

Southeast Alaska Port Sampling Project

Five Year Completion Report For the Period July 1, 1982 to
June 30, 1987. Project No. AFC-72-5 Anadromous Fish
Conservation Act



By: Benjamin W. Van Alen

Regional Informational Report. 1J88-45

Alaska Department of Fish and Game
Division of Commercial Fisheries
Juneau, Alaska

December 1988

SOUTHEAST ALASKA PORT SAMPLING PROJECT

Five Year Completion Report
For the Period July 1, 1982 to June 30, 1987
Project No. AFC-72-5
Anadromous Fish Conservation Act

By

Benjamin W. Van Alen

Regional Information Report No.¹ IJ88-45

Alaska Department of Fish and Game
Division of Commercial Fisheries
Juneau Alaska

December 1988

¹ The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may contain preliminary data: this information may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Division of Commercial Fisheries.

TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| LIST OF TABLES | ii |
| LIST OF APPENDICES | iv |
| INTRODUCTION | 1 |
| CODED MICROWIRE TAG RECOVERY | 2 |
| TROLL FISHERY PERFORMANCE | 3 |
| AGE, SEX, AND LENGTH | 4 |
| LITERATURE CITED | 5 |
| APPENDICES | 34 |

LIST OF TABLES

| <u>Table</u> | <u>Page</u> |
|--|-------------|
| 1. Chinook salmon coded wire tag sampling effort for the Southeast Alaska winter troll fishery, October 1985 to April 1986 | 6 |
| 2. Chinook salmon coded wire tag sampling effort for the Southeast Alaska summer troll fishery, 1986 | 7 |
| 3. Coho salmon coded wire tag sampling effort summary for the Southeast Alaska summer troll fishery, 1986 | 8 |
| 4. Chinook salmon coded wire tag sampling effort for the Southeast Alaska gill net fisheries, 1986 | 9 |
| 5. Coho salmon coded wire tag sampling summary for the Southeast Alaska gill net fisheries, 1986 | 10 |
| 6. Chum salmon coded wire tag sampling effort for the Southeast Alaska gill net fisheries, 1986 | 11 |
| 7. Sockeye salmon coded wire tag sampling effort for the Southeast Alaska gill net fisheries, 1986 | 12 |
| 8. Chinook salmon coded wire tag sampling effort summary for the Southeast Alaska purse seine fisheries, 1986 | 13 |
| 9. Coho salmon coded wire tag sampling effort summary for the Southeast Alaska purse seine fisheries, 1986 | 14 |
| 10. Chum salmon coded wire tag sampling effort summary for the Southeast Alaska purse seine fisheries, 1986 | 15 |
| 11. Sockeye salmon coded wire tag sampling effort summary for the Southeast Alaska purse seine fisheries, 1986 | 16 |
| 12. Coded microwire tag sampling effort for salmon in Yakutat area salmon fisheries | 17 |
| 13. Number of chinook salmon sampled for AWL data from gill net (G) and seine (S) fisheries, 1986 | 18 |
| 14. Number of coho salmon sampled for AWL data from gill net (G) and seine (S) fisheries, 1986 | 19 |
| 15. Number of chum salmon sampled for AWL data from gill net (G) and seine (S) fisheries, 1986 | 20 |
| 16. Number of sockeye salmon sampled for AWL data from gill net (G) and seine (S) fisheries, 1986 | 21 |

LIST OF TABLES (Continued)

| <u>Table</u> | <u>Page</u> |
|--|-------------|
| 17. Number of chinook salmon sampled for AWL data from the Southeast Alaska summer troll fishery, 1986 | 22 |
| 18. Number of coho salmon sampled for AWL data from the Southeast Alaska summer troll fishery, 1986 | 23 |
| 19. Chinook salmon AWL sampling effort in the Yakutat area, 1986 | 24 |
| 20. Coho salmon AWL sampling effort in the Yakutat area, 1986 | 25 |
| 21. Chum salmon AWL sampling effort in the Yakutat area, 1986 | 26 |
| 22. Sockeye salmon AWL sampling effort in the Yakutat area, 1986 | 27 |
| 23. Sex composition, in percent males, of pink salmon sampled from selected purse seine fisheries, 1986 | 28 |
| 24. Chinook salmon AWL sampling of escapements to Southeast Alaska and northwestern British Columbia systems, 1986 | 29 |
| 25. Coho salmon AWL sampling of escapements to Southeast Alaska and northwestern British Columbia systems, 1986 | 30 |
| 26. Chum salmon AWL sampling of escapements to Southeast Alaska and northwestern British Columbia systems, 1986 | 31 |
| 27. Sockeye salmon AWL sampling of escapements to Southeast Alaska and northwestern British Columbia systems, 1986 | 32 |

LIST OF APPENDICES

| | <u>Page</u> |
|--|-------------|
| APPENDIX A: LISTING OF PROJECT SUPPORTED REPORTS | 35 |
| APPENDIX B: PROJECT OPERATIONAL PLANS | 42 |
| B.1 - Microwire Tag Recovery | 42 |
| B.2 - Troll fishery performance monitoring | 53 |
| B.3 - AWL catch and escapement sampling | 66 |
| B.4 - Pink salmon sex ratio sampling | 81 |

INTRODUCTION

This Federal Aid Southeast Alaska Port Sampling Project provided funding to the Alaska Department of Fish and Game (ADF&G), Division of Commercial Fisheries, for collection of biological and fleet performance data at major ports of landing in Southeast Alaska and Yakutat for the 1982 through 1986 salmon seasons. It also supported collection of biological data from selected salmon escapements. This data is used by federal, state, and private agencies in a variety of management and research applications. All port sampling activities associated with coded microwire tag (CWT) recovery, troll fishery performance data (FPD), and biological sampling for age, sex, and size (AWL) data were unified under this project. Prior to 1982 the collection of this data was the responsibility of individual project leaders and there was little coordination of sampling activities between projects. Program efficiency and data quality and quantity has vastly improved under this unified project.

To simplify implementation of other Federally funded U.S./Canada projects dependent on sampling of commercial catches, and to improve the efficient collection of all data, catch sampling activities for these projects were integrated under this "Port Sampling" project. These U.S./Canada funded projects included: sockeye scale stock identification in the Boundary area, in District 106, 108 and the Stikine River, and in District 111 and Taku River; collection of parasite and genetic stock identification data; adult tagging of sockeye, pink, and chum salmon; incidental catch of chinook salmon by troll and seine gear; and monitoring of spring and experimental troll fisheries.

As mentioned above, this project specifically supported three jobs: CWT, AWL, and FPD sampling. The objectives of each job were:

- (1) CWT Sampling. To representatively sample a minimum of 20% of the chinook and coho salmon harvested in the troll and net fisheries; 20% of the chum salmon harvested in the Districts 101-114 net fisheries; and 20% of the sockeye salmon harvested in the District 101 and 106 seine and gill net fisheries.
- (2) FPD Sampling. To sample a minimum of 2,000 randomly selected troll deliveries each summer season for FPD data; and

- (3) AWL Sampling. To develop a comprehensive data base on the abundance, age, sex, and size composition of sockeye, chum, and chinook salmon in Southeast Alaska catches and escapements and collect pink salmon sex ratio data from selected seine fisheries.

This report summarizes the work accomplished under this Federal Aid Project. Specific information is presented regarding accomplishment of project objectives during the last year of this contract (July 1, 1986 to June 30, 1987). I also present a complete list of references to work accomplished under this five-year contract. I emphasize that the primary objective of this project is collection of AWL, CWT, and FPD port sampling data used by researchers and managers in other projects and agencies. Only the reporting on the abundance, age, sex, and size composition of chinook, coho, sockeye, and chum salmon was specifically required in this project. Coded microwire tag data is forwarded to the ADF&G, Fisheries, Rehabilitation, Enhancement, and Development (FRED) Division, Tag Lab in Juneau for preparation for coastwide distribution as stipulated by the Pacific Marine Fisheries Commission and our FPD data is forwarded to the ADF&G, Commercial Fisheries Division, Troll Management office in Sitka. However, project personnel assisted in analysis and reporting on several other subjects including coded micro-wire tag, stock identification of sockeye, chinook, and chum, troll fishery performance, pink sex ratio, scale age verification, and length conversions. The support of this federal aid project to these other projects has been acknowledged in the respective reports. The reports funded in whole or in part by this project are listed in Appendix A.

CODED MICROWIRE TAG RECOVERY

Port sampling project personnel have, with few exceptions, succeeded in meeting CWT sampling goals for each species/gear/area/time strata in each year of this project. Detailed sampling effort data (number caught and number sampled) for each strata is maintained by the ADF&G, FRED Division, Tag Lab in Juneau and is not reported here. Sampling effort summaries are also provided in prior annual reports for this project. I summarize the 1985/1986 winter troll and 1986 summer troll, gill net, and purse seine CWT sampling effort here. The Project Operational Plan for this activity is presented in Appendix B.1.

In 1986 ADF&G port sampling project employees sampled chinook, coho, chum, and sockeye salmon for CWT data throughout the duration of the summer troll, seine,

and gill net fishery and the early and late portions of the winter troll fishery. Samplers were stationed at the principal ports of Sitka, Pelican, Juneau, Petersburg, Wrangell, Ketchikan, Craig, Klawock, Excursion Inlet, Hoonah, and Yakutat. Sampling was also conducted periodically onboard tenders and fishing vessels. Data and heads of all marked fish were sent to the Tag Lab on a weekly basis. The sampling effort was monitored throughout the season and adjustments were made in manpower and sampling assignments between the ports to assure that the sampling level was uniform throughout the region with respect to the landing distribution of fish.

Our CWT sampling goals were generally achieved in 1986 despite a record coho harvest of over 3.3 million and large sockeye, chum, and pink landings. Project personnel sampled almost 25% of the chinook landed during the 1985/86 winter troll fishery (Table 1), 28% of the chinook and 24% of the coho harvested during the summer troll fishery (Tables 2 and 3), 34% of the chinook, 27% of the coho, 21% of the chum, and 27% of the sockeye (Districts 101, 106, and 108) harvested in gill net fisheries (Tables 4 to 7), and 34% of the chinook, 19% of the coho, 24% of the chum, and 15% of the sockeye (Districts 101 to 110) harvested in purse seine fisheries (Tables 8 to 11). These totals include Annette Island Fishery Reserve catches in District 101 which were sampled in Metlakatla by local employees. Selected chinook, coho, and sockeye set gill net fisheries in the Yakutat area were also sampled (Table 12).

TROLL FISHERY PERFORMANCE

Port Sampling Project employees again collected FPD data in 1986 in the ports listed above for CWT. The FPD sampling was done in conjunction with CWT sampling. Troll fishermen were interviewed at the time of landing to obtain catch and effort data. This FPD data was used to estimate harvest to date and to project catch rates. These estimates were essential for in-season regulation of the fishery to see that catch quotas set by the Alaska Board of Fisheries, the North Pacific Fishery Management Council, and the Pacific Salmon Commission were met but not exceeded. Over 2,000 complete FPD interviews were obtained from the 1986 summer troll fishery. The Project Operational Plan for this activity is provided in Appendix B.2.

AGE, SEX, AND LENGTH

This project, working in cooperation with other projects and agencies, succeeded in its goal of developing a comprehensive data base on the abundance, age, sex, and size composition of sockeye, chum, chinook, and coho salmon in Southeast Alaska catches and escapements. The references to the reports completed under this contract can be found in Appendix A. Project personnel also succeeded in compiling an extensive data base on the sex composition of pink salmon in selected purse seine fishery catches. The Project Operational Plan for AWL catch and escapement sampling is provided in Appendix B.3 and for pink sex ratio sampling in Appendix B.4.

Age, sex, and size data was collected by project personnel from catches and escapements of chinook, sockeye, chum, coho, and pink salmon from throughout Southeast Alaska and Yakutat during the summer of 1986. Salmon were sampled for AWL data at all ports listed above. Project personnel sampled 1,186 chinook, 3,493 coho, 36,920 chum, and 60,400 sockeye salmon from gill net and purse seine fisheries (Tables 13 to 16) and 9,954 chinook and 7,382 coho from the summer troll fishery (Tables 17 and 18). In the Yakutat area project personnel led the sampling of 466 chinook, 5,500 coho, 412 chum, and 9,716 sockeye caught in set gill net fisheries (Tables 19 to 22). Pink sex ratio data was collected from all major purse seine fisheries (Table 23). Project personnel also assisted in collection of escapement samples (Tables 24 to 27).

Compilation of the abundance, age, sex, and size data for 1986 catches and escapements are presented in McPherson, McGregor, and Bergander (1988) for sockeye salmon, Weller and Clark (in prep.) for chum salmon, Wood and Van Alen (in prep.) for coho salmon, and Van Alen and Olsen (in prep.) for chinook salmon. Age, sex, and size data for salmon sampled in the Yakutat area are presented in Pahlke and Riffe (1988).

LITERATURE CITED

- McPherson, S.A., A.J. McGregor, and F.E. Bergander. 1988. Abundance, age, sex, and size of sockeye salmon catches and escapements in Southeast Alaska in 1986. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Fishery Report 88-08, Juneau.
- Pahlke, K.A. and R.R. Riffe. 1988. Compilation of catch, escapement, age, sex, and size data for salmon returns to the Yakutat area in 1986. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 224, Juneau.
- Van Alen, B.W. and M.A. Olsen. (in prep). Abundance, age, sex, and size of chinook salmon catches and escapements in Southeast Alaska in 1986. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Fishery Report, Juneau.
- Weller, J.L. and J.E. Clark. (in prep). Age, sex, and size of chum salmon from catches and escapements in Southeast Alaska in 1986. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Fishery Report, Juneau.
- Wood, D.S. and B.W. Van Alen. (in prep). Abundance, age, sex, and size of coho salmon catches and escapements in Southeast Alaska in 1986. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Fishery Report, Juneau.

Table 1. Chinook salmon coded wire tag sampling effort for the Southeast Alaska winter troll fishery, October 1985 to April 1986.

| Stat Week | 1985 Dates | Northern Inside | Northern Outside | Southern Inside | Southern Outside | 1985 Total | Stat Week | 1986 Dates | Northern Inside | Northern Outside | Southern Inside | Southern Outside | Total |
|--------------|-------------|-----------------|------------------|-----------------|------------------|------------|-----------|------------|-----------------|------------------|-----------------|------------------|-------|
| 40 | 9/29-10/3 | C 384 | 221 | 496 | 7 | 1,108 | 1-2 | 1/1-1/11 | C 9 | 39 | 60 | 42 | 170 |
| | | S 46 | 0 | 7 | 0 | 53 | | | S 0 | 0 | 0 | 0 | 0 |
| | | X 11.98 | 0.00 | 1.41 | 0.00 | 4.78 | | | X 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41 | 10/6-10/12 | C 2,931 | 1,405 | 2,030 | 7 | 6,394 | 3-4 | 1/12-1/25 | C 39 | 92 | 41 | 98 | 270 |
| | | S 792 | 0 | 700 | 0 | 1,492 | | | S 0 | 0 | 0 | 0 | 0 |
| | | X 26.84 | 0.00 | 34.48 | 0.00 | 23.33 | | | X 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42 | 10/13-10/19 | C 605 | 619 | 966 | 17 | 2,207 | 5 | 1/26-2/1 | C 12 | 30 | 16 | 116 | 194 |
| | | S 149 | 9 | 357 | 0 | 715 | | | S 0 | 0 | 0 | 0 | 0 |
| | | X 24.63 | 1.45 | 57.66 | 0.00 | 32.40 | | | X 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43 | 10/20-10/26 | C 548 | 641 | 992 | 2 | 2,183 | 6 | 2/2-2/8 | C 26 | 62 | 63 | 202 | 353 |
| | | S 240 | 52 | 531 | 0 | 823 | | | S 0 | 0 | 0 | 0 | 0 |
| | | X 43.80 | 8.11 | 53.53 | 0.00 | 37.70 | | | X 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44 | 10/27-11/2 | C 615 | 190 | 705 | 25 | 1,535 | 7 | 2/9-2/15 | C 19 | 176 | 104 | 148 | 447 |
| | | S 264 | 33 | 92 | 19 | 408 | | | S 0 | 0 | 0 | 0 | 0 |
| | | X 42.93 | 17.37 | 13.05 | 76.00 | 26.58 | | | X 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45 | 11/3-11/9 | C 447 | 229 | 357 | 1 | 1,034 | 8 | 2/16-2/22 | C 0 | 27 | 57 | 42 | 126 |
| | | S 284 | 22 | 37 | 0 | 283 | | | S 0 | 0 | 0 | 0 | 0 |
| | | X 30.11 | 3.61 | 10.36 | 0.00 | 27.37 | | | X 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46 | 11/10-11/16 | C 263 | 95 | 180 | 1 | 539 | 9 | 2/23-3/1 | C 3 | 18 | 36 | 60 | 117 |
| | | S 0 | 5 | 11 | 0 | 16 | | | S 0 | 0 | 0 | 0 | 0 |
| | | X 0.00 | 5.26 | 6.11 | 0.00 | 2.97 | | | X 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47 | 11/17-11/23 | C 17 | 33 | 108 | 5 | 163 | 10 | 3/2-3/8 | C 5 | 30 | 138 | 24 | 197 |
| | | S 0 | 10 | 11 | 0 | 21 | | | S 0 | 0 | 0 | 0 | 0 |
| | | X 0.00 | 30.30 | 10.19 | 0.00 | 12.88 | | | X 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48 | 11/24-11/30 | C 125 | 204 | 14 | 17 | 360 | 11 | 3/9-3/15 | C 29 | 39 | 165 | 152 | 405 |
| | | S 10 | 3 | 0 | 0 | 13 | | | S 22 | 1 | 66 | 0 | 89 |
| | | X 8.00 | 1.47 | 0.00 | 0.00 | 3.61 | | | X 73.86 | 1.69 | 40.00 | 0.00 | 21.98 |
| 49 | 12/1-12/7 | C 6 | 212 | 45 | 8 | 271 | 12 | 3/16-3/22 | C 57 | 209 | 336 | 146 | 748 |
| | | S 0 | 0 | 12 | 0 | 12 | | | S 52 | 38 | 173 | 22 | 285 |
| | | X 0.00 | 0.00 | 26.67 | 0.00 | 4.43 | | | X 91.23 | 18.18 | 51.49 | 15.07 | 38.10 |
| 50 | 12/8-12/14 | C 15 | 61 | 146 | 0 | 222 | 13 | 3/23-3/29 | C 46 | 194 | 200 | 78 | 518 |
| | | S 0 | 0 | 4 | 0 | 4 | | | S 9 | 107 | 40 | 21 | 177 |
| | | X 0.00 | 0.00 | 2.74 | 0.00 | 1.80 | | | X 19.57 | 55.15 | 20.00 | 26.92 | 34.17 |
| 51 | 12/15-12/21 | C 26 | 100 | 94 | 9 | 229 | 14 | 3/30-4/5 | C 53 | 230 | 280 | 112 | 675 |
| | | S 0 | 0 | 80 | 7 | 87 | | | S 43 | 37 | 131 | 12 | 223 |
| | | X 0.00 | 0.00 | 85.11 | 77.78 | 37.99 | | | X 81.13 | 16.09 | 46.79 | 10.71 | 33.04 |
| 52 | 12/22-12/28 | C 0 | 22 | 46 | 22 | 90 | 15 | 4/6-4/12 | C 46 | 242 | 313 | 56 | 659 |
| | | S 0 | 0 | 4 | 0 | 4 | | | S 36 | 57 | 214 | 4 | 311 |
| | | X 0.00 | 0.00 | 8.70 | 0.00 | 4.44 | | | X 75.00 | 23.35 | 68.37 | 7.14 | 47.19 |
| 53 | 12/29-12/31 | C 1 | 57 | 13 | 0 | 71 | 16 | 4/13-4/19 | C 92 | 586 | 359 | 72 | 1,109 |
| | | S 0 | 0 | 0 | 0 | 0 | | | S 85 | 251 | 212 | 20 | 568 |
| | | X 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | X 92.39 | 42.83 | 59.05 | 27.78 | 51.22 |
| Total | | C 6,003 | 4,090 | 6,192 | 121 | 16,406 | | | C 438 | 2,034 | 2,170 | 1,348 | 5,990 |
| | | S 1,725 | 134 | 2,046 | 26 | 3,931 | | | S 247 | 491 | 836 | 79 | 1,653 |
| | | X 28.74 | 3.28 | 33.04 | 21.49 | 23.96 | | | X 56.39 | 24.14 | 38.53 | 3.86 | 27.60 |
| Grand Total | | C 6,441 | 6,124 | 8,362 | 1,469 | 22,396 | | | | | | | |
| Total | | S 1,972 | 625 | 2,882 | 105 | 5,584 | | | | | | | |
| Winter Troll | | X 30.62 | 10.21 | 34.47 | 7.15 | 24.93 | | | | | | | |

Table 2. Chinook salmon coded wire tag sampling effort for the Southeast Alaska summer troll fishery, 1986.

| Stat Week. | Dates | | Northern Inside | Northern Outside | Southern Inside | Southern Outside | Total |
|---|-----------|---|-----------------|------------------|-----------------|------------------|---------|
| - Fishery Opened June 20 - | | | | | | | |
| 25 | 6/15-6/21 | C | 738 | 1,508 | 215 | 354 | 2,815 |
| | | S | 229 | 0 | 48 | 0 | 277 |
| | | X | 31.03 | 0.00 | 22.33 | 0.00 | 9.84 |
| 26 | 6/22-6/28 | C | 6,034 | 20,787 | 4,188 | 6,935 | 37,964 |
| | | S | 2,525 | 3,429 | 1,415 | 1,775 | 9,144 |
| | | X | 41.85 | 16.50 | 33.79 | 25.52 | 24.09 |
| 27 | 6/29-7/5 | C | 4,707 | 23,108 | 4,123 | 4,827 | 38,765 |
| | | S | 3,152 | 6,411 | 1,193 | 981 | 11,737 |
| | | X | 66.96 | 25.53 | 28.94 | 20.32 | 30.28 |
| 28 | 7/6-7/12 | C | 3,324 | 29,951 | 4,276 | 2,569 | 40,120 |
| | | S | 2,210 | 4,030 | 1,238 | 787 | 8,265 |
| | | X | 66.49 | 13.46 | 28.95 | 30.63 | 20.60 |
| 29 | 7/13-7/19 | C | 1,501 | 28,118 | 2,951 | 2,499 | 35,069 |
| | | S | 1,113 | 7,584 | 1,386 | 994 | 11,077 |
| | | X | 74.15 | 26.97 | 46.97 | 39.78 | 31.59 |
| - Fishery Closed to Taking of Chinook from July 16 to August 21 - | | | | | | | |
| 34 | 8/17-8/23 | C | 663 | 4,582 | 318 | 436 | 5,999 |
| | | S | 22 | 641 | 36 | 0 | 699 |
| | | X | 3.32 | 13.99 | 11.32 | 0.00 | 11.65 |
| 35 | 8/24-8/30 | C | 1,977 | 19,584 | 2,563 | 1,521 | 25,645 |
| | | S | 848 | 7,960 | 1,402 | 541 | 10,751 |
| | | X | 42.89 | 40.65 | 54.70 | 35.57 | 41.92 |
| 36 | 8/31-9/6 | C | 1,141 | 9,506 | 1,554 | 1,468 | 13,669 |
| | | S | 50 | 2,459 | 664 | 94 | 3,267 |
| | | X | 4.38 | 25.87 | 42.73 | 6.40 | 23.90 |
| 37 | 9/7-9/13 | C | 968 | 10,517 | 1,684 | 356 | 13,525 |
| | | S | 232 | 3,387 | 775 | 406 | 4,800 |
| | | X | 23.97 | 32.21 | 46.02 | 114.04 | 35.49 |
| - Fishery Closed to Taking of Chinook on Sept. 10 - | | | | | | | |
| Total | | C | 21,053 | 149,661 | 21,872 | 20,985 | 213,571 |
| | | S | 10,381 | 35,901 | 8,157 | 5,578 | 60,017 |
| | | X | 49.31 | 23.99 | 37.29 | 26.58 | 28.10 |

Table 3. Coho salmon coded wire tag sampling effort summary for the Southeast Alaska summer troll fishery, 1986.

| Stat. Week | Date | | Northern Inside | Northern Outside | Southern Inside | Southern Outside | Total |
|---------------|-----------|---|--------------------|---------------------|--------------------|---------------------|-----------|
| 25 | 6/15-6/21 | C | 310 | 880 | 110 | 295 | 1,595 |
| | | S | 1 | 0 | 0 | 0 | 1 |
| | | s | 6.32 | 0.00 | 0.00 | 0.00 | 0.06 |
| 26 | 6/22-6/28 | C | 2,890 | 26,563 | 1,608 | 5,388 | 36,389 |
| | | S | 646 | 2,304 | 963 | 1,821 | 5,334 |
| | | s | 22.35 | 9.43 | 53.89 | 34.18 | 16.31 |
| 27 | 6/29-7/5 | C | 4,473 | 71,509 | 3,761 | 7,640 | 87,383 |
| | | S | 1,393 | 5,278 | 675 | 1,537 | 8,883 |
| | | s | 31.14 | 7.38 | 17.95 | 20.12 | 10.17 |
| 28 | 7/6-7/12 | C | 32,406 | 242,648 | 13,511 | 15,785 | 304,350 |
| | | S | 5,362 | 29,984 | 4,471 | 4,421 | 44,238 |
| | | s | 16.55 | 12.36 | 33.09 | 28.01 | 14.54 |
| 29 | 7/13-7/19 | C | 36,224 | 229,890 | 14,342 | 40,052 | 320,508 |
| | | S | 21,126 | 41,262 | 7,454 | 7,346 | 77,188 |
| | | s | 58.32 | 17.95 | 51.97 | 18.34 | 24.08 |
| 30 | 7/20-7/26 | C | 25,966 | 172,210 | 15,722 | 78,663 | 292,561 |
| | | S | 11,973 | 51,303 | 8,182 | 15,111 | 86,569 |
| | | s | 46.11 | 29.79 | 52.04 | 19.21 | 29.99 |
| 31 | 7/27-8/2 | C | 27,524 | 180,832 | 20,833 | 47,293 | 275,682 |
| | | S | 11,487 | 26,851 | 6,520 | 10,066 | 54,924 |
| | | s | 41.73 | 14.85 | 32.55 | 21.28 | 19.92 |
| 32 | 8/3-8/9 | C | 18,511 | 116,642 | 22,112 | 36,031 | 193,296 |
| | | S | 4668 | 21,132 | 8039 | 8777 | 42,616 |
| | | s | 29.22 | 18.12 | 36.36 | 24.36 | 22.05 |
| 33 | 8/10-8/16 | C | 6,008 | 86,023 | 14,829 | 23,062 | 129,913 |
| | | S | 4,060 | 34,366 | 7,356 | 7,277 | 53,059 |
| | | s | 67.58 | 39.95 | 49.64 | 31.55 | 40.84 |
| 34 | 8/17-8/23 | C | 1,573 | 43,076 | 2,512 | 11,355 | 60,516 |
| | | S | 29 | 4,302 | 121 | | 4,452 |
| | | s | 6.81 | 9.99 | 4.82 | 0.00 | 7.36 |
| 35 | 8/24-8/30 | C | 10,798 | 153,287 | 24,130 | 44,885 | 233,100 |
| | | S | 4,669 | 48,823 | 6,602 | 11,693 | 71,787 |
| | | s | 43.24 | 31.85 | 27.36 | 26.05 | 30.80 |
| 36 | 8/31-9/6 | C | 1,576 | 71,901 | 22,845 | 16,529 | 114,851 |
| | | S | 1,289 | 17,306 | 9,300 | 5,935 | 34,830 |
| | | s | 38.05 | 24.35 | 40.71 | 35.91 | 29.63 |
| 37 | 9/7-9/13 | C | 2,669 | 32,589 | 16,362 | 3,878 | 55,498 |
| | | S | 309 | 7,366 | 6,832 | 1,637 | 16,144 |
| | | s | 11.58 | 22.60 | 41.76 | 42.21 | 29.09 |
| 38 | 9/14-9/20 | C | 1,891 | 5,161 | 11,625 | 993 | 19,670 |
| | | S | 328 | 519 | 3,708 | | 4,555 |
| | | s | 17.35 | 10.06 | 31.87 | 0.00 | 23.15 |
| Total | | C | 176,819 | 1,433,211 | 183,903 | 331,789 | 2,125,322 |
| | | S | 67,340 | 291,196 | 70,223 | 75,621 | 504,380 |
| | | s | 38.08 | 20.32 | 38.27 | 22.79 | 23.73 |

Table 4. Chinook salmon coded wire tag sampling effort for the Southeast Alaska gill net fisheries, 1986.

| Stat. Week | Dates | | District | | | | | Total | |
|------------|------------|---|----------|-----|-------|--------|--------|-------|-------|
| | | | 101 | 102 | 106 | 108 | 111 | | 115 |
| 25 | 6/15-6/21 | C | 245 | | 142 | 24 | 536 | 269 | 1,216 |
| | | S | 143 | | 69 | 0 | 1 | 231 | 444 |
| | | % | 58.4% | | 48.6% | 0.0% | 0.2% | 85.9% | 36.5% |
| 26 | 6/22-6/28 | C | 151 | | 123 | 1 | 267 | 13 | 555 |
| | | S | 67 | | 89 | 0 | 66 | 5 | 227 |
| | | % | 44.4% | | 72.4% | 0.0% | 24.7% | 38.5% | 40.9% |
| 27 | 6/29-7/3 | C | 372 | | 100 | 0 | 330 | 142 | 944 |
| | | S | 29 | | 10 | 0 | 176 | 30 | 245 |
| | | % | 7.8% | | 10.0% | 0.0% | 53.3% | 21.1% | 26.0% |
| 28 | 7/6-7/12 | C | 96 | | | | 516 | 264 | 876 |
| | | S | 31 | | | | 230 | 111 | 372 |
| | | % | 32.3% | | | | 44.6% | 42.0% | 42.5% |
| 29 | 7/13-7/19 | C | 201 | | 124 | 0 | 313 | 452 | 1,090 |
| | | S | 104 | | 50 | 0 | 97 | | 251 |
| | | % | 51.7% | | 40.3% | 0.0% | 31.0% | 0.0% | 23.0% |
| 30 | 7/20-7/26 | C | 145 | | 271 | 36 | 195 | 50 | 697 |
| | | S | 46 | | 111 | 28 | 43 | | 228 |
| | | % | 31.7% | | 41.0% | 77.8% | 22.1% | 0.0% | 32.7% |
| 31 | 7/27-8/2 | C | 49 | | 428 | 4 | 207 | 24 | 712 |
| | | S | 15 | | 158 | 4 | 33 | 0 | 210 |
| | | % | 30.6% | | 36.9% | 100.0% | 15.9% | 0.0% | 29.5% |
| 32 | 8/3-8/9 | C | 34 | | 146 | 2 | 81 | 105 | 368 |
| | | S | 18 | | 32 | 2 | 6 | 6 | 64 |
| | | % | 52.9% | | 21.9% | 100.0% | 7.4% | 5.7% | 17.4% |
| 33 | 8/10-8/16 | C | 34 | | 43 | 4 | 32 | 303 | 416 |
| | | S | 56 | | 30 | 4 | 21 | 135 | 246 |
| | | % | 164.7% | | 69.8% | 100.0% | 65.6% | 44.6% | 59.1% |
| 34 | 8/17-8/23 | C | 21 | | 67 | 17 | 16 | 320 | 441 |
| | | S | 18 | | 35 | 7 | 29 | 118 | 207 |
| | | % | 85.7% | | 52.2% | 41.2% | 181.3% | 36.9% | 46.9% |
| 35 | 8/24-8/30 | C | 7 | | 66 | 5 | 50 | 220 | 348 |
| | | S | 4 | | 27 | 1 | 9 | 76 | 117 |
| | | % | 57.1% | | 40.9% | 20.0% | 18.0% | 34.5% | 33.6% |
| 36 | 8/31-9/6 | C | 1 | | 53 | 6 | 31 | 88 | 179 |
| | | S | 4 | | 10 | 1 | 6 | 49 | 70 |
| | | % | 400.0% | | 18.9% | 16.7% | 19.4% | 55.7% | 39.1% |
| 37 | 9/7-9/13 | C | 8 | | 78 | 7 | 7 | 174 | 274 |
| | | S | 1 | | 47 | 1 | | 46 | 95 |
| | | % | 12.3% | | 60.3% | 14.3% | 0.0% | 26.4% | 34.7% |
| 38 | 9/14-9/20 | C | 1 | | 37 | | 25 | 154 | 217 |
| | | S | 4 | | 18 | | 13 | 79 | 114 |
| | | % | 400.0% | | 48.6% | | 52.0% | 51.3% | 52.5% |
| 39 | 9/21-9/27 | C | | | 31 | | | 123 | 154 |
| | | S | | | 4 | | | 54 | 58 |
| | | % | | | 12.9% | | | 43.9% | 37.7% |
| 40-41 | 9/28-10/11 | C | | | | | | 66 | 61 |
| | | S | | | | | | 6 | 6 |
| | | % | | | | | | 9.1% | 9.8% |
| Total | | C | 1,365 | 0 | 1,709 | 106 | 2,606 | 2,767 | 8,548 |
| | | S | 540 | 0 | 686 | 48 | 734 | 886 | 2,890 |
| | | % | 39.6% | | 40.1% | 45.3% | 28.2% | 32.0% | 33.8% |

Table 5. Coho salmon coded wire tag sampling summary for the Southeast Alaska gill net fisheries, 1986.

| Stat. Month | Dates | | District | | | | | Total | |
|-------------|-----------|---|----------|-----|---------|--------|--------|--------|---------|
| | | | 101 | 102 | 106 | 108 | 111 | | 115 |
| 25 | 6/15-6/21 | C | 325 | | 830 | 7 | 0 | 1 | 1,163 |
| | | S | 102 | | 412 | | | 1 | 515 |
| | | % | 31.4% | | 49.6% | 0.0% | | 100.0% | 44.3% |
| 26 | 6/22-6/28 | C | 851 | | 1,440 | 2 | 5 | 0 | 2,306 |
| | | S | 120 | | 727 | | 2 | | 849 |
| | | % | 14.1% | | 50.2% | 0.0% | 40.0% | | 36.8% |
| 27 | 6/29-7/5 | C | 1,246 | | 2,415 | 0 | 16 | 30 | 3,715 |
| | | S | 230 | | 446 | | 2 | 83 | 769 |
| | | % | 19.1% | | 18.3% | | 12.3% | 218.4% | 20.7% |
| 28 | 7/6-7/12 | C | 1,570 | | 0 | 0 | 170 | 26 | 1,766 |
| | | S | 503 | | | | 34 | 7 | 544 |
| | | % | 32.0% | | | | 20.0% | 26.9% | 30.8% |
| 29 | 7/13-7/19 | C | 4,616 | | 2,979 | 0 | 213 | 12 | 7,820 |
| | | S | 1,149 | | 731 | | 20 | | 1,900 |
| | | % | 24.9% | | 24.3% | | 9.4% | 0.0% | 24.3% |
| 30 | 7/20-7/26 | C | 3,945 | | 5,100 | 36 | 478 | 5 | 9,572 |
| | | S | 563 | | 1,071 | 51 | 85 | | 1,772 |
| | | % | 14.3% | | 21.0% | 141.7% | 17.8% | 0.0% | 18.5% |
| 31 | 7/27-8/2 | C | 4,449 | | 16,154 | 133 | 1,281 | 20 | 22,037 |
| | | S | 877 | | 3,083 | 124 | 425 | 0 | 4,509 |
| | | % | 19.7% | | 19.1% | 93.2% | 33.2% | 0.0% | 20.5% |
| 32 | 8/3-8/9 | C | 5,707 | 5 | 15,190 | 271 | 1,512 | 492 | 23,185 |
| | | S | 1,832 | 12 | 4,656 | 251 | 582 | 33 | 7,366 |
| | | % | 32.1% | | 30.6% | 92.6% | 38.5% | 6.7% | 31.8% |
| 33 | 8/10-8/16 | C | 4,444 | 290 | 17,937 | 858 | 3,214 | 1,118 | 27,861 |
| | | S | 2,223 | | 6,316 | 248 | 660 | 573 | 10,020 |
| | | % | 50.0% | | 35.2% | 28.9% | 20.5% | 51.3% | 36.0% |
| 34 | 8/17-8/23 | C | 9,001 | 9 | 23,772 | 2,620 | 2,190 | 6,000 | 43,592 |
| | | S | 3,627 | | 7,096 | 314 | 584 | 530 | 12,151 |
| | | % | 40.3% | | 29.9% | 12.0% | 26.7% | 8.8% | 27.9% |
| 35 | 8/24-8/30 | C | 15,269 | | 36,047 | 2,256 | 8,914 | 6,620 | 69,114 |
| | | S | 2,269 | | 5,333 | 1,151 | 683 | 1,209 | 10,667 |
| | | % | 14.9% | | 15.4% | 51.0% | 7.7% | 18.2% | 15.7% |
| 36 | 8/31-9/6 | C | 16,448 | | 44,134 | 3,061 | 4,961 | 15,317 | 84,161 |
| | | S | 6,880 | | 9,011 | 609 | 1,382 | 4,101 | 21,983 |
| | | % | 41.7% | | 20.3% | 19.9% | 27.9% | 26.8% | 26.1% |
| 37 | 9/7-9/13 | C | 18,367 | | 23,128 | 3,863 | 4,172 | 19,219 | 68,969 |
| | | S | 7,967 | | 5,680 | 914 | 1,044 | 6,945 | 22,550 |
| | | % | 42.9% | | 24.6% | 23.3% | 25.0% | 36.1% | 32.7% |
| 38 | 9/14-9/20 | C | 19,321 | | 14,582 | 754 | 3,285 | 18,951 | 56,893 |
| | | S | 10,161 | | 5,233 | 583 | 1,430 | 4,675 | 22,142 |
| | | % | 32.6% | | 36.3% | 77.3% | 43.5% | 24.7% | 38.9% |
| 39 | 9/21-9/27 | C | 10,109 | | 1,912 | 379 | 0 | 8,151 | 20,551 |
| | | S | | | 226 | 388 | | 2,105 | 2,719 |
| | | % | | | 11.8% | 102.4% | | 25.8% | 13.2% |
| 40 | 9/28-10/4 | C | 0 | | 0 | 139 | 0 | 5,488 | 5,627 |
| | | S | | | | | | | 0 |
| | | % | | | | | | 0.0% | 0.0% |
| Total | | C | 115,908 | 304 | 205,844 | 14,399 | 30,411 | 81,466 | 448,332 |
| | | S | 38,513 | 12 | 50,303 | 4,633 | 6,933 | 20,262 | 120,656 |
| | | % | 33.2% | | 24.4% | 32.2% | 22.8% | 24.9% | 26.9% |

Table 6. Chum salmon coded wire tag sampling effort for the Southeast Alaska gill net fisheries, 1986.

| Stat. Month | Dates | | District | | | | | Total | |
|-------------|-----------|---|----------|-----|--------|--------|--------|---------|---------|
| | | | 101 | 102 | 106 | 108 | 111 | | 115 |
| 25 | 6/15-6/21 | C | 7,549 | | 463 | 9 | 26 | 85 | 8,132 |
| | | S | 2,431 | | 163 | | 4 | 46 | 2,644 |
| | | % | 32.2% | | 35.2% | | 13.4% | 54.1% | 32.5% |
| 26 | 6/22-6/28 | C | 10,944 | | 909 | 0 | 266 | 542 | 12,661 |
| | | S | 4,070 | | 467 | | 139 | 278 | 4,974 |
| | | % | 37.2% | | 53.6% | | 32.3% | 51.3% | 33.3% |
| 27 | 6/29-7/5 | C | 20,320 | | 2,977 | 0 | 3,013 | 4,992 | 30,982 |
| | | S | 5,702 | | 768 | | 797 | 2,257 | 9,524 |
| | | % | 28.1% | | 29.6% | | 26.5% | 45.2% | 30.8% |
| 28 | 7/6-7/12 | C | 30,631 | | 0 | 0 | 3,835 | 6,027 | 40,493 |
| | | S | 9,040 | | | | 1,778 | 1,299 | 12,117 |
| | | % | 29.5% | | | | 46.4% | 21.6% | 29.9% |
| 29 | 7/13-7/19 | C | 54,962 | | 2,931 | 0 | 7,202 | 4,877 | 69,972 |
| | | S | 13,635 | | 788 | | 2,539 | 2,589 | 19,551 |
| | | % | 24.8% | | 26.9% | | 35.3% | 53.1% | 27.9% |
| 30 | 7/20-7/26 | C | 44,236 | | 9,938 | 3,817 | 7,249 | 1,654 | 70,894 |
| | | S | 10,327 | | 4,016 | 2,172 | 2,389 | 0 | 18,895 |
| | | % | 21.4% | | 40.4% | 56.9% | 32.8% | 0.0% | 26.7% |
| 31 | 7/27-8/2 | C | 32,335 | | 15,738 | 1,230 | 5,195 | 810 | 55,258 |
| | | S | 5,749 | | 4,111 | 1,153 | 1,582 | 0 | 12,595 |
| | | % | 17.8% | | 26.1% | 93.7% | 30.7% | 0.0% | 22.8% |
| 32 | 8/3-8/9 | C | 18,367 | 41 | 10,520 | 355 | 1,622 | 5,095 | 36,000 |
| | | S | 5,903 | 66 | 2,950 | 252 | 954 | 739 | 10,864 |
| | | % | 32.1% | | 28.0% | 71.0% | 58.8% | 14.5% | 30.2% |
| 33 | 8/10-8/16 | C | 19,522 | 114 | 10,292 | 204 | 1,404 | 9,280 | 40,756 |
| | | S | 9,834 | | 4,628 | 96 | 113 | 4,002 | 18,673 |
| | | % | 50.4% | | 45.0% | 47.1% | 8.0% | 43.4% | 45.8% |
| 34 | 8/17-8/23 | C | 20,851 | 10 | 6,748 | 107 | 1,174 | 20,521 | 49,411 |
| | | S | 6,882 | | 2,349 | 32 | 593 | 2,772 | 12,628 |
| | | % | 33.0% | | 34.8% | 29.9% | 50.5% | 13.5% | 25.6% |
| 35 | 8/24-8/30 | C | 27,815 | | 7,772 | 67 | 8,976 | 13,876 | 58,506 |
| | | S | 4,681 | | 1,181 | 26 | 728 | 3,172 | 9,788 |
| | | % | 16.8% | | 15.2% | 38.8% | 8.1% | 22.9% | 16.7% |
| 36 | 8/31-9/6 | C | 30,282 | | 6,256 | 27 | 8,458 | 39,362 | 84,385 |
| | | S | 11,705 | | 1,721 | 12 | 2,155 | 2,442 | 18,035 |
| | | % | 38.7% | | 27.3% | 44.4% | 25.5% | 6.2% | 21.4% |
| 37 | 9/7-9/13 | C | 24,234 | | 4,445 | 125 | 6,791 | 48,543 | 84,138 |
| | | S | 10,445 | | 1,008 | 25 | 2,187 | 7,536 | 21,201 |
| | | % | 43.1% | | 22.7% | 20.0% | 32.2% | 15.5% | 25.2% |
| 38 | 9/14-9/20 | C | 30,046 | | 3,401 | 3 | 3,396 | 108,958 | 145,804 |
| | | S | 13,722 | | 1,044 | 3 | 1,173 | 1,003 | 16,945 |
| | | % | 45.7% | | 30.7% | 100.0% | 34.5% | 0.9% | 11.6% |
| 39-40 | 9/21-10/4 | C | 7,248 | | 693 | 0 | 0 | 116,780 | 124,721 |
| | | S | 0 | | 61 | | | 0 | 61 |
| | | % | | | 8.8% | | | 0.0% | .0% |
| Total | | C | 383,342 | 165 | 82,703 | 5,944 | 58,567 | 381,342 | 912,063 |
| | | S | 114,126 | 66 | 25,275 | 3,771 | 17,122 | 28,135 | 188,495 |
| | | % | 29.8% | | 30.6% | 62.4% | 29.2% | 7.4% | 20.7% |

Table 7. Sockeye salmon coded wire tag sampling effort for the Southeast Alaska gill net fisheries, 1986.

| Stat. Week | Dates | | District | | | | | Total | |
|------------|-----------|---|----------|------|---------|-------|--------|---------|---------|
| | | | 101 | 102 | 106 | 108 | 111* | | 115* |
| 25 | 6/15-6/21 | C | 2,125 | | 2,590 | 36 | 642 | 335 | 5,748 |
| | | S | 891 | | 1,087 | 0 | 0 | 0 | 1,978 |
| | | % | 41.9% | | 42.0% | 0.0% | 0.0% | 0.0% | 34.4% |
| 26 | 6/22-6/28 | C | 9,949 | | 3,689 | 14 | 1,616 | 1,379 | 16,647 |
| | | S | 4,143 | | 1,980 | 0 | 485 | 179 | 6,787 |
| | | % | 41.6% | | 53.7% | 0.0% | 30.0% | 13.0% | 40.8% |
| 27 | 6/29-7/5 | C | 10,289 | | 17,388 | 0 | 4,353 | 4,669 | 36,699 |
| | | S | 3,203 | | 5,038 | | 772 | 107 | 9,120 |
| | | % | 31.1% | | 29.0% | | 17.7% | 2.3% | 24.9% |
| 28 | 7/6-7/12 | C | 21,149 | | 0 | 0 | 9,000 | 6,025 | 36,174 |
| | | S | 6,103 | | | | 1,404 | 505 | 8,012 |
| | | % | 28.9% | | | | 15.6% | 8.4% | 22.1% |
| 29 | 7/13-7/19 | C | 47,742 | | 7,899 | 0 | 13,365 | 4,257 | 73,263 |
| | | S | 9,585 | | 1,901 | | 1,171 | 447 | 13,104 |
| | | % | 20.1% | | 24.1% | | 8.8% | 10.5% | 17.9% |
| 30 | 7/20-7/26 | C | 30,307 | | 21,184 | 2,009 | 10,768 | 5,448 | 69,716 |
| | | S | 4,751 | | 5,514 | 1,164 | 1,239 | 200 | 12,868 |
| | | % | 15.7% | | 26.0% | 57.9% | 11.5% | 3.7% | 18.5% |
| 31 | 7/27-8/2 | C | 20,932 | | 33,585 | 683 | 16,059 | 4,833 | 76,092 |
| | | S | 4,804 | | 6,189 | 451 | 2,164 | 0 | 13,608 |
| | | % | 23.0% | | 18.4% | 66.0% | 13.5% | 0.0% | 17.9% |
| 32 | 8/3-8/9 | C | 15,684 | 20 | 24,819 | 788 | 5,368 | 19,534 | 66,233 |
| | | S | 4,876 | 0 | 6,581 | 457 | 560 | 0 | 12,474 |
| | | % | 31.1% | 0.0% | 26.5% | 58.0% | 10.4% | 0.0% | 18.8% |
| 33 | 8/10-8/16 | C | 7,429 | 13 | 19,862 | 454 | 4,973 | 53,014 | 85,745 |
| | | S | 5,148 | 0 | 7,739 | 161 | | 2 | 13,050 |
| | | % | 63.3% | 0.0% | 39.0% | 33.5% | 0.0% | .0% | 15.2% |
| 34 | 8/17-8/23 | C | 5,330 | 4 | 10,515 | 166 | 3,668 | 84,104 | 103,787 |
| | | S | 2,533 | 0 | 2,914 | 57 | 0 | 1 | 5,505 |
| | | % | 47.3% | 0.0% | 27.7% | 34.3% | 0.0% | .0% | 5.3% |
| 35 | 8/24-8/30 | C | 1,869 | | 3,156 | 33 | 2,448 | 35,734 | 43,240 |
| | | S | 216 | | 352 | 14 | 12 | 103 | 697 |
| | | % | 11.6% | | 11.2% | 42.4% | 0.5% | 0.3% | 1.6% |
| 36 | 8/31-9/6 | C | 423 | | 816 | 6 | 383 | 54,188 | 55,816 |
| | | S | 245 | | 112 | 2 | 0 | 23 | 382 |
| | | % | 57.9% | | 13.7% | 33.3% | 0.0% | .0% | 0.7% |
| 37 | 9/7-9/13 | C | 91 | | 158 | 8 | 82 | 9,925 | 10,264 |
| | | S | 27 | | 27 | 0 | 0 | 0 | 54 |
| | | % | 28.7% | | 17.1% | 0.0% | 0.0% | 0.0% | 0.5% |
| 38 | 9/14-9/20 | C | 257 | | 42 | 0 | 51 | 5,173 | 5,523 |
| | | S | 18 | | 19 | | 0 | 16 | 53 |
| | | % | 7.0% | | 45.2% | | 0.0% | 0.3% | 1.0% |
| 39-40 | 9/21-10/4 | C | 0 | | 7 | 0 | 0 | 1,154 | 1,161 |
| | | S | | | 1 | | | 101 | 102 |
| | | % | | | 14.3% | | | 8.8% | 8.8% |
| Total | | C | 173,576 | 37 | 145,710 | 4,197 | 72,776 | 289,812 | 686,108 |
| | | S | 46,543 | 0 | 39,454 | 2,306 | 7,807 | 1,684 | 97,794 |
| | | % | 26.8% | | 27.1% | 54.9% | 10.7% | 0.6% | 14.3% |

* CWT sampling is not directed at sockeye in these districts.

Table 8. Chinook salmon coded wire tag sampling effort summary for the Southeast Alaska purse seine fisheries, 1986.

| Stat. Week | Dates | | District | | | | | | | | | | Total | |
|------------|-----------|---|----------|--------|--------|---------|--------|---------|--------|-------|--------|--------|--------|--------|
| | | | 101 | 102 | 103 | 104 | 105 | 106/107 | 109 | 110 | 112 | 113 | | 114 |
| 27 | 6/29-7/5 | C | 161 | | | | | | | | 120 | | | 281 |
| | | S | 0 | | | | | | | 88 | | | 88 | |
| | | % | 0.0% | | | | | | | 73.3% | | | 31.3% | |
| 28 | 7/6-7/12 | C | 37 | 0 | | 0 | | | | 496 | 0 | 5 | 538 | |
| | | S | 73 | | | 1 | | | | 163 | | 0 | 237 | |
| | | % | 197.3% | | | | | | | 32.9% | | 0.0% | 44.1% | |
| 29 | 7/13-7/19 | C | 38 | 19 | | 13 | | | | 273 | 0 | 2 | 345 | |
| | | S | 52 | 0 | | 10 | | | | 126 | | 4 | 192 | |
| | | % | 136.8% | 0.0% | | 76.9% | | | | 46.2% | | 200.0% | 55.7% | |
| 30 | 7/20-7/26 | C | 17 | 19 | | 34 | | | | 83 | 97 | | 230 | |
| | | S | 104 | 31 | | 62 | | | | 46 | 40 | | 283 | |
| | | % | 611.8% | 163.2% | | 182.4% | | | | 55.4% | 41.2% | | 113.2% | |
| 31 | 7/27-8/2 | C | 948 | 229 | | 1,093 | | | | 112 | 11 | | 4,393 | |
| | | S | 495 | 100 | | 839 | | | | 39 | 1 | | 1,474 | |
| | | % | 52.2% | 43.7% | | 27.1% | | | | 34.8% | 9.1% | | 33.6% | |
| 32 | 8/3-8/9 | C | 642 | 74 | 1 | 6376 | 3 | | 53 | 108 | 1 | | 7,258 | |
| | | S | 288 | 45 | | 1,314 | 3 | | 21 | 0 | 2 | | 1,673 | |
| | | % | 44.9% | 60.8% | | 20.6% | 100.0% | | 39.6% | 0.0% | 200.0% | | 23.1% | |
| 33 | 8/10-8/16 | C | 10 | 18 | 1 | 23 | 4 | 21 | 5 | 0 | 5 | | 67 | |
| | | S | 10 | 12 | 7 | 257 | 0 | 31 | 3 | 8 | 6 | | 334 | |
| | | % | 100.0% | 66.7% | | 1117.4% | 0.0% | 147.6% | 60.0% | | 120.0% | | 383.9% | |
| 34 | 8/17-8/23 | C | 21 | 1 | 0 | 10 | 0 | 0 | 1 | 0 | 2 | | 35 | |
| | | S | 31 | | 22 | 29 | 1 | | 6 | | 2 | | 91 | |
| | | % | 147.6% | 0.0% | | 290.0% | | | 600.0% | | 100.0% | | 260.0% | |
| 35 | 8/24-8/30 | C | 9 | 12 | 5 | 25 | 5 | 31 | 0 | 0 | 0 | 5 | 92 | |
| | | S | 69 | 1 | 17 | 36 | 0 | 35 | | 2 | | 0 | 160 | |
| | | % | 766.7% | 8.3% | 340.0% | 144.0% | 0.0% | 112.9% | | 20.0% | | 0.0% | 173.9% | |
| 36 | 8/31-9/6 | C | 2 | 3 | 5 | 15 | 0 | 0 | 1 | | | | 26 | |
| | | S | 26 | 0 | | 8 | | | 2 | | | | 36 | |
| | | % | 1300.0% | 0.0% | | 53.3% | | | 200.0% | | | | 138.5% | |
| 37 | 9/7-9/13 | C | | 0 | 1 | | | | | | | | 1 | |
| | | S | | | 0 | | | | | | | | 0 | |
| | | % | | | 0.0% | | | | | | | | 0.0% | |
| 38 | 9/14-9/20 | C | | 3 | | | | | | | | | 3 | |
| | | S | | 10 | | | | | | | | | 10 | |
| | | % | | 333.3% | | | | | | | | | 333.3% | |
| Total | | C | 1,885 | 378 | 13 | 9,589 | 12 | 52 | 60 | 0 | 1,192 | 116 | 12 | 13,309 |
| | | S | 1,148 | 199 | 46 | 2,556 | 4 | 66 | 32 | 0 | 472 | 51 | 4 | 4,578 |
| | | % | 60.9% | 52.6% | 351.8% | 26.7% | 33.3% | 126.9% | 53.3% | | 39.6% | 44.0% | 33.3% | 34.4% |

Table 9. Coho salmon coded wire tag sampling effort summary for the Southeast Alaska purse seine fisheries, 1986.

| Stat. Week | Dates | | District | | | | | | | | | | Total | |
|------------|-----------|---|----------|--------|--------|---------|-------|---------|-------|-----|--------|-------|-------|---------|
| | | | 101 | 102 | 103 | 104 | 105 | 106/107 | 109 | 110 | 112 | 113 | | 114 |
| 27 | 6/29-7/5 | C | | | | | | | | | 33 | 0 | 0 | 33 |
| | | S | | | | | | | | | 6 | | | 6 |
| | | % | | | | | | | | | 18.2% | | | 18.2% |
| 28 | 7/6-7/12 | C | 1,405 | 0 | 0 | 7,441 | | | | | 434 | 0 | 58 | 9,358 |
| | | S | 346 | | | 1,675 | | | | | 578 | | 36 | 2,635 |
| | | % | 24.6% | | | 22.5% | | | | | 127.3% | | 62.1% | 28.2% |
| 29 | 7/13-7/19 | C | 1,721 | 1,345 | 0 | 11,265 | | | | | 948 | 20 | 62 | 15,361 |
| | | S | 599 | 0 | | 3,208 | | | | | 155 | 0 | 14 | 3,976 |
| | | % | 34.8% | 0.0% | | 28.5% | | | | | 16.4% | 0.0% | 22.6% | 25.9% |
| 30 | 7/20-7/26 | C | 3,416 | 3,201 | 0 | 30,882 | | | | | 1,145 | 162 | 0 | 38,806 |
| | | S | 760 | 1,145 | | 10,160 | | | | | 228 | 14 | | 12,307 |
| | | % | 22.2% | 35.8% | | 32.9% | | | | | 19.9% | 8.6% | | 31.7% |
| 31 | 7/27-8/2 | C | 7,577 | 5,397 | 0 | 43,637 | | | | | 1,468 | 38 | 0 | 58,117 |
| | | S | 2,324 | 1,610 | | 8,641 | | | | | 266 | 11 | | 12,852 |
| | | % | 30.7% | 29.8% | | 19.8% | | | | | 18.1% | 28.9% | | 22.1% |
| 32 | 8/3-8/9 | C | 8,911 | 8,379 | 420 | 57,471 | 101 | 0 | 1,945 | | 1,421 | 239 | 0 | 78,887 |
| | | S | 3,624 | 812 | 0 | 8,033 | 90 | | 729 | | 196 | 60 | | 13,544 |
| | | % | 40.7% | 9.7% | 0.0% | 14.0% | 89.1% | | 37.5% | | 13.8% | 25.1% | | 17.2% |
| 33 | 8/10-8/16 | C | 13,045 | 11,354 | 10,447 | 33,477 | 574 | 3,754 | 1,083 | | 3,032 | 102 | 0 | 76,868 |
| | | S | 1,624 | 1,384 | 421 | 4,337 | 41 | 828 | 175 | | 727 | 24 | | 9,561 |
| | | % | 12.4% | 12.2% | 4.0% | 13.0% | 7.1% | 22.1% | 16.2% | | 24.0% | 23.5% | | 12.4% |
| 34 | 8/17-8/23 | C | 20,534 | 2,545 | 18,298 | 30,999 | 0 | 0 | 0 | | | 136 | 0 | 72,512 |
| | | S | 4,498 | 638 | 4,607 | 3,093 | | | | | | 37 | | 12,873 |
| | | % | 21.9% | 25.1% | 25.2% | 10.0% | | | | | | 27.2% | | 17.8% |
| 35 | 8/24-8/30 | C | 33,921 | 16,764 | 25,942 | 44,224 | 300 | 1,700 | 4,770 | | 167 | 91 | 429 | 128,308 |
| | | S | 7,140 | 2,013 | 2,844 | 7,544 | 66 | 872 | 801 | | 0 | 30 | 0 | 21,310 |
| | | % | 21.0% | 12.0% | 11.0% | 17.1% | 22.0% | 51.3% | 16.8% | | 0.0% | 33.0% | 0.0% | 16.6% |
| 36 | 8/31-9/6 | C | 40,956 | 10,362 | 6,387 | 13,857 | 0 | 0 | 0 | | | | | 71,562 |
| | | S | 11,941 | 1,183 | 674 | 879 | | | 376 | | | | | 15,053 |
| | | % | 29.2% | 11.4% | 10.6% | 6.3% | | | | | | | | 21.0% |
| 37 | 9/7-9/13 | C | 578 | 0 | 5,585 | | | | | | | | | 6,163 |
| | | S | 1,411 | | 2,246 | | | | | | | | | 3,657 |
| | | % | 244.1% | | 40.2% | | | | | | | | | 59.3% |
| 38 | 9/14-9/20 | C | 9,913 | 1,306 | 4,329 | | | | | | | | | 15,548 |
| | | S | 109 | 67 | 395 | | | | | | | | | 771 |
| | | % | 1.1% | 5.1% | 11.7% | | | | | | | | | 5.0% |
| 39 | 9/21-9/27 | C | 5,968 | 129 | 1,556 | | | | | | | | | |
| | | S | 105 | 108 | 797 | | | | | | | | | |
| | | % | 1.8% | 83.7% | 22.4% | | | | | | | | | |
| 40 | 9/28-10/4 | C | 4,618 | 1,109 | 539 | | | | | | | | | |
| | | S | 0 | 0 | 0 | | | | | | | | | |
| | | % | | | | | | | | | | | | |
| Total | | C | 152,563 | 61,891 | 75,503 | 273,253 | 975 | 5,454 | 7,798 | 0 | 8,668 | 788 | 549 | 571,523 |
| | | S | 34,481 | 8,960 | 12,184 | 47,570 | 197 | 1,700 | 2,081 | 0 | 2,156 | 176 | 50 | 108,545 |
| | | % | 22.6% | 14.5% | 16.1% | 17.4% | 20.2% | 31.2% | 26.7% | | 24.9% | 22.3% | 9.1% | 19.0% |

Table 10. Chum salmon coded wire tag sampling effort summary for the Southeast Alaska purse seine fisheries, 1986.

| Stat. Week | Dates | | District | | | | | | | | | | Total | |
|------------|-----------|---|----------|---------|---------|---------|--------|---------|---------|---------|---------|---------|---------|-----------|
| | | | 101 | 102 | 103 | 104 | 105 | 106/107 | 109 | 110 | 112 | 113 | | 114 |
| 27 | 6/29-7/5 | C | 131 | | | | | | | | 39,960 | 0 | 0 | 40,091 |
| | | S | 0 | | | | | | | 10,232 | | | 10,232 | |
| | | % | 0.0% | | | | | | | | 25.6% | | | 25.5% |
| 28 | 7/6-7/12 | C | 11,970 | 0 | 0 | 8,509 | | | | 292,530 | 0 | 1,102 | 274,131 | |
| | | S | 1,805 | | | 2,808 | | | | 63,923 | | 1,097 | 69,633 | |
| | | % | 15.1% | | | 33.0% | | | | 25.3% | | 99.5% | 25.4% | |
| 29 | 7/13-7/19 | C | 16,697 | 2,702 | 0 | 36,320 | | | | 108,474 | 0 | 3,545 | 167,738 | |
| | | S | 3,928 | 0 | | 18,511 | | | | 32,533 | | 1,657 | 56,649 | |
| | | % | 23.5% | 0.0% | | 51.0% | | | | 30.0% | | 46.7% | 33.8% | |
| 30 | 7/20-7/26 | C | 15,907 | 5,093 | 0 | 36,890 | | | | 64,930 | 5,177 | 0 | 127,997 | |
| | | S | 3,642 | 1,914 | | 14,359 | | | | 19,518 | 4,044 | | 43,477 | |
| | | % | 22.9% | 37.6% | | 38.9% | | | | 30.1% | 78.1% | | 34.0% | |
| 31 | 7/27-8/2 | C | 39,763 | 8,836 | 0 | 75,451 | | | | 123,910 | 13,594 | 0 | 261,554 | |
| | | S | 14,164 | 2,438 | | 19,099 | | | | 30,264 | 1,758 | | 67,723 | |
| | | % | 35.6% | 27.6% | | 25.3% | | | | 24.4% | 12.9% | | 25.9% | |
| 32 | 8/3-8/9 | C | 25,689 | 15,778 | 520 | 144,502 | 21,803 | 0 | 106,036 | | 5,674 | 39,836 | 0 | 359,838 |
| | | S | 6,182 | 1,727 | 0 | 25,823 | 11,679 | | 33,131 | | 284 | 12,038 | | 90,884 |
| | | % | 24.1% | 10.9% | 0.0% | 17.9% | 53.6% | | 31.3% | | 5.0% | 30.2% | | 25.3% |
| 33 | 8/10-8/16 | C | 29,313 | 30,362 | 31,872 | 63,596 | 23,776 | 3,115 | 28,163 | | 6,248 | 8,525 | 0 | 224,970 |
| | | S | 3,116 | 3,776 | 804 | 13,197 | 5,998 | 995 | 7,456 | | 1,187 | 329 | | 36,858 |
| | | % | 10.6% | 12.4% | 2.5% | 20.8% | 25.2% | 31.9% | 26.5% | | 19.0% | 3.9% | | 16.4% |
| 34 | 8/17-8/23 | C | 44,417 | 8,369 | 46,971 | 20,652 | 0 | 0 | 0 | | 0 | 28,654 | 0 | 149,063 |
| | | S | 10,267 | 2,212 | 8,603 | 4,598 | | | | | | 10,172 | | 35,852 |
| | | % | 23.1% | 26.4% | 18.3% | 22.3% | | | | | | 35.5% | | 24.1% |
| 35 | 8/24-8/30 | C | 52,233 | 30,684 | 51,912 | 35,743 | 1,800 | 600 | 37,291 | | 4,114 | 16,038 | 34,516 | 264,933 |
| | | S | 7,103 | 3,162 | 8,572 | 9,961 | 2,231 | 204 | 9,420 | | 1,499 | 3,514 | 0 | 45,666 |
| | | % | 13.6% | 10.3% | 16.5% | 27.9% | 123.9% | 34.0% | 25.3% | | 36.4% | 21.9% | 0.0% | 17.2% |
| 36 | 8/31-9/6 | C | 47,702 | 34,159 | 21,464 | 15,761 | 0 | | 2,900 | | | | | 121,986 |
| | | S | 11,388 | 4,672 | 2,635 | 1,662 | | 58 | 1,642 | | | | | 22,057 |
| | | % | 23.9% | 13.7% | 12.3% | 10.5% | | | | | | | | 18.1% |
| 37 | 9/7-9/13 | C | 328 | 0 | 25,810 | | | | | | | | | 26,138 |
| | | S | 137 | | 11,045 | | | | | | | | | 11,182 |
| | | % | 41.8% | | 42.8% | | | | | | | | | 42.8% |
| 38 | 9/14-9/20 | C | 23,224 | 6,118 | 19,645 | | | | | | | | | 48,987 |
| | | S | 239 | 518 | 7,781 | | | | | | | | | 8,538 |
| | | % | 1.0% | 8.5% | 39.6% | | | | | | | | | 17.4% |
| 39 | 9/21-9/27 | C | 30,898 | 916 | 15,543 | | | | | | | | | 47,357 |
| | | S | 268 | 710 | 2,281 | | | | | | | | | 3,259 |
| | | % | 0.9% | 77.5% | 14.7% | | | | | | | | | 6.9% |
| 40 | 9/28-10/4 | C | 11,334 | 62,654* | 1,795 | | | | | | | | | 13,129 |
| | | S | 0 | 0 | 0 | | | | | | | | | 0 |
| | | % | | | | | | | | | | | | |
| Total | | C | 349,608 | 143,017 | 215,532 | 437,424 | 47,379 | 3,715 | 174,390 | 0 | 605,860 | 111,824 | 39,163 | 2,127,912 |
| | | S | 62,239 | 21,129 | 41,721 | 110,018 | 19,908 | 1,257 | 51,669 | 0 | 159,460 | 31,855 | 2,754 | 502,010 |
| | | % | 17.8% | 14.8% | 19.4% | 25.2% | 42.0% | 33.8% | 29.6% | | 26.3% | 28.5% | 7.0% | 23.6% |

* Includes catch of 2,915 in week 41.

Table 11. Sockeye salmon coded wire tag sampling effort summary for the Southeast Alaska purse seine fisheries, 1986.

| Stat. Area | Dates | | District | | | | | | | | | Total | | |
|------------|-----------|---|----------|--------|--------|---------|------|---------|-------|-----|-------|-------|-------|---------|
| | | | 101 | 102 | 103 | 104 | 105 | 106/107 | 109 | 110 | 112* | | 113* | 114* |
| 27 | 6/29-7/5 | C | | | | | | | | | 88 | 0 | 9 | 97 |
| | | S | | | | | | | | | 32 | | 0 | 32 |
| | | % | | | | | | | | | 36.4% | | 0.0% | 33.0% |
| 28 | 7/6-7/12 | C | 7,675 | 0 | 0 | 7,192 | | | | | 564 | 0 | 60 | 15,491 |
| | | S | 2,136 | | | 2,248 | | | | | 238 | | 0 | 4,622 |
| | | % | 27.8% | | | 31.3% | | | | | 42.2% | | 0.0% | 29.8% |
| 29 | 7/13-7/19 | C | 4,632 | 3,476 | 0 | 30,307 | | | | | 164 | 0 | 1,238 | 39,817 |
| | | S | 1,138 | 0 | | 10,638 | | | | | 69 | | 0 | 11,845 |
| | | % | 24.6% | 0.0% | | 35.1% | | | | | 42.1% | | 0.0% | 29.7% |
| 30 | 7/20-7/26 | C | 9,753 | 5,495 | 0 | 53,805 | | | | | 121 | 4,491 | 0 | 73,665 |
| | | S | 1,791 | 2,235 | | 11,748 | | | | | 0 | 42 | | 15,816 |
| | | % | 18.4% | 40.7% | | 21.8% | | | | | 0.0% | 0.9% | | 21.5% |
| 31 | 7/27-8/2 | C | 19,231 | 5,202 | 0 | 104,325 | | | | | 208 | 173 | 0 | 129,139 |
| | | S | 4,537 | 1,802 | | 11,377 | | | | | 21 | 3 | | 17,740 |
| | | % | 23.6% | 34.6% | | 10.9% | | | | | 10.1% | 1.7% | | 13.7% |
| 32 | 8/3-8/9 | C | 19,875 | 6,673 | 80 | 154,415 | 181 | 0 | 1,767 | | 1,116 | 2,022 | 0 | 186,129 |
| | | S | 6,163 | 396 | 0 | 7,312 | 1 | | 16 | | 22 | 0 | | 13,910 |
| | | % | 31.0% | 5.9% | 0.0% | 4.7% | 0.6% | | 0.9% | | 2.0% | 0.0% | | 7.5% |
| 33 | 8/10-8/16 | C | 9,150 | 7,436 | 4,091 | 63,098 | 206 | 2,436 | 182 | | 3,369 | 36 | 0 | 90,004 |
| | | S | 2,023 | 996 | 45 | 6,918 | 17 | 749 | 6 | | | 11 | | 10,765 |
| | | % | 22.1% | 13.4% | 1.1% | 11.0% | 8.3% | 30.7% | 3.3% | | 0.0% | 30.6% | | 12.0% |
| 34 | 8/17-8/23 | C | 5,333 | 1,300 | 5,137 | 15,872 | 0 | 0 | 0 | | 0 | 4 | 0 | 27,646 |
| | | S | 2,282 | 411 | 1,931 | 1,943 | | | | | | 0 | | 6,567 |
| | | % | 42.8% | 31.6% | 37.6% | 12.2% | | | | | | 0.0% | | 23.8% |
| 35 | 8/24-8/30 | C | 2,938 | 2,438 | 3,820 | 11,989 | 310 | 300 | 61 | | | 4 | 167 | 22,027 |
| | | S | 647 | 371 | 365 | 794 | | 18 | | | 15 | 0 | 0 | 2,210 |
| | | % | 22.0% | 15.2% | 9.6% | 6.6% | 0.0% | 6.0% | 0.0% | | | 0.0% | 0.0% | 10.0% |
| 36 | 8/31-9/6 | C | 1,303 | 647 | 443 | 2,986 | 0 | 0 | 0 | | | | | 5,379 |
| | | S | 298 | 295 | 15 | 90 | | | | | | | | 702 |
| | | % | 22.9% | 45.6% | 3.4% | 3.0% | | | | | | | | 13.1% |
| 37 | 9/7-9/13 | C | 2 | 14 | | | | | | | | | | 16 |
| | | S | 0 | 0 | | | | | | | | | | 0 |
| | | % | 0.0% | 0.0% | | | | | | | | | | 0.0% |
| 38 | 9/14-9/20 | C | 0 | 14 | | | | | | | | | | 14 |
| | | S | | 6 | | | | | | | | | | 6 |
| | | % | | 42.9% | | | | | | | | | | 42.9% |
| Total | | C | 73,892 | 32,695 | 13,571 | 443,989 | 697 | 2,736 | 2,010 | 0 | 5,630 | 6,730 | 1,474 | 589,424 |
| | | S | 21,015 | 6,512 | 2,356 | 51,068 | 18 | 771 | 22 | 0 | 397 | 56 | 0 | 84,215 |
| | | % | 28.3% | 19.9% | 17.4% | 12.0% | 2.6% | 28.2% | 1.1% | | 7.1% | 0.8% | 0.0% | 14.3% |

* CWT sampling is not directed at sockeye in these districts.

Table 12. Coded microwire tag sampling effort for salmon in Yakutat area salmon fisheries.

| Stat. Week | | Socias/District | | | | | |
|------------|---|-----------------|-------|--------|-------|---------|--------|
| | | Chinook | | Coho | | Sockeye | |
| | | 182 | 183 | 182 | 183 | 182 | 183 |
| 24 | C | 0 | 35 | 0 | 0 | 0 | 1,339 |
| | S | 0 | 0 | 0 | 0 | 0 | 0 |
| | % | | 0.0% | | | | 0.0% |
| 25 | C | 273 | 55 | 0 | 30 | 1,190 | 1,539 |
| | S | 0 | 0 | 0 | 0 | 0 | 0 |
| | % | 0.0% | 0.0% | | 0.0% | 0.0% | 0.0% |
| 26 | C | 377 | 64 | 5 | 47 | 3,226 | 2,060 |
| | S | 0 | 0 | 0 | 0 | 0 | 0 |
| | % | 0.0% | | | | 0.0% | 0.0% |
| 27 | C | 189 | 0 | 10 | 0 | 7,418 | 994 |
| | S | 0 | 0 | 0 | 0 | 0 | 0 |
| | % | 0.0% | | 0.0% | | 0.0% | 0.0% |
| 28 | C | 154 | 21 | 11 | 103 | 7,429 | 2,608 |
| | S | 53 | 0 | 0 | 0 | 700 | 0 |
| | % | 34.4% | 0.0% | 0.0% | 0.0% | 3.4% | 0.0% |
| 29 | C | 153 | 15 | 6 | 89 | 14,636 | 4,093 |
| | S | 15 | 1 | 0 | 0 | 82 | 497 |
| | % | 9.7% | 6.7% | 0.0% | 0.0% | 0.6% | 12.1% |
| 30 | C | 31 | 2 | 7 | 23 | 11,766 | 4,037 |
| | S | 7 | 0 | 0 | 0 | 200 | 92 |
| | % | 22.6% | 0.0% | 0.0% | 0.0% | 1.7% | 2.3% |
| 31 | C | 10 | 14 | 20 | 87 | 21,253 | 6,724 |
| | S | 0 | 0 | 0 | 0 | 0 | 908 |
| | % | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 13.5% |
| 32 | C | 10 | 0 | 77 | 166 | 21,788 | 790 |
| | S | 0 | 0 | 0 | 0 | 0 | 0 |
| | % | 0.0% | | 0.0% | 0.0% | 0.0% | 0.0% |
| 33 | C | 0 | 3 | 53 | 642 | 1,278 | 2,115 |
| | S | 0 | 1 | 0 | 22 | 0 | 0 |
| | % | | 11.3% | 0.0% | 1.4% | 0.0% | 0.0% |
| 34 | C | 6 | 1 | 1,432 | 271 | 20,661 | 374 |
| | S | 0 | 0 | 0 | 0 | 0 | 0 |
| | % | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 35 | C | 4 | 0 | 3,650 | 1,131 | 9,377 | 10 |
| | S | 0 | 0 | 233 | 0 | 0 | 0 |
| | % | 0.0% | | 4.1% | 0.0% | 0.0% | |
| 36 | C | 2 | 1 | 6,628 | 1,974 | 1,508 | 8 |
| | S | 0 | 0 | 835 | 0 | 0 | 0 |
| | % | 0.0% | 0.0% | 12.9% | 0.0% | 0.0% | 0.0% |
| 37 | C | 0 | 0 | 6,401 | 1,306 | 136 | 1 |
| | S | 0 | 0 | 1,680 | 116 | 0 | 0 |
| | % | | | 26.2% | 8.9% | 0.0% | |
| 38 | C | 0 | 0 | 8,250 | 693 | 43 | 4 |
| | S | 0 | 0 | 2,380 | 85 | 0 | 0 |
| | % | | | 28.8% | 12.3% | 0.0% | 0.0% |
| 39-40 | C | 0 | 0 | 3,173 | 711 | 1 | 1 |
| | S | 0 | 0 | 1,258 | 83 | 0 | 0 |
| | % | | | 40.0% | 11.7% | 0.0% | 0.0% |
| Total | C | 1,211 | 211 | 31,723 | 7,273 | 123,772 | 26,737 |
| | S | 75 | 2 | 6,416 | 306 | 982 | 1,497 |
| | % | 6.2% | 0.9% | 20.2% | 4.2% | 0.8% | 5.6% |

Table 13. Number of chinook salmon sampled for AWL data from gill net (G) and seine (S) fisheries, 1986.

| Stat. Week | Fishery | | | | | | | | | | | | | | | | | | | | Total |
|--------------|-----------|------------|----------|-----------|----------|------------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|----------|------------|--------------|
| | G 101 | S 101 | G 102 | S 102 | S 103 | S 104 | S 105 | G 106 | G 10630 | G 10641 | S 106 | S 107 | G 108 | S 109 | S 110 | G 111 | S 112 | S 113 | S 114 | G 115 | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 26 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 5 |
| 27 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 2 | 0 | 0 | 0 | 0 |
| 28 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| 29 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 0 | 0 | 0 |
| 30 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 24 |
| 31 | 4 | 108 | 0 | 12 | 0 | 166 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 306 |
| 32 | 0 | 30 | 0 | 1 | 0 | 290 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 13 |
| 33 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 47 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 26 |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 90 | 138 | 0 | 15 | 0 | 446 | 0 | 39 | 0 | 71 | 24 | 47 | 0 | 316 | 1,186 |

Table 14. Number of coho salmon sampled for AWL data from gill net (G) and seine (S) fisheries, 1986.

| Stat. Week | Fishery | | | | | | | | | | | | | | | | | | | | Total |
|--------------|------------|------------|----------|------------|------------|------------|----------|------------|----------|----------|----------|------------|-----------|------------|----------|------------|------------|------------|-----------|------------|--------------|
| | G 101 | S 101 | G 102 | S 102 | S 103 | S 104 | S 105 | G 106 | G 106.30 | G 106.41 | S 106 | S 107 | G 108 | S 109 | S 110 | G 111 | S 112 | S 113 | S 114 | S 115 | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 13 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0 | 110 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 10 | 32 | 0 | 30 | 0 | 79 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 61 | 10 | 0 | 0 | 0 |
| 32 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 120 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 20 | 0 | 32 | 0 | 0 | 0 |
| 33 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 80 | 0 | 0 | 0 | 120 | 0 | 0 | 0 | 68 | 50 | 23 | 0 | 93 | 498 |
| 34 | 72 | 64 | 0 | 0 | 48 | 38 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 90 | 391 |
| 35 | 80 | 70 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 50 | 0 | 20 | 0 | 24 | 30 | 60 | 464 |
| 36 | 100 | 0 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 349 | 0 | 120 | 29 | 0 | 678 |
| 37 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 | 0 | 0 | 0 | 90 | 272 |
| 38 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 152 |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 110 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 387 | 292 | 0 | 110 | 104 | 317 | 0 | 569 | 0 | 0 | 0 | 120 | 80 | 110 | 0 | 629 | 111 | 224 | 59 | 381 | 3,493 |

Table 15. Number of chum salmon sampled for AWL data from gill net (G) and seine (S) fisheries, 1986.

| Stat. Week | Fishery | | | | | | | | | | | | | | | | | | | | Total | | |
|--------------|--------------|--------------|----------|--------------|--------------|--------------|------------|--------------|----------|----------|------------|------------|------------|--------------|----------|--------------|--------------|--------------|--------------|--------------|---------------|-------|-----|
| | G 101 | S 101 | G 102 | S 102 | G 103 | S 104 | S 105 | G 106 | G 10630 | G 10641 | S 106 | S 107 | G 108 | S 109 | S 110 | G 111 | G 112 | S 113 | S 114 | G 115 | | | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 326 |
| 25 | 220 | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 210 | 873 | |
| 26 | 318 | 0 | 0 | 0 | 0 | 0 | 0 | 219 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 126 | 0 | 0 | 0 | 0 | 219 | 1,501 | |
| 27 | 380 | 0 | 0 | 0 | 0 | 0 | 0 | 132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 370 | 200 | 0 | 0 | 0 | 144 | 2,246 | |
| 28 | 308 | 342 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 506 | 640 | 0 | 270 | 0 | 588 | 2,929 | |
| 29 | 270 | 300 | 0 | 16 | 0 | 202 | 0 | 250 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 373 | 658 | 0 | 272 | 0 | 0 | 3,174 | |
| 30 | 313 | 352 | 0 | 0 | 0 | 355 | 0 | 331 | 0 | 0 | 0 | 0 | 290 | 0 | 0 | 503 | 773 | 257 | 0 | 0 | 0 | 3,359 | |
| 31 | 327 | 328 | 0 | 0 | 0 | 586 | 0 | 301 | 0 | 0 | 0 | 0 | 131 | 0 | 0 | 388 | 631 | 667 | 0 | 0 | 517 | 3,366 | |
| 32 | 306 | 0 | 0 | 15 | 0 | 271 | 223 | 331 | 0 | 0 | 0 | 0 | 101 | 618 | 0 | 381 | 0 | 583 | 0 | 0 | 742 | 4,843 | |
| 33 | 522 | 276 | 0 | 134 | 263 | 606 | 276 | 302 | 0 | 0 | 300 | 137 | 0 | 319 | 0 | 58 | 108 | 0 | 360 | 0 | 713 | 2,790 | |
| 34 | 486 | 361 | 0 | 0 | 230 | 296 | 0 | 313 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 236 | 320 | 680 | 3,376 | | |
| 35 | 317 | 0 | 0 | 348 | 222 | 156 | 0 | 306 | 0 | 0 | 80 | 0 | 0 | 300 | 0 | 409 | 0 | 0 | 201 | 0 | 673 | 3,287 | |
| 36 | 333 | 0 | 0 | 327 | 234 | 498 | 0 | 300 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300 | 0 | 0 | 0 | 0 | 711 | 1,653 | |
| 37 | 324 | 0 | 0 | 0 | 0 | 0 | 0 | 318 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300 | 0 | 0 | 0 | 0 | 916 | 2,246 | |
| 38 | 329 | 0 | 0 | 0 | 0 | 0 | 0 | 300 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 791 | 791 | |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 | 0 | 0 | 160 | |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | 4,753 | 1,959 | 0 | 1,060 | 1,990 | 2,998 | 499 | 1,654 | 0 | 0 | 380 | 137 | 533 | 1,948 | 0 | 3,722 | 3,010 | 2,103 | 1,223 | 6,951 | 36,920 | | |

Table 16. Number of sockeye salmon sampled for AWL data from gill net (G) and seine (S) fisheries, 1986.

| Stat. Week | Fishery | | | | | | | | | | | | | | | | | | | | Total |
|--------------|--------------|--------------|----------|------------|--------------|--------------|-----------|------------|--------------|--------------|------------|------------|--------------|------------|----------|--------------|------------|------------|--------------|---------------|---------------|
| | G 101 | S 101 | G 102 | S 102 | S 103 | S 104 | G 105 | G 106 | G 10630 | G 10641 | S 106 | S 107 | G 108 | S 109 | S 110 | G 111 | S 112 | S 113 | S 114 | G 115 | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 170 | 847 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 157 | 1,687 |
| 26 | 727 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300 | 695 | 0 | 0 | 0 | 0 | 0 | 179 | 0 | 0 | 0 | 358 | 2,459 |
| 27 | 666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 427 | 710 | 0 | 0 | 14 | 0 | 0 | 600 | 0 | 0 | 0 | 513 | 2,938 |
| 28 | 741 | 724 | 0 | 0 | 0 | 538 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,535 | 130 | 0 | 659 | 852 | 5,179 |
| 29 | 846 | 603 | 0 | 32 | 0 | 1,344 | 0 | 421 | 688 | 0 | 0 | 0 | 0 | 0 | 0 | 1,144 | 68 | 0 | 500 | 823 | 6,469 |
| 30 | 730 | 375 | 0 | 0 | 0 | 1,387 | 0 | 0 | 670 | 753 | 0 | 0 | 694 | 0 | 0 | 1,125 | 57 | 240 | 0 | 200 | 6,231 |
| 31 | 704 | 729 | 0 | 0 | 0 | 1,115 | 0 | 0 | 732 | 700 | 0 | 0 | 553 | 0 | 0 | 916 | 23 | 65 | 0 | 494 | 6,031 |
| 32 | 727 | 795 | 0 | 12 | 0 | 979 | 0 | 0 | 894 | 791 | 0 | 0 | 488 | 185 | 0 | 1,315 | 0 | 131 | 0 | 1,116 | 7,433 |
| 33 | 717 | 795 | 0 | 507 | 793 | 781 | 54 | 0 | 658 | 695 | 515 | 377 | 0 | 65 | 0 | 539 | 475 | 11 | 0 | 1,310 | 8,212 |
| 34 | 658 | 771 | 0 | 0 | 303 | 714 | 0 | 111 | 756 | 703 | 0 | 0 | 0 | 0 | 0 | 198 | 0 | 0 | 0 | 1,371 | 5,585 |
| 35 | 391 | 280 | 0 | 0 | 401 | 864 | 0 | 0 | 21 | 201 | 105 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 1,447 | 3,737 |
| 36 | 96 | 159 | 0 | 217 | 0 | 439 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 1,875 | 2,836 |
| 37 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 780 | 792 |
| 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 767 | 767 |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 52 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 7,494 | 5,231 | 0 | 768 | 1,497 | 8,083 | 54 | 534 | 5,316 | 6,095 | 620 | 377 | 1,749 | 250 | 0 | 7,658 | 753 | 447 | 1,159 | 12,315 | 60,400 |

Table 17. Number of chinook salmon sampled for AWL data from the Southeast Alaska summer troll fishery, 1986.

| Stat. Week | Area 1 - Northern Outside | | | | | | | | Area 3 - Northern Inside | | | | | | | Area 3 Total |
|--------------|---------------------------|------------|------------|------------|------------|-----------|-----------|--------------|--------------------------|-----------|------------|-----------|------------|-----------|--------------|--------------|
| | 113 | 154 | 114 | 116 | 157 | 181 | 189 | Area 1 Combo | Area 1 Total | 109 | 110 | 111 | 112 | 115 | Area 3 Combo | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 201 | 0 | 37 | 0 | 0 | 0 | 0 | 216 | 454 | 0 | 117 | 0 | 2 | 0 | 0 | 119 |
| 27 | 264 | 7 | 57 | 0 | 230 | 0 | 20 | 172 | 754 | 0 | 145 | 10 | 0 | 30 | 0 | 185 |
| 28 | 302 | 20 | 59 | 10 | 20 | 0 | 0 | 305 | 716 | 80 | 0 | 0 | 3 | 0 | 0 | 83 |
| 29 | 579 | 80 | 72 | 44 | 0 | 0 | 0 | 100 | 875 | 0 | 104 | 0 | 0 | 0 | 0 | 104 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 45 |
| 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 26 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 50 | 0 | 86 | 0 | 0 | 0 | 0 | 60 | 196 | 0 | 0 | 0 | 18 | 0 | 0 | 18 |
| 35 | 701 | 0 | 117 | 25 | 0 | 0 | 0 | 113 | 966 | 0 | 106 | 0 | 84 | 0 | 0 | 190 |
| 36 | 160 | 0 | 83 | 28 | 0 | 10 | 0 | 420 | 701 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 680 | 0 | 60 | 0 | 0 | 0 | 18 | 50 | 808 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2,969 | 107 | 571 | 117 | 250 | 10 | 38 | 1,436 | 5,498 | 84 | 472 | 10 | 178 | 30 | 0 | 774 |

| Stat. Week | Area 4 - Southern Inside | | | | | | Area 2 - Southern Outside | | | | | | Weekly Total | | |
|--------------|--------------------------|------------|------------|------------|-----------|----------|---------------------------|--------------|------------|--------------|----------|--------------|--------------|--------------|--------------|
| | 101 | 102 | 105 | 106 | 107 | 108 | Area 4 Combo | Area 4 Total | 103 | 104 | 152 | Area 2 Combo | | Area 2 Total | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 137 | 0 | 0 | 57 | 0 | 17 | 211 | 0 | 277 | 0 | 222 | 499 | 0 | 1283 |
| 27 | 20 | 14 | 147 | 0 | 0 | 0 | 0 | 181 | 10 | 110 | 0 | 107 | 227 | 0 | 1347 |
| 28 | 74 | 52 | 0 | 50 | 0 | 0 | 127 | 303 | 15 | 355 | 0 | 96 | 466 | 0 | 1568 |
| 29 | 210 | 0 | 0 | 6 | 0 | 0 | 70 | 286 | 80 | 221 | 0 | 84 | 385 | 0 | 1650 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 20 | 0 | 24 |
| 33 | 0 | 0 | 0 | 70 | 0 | 0 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 70 |
| 34 | 25 | 6 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 54 | 54 | 0 | 299 |
| 35 | 152 | 107 | 0 | 0 | 0 | 0 | 0 | 259 | 3 | 87 | 0 | 0 | 90 | 0 | 1505 |
| 36 | 71 | 37 | 0 | 0 | 0 | 0 | 0 | 108 | 0 | 17 | 0 | 0 | 17 | 0 | 826 |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 808 |
| 38 | 103 | 40 | 0 | 72 | 0 | 0 | 0 | 215 | 0 | 0 | 0 | 260 | 260 | 0 | 503 |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 655 | 393 | 147 | 198 | 57 | 0 | 214 | 1,664 | 108 | 1,087 | 0 | 823 | 2,018 | 0 | 9,954 |

Table 18. Number of coho salmon sampled for AWL data from the Southeast Alaska summer troll fishery, 1986.

| Stat. Week | Area 1 - Northern Outside | | | | | | | | Area 3 - Northern Inside | | | | | | | | Area 3 Combo | Area 3 Total |
|--------------|---------------------------|-----------|------------|-----------|-----------|-----------|-----------|--------------|--------------------------|------------|----------|----------|------------|----------|----------|------------|--------------|--------------|
| | 113 | 154 | 114 | 116 | 157 | 181 | 189 | Area 1 Combo | Area 1 Total | 109 | 110 | 111 | 112 | 115 | | | | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 26 | 50 | 0 | 1 | 0 | 0 | 0 | 0 | 10 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 27 | 80 | 0 | 2 | 0 | 20 | 0 | 10 | 10 | 122 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | | |
| 28 | 245 | 0 | 50 | 0 | 0 | 0 | 0 | 70 | 365 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | | |
| 29 | 308 | 0 | 10 | 10 | 0 | 0 | 0 | 15 | 343 | 97 | 0 | 0 | 0 | 0 | 0 | 97 | | |
| 30 | 200 | 0 | 41 | 0 | 5 | 0 | 0 | 0 | 246 | 136 | 0 | 0 | 0 | 0 | 0 | 136 | | |
| 31 | 113 | 22 | 66 | 0 | 0 | 0 | 0 | 310 | 511 | 190 | 0 | 0 | 160 | 0 | 0 | 350 | | |
| 32 | 443 | 0 | 165 | 0 | 0 | 30 | 0 | 180 | 818 | 190 | 0 | 0 | 35 | 0 | 0 | 225 | | |
| 33 | 230 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 240 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 34 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 28 | 0 | 0 | 28 | | |
| 35 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 36 | 350 | 0 | 40 | 20 | 0 | 0 | 0 | 20 | 430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 37 | 248 | 0 | 17 | 0 | 0 | 0 | 0 | 130 | 395 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 38 | 17 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Total | 2,304 | 22 | 472 | 30 | 25 | 40 | 10 | 745 | 3,648 | 613 | 0 | 0 | 227 | 8 | 0 | 848 | | |

| Stat. Week | Area 4 - Southern Inside | | | | | | Area 2 - Southern Outside | | | | | | Weekly Total | |
|--------------|--------------------------|------------|------------|-----------|----------|----------|---------------------------|--------------|------------|------------|----------|--------------|--------------|--------------|
| | 101 | 102 | 105 | 106 | 107 | 108 | Area 4 Combo | Area 4 Total | 103 | 104 | 152 | Area 2 Combo | | Area 2 Total |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 15 | 76 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | 90 | 220 |
| 28 | 50 | 57 | 0 | 0 | 0 | 0 | 120 | 227 | 140 | 105 | 0 | 115 | 360 | 956 |
| 29 | 75 | 50 | 0 | 0 | 0 | 0 | 0 | 125 | 135 | 120 | 0 | 0 | 235 | 820 |
| 30 | 125 | 0 | 80 | 0 | 0 | 0 | 0 | 205 | 0 | 0 | 0 | 0 | 0 | 587 |
| 31 | 125 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 50 | 0 | 0 | 0 | 50 | 1036 |
| 32 | 40 | 0 | 0 | 0 | 0 | 0 | 125 | 165 | 0 | 0 | 0 | 104 | 104 | 1312 |
| 33 | 0 | 0 | 80 | 0 | 0 | 0 | 225 | 305 | 60 | 176 | 0 | 40 | 276 | 821 |
| 34 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 95 |
| 35 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 60 | 40 | 0 | 0 | 56 | 96 | 176 |
| 36 | 20 | 0 | 60 | 0 | 0 | 0 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 510 |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 395 |
| 38 | 107 | 0 | 0 | 0 | 0 | 0 | 80 | 187 | 0 | 0 | 0 | 90 | 90 | 314 |
| 39 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 64 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 606 | 114 | 220 | 60 | 0 | 0 | 550 | 1,550 | 425 | 401 | 0 | 510 | 1,336 | 7,382 |

Table 19. Chinook salmon AWL sampling effort in the Yakutat area, 1986.

| Week | Fishery | | | | | | | | | | | | Total |
|-------|---------|-------|-------|--------|--------|-------|------|-------------|-------|---|--------|--------|-------|
| | East | | Alsea | Italic | Bangor | Situk | Lost | Yakutat Bay | Kasby | | Yakima | Kalain | |
| Alsea | Alsea | Shore | | | | | | | Shore | | | | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 25 |
| 25 | 0 | 130 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 151 |
| 26 | 0 | 53 | 84 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 164 |
| 27 | 5 | 10 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 28 | 0 | 7 | 5 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 60 |
| 29 | 0 | 0 | 0 | 0 | 0 | 24 | 1 | 1 | 0 | 0 | 0 | 0 | 26 |
| 30 | 0 | 0 | 1 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 34 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 200 | 105 | 0 | 0 | 79 | 1 | 76 | 0 | 0 | 0 | 0 | 466 |

| EQUIPMENT | Situk | |
|-----------|-------|--|
| | Wear | |
| Total | 0 | |

Table 20. Coho salmon AWL sampling effort in the Yakutat area, 1986.

| Date | Fishery | | | | | | | | | | | | Total |
|--------------|---------------|------------|------------|------------|----------|------------|----------|----------------|----------------|------------|------------|------------|--------------|
| | East Alsek | Alsek | Alsek | Italic | Dangross | Situk | Lost | Yakutat Bay | Nemby Shore | Yakutat | Kalaish | Tote | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 11 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 | 46 |
| 33 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 180 | 0 | 0 | 50 | 0 | 253 |
| 34 | 0 | 0 | 20 | 0 | 0 | 200 | 0 | 25 | 0 | 0 | 0 | 0 | 245 |
| 35 | 136 | 0 | 0 | 0 | 0 | 100 | 0 | 42 | 200 | 0 | 216 | 90 | 784 |
| 36 | 197 | 90 | 163 | 0 | 0 | 100 | 0 | 40 | 100 | 269 | 210 | 280 | 1,457 |
| 37 | 0 | 20 | 235 | 280 | 0 | 100 | 0 | 115 | 100 | 100 | 214 | 190 | 1,374 |
| 38 | 30 | 185 | 120 | 0 | 0 | 100 | 0 | 85 | 0 | 280 | 0 | 80 | 500 |
| 39 | 0 | 0 | 90 | 30 | 0 | 0 | 0 | 70 | 240 | 0 | 0 | 0 | 430 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 383 | 303 | 648 | 133 | 0 | 600 | 0 | 614 | 640 | 649 | 690 | 640 | 5,390 |

| ESCAPEMENT: | Situk | |
|-------------|-------|-----|
| | Min | Max |
| Total | 0 | 0 |

Table 21. Chum salmon AWL sampling effort in the Yakutat area, 1986.

| Date | Fishery | | | | | | | | | | | | Total |
|-------|---------------|-------|-------|--------|----------|-------|------|----------------|----------------|---------|----------|------|-------|
| | East Alsek | Alsek | Alsek | Italic | Bangweon | Situk | Lost | Yakutat Bay | Nemly Shore | Yakutat | Kalainik | Tsui | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 200 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 |
| 35 | 212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 212 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 412 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 412 |

| ESCHMENT: | Situk | |
|-----------|-------|--|
| | Muz | |
| Total | 0 | |

Table 22. Sockeye salmon AWL sampling effort in the Yakutat area, 1986.

| CATCH | Fishery | | | | | | | | | | | | | Total |
|------------|---------|------------|-------|------|--------|----------|-------|-------|-------------|-------------|---------|----------|-------|-------|
| | Week | East Aleut | Aleut | Alut | Itaita | Bergeson | Situk | Lost | Yakutat Bay | Randy Shore | Yakutat | Kalaikih | Tsien | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 0 | 0 | 0 | 0 | 200 |
| 25 | 0 | 220 | 0 | 0 | 0 | 0 | 0 | 0 | 503 | 0 | 0 | 0 | 0 | 723 |
| 26 | 0 | 314 | 289 | 0 | 0 | 0 | 0 | 0 | 356 | 0 | 0 | 0 | 0 | 999 |
| 27 | 129 | 298 | 200 | 200 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 876 |
| 28 | 197 | 105 | 100 | 200 | 0 | 700 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 1,402 |
| 29 | 200 | 100 | 100 | 183 | 0 | 201 | 127 | 202 | 0 | 0 | 0 | 0 | 0 | 1,113 |
| 30 | 200 | 300 | 100 | 142 | 95 | 200 | 0 | 200 | 400 | 0 | 0 | 0 | 0 | 1,637 |
| 31 | 210 | 101 | 87 | 100 | 0 | 0 | 0 | 300 | 0 | 0 | 0 | 0 | 0 | 798 |
| 32 | 200 | 300 | 0 | 0 | 244 | 0 | 0 | 200 | 0 | 0 | 0 | 0 | 0 | 944 |
| 33 | 0 | 309 | 0 | 0 | 199 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 508 |
| 34 | 118 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 176 |
| 35 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 0 | 0 | 0 | 0 | 0 | 240 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 240 |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1,354 | 2,047 | 876 | 825 | 587 | 1,399 | 127 | 2,101 | 400 | 0 | 0 | 0 | 0 | 9,716 |
| ESCAPMENT: | | | | | | Situk | | | | | | | | |
| | | | | | | Meir | | | | | | | | |
| Total | | | | | | 1308 | | | | | | | | |

Table 23. Sex composition, in percent males, of pink salmon sampled from selected purse seine fisheries, 1986.

| Stat. Week | All | | | | | | | | | | | | |
|---------------|----------------|----------------|----------------|------------------------|------------------------|----------------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| | 101 | 102 | 103 | Lower 104 104-10.20 | Upper 104 104-35.40 | Dist 104 Combined | 105 | 106 | 107 | 109 | 110 | 112 | 113 |
| 28 | 74.3% 400 | | | 73.5% 400 | | 73.5% 400 | | | | | | | |
| 29 | 69.8% 400 | | | 70.8% 400 | 71.8% 800 | 75.1% 2,007 | | | | | | 73.1% 1,020 | |
| 30 | 54.9% 771 | 67.5% 400 | | 59.3% 1,229 | 63.1% 1,100 | 63.8% 4,689 | | | | | 71.3% 718 | 61.8% 380 | 52.3% 262 |
| 31 | 56.6% 2,433 | | | 56.9% 800 | 58.9% 1,200 | 64.8% 4,469 | | | | | | 66.8% 406 | |
| 32 | 49.6% 900 | 51.1% 407 | 86.5% 400 | | 51.5% 1,100 | 51.5% 1,100 | 67.2% 402 | | | | 82.9% 461 | 58.8% 400 | 61.1% 2,296 |
| 33 | 43.2% 2,365 | 45.4% 1,250 | 48.1% 1,679 | 41.5% 2,017 | 38.9% 800 | 48.8% 2,817 | 48.5% 400 | 49.8% 627 | 38.3% 399 | 54.2% 402 | | 42.5% 400 | 32.1% 601 |
| 34 | 33.8% 802 | 38.3% 400 | 42.8% 3,609 | 41.5% 400 | 38.3% 400 | 39.9% 800 | | | | | | | |
| 35 | 48.3% 2,007 | 36.8% 400 | 44.2% 1,200 | 48.2% 500 | 42.8% 400 | 46.8% 1,700 | | | | | 38.7% 377 | | |
| 36 | 48.1% 900 | | 43.6% 2,831 | 45.6% 500 | 46.8% 400 | 45.8% 900 | | | | | 39.3% 300 | | |
| 39 | | | 43.4% 190 | | | | | | | | | | |

Table 24. Chinook salmon AWL sampling of escapements to Southeast Alaska and northwestern British Columbia systems, 1986.

| Location Code | Description | Sample Size | Sampling Crew |
|---------------|--------------------------|-------------|---------------|
| 101-47-025 | Deer Mtn. Hatchery | 305 | FRED-ADF&G |
| 101-71-004 | Chickamin R. Barrier Cr. | 57 | SSRAA |
| 101-71-004 | Chickamin R. Butler Cr. | 77 | SF-ADF&G |
| 101-75-030 | Genes Lake Cr. | 163 | SF-ADF&G |
| 101-75-015 | Eulachon River | 201 | SF-ADF&G |
| 101-75-017 | Clear Creek | 135 | SF-ADF&G |
| 101-75-300 | Cripple Cr. Weir | 856 | SF-ADF&G |
| 106-44-031 | Crystal Lake Hatchery | 80 | FRED-ADF&G |
| 107-40-049 | Harding River | 31 | FRED-ADF&G |
| 108-80-120 | Little Tahltan Weir | 500 | CDFO |
| 111-32-032 | Taku R. Canyon Is. | 423 | CF-ADF&G/CDFO |
| 111-32-032 | Taku R. Comm. Catch | 45 | CF-ADF&G/CDFO |
| 111-33- | Snettisham Hatchery | 181 | FRED-ADF&G |
| 111-17-010 | King Salmon River | 50 | FRED-ADF&G |
| 111-32-270 | Nahlin River | 7 | CF-ADF&G |
| 111-32-220 | Nakina River Weir | 1070 | CDFO |
| 111-32-260 | Hackett River Weir | 150 | CDFO |
| 115-32-068 | Tahini River | 42 | FRED-ADF&G |
| Total | | 4,373 | |

CF-ADF&G Commercial Fisheries Division, Ak. Dept. of Fish and Game
 SF-ADF&G Sport Fish Division, Ak. Dept. of Fish and Game
 FRED-ADF&G Fisheries, Rehabilitation, Enhancement and Development
 Division, Ak. Dept. of Fish and Game
 CDFO Canadian Department of Fisheries and Oceans
 SSRAA Southern Southeast Regional Aquaculture Association
 NMFS National Marine Fisheries Service

Table 25. Coho salmon-AWL sampling of escapements to Southeast Alaska and northwestern British Columbia systems, 1986.

| Location Code | Description | Sample Size | Sampling Crew |
|---------------|-----------------------|-------------|---------------|
| 101-30-075 | Hugh Smith Weir | 526 | FRED-ADF&G |
| 102-60-087 | Karta River Weir | 146 | CF-ADF&G |
| 103-60-047 | Klawock R. Weir | 114 | FRED_ADF&G |
| 106-41- | Salmon Bay Weir | 491 | CF-ADF&G |
| 106-44-031 | Crystal Lake Hatchery | 136 | FRED-ADF&G |
| 107-10-030 | Black Bear Creek | 29 | CF-ADF&G |
| 111-50-042 | Auke Cr. Weir | 340 | NMFS |
| 111-32-032 | Taku R. Canyon Is. | 616 | CF-ADF&G/CDFO |
| 111-32-032 | Taku R. Comm. Catch | 77 | CF-ADF&G/CDFO |
| 111-32-066 | Yenning Cr. Weir | 362 | |
| 111-50-056 | Steeo Cr. | 45 | CF-ADF&G |
| 113-41-032 | Salmon Lake | 597 | ADF&G |
| 113-41-043 | Redoubt Lake Weir | 104 | FRED-ADF&G |
| 113-73-003 | Ford Ave Lake | 619 | CF-ADF&G |
| 115-20-010 | Benners River | 320 | CF-ADF&G |
| 115-32-062 | Chilkat River | 503 | SF-ADF&G |
| Total | | 5,025 | |

CF-ADF&G Commercial Fisheries Division, Ak. Dept. of Fish and Game
 SF-ADF&G Sport Fish Division, Ak. Dept. of Fish and Game
 FRED-ADF&G Fisheries, Rehabilitation, Enhancement and Development
 Division, Ak. Dept. of Fish and Game
 CDFO Canadian Department of Fisheries and Oceans
 SSRAA Southern Southeast Regional Aquaculture Association
 NMFS National Marine Fisheries Service

Table 26. Chum salmon AWL sampling of escapements to Southeast Alaska and northwestern British Columbia systems, 1986.

| Location Code | Description | Sample Size | Sampling Crew |
|---------------|--------------------------|-------------|---------------|
| 111-32-032 | Taku R. Canyon Is. | 70 | CF-ADF&6/COFO |
| 111-40-015 | Salmon Cr. | 440 | CF-ADF&6 |
| 111-50-069 | Fish Creek | 294 | CF-ADF&6 |
| 111-33-000 | Snettisham Hatchery | 1,916 | FRED-ADF&6 |
| 112-11-011 | Hidden Falls Hatchery | 1,900 | FRED-ADF&6 |
| 112-42-025 | Kadashan River | 727 | CF-ADF&6 |
| 114-27-030 | Soasski Creek | 400 | CF-ADF&6 |
| 114-31-009 | Gartina Creek | 560 | CF-ADF&6 |
| 114-31-013 | Game Creek | 253 | CF-ADF&6 |
| 115-20-052 | Sawmill Creek | 220 | CF-ADF&6 |
| 115-32-025 | Chilkat Soawning Channel | 650 | CF-ADF&6 |
| 115-32-048 | Hersan Creek | 25 | CF-ADF&6 |
| 115-32-057 | Klehina River | 348 | CF-ADF&6 |
| Total | | 7,803 | |

CF-ADF&6 Commercial Fisheries Division, Ak. Dept. of Fish and Game
 SF-ADF&6 Sport Fish Division, Ak. Dept. of Fish and Game
 FRED-ADF&6 Fisheries, Rehabilitation, Enhancement and Development
 Division, Ak. Dept. of Fish and Game
 COFO Canadian Department of Fisheries and Oceans
 SSR&A Southern Southeast Regional Aquaculture Association
 NMFS National Marine Fisheries Service

Table 27. Sockeye salmon AWL sampling of escapements to Southeast Alaska and northwestern British Columbia systems, 1986.

| Location Code | Description | Sample Size | Sampling Crew |
|---------------|------------------------|-------------|---------------|
| 101-30-075 | Hugh Smith Weir | 2,172 | FRED-ADF&G |
| 101-45-032 | Leask Lake | 365 | CF-ADF&G |
| 101-80-070 | McDonald Lake | 600 | CF-ADF&G |
| 101-90-050 | Naha River Weir | 1,001 | CF-ADF&G |
| 101-90-084 | Helm Lake | 353 | CF-ADF&G |
| 102-60-087 | Karta River Weir | 595 | CF-ADF&G |
| 102-30-017 | Jonsson Lake | 14 | CF-ADF&G |
| 102-30-067 | Megan Lake | 240 | CF-ADF&G |
| 103-90-014 | Sarkar Lake | 416 | CF-ADF&G |
| 103-25-017 | Hetta Lake | 500 | CF-ADF&G |
| 103-60-047 | Klawock Weir | 916 | FRED-ADF&G |
| 103-80-031 | Chuck Lake | 414 | CF-ADF&G |
| 105-31-003 | Kushneahin Lake | 104 | CF-ADF&G |
| 105-42-014 | Sutter Lake | 65 | CF-ADF&G |
| 106-10-034 | Luck Lake | 488 | CF-ADF&G |
| 106-30-051 | Galea Lake | 276 | CF-ADF&G |
| 106-41- | Salmon Bay Weir | 1,528 | CF-ADF&G |
| 106-41-030 | Red Bay Lake | 608 | CF-ADF&G |
| 106-42- | Kah Sheets Lake | 26 | CF-ADF&G |
| 106-44-060 | Petersburg Lake | 551 | CF-ADF&G |
| 107-30-030 | Thoms Lake | 530 | CF-ADF&G |
| 108-80-110 | Tahitan Lake | 2,413 | CDFO |
| 108-40-015 | Stikine R. Comm. Catch | 272 | CF-ADF&G/CDFO |
| 108-80-030 | Stikine R. mainstem | 67 | CF-ADF&G |
| 108-80- | Chutine Lake | 168 | CF-ADF&G |
| 108-80-060 | Chutine River | 109 | CF-ADF&G |
| 109-52-035 | Kutlaku Lake | 525 | CF-ADF&G |
| 109-62-013 | Alics' Lake | 520 | CF-ADF&G |

-continued-

Table 27. (page 2 of 2)

| Location Code | Description | Sample Size | Sampling Crew |
|---------------|--|---------------|---------------|
| 111-32-032 | Taku R. Canyon Is. | 4,920 | CF-ADF&G/CDFO |
| 111-32-032 | Taku R. Comm. Catch | 1,139 | CF-ADF&G/CDFO |
| 111-32-066 | Yenring Creek Weir | 217 | SF-ADF&G |
| 111-32-056 | Fish Creek | 20 | NMFS |
| 111-32-032 | Taku R. mainstem | 262 | NMFS |
| 111-32-201 | South Fork Slough | 61 | NMFS |
| 111-32-220 | Nakina River | 213 | CDFO |
| 111-32-235 | Kuthai Lake | 75 | CDFO |
| 111-32-245 | L. Trapper Lake Weir | 750 | CDFO |
| 111-32-254 | L. Tatsamenie Lake Weir | 750 | CDFO |
| 111-32-260 | Hackett River Weir | 250 | CDFO |
| 111-33-034 | Soeul Lake Weir | 1,203 | CF-ADF&G |
| 111-35-006 | Crescent Lake Weir | 1,047 | CF-ADF&G |
| 111-50-056 | Steeo Creek | 428 | CF-ADF&G |
| 111-50-042 | Auke Creek Weir | 505 | NMFS |
| 113-41-043 | Redoubt Lake Weir | 1,534 | FRED-ADF&G |
| 113-71-003 | Ford Arm Lake Weir | 225 | CF-ADF&G |
| 115-20-020 | Lace River | 207 | CF-ADF&G |
| 115-32-032 | Chilkat River Weir | 600 | CF-ADF&G |
| 115-32-062 | Chilkat R. mainstem | 138 | CF-ADF&G |
| 115-33-020 | Chilkoot River Weir | 2,758 | CF-ADF&G |
| 182-20-010 | East Alsek River | 600 | CF-ADF&G |
| 182-27-001 | Situk R. Weir | 1,308 | CF-ADF&G |
| 182-30-021 | Klukshu R. Weir | 770 | CDFO |
| 182-40-010 | Alose Lake | 505 | CF-ADF&G |
| 182-80-010 | Lost Lake | 120 | CF-ADF&G |
| Total | | 36,441 | |
| CF-ADF&G | Commercial Fisheries Division, Ak. ext. of Fish and Game | | |
| SF-ADF&G | Sport Fish Division, Ak. Dept. of Fish and Game | | |
| FRED-ADF&G | Fisheries, Rehabilitation, Enhancement and Development | | |
| CDFO | Division, Ak. Dept. of Fish and Game | | |
| CDFO | Canadian Department of Fisheries and Oceans | | |
| SSRAA | Southern Southeast Regional Aquaculture Association | | |
| NMFS | National Marine Fisheries Service | | |

APPENDICES

Appendix A: Listing of Project Supported Reports

The following is a list of ADF&G, Division of Commercial Fisheries publications in which the data collection and/or analysis and reporting was partially or fully supported by this Federal Aid Southeast Alaska Port Sampling Project.

TECHNICAL DATA REPORTS

- No. 87 Origins of sockeye salmon (*Oncorhynchus nerka*) in the Lynn Canal drift gillnet fishery of 1982 based on scale pattern analysis. By Scott A. McPherson, Andrew J. McGregor, and Scott L. Marshall. March 1983. 31 pp.
- No. 99 Age, sex, and size of chum salmon (*Oncorhynchus keta* Walbaum) from catches and escapements in Southeastern Alaska, 1982. Compiled by: John E. Clark and Andrew J. McGregor. October 1983. 141 pp.
- No. 100 Age, sex, and size of sockeye salmon (*Oncorhynchus nerka* Walbaum) catches and escapements in Southeastern Alaska in 1982. By Andrew J. McGregor. October 1983. 124 pp.
- No. 101 Catch, escapement, age, sex, and size of salmon (*Oncorhynchus spp.*) returns to the Yakutat area, 1982. Compiled and Edited by: Douglas N. McBride and Alex Brogle. November 1983. 97 pp.
- No. 102 Abundance, age, size, and sex composition of chinook salmon (*Oncorhynchus tshawytscha*) catches and escapements in Southeastern Alaska, 1982. By Benjamin W. Van Alen and Demarie S. Wood. December 1983. 48 pp.
- No. 104 Abundance, age, sex, and size of coho salmon (*Oncorhynchus kisutch* Walbaum) catches and escapements in Southeastern Alaska, 1982. By David C. Mesiar. January 1984. 97 pp.
- No. 126 Compilation of catch, escapement, age, sex, and size data for salmon (*Oncorhynchus spp.*) returns to the Yakutat area, 1983. Compiled and Edited by: Douglas N. McBride. August 1984. 98 pp.

- No. 131 Age, sex, and size of chum salmon (*Oncorhynchus keta* Walbaum) from catches and escapements in Southeastern Alaska, 1983. Compiled by: John E. Clark, Demarie S. Wood, Andrew J. McGregor, and Jesse D. Jones. December 1984. 171 pp.
- No. 132 Abundance, age, sex, and size of sockeye salmon (*Oncorhynchus nerka* Walbaum) catches and escapements in Southeastern Alaska in 1983. By Andrew J. McGregor, Scott A. McPherson, and John E. Clark. December 1984. 180 pp.
- No. 161 Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1982. By John E. Clark, Benjamin Van Alen, and Robert P. Marshall. December 1985. 44 pp.

Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1982. Appendix A - Volume I. By John E. Clark, Benjamin W. Van Alen, and Robert P. Marshall. December 1985. 152 pp.

Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1982. Appendix A - Volume II. By John E. Clark, Benjamin W. Van Alen, and Robert P. Marshall. December 1985. 227 pp.

Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1982. Appendix A - Volume III. By John E. Clark, Benjamin W. Van Alen, and Robert P. Marshall. December 1985. 211 pp.

Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1982. Appendix A - Volume IV. By John E. Clark, Benjamin W. Van Alen, and Robert P. Marshall. December 1985. 228 pp.

- No. 164 Compilation of catch, escapement, age, sex and size data for salmon (*Oncorhynchus* sp.) returns to the Yakutat area, 1984. Compiled and Edited by: Douglas N. McBride. March 1986. 104 pp.
- No. 165 Contribution, exploitation, and migratory timing of Chilkat and Chilkoot River runs of sockeye salmon (*Oncorhynchus nerka* Walbaum) in the Lynn Canal drift gillnet fishery of 1983. By Scott A. McPherson and Scott L. Marshall. March 1986. 39 pp.

No. 166 Abundance, age, sex, and size of sockeye salmon (*Oncorhynchus nerka* Walbaum) catches and escapements in Southeastern Alaska in 1984. By Andrew J. McGregor and Scott A. McPherson. March 1986. 233 pp.

No. 167 Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1983. By Robert P. Marshall and John E. Clark. April 1986. 47 pp.

Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1983. Appendix A - Volume I. By Robert P. Marshall and John E. Clark. April 1986. 124 pp.

Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1983. Appendix A - Volume II. By Robert P. Marshall and John E. Clark. April 1986. 204 pp.

Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1983. Appendix A - Volume III. By Robert P. Marshall and John E. Clark. April 1986. 177 pp.

Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1983. Appendix A - Volume IV. By Robert P. Marshall and John E. Clark. April 1986. 169 pp.

No. 168 Age, sex, and size of chum salmon (*Oncorhynchus keta* Walbaum) from catches and escapements in Southeastern Alaska, 1984. By John E. Clark and Jan L. Weller. May 1986. 288 pp.

No. 169 Age, sex, and size of chum salmon (*Oncorhynchus keta* Walbaum) from catches and escapements in Southeastern Alaska, 1985. By John E. Clark, Marc S. Pritchett, and Jan L. Weller. May 1986. 221 pp.

No. 174 Origins of sockeye salmon (*Oncorhynchus nerka* Walbaum) in the Taku-Snettisham drift gillnet fishery of 1984 based on scale pattern analysis. By Andrew J. McGregor. May 1986. 29 pp.

No. 177 Abundance, age, sex, and size of chinook salmon (*Oncorhynchus*

tshawytscha Walbaum) catches and escapements in Southeastern Alaska, 1983. By Benjamin Van Alen, Demarie S. Wood, and Scott L. Marshall. August 1986. 77 pp.

No. 179 Abundance, age, sex, and size of coho salmon (*Oncorhynchus kisutch* Walbaum) catches and escapements in Southeastern Alaska, 1983. By Benjamin Van Alen and Demarie S. Wood. August 1986. 171 pp.

No. 185 Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1980. By Scott L. Johnson and John E. Clark. September 1986. 36 pp.

Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1980. Appendix A - Volume I. By Scott L. Johnson and John E. Clark. September 1986. 146 pp.

Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1980. Appendix A - Volume II. By Scott L. Johnson and John E. Clark. September 1986. 242 pp.

No. 188 Abundance, age, sex, and size of sockeye salmon (*Oncorhynchus nerka* Walbaum) catches and escapements in Southeastern Alaska in 1985. By Scott A. McPherson and Andrew J. McGregor. October 1986. 222 pp.

No. 190 Abundance, age, sex, and size composition of chinook salmon (*Oncorhynchus tshawytscha* Walbaum) catches and escapements in Southeastern Alaska, 1984. By Benjamin W. Van Alen and Mark A. Olsen. November 1986. 79 pp.

No. 192 Abundance, age, sex, and size of coho salmon (*Oncorhynchus kisutch* Walbaum) catches and escapements in Southeastern Alaska, 1984. By Demarie S. Wood and Benjamin W. Van Alen. January 1987. 117 pp.

No. 198 Contribution, exploitation, and migratory timing of Chilkat and Chilkoot River runs of sockeye salmon (*Oncorhynchus nerka* Walbaum) in the Lynn Canal drift gillnet fishery of 1984. By Scott A. McPherson. March 1987. 42 pp.

- No. 200 Abundance, age, and sex compositions of chinook, sockeye, coho, and chum salmon catches and escapements in Southeast Alaska in 1981. By Andrew J. McGregor and Benjamin W. Van Alen. April 1987. 174 pp.
- No. 205 Estimated contribution of coded wire tagged releases of coho salmon (*Oncorhynchus kisutch*) to the commercial fisheries of Southeastern Alaska in 1980. By John E. Clark, Keith A. Pahlke, and Melinda L. Rowse. June 1987. 131 pp.
- No. 208 Abundance, age, sex, and size of coho salmon (*Oncorhynchus kisutch* Walbaum) catches and escapements in Southeastern Alaska, 1985. By Demarie S. Wood and Benjamin W. Van Alen. June 1987. 187 pp.
- No. 210 Compilation of catch, escapement, age, sex, and size data for salmon (*Oncorhynchus*) returns to the Yakutat area in 1985. By Renate R. Riffe, Scott A. McPherson, Benjamin W. Van Alen, and Douglas N. McBride. August 1987. 123 pp.
- No. 213 Separation of principal Taku River and Port Snettisham sockeye salmon (*Oncorhynchus nerka*) stocks in Southeastern Alaska and Canadian fisheries of 1986 based on scale pattern analysis. By Andrew J. McGregor and Susan L. Walls. August 1987. 57 pp.
- No. 215 Abundance, age, sex, and size of chinook salmon (*Oncorhynchus tshawytscha* Walbaum) catches and escapements in Southeastern Alaska in 1985. By Benjamin Van Alen, Keith A. Pahlke, and Mark A. Olsen. September 1987. 87 pp.
- No. 217 Contribution, exploitation, and migratory timing of returns of sockeye salmon (*Oncorhynchus nerka*) stocks to Lynn Canal in 1985 based on analysis of scale patterns. By Scott A. McPherson. October 1987. 61 pp.
- No. 220 Contribution, exploitation, and migratory timing of returns of sockeye salmon stocks to Lynn Canal in 1986 based on analysis of scale patterns. By Scott A. McPherson and Elisabeth L. Jones. December 1987. 58 pp.
- No. 224 Compilation of catch, escapement, age, sex, and size data for salmon returns to the Yakutat area in 1986. By Keith A. Pahlke and Renate R. Riffe. May 1988. 151 pp.

INFORMATIONAL LEAFLETS

- No. 219 Feasibility of determining the origin of sockeye salmon (*Oncorhynchus nerka*) in the Taku-Snettisham gillnet fishery using scale pattern analysis, 1981-1982. By Andrew J. McGregor, Scott A. McPherson, and Scott L. Marshall. May 1983. 23 pp.
- No. 230 Accuracy of scale pattern analysis in separating major stocks of sockeye salmon (*Oncorhynchus nerka*) from southern Southeastern Alaska and northern British Columbia. By Scott L. Marshall, Glen T. Oliver, David R. Bernard, and Scott A. McPherson. January 1984. 28 pp.
- No. 240 Observations on externally scarred and marked chinook and coho salmon in the 1982 Southeastern Alaska commercial troll fishery. By M. Seibel, A. Davis, J. Kelly, L. Talley, and P. Skannes. August 1984. 71 pp.
- No. 245 Analysis of Lynn Canal sockeye salmon (*Oncorhynchus nerka*) brood year returns, 1976 through 1982. By Fred Bergander. February 1985. 19 pp.
- No. 246 Origins of sockeye salmon (*Oncorhynchus nerka* Walbaum) in the Taku-Snettisham drift gillnet fishery of 1983 based on scale pattern analysis. By Andrew J. McGregor. April 1985. 28 pp.

TECHNICAL FISHERY REPORTS

- No. 88-08 Abundance, age, sex, and size of sockeye salmon catches and escapements in Southeast Alaska in 1986. By Scott A. McPherson, Andrew J. McGregor, and Fred E. Bergander. June 1988. 42 pp.

FISHERY RESEARCH BULLETINS

- No. 88-04 Feasibility of using scale and tag data to estimate origins of chinook salmon harvested in Southeast Alaska fisheries in 1982. By Benjamin W. Van Alen. May 1988. 117 pp.

REGIONAL INFORMATION REPORTS

No. 1J88-2 Data:

Abundance, age, sex, and size of sockeye salmon catches and escapements in Southeast Alaska in 1986. By: Scott A. McPherson, Andrew J. McGregor, and Fred E. Bergander. January 1988. 221 pp.

No. 1J88-3

Length conversion equations for sockeye, chinook, and coho salmon in Southeast Alaska. By: Keith Pahlke. February 1988.

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

PROJECT OPERATIONAL PLAN

Title: Microwire Tag Recovery

Project Leader: Benjamin W. Van Alen

PCN: 11-1398

Date Submitted: April 1988

Region: Southeast Alaska

Fishery Unit: Southeast Alaska

Yellow Book Project No.: Included in: CF-218, CF-224, CF-225, CF-226,
CF-227, and CF-230.

Fiscal Year: 89

Total Project Cost: 132.7

APPROVAL

| Level | Signature | Date |
|-------------|-----------|-------|
| Biometric: | _____ | _____ |
| Regional: | _____ | _____ |
| Divisional: | _____ | _____ |

I. TITLE: Microwire Tag Recovery

II. OBJECTIVES:

A. List the specific objectives beginning with the highest priority:

This project covers the sampling of all commercially caught salmon in Southeast Alaska and Yakutat (excluding Annette Island Reserve landings) for coded micro-wire tag (CWT) data. Heads and accompanying data forms are immediately forwarded to ADF&G FRED Division Tag Lab in Juneau where the tags are dissected and decoded and summary reports are generated.

Specific objectives are to:

1. Representatively sample at least 20% of the chinook salmon harvested in the summer troll fishery in each week and quadrant area.
Representatively sample at least 20% of the chinook salmon harvested by seine and drift gillnet gear in each week and district.
2. Representatively sample at least 20% of the coho salmon harvested in the summer troll fishery in each week and quadrant area.
Representatively sample at least 20% of the coho salmon harvested by seine and drift gillnet gear in each week and district.
3. Representatively sample at least 20% of the chum salmon harvested by seine and gillnet gear in each week and district.
4. Representatively sample at least 20% of the sockeye salmon harvested by seine and gillnet gear in each week and district in Districts 101 to 106.
5. Representatively sample at least 20% of the coho salmon harvested weekly in the following Yakutat area set gillnet fisheries: Yakutat Bay, Situk, Akwe, Lost, and Tsiu-Tsivat.
6. Representatively sample at least 20% of the sockeye salmon harvested weekly in the following Yakutat area set gillnet fisheries: Yakutat Bay and Situk.

7. Representatively sample at least 20% of the chinook salmon harvested weekly in the following Yakutat area set gillnet fisheries: Yakutat Bay and Situk.
 8. Collect and forward to the Tag Lab all select (out of sample) CWT data available.
 9. Sample selected terminal area common property fisheries. Note - this project does not cover sampling of cost recovery fisheries associated with PNP operations.
- B. To what Fisheries Management Operational Plans will this project contribute?

| <u>Species</u> | <u>Gear</u> | <u>Location</u> |
|---------------------------|-------------|--|
| Pink | Seine | Northern S.E. |
| Pink | Seine | Southern S.E. |
| Sockeye | Seine | District 104 |
| Sockeye | Seine | District 113 |
| All Salmon | All | Terminal Hatchery |
| All Salmon | Gillnet | Tree Pt./Portland Canal |
| All Salmon | Gillnet | Districts 106 and 108 |
| All Salmon | Gillnet | District 111 (Taku) |
| All Salmon | Gillnet | District 115 (Lynn Canal) |
| All Salmon | Gillnet | Terminal Hatchery |
| Chinook | Troll | All Southeast and Yakutat |
| Coho | Troll | All Southeast and Yakutat |
| Sockeye, Chum | Set GN | East River |
| Sockeye | Set GN | Alsek River |
| Sockeye, Coho, Chinook | Set GN | Situk, Lost R., Yakutat Bay |
| Sockeye, Coho, Chinook | Set GN | Akwe, Italio, Manby Shore, Humpy Creek, and other minor summer fisheries |
| Coho | Set GN | Yakutat Districts |
| Coho | Set GN | Yakutaga Districts |

III. NEED OR PROBLEM ADDRESSED:

- A. Describe the public and/or resource need addressed by the project and the project's benefits.

Southeast Alaska's Microwire Tag Recovery Project is part of a coast-wide program to recover Coded Wire Tags (CWTs) from commercial caught salmon. An agreement among Pacific coast states and Canada assures scientists and managers along the coast that at least 20% of the commercially caught chinook and coho salmon will be

sampled for the presence of coded wire tags. It is this project's responsibility to sample at least 20% of the commercially caught chinook, coho, chum, and sockeye salmon caught in the fisheries detailed in the Objectives section of this POP.

Coded wire tags are used by Northwest coast researchers and managers to identify stocks of salmon of both wild and hatchery production. Coded wire tagging and recovery programs serve to evaluate the quality and effectiveness of salmon rearing facilities and to differentiate between natural and hatchery produced salmon in mixed stock fisheries. The data obtained following recovery of the tags also provides information on migratory timing and direction of travel, survival, rates of growth, age of maturity, and other biological parameters of tagged stocks. It is important for fishery managers to have reliable estimates of the harvest of hatchery fish to avoid overharvesting of wild stocks. Coded wire tag release and recovery is currently the principal method used to estimate the contribution of hatchery fish to mixed-stock fisheries. The estimation of chinook salmon add-on, under the Pacific Salmon Treaty, is based on CWT data. Wild stock tagging programs have yielded estimates of migration routes, migration timing, and harvest rates.

B. How will the success of the project be judged?

Success of the project will be determined by:

1. Achievement of CWT sampling goals for each species and fishery, ie., obtaining a representative sample of at least 20% of the fish harvested in each gear/time/area strata;
2. Ability of project staff to rapidly forward heads of CWT'ed fish and accompanying data to the FRED Division Tag Lab in Juneau;

IV. PROJECT DESCRIPTION:

Port sampling for tagged salmon involves counting the number of tagged and un-tagged fish in randomly selected deliveries and recovery of the heads of tagged fish. Since the tag is a .5 to 1.0mm long piece of wire imbedded in the snout of the fish and is invisible to the eye, the fish are externally marked by clipping the adipose fin.

We sample salmon landed by commercial troll, seine, drift gillnet, and set gillnet fishermen for CWT data at on-shore

processing facilities, buying stations, and onboard tenders and fishing vessels throughout Southeast Alaska and Yakutat. Employees are stationed in the ports of Yakutat, Sitka, Juneau, Petersburg, Ketchikan, Craig/Klawock, Excursion Inlet, Hoonah, Pelican, Kake and Wrangell for sampling of the summer troll, seine, and gillnet landings. Winter troll landings are sampled, usually, in Sitka, Wrangell, Petersburg, Ketchikan, Juneau, and Hoonah. Several Yakutat set net fisheries are sampled on site. Heads of tagged fish and accompanying biological data from each port are forwarded weekly to the FRED Division's Tag Lab in Juneau where the tags are dissected and decoded.

Project supervision is provided from the Douglas regional office and there are "Port Supervisors" in Douglas (direct supervision of sampling activities in Juneau/Douglas, Excursion Inlet, Hoonah, and Pelican), Sitka, Petersburg (direct supervision of sampling activities in the Petersburg/Wrangell/ Kake area), Ketchikan (direct supervision of sampling activities in the Ketchikan/Craig/Klawock area), and Yakutat. The Ketchikan port supervisor also advises Annette Island Fishery Reserve biologists on their sampling of landings in Metlakatla. Project biologists work closely with personnel at the FRED Division Tag Lab in the coordination of sampling activities.

Personnel employed to sample commercial landings of salmon for CWT data also sample for age, sex, and size data, troll fishery performance data, brain parasite data, genetic stock identification data, pink sex ratio data, gear-marked or scarred fish data, adult tag recovery data, and other new or continuing sampling activities funded by General Fund, Federal Aid, U.S./Canada, or other sources. The sampling of the selected salmon escapements is also accomplished by these employees.

- A. Location: The study area consists of the coastal waters and inland drainages of Southeast Alaska from Cape Suckling on the North to Dixon Entrance on the south. The region is divided into 24 coastal (101-116, 181-186, 191, and 192) and 6 offshore (150, 152, 154, 156, 157, and 189) fishing districts. Salmon are commercially harvested by hand and power troll gear in Districts 101-116, 152, 154, 156, 157, 181, 183, and 189. Seine fisheries occur in Districts 101 to 107 and 109 to 114. Drift gillnet fisheries occur in Districts 101, 102, 106, 108, 111, and 115. Set gillnet fisheries occur in Yakutat area Districts 182, 183, 185, and 192.

B. Field Program Duration:

Winter Troll - 1 October to 30 October and 16 March to
16 April (dependent on funding)
Summer Troll - opening (late June) to 22 September
Drift Gillnet - 3rd Sunday in June to October
Seine - 1st Sunday in July to October
Set gillnet - 2nd Sunday in June to October

C. Sampling Duration If Different Than Above:

Winter Troll - 5 October to 30 October and 16 March to
16 April (dependent on funding)
Summer Troll - 5 days after opening (late June) to
22 September
Drift Gillnet - 3rd Sunday in June to October
Seine - 1st Sunday in July to October
Set gillnet - 2nd Sunday in June to October

Note: season dates for the troll fishery are set annually
by the Board of Fisheries.

D. Frequency Of Sampling While In The Field:

Commercial catch sampling is done whenever landings are
made. Commercial gillnet and seine landings generally
occur from Monday to Friday following the traditionally
6:00 a.m. Sunday openings. Troll catches are sampled
continuously throughout the season whenever landings
are made.

E. Longevity Of The Project: 1 year, 2 years,
 3 years, continuing

F. Is this project new? Yes, No

G. Project began: 7/1/83

H. Most Recent Project Report:

Annual Report for period July 1, 1985 to June 30, 1986.
Project No. AFC-72-5 Anadromous Fish Conservation Act
Regional Information Report 1J88-8.

V. DATA COLLECTION:

A. Types of Data Collected:

1. Number of fish examined for missing adipose
fins (by species);

2. Number of fish with missing adipose fins (by species);
3. Fork length of adipose-less fish;
4. Flesh color (red or white) of adipose-less chinook salmon;
5. Heads of adipose-less fish; and
6. Accompanying sample descriptive and biological data (see Sampling instructions).

B. Sample Collection Methods:

Sampling procedures are outlined in the "Micro Wire Tag Sampling Program Commercial Fisheries Sampling Detailed Sampling Instructions" (attached) and the Port Sampling Operational Plan memorandum (attached).

Commercially caught salmon are usually sampled at fish processing facilities when the fish are being offloaded and sorted by species, size, and condition by plant personnel. With the aid of hand tally counters, samplers count the number of chinook, coho, chum, and sockeye salmon they inspect for missing adipose fins. Fish with a missing adipose fin are flagged with a individually numbered "strap" or "head" tag around one side of the jaw, a short piece of surveyors flagging around the other side of the jaw, and are measured from tip-of-snout to fork-of-tail to the nearest millimeter. The head number, species, fork length, clip status (OK, questionable, or unknown), and, if a chinook, flesh-color (red or white) is recorded on a "Micro Wire Tag Recovery Sampling Form - Commercial" data form along with information on number of each species sampled, number of tagged fish observed, and information on the source and type of sample (processor, sampler, date sold, date sampled, sample number, boat name, ADF&G number, gear, and question if tender sample, random or select sample, and sample source). Tagged fish are returned to the conveyor belt or tote from which taken. Processing plant personnel set these tagged heads aside in designated ADF&G head recovery buckets when the fish are headed. Project personnel collect these heads, verify their recovery by checking off on the appropriate data form, and ship heads and edited data forms (edited for completeness, readability, and accuracy) to Juneau along with a completed "Head Batch Transfer Sheet".

All data is recorded directly on a CWT Data Form (included in attached CWT sampling instructions).

VI. DATA ANALYSIS:

- A. What determines how many samples (observations) of each data type will be taken?

Coast-wide agreement through PMFC to sample at least 20% of the chinook and coho salmon harvested. Ideally, all tagging studies are designed to yeild statistically acceptable results given a 20% sampling effort.

It is important to note that sampling levels are dependent on manpower (and manpower is dependent on funding). The more project employees, the more fish that can be sampled, the more ports of landing that can be sampled, and the more uniform the coverage. In addition, the shared sampling responsibilities of all Port Sampling Project employees (CWT, AWL, FPD, Pink Sex, U.S./Canada data collections, etc.) enhance the efficiency at which CWT data is collected.

- B. What types of statistics are computed?

1. Percent of catch sampled.

Note: this project supports data collection only. All tag recovery data is forwarded to the FRED Division Tag Lab in Juneau from which release and recovery data is accessed by other Department and agency personnel for their analysis needs.

- C. What types of statistical tests are applied?

None (see note above).

- D. What questions will each test help you evaluate?

N/A

- E. Where, how, when, and with what hardware and software will these analyses be conducted?

N/A

VII. REPORTING:

A. What types of documents will be written by whom on what schedule?

It is not the responsibility of project personnel to analyze and report on this CWT data, however, several ADF&G Technical Data Reports on the contribution of CWT'ed chinook salmon to the region's fisheries have been written with assistance from project personnel (TDR No's. 161, 167, and 185) and more TDR's are planned. The U.S./Canada budget currently supports the analysis and reporting on contributions of chinook, coho, and chum salmon.

| <u>Report</u> | <u>Author</u> | <u>Completion Date</u> |
|-----------------------|---------------|------------------------|
| Technical Report | | |
| Annual Project Report | Van Alen | June 1987 |

VIII. PROJECT BUDGET:

This Coded Microwire Tag Recovery Project has not been specifically budgeted for in the past since AWL, CWT, FPD, and Pink Sex Ratio data collection activities are all integrated into "Port Sampling" budgets for Ketchikan, Petersburg, Juneau, Sitka, and Yakutat. In addition, these same project personnel assist in the collection of data for U.S./Canada funded projects. Estimates of the Coded Microwire Tag Recovery Project costs are provided here, nevertheless. These CWT project costs are based on the FY 87 allocations to Projects CF-218, 224, 225, 226, 227, and 230. CWT sampling costs related to this POP are estimated to be 47.5% of Project No. 218, 224, 225, 226, and 227, and 33% of project No. 230.

A. By Line Item:

| <u>Line</u> | <u>GF</u> | <u>Other</u> | <u>Total</u> |
|-------------|-----------|--------------|--------------|
| 100 | | | 107.6 |
| 200 | _____ | _____ | 7.5 |
| 300 | _____ | _____ | 9.6 |
| 400 | _____ | _____ | 6.6 |
| 500 | _____ | _____ | 1.4 |
| Total | _____ | _____ | 132.7 |

B. What is the cost per sample for each data type?

| <u>Date Type</u> | <u>Cost/Observation</u> |
|--------------------------|-------------------------|
| 1. Cost per fish sampled | \$0.08 |
| 2. Cost per tagged fish | \$6.60 |

Calculated based on:

Approximately 1,670,000 fish sampled in 1986 (excluding landings in Metlakatla) (Please refer to attached tables detailing the 1986 sampling effort).

Sampling cost of \$132,000 in 1986 (see VIII. Project Budget above).

Approximately 20,000 tagged heads recovered from commercial fisheries.

Note: I estimated the cost per fish sampled to be \$0.13 in 1984 and \$0.11 in 1985. It is difficult to identify just the CWT sampling costs in this combined CWT, AWL, FPD, Pink Sex Ratio, and U.S./Canada research "Port Sampling" Project. There is an additive effect toward increased sampling efficiency with the addition of employees funded to collect other port sampling data.

C. Project Positions:

| <u>Class</u> | <u>PCN</u> | <u>PFT mm</u> | <u>SFT mm</u> |
|--|------------|---------------|---------------|
| <u>Project Supervision</u> (Proj. No. 218): | | | |
| FB III | 1398 | 12.0 | |
| <u>Ketchikan Port Sampling</u> (Proj. No. 224): | | | |
| FT II | 1620 | | 3.0 |
| FT I | 1741 | | 2.0 |
| FT III | 1733 | | 3.0 |
| FT III | 1745 | | 3.0 |
| FT I | 1746 | | 1.0 |
| FT III | 5253 | | 1.0 |
| <u>Petersburg Port Sampling</u> (Proj. No. 225): | | | |
| FB II | 1863 | | 6.0 |
| FT I | 1613 | | 2.0 |
| FT III | 1735 | | 4.0 |
| FT I | 1876 | | 2.0 |
| FT II | 1897 | | 2.0 |

| | | |
|--------|------|-----|
| FT II | 1734 | 2.0 |
| FT I | 1878 | 3.0 |
| FT III | 1837 | 3.0 |

Juneau Port Sampling (Proj. No. 226):

| | | |
|--------|------|-----|
| FT III | 1722 | 3.0 |
| FT II | 1872 | 3.0 |
| FT II | 1705 | 2.0 |
| FT III | 1707 | 2.0 |
| FT I | 1943 | 1.5 |

Sitka Port Sampling (Proj. No. 227):

| | | |
|--------|------|-----|
| FT III | 1728 | 5.0 |
| FT III | 1740 | 4.0 |
| FT I | 1732 | 4.0 |

Yakutat Port Sampling (Proj. No. 230):

| | | |
|--------|------|-----|
| FT III | 1701 | 3.0 |
| FT I | 1942 | 2.5 |

Note: Employees in Project No's 218, 224, 225, 226, 227, and 230 also assist in the collection of AWL, FPD, pink sex ratio, and other port sample data. Therefore, the man months listed are not exclusively for CWT sampling.

D. How many man months are assigned to each position for data analysis?

N/A

E. How many man months are assigned to each position for report writing and other presentations of project data?

N/A

I. TITLE: Troll Fishery Performance Monitoring

II. OBJECTIVES:

A. List the specific objectives beginning with the highest priority:

1. To evaluate the catch rate and fishing effort, by time and area, for the two main target species of troll fishery: chinook and coho salmon.
2. To estimate catch-per-unit-effort (CPUE) on a timely basis.
3. To combine this CPUE with aerial vessel survey information in order to provide an estimation of catch for each species.

B. To what Fisheries Management Operational Plans will this project contribute?

| Species | Gear | Location |
|----------------|-------|------------------|
| Chinook Salmon | Troll | Southeast Alaska |
| Coho Salmon | Troll | Southeast Alaska |

III. NEED OR PROBLEM ADDRESSED:

A. Describe the public and/or resource need addressed by the project and the project's benefits.

Although the data collection and analysis are identical for each species, the management strategies and objectives differ due to an imposed catch ceiling for chinook.

Timely in-season CPUE data is necessary to estimate when the cumulative chinook catch will approach the harvest ceiling established by the Pacific Salmon Commission. This enables management biologists to announce fishery closures, area restrictions, or gear reductions in an orderly manner to prevent the catch from exceeding the established harvest ceiling. Since some trollers can fish for several weeks between landings, and the numbers of fish landed as shown on fish tickets are not readily available, the fishery performance data is needed to make timely estimates of the catch during the season.

Prompt in-season C.P.U.E. data is necessary to indicate coho run strengths or weaknesses. Allowing fishing to continue in the event of a poor coho run would lower escapements and reduce future coho returns. The ability to determine run

strength in-season gives managers the ability to compensate for deviations from historical catches with extended or shortened seasons, area restrictions, or gear reductions.

B. How will the success of the project be judged?

1. By the achievement of weekly sampling goals and aerial vessel surveys, and the timely use of the combined information by the troll management office in Sitka for making catch estimations and projections.
2. By the maintenance of the chinook salmon catch ceiling which is established by the Pacific Salmon Commission.
3. By maintenance of coho escapement levels and catch allocations among user groups.

IV. PROJECT DESCRIPTION:

Port samplers provide a 10% for coho and 20% for chinook sample of all landings by troll gear in Southeast Alaska detailing daily catch, area, hours fished, and number of days fished. This is computerized and summarized to provide catch-per-unit-effort (CPUE) figures for each area. Estimates of numbers of vessels by area are obtained by weekly aerial surveys. Weekly catches for the region are estimated from the CPUE and vessel surveys by area. Projections of future catch is computed using historical catch trends over time. Fish tickets are processed and used to check accuracy of catch estimations although this is usually three to four weeks later than needed for timely catch estimations.

- A. Location: All waters of Southeast Alaska (including the F.C.Z.) between Cape Suckling and Dixon Entrance.
- B. Field Program Duration: June through October.
- C. Sampling Duration If Different Than Above: Same.
- D. Frequency Of Sampling While In The Field:
 1. Weekly sample goals are established for each port. A single data point consists of a complete vessel landing interview. Weekly data point goals for each port are as follows:

| | |
|---------------------|------|
| Craig/Steamboat Bay | - 25 |
| Elfin Cove | - 15 |
| Hoonah/Excursion I. | - 25 |
| Ketchikan | - 25 |
| Pelican | - 30 |
| Petersburg | - 35 |
| Sitka | - 35 |

2. Aerial vessel surveys for the region are attempted weekly. If aerial vessel surveys can not be completed due to restrictive weather, previous survey data is used for the current weeks estimations.

E. Longevity Of The Project: 1 year, 2 years,
 3 years, continuing

F. Is this project new? Yes, No

V. DATA COLLECTION:

A. Types of Data Collected:

1. Vessel A.D.F.G. number.
2. Gear type (power troll or hand troll).
3. Name of places fished (sampler then provides the appropriate statistical area number for each).
4. Number of days fished at each location.
5. Number of hours per day at each location.
6. Number of chinook, coho, and pink salmon caught at each location.
7. Dates vessel began and ended the trip.
8. Whether vessel froze fish onboard for the trip.
9. Fishermen comments.
10. Number of vessels engaged in fishing by area (from weekly aerial vessel surveys).

B. Sample Collection Methods:

Troll fishermen are interviewed in accordance with the issued interview forms and instructions, and landed salmon are counted by the sampler. Fisherman comments and any refusals to answer questions are also recorded. Weekly goals are set for each port sampled, totaling a minimum of 190 data points per week. Completed data forms are sent weekly to the troll management office in Sitka. Troll Fishery Performance Data (F.P.D.) forms are pre-numbered and all information collected is kept confidential. Vessels are sampled as randomly as possible, taking care not to favor any particular type. The same vessels are often sampled for Age, Weight and Length (A.W.L.) and Coded Wire Tags (C.W.T.) by the same port sampler. Sampling instructions for 1986 are attached. Complete

interview forms are organized by ports by statistical week in the Sitka troll management office. Incomplete forms are retained in a separate folder for possible future reference. Data from the interview forms are entered into a microcomputer database for analysis.

Summaries from this information are organized by time. Typically this has been by statistical week or by month; although as the fishing seasons become shorter and more fragmented, variable length units of time will be examined.

C. Means of Recording Each Data Type:

1. See attached preprinted form.
2. A log is maintained of the sample effort in each port, and the F.P.D. forms are shipped to the Troll Management Office.

VI. DATA ANALYSIS:

A. What determines how many samples (observations) of each data type will be taken?

1. A minimum goal of 2,280 valid data points for a 12 week season is apportioned through the region by port (major ports have more samples, minor ports have fewer samples) in order to obtain a goal of ten percent of expected total landings. Past years' data will be used to evaluate each new year's sampling goals. Sampling goals for each port are minimum expectations; and higher numbers of data points for each port are encouraged if the number of vessel landings allow. The variability in fishing effort by area for the troll fishery disallows precise sampling expectations by port or by statistical area. Troll fishermen tend to move to areas of higher catch rates, and those areas of concentrated effort may differ from week to week, and from year to year. The intent is to maintain an overall ten percent sample of the troll landings. The ten percent figure is derived as being a representative subsample of the landings, and as being logistically feasible. A higher overall sample rate, would be very costly and is not possible under the current budget.
2. Aerial surveys are weather dependent, and have been attempted on a weekly basis. Again; as the summer troll season has become fragmented, it will be necessary to examine variable aerial survey schedules to accurately represent and analyze the fishing effort.

B. What types of statistics are computed?

1. Number of boat days fished by time (usually week) by area. Boat days are simply the number of days fishermen report having fished.
2. Mean hours per day fished by time and area for handtroll and powertroll separately, and combined. These figures become what will be used as standard gear days.
3. Number of standard gear days fished by time and area (see above). In past years, we had tried including the number of hooks fished to calculate a standard gear day, but found it to be an inaccurate measurement of effort. Number of hooks fished tends to reflect how deep the fisherman is running his gear; when running deeper gear, more hooks are commonly run. Thus, if the fish were only to be found at great depth, a higher standard gear day would result. It was also found that fishermen would commonly refuse to provide the number of hooks fished.
4. Catch per boat day by time and area for chinook and coho.
5. Catch per gear day by time and area for chinook and coho.
6. Catch per landing by time and area for chinook and coho.
7. Estimated catch for chinook and coho by time and area, derived from multiplying C.P.U.E. by number of vessels observed during aerial surveys.
8. Estimated catch for chinook and coho by time for the region, weighted by area to compensate for differences in fishing effort.

C. What types of statistical tests are applied?

Summary statistics described above. It is anticipated that historical catch comparisons by time will be examined in future analysis due to improved data base management facilities now available. Catch rates between selected time periods for critical fishing areas will be explored, and those ratios will be used to provide some in-season catch projections.

D. What questions will each test help you evaluate?

Not Applicable.

- E. Where, how, when, and with what hardware and software will these analyses be conducted?

The information received weekly by the Troll Management Office in Sitka is entered into a microcomputer for analysis. Previous to 1987, a Gnat System 10 microcomputer ran a custom designed FORTRAN program which provided data summaries. Recently a Compaq 286 microcomputer was purchased for use by the Troll Management office. The 1987 season will be the first where the entry and analysis will be performed using the database package REVELATION on the Compaq 286. All troll fisheries performance data from previous years will be in the database, and available for comparative analysis.

VII. REPORTING:

- A. What types of documents will be written by whom on what schedule?

| <u>Report</u> | <u>Author</u> | <u>Completion Date</u> |
|--------------------------------|---------------|------------------------|
| Annual Fishery Management Rpt. | Alan Davis | March |
| Board Report | Alan Davis | November |
| Region Annual Report | Alan Davis | Annually |

VIII. PROJECT BUDGET:

- A. By Line Item:

Using General Funds and Federal Aid

| <u>Line</u> | <u>GF&Fed. Aid</u> | <u>US/Canada</u> | <u>Total</u> |
|--------------|------------------------|------------------|--------------|
| 100 | 97.8 | 47.9 | 145.7 |
| 200 | 19.1 | - | 19.1 |
| 300 | 17.0 | - | 17.0 |
| 400 | 8.0 | - | 8.0 |
| 500 | 0.2 | - | 0.2 |
| Total | 142.1 | 47.9 | 190.0 |

B. What is the cost per sample for each data type?

| Data Type | Cost/Observation |
|-----------------------|------------------|
| 1. Fishery Monitoring | \$ 43.35/sample |
| 2. Aerial Survey | \$625.00/flight |

C. Project Positions:

| Class | PCN | PFT mm | SFT mm |
|------------------|---------|--------|--------|
| FB III | 11-1071 | 12 | |
| FB I | 11-1693 | | 4 |
| Analyst/Prog. II | 11-1821 | | 12 |

| Class | PCN | PFT mm | SFT mm |
|-------|-----|--------|--------|
|-------|-----|--------|--------|

Sampling Supervision (Proj. No. 218):

| | | | |
|--------|------|------|--|
| FB III | 1398 | 12.0 | |
|--------|------|------|--|

| Class | PCN | PFT mm | SFT mm |
|-------|-----|--------|--------|
|-------|-----|--------|--------|

Ketchikan Port Sampling (Proj. No. 225):

| | | | |
|--------|------|--|-----|
| FT II | 1620 | | 3.0 |
| FT I | 1741 | | 2.0 |
| FT III | 1733 | | 3.0 |
| FT III | 1745 | | 3.0 |
| FT I | 1746 | | 1.0 |
| FT III | 5253 | | 1.0 |

| Class | PCN | PFT mm | SFT mm |
|-------|-----|--------|--------|
|-------|-----|--------|--------|

Petersburg Port Sampling (Proj. No. 225):

| | | | |
|--------|------|--|-----|
| FB II | 1863 | | 6.0 |
| FT I | 1613 | | 2.0 |
| FT III | 1735 | | 4.0 |
| FT I | 1876 | | 2.0 |
| FT II | 1897 | | 2.0 |
| FT II | 1734 | | 3.0 |
| FT I | 1878 | | 3.0 |
| FT III | 1837 | | 3.0 |

| Class | PCN | PFT mm | SFT mm |
|-------|-----|--------|--------|
|-------|-----|--------|--------|

Juneau Port Sampling (Proj. No. 226)

| | | | |
|--------|------|--|-----|
| FT III | 1722 | | 3.0 |
| FT II | 1872 | | 3.0 |
| FT II | 1705 | | 2.0 |
| FT III | 1707 | | 2.0 |
| FT I | 1943 | | 1.5 |

| Class | PCN | PFT mm | SFT mm |
|-------|-----|--------|--------|
|-------|-----|--------|--------|

Sitka Port Sampling (Proj. No. 227):

| | | | |
|--------|------|--|-----|
| FT III | 1728 | | 5.0 |
| FT III | 1740 | | 4.0 |
| FT I | 1732 | | 4.0 |

| Class | PCN | PFT mm | SFT mm |
|--|------|--------|--------|
| Yakutat Port Sampling (Proj. No. 230): | | | |
| FT III | 1701 | | 3.0 |
| FT I | 1942 | | 2.5 |

Note - employees in these projects also assist in the collection of AWL, CWT, and other port sample data. Therefore, the manmonths listed are not exclusively for FPD sampling.

- D. How many man months are assigned to each position for data analysis.

| PCN | Report | mm |
|---------|--------------------|----|
| 11-1821 | Fishery Monitoring | 12 |
| 11-1693 | Fishery Monitoring | 4 |
| 11-1071 | Fishery Monitoring | 12 |

- E. How many man months are assigned to each position for report writing and other presentations of project data?

| PCN | Report | mm |
|---------|--------------------------|----|
| 11-1071 | Annual Management Report | 12 |
| 11-1821 | Board Reports | 12 |
| 11-1693 | Region Annual Report | 4 |

FORM63.POP

ALASKA DEPARTMENT OF FISH AND GAME
1986 TROLL FISHERY PERFORMANCE DATA PROGRAM
(FPD Program)
SAMPLING INSTRUCTIONS

The FISHERY PERFORMANCE DATA Program is continuing to assist with management of the troll salmon fishery by supplying catch rate information to the management staff. For our purposes, catch rate is expressed as a ratio of catch per standardized fishing day, or CPUE (catch per unit of effort). Interviews are conducted at the time of unloading or at any time shortly after, whichever is convenient. This year we will combine AWL, CWT, and FPD sampling projects in order to collect the necessary data in the most efficient manner possible.

It is important to remember that the information the fisherman gives you is confidential. It may help to interview the fisherman when no one else is around or suggest that you both walk a short distance away if you are in a crowd.

Please explain at the beginning of the FPD interview that the reason you will be asking questions of the fisherman is to find out what effort is necessary to bring in the amount of fish landed. The data will enable management biologists to conduct inseason management based on dockside sampling data rather than relying solely on fishticket data. Comments by fishermen are very helpful and should be recorded whenever possible.

Much of the data necessary for a complete FPD interview can be obtained by direct observation of the vessel, such as boat name, ADF&G number and whether or not they were freezing fish.

You may identify a vessel as a handtroller or a powerroller by observing either the letters "HT" on the side of the boat.

It is very important that you DON'T BIAS THE DATABASE BY FAVORING ANY GROUP OR TYPE OF BOATS when deciding which boats to sample (for instance; powerrollers, handrollers, highliners, or boats and skippers that you are familiar with). We are looking for random samples, so please sample the next available boat rather than seeking a familiar one or waiting for one who usually catches a lot of fish.

Whenever possible, count all the chinook and coho in each delivery to obtain the total catch for these species. If it is not possible to count all the chinook or coho in a troll delivery, it will be permissible to obtain the total catch for these species from the fishticket, provided you are able to get all other FPD data necessary from a complete interview with the skipper.

Since the purpose of the FPD program is to determine the number of fish caught in each area per given amount of effort, it is very critical that the interview reflect only that fishing time used to catch the fish you see landed. This could be biased if a fisherman sold fish at a scow halfway through his/her trip, but gives you the dates and information for the whole trip. Please be sure that the interview data describes the

exact fishing time and places that it took to bring in the salmon that you count from that landing.

THE QUESTIONS YOU WILL HAVE TO ASK ARE:

1. NAME OF PLACE OR PLACES FISHED.
2. NUMBER OF DAYS FISHED AT EACH PLACE.
3. HOURS FISHED PER DAY FOR EACH PLACE.
4. NUMBER OF FISH CAUGHT AT EACH PLACE.

-This is very important, so we can get an independent catch rate for each area, rather than an average for multiple areas.

-It will be fine if the fisherman gives percentages of the total catch (by species) for each place fished; simply record the percentage of the total in the space for each place's catch. (BE SURE TO WRITE DOWN THE TOTAL!!)

5. TRIP DATES.

-Date the vessel left port until landing date.

-It's all right if this exceeds the number of days fished; we get that from Total Days Fished.

6. COMMENTS BY EACH FISHERMAN.

It is important to fill out FPD's completely since incomplete interviews have no statistical validity for our program. After the interview, you can enter the statistical area for each place fished from the list provided, enter the total for days fished and totals for each species caught.

If the fisherman refuses to answer any questions; be sure to indicate so in the fisherman's comments. It is important to identify how many samples are incomplete due to fishermen's refusal to answer questions.

Please use FPD forms that have a preprinted interview number. If you run out of these forms contact your supervisor or Jeff Kelly in Sitka.

Thank you for your compliance with these guidelines and help in making this an effective method of tracking the troll harvest in season. If you have any questions or comments regarding the FPD program, please feel free to contact Jeff Kelly or Alan Davis in the Sitka area office of the Department of Fish and Game.

**ALASKA DEPARTMENT OF FISH AND GAME
COMMERCIAL TROLL FISHERY
FISHERY PERFORMANCE DATA FORM**

Interview Number: Nº 1601

Port: _____

Date of Interview: ____/____/____

Interviewer: _____

ADF&G Number: _____

Name of Vessel: _____

Power Troll: _____ Hand Troll: _____

| | Name of Placed Fished | Stat. Area | Days Fished | Hours Per Day | King | Catch Coho | Pink |
|----|-----------------------|------------|-------------|---------------|---------|------------|-------|
| 1. | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| 2. | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| 3. | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| 4. | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| 5. | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| | | Total: | _____ | | Totals: | _____ | _____ |

Trip Dates: ____/____/____ through ____/____/____

Freezing Fish this Trip: Yes No

Fishermen Comments:

Appendix B.3. AWL Catch and Escapement Sampling

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

PROJECT OPERATIONAL PLANS

Title: AWL Catch and Escapement Sampling

Project Leader: Benjamin W. Van Alen

PCN: 11-1398

Date Submitted: April 1988

Region: Southeast Alaska

Fishery Unit: Southeast Salmon

Yellow Book Project No.: Included in: CF-218, CF-224, CF-225, CF-226,
CF-227, CF-229, CF-230, CF-259.

Fiscal Year: 89

Total Project Cost: 211.9

APPROVAL

| Level | Signature | Date |
|-------------|-----------|-------|
| Biometric: | _____ | _____ |
| Regional: | _____ | _____ |
| Divisional: | _____ | _____ |

I. TITLE: AWL Catch and Escapement Sampling

II. OBJECTIVES:

A. List the specific objectives beginning with the highest priority:

The overall objective of this project is to compile and maintain a historical data base of the age, sex, and size (AWL) compositions of salmon catches and escapements in Southeast Alaska. This data is used by various State, Federal, and private agencies for a variety of management and research purposes. Annual reports are compiled documenting the magnitude and age, sex, and size composition of chinook, coho, sockeye, and chum salmon in Southeast Alaska catches and escapements. In addition, copies of AWL data are frequently forwarded to other Department and agency personnel. This project supports: (1) collection of age (scale), sex, and length data from Southeast Alaska catches and escapements, from Yakutat south (note: several catch and escapement sampling activities in the region are supported by other projects and Divisions); (2) data processing activities including scale aging, data editing, computer summarization, and archiving; and (3) reporting. Examples of project operational plans for salmon catch and escapement sampling in Southeast Alaska and Yakutat are attached along with a summary of our 1986 catch sampling effort.

Specific objectives are to:

1. Commercial Catch Sampling. Sample Southeast Alaska and Yakutat commercial troll, seine, and gillnet (drift and set) landings of chinook, coho, sockeye, and chum salmon for age (scale), sex, and size data in a manner yielding statistically valid age composition estimates for catches in selected gear type, area, and time strata. Some fisheries are sampled opportunistically when manpower and fish are available. Difficulties in accessing fish to sample and inadequate resources (money and personnel) occasionally precludes attainment of sampling goals.

Sampling goals for each species and fishery are:

Chinook

- a. Summer Troll - 350 samples/SW, NE, SE quadrant/week @ 3 scales per fish and 700 samples/NW quadrant/week @ 3 scales/fish. (Refer to Figure 3 of the AWL Sampling Manual (attached). Measure length (mid-eye to fork-of-tail) from at least 10% of the fish sampled for scales. Don't record sex, since we've yet to find a method to accurately sex troll dressed chinook salmon.
- b. Drift Gillnet - 700 samples/season from District 101 and 102 pooled, District 106 and 108 pooled, District 111, and District 115 @ 3 scales per fish. Measure length from 10% of the fish sampled for scales. Don't record sex.
- c. Seine - 700 samples/season/quadrant area @ 3 scales per fish. Measure length from 10% of the fish samples for scales. Don't record sex.
- d. Winter Troll - Sample as many chinook salmon for scale and length data as possible in conjunction with Coded Mirrowire Tag (CWT) sampling activities.
- e. Yakutat Set Net Fisheries - 600 samples/season @ 3 scales per fish from each of the following fisheries (if open): Alsek, Akwe, Situk, and Yakutat Bay. Note - small chinook salmon catches, poor access to fish, and inadequate manpower has precluded attaining sampling goals in past years. Measure lengths from 20% of the fish and record sex.

In the random sampling of chinook salmon for AWL data, for each adipose-less fish also sampled for CWT data, record the 5 digit head tag number in the first five fields on the back of the mark-sense data form. Note that Canadian in-river gillnet fisheries, and trap, gillnet, and seine fisheries on the Annette

Island Fishery Reserve are not sampled by this project.

Coho Salmon

- a. Summer Troll - 250 samples/quadrant area/on a two weeks on - two weeks off basis @ 3 scales per fish. Don't sex troll caught coho. Measure lengths from 10% of the fish.
- b. Drift Gillnet - 500 samples/fishery (Districts 101, 102, 106, 108, 111, and 115)/season @ 3 scales per fish. Measure length from 10% of the fish and record sex.
- c. Seine - 500 samples/quadrant area/season @ 3 scales per fish. Measure length from 10% of the fish and record sex.
- d. Yakutat Set Net - 640 samples/season @ 3 scales per fish from each of the following fisheries (if open): East Alsek, Alsek, Akwe, Italio, Situk, Lost, Yakutat Bay, Manby Shore, Yahtse, Tsiu, and Kaliakh. Measure length from 20% of the fish and record sex.

Sockeye Salmon

- a. Drift Gillnet - 700 samples/fishery (District 101, 102, 106, 108, and 111)/week @ 1 scale per fish. 1,000 samples/District 115/week @ 1 scale per fish. Measure length from 20% of the District 111 and 115 fish and 10% of the fish in the other districts. Sex all fish.
- b. Seine - 700 samples/fishery (all S.E. Alaska seine fishery districts)/week @ 1 scale per fish. Measure lengths from 20% of the fish. Sex all fish. Terminal seine fisheries in District 113 (Necker, Whale, and Red Fish Bays) are sampled independently from the other mixed stock fisheries with sampling goals of 600 fish/terminal area.

- c. Yakutat Set Net - Sample the following @ 1 scale per fish: East Alsek, 1,300, Alsek 2,000, Akwe 640, Itatio 640, Situk 2,000, Lost 640, Yakutat Bay 2,000, and Manby Shore 640. Measure lengths from 20% of the fish. Sex all fish.

Chum Salmon

- a. Drift Gillnet - 300 samples/fishery (Districts 101, 102, 106, and 108)/week @ 1 scale fish, and 600 samples/fishery in Districts 111 and 115/week @ 1 scale per fish. Measure length from 20% of the fish and record sex.
- b. Seine - 300 samples/week @ 1 scale per fish from Districts 101 and 102 pooled, 103 and 104 pooled, 105, 106, and 108 pooled, 109 and 110 pooled, 112, 113, and 114. In addition sample 300 fish/week/District 112-22 (Hidden Falls) when Hidden Falls is not the only section of District 112 open. Measure length from 20% of the fish. Sex all fish.
- c. Yakutat Set Net - Sample 400 from East Alsek/season @ 1 scale per fish. Measure length from 20%. Sex all fish.
2. Escapement Sampling. Sample select escapements of chinook, coho, sockeye, and chum salmon for AWL data in a manner yielding statistically valid estimates of the age compositions to each escapement. Sampling is often done opportunistically in combination with other projects. Samples are also frequently obtained entirely by other projects with only sampling supplies, instructions, and advice provided by this project. Small escapements, difficulties in accessing fish to sample and inadequate resources often precludes attainment of sampling goals.

Specific sampling goals by species are:

Chinook Salmon

Sample as many as possible. Sampling is in cooperation with Sport Fish Division and other

agencies. Sampling goals are 600+ samples from each system sampled, however, low chinook salmon availability will frequently prevent us from attaining these goals. Record sex and length for all fish sampled.

Coho Salmon

Obtain AWL samples in cooperation with Coho Research Project personnel. Sampling goals are 1,000 samples from weired systems and 500 samples from un-weired systems at three scales per fish. Record sex and length for all fish sampled.

Sockeye Salmon

Sampling goals are 2,000 for weired systems and 800 for unweired systems at one scale per fish. Record sex and length for all fish sampled. Sampling of weired systems is the responsibility of other Commercial Fishery, Sport Fish, or FRED Division projects. Sampling of southern Southeast unweired systems is the responsibility of the U.S./Canada Stock ID Scales project. This project typically samples the escapements to un-weired systems in northern Southeast and Yakutat. Yakutat sampling goals are: East Alsek 640, Akwe 640, Itatio 640, Situk 1,300, and Lost 640.

Chum Salmon

Sampling goals are 1,200 samples from weired systems and 600 samples from un-weired systems at one scale per fish. Record sex and length for all fish sampled.

3. Process AWL data at the Scale Lab in Douglas where scales are: pressed (scales forwarded to Douglas from our Sitka, Petersburg, or Ketchikan offices are usually already pressed), aged, and associated sample and biological data is edited and summarized on microcomputers.
4. Write reports, in the ADF&G Technical Fisheries Report Series, on the magnitudes and age, sex, and size compositions of annual catches and escapements of chinook, coho, sockeye, and chum salmon in Southeast Alaska and Yakutat. This involves cooperating with people in other projects, Divisions, and agencies in the

compilation of all available AWL data from catches and escapements.

5. Archive AWL data (gumcards, acetates, data forms, data summaries, and ASCII data files on microcomputer diskette) in the Douglas office.

- B. To what Fisheries Management Operational Plans will this project contribute?

| <u>Species</u> | <u>Gear</u> | <u>Location</u> |
|------------------------|-------------|--|
| Fall Chum | Seine | Northern and Southern S.E |
| Sockeye | Seine | District 104 |
| Sockeye | Seine | District 113 |
| All salmon | Gillnet | Tree Pt./Portland Canal |
| All salmon | Gillnet | Districts 106 and 108 |
| All salmon | Gillnet | District 111 (Taku) |
| All salmon | Gillnet | District 115 (Lynn Canal) |
| Chinook | Troll | All Southeast and Yakutat |
| Coho | Troll | All Southeast and Yakutat |
| Sockeye, Chum | Set GN | East River |
| Sockeye | Set GN | Alsek River |
| Sockeye, Coho, Chinook | Set GN | Situk, Lost R., Yakutat Bay |
| Sockeye, Coho | Set GN | Akwe, Italio, Manby Shore, Humpy Creek, and other minor summer fisheries |
| Chinook | | |
| Coho | Set GN | Yakutat Districts |
| Coho | Set GN | Yakutaga Districts |

III. NEED OR PROBLEM ADDRESSED:

- A. Describe the public and/or resource need addressed by the project and the project's benefits.

A comprehensive and representative data base on the age, sex, and size composition of salmon in our regions catches and escapements is essential to sound management of the resource. Age, sex, and size data combined with catch, effort, and other biological, geographic, and resource data is needed for the development of regulatory management strategies which provide for optimal escapements while maximizing harvests. For example this information is drawn upon by management and research biologists for:

A comprehensive and representative data base on the age, sex, and size composition of salmon in our regions catches and escapement is essential to sound management of the resource. Age, sex, and size data combined with

catch, effort, and other biological, geographic, and resource data is needed for the development of regulatory management strategies which provide for optimal escapements while maximizing harvests. For example this information is drawn upon by management and research biologists for:

1. Forecasting run strengths;
2. Setting and evaluating escapement goals;
3. Examining the productivity of a system;
4. Age and growth studies;
5. Sex composition studies;
6. Evaluating age composition of returns;
7. Gear selectivity studies;
8. Migration timing studies;
9. Scale pattern analysis studies;
10. Catch apportionment based on age compositions and/or scale patterns (both in- and post-season);
11. Estimating harvest and interception rates;
12. Evaluation of hatchery returns; and to
13. Establish a better understanding of the biology of each stock.

B. How will the success of the project be judged?

Success of the project will be determined by:

1. Achievement of AWL sampling goals from each targeted fishery and escapement;
2. Ability of project staff to rapidly distribute accurately aged and compiled AWL data to requesting management and research biologists;
3. Complete and accurate documentation of AWL data in annual TDR reports;
4. Maintenance of an AWL data archive that can readily fulfill requests for data summaries in hard copy or electronic form or for copies of data forms or impressions.

IV. PROJECT DESCRIPTION:

We sample salmon landed by commercial troll, seine, drift gillnet, and set gillnet fishermen for scale, sex, and length data at on-shore processing facilities, buying stations, and onboard tenders and fishing vessels throughout Southeast Alaska and Yakutat. Employees are stationed in the ports of Yakutat, Sitka, Juneau, Petersburg, Ketchikan, Craig/Klawock, Excursion

Inlet, Hoonah, Kake, Pelican, and Wrangell for sampling of the summer troll, seine, and gillnet landings. Winter troll landings are sampled, usually, in Wrangell, Sitka, Petersburg, Ketchikan, Juneau and Hoonah. Several Yakutat set net fisheries are sampled on site.

Project supervision is provided from the Douglas regional office and there are "Port Supervisors" in Douglas (direct supervision of sampling activities in Juneau/Douglas, Excursion Inlet, Hoonah, and Pelican), Sitka, Petersburg (direct supervision of sampling activities in the Petersburg/Wrangell/ Kake area). The Ketchikan port supervisor also advises Annette Island Fishery Reserve biologists on their sampling of landings in Metlakatla. Scales are aged in the Scale Lab in Douglas by project biologists and seasonal technicians.

Personnel employed to sample commercial landings of salmon for AWL data also sample for coded micro-wire tag data, troll fishery performance data, brain parasite data, genetic stock identification data, pink sex ratio data, gear-marked or scarred fish data, adult tag recovery data, and other new or continuing sampling activities funded by General Fund, Federal Aid, U.S./Canada, or other sources. The sampling of the selected salmon escapements is also accomplished by these employees.

Scales are taken from the preferred area on the left side of the fish, mounted on gum cards, and impressions made in cellulose acetate. Age is determined by visual examination of scale impressions under moderate (40X) magnification with the aid of microfiche reader. Ages are reported in european notation. All lengths are measured from mid-eye to fork-of-tail to the nearest half centimeter. Sex is determined by examination of external dimorphic maturation characteristics. All data, sex, length, age, and accompanying sample description, is recorded on mark-sense readable "ADF&G Adult Salmon Age-Length Form Version 2.1". Recorded AWL data is transferred to ASCII files on IBM format microcomputer floppy disks via an Opscan reader. Editing and initial summarization of each sample is accomplished by running Bob Conrad's BASIC AWL summarization programs titled AGESUM and LENGTH. Formal reporting of AWL data is done with the aid of custom BASIC programs (programmed by John Clark and Scott McPherson), Lotus, and Wordstar software packages.

- A. Location: The study area consists of the coastal waters and inland drainages of Southeast Alaska from Cape Suckling on the North to Dixon Entrance on the south. The region is divided into 24 coastal (101-116, 181-186, 191, and 192) and 6 offshore (150, 152, 154, 156, 157, and 189) fishing districts. Salmon are commercially harvested by hand and power troll gear in

Districts 101-116, 152, 154, 156, 157, 181, 183, and 189. Seine fisheries occur in Districts 101 to 107 and 109 to 114. Drift gillnet fisheries occur in Districts 101, 102, 106, 108, 111, and 115. Set gillnet fisheries occur in Yakutat area Districts 182, 183, 185, and 192.

B. Field Program Duration:

Winter troll - 1 October to 30 October and 16 March to
16 April (dependent on funding)
Summer troll - opening (late June) to 22 September
Drift gillnet - 3rd Sunday in June to October
Seine - 1st Sunday in July to October
Set gillnet - 2nd Sunday in June to October
Escapement sampling - August to October

C. Sampling Duration If Different Than Above:

Winter troll - 5 October to 30 October and 16 March to
16 April (dependent on funding)
Summer troll - 5 days after opening (late June) to
22 September
Drift gillnet - 3rd Sunday in June to October
Seine - 1st Sunday in July to October
Set gillnet - 2nd Sunday in June to October
Escapement sampling - August to October

D. Frequency Of Sampling While In The Field:

Commercial catch sampling is done whenever landings are made. Commercial gillnet and seine landings generally occur from Monday to Friday following the traditional 6:00 a.m. Sunday openings. Troll catches are sampled continuously throughout the season whenever landings are made.

Our collection of escapement samples from un-weired systems is usually limited to one sampling event per season.

E. Longevity Of The Project: 1 year, 2 years
 3 years, continuing

F. Is this project new? Yes, No

G. Project Began: 7/1/83

H. Most Recent Project Report: Annual Report for period July 1, 1985 to June 30, 1986. Project No. AFC-72-5 Anadromous Fish Conservation Act Regional Information Report 1J88-8.

V. DATA COLLECTION:

A. Types of Data Collected:

1. Scales
2. Length (mid-eye to fork-of-tail)
3. Sex
4. Other biological data as requested

B. Sample Collection Methods:

Commercially caught salmon are usually sampled at fish processing facilities when the fish are being offloaded and sorted by species, size, and condition by plant personnel. Sampling procedures are outlined in the Stock Biology AWL sampling manual (attached). Tweezers are used to take scales. Scales are taken from the preferred area on the left side of the fish. If the number of fish is limited and there are no scales in the preferred area on the fishes left side then they are taken from the preferred area on the right side. If no preferred area scales are available then scales closest to the preferred area are sampled and age error code #8 is marked on the data form. Length measurements are made by either laying the fish on a measuring tape secured to a flat aluminum measuring board or by laying the fish on a flat surface and measuring with a tape or measuring stick.

Several methods are used to sample fish depending on how the fish are being handled by plant personnel, the number of samplers, and the amount of space available for sampling. The intent of all methods is to attain the sampling goal, with the fewest people, in the shortest time with the least impact on processing plant operations. Exact sampling procedures and descriptions of sampling scenarios are provided in the AWL Sampling Manual.

Scales are mounted directly on gum cards. Sex, length, and age data is recorded in pencil directly onto mark-sense data forms (see example in AWL Sampling Manual). An Opscan 90/20 mark-sense reader is used to transfer the AWL data from the data forms to ASCII data files on IBM format floppy disks.

A log is maintained, in each port and in the Douglas office, of the weekly AWL sampling effort in each port.

VI. DATA ANALYSIS:

- A. What determines how many samples (observations) of each data type will be taken?

We desire to maintain a one-in-ten chance that our estimate of the age composition of each gear/area/time strata did not exceed plus or minus five percent of the true value. We used the AWL sampling guidelines developed by Dave Bernard in 1982 (equations of Cochran (1977)) modified for finite populations and age classes to determine the desired sample size for a strata. We assumed the presence of seven age classes for chinook salmon, three for coho salmon, six for sockeye salmon and, three for chum salmon. We also needed to take into account the loss of samples to unreadable scales.

- B. List tables.

1. Age compositions of catches and escapements with associated Standard Errors.
2. Mean length by age and sex with associated Standard Errors.
3. Sex composition.
4. Harvest of fish by age and sex (where applicable).
5. Mean and variance of the passage of salmon through weirs.

- C. What types of statistical tests are applied?

None.

- D. What questions will each test help you evaluate? N/A

- E. Where, how, when, and with what hardware and software will these analyses be conducted?

All analysis is done in the Region I office in Douglas. Scales are aged using a 40 - 80X microfiche. Mark-sense forms are read by an Opscan machine. All electronic data editing, analysis, and report writing is performed on IBM or compatible microcomputers and printed on an Apple Lazerwriter. Custom BASIC programs are used to compile and tabulate AWL data. Lotus is used to construct some tables and for graphing. Graphs are done on a Houston Instruments DMP-29 plotter. Reports are done using WordPerfect.

VII. REPORTING:

A. What types of documents will be written by whom on what schedule?

| <u>Report</u> | <u>Author</u> | <u>Completion Date</u> |
|-------------------------|-------------------|------------------------|
| <u>IFR's</u> | | |
| Annual Chinook C&E | Van Alen et. al. | June 1988 |
| Annual Coho C&E | Wood et. al. | June 1988 |
| Annual Sockeye C&E | McPherson et. al. | June 1988 |
| Annual Chum C&E | Clark et. al. | June 1988 |
| Annual Yakutat C&E | Pahlke | June 1988 |
| <u>Technical Report</u> | | |
| Annual Project Report | Van Alen | June 1988 |

VIII. PROJECT BUDGET:

This AWL Catch and Escapement Sampling Project has not been specifically budgeted for in the past since AWL, CWT, FPD, and Pink Sex Ratio data collection activities are all integrated into "Port Sampling" budgets for Ketchikan, Petersburg, Juneau, Sitka, and Yakutat. In addition, these same project personnel assist in the collection of data for U.S./Canada funded projects. Estimates of the AWL catch and escapement sampling costs are provided here, nevertheless. These AWL project costs are based on the FY 87 allocations to Projects CF-218, 224, 225, 226, 227, 229, 230, and 259. AWL catch and escapement sampling costs related to this POP are estimated to be 37.8% of Project No. 218, 224, 225, 226, and 227, 60% of project No. 230, and 100% of Project No. 229 and 259.

A. By Line Item:

| <u>Line</u> | <u>GF</u> | <u>Other</u> | <u>Total</u> |
|-------------|-----------|--------------|--------------|
| 100 | _____ | _____ | 165.7 |
| 200 | _____ | _____ | 9.4 |
| 300 | _____ | _____ | 22.3 |
| 400 | _____ | _____ | 13.4 |
| 500 | _____ | _____ | 1.1 |
| Total | _____ | _____ | 211.9 |

B. What is the cost per sample for each data type?

| <u>Data Type</u> | <u>Cost/Observation</u> |
|------------------|-------------------------|
|------------------|-------------------------|

| | |
|----------------------------------|--------|
| 1. One scale, sex, length sample | \$0.94 |
|----------------------------------|--------|

Calculated based on FY87 sampling costs in Ketchikan, Petersburg, Juneau, Sitka, and Yakutat of \$99,100 (excludes Project No. 218, 229, and 259) and approximately 105,000 AWL samples taken in FY87 (excludes all AWL samples not taken by this project).

C. Project Positions:

| <u>Class</u> | <u>PCN</u> | <u>PFT mm</u> | <u>SFT mm</u> |
|--------------|------------|---------------|---------------|
|--------------|------------|---------------|---------------|

Project Supervision (Proj. No. 218):

| | | | |
|--------|------|------|--|
| FB III | 1398 | 12.0 | |
|--------|------|------|--|

Ketchikan Port Sampling (Proj. No. 224):

| | | | |
|--------|------|-----|--|
| FT II | 1620 | 3.0 | |
| FT I | 1741 | 2.0 | |
| FT III | 1733 | 3.0 | |
| FT III | 1745 | 3.0 | |
| FT I | 1746 | 1.0 | |
| FT III | 5253 | 1.0 | |

Petersburg Port Sampling (Proj. No. 225):

| | | | |
|--------|------|-----|--|
| FB II | 1863 | 6.0 | |
| FT I | 1613 | 2.0 | |
| FT III | 1735 | 4.0 | |
| FT I | 1876 | 2.0 | |
| FT II | 1897 | 2.0 | |
| FT II | 1734 | 2.0 | |
| FT I | 1878 | 3.0 | |
| FT III | 1837 | 3.0 | |

Juneau Port Sampling (Proj. No. 226):

| | | | |
|--------|------|-----|--|
| FT III | 1722 | 3.0 | |
| FT II | 1872 | 3.0 | |
| FT II | 1705 | 2.0 | |
| FT III | 1707 | 2.0 | |
| FT I | 1943 | 1.5 | |

Sitka Port Sampling (Proj. No. 227):

| | | |
|--------|------|-----|
| FT III | 1728 | 5.0 |
| FT III | 1740 | 4.0 |
| FT I | 1732 | 4.0 |

Yakutat Port Sampling (Proj. No. 230):

| | | |
|--------|------|-----|
| FT III | 1701 | 3.0 |
| FT I | 1942 | 2.5 |

Aging Laboratory (Proj. No. 259):

| | | |
|--------|------|-----|
| FB II | 1332 | 6.0 |
| FT II | 1898 | 4.0 |
| FT I | 1944 | 4.0 |
| FT III | 1583 | 3.0 |
| FT III | 1626 | 3.0 |

Note: Employees in Project No.'s 218, 224, 225, 226, 227, and 230 also assist in the collection of CWT, FPD, pink sex ratio, and other port sample data. Therefore, the man months listed are not exclusively for AWL sampling.

- D. How many man months are assigned to each position for data analysis?

| <u>PCN</u> | <u>Report</u> | <u>mm</u> |
|------------|-----------------|-----------|
| 1398 | Chinook C&E TFR | 1.0 mm |
| 1332 | Sockeye C&E TFR | 2.0 mm |
| 1863 | Chinook C&E TFR | 1.0 mm |
| 1232 | Yakutat C&E TFR | 1.5 mm |
| 1298 | Coho C&E TFR | 2.0 mm |
| 1357 | Chum C&E TFR | 1.0 mm |

- E. How many man months are assigned to each position for report writing and other presentations of project data?

| <u>PCN</u> | <u>Report</u> | <u>mm</u> |
|------------|-----------------|-----------|
| 1398 | Chinook C&E TFR | 1.0 mm |
| 1332 | Sockeye C&E TFR | 1.0 mm |
| 1232 | Yakutat C&E TFR | 1.0 mm |
| 1298 | Coho C&E TFR | 1.0 mm |
| 1357 | Chum C&E TFR | 0.5 mm |

I. TITLE: Pink Salmon Sex Ratio Sampling

II. OBJECTIVES:

- A. List the specific objectives beginning with the highest priority:
1. To obtain reliable estimates of the sex composition of pink salmon harvested each week in selected Southeast Alaska purse seine fisheries;
 2. To pass on all pink salmon sex ratio data to appropriate management biologists on a timely basis; and,
 3. To provide this data to the Pink and Chum project personnel for subsequent analysis and reporting.
- B. To what Fisheries Management Operational Plans will this project contribute?

| <u>Species</u> | <u>Gear</u> | <u>Location</u> |
|----------------|-------------|--------------------|
| Pink | Seine | Northern Southeast |
| Pink | Seine | Southern Southeast |

III. NEED OR PROBLEM ADDRESSED:

- A. Describe the public and/or resource need addressed by the project and the project's benefits.

In-season estimates of sex composition are used by managers, albeit currently in a non-quantitative fashion, to assess run timing and run strength of pink salmon. This information is an asset in management of seine fisheries and is therefore of benefit to commercial fishermen. Future advances in the applications of pink sex ratio data will increase the value of this data base. Pink sex composition data can potentially be used in the development of models to predict run timing and run strength, in forecasting, in managing for a desired sex composition on the spawning ground, and for improving the quality of the catch.

- B. How will the success of the project be judged?

If pink salmon sex ratio data is a useful indicator of run timing and run strength then managers will be better able to maximize harvests and allow for adequate escapements. In short, if the fishery managers find the pink sex ratio data useful, then the project is successful.

IV. PROJECT DESCRIPTION:

Pink salmon sex ratio sampling is being done as a research activity to see if the run timing and abundance of pink salmon can be monitored based on changes in the sex ratio through time. This project is solely responsible for collecting pink salmon sex ratio data from commercial purse seine fisheries, no analysis or reporting is involved. Commercial purse seine landings of pink salmon are sampled for sex composition data at fish processing facilities throughout Southeast Alaska. Samples are collected weekly from as many fishing districts as possible, however, an effort is made to prioritize sampling of major pre-selected fisheries. Sampling consists of examining gonads of pink salmon off loaded from either individual seine vessels or tenders. Gonads are examined either by the sampler cutting a small slit in the abdominal cavity or by examining the fish as they pass down a manual or automatic cleaning line. Sex determinations based on visual examination of external morphometric characteristics is rarely done since there is little sexual dimorphism in ocean bright fish. All data is recorded on data forms of which copies are immediately forwarded to the respective area management biologist and the Finfish Coordinator. Prior to the season, a list is compiled of the seine fisheries which will be targeted for sampling. Selection of these fisheries is based on a number of factors including, continuity with prior years data, potential regularity of openings, and the potential harvest of pinks destined to early, middle, and late run systems. Targeted fisheries have usually included, District 101-41, District 104-10, District 104-40, District 109, and a District 113 sub-district (113-95 in odd years, or 113-41 in even years). Test fishing is occasionally done in the areas that are closed to commercial fishing in order to get weekly data points. The responsibility to sample specific fisheries is assigned to employees working in the ports most likely to receive un-mixed landings from those fisheries. Sampling instructions for 1986 are attached.

- A. Location: Samples are collected from all Southeast Alaska purse seine fisheries, Districts 101 to 114, that harvest pink salmon. Sampling is conducted in the ports of Ketchikan, Craig, Klawock, Petersburg, Sitka, Pelican, and Excursion Inlet.
- B. Field Program Duration: Sampling is conducted throughout the pink salmon run, from early July to early September.
- C. Sampling Duration if Different Than Above: Same as above.
- D. Frequency Of Sampling While In The Field: Samples are collected from as many of the seine districts open each week as possible. The sampling of pre-selected districts is prioritized.
- E. Longevity Of The Project: 1 year, 2 years,
 3 years, continuing

F. Is this project new? [] Yes, [X] No

V. DATA COLLECTION:

A. Types of Data Collected:

1. Sex composition (by district, sub-district, statistical week, date, and sampling location) - no. males, no. females, and sample size per observation and for the total sample.
2. Comments as to source of sample (seine vessel or tender), how sex determinations were made (via. cutting fish or during processing), and any other observation pertaining to the sample.

B. Sample Collection Methods:

Three methods:

1. Intercepting fish during the offloading process (either working from tote to tote or at the head of a conveyor belt) and visually inspecting gonads through a small cut made anterior from the vent by the sampler with a small knife;
2. By tallying sexes of fish as they pass down a processing line, typically where the roe is removed; or
3. By visual examination of external dimorphic characteristics. The latter method is used only in the latter part of the season, when no bright fish are present to put sex determinations in question. Prior to sampling, the catch origin of the fish is determined by asking the skipper of the seine vessel or tender where the fish were caught. If the landing consisted of fish caught in more than one district no sampling was done. (Please refer to "1986 Pink Sex Ratio Sampling Plan")

C. Means of Recording Each Data Type:

All data (description of sample and sex composition data) is recorded on data forms (see attached sampling plan).

VI. DATA ANALYSIS:

- A. What determines how many samples (observations) of each data type will be taken?

Desire the observed sex composition to be within $\pm 5\%$ of the true value at least 9 out of 10 times. According to Dave Bernard's "Statewide Standards for Sampling Sizes for AWLs"

tions to Projects CF-218, 224, 225, 226, and 227.

A. By Line Item:

| <u>Line</u> | <u>GE</u> | <u>Other</u> | <u>Total</u> |
|-------------|-----------|--------------|--------------|
| 100 | _____ | _____ | 15.4 |
| 200 | _____ | _____ | 1.0 |
| 300 | _____ | _____ | 1.4 |
| 400 | _____ | _____ | 0.9 |
| 500 | _____ | _____ | 0.2 |
| Total | _____ | _____ | 18.9 |

B. What is the cost per sample for each data type?

| <u>Data Type</u> | <u>Cost/Observation</u> |
|---------------------------------|-------------------------|
| 1. Pink sex ratio sample 1 fish | \$0.29 |
| Pink sex ratio sample 400 fish | \$117.76 |

Based on \$18,900 cost and 64,211 pink salmon sexed
In 1986.

C. Project Positions:

| <u>Class</u> | <u>PCN</u> | <u>PFT mm</u> | <u>SFT mm</u> |
|--|------------|---------------|---------------|
| <u>Project Supervision (Proj. No. 218):</u> | | | |
| FB III | 1398 | 12.0 | |
| <u>Ketchikan Port Sampling (Proj. No. 225):</u> | | | |
| FT II | 1620 | | 3.0 |
| FT I | 1741 | | 2.0 |
| FT III | 1733 | | 3.0 |
| FT III | 1745 | | 3.0 |
| FT I | 1746 | | 1.0 |
| FT III | 5253 | | 1.0 |
| <u>Petersburg Port Sampling (Proj. No. 225):</u> | | | |
| FB II | 1863 | | 6.0 |
| FT I | 1613 | | 2.0 |
| FT III | 1735 | | 4.0 |
| FT I | 1876 | | 2.0 |
| FT II | 1897 | | 2.0 |
| FT II | 1734 | | 2.0 |
| FT I | 1878 | | 3.0 |
| FT III | 1837 | | 3.0 |
| <u>Juneau Port Sampling (Proj. No. 226):</u> | | | |
| FT III | 1722 | | 3.0 |
| FT II | 1872 | | 3.0 |
| FT II | 1705 | | 2.0 |
| FT III | 1707 | | 2.0 |
| FT I | 1943 | | 1.5 |

Sitka Port Sampling (Proj. No. 227):

MEMORANDUM

State of Alaska

To: Samplers and
Area Supervisors

Date: June 16, 1986

File: c:memo23.ws

Telephone No: 465-3323

From: Ben Van Alen
Fishery Biologist
Commercial Fisheries
Douglas

Subject: 1986 Pink Sex Ratio
Sampling Plan

This memo outlines our pink salmon sex ratio sampling plan for the 1986 season. Pink sex ratio sampling is being done as a research activity to see if the run timing of pink salmon can be monitored based on changes in the sex ratio through time. Research conducted the past few years indicated that the males tend to run earlier than the females. This sex ratio data can be used to estimate the run timing and magnitude. Our prior research findings indicate that the run is half over when the sex ratio is equal and that the run is building when there is a preponderance of males in the harvest. In the future the fishery manager might be able to use sex ratio data along with catch, effort, and forecast data to target the harvest on males. This management strategy has several advantages: the "quality" of the spawning escapement will be enhanced since there will be a higher proportion of females on the spawning ground, the fishermen can harvest more fish, and the fish will be harvested earlier in the run when they are brighter in color and of greater value to the fishermen. If the seasonal change in sex ratio can be accurately monitored then inseason data on the sex ratio will be extremely valuable to fishery managers in monitoring run timing, run strength, and the establishment of fishing periods.

Five seine fishing areas have been selected for collection of pink sex ratio data. These sites were selected based on the potential regularity of openings in each of these areas, the potential harvest of pinks destined to early, middle, and late run systems, and the need to be consistent with data collected in prior years. In order to generate a usable data base, sex ratio data needs to be collected from each of these areas on a weekly basis. Test fishing will be conducted in the districts that are closed to commercial fishing. The five seine fishery areas where pink sex ratio data will be collected on a weekly basis are:

- | | |
|---------------------|----------------------------------|
| (1) District 113-41 | Sitka Sound |
| (2) District 109 | Random fishery sample |
| (3) District 104-40 | Noyes Island (N. Dist 104) |
| (4) District 104-10 | Southern Dall Isl. (S. Dist 104) |
| (5) District 101-41 | Lucky Cove |

July 5, 1986

- (5) It is important to sex the pinks prior to the fish being graded. Quite often the bright fish are "hi-graded" for the whole fish market. Ideally you can sample the fish immediately after being offloaded from the seiner or tender. Perhaps sampling off a conveyor belt is possible or you can have a tote set aside so you can work between totes or between the tote and the conveyor belt.
- (6) All data should be recorded directly onto the Pink Sex Ratio Data Form (example attached).

Data Flow:

Pink Sex Ratio Data Forms should be forwarded to the port supervisor immediately. The port supervisor will make two copies, one for the area management biologist and one for his records. The original will be mailed weekly along with the AWL data to Iris Frank in Juneau (ADF&G, Commercial Fisheries, P.O.Box 20, Douglas, Ak. 99824, phone 465-3323).

cc: Iris Frank, Dave Cantillon, Paul Larson, Doug Jones, John Valentine, Bob DeJong, Will Bergman, Don Ingledue, Phil Mundy.

PINK SALMON SEX RATIO DATA FORM

Area and Fishery _____

Date of Sample _____ Statistical Week _____

Source of Sample _____

Sampling Location _____

Sampled By _____

| Observation | A Number of Males | B Number of Females | C Sample Size (a+b) | D x Males (a ÷ c) | E Ratio (a ÷ b : 1) |
|-------------|----------------------------|------------------------------|------------------------------|-------------------------|---------------------------|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| Total | | | | | |

Comments:

Table 26. Pink salmon sex composition in percent males, 1964.

(110016, pinksm2.123)

| Stat. Week | Seine Fishery Samples | | | | | | | | | | | Gillnet Fishery Samples | | | | | | | | | | | | | | |
|------------|-----------------------|--------------------|-----------------------|---------------|---------------|------------------------------|---------------------|-----------------------|---------------|---------------|---------------|-------------------------|---------------|---------------------|--------------------------|--------|------------------|------------------|--------------------|------------------------|--------------|-----|----------------------------|---------------|---------------|---------------|
| | Lucky Cove 101-41 | 101-23, 29 and six | District 101 Combined | 102-10 | 103 | Southern Bell Is. 104-10, 20 | Mayes Island 104-40 | District 104 Combined | 105-10 | 106-30 | 109 | 110-31&34 | 110-21to24 | Madden Falls 112-11 | Tanahoa Inlet 112-41to45 | 112-16 | 112-10 | 113 | Port Frederick 114 | Summer Testfish 106-41 | Testfish 100 | 115 | Taku R. 1/ Fishhook 111-32 | | | |
| 26 | | | | | | | | | | | | | | | | | | | 0.57 (197) | | | | 0.64 (217) | | | |
| 27 | 0.74 (344) | | 0.74 (344) | | | | | | | | | 0.70 (420) | 0.70 (397) | | | | | | | | | | 0.74 (231) | 0.63 (427) | | |
| 28 | 0.63 (606) | | 0.63 (606) | | | 0.64 (385) | 0.63 (251) | 0.63 (636) | | | | 0.60 (385) | 0.66 (385) | 0.61 (421) | 0.57 (385) | | | | | | | | 0.64 (430) | 0.73 (63) | 0.59 (419) | |
| 29 | 0.63 (374) | | 0.63 (374) | | | 0.59 (421) | | 0.59 (421) | | | | | 0.56 (386) | 0.50 (385) | 0.35 (1522) | | | | | | | | 0.61 (116) | 0.76 (101) | 0.71 (200) | 0.49 (200) |
| 30 | 0.50 (400) | 0.57 (800) | 0.34 (1200) | 0.64 (400) | | 0.50 (400) | 0.60 (320) | 0.39 (750) | | | 0.66 (810) | | 0.54 (536) | 0.66 2/ (410) | 0.35 (400) | | 0.79 3/ (265) | | | | | | 0.79 (562) | 0.37 (370) | | |
| 31 | 0.40 (400) | 0.54 (400) | 0.51 (800) | | | 0.47 (400) | 0.35 (1510) | 0.54 (1910) | | | 0.64 (293) | | 0.54 (385) | | | | 0.55 4/ (386) | 0.61 5/ (386) | | | | | | 0.28 (386) | | |
| 32 | | 0.40 (400) | 0.40 (400) | 0.52 (400) | | | 0.60 (385) | 0.60 (385) | | | 0.60 (776) | | | | | | 0.46 4/ (411) | 0.65 6/ (407) | | | | | | 0.25 (106) | | |
| 33 | 0.42 (383) | 0.41 (370) | 0.42 (761) | 0.42 (800) | 0.52 (412) | 0.46 (407) | | 0.46 (407) | | | 0.56 (796) | | | | | | | | | | | | 0.47 7/ (440) | | 0.25 (106) | |
| 34 | | | | 0.41 (376) | 0.40 (400) | 0.45 (400) | 0.34 (1915) | 0.30 (11315) | 0.40 (701) | 0.41 (390) | 0.45 (702) | | | | | | | | | | | | 0.41 7/ (353) | | | |
| 35 | | 0.34 (226) | 0.34 (226) | | | | | | | 0.40 (352) | | | | | | | | | | | | | | 0.42 (567) | | |
| 36 | | | | | | | | | | 0.39 (400) | | | | | | | | | | | | | | | | |

1/ Only statistical weeks 32 sexes were determined by dissection. Immature males in early weeks were likely called females.

2/ Sample of pink salmon taken after Briton were higraded, therefore sample is biased towards males.

3/ District 112-10.

4/ District 112-16.

5/ Pupil Strait District 113-51.

6/ Bitha Sound District 113-41.

7/ Salisbury Sound District 113-61.

Table 26. Pink salmon sex composition in percent males, 1965.

(Upd5, pinksex2, 123)

Seine Fishery Samples

| Stat. Week | Lucky District | | | Southern Hayes District | | | | 110 | 111 | 112-16 | 112-18 | 112-22 | Tonahoe Inlet | 112-41to45 | Sitka Sd | 113-41 | 113-45 | Peril St. | 113-51 | 113-61 | 113-62 | Lisianski | 113-95 | Siocum | 113-73 | 113 mixed |
|------------|----------------|----------------|---------------|-------------------------|---------------|----------------|----------------|---------------|---------------|--------|--------|----------------|---------------|---------------|----------|--------|----------------|----------------|---------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|
| | 101-41 | 101 Combined | 102-10 | 103 | Ball Isl. | 104-10, 20 | Island | | | | | | | | | | | | | | | | | | | |
| 26.00 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27.00 | | 0.74 (344) | | | | | | | | | | 0.67 (1100) | 0.69 (394) | | | | | | | | | | | | | |
| 28.00 | | 0.63 (606) | | | 0.68 (203) | | 0.68 (303) | | | | | 0.74 (800) | 0.68 (400) | 0.64 (802) | | | | | | | | | | | | 0.76 (200) |
| 29.00 | | 0.63 (374) | | | 0.67 (309) | | 0.67 (309) | | | | | 0.75 (393) | 0.59 (800) | 0.61 (855) | | | | | | | | | 0.64 (400) | | | |
| 30.00 | 0.56 (400) | 0.42 (721) | 0.67 (90) | | 0.64 (262) | | 0.71 (662) | | | | | 0.62 (400) | 0.58 (400) | | | | 0.53 (1876) | | 0.56 (400) | 0.58 (1726) | 0.53 (1359) | | 0.57 (1000) | 0.64 (400) | 0.55 (3658) | |
| 31.00 | 0.35 (416) | 0.45 (1035) | 0.72 (316) | | 0.33 (267) | 0.54 (2727) | 0.54 (2994) | | 0.61 (400) | | | 0.52 (400) | 0.58 (900) | | | | 0.53 (1300) | | 0.53 (400) | | | 0.49 (10859) | 0.52 (1690) | 0.58 (103) | | |
| 32.00 | 0.48 (1398) | 0.47 (1798) | 0.43 (407) | | 0.52 (800) | 0.56 (2102) | 0.47 (3400) | 0.63 (400) | 0.50 (800) | | | 0.31 (800) | | | | | 0.47 (400) | 0.58 (4333) | 0.65 (407) | | | 0.53 (1224) | 0.48 (2808) | | 0.52 (400) | 0.55 (3658) |
| 33.00 | 0.43 (400) | 0.42 (761) | 0.47 (402) | 0.50 (1604) | 0.50 (406) | 0.49 (804) | 0.58 (2010) | 0.59 (400) | | | | 0.39 (400) | | | | | 0.43 (1604) | 0.56 (8568) | 0.47 (448) | | | 0.48 (12168) | 0.48 (3011) | 0.50 (400) | 0.51 (400) | |
| 34.00 | | 0.44 (400) | | 0.47 (2400) | | | | 0.42 (400) | 0.31 (800) | | | | | | | | 0.28 (400) | 0.44 (4454) | 0.41 (353) | | | | 0.47 (2840) | 0.45 (1626) | 0.43 (1043) | |
| 35.00 | | | | 0.34 (400) | | 0.38 (802) | 0.38 (802) | | 0.40 (399) | | | | | | | | 0.33 (400) | 0.37 (436) | | | | | | | | |
| 36.00 | | | | 0.32 (400) | | | | 0.25 (279) | 0.24 (400) | | | | | | | | | | | | | | | | | |

26

3
 Table 22. Sex composition, in percent males, of pink salmon sampled from select purse seine fisheries, 1986.
 27, pnksex86.wks

| Stat. Week | All | | | | | | | | | | | | |
|---------------|----------------|----------------|----------------|------------------------|------------------------|----------------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| | 101 | 102 | 103 | Lower 104 104-10,20 | Upper 104 104-35,40 | Dist 104 Combined | 105 | 106 | 107 | 109 | 110 | 112 | 113 |
| 28 | 74.3% 400 | | | 73.5% 400 | | 73.5% 400 | | | | | | | |
| 29 | 69.8% 400 | | | 70.8% 400 | 71.8% 800 | 75.1% 2,007 | | | | | | 73.1% 1,020 | |
| 30 | 54.9% 771 | 67.5% 400 | | 59.3% 1,229 | 63.1% 1,100 | 63.8% 4,689 | | | | | 71.3% 718 | 61.8% 360 | 52.3% 262 |
| 31 | 56.6% 2,433 | | | 56.9% 800 | 58.9% 1,200 | 64.0% 4,469 | | | | | | 66.0% 406 | |
| 32 | 49.6% 900 | 51.1% 407 | 86.5% 400 | | 51.5% 1,100 | 51.5% 1,100 | 67.2% 402 | | | 82.9% 461 | | 58.0% 400 | 61.1% 2,296 |
| 33 | 43.2% 2,365 | 45.4% 1,250 | 48.1% 1,679 | 41.5% 2,017 | 38.9% 800 | 40.8% 2,817 | 48.5% 400 | 49.0% 627 | 38.3% 399 | 54.2% 402 | | 42.5% 400 | 32.1% 601 |
| 34 | 33.8% 802 | 38.3% 400 | 42.0% 3,609 | 41.5% 400 | 38.3% 400 | 39.9% 800 | | | | | | | |
| 35 | 40.3% 2,087 | 36.8% 400 | 44.2% 1,200 | 48.2% 500 | 42.0% 400 | 46.8% 1,700 | | | | 38.7% 377 | | | |
| 36 | 40.1% 900 | | 43.6% 2,031 | 45.6% 500 | 46.0% 400 | 45.8% 900 | | | | 39.3% 300 | | | |
| 39 | | | 43.4% 198 | | | | | | | | | | |

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, religion, color, national origin, age, sex, 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