.6 mm with a range of 62-126 mm. Of the total numbers tagged, 2,615 were 62-79 mm, 1,662 were 80-100 mm, and 666 were larger than 100 mm. Lake surface temperature measurements during the period averaged 16.0°C (range 15°C-17°C).

This was the first attempt to tag juvenile coho salmon in this system and, therefore, a considerable amount of effort was expended in locating the best trapping areas. The lake is 5.2 km long. Trapping along the shoreline of the lake was relatively unproductive while 81% of the catch came from the outlet stream. The most productive trapping in the lake area occurred in the mouths of three tributary streams and adjacent beaver ponds in the south end. The outlet stream produced catches consistently over its entire length (3.0 km) from the lake to saltwater with an overall average of 3.1 fish per trap. However, no large concentration of rearing coho salmon was located anywhere in the system.

Warm Chuck Lake Juveniles. A total of 6,774 juvenile coho salmon was trapped and tagged at Warm Chuck Lake during 21 August - 1 September (Figure 2). The overall catch rate averaged 4.1 fish per trap. Tagged fish averaged 80.3 mm with a range of 62-129 mm. Of the total number of fish tagged, 3,651 were 62-79 mm, 2,656 were 80-100 mm, and 467 were larger than 100 mm. The lake surface temperature during the period averaged 15.5°C and ranged from 14.5°C-17.0°C.

Chilkat River Juveniles. A total of 14,542 juvenile coho salmon was trapped and tagged in seven side ponds connecting with the Chilkat River by the ADF&G, Fisheries Rehabilitation, Enhancement, and Development (FRED) Division

during October (Josephson 1986). Channels had been constructed to provide access by rearing fish to five of these ponds, while two had natural access.

Unuk River and Chickamin River Juveniles. Juvenile coho salmon were tagged on the Unuk and Chickamin Rivers by the ADF&G, Sport Fish Division (Kissner 1985) during October 1984 (Figure 2). A total of 6,058 fish was tagged on the Unuk River, while 3,790 were tagged from the Chickamin River. Some of these fish were expected to outmigrate in 1985 and return as adults in 1986, while others were expected to remain in fresh water for another year and return in 1987. The catch rate averaged 2.4 fish per trap for both systems.

Auke Lake Smolts. A total of 5,601 wild coho salmon smolts migrated from Auke Lake in 1985 (Figure 2). This was the lowest record smolt migration for that system. A total of 5,558 smolts was coded-wire tagged between 5 May and 18 June, of which an estimated 5,502 (99.0%) retained their tags. Of the total number tagged, 660 were 100 mm or less, 4,842 were 101 to 130 mm, and 56 were larger than 130 mm. The first smolt entered the trap on 5 May and the last smolts were counted on 18 June (Taylor and James 1985). The peak and midpoint of the migration occurred on 26 May.

Hugh Smith Lake Smolts. The Hugh Smith Lake smolt weir was installed on 27 April. The first coho salmon smolt was captured on 29 April. The peak daily count occurred on 10 May while the midpoint of the migration occurred on 13 May. The migration had decreased to less than 100 smolts per day when the tagging operation was terminated on 30 May. Totals of 11,111 coho salmon smolts, 31,323 sockeye salmon smolts, and 3,955 Dolly Varden were counted through 30 May.

A total of 9,833 coho salmon smolts was tagged. The smolts were divided into three size groups that were tagged with different codes. Of the total, 3,102 smolts were smaller than 100 mm (code: 4-24-51) while 5,352 were 100-120 mm (code: 4-24-50) and 1,379 were larger than 120 mm (code: 4-24-52). The overall mean length of tagged smolts was 105.4 mm (range 80-151 mm). Daily smolt counts and age-length-weight data were reported by Zadina and Haddix (1985).

Berners River Juveniles. A total of 10,110 juvenile coho salmon was trapped and tagged on the Berners River during 17-28 June (Figure 2). Of the total number tagged, 7,843 were 62-79 mm, 2,227 were 80-100 mm, and 40 were over 100 mm in length. The mean length of tagged fish was 76.8 mm (N=949). Fish captured in the main slough averaged 76.2 mm (N=618), while those captured in Det's Pond averaged 77.8 mm (N=331). The temperature of the slough averaged 7.5°C (range 7.2°C-7.8°C), while the temperature of the pond average 7.0°C (range 6.1°C-7.8°C). In 1984 the slough and pond averaged 9.2°C and 16.0°C, respectively. The 1985 average catch rate of 6.6 fish per trap was lower than the 1984 average of 10.6 per trap. The difference may have been due in large part to colder water in 1985 compared with 1984. The 1985 catch rate averaged 7.4 in the slough and 5.3 in the pond.

#### Yakutat Systems:

Coho salmon juveniles and smolts were tagged on four rivers in the Yakutat area in 1984 (Table 2). Rearing juveniles were tagged on the Lost, Akwe and Tsiu-Tsivat River systems, while smolts were tagged at the mouth of the Situk River (Figure 3). Fish tagged on the Situk River returned as adults in 1985

while the majority of tagged adults from the other systems returned in 1986. Tag recovery was conducted in both the troll fishery and inriver setnet fisheries to determine migratory patterns, fishery contribution and harvest distributions for Yakutat area stocks. Results will be published in later reports when the data are finalized.

Situk River. Personnel from the Sport Fish Division Chinook Research Project (Kissner, 1985) tagged 9,867 coho salmon smolts in the lower kilometer of the Situk River during 25 May-22 June, 1984 (Figure 4). Of these, an estimated 9,699 (98.3%) retained their tags. Fish were captured with a small-mesh beach seine and tagged daily with code 4-24-01. Other species that were captured concurrently and tagged included 12,552 chinook salmon and 35,017 sockeye salmon. Tagged coho salmon ranged from 73 mm to 158 mm and averaged 106 mm (snout-fork length) from a sample of 1,808 fish.

Lost River. Juvenile coho salmon were captured in minnow traps and coded-wire tagged at two locations in the Lost River drainage during 3-27 July (Figure 4). A total of 18,926 juveniles was marked of which an estimated 16,924 (89.4%) retained their tags.

Trapping and tagging was conducted during 3-10 July at Coast Guard Lake and Ophir Creek which are located near the source of Tawah Creek (Figure 4). Coast Guard Lake also drains through a small connection to Ankau Lagoon. Coast Guard Lake was very low and warm with a temperature range above 16°C after a dry spring-early summer period. Very few juvenile coho salmon were captured in the lake itself, although sticklebacks (*Gasterosteus*) and tadpoles were very abundant. A concentration of coho salmon was found at the Ophir Creek Inlet where water was deeper and cooler (12.5°C-14.5°C). The lower creek had abundant submerged and emergent vegetation which provided excellent habitat for juvenile coho salmon. Over 7,500 juveniles greater than 62 mm in length were captured in an area approximately 200 m long and 30 m wide. Trapping was less productive further upstream where the creek was narrower with riffles, pools, and very little aquatic vegetation. A total of 7,602 juvenile coho salmon were marked at Ophir Creek and Coast Guard Lake of which an estimated 6,798 retained their tags. Overall, catches averaged 17.3 juveniles (62 mm or greater) per trap.

Trapping and tagging was conducted on Tawah Creek near the R.E.L. bridge during 11-27 July. The character of the habitat was quite different upstream and downstream of the bridge. Upstream to Coast Guard Lake, Tawah Creek was broad, marshy and shallow with pond lilies and other emergents covering much of the area. Downstream from the R.E.L. bridge, Tawah Creek becomes a narrow, single channel with noticeable current and a weedy bottom, and is bordered by willows and muskeg. Overall trapping success was similar (non-statistical comparison-NSC) above and below the bridge and catches in the two areas averaged 6.0 and 5.5 coho salmon/trap, respectively.

Fish tagged on Tawah Creek averaged 81.4 mm, while those tagged at Ophir Creek and Coast Guard Lake average 74.3 mm. Scale samples indicated that all size groups tagged at Ophir Creek were predominantly age 1+. At Tawah Creek, fish between 62-94 mm were predominantly age 1+ while larger fish ranging from 95-116 mm were predominantly age 2+.

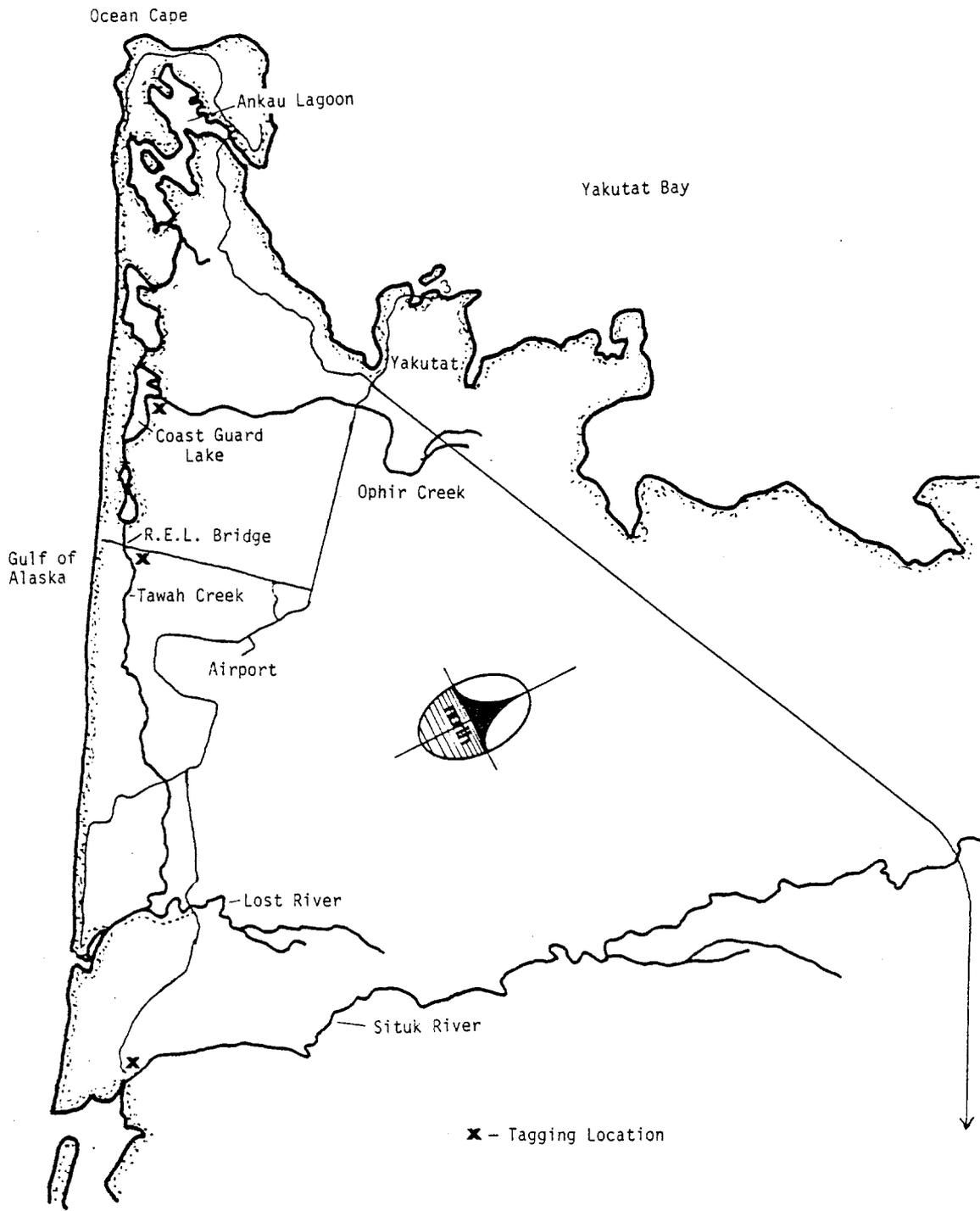


Figure 4. Wild coho salmon coded-wire tagging locations on the Situk and Lost River systems, 1984.

Tags were detected in a total of 95 marked fish (6.4%) from a catch of 1,487 fish near the R.E.L. bridge during 11-13 July. Since tagging had not yet been conducted at Tawah Creek, these fish must have come from the previous tagging location at Ophir Creek. This required a migration of 5-6 km across the shallow, barren lower end of Coast Guard Lake and slow-moving, weedy upper Tawah Creek. This is evidence of substantial movement of juveniles in over a short period of time (1-7 days).

A total of 11,324 juveniles was marked at the R.E.L. bridge on Tawah Creek of which an estimated 10,126 retained their tags.

Other fish species caught incidentally in minnow traps set in Ophir and Tawah Creeks included Dolly Varden (*Salvelinus malma*), rainbow trout (*Salmo gairdneri*), coastrange sculpin (*Cottus aleuticus*), and threespine stickleback (*Gasterosteus aculeatus*). Rainbow trout were relatively scarce: one was caught in Ophir Creek while eight were caught in Tawah Creek.

Akwe River. Juvenile coho salmon were captured in minnow traps and coded-wire tagged on the Akwe River during 30 July - 17 August (Figure 3). All trapping on this system was conducted on the Middle Fork, a tributary that joins the lower Akwe River between the mainstem and the Ustay River.

A campsite was established approximately 1.2 km upstream from the confluence with the mainstem Akwe River. Excellent catch rates were experienced below camp averaging 10.1 juvenile coho salmon per trap. The streambed in this area was shallow and sandy with thick beds of emergent aquatic vegetation. Farther upstream, the catch rate declined, while the stream became narrower and very shallow in places; grasses had replaced other aquatic plants. The Middle Fork was trapped to a point approximately 6 km upstream of its confluence with the main Akwe River. Over this course, the stream narrowed to 2-3 m in places and was spanned by three beaver dams. While the habitat in much of the upper section appeared to be very suitable, trapping success was mediocre in comparison with the lower section, downstream from camp.

Water temperatures varied widely depending on time and location. The temperature was highest (up to 14.5°C) behind beaver dams, during sunny weather, and late in the day. It was coldest (9.5°C) near camp in the morning after a cold, clear night. Overall, the water temperature averaged about 12°C.

The overall catch rate averaged 6.2 juvenile coho salmon ( $\geq 62$  mm) per trap with a range of 2.0-21.3 per trap among sets of 20-30 traps. A total of 12,333 fish were marked during the period of which an estimated 11,552 (93.7%) retained their tags. Tagged fish averaged 80.7 mm in length. Scale samples indicated that fish up to 67 mm were predominantly age 1+. The mean length of fish in size groups that were predominantly age 1+ was 82.4 mm.

Other species captured in the trapping area included Dolly Varden, cutthroat trout (*Salmo clarki*), sockeye salmon (*O. nerka*), coastrange sculpin, and threespine stickleback.

Exploratory trapping to locate concentrations of juvenile coho salmon was conducted on other parts of the Akwe River system during 19-21 July.

The lower kilometer of the Ustay River was explored on 19 July. This portion of the stream was very shallow with a sandy bottom, swift current, and very little suitable habitat in the form of pools, aquatic vegetation, or overhung banks. Two traps were set for an hour in the most promising locations. One captured three juveniles (age 1+) and five fry (age 0+) while the other captured six juveniles and two fry. The water temperature was 10.6°C.

On 19 July, twelve traps were set for 2 hours along the banks of the mainstem Akwe River from its junction with the middle fork to a point approximately 2 km upstream. Catches ranged from 0 to 13 age-1+ juveniles per trap and averaged 3.0 per trap. Catches of age-0+ fry ranged from 1 to 10 per trap and averaged 3.3 per trap. Dolly Varden and threespine sticklebacks were also present. The water was 9.5°C and slightly glacial.

Exploratory trapping was conducted at Triangle Lake during 20-21 July. Triangle Lake is a shallow (1-2 m deep), Weedy Lake about 2.4 km long that drains into the Akwe River. It was in an advanced stage of eutrophication. The water had a slightly brown coloration and was warm (15.3°C-16.1°C). Based on an initial visual impression, the lake appeared to contain exceptionally productive rearing habitat. A variety of aquatic plant species provided excellent cover with a probably high abundance of aquatic insects. Juvenile coho salmon could be seen leaping throughout the lake surface.

Minnow trap catches provided a contrary assessment of habitat suitability for coho salmon compared with initial visual observations. Only two juvenile coho salmon were captured in 15 traps set throughout the lake for a period of 2 hours. Both of those captured in a very shallow set at a beaver lodge along the north shore. A total of 30 sticklebacks was also captured in the lake. Twenty-one traps were set in the outlet stream with catches averaging 2.5 age-1+ juveniles per trap (range 0-12). A few age-0+ fry were found in the outlet with catches averaging 0.4 fry per trap. Dolly Varden and sticklebacks were also present in the outlet.

Although Triangle Lake appeared to offer suitable cover, food, and access for rearing coho salmon, low oxygen levels may have severely limited habitat utilization. While juvenile coho salmon could be seen cruising and actively feeding near the lake surface, they did not enter minnow traps set a meter or less beneath the surface.

Tsiu-Tsivat Rivers. Minnow trapping and coded-wire tagging of juvenile coho salmon was conducted at the Tsiu-Tsivat Rivers during 22 August - 9 September (Figure 3).

The Tsiu and Tsivat Rivers are small, clear streams that begin near the base of Bering Glacier in the Yakataga District. Despite their small size, both have extensive, high quality rearing habitat consisting of numerous beaver ponds, tributary channels, and backwaters with lush aquatic plant growth. Both streams enter a shallow lake that borders a lush wetland covered by grass and shrubs on the interior side with a vast, barren sandy area on the ocean side. A single stream emerges from the lake and flows approximately 3 km over the sand into the ocean. A setnet fishery is conducted in the lower section. The high quality of the habitat in this system is reflected in past catch and escapement records which indicate that the total annual coho salmon return has exceeded 100 thousand fish in some recent years.

An exploratory trip was made during 28-30 July to assess the potential for coded-wire tagging juvenile coho salmon in the Tsiu-Tsivat River system. Traps were set from the inlet of the Tsivat River into the lake to a point approximately 3 km upstream. Also explored were the extensive weedbeds where the Tsivat River enters the lake and weedy areas in the northwest end of the lake where the Tsiu River enters. Both coho salmon fry and age-1+ juveniles were found in high abundance in and near the Tsivat River with catches averaging 16.1 age-1+ fish and 35.6 fry (age-0+) per trap. Catches in the area where the Tsiu River enters the lake averaged 11.6 age-1+ fish and 5.0 fry per trap. Threespine sticklebacks were abundant throughout the area that was trapped. Catches of rainbow trout, probably juvenile steelhead, averaged 1.0 per trap in the mainstem Tsivat River and 0.1 per trap in the northwest end of the lake. Approximately 2,300 adult sockeye salmon and 150 pink salmon (*O. gorbuscha*) were present in the lower Tsivat River. The carcass of a single bright adult coho salmon was found in the lake and numerous adult salmon, presumably coho, were seen leaping in the surf area and lagoon at the river mouth. The water temperature in the system ranged from 12.0°C-14.5°C.

On 22 August, the tagging crew began minnow trapping in the Tsivat River. Due to sustained excellent success, trapping was conducted only in channels of the lower Tsivat River and in lush weedbeds where it enters the lake. By 9 September, a total of 21,091 juvenile coho salmon was marked of which an estimated 19,406 (92.0%) retained their tags. Overall, catches averaged 11.7 per trap (range 1.9-28.7). Also captured in the traps were rainbow trout, Dolly Varden, threespine sticklebacks, and coastrange sculpins. Catches of rainbow trout averaged 0.3 per trap (range 0-1.3).

Significant catches of young rainbow trout were made in spite of the fact that most trapping was conducted in weedy, low-velocity areas that are not usually favored by that species. In view of this, the Tsiu-Tsivat River system may support a significant steelhead run.

The relatively cold water temperature (12.0°C-14.5°C) of the system was surprising because of its shallow, slow moving, weedy nature. This may be due to upwelling springs which tend to stabilize the water temperature and provide increased nutrient levels compared with runoff fed systems.

The mean length of tagged fish was 79.3 mm (Figure 8). Scale samples indicated that fish up to 73 mm were predominantly age 0+ while fish over that length were predominantly age 1+. Approximately 32% of the tagged fish were age-0+. The mean length of fish in size groups that were predominantly age 1+ was 84.5 mm.

Italio River Exploratory Trapping. An overnight trip was made during 24-25 July to the lower Italio River to determine the feasibility of tagging juvenile coho salmon in that system. The Italio River is a small clear stream that enters saltwater approximately 37 km east of Yakutat. It is located just west of the Akwe River.

Minnow traps were set beginning at the confluence of the mainstem Italio River with a major tributary that enters from the east about 9.5 km upstream from where the river enters the ocean. This site was only about 0.5 km from the mouth of the Akwe River and about 50 m from Ryman's cabin. Twelve minnow traps were set along the lower 1.5 km of the tributary for a period of 2

hours. The stream had a sandy bottom, pools interspersed with shallow riffles, undercut banks, and moderate current. The water temperature was 13.0°C. The catch per trap averaged 12.4 (range 2-35) predominantly age-1+ juvenile coho salmon and 27.1 (range 0-62) age-0+ coho salmon fry. Other species that were captured included rainbow trout, Dolly Varden, and coast-range sculpin.

An additional twelve traps were set for 2 hours along a stretch of the main-stem Italo River from a point 1 km downstream from the tributary to 0.5 km above the tributary. This section was characterized by a relatively fast current and an unstable gravel and sand bottom. There were a number of pools containing adult sockeye, chum, and pink salmon and Dolly Varden. The water temperature above the tributary was 10.0°C. Only seven predominantly age-1+ coho salmon were captured in 12 traps for an average of 0.6 per trap (range 0- 3). The catch of age-0+ fry averaged 10.5 per trap (range 0-34).

The lower river between the tributary and the ocean was floated by raft and examined while departing the area on 25 July. Although no minnow traps were set in the lower 8.5 km, the habitat did not appear promising for capturing and tagging a large number of juvenile coho salmon. The current was relatively swift and the bottom was unstable along most of the stretch. There were few backwaters or pools with overhanging banks and aquatic vegetation.

The tributary that enters the Italo near the mouth of the Akwe River appeared to be the most promising site in the system for tagging based on trap catches. However, access to and along this stream would be difficult because of its small, shallow nature and long distance from suitable airplane landing sites.

#### FISHERY CONTRIBUTION, ESCAPEMENT, HARVEST RATES, MIGRATORY TIMING, SMOLT OUTMIGRATION, AND SURVIVAL RATES

##### Methods and Procedures

Coded-wire tag recovery was conducted in nearly all marine fisheries in Southeastern Alaska and northern British Columbia and in selected stream systems.

##### Tag Recovery from Fisheries:

Commercial catch sampling for coded-wire tagged coho salmon was conducted by the ADF&G Stock Biology Group which had samplers stationed at fish processors and buying stations located throughout Southeastern Alaska. The samplers watched for adipose clipped coho salmon during off-loading and sorting operations. Skippers of fishing vessels and tenders were interviewed to determine fishing areas (Appendix Figures 1-4). The heads of all adipose fin clipped fish were sent to the ADF&G Coded-wire Tag Lab in Juneau for removal and decoding of tags. Areas used in expanding random recoveries were the nine Pacific Marine Fisheries Commission (PMFC) area groupings of regulatory districts shown in Appendix Table 1. Time strata used were statistical weeks (Appendix Table 2). Randomly recovered tags were expanded by the inverse of the proportion of the catch that was sampled within area, gear type and weekly strata.

The ADF&G Sport Fish Division conducted a creel census and survey of the Juneau and Ketchikan marine recreational fisheries (Neimark 1985). At Juneau interviewers examined 1,891 coho salmon for missing adipose fins out of a total estimated catch of 10,100. At Ketchikan 1,416 coho salmon were examined from an estimated catch of 14,231. Tags recovered from random samples were expanded to the estimated total season catch.

#### Escapement Enumeration and Sampling:

Coho salmon escapements were enumerated at Auke Creek, Hugh Smith Lake, and the Berners River in 1984. The escapements to Auke Creek and Hugh Smith Lake were enumerated at weir sites and sampled for the presence of coded-wire tags. The escapement to the Berners River was enumerated during a survey count but was not sampled since few or no tagged fish were expected to return to that system.

#### Results

##### Fishery Recoveries:

A total of 507 coded-wire tagged wild Southeastern Alaska coho salmon was recovered from commercial and sport catches in Southeastern Alaska and British Columbia in 1984, excluding recoveries from Salmon Lake near Sitka (see Schmidt 1985). Information from these recoveries is presented in Appendix Tables 3 and 4. Expansion factors reported for British Columbia recoveries by the Canada Department of Fisheries and Oceans are preliminary.

##### Escapement:

The following are brief summaries of the weir operations at Auke and Hugh Smith Lakes, and the Berners River survey. Total counts and a summary of tag recovery data are shown in Table 3. Daily weir counts and age-length data for the weired systems were reported by Wood and Van Alen (1987).

Auke Creek Weir. The first wild adult coho salmon of the 1984 season was counted through the Auke Creek weir on 16 September. The peak daily count of 236 occurred on 2 October. The last adult was counted on 26 October and the weir was removed on 30 October. The total count of wild coho salmon was 651 adults (age .1 fish) and 315 jacks (age .0 fish). Of those totals, 614 adults (94.3%) and 304 jacks (96.5%) had missing adipose fins. The 1984 wild coho salmon escapement to Auke Lake and escapements during previous years are shown in Appendix Table 5.

Hugh Smith Lake Weir. The Hugh Smith Lake adult salmon weir was operated during 1 June to 26 November. The first adult coho salmon was counted on 17 July. The peak daily count of 82 adults occurred on 8 September while the last adult was counted on 25 November. An estimated 200 adults passed the weir uncounted during high water on 22-23 November based on downstream counts before and after the flood. The total escapement count for the season was 1,408 adults and 12 jacks. Of 1,177 adults and 12 jacks examined for tags, 215 adults and 5 jacks had missing adipose fins. Of the 215 marked adults 44 were examined for coded-wire tags. Forty-three of the sampled fish had been tagged as smolts at Hugh Smith Lake in 1983, while one was a stray from the Whitman Lake hatchery (code: 4-22-13). After subtracting an estimated 41

Table 3. Total adult escapement and estimated number of coded-wire tagged wild coho salmon escaping to systems in Southeastern Alaska, 1984.<sup>1</sup>

System	Adult Escapement	Type of Count	Number Examined for Marks	Number Marked	Estimated Tagged Adults In Escapement <sup>2</sup>
Auke Lake	651	Weir Count	651	651	614
Hugh Smith Lake	1,367	Weir Count	1,177	215	251
Berners River	2,825	Survey Count	-	-	-

<sup>1</sup> 1984 escapement estimation and sampling at Salmon Lake (near Sitka) are reported by Schmidt (1985).

<sup>2</sup> Adjusted for tag loss.

stray hatchery fish, the total wild coho salmon escapement to Hugh Smith Lake was estimated at 1,367.

Berners River Survey. A total of 2,825 adult coho salmon was counted during a float and foot survey of the Berners River during 22-25 October. Survey visibility conditions and timing were excellent. The majority of fish remained in pools while very little active spawning was evident. Of the total number of fish counted, 625 were holding in the mosse slough on the east side of the valley while the remainder were in the main river. The 1984 ground survey count represents one of the lowest escapements recorded for the Berners River system (Appendix Table 6).

#### Harvest by Gear Type:

The estimated 1984 harvest gear type and escapement was computed for coho salmon returns to Auke and Hugh Smith Lakes. These estimates were compared with estimates from previous years (Tables 4 and 5), and were broken down by area (Appendix Tables 7 and 8).

The 1984 total return to Auke Lake and the harvest distribution by gear type were about average for previous studies of that stock (Table 4). The troll fishery accounted for an estimated 28.9% of total return, while drift gill net and sport gear accounted for 7.3% and 2.6%, respectively. The total harvest rate was estimated at 38.8%.

The 1984 estimated total wild coho salmon return to Hugh Smith Lake was 4,045 fish of which an estimated 2,678 (66.2%) were harvested. An estimated 42.8% of the total return was harvested by troll gear of which 28.1% was taken in Alaska and 14.7% was taken in British Columbia. Although the total estimated percent taken by troll gear was between estimates for the two previous years (49.9% in 1982 and 41.9% in 1983), a larger proportion was taken by the British Columbia troll fishery in 1984 (Table 5).

An estimated 23.0% of the total return to Hugh Smith Lake was taken by net gear, of which 0.7% was accounted for by British Columbia net fisheries, while 11.4% and 10.9%, respectively, was attributed to Southeastern Alaska purse seine and drift gill net fisheries. An estimated 0.4% of the total return was taken by the Annette Island trap fishery.

No escapement data were available for tagged coho salmon that returned to the Chilkat and Chickamin Rivers. Therefore, it was only possible to determine the relative distribution of those stocks in the fisheries. Based on a total of 73 recoveries the estimated harvest distribution of Chilkat River coho salmon by gear type was: 43.2% by troll gear, 4.3% by purse seine gear, and 52.5% by drift gill net gear (Appendix Table 9).

A total of 22 tagged Chickamin River coho salmon was recovered from random fishery samples (Appendix Table 10). An estimated 60.7% of the total harvest was taken by troll gear of which the majority (55.5%) was attributed to Southeastern Alaska fisheries while 5.2% was taken in northern British Columbia. Estimated percentages for other gear types were: 33.0% for purse seine gear, 5.1% for drift gill net and 1.2% for trap gear.

Table 4. Estimated harvest and percent by gear type, escapement and total return of coho salmon returning to Auke Lake, 1978, 1980, 1981, 1982, 1983 and 1984.

Year	Fishery Sample Size <sup>1</sup>	Harvest: No. of Fish and Percent by Gear Type				Total Catch	Escapement	Total Return
		Troll	Purse Seine	Drift Gillnet	Sport			
1978	32	778 (49.2%)	-	29 (1.8%)	90 (5.7%)	897 (56.7%)	683 (43.3%)	1,580 (100%)
1980	11	96 (11.5%)	-	20 (2.4%)	17 (2.1%)	133 (16.0%)	698 (84.0%)	831 (100%)
1981	35	215 (24.4%)	4 (0.5%)	2 (0.2%)	17 (1.9%)	238 (27.0%)	644 (73.0%)	882 (100%)
1982	28	231 (28.8%)	97 (12.0%)	23 (2.9%)	6 (0.7%)	357 (44.4%)	447 (55.6%)	804 (100%)
1983	90	323 (29.1%)	10 (0.9%)	25 (2.2%)	59 (5.3%)	417 (37.5%)	694 (62.5%)	1,111 (100%)
1984	94	308 (28.9%)	-	78 (7.3%)	28 (2.6%)	414 (38.8%)	651 (61.2%)	1,065 (100%)
Average Number of Fish		325	18	30	36	409	636	1,045
Average % of Total		28.6	2.2	2.8	3.1	36.7	63.3	100

<sup>1</sup> Includes only expandable random recoveries.

Table 5. Estimated harvest and percent by gear type, escapement and total return of coho salmon returning to Hugh Smith Lake, 1982-1984.

Year	Fishery Sample Size <sup>1</sup>	Harvest: No. of Fish and Percent by Gear Type						Total Catch	Escapement	Total Return
		Alaska Troll	B.C. Troll	Alaska Seine	Alaska Gillnet	B.C. Net	Alaska Trap			
1982	72	2,732 (45.4%)	272 (4.5%)	556 (9.2%)	232 (3.9%)	84 (1.4%)	-	3,876 (64.4%)	2,144 (35.6%)	6,020 (100%)
1983	183	1,390 (36.5%)	207 (5.4%)	359 (9.4%)	264 (6.9%)	53 (1.4%)	48 (1.3%)	2,321 (60.9%)	1,490 (39.1%)	3,811 (100%)
1984	144	1,138 (28.1%)	594 (14.7%)	464 (11.4%)	439 (10.9%)	27 (0.7%)	16 (0.4%)	2,678 (66.2%)	1,367 (33.8%)	4,045 (100%)
Average Number of Fish		1,753	358	459	312	55	21	2,958	1,667	4,625
Average % of Total		36.7	8.2	10.0	7.3	1.2	0.6	63.8	36.2	100

<sup>1</sup> Includes only expandable random recoveries; B.C. data for 1983-1984 is preliminary.

## Harvest by Area:

In 1984 the total coho salmon return and harvest distribution by area was estimated for Auke and Hugh Smith Lakes. These figures were compared with estimates for previous years (Tables 6 and 7).

An estimated 28.9% of the total return to Auke Lake was harvested in the northern outside, central outside, and central intermediate PMFC areas (Appendix Table 1). The most important of these was the central intermediate area (Districts 112 and 114) where an estimated 13.3% of the total return was taken. In recent years these three areas appear to have been the most important intermediate and outside harvest areas for this stock. An estimated 9.9% of the total return to Auke Lake was taken in inside districts including 6.1% in Lynn Canal and 2.8% in Stephens Passage.

Hugh Smith Lake coho salmon have exhibited a relatively strong northward harvest distribution. In 1984 an estimated 50.8% of the total return to that system was harvested in Southeastern Alaska compared with 15.4% in British Columbia. The relative proportion taken in Southeastern Alaska compared with British Columbia was estimated (NSC) to be higher in 1982 and 1983 (Table 7). The central outside area (Districts 113 and 154) was estimated (NSC) to be the most important outside harvest area for Hugh Smith Lake coho salmon during all three years. On the average for all areas, the largest percentage of the total return was taken in the local southern inside districts (101 and 102). Overall, the harvest of Hugh Smith Lake coho salmon was widely distributed from Yakutat to central British Columbia. The harvest of that stock in northern Southeastern was limited to outside and intermediate areas with no recoveries recorded for Lynn Canal and Stephens Passage.

It was estimated that the vast majority (97.5%) of the harvest of Chilkat River coho salmon was taken in northern Southeastern. An estimated 24.7% of the harvest was taken in the central intermediate area while 10.1% and 10.2%, respectively, was attributed to fisheries in the northern and central outside areas (Appendix Table 9). Over half (52.5%) of the harvest was estimated to have been taken in Lynn Canal (District 115).

Based on 22 recoveries, the most important harvest areas for Chickamin River coho salmon appeared to be the central outside area and the southern inside area (Appendix Table 10).

## Harvest Rates:

Three different harvest related parameters are defined below.

1. Harvest distribution is the relative distribution of the catch among the fisheries by area and/or gear type expressed as a proportion of the total catch.
2. Stock distribution is the relative distribution of the catch and escapement expressed as a proportion of the total return (catch and escapement).
3. Harvest rate is the total harvest within a defined fishery divided by the total number of fish available within that fishery.

Table 6. Estimated total return, harvest by area, and escapement of coho salmon returns to Auke Lake, 1978, 1980, 1981, 1982, 1983 and 1984.

Area	Harvest: No. of Fish and Percent by Gear Type						Average	Average % of Total
	1978	1980	1981	1982	1983	1984		
Northern Outside 116, 157, 181, 183, 186, 189	-	40 (4.8%)	48 (5.4%)	19 (2.4%)	212 (19.1%)	44 (4.1%)	60	5.9
Central Outside 113, 154	30 (1.9%)	31 (3.7%)	38 (4.3%)	24 (3.0%)	19 (1.7%)	122 (11.5%)	44	4.3
Southern Outside 103, 104, 152	-	-	-	-	4 (0.4%)	-	1	0.1
Central Inter- mediate 112, 114	577 (36.5%)	20 (2.4%)	128 (14.6%)	262 (32.6%)	91 (8.2%)	142 (13.3%)	203	17.9
Southern Inter- mediate 105, 109, 110	-	5 (0.6%)	-	23 (2.8%)	7 (0.6%)	-	6	0.7
Lynn Canal 115	29 (1.8%)	-	2 (0.2%)	7 (0.9%)	19 (1.7%)	65 (6.1%)	20	1.8
Stephens Passage 111	261 (16.5%)	37 (4.5%)	17 (1.9%)	22 (2.7%)	65 (5.8%)	41 (3.8%)	74	5.9
Northern British Columbia	-	-	5 (0.6%)	-	-	-	1	0.1
Total Catch	897 (56.7%)	133 (16.0%)	235 (27.0%)	357 (44.4%)	417 (37.5%)	414 (38.8%)	409	36.7
Escapement	683 (43.3%)	698 (84.0%)	644 (73.0%)	447 (55.6%)	694 (62.5%)	651 (61.2%)	636	63.3
Total Return	1,580 (100%)	831 (100%)	882 (100%)	804 (100%)	1,111 (100%)	1,065 (100%)	1,045	100

Table 7. Estimated total return, harvest by area, and escapement of coho salmon returns to Hugh Smith Lake, 1982-1984.

Harvest: No. of Fish and Percent by Gear Type											
Year	Northern 116, 157, 181 183, 186, 189	Outside Central 113, 154	Southern Outside 103, 104, 152	Central Interm. 112, 114	Southern Interm. 105, 109, 110	Central Inside 106-108	Southern Inside 101, 102	Northern British Columbia	Total Catch	Escape- ment	Total Return
1982	-	1,152 (19.1%)	768 (12.8%)	65 (1.1%)	376 (6.2%)	52 (0.9%)	1,107 (18.4%)	356 (5.9%)	3,876 (64.4%)	2,144 (35.6%)	6,020 (100%)
1983	273 (3.1%)	520 (13.7%)	266 (7.0%)	54 (1.4%)	107 (2.8%)	181 (4.7%)	696 (18.3%)	260 (6.8%)	2,321 (60.9%)	1,490 (39.1%)	3,811 (100%)
1984	125 (3.1%)	459 (11.3%)	396 (9.8%)	104 (2.6%)	26 (0.6%)	43 (1.1%)	904 (22.3%)	621 (15.4%)	2,678 (66.2%)	1,367 (33.8%)	4,045 (100%)
Average	121	710	477	74	170	92	902	412	2,958	1,667	4,625
Average % of Total	3.1	14.7	9.9	1.7	3.2	2.2	19.6	9.4	63.8	36.2	100

4. Total harvest rate is the total harvest of a stock by all fisheries divided by the total return (catch and escapement).

In sequential "gauntlet" (Paulik and Greenough 1966) type fisheries such as occur for coho salmon in Southeastern Alaska, harvest rate estimates for distinct fisheries provide a clearer understanding of management options for achieving desired escapement than do harvest or stock distribution estimates. Harvest rates are independent of removal by previous fisheries and, therefore, provide an independent measure of the effect of a fishery on a migrating population of fish. Therefore, harvest rate estimates are an important component of postseason management assessment and are useful for developing future management strategies.

For this analysis the number of fish available to a fishery is considered to be the total number of fish that migrate through the area where the fishery occurs. The number of fish that pass through a fishing area is the estimated total return (catch and escapement) minus fish harvested in preceding fisheries. Therefore, it is necessary to assume a direction of migration. In this analysis it was assumed that returning coho salmon migrated by the most direct route(s) from the open ocean toward their systems of origin.

The total harvest rate for a stock was estimated as follows:

$$\text{Harvest Rate (H)} = \frac{F}{F + E}$$

Where F = estimated number of tagged fish harvested (expanded sum of random fishery recoveries); and

E = estimated number of tagged fish in the escapement.

Estimated total harvest rates and harvest rates by area for the Auke Lake and Hugh Smith Lake coho salmon stocks are shown in Tables 8 and 9. For the Hugh Smith Lake stock, the outside, intermediate and British Columbia areas were considered to be one fishing area through which the stock migrated enroute to the central and southern inside areas. Therefore, the estimated proportions harvested in outside and intermediate areas and northern British Columbia were summed to obtain a total harvest rate estimate for the overall area (Table 9).

For 1984 the harvest rate in outside waters for the Auke Lake stock was estimated at 0.156, while the overall average for 6 years was 0.105 (Table 8). The 1984 estimated harvest rate in intermediate waters (0.158) was lower than the overall average of 0.202. The 1984 harvest rate estimate for inside area (0.139) was slightly higher than the overall average estimate (0.114). The total estimated harvest rate for the Auke Lake stock in 1984 was 0.388 while the average for all years was 0.367.

The overall harvest rate for Hugh Smith Lake coho salmon by all fisheries was estimated at 0.662 in 1984 compared with 1982 and 1983 estimates of 0.644 and 0.609, respectively (Table 9). In 1984, the estimated harvest rate by out-

Table 8. Estimated harvest rate by area for coho salmon returns to Auke Lake, 1978, 1980, 1981, 1982, 1983 and 1984.

Year	Outside	Intermediate	Inside	Total
1978	0.019	0.372	0.298	0.567
1980	0.085	0.033	0.050	0.160
1981	0.103	0.162	0.029	0.270
1982	0.053	0.372	0.061	0.444
1983	0.212	0.112	0.108	0.375
1984	0.156	0.158	0.139	0.388
Average	0.105	0.202	0.114	0.367

Table 9. Estimated harvest rate by area for coho salmon returns to Hugh Smith Lake, 1982, 1983 and 1984.

Year	Outside, Intermediate, and Northern B.C.			Inside	Grand Total
	Outside and Intermediate	Northern B.C.	Total		
1982	0.392	0.059	0.451	0.352	0.644
1983	0.311	0.068	0.379	0.370	0.609
1984	0.274	0.154	0.428	0.409	0.662
Average	0.326	0.094	0.420	0.377	0.638

side, intermediate and Canadian fisheries was 0.428 while inside area fisheries harvested an estimated 40.9% of the remaining fish.

#### Migratory Timing:

Two areas were chosen for analysis of migratory timing. One contains southern outside districts (103, 104 and 152) and all of northern Southeastern, while the other includes inside and intermediate districts (101, 102, 105, 106, 107 and 108) in southern Southeast (Appendix Figure 4). The second area is also known as the Southeast Quadrant (Clark et al. 1987). These areas were selected to examine the timing of tagged southern inside area wild stocks in the major mixed stock troll fishing districts in outer coastal and northern areas separately from the more local inside areas in southern Southeastern. Significant differences in timing between these areas have been previously documented (NSC; Shaul, et al. 1986). Only the troll harvest was included in the analysis of migratory timing in the first area, while the entire commercial harvest was included for the Southeast Quadrant. Time strata used were 1-week periods corresponding to the statistical weeks shown in Appendix Table 2.

The resulting time-density distributions were based on the date when fish were landed instead of when they were caught. Since the average trip length for troll vessels was approximately 4-6 days, the time when fish were caught preceded the time when they were landed by an average of 2-3 days. The lag time between catch and landing averaged less for purse seine and drift gill net vessels than for troll vessels.

Southern Outside and Northern Areas. Estimated 1984 time-density distributions of the troll catch of Auke Lake, Chilkat River and Hugh Smith Lake coho salmon in southern outside and northern districts are shown in Figures 5 and 6. Included in this area are the Northwest, Northeast and Southwest Quadrants (Clark et al. 1987) which encompass Districts 103, 104, 109-116, 150, 152, 154, 157, 181, 183, 186 and 189. Also shown for comparison with individual stocks is the time density distribution of the total troll catch in that area. The total troll catch peaked on approximately 1 August while the midpoint and mean occurred on approximately 3 August and 10 August, respectively.

The timing of the Auke Lake stock in 1984 was similar to 1982 and 1983 (Shaul et al. 1985 and 1986). The stock was available in the troll fishery from approximately mid-July through the end of the season on 20 September with a peak during the last week of August (Figure 5). The estimated midpoint and mean also occurred during the last week of August.

Tagged Chilkat River coho salmon were available in the troll fishery from approximately the second week of July through the end of the season (20 September). The peak occurred in late August and early September while the mean and midpoint occurred during the last week of August (Figure 5). The Chilkat Lake stock demonstrated very similar timing in the major northern Southeastern troll fishing districts in 1983 (Shaul et al. 1986).

The Hugh Smith Lake stock was available during virtually the entire troll season with an estimated peak near the first of August (Figure 6). The estimated midpoint and mean occurred during approximately the second week of August. Similar migratory timing was observed in 1982 and 1983.

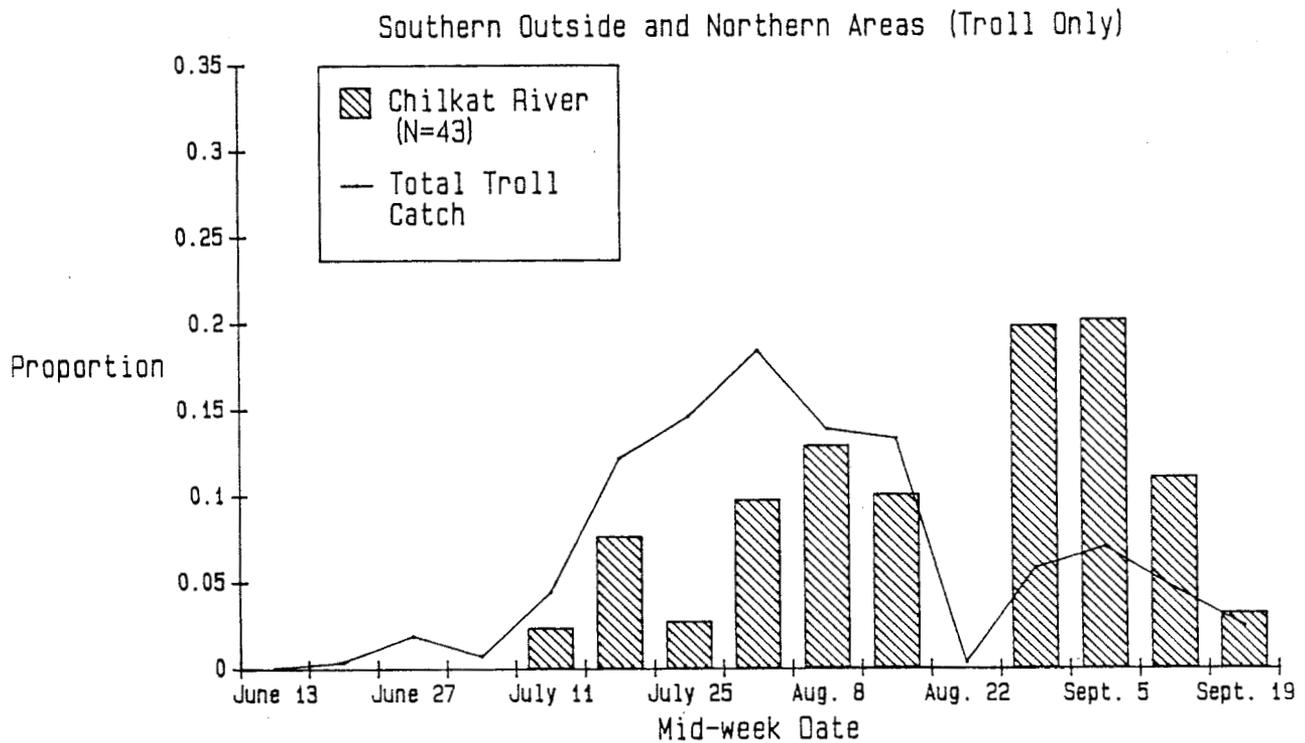
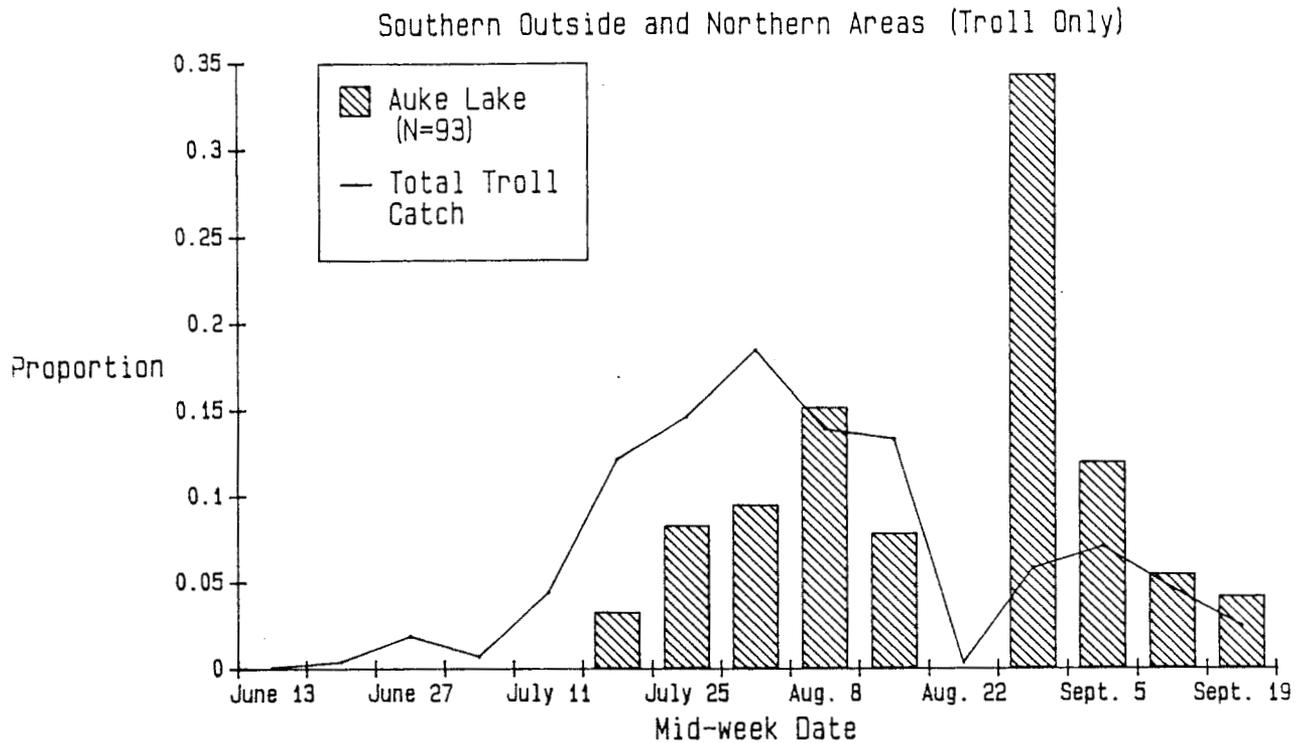


Figure 5. Weekly proportion of the total coho salmon troll catch (line graphs) and estimated troll catch of coded-wire tagged Auke Lake and Chilkat River coho salmon (bar graphs) in southern outside and northern areas, 1984.

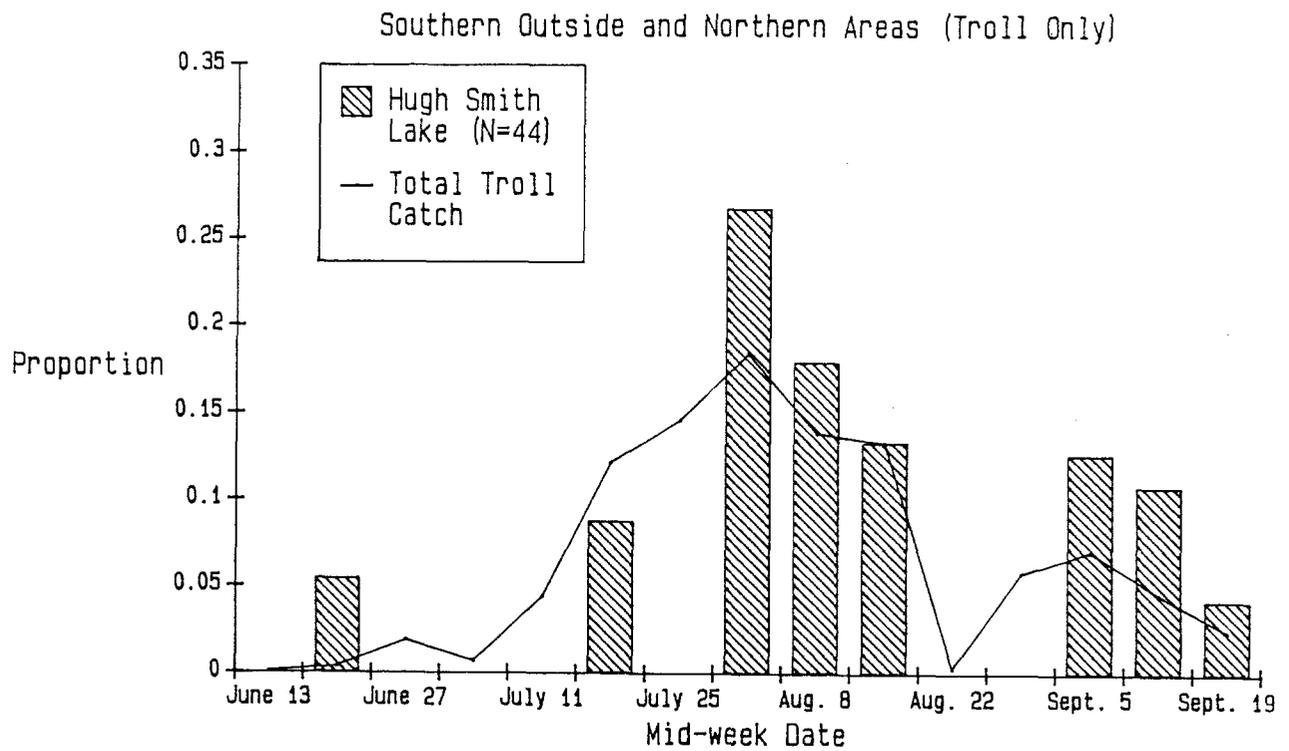


Figure 6. Weekly proportion of the total coho salmon troll catch (line graph) and estimated troll catch of coded-wire tagged Hugh Smith Lake coho salmon (bar graph) in southern outside and northern areas, 1984.

There was an insufficient number of tag recoveries for Chickamin River coho salmon to analyze migratory timing in the northern and outside troll fishery.

Southeast Quadrant. The Southeast Quadrant includes Districts 101, 102 and 105-108. The total commercial harvest by all gear types peaked on approximately 29 August with the midpoint and mean occurring on approximately 23 August and 25 August, respectively. Estimated time-density distributions in the Southeast Quadrant for two local southern inside area wild stocks are shown in Figure 7.

Tagged Hugh Smith Lake coho salmon were recovered during August and September with an estimated 84% of the catch occurring between 19 August and 12 September. The midpoint and mean occurred on about 1 September. A similar pattern was observed in estimated time-density distributions for this stock in 1982 and 1983.

Only 13 tagged Chickamin River coho salmon were recovered from random fishery samples in the Southeast Quadrant (Figure 7). These indicated that the return to that system was available from at least as early as the end of July through the end of the troll season on 20 September.

#### Smolt Outmigration:

The 1985 coho salmon smolt count of 5,601 at the Auke Creek weir was the lowest recorded escapement for that system (Table 10). Historical counts and estimates indicate that coho salmon smolt production from the system has exhibited a continued depressed trend since 1980.

The smolt outmigration from Hugh Smith Lake was estimated because the weir was less than 100% efficient at capturing smolts. A simple Peterson mark/recapture estimate was employed.

Because these estimates depend on examination of adult returns, 1983 is the most recent year for which a smolt population estimate is available for Hugh Smith Lake (Table 10). The 1983 point estimate of 52,269 (95% C.I. 45,987-58,551) smolts was higher than previous estimates of 44,051 (95% C.I. 35,861-59,324) in 1981 and 29,282 (95% C.I. 26,262-33,350) in 1982.

The 1983 age composition was estimated at 15.8% age 1, 50.3% age 2, and 33.9% age 3 (Zadina and Haddix 1985).

#### Survival Rates:

Survival from the time of tagging (smolt or age-1+ juvenile) to the adult stage (age .1) was estimated as follows:

$$\text{Survival Rates (S)} = \frac{F + E}{T}$$

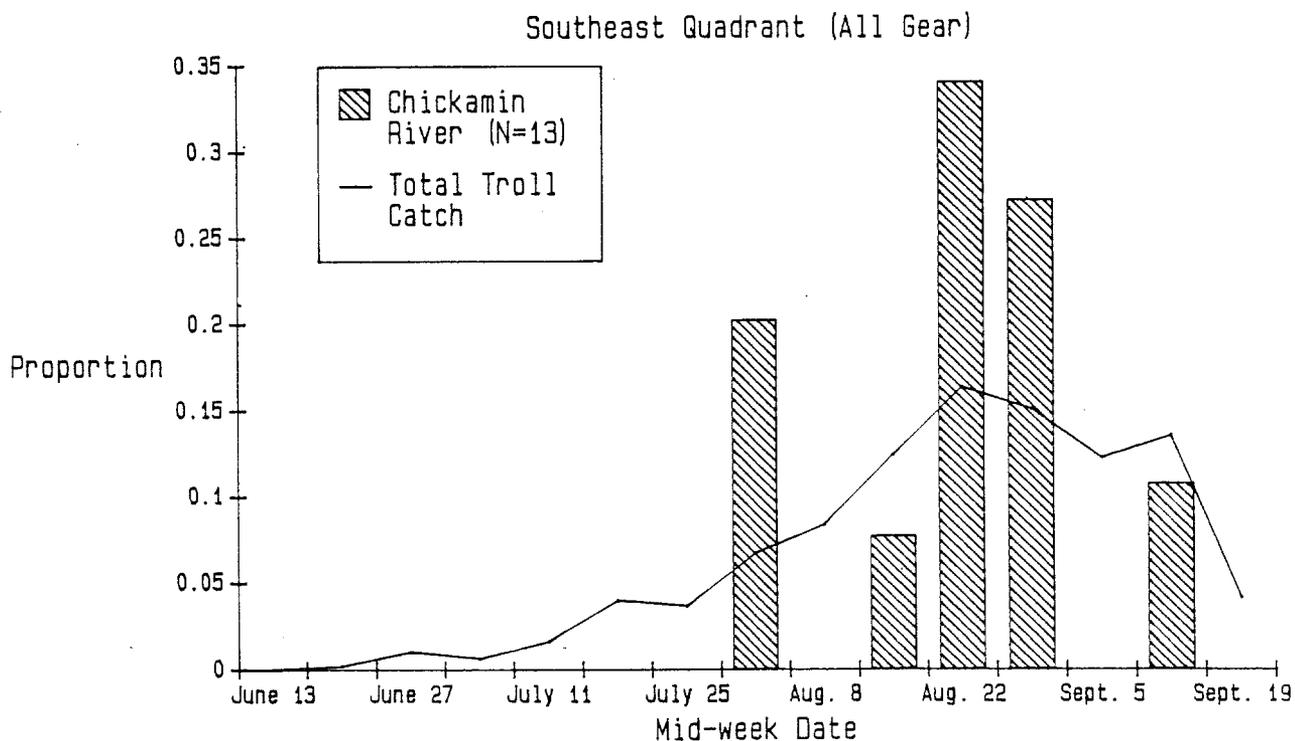
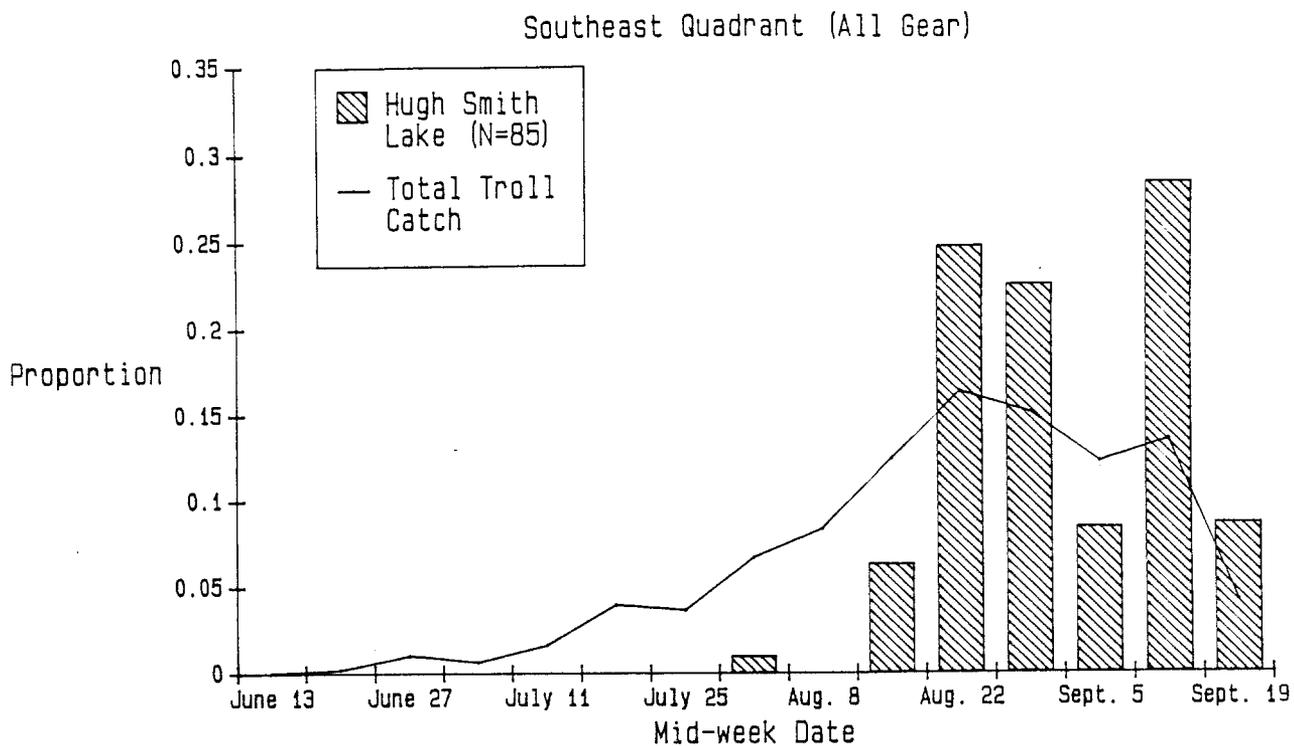


Figure 7. Weekly porportion of the total commercial coho salmon catch (line graphs) and estimated catch of coded-wire tagged Hugh Smith Lake and Chickamin River coho salmon (bar graphs) in the southeast quadrant (Districts 101, 102, and 105-108), 1984.

Table 10. Estimated smolt outmigration from Auke and Hugh Smith Lakes, 1976-1983.

Location	Year	Number of Smolts	95% C.I.
Auke Lake	1976	9,902	9,044 - 10,996
	1977	18,395	15,824 - 22,341
	1979	8,790	8,136 - 9,590
	1980	9,951	Total Count
	1981	6,915	Total Count
	1982	6,607	Total Count
	1983	6,721	Total Count
	1984	7,036	Total Count
	1985	5,601	Total Count
	Hugh Smith	1981	44,051
1982		29,282	26,262 - 33,350
1983		52,269	45,987 - 58,551

Where F = estimated number of marked fish harvested

E = number of marked fish in the escapement

T = number of smolts or juveniles tagged

Smolts that outmigrated from Auke Creek in 1983 experienced an estimated 16.4% survival rate to age .1. Including age-.0 (jack) returns the survival rate was estimated at 20.7%. Previous estimates (excluding age-.0 returns) were 10.5%, 9.0%, 8.2%, 11.8% and 16.1% for 1977, 1979, 1980, 1981 and 1982, respectively (Shaul et al. 1986).

### Discussion

Total harvest rate estimates for the Auke Lake stock have been consistently lower compared with other northern inside area stocks including Speel Lake and the Berners River (Shaul et al. 1986). There is some indication that more of the harvest of Auke Lake fish occurs in District 112 and 114 compared with the other stocks which are harvested in more outside areas. The Auke Lake stock appears to be somewhat intermediate in migratory timing compared with the earlier Speel Lake and Taku River stocks and the later Lynn Canal stocks. Tagged Auke Lake fish have consistently displayed a peak in mid to late August.

While the Auke Lake stock may not be typical of other stocks in the area, its more extensive data base makes it valuable for comparing harvest patterns and rates among years. The highest estimated total harvest rate (56.7%) was recorded in 1978, the year preceding implementation of major troll restrictions. Most of District 111 was closed to commercial trolling beginning in 1979, while extensive troll restrictions in Icy Strait and Cross Sound were implemented beginning in 1980. In addition, a 10-day mid-season troll closure was effected every year since 1980. Harvest rate estimates for the Auke Lake stock decreased greatly following these restrictions: 16.0% in 1980 and 27.0% in 1981. Harvest rates have since increased to an intermediate level with estimates of 44.4% in 1982, 37.5% in 1983, and 38.8% in 1984 (average 40.2%). The initial increase in 1982 was attributed to an increased purse seine catch in fisheries directed at a very large pink salmon return in northern South-eastern. The increase appeared to have been somewhat sustained in the two subsequent years by increased harvest rates by the troll fishery in outside waters. The proportion of the total troll harvest that was taken in outside districts has shown an increasing trend since the early to mid-1970's (ADF&G 1985).

Harvest rate estimates for the Hugh Smith Lake stock were relatively consistent during 1982-1984, ranging from 60.9-66.2% (average 63.8%). The harvest was widely distributed over fisheries involving four gear types from Yakutat south to central British Columbia. A slightly more southern distribution was indicated in 1984 compared with the two previous years. In 1984 British Columbia fisheries harvested an estimated 15.4% of the total return compared with 5.9% in 1982 and 6.5% in 1983. This increase was mitigated to some extent by a decrease in the estimated harvest in areas to the north of Hugh Smith Lake from 27.4% in 1982 and 28.8% in 1983 to 18.7% in 1984.

The timing of the Hugh Smith Lake stock in northern and outside districts appeared to largely coincide with the timing of the total troll catch of all stocks. However, in more local southern and central inside districts (Southeast Quadrant) this stock was relatively late compared with the overall mixture of available stocks, with the majority of the harvest of Hugh Smith Lake fish occurring from mid-August through early September. Local hatchery stocks have displayed similar timing to the Hugh Smith Lake stock (Shaul et al. 1983). Therefore, it appears that much of the harvest in southern districts in July is accounted for by other stock groups including Canadian stocks and/or local early stocks that have not been tagged to any extent. Unfortunately, only eight tags were recovered from 4,158 juvenile coho salmon tagged at Reflection Lake in 1981 (Appendix Table 11). Seven of these were recovered in southern and central inside districts. Seven of the eight recoveries occurred in July, while one fish was recovered in mid-August. Two of the Reflection Lake recoveries were from the Ketchikan area sport fishery, while no tagged Hugh Smith Lake fish have been recovered from that fishery. The Reflection Lake and Karta River socks are known to be relatively early in their migration into fresh water. These stocks should be tagged in the future to better determine their migratory patterns and harvest rates.

The Chilkat River stock exhibited a late migration through northern areas that has been typical of the major Lynn Canal stocks that have been tagged (Shaul et al. 1986). Although no harvest rate estimate was available for 1984, the relatively high percentage (52.5%) of the harvest that occurred in the drift gill net fishery indicated that the harvest rate was high. Data collected in 1983 indicated that the upper Lynn Canal stock were subjected to harvest rates of 85-90%, the highest for all indicator stocks in the region.

## ACKNOWLEDGMENTS

The authors appreciate the efforts of the many field employees who collected the basic data essential to the development of this report. Leon Kolankiewicz and Kent Crabtree were field supervisors of tagging operations in Yakutat and Southeastern Alaska, respectively. Other seasonal employees who participated in tagging and weir operations were Larry Hoare, Doug Hill, Mary Lynn Jensen, Dennis LeMond, Tom Kohan, Mary Ann Crabtree, and Lezlie Peck. The authors are grateful to Paul Kissner and other Sport Fish Division staff who tagged coho salmon on the Unuk, Chickamin and Situk Rivers, and to Ron Josephson and Mike Haddix of the Fisheries Rehabilitation, Enhancement, and Development (FRED) Division for their cooperation in the projects at the Chilkat River and Hugh Smith Lake. Jerry Taylor of the Auke Bay Laboratory and Mary James of the University of Alaska tagged coho salmon smolts and enumerated and sampled returning adults at Auke Creek. Mike Dean of the Commercial Fisheries Division in Juneau participated in the Berners River adult coho salmon survey.

The authors also wish to express their appreciation to Gary Gunstrom and Bob Wilbur for their critical review of the manuscript. In addition, special thanks go to Julie Anderson who typed the manuscript and June Grant who prepared the publication.

## LITERATURE CITED

- ADF&G. 1985. Selected information the migratory characteristics and present status of Southeast Alaska coho salmom stocks with respect to management. Southeast Region Report to the Board of Fisheries, Douglas.
- Clark, J. E., K. A. Pahlke and M. L. Rowse. *In press*. Estimated contribution of coded-wire tagged releases of coho salmon (*Oncorhynchus kisutch*) to the commercial fisheries of Southeastern Alaska in 1980. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report, Juneau.
- Gray, P. L., K. R. Florey, J. F. Koerner, and R. A. Marriott. 1978. Coho salmon (*Oncorhynchus kisutch*) fluorescent pigment mark-recovery program for the Taku, Berners, and Chilkat Rivers in Southeastern Alaska (1972-1974). Alaska Department of Fish and Game, Division of Commercial Fisheries, Information Leaflet 176, Juneau.
- Gray, P. L., J. F. Koerner, and R. A. Marriott. 1981. The age structure and length-weight relationship of Southeastern Alaska coho salmon (*Oncorhynchus kisutch*) 1969-1970. Alaska Department of Fish and Game, Division of Commercial Fisheries, Information Leaflet 195, Juneau.
- Gray, P. L. and R. A. Marriott. 1986. Rearing coho salmon (*Oncorhynchus kisutch*) surveys of 16 Southeastern Alaska watersheds. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 173, Juneau.
- Josephson, R. 1986. Chilkat ponds project update. Alaska Department of Fish and Game, Division of Fisheries Rehabilitation, Enhancement and Development. Unpublished Manuscript, Douglas.
- Kissner, P. D. 1984. A study of chinook salmon in Southeast Alaska. Alaska Department of Fish and Game, Sport Fish Division, Annual Report 1983-1984, Project F-9-16, Vol. 25 (AFS-41-11), Douglas.
- Kissner, P. D. 1985. A study of chinook salmon in Southeast Alaska. Alaska Department of Fish and Game, Sport Fish Division, Annual Report 1984-1985, Project F-9-17, Vol. 26 (AFS-41-12A), Douglas.
- Koerner, J. F. 1977. The use of the coded-wire tag injector under remote field conditions. Alaska Department of Fish and Game, Division of Commercial Fisheries, Information Leaflet 172, Juneau.
- Neimark, L. M. 1985. Harvest estimates of selected fisheries throughout Southeast Alaska. Alaska Department of Fish and Game, Sport Fish Division, Annual Report 1984-1985, Project F-9-17, Vol. 26 (AFS-41-12B), Douglas.
- Schmidt, A. 1984. Status of selected coho salmon stocks in Southeast Alaska. Alaska Department of Fish and Game, Sport Fish Division, Annual Report 1983-1984, Project AFS-51-1, Vol. 25, Douglas.

LITERATURE CITED (Continued)

- Schmidt, A. 1985. Status of selected coho salmon stocks in Southeast Alaska. Alaska Department of Fish and Game, Sport Fish Division, Annual Report 1984-1985, Project G-II-D, Vol. 26, Douglas.
- Shaul, L. D., P. L. Gray and J. F. Koerner. 1983. Coded-wire tagging of wild coho salmon (*Oncorhynchus kisutch*) stocks in Southeastern Alaska. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Report 1981-1982, Project AFC-67-1, Juneau.
- Shaul, L. D., P. L. Gray and J. F. Koerner. 1985. Coded-wire tagging of wild coho (*Oncorhynchus kisutch*) stocks in Southeastern Alaska, 1982-1983. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 140, Juneau.
- Shaul, L. D., P. L. Gray and J. F. Koerner. 1986. Coded-wire tagging of wild coho (*Oncorhynchus kisutch*) stocks in Southeastern Alaska, 1983-1984. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 162, Juneau.
- Taylor, S. G. and M. S. James. 1985. Annual Report - Auke Creek Weir 1985. U.S. Department of Commerce, National Marine Fisheries Service, Auke Bay Laboratory, Unpublished Manuscript, Auke Bay.
- Wood, D. S. and B. W. Van Alen. 1987. Abundance, age, sex and size of coho salmon (*Oncorhynchus kisutch* Walbaum) catches and escapements in Southeastern Alaska, 1984. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 192, Juneau.
- Zadina, T. and M. Haddix. 1985. A summary of coho salmon data from two Southeast Alaska lakes: Hugh Smith and McDonald. Alaska Department of Fish and Game, Division of Fisheries Rehabilitation, Enhancement and Development. Unpublished Manuscript, Douglas.

APPENDICES

Appendix Table 1. Pacific Marine Fisheries Commission (PMFC) area groupings of Southeastern Alaska regulatory districts:

PMFC Area	Regulatory Districts
NOUT Northern Outside	116, 157, 181, 183, 186, 189
COUT Central Outside	113, 154
SOUT Southern Outside	103, 104, 152
SIN Southern Inside	101, 102, 150
SNTR Southern Intermediate	105, 109, 110
CIN Central Inside	106, 107, 108
STEP Stephens Passage	111
CNTR Central Intermediate	112, 114
LYNN Lynn Canal	115

Appendix Table 2. Statistical weeks used in recording and compiling Southeastern Alaska commercial fisheries catch data.

STAT WEEK	YEAR/DATE 1978	YEAR/DATE 1979	YEAR/DATE 1980	YEAR/DATE 1981	YEAR/DATE 1982	YEAR/DATE 1983	YEAR/DATE 1984	YEAR/DATE 1985
1	0101 - 0107	0101 - 0106	0101 - 0105	0101 - 0103	0101 - 0102	0101 - 0101	0101 - 0107	0101 - 0105
2	0108 - 0114	0107 - 0113	0106 - 0112	0104 - 0110	0103 - 0109	0102 - 0108	0108 - 0114	0106 - 0112
3	0115 - 0121	0114 - 0120	0113 - 0119	0111 - 0117	0110 - 0116	0109 - 0115	0115 - 0121	0113 - 0119
4	0122 - 0128	0121 - 0127	0120 - 0126	0118 - 0124	0117 - 0123	0116 - 0122	0122 - 0128	0120 - 0126
5	0129 - 0204	0128 - 0203	0127 - 0202	0125 - 0131	0124 - 0130	0123 - 0129	0129 - 0204	0127 - 0202
6	0205 - 0211	0204 - 0210	0203 - 0209	0201 - 0207	0131 - 0206	0130 - 0205	0205 - 0211	0203 - 0209
7	0212 - 0218	0211 - 0217	0210 - 0216	0208 - 0214	0207 - 0213	0206 - 0212	0212 - 0218	0210 - 0216
8	0219 - 0225	0218 - 0224	0217 - 0223	0215 - 0221	0214 - 0220	0213 - 0219	0219 - 0225	0217 - 0223
9	0226 - 0304	0225 - 0303	0224 - 0301	0222 - 0228	0221 - 0227	0220 - 0226	0226 - 0303	0224 - 0302
10	0305 - 0311	0304 - 0310	0302 - 0308	0301 - 0307	0228 - 0306	0227 - 0305	0304 - 0310	0303 - 0309
11	0312 - 0318	0311 - 0317	0309 - 0315	0308 - 0314	0307 - 0313	0306 - 0312	0311 - 0317	0310 - 0316
12	0319 - 0325	0318 - 0324	0316 - 0322	0315 - 0321	0314 - 0320	0313 - 0319	0318 - 0324	0317 - 0323
13	0326 - 0401	0325 - 0331	0323 - 0329	0322 - 0328	0321 - 0327	0320 - 0326	0325 - 0331	0324 - 0330
14	0402 - 0408	0401 - 0407	0330 - 0405	0329 - 0404	0328 - 0403	0327 - 0402	0401 - 0407	0331 - 0406
15	0409 - 0415	0408 - 0414	0406 - 0412	0405 - 0411	0404 - 0410	0403 - 0409	0408 - 0414	0407 - 0413
16	0416 - 0422	0415 - 0421	0413 - 0419	0412 - 0418	0411 - 0417	0410 - 0416	0415 - 0421	0414 - 0420
17	0423 - 0429	0422 - 0428	0420 - 0426	0419 - 0425	0418 - 0424	0417 - 0423	0422 - 0428	0421 - 0427
18	0430 - 0506	0429 - 0505	0427 - 0503	0426 - 0502	0425 - 0501	0424 - 0430	0429 - 0505	0428 - 0504
19	0507 - 0513	0506 - 0512	0504 - 0510	0503 - 0509	0502 - 0508	0501 - 0507	0506 - 0512	0505 - 0511
20	0514 - 0520	0513 - 0519	0511 - 0517	0510 - 0516	0509 - 0515	0508 - 0514	0513 - 0519	0512 - 0518
21	0521 - 0527	0520 - 0526	0518 - 0524	0517 - 0523	0516 - 0522	0515 - 0521	0520 - 0526	0519 - 0525
22	0528 - 0603	0527 - 0602	0525 - 0531	0524 - 0530	0523 - 0529	0522 - 0528	0527 - 0602	0526 - 0601
23	0604 - 0610	0603 - 0609	0601 - 0607	0531 - 0606	0530 - 0605	0529 - 0604	0603 - 0609	0602 - 0608
24	0611 - 0617	0610 - 0616	0608 - 0614	0607 - 0613	0606 - 0612	0605 - 0611	0610 - 0616	0609 - 0615
25	0618 - 0624	0617 - 0623	0615 - 0621	0614 - 0620	0613 - 0619	0612 - 0618	0617 - 0623	0616 - 0622
26	0625 - 0701	0624 - 0630	0622 - 0628	0621 - 0627	0620 - 0626	0619 - 0625	0624 - 0630	0623 - 0629
27	0702 - 0708	0701 - 0707	0629 - 0705	0628 - 0704	0627 - 0703	0626 - 0702	0701 - 0707	0630 - 0706
28	0709 - 0715	0708 - 0714	0706 - 0712	0705 - 0711	0704 - 0710	0703 - 0709	0708 - 0714	0707 - 0713
29	0716 - 0722	0715 - 0721	0713 - 0719	0712 - 0718	0711 - 0717	0710 - 0716	0715 - 0721	0714 - 0720
30	0723 - 0729	0722 - 0728	0720 - 0726	0719 - 0725	0718 - 0724	0717 - 0723	0722 - 0728	0721 - 0727
31	0730 - 0805	0729 - 0804	0727 - 0802	0726 - 0801	0725 - 0731	0724 - 0730	0729 - 0804	0728 - 0803
32	0806 - 0812	0805 - 0811	0803 - 0809	0802 - 0808	0801 - 0807	0731 - 0806	0805 - 0811	0804 - 0810
33	0813 - 0819	0812 - 0818	0810 - 0816	0809 - 0815	0808 - 0814	0807 - 0813	0812 - 0818	0811 - 0817
34	0820 - 0826	0819 - 0825	0817 - 0823	0816 - 0822	0815 - 0821	0814 - 0820	0819 - 0825	0818 - 0824
35	0827 - 0902	0826 - 0901	0824 - 0830	0823 - 0829	0822 - 0828	0821 - 0827	0826 - 0901	0825 - 0831
36	0903 - 0909	0902 - 0908	0831 - 0906	0830 - 0905	0829 - 0904	0828 - 0903	0902 - 0908	0901 - 0907
37	0910 - 0916	0909 - 0915	0907 - 0913	0906 - 0912	0905 - 0911	0904 - 0910	0909 - 0915	0908 - 0914
38	0917 - 0923	0916 - 0922	0914 - 0920	0913 - 0919	0912 - 0918	0911 - 0917	0916 - 0922	0915 - 0921
39	0924 - 0930	0923 - 0929	0921 - 0927	0920 - 0926	0919 - 0925	0918 - 0924	0923 - 0929	0922 - 0928
40	1001 - 1007	0930 - 1006	0928 - 1004	0927 - 1003	0926 - 1002	0925 - 1001	0930 - 1006	0929 - 1005
41	1008 - 1014	1007 - 1013	1005 - 1011	1004 - 1010	1003 - 1009	1002 - 1008	1007 - 1013	1006 - 1012
42	1015 - 1021	1014 - 1020	1012 - 1018	1011 - 1017	1010 - 1016	1009 - 1015	1014 - 1020	1013 - 1019

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984.

HATCHERY.....	PMFC... GEAR	QUADRANT/PMFC/DISTR.	STAT WEEK	SAMPLE..... SOURCE	SAMPLE TYPE	TAG.. CODE	OBSERVED FISH	EXPANSION FACTOR
AUKE CREEK (W)	GILLNET	NORTHEAST/????/	0-	34	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHEAST/????/	0-	34	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHEAST/????/	0-	35	COMMERCIAL	SELECT 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHEAST/????/	0-	36	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHEAST/????/	0-	36	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHEAST/????/	0-	37	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHEAST/????/	0-	37	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHEAST/????/	0-	37	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHEAST/????/	0-	37	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHEAST/????/	0-	37	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHEAST/????/	0-	37	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHWEST/COUT/113-91		31	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		35	COMMERCIAL	RANDOM 031757	1	3.61
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 031757	1	2.83
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 031757	1	2.83
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 031757	1	2.83
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 031757	1	2.83
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 031757	1	2.83
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 031757	1	2.83
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-10		37	COMMERCIAL	RANDOM 031757	1	2.83
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-10		37	COMMERCIAL	RANDOM 031757	1	2.83
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-32		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-32		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 031757	1	2.35
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		39	COMMERCIAL	RANDOM 031757	1	3.67
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		39	COMMERCIAL	RANDOM 031757	1	3.67
AUKE CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		39	COMMERCIAL	RANDOM 031757	1	3.67
AUKE CREEK (W)	GILLNET	NORTHEAST/STEP/111-32		32	COMMERCIAL	RANDOM 031757	1	4.98
AUKE CREEK (W)	GILLNET	NORTHEAST/STEP/111-		36	COMMERCIAL	RANDOM 031757	1	3.87
AUKE CREEK (W)	GILLNET	NORTHEAST/STEP/111-32		36	COMMERCIAL	RANDOM 031757	1	3.87
AUKE CREEK (W)	SEINE	NORTHWEST/CNTR/114-25		35	COMMERCIAL	RANDOM 031825	1	11.90
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	29	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	30	COMMERCIAL	RANDOM 031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	30	COMMERCIAL	RANDOM 031757	1	0.00

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC... GEAR	QUADRANT/PMFC/DISTR.	STAT SAMPLE..... WEEK SOURCE	SAMPLE TAG.. TYPE CODE	OBSERVED FISH	EXPANSION FACTOR
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-71	32	COMMERCIAL RANDOM 031757	1	5.21
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-	32	COMMERCIAL RANDOM 031757	1	5.21
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-	32	COMMERCIAL RANDOM 031757	1	5.21
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-	33	COMMERCIAL RANDOM 031757	1	3.44
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/154-	33	COMMERCIAL RANDOM 031757	1	3.44
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-	33	COMMERCIAL RANDOM 031757	1	3.44
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-94	33	COMMERCIAL RANDOM 031757	1	3.44
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-94	33	COMMERCIAL RANDOM 031757	1	3.44
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-91	36	COMMERCIAL RANDOM 031757	1	4.77
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-91	36	COMMERCIAL RANDOM 031757	1	4.77
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-94	36	COMMERCIAL RANDOM 031757	1	4.77
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-94	36	COMMERCIAL RANDOM 031757	1	4.77
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-	38	COMMERCIAL RANDOM 031757	1	7.87
AUKE CREEK (W)	TROLL	NORTHWEST/NOUT/157-	32	COMMERCIAL RANDOM 031757	1	7.19
AUKE CREEK (W)	TROLL	NORTHWEST/NOUT/181-	33	COMMERCIAL RANDOM 031757	1	6.29
AUKE CREEK (W)	TROLL	NORTHWEST/NOUT/181-	33	COMMERCIAL RANDOM 031757	1	6.29
AUKE CREEK (W)	TROLL	NORTHWEST/NOUT/116-05	36	COMMERCIAL RANDOM 031757	1	4.88
AUKE CREEK (W)	TROLL	NORTHWEST/NOUT/181-	36	COMMERCIAL RANDOM 031757	1	4.88
AUKE CREEK (W)	TROLL	NORTHWEST/NOUT/116-05	36	COMMERCIAL RANDOM 031757	1	4.88
AUKE CREEK (W)	TROLL	NORTHWEST/NOUT/116-	37	COMMERCIAL RANDOM 031757	1	2.20
AUKE CREEK (W)	TROLL	NORTHWEST/NOUT/181-	38	COMMERCIAL RANDOM 031757	1	1.17
AUKE CREEK (W)	TROLL	NORTHWEST/NOUT/189-	38	COMMERCIAL RANDOM 031757	1	1.17
AUKE CREEK (W)	TROLL	NORTHWEST/NOUT/189-	38	COMMERCIAL RANDOM 031757	1	1.17
AUKE CREEK (W)	TROLL	NORTHWEST/NOUT/189-	38	COMMERCIAL RANDOM 031757	1	1.17
AUKE CREEK (W)	UNKNOWN	UNKNOWN/????/ 0-	31	COMMERCIAL SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	UNKNOWN/????/ 0-	31	COMMERCIAL SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	UNKNOWN/????/ 0-	32	COMMERCIAL SELECT 031757	1	0.00
AUKE CRÉEK (W)	UNKNOWN	UNKNOWN/????/ 0-	32	COMMERCIAL SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	UNKNOWN/????/ 0-	32	COMMERCIAL SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	UNKNOWN/????/ 0-	32	COMMERCIAL SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	UNKNOWN/????/ 0-	32	COMMERCIAL SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	UNKNOWN/????/ 0-	32	COMMERCIAL SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	UNKNOWN/????/ 0-	32	COMMERCIAL SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	UNKNOWN/????/ 0-	37	COMMERCIAL RANDOM 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	NORTHWEST/CNTR/114-	34	SPORT SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-50	31	SPORT SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-	32	SPORT RANDOM 031757	1	5.34
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-50	33	SPORT SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-40	33	UNKNOWN RANDOM 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-50	34	SPORT RANDOM 031757	1	5.34
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-50	36	SPORT RANDOM 031757	1	5.34

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC... GEAR	QUADRANT/PMFC/DISTR.	STAT SAMPLE..... WEEK SOURCE	SAMPLE TYPE	TAG.. CODE	OBSERVED FISH	EXPANSION FACTOR
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-25	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-25	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-25	35	COMMERCIAL RANDOM	031757	1	3.79
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-21	36	COMMERCIAL RANDOM	031757	1	8.59
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-25	36	COMMERCIAL RANDOM	031757	1	8.59
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-23	37	COMMERCIAL RANDOM	031757	1	6.19
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	37	COMMERCIAL RANDOM	031757	1	6.19
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-21	37	COMMERCIAL RANDOM	031757	1	6.19
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-25	37	COMMERCIAL RANDOM	031757	1	6.19
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-	37	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-25	38	COMMERCIAL RANDOM	031757	1	1.95
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-21	38	COMMERCIAL RANDOM	031757	1	1.95
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-25	38	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/ 0-	29	COMMERCIAL RANDOM	031757	1	5.16
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-94	29	COMMERCIAL RANDOM	031757	1	5.16
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/ 0-	30	COMMERCIAL RANDOM	031757	1	5.78
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-91	30	COMMERCIAL RANDOM	031757	1	5.78
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-91	30	COMMERCIAL RANDOM	031757	1	5.78
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-	30	COMMERCIAL RANDOM	031757	1	5.78
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-91	31	COMMERCIAL RANDOM	031757	1	5.85
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/ 0-	31	COMMERCIAL RANDOM	031757	1	5.85
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/113-31	32	COMMERCIAL RANDOM	031757	1	5.21
AUKE CREEK (W)	TROLL	NORTHWEST/COUT/154-	32	COMMERCIAL RANDOM	031757	1	5.21

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC... GEAR	QUADRANT/PMFC/DISTR.	STAT	SAMPLE..... WEEK SOURCE	SAMPLE TYPE	TAG.. CODE	OBSERVED FISH	EXPANSION FACTOR
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	30	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	30	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	31	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	31	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	31	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	31	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	31	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	31	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	31	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	31	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	32	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	32	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	32	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	32	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	32	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	32	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	32	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	33	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	33	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	33	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	33	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	33	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	33	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	33	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	33	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	33	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	33	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	33	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	35	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	35	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	35	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	36	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	36	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	36	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	36	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	37	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	37	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	37	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	38	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	38	COMMERCIAL RANDOM	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	38	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/????/	0-	38	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	UNKNOWN/????/	0-	39	COMMERCIAL SELECT	031757	1	0.00
AUKE CREEK (W)	TROLL	NORTHWEST/CNTR/114-27	0-	32	COMMERCIAL RANDOM	031757	1	8.24

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC... GEAR	QUADRANT/PMFC/DISTR.	STAT SAMPLE..... WEEK SOURCE	SAMPLE TAG.. TYPE CODE	OBSERVED FISH	EXPANSION FACTOR
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-50	36	SPORT RANDOM 031757	1	5.34
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-40	36	SPORT SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-50	36	SPORT SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-50	37	SPORT SELECT 031757	1	0.00
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-50	38	SPORT RANDOM 031757	1	5.34
AUKE CREEK (W)	UNKNOWN	NORTHEAST/STEP/111-50	38	SPORT SELECT 031757	1	0.00
SUBTOTAL					170	376.16
BERNERS RIVER (W)	GILLNET	NORTHEAST/????/ 0-	37	COMMERCIAL RANDOM 042243	1	0.00
SUBTOTAL					1	0.00
CHICKAMIN RIVER (W)	GILLNET	SOUTHEAST/ CIN/106-	33	COMMERCIAL RANDOM 042027	1	1.47
CHICKAMIN RIVER (W)	GILLNET	SOUTHEAST/ CIN/106-30	34	COMMERCIAL RANDOM 042027	1	1.36
CHICKAMIN RIVER (W)	GILLNET	SOUTHEAST/ SIN/101-	37	COMMERCIAL RANDOM 042027	1	2.37
CHICKAMIN RIVER (W)	SEINE	SOUTHEAST/????/ 0-	34	COMMERCIAL RANDOM 042027	1	0.00
CHICKAMIN RIVER (W)	SEINE	SOUTHEAST/ SIN/101-41	31	COMMERCIAL RANDOM 042027	1	9.75
CHICKAMIN RIVER (W)	SEINE	SOUTHEAST/ SIN/101-	34	COMMERCIAL RANDOM 042027	1	3.49
CHICKAMIN RIVER (W)	SEINE	SOUTHEAST/ SIN/102-10	34	COMMERCIAL RANDOM 042027	1	3.49
CHICKAMIN RIVER (W)	SEINE	SOUTHEAST/ SIN/102-10	34	COMMERCIAL RANDOM 042144	1	3.49
CHICKAMIN RIVER (W)	SEINE	SOUTHEAST/ SIN/101-11	35	COMMERCIAL RANDOM 042144	1	3.41
CHICKAMIN RIVER (W)	SEINE	SOUTHWEST/SOUT/104-10	32	COMMERCIAL RANDOM 042027	1	4.74
CHICKAMIN RIVER (W)	SEINE	SOUTHWEST/SOUT/104-10	34	COMMERCIAL RANDOM 042144	1	5.03
CHICKAMIN RIVER (W)	TRAP	SOUTHEAST/ SIN/101-28	33	COMMERCIAL RANDOM 042027	1	1.25
CHICKAMIN RIVER (W)	TROLL	NORTHWEST/????/ 0-	31	COMMERCIAL RANDOM 042027	1	0.00
CHICKAMIN RIVER (W)	TROLL	UNKNOWN/????/ 0-	36	COMMERCIAL SELECT 042027	1	0.00
CHICKAMIN RIVER (W)	TROLL	SOUTHEAST/ CIN/106-	35	COMMERCIAL RANDOM 042144	1	3.17
CHICKAMIN RIVER (W)	TROLL	NORTHWEST/CNTR/114-21	37	COMMERCIAL RANDOM 042027	1	6.19
CHICKAMIN RIVER (W)	TROLL	NORTHWEST/COUT/113-45	28	COMMERCIAL RANDOM 042144	1	8.45
CHICKAMIN RIVER (W)	TROLL	NORTHWEST/COUT/113-45	30	COMMERCIAL RANDOM 042144	1	5.78
CHICKAMIN RIVER (W)	TROLL	NORTHWEST/COUT/154-	32	COMMERCIAL RANDOM 042144	1	5.21
CHICKAMIN RIVER (W)	TROLL	NORTHWEST/COUT/113-71	32	COMMERCIAL RANDOM 042144	1	5.21
CHICKAMIN RIVER (W)	TROLL	NORTHWEST/COUT/113-91	36	COMMERCIAL RANDOM 042144	1	4.77
CHICKAMIN RIVER (W)	TROLL	SOUTHEAST/ SIN/101-29	37	COMMERCIAL RANDOM 042027	1	1.91
CHICKAMIN RIVER (W)	TROLL	NORTHEAST/SNTR/109-	29	COMMERCIAL RANDOM 042027	1	2.18
CHICKAMIN RIVER (W)	TROLL	SOUTHEAST/SNTR/105-	35	COMMERCIAL RANDOM 042027	1	13.26
CHICKAMIN RIVER (W)	UNKNOWN	UNKNOWN/????/ 0-	31	COMMERCIAL SELECT 042027	1	0.00
CHICKAMIN RIVER (W)	UNKNOWN	UNKNOWN/????/ 0-	31	COMMERCIAL SELECT 042027	1	0.00
CHICKAMIN RIVER (W)	UNKNOWN	SOUTHEAST/ SIN/101-27	37	SPORT RANDOM 042144	1	0.00
SUBTOTAL					27	94.73

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC... GEAR	QUADRANT/PMFC/DISTR.	STAT WEEK	SAMPLE..... SOURCE	SAMPLE TYPE	TAG.. CODE	OBSERVED FISH	EXPANSION FACTOR
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-	38	COMMERCIAL	RANDOM	042207	1	2.35
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-32	38	COMMERCIAL	RANDOM	042209	1	2.35
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-32	38	COMMERCIAL	RANDOM	042209	1	2.35
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-34	39	COMMERCIAL	RANDOM	042139	1	3.67
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-	39	COMMERCIAL	RANDOM	042207	1	3.67
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-	39	COMMERCIAL	RANDOM	042207	1	3.67
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-	42	COMMERCIAL	RANDOM	042210	1	34.00
CHILKAT RIVER (W)	SEINE	NORTHEAST/CNTR/112-18	34	COMMERCIAL	RANDOM	042137	1	5.40
CHILKAT RIVER (W)	SEINE	NORTHWEST/CNTR/114-80	36	COMMERCIAL	RANDOM	042207	1	3.25
CHILKAT RIVER (W)	SEINE	NORTHEAST/SNTR/109-10	32	COMMERCIAL	RANDOM	042209	1	1.91
CHILKAT RIVER (W)	SEINE	NORTHEAST/SNTR/109-	34	COMMERCIAL	RANDOM	042210	1	2.59
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	29	COMMERCIAL	RANDOM	042207	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	29	COMMERCIAL	RANDOM	042209	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	30	COMMERCIAL	RANDOM	042210	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	31	COMMERCIAL	RANDOM	042137	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	31	COMMERCIAL	RANDOM	042137	1	0.00
CHILKAT RIVER (W)	TROLL	UNKNOWN/????/ 0-	31	COMMERCIAL	SELECT	042137	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	32	COMMERCIAL	RANDOM	042138	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	32	COMMERCIAL	RANDOM	042139	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	33	COMMERCIAL	RANDOM	042137	1	0.00
CHILKAT RIVER (W)	TROLL	UNKNOWN/????/ 0-	33	COMMERCIAL	SELECT	042137	1	0.00
CHILKAT RIVER (W)	TROLL	UNKNOWN/????/ 0-	33	COMMERCIAL	SELECT	042139	1	0.00
CHILKAT RIVER (W)	TROLL	UNKNOWN/????/ 0-	33	COMMERCIAL	SELECT	042209	1	0.00
CHILKAT RIVER (W)	TROLL	UNKNOWN/????/ 0-	33	COMMERCIAL	SELECT	042210	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	36	COMMERCIAL	RANDOM	042138	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	36	COMMERCIAL	RANDOM	042138	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	36	COMMERCIAL	RANDOM	042209	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	36	COMMERCIAL	RANDOM	042209	1	0.00
CHILKAT RIVER (W)	TROLL	UNKNOWN/????/ 0-	36	COMMERCIAL	SELECT	042207	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	37	COMMERCIAL	RANDOM	042137	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	37	COMMERCIAL	RANDOM	042139	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	37	COMMERCIAL	RANDOM	042207	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	37	COMMERCIAL	RANDOM	042207	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	37	COMMERCIAL	RANDOM	042210	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/????/ 0-	38	COMMERCIAL	SELECT	042139	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-	32	COMMERCIAL	RANDOM	042210	1	8.24
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL	RANDOM	042137	1	3.79
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL	RANDOM	042138	1	3.79
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL	RANDOM	042138	1	3.79
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL	RANDOM	042139	1	3.79
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL	RANDOM	042210	1	3.79

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC... GEAR	QUADRANT/PMFC/DISTR.	STAT WEEK	SAMPLE SOURCE	SAMPLE TYPE	TAG.. CODE	OBSERVED FISH	EXPANSION FACTOR
CHILKAT LAKE (W)	TROLL	UNKNOWN/????/	0-	36	COMMERCIAL	SELECT 042124	1	0.00
							-----	-----
SUBTOTAL							1	0.00
CHILKAT RIVER (W)	GILLNET	NORTHEAST/????/	0-	34	COMMERCIAL	RANDOM 042137	1	0.00
CHILKAT RIVER (W)	GILLNET	NORTHEAST/????/	0-	37	COMMERCIAL	RANDOM 042140	1	0.00
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		32	COMMERCIAL	RANDOM 042209	1	3.78
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		34	COMMERCIAL	RANDOM 042139	1	4.81
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		35	COMMERCIAL	RANDOM 042209	1	3.61
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		36	COMMERCIAL	RANDOM 042138	1	5.97
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		36	COMMERCIAL	RANDOM 042140	1	5.97
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		36	COMMERCIAL	RANDOM 042210	1	5.97
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042137	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042138	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042138	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042138	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042138	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042138	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042138	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042138	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042139	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042139	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042139	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042140	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-10		37	COMMERCIAL	RANDOM 042140	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042207	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042207	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042207	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042209	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042209	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042209	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042210	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042210	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042210	1	2.83
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 042137	1	2.35
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 042138	1	2.35
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-32		38	COMMERCIAL	RANDOM 042139	1	2.35
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-32		38	COMMERCIAL	RANDOM 042139	1	2.35
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 042139	1	2.35
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 042139	1	2.35
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 042140	1	2.35
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-		38	COMMERCIAL	RANDOM 042207	1	2.35
CHILKAT RIVER (W)	GILLNET	NORTHEAST/LYNN/115-32		38	COMMERCIAL	RANDOM 042207	1	2.35

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC...	QUADRANT/PMFC/DISTR.	STAT	SAMPLE.....	SAMPLE	TAG..	OBSERVED	EXPANSION
	GEAR		WEEK	SOURCE	TYPE	CODE	FISH	FACTOR
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-	35	COMMERCIAL	RANDOM	042210	1	3.79
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-25	36	COMMERCIAL	RANDOM	042138	1	8.59
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-25	36	COMMERCIAL	RANDOM	042140	1	8.59
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-25	36	COMMERCIAL	RANDOM	042210	1	8.59
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-	37	COMMERCIAL	RANDOM	042209	1	6.19
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-	37	COMMERCIAL	SELECT	042140	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-25	38	COMMERCIAL	RANDOM	042138	1	1.95
CHILKAT RIVER (W)	TROLL	NORTHWEST/CNTR/114-25	38	COMMERCIAL	RANDOM	042139	1	1.95
CHILKAT RIVER (W)	TROLL	NORTHWEST/COUT/113-	28	COMMERCIAL	RANDOM	042137	1	8.45
CHILKAT RIVER (W)	TROLL	NORTHWEST/COUT/113-95	29	COMMERCIAL	RANDOM	042209	1	5.16
CHILKAT RIVER (W)	TROLL	NORTHWEST/COUT/113-	30	COMMERCIAL	SELECT	042207	1	0.00
CHILKAT RIVER (W)	TROLL	NORTHWEST/COUT/ 0-	31	COMMERCIAL	RANDOM	042140	1	5.85
CHILKAT RIVER (W)	TROLL	NORTHWEST/COUT/154-	33	COMMERCIAL	RANDOM	042138	1	3.44
CHILKAT RIVER (W)	TROLL	NORTHWEST/COUT/113-94	33	COMMERCIAL	RANDOM	042207	1	3.44
CHILKAT RIVER (W)	TROLL	NORTHWEST/COUT/113-94	36	COMMERCIAL	RANDOM	042209	1	4.77
CHILKAT RIVER (W)	TROLL	NORTHWEST/NOU/116-25	31	COMMERCIAL	RANDOM	042209	1	7.60
CHILKAT RIVER (W)	TROLL	NORTHWEST/NOU/116-05	32	COMMERCIAL	RANDOM	042138	1	7.19
CHILKAT RIVER (W)	TROLL	NORTHWEST/NOU/116-	33	COMMERCIAL	RANDOM	042209	1	6.29
CHILKAT RIVER (W)	TROLL	NORTHWEST/NOU/116-	33	COMMERCIAL	RANDOM	042209	1	6.29
CHILKAT RIVER (W)	TROLL	NORTHWEST/NOU/ 0-	37	COMMERCIAL	RANDOM	042210	1	2.20
CHILKAT RIVER (W)	TROLL	NORTHWEST/NOU/189-	38	COMMERCIAL	RANDOM	042139	1	1.17
CHILKAT RIVER (W)	TROLL	SOUTHWEST/SOUT/104-40	32	COMMERCIAL	RANDOM	042209	1	3.09
CHILKAT RIVER (W)	UNKNOWN	UNKNOWN/????/ 0-	28	COMMERCIAL	SELECT	042140	1	0.00
CHILKAT RIVER (W)	UNKNOWN	UNKNOWN/????/ 0-	31	COMMERCIAL	SELECT	042137	1	0.00
CHILKAT RIVER (W)	UNKNOWN	UNKNOWN/????/ 0-	31	COMMERCIAL	SELECT	042138	1	0.00
CHILKAT RIVER (W)	UNKNOWN	UNKNOWN/????/ 0-	31	COMMERCIAL	SELECT	042138	1	0.00
CHILKAT RIVER (W)	UNKNOWN	UNKNOWN/????/ 0-	31	COMMERCIAL	SELECT	042207	1	0.00
CHILKAT RIVER (W)	UNKNOWN	UNKNOWN/????/ 0-	31	COMMERCIAL	SELECT	042209	1	0.00
CHILKAT RIVER (W)	UNKNOWN	UNKNOWN/????/ 0-	31	COMMERCIAL	SELECT	042210	1	0.00
CHILKAT RIVER (W)	UNKNOWN	UNKNOWN/????/ 0-	32	COMMERCIAL	SELECT	042137	1	0.00
CHILKAT RIVER (W)	UNKNOWN	UNKNOWN/????/ 0-	32	COMMERCIAL	SELECT	042138	1	0.00
SUBTOTAL							109	305.33
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/????/ 0-	34	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/????/ 0-	34	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKE (W)	GILLNET	UNKNOWN/????/ 0-	36	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ CIN/106-41	37	COMMERCIAL	RANDOM	042028	1	1.71
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ CIN/106-41	37	COMMERCIAL	RANDOM	042206	1	1.71
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	31	COMMERCIAL	RANDOM	042206	1	2.35
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	33	COMMERCIAL	RANDOM	042206	1	1.94

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC...	QUADRANT/PMFC/DISTR.	STAT	SAMPLE.....	SAMPLE	TAG..	OBSERVED	EXPANSION	
	GEAR		WEEK	SOURCE	TYPE	CODE	FISH	FACTOR	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	37	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	37	RACK RETURN	SELECT	042319	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-90	37		SPORT	SELECT	042206	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042028	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042028	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042028	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042029	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	38	RACK RETURN	SELECT	042319	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042028	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042028	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042028	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042028	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042029	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042319	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	39	RACK RETURN	SELECT	042319	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	40	RACK RETURN	RANDOM	042028	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	40	RACK RETURN	RANDOM	042028	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	40	RACK RETURN	RANDOM	042029	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	40	RACK RETURN	RANDOM	042029	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	40	RACK RETURN	RANDOM	042029	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	40	RACK RETURN	RANDOM	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	40	RACK RETURN	RANDOM	042206	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	40	RACK RETURN	SELECT	042029	1	0.00	
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	41	RACK RETURN	RANDOM	042206	1	0.00	
SUBTOTAL							211	375.29	

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC... GEAR	QUADRANT/PMFC/DISTR.	STAT SAMPLE..... WEEK SOURCE	SAMPLE TAG.. TYPE CODE	OBSERVED FISH	EXPANSION FACTOR
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-	37	COMMERCIAL RANDOM 042028	1	1.91
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-29	37	COMMERCIAL RANDOM 042028	1	1.91
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-	37	COMMERCIAL RANDOM 042206	1	1.91
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/102-	37	COMMERCIAL RANDOM 042206	1	1.91
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-	37	COMMERCIAL RANDOM 042206	1	1.91
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-10	37	COMMERCIAL RANDOM 042206	1	1.91
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-	37	COMMERCIAL RANDOM 042206	1	1.91
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-	37	COMMERCIAL RANDOM 042206	1	1.91
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-29	38	COMMERCIAL RANDOM 042028	1	2.57
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-41	38	COMMERCIAL RANDOM 042028	1	2.57
HUGH SMITH LAKE (W)	TROLL	NORTHEAST/SNTR/109-	29	COMMERCIAL RANDOM 042029	1	2.18
HUGH SMITH LAKE (W)	TROLL	SOUTHWEST/SOUT/104-40	31	COMMERCIAL RANDOM 042028	1	3.87
HUGH SMITH LAKE (W)	TROLL	SOUTHWEST/SOUT/104-40	31	COMMERCIAL RANDOM 042028	1	3.87
HUGH SMITH LAKE (W)	TROLL	SOUTHWEST/SOUT/104-40	31	COMMERCIAL RANDOM 042206	1	3.87
HUGH SMITH LAKE (W)	TROLL	SOUTHWEST/SOUT/104-40	31	COMMERCIAL RANDOM 042206	1	3.87
HUGH SMITH LAKE (W)	TROLL	SOUTHWEST/SOUT/104-40	32	COMMERCIAL RANDOM 042206	1	3.09
HUGH SMITH LAKE (W)	TROLL	SOUTHWEST/SOUT/104-	33	COMMERCIAL RANDOM 042206	1	2.12
HUGH SMITH LAKE (W)	TROLL	SOUTHWEST/SOUT/104-40	36	COMMERCIAL RANDOM 042028	1	4.05
HUGH SMITH LAKE (W)	TROLL	SOUTHWEST/SOUT/103-90	37	COMMERCIAL RANDOM 042028	1	5.10
HUGH SMITH LAKE (W)	TROLL	SOUTHWEST/SOUT/103-90	37	COMMERCIAL RANDOM 042029	1	5.10
HUGH SMITH LAKE (W)	UNKNOWN	UNKNOWN/????/ 0-	0	COMMERCIAL SELECT 042206	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	UNKNOWN/????/ 0-	32	COMMERCIAL SELECT 042206	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	UNKNOWN/????/ 0-	32	COMMERCIAL SELECT 042206	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	2	RACK RETURN SELECT 042020	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	2	RACK RETURN SELECT 042130	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	2	RACK RETURN SELECT 042130	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	2	RACK RETURN SELECT 042130	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	2	RACK RETURN SELECT 042130	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	2	RACK RETURN SELECT 042143	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-	34	COMMERCIAL RANDOM 042028	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-	34	COMMERCIAL RANDOM 042028	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-	34	COMMERCIAL RANDOM 042029	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-	34	COMMERCIAL RANDOM 042206	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-90	35	SPORT SELECT 042028	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	37	RACK RETURN SELECT 042028	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	37	RACK RETURN SELECT 042028	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	37	RACK RETURN SELECT 042028	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	37	RACK RETURN SELECT 042028	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	37	RACK RETURN SELECT 042028	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	37	RACK RETURN SELECT 042206	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	37	RACK RETURN SELECT 042206	1	0.00
HUGH SMITH LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/101-30	37	RACK RETURN SELECT 042206	1	0.00

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC... GEAR	QUADRANT/PMFC/DISTR.	STAT WEEK	SAMPLE..... SOURCE	SAMPLE TYPE	TAG.. CODE	OBSERVED FISH	EXPANSION FACTOR
HUGH SMITH LAKE (W)	TROLL	UNKNOWN/????/ 0-	39	COMMERCIAL SELECT	042028	1	0.00	
HUGH SMITH LAKE (W)	TROLL	UNKNOWN/????/ 0-	39	COMMERCIAL SELECT	042206	1	0.00	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ CIN/106-41	36	COMMERCIAL RANDOM	042206	1	0.93	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ CIN/106-41	36	COMMERCIAL RANDOM	042206	1	0.93	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ CIN/106-41	37	COMMERCIAL RANDOM	042206	1	1.29	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ CIN/106-41	37	COMMERCIAL RANDOM	042206	1	1.29	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/CNTR/114-	29	COMMERCIAL RANDOM	042206	1	5.40	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/CNTR/114-	29	COMMERCIAL RANDOM	042206	1	5.40	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/CNTR/114-	32	COMMERCIAL RANDOM	042206	1	8.24	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/113-	26	COMMERCIAL RANDOM	042206	1	7.99	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/113-91	29	COMMERCIAL RANDOM	042206	1	5.16	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/113-91	31	COMMERCIAL RANDOM	042206	1	5.85	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/113-	31	COMMERCIAL RANDOM	042206	1	5.85	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/113-31	31	COMMERCIAL RANDOM	042206	1	5.85	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/154-	32	COMMERCIAL RANDOM	042028	1	5.21	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/154-	32	COMMERCIAL RANDOM	042028	1	5.21	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/113-71	32	COMMERCIAL RANDOM	042029	1	5.21	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/154-	32	COMMERCIAL RANDOM	042206	1	5.21	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/154-	32	COMMERCIAL RANDOM	042206	1	5.21	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/ 0-	33	COMMERCIAL RANDOM	042028	1	3.44	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/154-	33	COMMERCIAL RANDOM	042028	1	3.44	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/154-	33	COMMERCIAL RANDOM	042206	1	3.44	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/113-91	36	COMMERCIAL RANDOM	042028	1	4.77	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/113-91	36	COMMERCIAL RANDOM	042206	1	4.77	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/COU/113-	38	COMMERCIAL RANDOM	042206	1	7.87	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/NOUT/157-	31	COMMERCIAL RANDOM	042206	1	7.60	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/NOUT/116-25	36	COMMERCIAL RANDOM	042028	1	4.88	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/NOUT/ 0-	36	COMMERCIAL RANDOM	042206	1	4.88	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/NOUT/ 0-	37	COMMERCIAL RANDOM	042206	1	2.20	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/NOUT/189-	38	COMMERCIAL RANDOM	042028	1	1.17	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/NOUT/189-	38	COMMERCIAL RANDOM	042029	1	1.17	
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/NOUT/189-	38	COMMERCIAL RANDOM	042206	1	1.17	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-29	35	COMMERCIAL RANDOM	042028	1	2.43	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-	35	COMMERCIAL RANDOM	042028	1	2.43	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-	35	COMMERCIAL RANDOM	042028	1	2.43	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-29	35	COMMERCIAL RANDOM	042028	1	2.43	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-	35	COMMERCIAL RANDOM	042206	1	2.43	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-23	36	COMMERCIAL RANDOM	042028	1	2.35	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-29	36	COMMERCIAL RANDOM	042206	1	2.35	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/102-	37	COMMERCIAL RANDOM	042028	1	1.91	
HUGH SMITH LAKE (W)	TROLL	SOUTHEAST/ SIN/101-	37	COMMERCIAL RANDOM	042028	1	1.91	

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC...	QUADRANT/PMFC/DISTR.	STAT	SAMPLE.....	SAMPLE	TAG..	OBSERVED	EXPANSION
	GEAR		WEEK	SOURCE	TYPE	CODE	FISH	FACTOR
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/????/ 0-	34	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-	33	COMMERCIAL	RANDOM	042206	1	4.61
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-41	33	COMMERCIAL	RANDOM	042206	1	4.61
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-29	33	COMMERCIAL	RANDOM	042206	1	4.61
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-	34	COMMERCIAL	RANDOM	042028	1	3.49
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-29	34	COMMERCIAL	RANDOM	042028	1	3.49
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-41	34	COMMERCIAL	RANDOM	042028	1	3.49
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-	34	COMMERCIAL	RANDOM	042028	1	3.49
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-41	34	COMMERCIAL	RANDOM	042029	1	3.49
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-29	35	COMMERCIAL	RANDOM	042028	1	3.41
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/ 0-	35	COMMERCIAL	RANDOM	042028	1	3.41
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-41	35	COMMERCIAL	RANDOM	042029	1	3.41
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-29	35	COMMERCIAL	RANDOM	042206	1	3.41
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-35	35	COMMERCIAL	SELECT	042029	1	0.00
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/ SIN/101-35	35	COMMERCIAL	SELECT	042206	1	0.00
HUGH SMITH LAKE (W)	SEINE	NORTHEAST/SNTR/109-10	34	COMMERCIAL	RANDOM	042028	1	2.59
HUGH SMITH LAKE (W)	SEINE	SOUTHWEST/SOUT/104-40	33	COMMERCIAL	RANDOM	042206	1	12.75
HUGH SMITH LAKE (W)	SEINE	SOUTHWEST/SOUT/104-	34	COMMERCIAL	RANDOM	042028	1	5.03
HUGH SMITH LAKE (W)	SEINE	SOUTHWEST/SOUT/104-40	34	COMMERCIAL	RANDOM	042029	1	5.03
HUGH SMITH LAKE (W)	SEINE	SOUTHWEST/SOUT/104-10	34	COMMERCIAL	RANDOM	042206	1	5.03
HUGH SMITH LAKE (W)	SEINE	SOUTHWEST/SOUT/104-20	34	COMMERCIAL	RANDOM	042206	1	5.03
HUGH SMITH LAKE (W)	SEINE	SOUTHWEST/SOUT/104-20	34	COMMERCIAL	RANDOM	042206	1	5.03
HUGH SMITH LAKE (W)	TRAP	SOUTHEAST/ SIN/101-28	33	COMMERCIAL	RANDOM	042206	1	1.25
HUGH SMITH LAKE (W)	TRAP	SOUTHEAST/ SIN/101-28	35	COMMERCIAL	RANDOM	042028	1	1.74
HUGH SMITH LAKE (W)	TROLL	UNKNOWN/????/ 0-	29	COMMERCIAL	SELECT	042029	1	0.00
HUGH SMITH LAKE (W)	TROLL	UNKNOWN/????/ 0-	29	COMMERCIAL	SELECT	042206	1	0.00
HUGH SMITH LAKE (W)	TROLL	UNKNOWN/????/ 0-	30	COMMERCIAL	SELECT	042206	1	0.00
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/????/ 0-	31	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/????/ 0-	31	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/????/ 0-	31	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/????/ 0-	33	COMMERCIAL	RANDOM	042028	1	0.00
HUGH SMITH LAKE (W)	TROLL	UNKNOWN/????/ 0-	33	COMMERCIAL	RANDOM	042028	1	0.00
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/????/ 0-	33	COMMERCIAL	RANDOM	042029	1	0.00
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/????/ 0-	33	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKE (W)	TROLL	UNKNOWN/????/ 0-	33	COMMERCIAL	SELECT	042206	1	0.00
HUGH SMITH LAKE (W)	TROLL	UNKNOWN/????/ 0-	36	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKE (W)	TROLL	UNKNOWN/????/ 0-	37	COMMERCIAL	RANDOM	042028	1	0.00
HUGH SMITH LAKE (W)	TROLL	UNKNOWN/????/ 0-	37	COMMERCIAL	RANDOM	042028	1	0.00
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/????/ 0-	37	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKE (W)	TROLL	NORTHWEST/????/ 0-	37	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKE (W)	TROLL	UNKNOWN/????/ 0-	39	COMMERCIAL	SELECT	042028	1	0.00

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC... GEAR	QUADRANT/PMFC/DISTR.	STAT WEEK	SAMPLE..... SOURCE	SAMPLE TYPE	TAG.. CODE	OBSERVED FISH	EXPANSION FACTOR
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	34	COMMERCIAL	RANDOM	042028	1	2.40
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	34	COMMERCIAL	RANDOM	042029	1	2.40
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	34	COMMERCIAL	RANDOM	042206	1	2.40
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	34	COMMERCIAL	RANDOM	042206	1	2.40
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	34	COMMERCIAL	RANDOM	042206	1	2.40
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	34	COMMERCIAL	RANDOM	042206	1	2.40
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	35	COMMERCIAL	RANDOM	042028	1	2.61
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	35	COMMERCIAL	RANDOM	042029	1	2.61
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-23	35	COMMERCIAL	RANDOM	042206	1	2.61
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	35	COMMERCIAL	RANDOM	042206	1	2.61
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	35	COMMERCIAL	RANDOM	042206	1	2.61
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	35	COMMERCIAL	RANDOM	042206	1	2.61
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	35	COMMERCIAL	RANDOM	042206	1	2.61
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	36	COMMERCIAL	RANDOM	042028	1	1.84
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	36	COMMERCIAL	RANDOM	042028	1	1.84
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	36	COMMERCIAL	RANDOM	042029	1	1.84
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	36	COMMERCIAL	RANDOM	042206	1	1.84
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	36	COMMERCIAL	RANDOM	042206	1	1.84
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	37	COMMERCIAL	RANDOM	042028	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	37	COMMERCIAL	RANDOM	042028	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	37	COMMERCIAL	RANDOM	042028	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	37	COMMERCIAL	RANDOM	042028	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	37	COMMERCIAL	RANDOM	042028	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	37	COMMERCIAL	RANDOM	042028	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	37	COMMERCIAL	RANDOM	042206	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	37	COMMERCIAL	RANDOM	042206	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	37	COMMERCIAL	RANDOM	042206	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	37	COMMERCIAL	RANDOM	042206	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	37	COMMERCIAL	RANDOM	042206	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	37	COMMERCIAL	RANDOM	042206	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	37	COMMERCIAL	RANDOM	042206	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	37	COMMERCIAL	RANDOM	042206	1	2.37
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	38	COMMERCIAL	RANDOM	042028	1	0.76
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	38	COMMERCIAL	RANDOM	042028	1	0.76
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	38	COMMERCIAL	RANDOM	042028	1	0.76
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	38	COMMERCIAL	RANDOM	042206	1	0.76
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	38	COMMERCIAL	RANDOM	042206	1	0.76
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	38	COMMERCIAL	RANDOM	042206	1	0.76
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	38	COMMERCIAL	RANDOM	042206	1	0.76
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	38	COMMERCIAL	RANDOM	042206	1	0.76
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	38	COMMERCIAL	RANDOM	042206	1	0.76
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-	38	COMMERCIAL	RANDOM	042206	1	0.76
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	38	COMMERCIAL	RANDOM	042206	1	0.76
HUGH SMITH LAKE (W)	GILLNET	SOUTHEAST/ SIN/101-11	38	COMMERCIAL	RANDOM	042206	1	0.76
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/????/ 0-	34	COMMERCIAL	RANDOM	042028	1	0.00
HUGH SMITH LAKE (W)	SEINE	SOUTHEAST/????/ 0-	34	COMMERCIAL	RANDOM	042206	1	0.00
HUGH SMITH LAKF (W)	SEINE	SOUTHEAST/????/ 0-	34	COMMERCIAL	RANDOM	042206	1	0.00

- Continued -

Appendix Table 3. Southeastern Alaska recoveries of coded-wire tagged wild Southeastern Alaska coho salmon (excluding Salmon Lake recoveries), 1984 (continued).

HATCHERY.....	PMFC... GEAR	QUADRANT/PMFC/DISTR.	STAT WEEK	SAMPLE..... SOURCE	SAMPLE TYPE	TAG.. CODE	OBSERVED FISH	EXPANSION FACTOR
MCDONALD LAKE (W)	TROLL	NORTHWEST/????/	0-	29	COMMERCIAL	RANDOM 042142	1	0.00
							-----	-----
SUBTOTAL							1	0.00
MONTANA CREEK (W)	GILLNET	NORTHEAST/LYNN/115-		37	COMMERCIAL	RANDOM 042152	1	2.83
MONTANA CREEK (W)	TROLL	NORTHWEST/????/	0-	30	COMMERCIAL	RANDOM 042152	1	0.00
MONTANA CREEK (W)	TROLL	NORTHWEST/????/	0-	33	COMMERCIAL	RANDOM 042152	1	0.00
MONTANA CREEK (W)	TROLL	NORTHWEST/????/	0-	37	COMMERCIAL	RANDOM 042153	1	0.00
MONTANA CREEK (W)	TROLL	NORTHWEST/CNTR/114-		35	COMMERCIAL	RANDOM 042152	1	3.79
							-----	-----
SUBTOTAL							5	6.62
REFLECTION LAKE (W)	GILLNET	SOUTHEAST/ CIN/106-41		33	COMMERCIAL	RANDOM 042131	1	1.47
REFLECTION LAKE (W)	TRAP	SOUTHEAST/ SIN/101-28		28	COMMERCIAL	RANDOM 042131	1	1.97
REFLECTION LAKE (W)	TRAP	SOUTHEAST/ SIN/101-28		29	COMMERCIAL	RANDOM 042131	1	1.12
REFLECTION LAKE (W)	UNKNOWN	SOUTHEAST/ SIN/102-80		28	SPORT	SELECT 042131	1	0.00
							-----	-----
SUBTOTAL							4	1.47
SPEEL LAKE (W)	GILLNET	NORTHEAST/STEP/111-		38	COMMERCIAL	RANDOM 042145	1	1.79
SPEEL LAKE (W)	SEINE	NORTHEAST/SNTR/109-30		34	COMMERCIAL	RANDOM 042145	1	2.59
SPEEL LAKE (W)	TROLL	NORTHWEST/????/	0-	31	COMMERCIAL	RANDOM 042145	1	0.00
SPEEL LAKE (W)	TROLL	NORTHWEST/????/	0-	32	COMMERCIAL	RANDOM 042145	1	0.00
SPEEL LAKE (W)	TROLL	UNKNOWN/????/	0-	37	COMMERCIAL	SELECT 042145	1	0.00
SPEEL LAKE (W)	TROLL	NORTHWEST/CNTR/114-		29	COMMERCIAL	RANDOM 042145	1	5.40
SPEEL LAKE (W)	TROLL	NORTHWEST/CNTR/114-		35	COMMERCIAL	RANDOM 042145	1	3.79
SPEEL LAKE (W)	TROLL	NORTHWEST/CNTR/114-60		36	COMMERCIAL	RANDOM 042145	1	8.59
SPEEL LAKE (W)	TROLL	NORTHWEST/COUT/	0-	29	COMMERCIAL	RANDOM 042145	1	5.16
SPEEL LAKE (W)	TROLL	NORTHWEST/COUT/113-		31	COMMERCIAL	RANDOM 042145	1	5.85
SPEEL LAKE (W)	UNKNOWN	NORTHEAST/STEP/111-33		47	RACK RETURN	RANDOM 042322	1	0.00
							-----	-----
SUBTOTAL							11	33.17
TOTAL FOR ALL SYSTEMS LISTED IS .....							540	1,192.77

Appendix Table 4. Summary of recoveries of coded-wire tagged Southeastern Alaska coho salmon in British Columbia fisheries, 1984<sup>1</sup>.

System	Fishery	Code	Number of Recoveries	Expansion Factor	Total Expansion
Hugh Smith Lake	Northern Troll	4-20-28	9	5.2	46.8
		4-20-29	1	5.2	5.2
		4-22-06	11	5.2	57.2
		Subtotal	21	5.2	109.2
	Northern Net	4-22-06	1	4.9	4.9
		Subtotal	1	4.9	4.9
	Total	All Codes	22	-	114.1
Chickamin River	Northern Troll	4-20-27	1	5.2	5.2
	Total	All Codes	1	5.2	5.2
Grand Total	All Fisheries	All Codes	23	-	119.3

<sup>1</sup> Preliminary data from the Canada Department of Fisheries and Oceans.

Appendix Table 5. Wild coho salmon escapement counts at the Auke Creek weir, 1971-1984.

Year	Adults	Jacks <sup>1</sup>	Comments
1971	308	608	
1972	967	146	
1973	399	238	
1974	768	379	
1975	1,310	98	
1976	272	182	Washed out 3 October
1977	889	596	
1978	683	256	
1979	596	107	Washed out 3 days
1980	698	276	
1981	644	231	
1982	447	338	
1983	694	310	
1984	651	315	

<sup>1</sup> Age .0

Appendix Table 6. Berners River coho salmon escapement surveys, 1960-1986.

Year	Date	Count	Method	Remarks
1960	06 October	6,000	Aerial	
1961	25 September	600	Aerial	Poor visibility
1968	23 September	2,500	Aerial	Schooled in pools
	11 October	5,000	Aerial	
1969	01 October	5,000	Aerial	Lower 22 km surveyed
	14 October	320	Aerial	
	22 October	345	Boat	
	23 October	1,600	Aerial	
1970	05 October	3,000	Aerial	
1971	12 October	3,600	Aerial	
1972	06 October	4,200	Aerial	
	13 October	3,800	Aerial	
	20 October	1,500	Aerial	
	02 November	1,100	Aerial	
1973	05 October	300	Aerial	Lower 3 km surveyed 300 intertidal; 1,700 river
	10 October	2,000	Aerial	
1974	04 October	820	Aerial	Lower river surveyed
	28 October	620	Aerial	
	06 November	4,121	Foot	
1975	24 September	140	Aerial	
	22 October	3,500	Aerial	
	28 October	4,342	Foot	
1976	12 October	1,500	Aerial	
	21 October	3,600	Aerial	
	05 November	1,820	Foot	
1977	01 September	-	Aerial	
	26 September	700	Aerial	
	03 October	1,600	Aerial	
	19 October	2,500	Aerial	
	23 October	3,200	Aerial	
	26 October	1,400	Aerial	
	09 November	2,200	Helicopter	
1978	21 September	50	Aerial	
	25 September	200	Aerial	

--continued--

Appendix Table 6. Berners River coho salmon escapement surveys, 1960-1986  
(continued).

Year	Date	Count	Method	Remarks
1978	16 October	1,370	Aerial	300 in lower river
	08 November	3,108	Foot	
	13 November	500	Aerial	Poor visibility
1979	10 September	90	Aerial	Poor visibility
	19 September	-	Aerial	Poor visibility
	19 October	900	Aerial	All in pools
	25 October	910	Aerial	
	04 November	3,460	Foot	
	06 November	1,600	Aerial	
	07 November	2,900	Aerial	
1980	12 September	840	Aerial	
	13 October	890	Aerial	All in pools
	31 October	2,300	Aerial	Most in pools
	07 November	2,820	Helicopter	Some foot counts
1981	07 October	7,170	Aerial	All in pools
	02 November	4,420	Helicopter	Most in pools
1982	09 September	20	Aerial	
	22 September	850	Aerial	
	19 October	9,000	Aerial	Still in pools
	01 November	3,500	Aerial	400 in Moose Slough
	05 November	7,505	Foot	400 in Moose Slough
1983	07 September	125	Aerial	
	20 September	1,000	Foot	Lower 3 km surveyed
	27 September	9,800	Aerial	1,500 in Moose Slough
	27 September	13,000	Aerial	In pools
	31 October	9,840	Foot	770 in Moose Slough
1984	05 September	50	Aerial	Not in pools yet
	11 September	455	Aerial	Most below Moose Slough
	18 September	300	Aerial	250 below Moose Slough
	19 September	585	Aerial	
	21 September	525	Aerial	480 upper, 45 lower
	24 September	1,180	Aerial	
	28 September	2,150	Aerial	Lower school building
	04 October	1,400	Aerial	450 in lower river
	16 October	3,000	Aerial	
	24 October	2,825	Foot	625 in Moose Slough

--continued--

Appendix Table 6. Berners River coho salmon escapement surveys, 1960-1986  
(continued).

Year	Date	Count	Method	Remarks
1985	11 September	0	Aerial	None Seen
	13 September	650	Aerial	600 in lower part
	18 September	350	Aerial	
	28 September	1,150	Aerial	450 below Moose Slough
	06 October	1,110	Aerial	
	15 October	4,180	Aerial	2,690 in Moose Slough
	16 October	6,200	Aerial	2,340 in Moose Slough
	28 October	6,169	Foot	2,954 in Moose Slough
1986	11 September	270	Aerial	
	15 September	40	Aerial	
	22 September	70	Aerial	Poor visibility
	28 September	1,800	Aerial	1,200 lower, 600 Upper
	26 October	1,752	Foot	Nearly all (1,744) above Slough

Appendix Table 7. Estimated harvest by area and gear type, and escapement of Auke Lake coho salmon, 1984.

Area	Gear	Number of Recoveries <sup>1</sup>	Expanded Recoveries	Estimated No. of Fish	% of Total
Northern Outside	Troll	11	41.29	44	4.1
Central Outside	Troll	23	115.34	122	11.5
Central Interm.	Troll	30	133.67	142	13.3
Lynn Canal	Gillnet	22	61.24	65	6.1
Stephens Passage	Gillnet	3	12.72	13	1.2
	Sport	5	26.70	28	2.6
	Subtotal	8	39.42	41	3.8
Total Catch	Troll	64	290.30	308	28.9
	Gillnet	25	73.96	78	7.3
	Sport	5	26.70	28	2.6
	Subtotal	94	390.96	414	38.8
Escapement		614	614	651	61.2
Grand Total		708	1,004.96	1,065	100

<sup>1</sup> Includes only random recoveries that are expandable within PMFC areas.

Appendix Table 8. Estimated harvest by area and gear type, and escapement of Hugh Smith Lake coho salmon, 1984.

Area	Gear	Number of Recoveries <sup>1</sup>	Expanded Recoveries	Estimated No. of Fish	% of Total
Northern Outside	Troll	7	23.07	125	3.1
Central Outside	Troll	16	84.48	459	11.3
Southern Outside	Troll	9	34.94	190	4.7
	Seine	6	37.90	206	5.1
	Subtotal	15	72.84	396	9.8
Central Interm.	Troll	3	19.04	104	2.6
Southern Interm.	Troll	1	2.18	12	0.3
	Seine	1	2.59	14	0.3
	Subtotal	2	4.77	26	0.6
Central Inside	Troll	4	4.44	24	0.6
	Gillnet	2	3.42	19	0.5
	Subtotal	6	7.86	43	1.1
Southern Inside	Troll	17	41.09	224	5.5
	Seine	14	44.92	244	6.0
	Gillnet	40	77.22	420	10.4
	Trap	2	2.99	16	0.4
	Subtotal	73	166.22	904	22.3
Northern B.C.	Troll	21	109.20	594	14.7
	Net	1	4.90	27	0.7
	Subtotal	22	114.10	621	15.4
Total Catch	AK Troll	57	209.24	1,138	28.1
	AK Seine	21	85.41	464	11.4
	AK Gillnet	42	80.64	439	10.9
	AK Trap	2	2.99	16	0.4
	B.C. Troll	21	109.20	594	14.7
	B.C. Net	1	4.90	27	0.7
	Total	144	492.38	2,678	66.2

--continued--

Appendix Table 8. Estimated harvest by area and gear type, and escapement of Hugh Smith Lake coho salmon, 1984 (continued).

Area	Gear	Number of Recoveries <sup>1</sup>	Expanded Recoveries	Estimated No. of Fish	% of Total
Escapement		210	251.35	1,367	33.8
Grand Total		354	743.73	4,045	100

<sup>1</sup> Includes only random recoveries that are expandable within PMFC areas.

Appendix Table 9. Estimated harvest distribution of Chilkat River coho salmon by area and gear type, 1984.

Area	Gear	Number of Recoveries <sup>1</sup>	Expanded Recoveries	% of Total
Northern Outside	Troll	6	30.74	10.1
Central Outside	Troll	7	31.11	10.2
Southern Outside	Troll	1	3.09	1.0
Central Interm.	Troll	13	66.84	21.9
	Seine	2	8.65	2.8
	Subtotal	15	75.49	24.7
Southern Interm.	Seine	2	4.50	1.5
Lynn Canal	Gillnet	42	160.40	52.5
Total Catch	Troll	27	131.78	43.2
	Seine	4	13.15	4.3
	Gillnet	42	160.40	52.5
	Total	73	305.33	100

<sup>1</sup> Includes only random recoveries that are expandable within PMFC areas.

Appendix Table 10. Estimated harvest distribution of Chickamin River coho salmon by area and gear type, 1984.

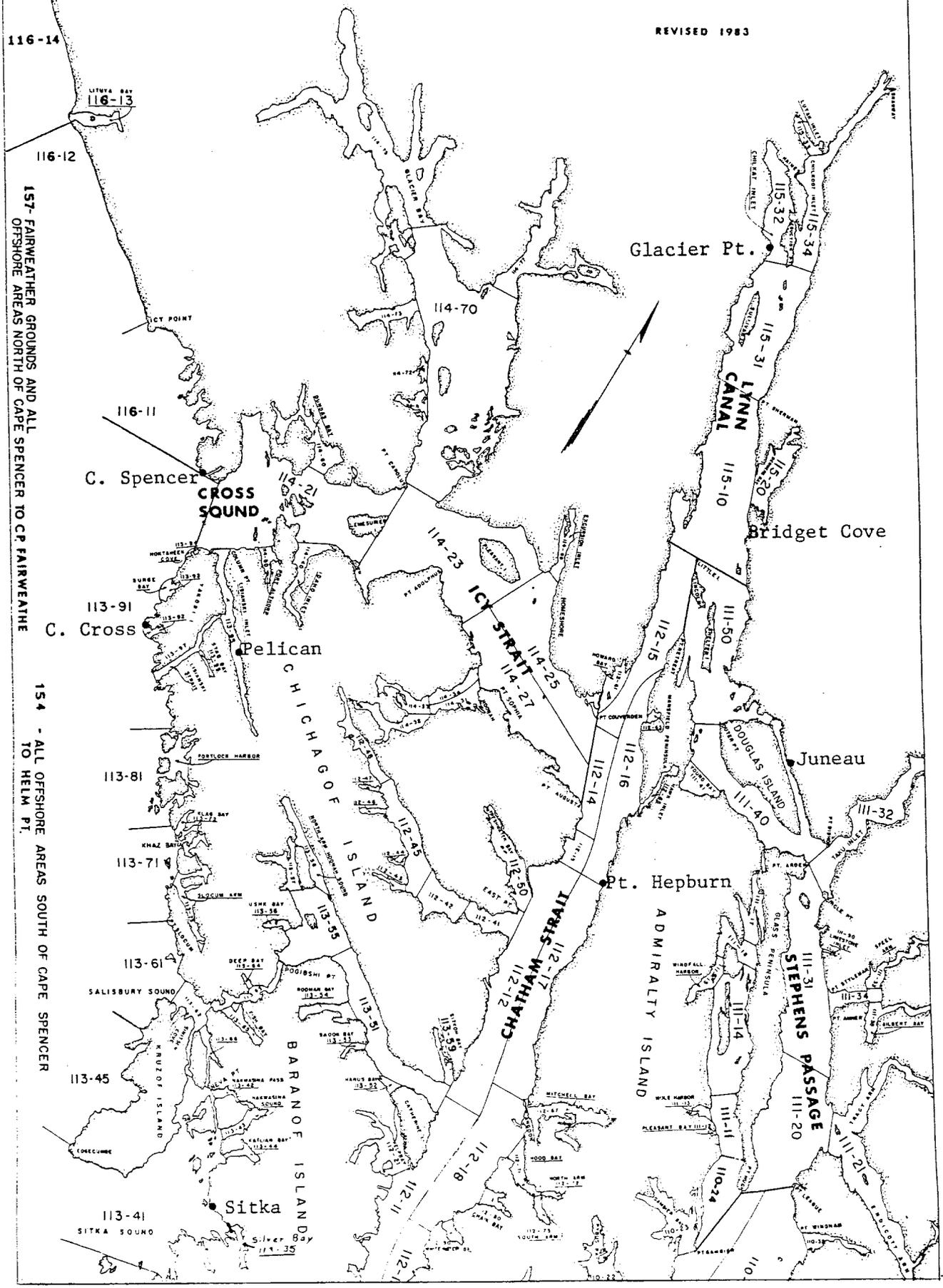
Area	Gear	Number of Recoveries <sup>1</sup>	Expanded Recoveries	% of Total
Central Outside	Troll	5	29.42	29.1
Southern Outside	Seine	2	9.77	9.7
Central Interm.	Troll	1	6.19	6.1
Southern Interm.	Troll	2	15.44	15.3
Central Inside	Troll	1	3.17	3.1
	Gillnet	2	2.83	2.8
	Subtotal	3	6.00	5.9
Southern Inside	Troll	1	1.91	1.9
	Seine	5	23.63	23.4
	Gillnet	1	2.37	2.3
	Trap	1	1.25	1.2
	Subtotal	8	29.16	28.8
Northern B.C.	Troll	1	5.20	5.1
Total Catch	AK Troll	10	56.13	55.5
	AK Seine	7	33.40	33.0
	AK Gillnet	3	5.20	5.1
	AK Trap	1	1.25	1.2
	B.C. Troll	1	5.20	5.2
	Total	22	101.18	100

<sup>1</sup> Includes only random recoveries that are expandable within PMFC areas.

Appendix Table 11. Recoveries of coded-wire tagged wild coho salmon returning to Reflection and McDonald Lakes from area-specific fishery samples, 1983-1984.

System (Year)	District(s)	Gear	Stat. Week	Tag Code	Recovery Type	Expansion
Reflection Lake (1983)	113	Troll	28	4-21-31	Random	5.70
	102-10	Troll	29	4-21-31	Random	2.20
	106-30	Gillnet	31	4-21-31	Random	1.29
	101-90	Sport	28	4-21-31	Random	10.39
Reflection Lake (1984)	106-41	Gillnet	33	4-21-31	Random	1.47
	101-28	Trap	28	4-21-31	Random	1.97
	101-28	Trap	29	4-21-31	Random	1.12
	102-80	Sport	28	4-21-31	Select	-
McDonald Lake (1983)	113-71	Troll	29	4-21-42	Random	4.66
	109	Troll	31	4-21-42	Random	2.71
	109	Troll	32	4-21-32	Random	2.10
	105-10	Troll	35	4-21-42	Random	0.84

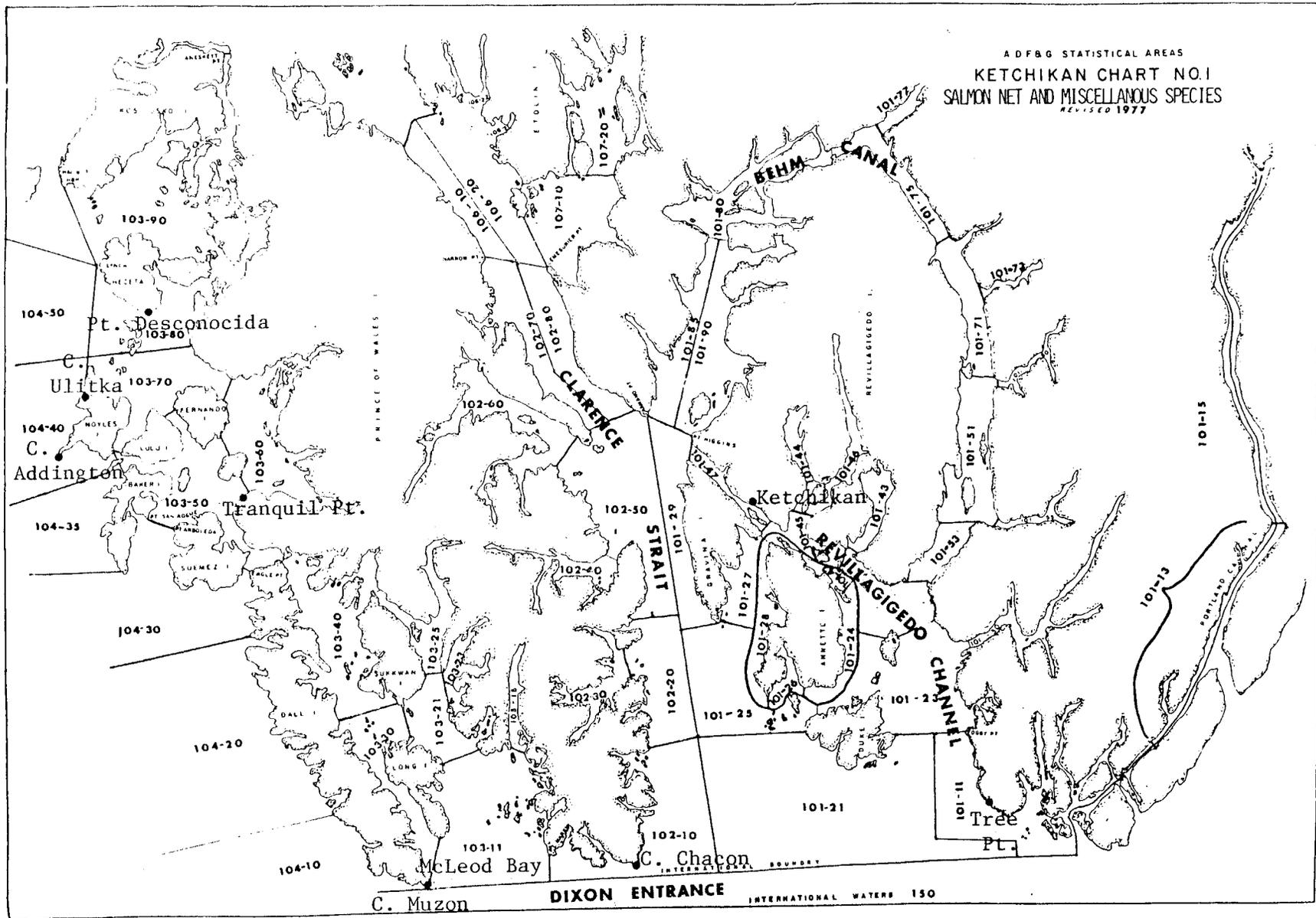
REVISED 1983



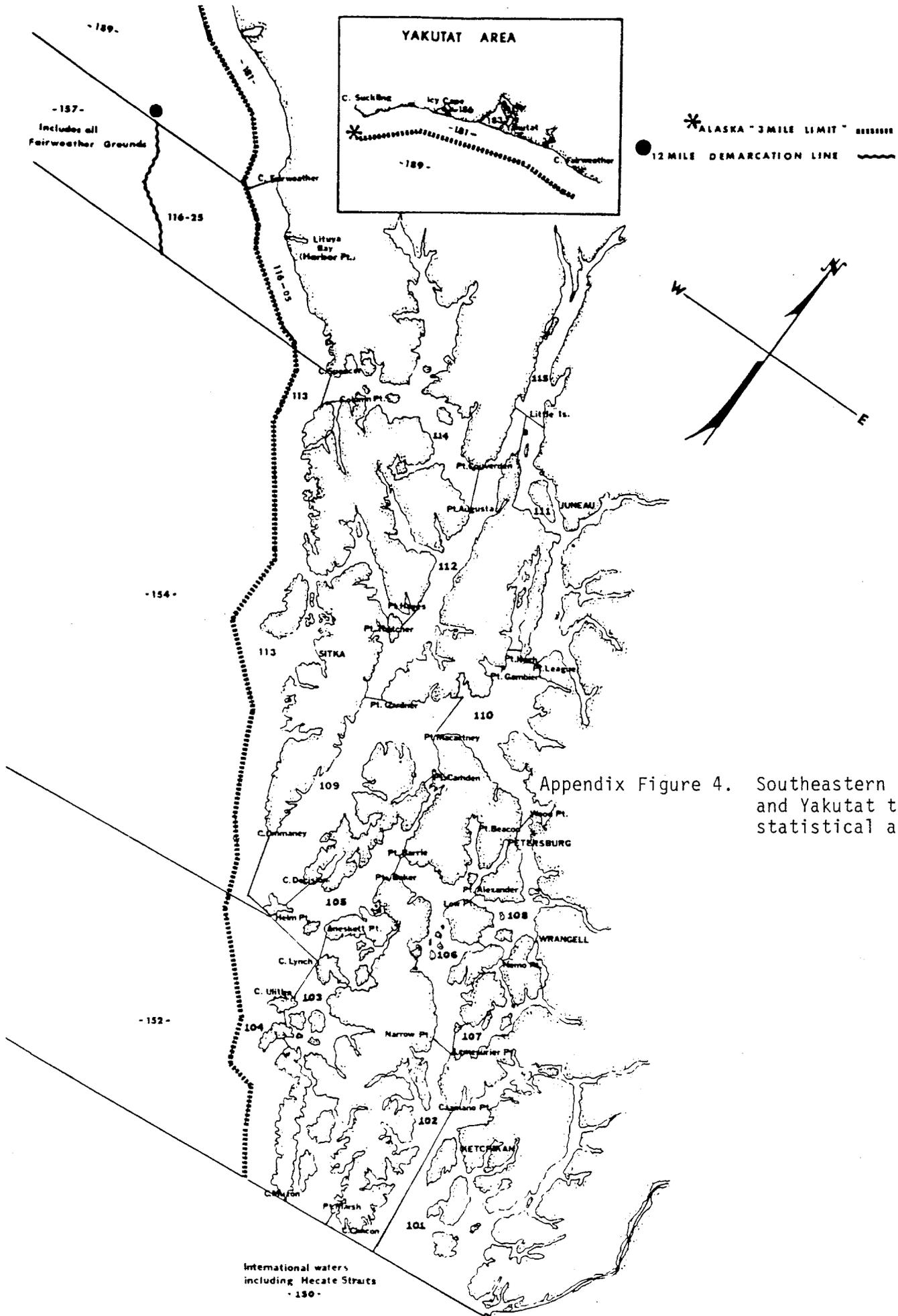
157- FAIRWEATHER GROUNDS AND ALL OFFSHORE AREAS NORTH OF CAPE SPENCER TO CP FAIRWEATHER

154 - ALL OFFSHORE AREAS SOUTH OF CAPE SPENCER TO HELM PT.





Appendix Figure 3. Southern Southeastern Alaska statistical areas.



Appendix Figure 4. Southeastern Alaska and Yakutat troll statistical areas.

Because the Alaska Department of Fish and Game receives federal funding, all of its public programs and activities are operated free from discrimination on the basis of race, color, national origin, age, or handicap. Any person who believes he or she has been discriminated against should write to:

O.E.O.  
U.S. Department of the Interior  
Washington, D.C. 20240