

PRINCE WILLIAM SOUND MANAGEMENT AREA
2001 ANNUAL FINFISH MANAGEMENT REPORT



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TABLE OF CONTENTS

	<u>Page</u>
LIST OF APPENDICES	iv
2001 PRINCE WILLIAM SOUND AND COPPER RIVER COMMERCIAL SALMON FISHERIES	1
MANAGEMENT AREA DESCRIPTION.....	1
OVERVIEW OF AREA WIDE FISHERIES	1
2001 SEASON SUMMARY BY DISTRICT	2
COPPER RIVER DISTRICT	2
BERING RIVER DISTRICT	8
COGHILL DISTRICT (Prior to July 21).....	9
UNAKWIK DISTRICT.....	13
ESHAMY DISTRICT	14
GENERAL PURSE SEINE DISTRICTS	17
2001 PRINCE WILLIAM SOUND AND COPPER RIVER SUBSISTENCE FISHERIES	28
PRINCE WILLIAM SOUND AND LOWER COPPER RIVER	28
EASTERN AND SOUTHWESTERN DISTRICT SUBSISTENCE FISHERIES	29
UPPER COPPER RIVER.....	29
GLENNALLEN SUBDISTRICT	29
CHITINA SUBDISTRICT	30
BATZULNETAS	30
2001 PRINCE WILLIAM SOUND HERRING FISHERIES	31
PRESEASON OUTLOOK AND HARVEST STRATEGY	31
2001 SEASON SUMMARY	32
2001-2002 HERRING SEASON OUTLOOK.....	33
LITERATURE CITED	34

LIST OF APPENDICES

<u>Appendix</u>	<u>Page</u>
A: PRINCE WILLIAM SOUND AREA WIDE INFORMATION	
A.1 - Prince William Sound Area showing commercial fishing districts, salmon hatcheries, weir locations, and Miles Lake sonar camp (Figure).....	35
A.2 - Commercial salmon harvest by species, gear type and district in the Prince William Sound Management Area, 2001 (Table).....	36
A.3 - Commercial salmon harvest by species from all gear types, Prince William Sound Area, 1971 - 2001 (Table).....	37
A.4 - Commercial salmon harvest by species for all gear types combined, Prince William Sound, 1971 -2001 (Figure).....	38
A.5 - Mean price and estimated exvessel value of the total commercial salmon harvest by gear type, Prince William Sound, 2001 (Table).....	39
A.6 - Average price paid to permit holders for salmon, Prince William Sound, 1992 - 2001 (Table).....	40
A.7 - Estimated exvessel value of the total commercial salmon harvest by gear type, Prince William Sound, 1991 -2001 (Table)	41
A.8 - Exvessel value of the commercial salmon harvest by gear type 1991 -2001 (Figure).....	42
A.9 - Preseason harvest projections for the 2001 commercial salmon fishery by district and species, Prince William Sound Area (Table).....	43
A.10 - A listing of finfish processors, their location of operation, and type of product processed, Prince William Sound Area, 2001 (Table)	44
A.11 - Prince William Sound Area showing commercial fishing districts and statistical reporting areas, 2001 (Figure).....	46
B: COPPER AND BERING RIVER DISTRICTS	
B.1 - Commercial salmon catch by species in the Copper River District, 1974-2001 (Table)	47
B.2 - Anticipated and actual weekly catch and escapement of sockeye salmon in the Copper River District drift gillnet fishery, 2001 (Table).....	48

LIST OF APPENDICES (continued)

<u>Appendix</u>	<u>Page</u>
B.3 - Anticipated versus actual semi-weekly and cumulative harvest of sockeye salmon in the Copper River drift gillnet fishery, 2001 (Figure).....	49
B.4 - Commercial salmon harvest by period in the Copper River District drift gillnet fishery, 2001 (Table)	50
B.5 - Anticipated and actual weekly catch of chinook and coho salmon in the Copper River District drift gillnet fishery, 2001 (Table).....	51
B.6 - Anticipated versus actual weekly and cumulative harvest of chinook salmon in the Copper River drift gillnet fishery, 2001 (Figure)	52
B.7 - Copper River District area closed to chinook salmon harvest during the first fishing period, 2001 (Figure).....	53
B.8 - Daily sockeye salmon escapement estimates at Miles Lake sonar, 2001 (Table)	54
B.9 - Anticipated versus actual daily and cumulative salmon escapement, Miles Lake sonar, 2001(Figure)	56
B.10 - Measured water level at the Million Dollar Bridge from 1982 – 2001 (Figure)	57
B.11 - Aerial escapement indices by date and location for sockeye salmon returning to the Copper River Delta, 2001 (Table)	58
B.12 - Copper River and Bering River area sockeye salmon escapement estimates, 1993 - 2001 (Table).....	62
B.13 - Aerial survey indices of chinook salmon escapement to the upper Copper River 1992 - 2001 (Table)	63
B.14 - Aerial survey indices of sockeye salmon escapement to the upper Copper River drainage, 1992 - 2001 (Table).....	64
B.15 - Anticipated versus actual weekly and cumulative harvest of coho salmon in the Copper River drift gillnet fishery, 2001 (Figure).....	65
B.16 - Aerial escapement indices by date and location for coho salmon returning to the Copper River Delta, 2001 (Table).....	66

LIST OF APPENDICES (continued)

<u>Appendix</u>	<u>Page</u>
B.17 - Copper River Delta and Bering River coho salmon escapement estimates, 1992 - 2001 (Table).....	69
B.18 - Estimated age and sex composition of sockeye salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2001 (Table)	70
B.19 - Estimated age and sex composition of the chinook salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2001 (Table)	71
B.20 - Estimated age and sex composition of the coho salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2001 (Table)	72
B.21 - Commercial salmon catch by species in the Bering River District, 1973 – 2001 (Table)	73
B.22 - Commercial salmon harvest by period in the Bering River District drift gillnet fishery, 2001 (Table)	74
B.23 - Aerial escapement indices by date and location for sockeye salmon returning to the Bering River Delta, 2001 (Table)	75
B.24 - Anticipated and actual weekly catch and escapement of coho salmon in the Bering River District drift gillnet fishery, 2001 (Table).....	77
B.25 - Aerial escapement indices by date and location for coho salmon returning to the Bering River Delta, 2001 (Table).....	78
B.26 - Summary of periods and emergency orders issued for the commercial salmon gillnet fisheries in the Bering and Copper River Districts, 2001 (Table)	79
 C: COGHILL AND UNAKWIK DISTRICTS	
C.1 - Commercial salmon harvest by period in the Coghill District drift gillnet and purse seine fisheries, Prince William Sound, 2001 (Table)	80
C.2 - Commercial salmon catch by species in the Coghill District, Prince William Sound, 1983 - 2001 (Table)	81
C.3 - Daily salmon escapement through the Coghill River weir, Prince William Sound, 2001 (Table).....	82

LIST OF APPENDICES (continued)

<u>Appendix</u>	<u>Page</u>
C.4 - Anticipated daily and cumulative sockeye salmon escapement versus actual escapement past the Coghill River weir, Prince William Sound, 2001 (Figure)	84
C.5 - Salmon escapement by species in the Coghill District, Prince William Sound, 1970 - 2001 (Table).....	85
C.6 - Sockeye salmon catch and escapement in the Coghill District, Prince William Sound, 1983 - 2001 (Figure).....	86
C.7 - Estimated age and sex composition of sockeye salmon harvested in the Coghill District commercial common property drift gillnet fisheries, 2001 (Table).....	87
C.8 - Temporally stratified age and sex composition of sockeye salmon escapement through the weir on the outlet stream of Coghill Lake, 2001 (Table)	88
C.9 - Commercial salmon harvest by period in the Unakwik District drift gillnet fisheries, Prince William Sound, 2001 (Table).....	89
C.10 - Commercial salmon catch by species in the Unakwik District, Prince William Sound, 1990 - 2001 (Table)	90
C.11 - Summary of periods, dates, hours open, and emergency orders issued for the commercial salmon fisheries in the Coghill and Unakwik Districts, Prince William Sound, 2001 (Table).....	91
 D: ESHAMY DISTRICT	
D.1 - Commercial salmon harvest by period in the Eshamy District drift gillnet and set gillnet fisheries, Prince William Sound, 2001 (Table)	93
D.2 - Commercial salmon catch by species in the Eshamy District, Prince William Sound, 1987 - 2001 (Table)	94
D.3 - Daily salmon escapement through the Eshamy weir, Prince William Sound, 2001 (Table).....	95
D.4 - Anticipated daily and cumulative sockeye salmon escapement versus actual escapement past the Eshamy River weir, 2001 (Figure)	97
D.5 - Salmon escapement by species at the Eshamy weir, Prince William Sound, 1967 - 2001 (Table)	98

LIST OF APPENDICES (continued)

<u>Appendix</u>	<u>Page</u>
D.6 - Sockeye salmon catch and escapement in the Eshamy District, Prince William Sound, 1986 - 2001 (Figure).....	99
D.7 - Temporally stratified age and sex composition of sockeye salmon harvested in the Eshamy District commercial common property gillnet fishery, 2001 (Table).....	100
D.8 - Temporally stratified age and sex composition of the sockeye salmon escapement through the weir at the head of Eshamy Lagoon, 2001 (Table).....	101
D.9 - Summary of periods, dates, hours open, and emergency orders issued for the commercial salmon fisheries in the Eshamy District, Prince William Sound, 2001 (Table).....	102
 E: PRINCE WILLIAM SOUND PURSE SEINE DISTRICTS	
E.1 - Prince William Sound commercial purse seine harvest by day, 2001 (Table).....	104
E.2 - Commercial salmon harvest by species, all gear and districts combined, Prince William Sound, 1971 - 2001 (Table).....	106
E.3 - Commercial pink salmon harvest for all gear types, by district, Prince William Sound, 1975 - 2001 (Table).....	107
E.4 - Aerial escapement indices for pink and chum salmon by district, Prince William Sound, 2001 (Table).....	108
E.5 - Pink salmon harvests and escapement indices, including hatchery sales harvests and broodstock, Prince William Sound, 1971 - 2001 (Table).....	109
E.6 - Weekly aerial estimates of pink salmon escapement by statistical area, Prince William Sound, 2001 (Table).....	110
E.7 - Current year and historical weekly pink salmon escapement performance of index spawning streams, Prince William Sound, 2001 (Figure).....	111

LIST OF APPENDICES (continued)

<u>Appendix</u>	<u>Page</u>
E.8 - Pink salmon catch and escapement, even years (1970-2000) and odd years (1969-2001), Prince William Sound, Alaska (Figure)	112
E.9 - Chum salmon harvests and escapement indices, including hatchery sales harvests and broodstock, Prince William Sound, 1971 - 2001 (Table).....	113
E.10 - Weekly aerial estimates of chum salmon escapement by statistical area, Prince William Sound, 2001 (Table)	114
E.11 - Current year and historical weekly chum salmon escapement performance from index spawning streams, Prince William Sound, 2001 (Figure).....	115
E.12 - Chum salmon catch and escapement, Prince William Sound, 1980 - 2001 (Figure).....	116
E.13 - Aerial survey escapement counts of sockeye salmon from selected systems, Prince William Sound, 2001 (Table)	117
E.14 - Estimated age and sex composition of Prince William Sound commercial chum salmon catches, by district, 2001 (Table)	118
E.15 - Summary of periods, dates, hours open, and emergency orders issued by district, for the commercial purse seine salmon fishery, Prince William Sound, 2001 (Table)	119
F: HATCHERY RETURNS	
F.1 - Daily salmon sales harvests and sex ratios at the Wally Noerenberg Hatchery, 2001 (Table).....	123
F.2 - Daily salmon sales harvests and sex ratios at the Armin F. Koernig Hatchery, 2001 (Table).....	125
F.3 - Daily pink salmon sales harvests and sex ratios at the Solomon Gulch Hatchery, 2001 (Table).....	126
F.4 - Daily pink salmon sales harvests and sex ratios at the Cannery Creek Hatchery, 2001 (Table).....	128
F.5 - Daily salmon sales harvests at the Main Bay Hatchery, 2001 (Table)	129
F.6 - Sales harvests of salmon by species from private nonprofit hatcheries as reported on fish tickets, Prince William Sound, 1977 - 2001 (Table).....	130

LIST OF APPENDICES (continued)

<u>Appendix</u>	<u>Page</u>
F.7 - Summary of pink and chum salmon returns to Prince William Sound hatcheries, 2001 (Table).....	131
F.8 - Historical catch contributions, thermally marked otolith releases, and total returns of pink salmon to Prince William Sound hatcheries, 1995 - 2002 (Table)	132
F.9 - Estimated total hatchery and wild stock production of pink salmon, Prince William Sound, 1977 - 2001 (Table).....	133
F.10 - Estimated total pink salmon returns to hatcheries and wild stock systems, Prince William Sound, 1977 - 2001 (Figure).....	134
F.11 - Historical catch contributions, coded wire tag (CWT) and thermally marked otolith releases, and total returns of pink salmon to all hatcheries combined, Prince William Sound, 1977 – 2001 (Table).....	135
F.12 - Hatchery contributions to the common property pink salmon seine fishery in the Eastern District, Prince William Sound, 2001. (Table)	136
F.13 - Hatchery contributions to the common property pink salmon seine fishery in the Northern District, Prince William Sound, 2001. (Table)	137
F.14 - Hatchery contributions to the common property pink salmon drift gillnet and seine fisheries in the Coghill District, Prince William Sound, 2001. (Table)	138
F.15 - Hatchery contributions to the common property pink salmon drift and set gillnet fisheries in the Eshamy District, Prince William Sound, 2001. (Table).....	139
F.16 - Hatchery contributions to the common property pink salmon seine fishery in the Southwestern District, Prince William Sound, 2001. (Table)	140
F.17 - Hatchery contributions to the common property pink salmon seine fishery in the Montague District, Prince William Sound, 2001. (Table).....	141
F.18 - Hatchery contributions to the common property pink salmon seine fishery in the Southeastern District, Prince William Sound, 2001. (Table)	142
F.19 - Hatchery contributions to the common property pink salmon drift gillnet and seine fisheries in the Unakwik District, Prince William Sound, 2001 (Table).....	143

LIST OF APPENDICES (continued)

<u>Appendix</u>	<u>Page</u>
G: SUBSISTENCE AND PERSONAL USE FISHERIES	
G.1 - Subsistence salmon harvest by species and gear type, Prince William Sound and Upper Copper River, 2001 (Table).....	144
G.2 - Salmon catch and effort in the Prince William Sound subsistence fishery, 1965 - 2001 (Table).....	145
G.3 - Salmon catch and effort in the Copper River District subsistence gillnet fishery, 1965 - 2001 (Table).....	146
G.4 - Salmon catch and effort in the Eastern District (Tatitlek) and Southwestern District (Chenega) subsistence fisheries, Prince William Sound, 1988 - 2001 (Table)	147
G.5 - Salmon catch by species and numbers of permits by gear type for the Upper Copper River subsistence and personal use fisheries, 1981 - 2001 (Table)	148
G.6 - Personal use salmon harvest by district and gear type, Prince William Sound Management Area, 2001 (Table).....	149
H: HERRING FISHERIES	
H.1 - Location of spawning herring and miles of spawn observed during aerial surveys in Prince William Sound, 2001.....	150
H.2 - Prince William Sound commercial Pacific herring harvest summary with fishing location and effort by gear type, 2001 (Table)	151
H.3 - Prince William Sound commercial herring harvest by management year and fishery, 1968-2001 (Figure)	152
H.4 - Pacific herring sac roe seine and gillnet fishery effort, anticipated harvest, and actual harvest, Prince William Sound, 1969 - 2001 (Table)	153
H.5 - Prince William Sound commercial herring sac roe purse seine and gillnet harvest by management year, 1968 - 2001 (Figure)	154
H.6 - Pacific herring spawn-on-kelp harvests from natural spawning, Prince William Sound, 1969 - 2001 (Table)	155
H.7 - Pacific herring spawn-on-kelp harvest produced in pounds, Prince William Sound, 1979 - 2001 (Table)	156

LIST OF APPENDICES (continued)

<u>Appendix</u>	<u>Page</u>
H.8 - Prince William Sound commercial spawn-on-kelp herring usage by management year, 1968 - 2001 (Figure)	157
H.9 - Prince William Sound commercial Pacific herring food/bait fishery effort and harvests, management years 1969 - 2001 (Table)	158
H.10 - Prince William Sound commercial food/bait herring harvest, management years 1968 - 2001 (Figure)	159
H.11 - Annual Pacific herring biomass indices for harvest management years 1973-2000 and the forecast of prefishery run biomass for 2000, Prince William Sound (Table)	160
H.12 - Prince William Sound annual herring biomass indices by management year, 1973 – 2000, and forecast run biomass for 2000 from ASA model (Figure)	161
H.13 - Mean price and estimated exvessel value of the commercial Pacific herring harvest by gear type based on verbal post season estimates from processors and permit holders, Prince William Sound, calendar years 1978 - 2001 (Table).....	162
H.14 - Average annual exvessel value of commercial herring fisheries, Prince William Sound, calendar years 1978 - 2001 (Figure)	163
H.15 - Percent contribution by weight of each age to spring run biomass, Prince William Sound, 1990 - 2001 (Figure).....	164

2001 PRINCE WILLIAM SOUND AND COPPER RIVER COMMERCIAL SALMON FISHERIES

MANAGEMENT AREA DESCRIPTION

Prince William Sound (PWS) management area encompasses all coastal waters and inland drainages entering the northcentral Gulf of Alaska between Cape Suckling and Cape Fairfield (Appendix A.1). This area includes the Bering River, Copper River and all of Prince William Sound with a total adjacent land area of approximately 38,000 square miles.

The salmon management area is divided into eleven districts that correspond to local geography and distribution of the five species of salmon harvested by the commercial fishery. The management objective for all districts is the achievement of escapement goals for the major species while allowing for the orderly harvest of all fish surplus to spawning requirements. In addition, the department follows regulatory plans to manage fisheries and assist private non-profit (PNP) hatcheries in achieving cost recovery and broodstock objectives.

Six hatcheries contribute to the area's fisheries. Five are operated by the regional aquaculture association, Prince William Sound Aquaculture Corporation (PWSAC). Gulkana Hatchery in Paxson augments production of sockeye salmon in the Copper River. Cannery Creek Hatchery located on the north shore of PWS, and the A.F. Koernig Hatchery in southwestern PWS produce pink salmon, the Wally H. Noerenberg Hatchery in northwestern PWS produces pink, chum, and coho salmon and Main Bay Hatchery in western PWS produces sockeye salmon. Valdez Fisheries Development Association (VFDA) operates Solomon Gulch Hatchery in Port Valdez and produces pink and coho salmon.

Gear for the salmon fishery includes purse seine, drift and set gillnet. Drift gillnet permits are most numerous and are allowed in Bering River, Copper River, Coghill, Unakwik and Eshamy Districts. Set gillnet gear is allowed only in Eshamy District. Purse seine gear is allowed in Eastern, Northern, Unakwik, Coghill, Northwestern, Southwestern, Montague and Southeastern Districts.

As an avenue for the commercial fishing industry to formally provide management recommendations to the department, representatives from PWS area processors, gear groups, and aquaculture associations sit on an advisory body known as the PWS Salmon Harvest Task Force (SHTF).

Five herring fisheries occur during the year. Gillnet sac roe, purse seine sac roe, spawn-on-kelp not in pounds, and spawn-on-kelp in pounds fisheries occur in the spring. A herring food/bait fishery occurs in the fall. All of the herring fisheries are managed for a guideline harvest level established by the Prince William Sound Herring Management Plan, 5 AAC 27.365. The management objective for herring is to target fisheries on a high quality segment of the biomass.

OVERVIEW OF AREA WIDE SALMON FISHERIES

The 2001 Prince William Sound Area commercial salmon harvest of 41.1 million fish is fourth highest on record (Appendix A.3). Harvest was comprised of 35.2 million pink, 2.3 million sockeye, 3.1 million chum, 494.1 thousand coho, and 40.5 thousand chinook salmon (Appendix A.2.). The majority of the

catch, 36.4 million fish, was common property harvest while 13.9 million were sold for hatchery cost recovery (exclusive of roe/meal sales).

Estimated value of the combined commercial salmon harvest is \$45.2 million, including hatchery sales (Appendices A.5 and A.7). During the 2001 season, 535 drift gillnet permit holders fished. Drift gillnet catch is valued at \$21.3 million, setting average earnings at \$39,731. Set gillnet catch is valued at \$888,689 setting average earnings of the 32 participating permits at \$27,772. Seine fishery harvest was worth \$13.4 million for an average ex-vessel value of \$88,101 for the 152 permit holders that participated this year. Revenue generated for hatchery operations (exclusive of roe/meal sales) was approximately \$9.7 million.

Due to a below acceptable spawning biomass of herring, no commercial fisheries for herring occurred in 2001.

2001 SALMON SEASON SUMMARY BY DISTRICT

COPPER RIVER DISTRICT

Introduction

The Department of Fish and Game, with allocative direction from the Board of Fisheries, has consistently endeavored to manage salmon runs to the Copper River District to assure sustained yield and to meet all user group allocations, as outlined in 5AAC 24.361 Copper River District Salmon Management Plan. To these ends, the past decade can be measured more by its successes than shortfalls. At the December 1999 meeting in Valdez, the Board of Fisheries amended 5 AAC 24.361 COPPER RIVER CHINOOK SALMON FISHERY MANAGEMENT PLAN to provide the department both the tools and the discretion to manage the early season as necessary to maintain the spawning escapement within the range of 28,000 to 55,000 chinook salmon *Oncorhynchus tshawytscha*. This season, the department actively enacted provisions in the plan with positive results.

Management tools currently available to the department have allowed it to consistently respond to indices of abundance in season and to regulate the commercial salmon harvest accordingly. In 2000, the department began reassessing the feasibility of using dipnets and small mesh gillnets to assess run strength in the lower river early in the season for sockeye salmon. Accurately monitoring inriver movement of salmon above the commercial fishing district and below the sonar has long been recognized as a useful tool that could add precision to early season management actions. The department has been pursuing lower Copper River assessment projects since the 1992 season.

Working in the lower Copper River in May has proven to be challenging. The department received new funding to broaden its test-fishing efforts in 2001. Initial fish monitoring results may be used to confirm that inriver migration has begun, while a long-term goal would be to develop a relationship between test fish indices and subsequent sonar counts. The Native Village of Eyak has also proposed a lower river assessment project that has the potential to further help characterize run entry well below the Miles Lake sonar counters. Preliminary work to assess the feasibility of their project began in 2001.

In managing commercial harvest to provide for upriver escapement and allocations, the department's primary measure of inseason success and the focus of ACR-10 is the escapement index provided by the Bendix sonar counters at Miles Lake. Upriver subsistence harvests have averaged 196,140 salmon from 1995-1999. An increasing trend in subsistence harvests is reflected annually through additions to the inriver goal. Additionally, aerial escapement indices, coded wire tag data, and weir data have provided supporting information as to the relative success the department has had in meeting provisions of the Copper River District Salmon Management Plan. While the board has undoubtedly received numerous testimonies by all users regarding the status or importance of these early stocks, achieving biological escapement goals and satisfying other management plan provisions have remained the department's primary management objectives.

Background

The Copper River District commercial fishing season has opened in mid-May since the early 1960s. Fishing periods are now established in season by emergency order following many years of "book openings" that formerly ran from Monday mornings to Friday evenings. In general, fishing time has steadily been reduced over the years in response to changing patterns in the fishery, increased efficiency of the fleet, and reallocations by the Board of Fisheries. Two commercial fishing periods per week has been the recent pattern with the duration of a given fishing period dependant upon trends in escapement, harvest, and environmental conditions.

The upriver biological escapement goal for wild stock sockeye salmon is 300,000 fish and this number has been constant since being adopted in 1972 and placed into regulation in 1980 (Fried 1994). The Copper River District Salmon Management Plan outlines the biological and allocative categories that comprise the inriver goal for Miles Lake sonar. Spawning escapement, subsistence harvest, sport fishery, hatchery brood, and hatchery surplus are the categories included in the management plan's inriver goal. Relative timing of the wild and enhanced components of the Copper River run is shown in Appendix B2. Timing of enhanced fish passing Miles Lake sonar was determined from their timing in commercial harvest adjusted for travel time from the commercial fishing district to Miles Lake.

Of the five categories contained within the inriver goal, the most significant increases over time have been in the hatchery surplus and subsistence categories. In the early 1980s, the inriver goal stood at 516,000 salmon. By 2001, the inriver goal totaled approximately 723,000 wild and enhanced salmon. In 2001, based upon the forecasted run of some 555,000 enhanced sockeye salmon to the Copper River, the hatchery surplus within the inriver goal was set at 185,500 sockeye salmon. Other inriver goal categories included 185,000 subsistence, 15,000 sport, 17,500 "other salmon" and 20,000 hatchery broodstock sockeye salmon for a total inriver goal of 723,000 salmon. The escapement objective for the Miles Lake sonar counter called for 708,000 salmon to pass the counter by August 3, the last scheduled day of counting for the sonar project.

The category of subsistence salmon within the inriver goal is expressed as a range. The number of fish added to the inriver goal for subsistence use is set annually based on harvest in recent years. In 2001, the upper end of the Glennallen Subdistrict harvest range and the mid-point of the Chitina Subdistrict harvest range were combined and incorporated into the inriver goal. The number of surplus sockeye salmon within the inriver goal is determined annually based on the Gulkana Hatchery run forecast and a preseason estimate of commercial harvest exploitation rate that wild stocks can likely sustain during the late June and July mixed stock fishery in the Copper River District. It is important to note that these surplus salmon do not fulfill any biological escapement needs, nor are they specifically linked to any upriver subsistence

harvest or sport allocations. An unknown percentage of the substantial hatchery surplus is taken during July and August in these upriver fisheries.

Preseason Outlook and Harvest Strategy

The 2001 harvest forecast for Copper River District was 48,600 chinook, 640,000 sockeye, and 305,000 coho salmon. Gulkana Hatchery located north of Paxson Lake was expected to contribute approximately 400,000 sockeye salmon to the commercial catch. The actual 2001 sockeye salmon harvest of 1,323,577 ranked as the sixth largest on record (Appendix B.1.), but was slightly below the recent ten-year average harvest of 1.52 million sockeye salmon. The harvest of 39,524 chinook salmon was below the projected harvest and ranked as the thirteenth largest chinook salmon harvest on record. The 2001 inriver goal for salmon passing Miles Lake was set at 723,000 fish. This number equated to a preseason sonar goal of 708,000 salmon by August 3, the normal season ending date for sonar counting at Miles Lake. By July 31 the last day of sonar counting, 833,569 salmon had passed the Miles Lake sonar counter (Appendix B.8 and B.9).

The traditional fishing schedule for Copper River District is two 24-hour periods per week. Periods begin at 7:00 a.m. on Mondays and 7:00 p.m. on Thursdays. Lengths of fishing periods are adjusted by emergency order as needed. After August 7, the priority switches to coho management and fishing is anticipated to begin with one 24-hour period per week. Additional fishing time depends upon the strength of the return determined from harvest and escapement information. Fishing periods during the coho fishery begin at 12:00 noon.

Early-season management of Copper River District is based on actual harvest as compared to anticipated harvest. This is the most reliable method of evaluating early run strength prior to installation of the inriver sonar at Miles Lake. In late May, sonar counts and commercial harvest information become the primary factors governing management of the fishery. The 2001 inriver goal for the upper Copper River was 723,000 salmon. By mid-June, aerial estimates of sockeye escapement in Copper River Delta systems become an additional consideration when scheduling commercial fishing periods. Due to the many spawning systems in the lower Copper River Delta, an actual weekly escapement index of selected sockeye systems is compared to an anticipated weekly escapement index. The escapement index goal for the Copper River Delta is 90,000 sockeye salmon. The sockeye salmon aerial escapement index for the Copper River Delta systems was 71,065, 21% below the index goal (Appendix B.11).

2001 Sockeye and Chinook Salmon Fishery Season Summary

The first commercial fishing period occurred on May 17 for 12 hours and included a central statistical area closure inside the barrier islands as stipulated in the chinook salmon management plan. The closure prohibits fishing inside the barrier islands in the center of Copper River District. The chinook salmon harvest of 5,588 was less than anticipated while the sockeye salmon harvest of 79,949 greatly exceeded the predicted semi-weekly harvest of 15,580 fish (Appendix B.2, B.3, B.4). Anecdotal reports consistently indicated that there were few sockeye salmon caught inside the barrier islands at the period's opening. Many harvesters concentrated their efforts in those limited open areas inside the barrier islands during the initial low water to target chinook salmon. Once chinook salmon catches tapered off, most of the fleet fished outside the barrier islands where a majority of the sockeye salmon harvest occurred during the first period.

The north bank sonar counter at Miles Lake began counting on May 10, with occasional disruptions due to ice flows (Appendix B.8, B.9). The south bank counter began operation on May 18, with indications that salmon migrations had begun.

With water levels remaining below average (Appendix B.8, B.10) the second fishing period on May 21 was again limited to 12 hours, however the inside statistical area was not closed. The harvest pattern was similar to the first period's: following initial effort directed towards chinook salmon, many boats moved outside to target sockeye salmon. The chinook salmon harvest of 7,856 was less than half the anticipated while the sockeye harvest of 149,191 was approximately 121,000 fish higher than anticipated (Appendix B.2). Sockeye salmon catches were reported to have improved slightly inside the barrier islands for the second period, but most reports indicated that a majority of the sockeye salmon harvest was caught outside the islands. Miles Lake sonar counts also indicated that salmon migration into the river had begun (Appendix B.8, B.9).

The third fishing period on May 25 was again limited to 12 hours, due to continuing low water conditions. Chinook salmon harvest decreased to 6,642 fish and sockeye salmon harvest increased to 206,040 fish. Delaying the opening until May 25 allowed more fish to enter the river when peak tides were occurring on May 24 and May 25, thus allowing a continuing schedule of commercial openings.

With commercial harvest performing well above preseason projections, coupled with an early escapement of 64,796 salmon versus an anticipated sonar count of 25,765 fish as of May 25, the fourth commercial opening of May 28 and 29 was set for 24 hours. Approximately 3,759 chinook salmon and 105,780 sockeye salmon were harvested during the fourth fishing period.

The duration of the fifth period was originally established for 36 hours beginning May 31 and ending on June 1. However, twelve hours into the fishing period, an estimated 95% of the commercial drift gillnet fleet ceased fishing in protest to low prices being offered by area processors. With contract negotiations between processors and fleet representatives ongoing during the fishing period and with no estimate as to when fishing would resume, the fishing period was extended an additional 24 hours for a total 60-hour commercial period ending June 2. With minimal harvest pressure on both sockeye and chinook runs, an extension was not believed to have caused a significant increase in harvest. In addition, an extended commercial fishing period would allow subsistence fishermen to take advantage of a weekend harvest opportunity with a reduction in commercial harvest pressure to help fulfill their subsistence needs.

The next fishing period of June 4-5 was for 36 hours. With a sonar count of 204,353 versus an anticipated count of 80,500 as of May 31, and harvest performing above projections, maintaining twice-weekly fishing periods remained justified. The sixth period had a harvest of chinook salmon of 4,411 and 90,491 sockeye salmon.

The seventh period was also for 36-hours with fishing on June 7 and 8. Once again the rationale for maintaining two weekly commercial fishing periods were harvest above projections and sonar counts nearly double the anticipated for that time (Appendix B.2, B.3, B.8, and B.9).

In early June, delta sockeye escapement became an additional concern of the department in its decision making process. On June 8, an aerial survey was flown to assess the delta escapement index. Approximately 9,722 sockeye salmon were observed versus an anticipated count of 3,242 (Appendix B.11 and B.12).

The eighth and ninth fishing periods were for 24 hours each occurring on June 11-12 and June 14-15 respectively. Daily sonar counts at Miles Lake were beginning to match anticipated counts, but were approximately 100,000 above the projected counts for that period. In addition, delta escapement indicated early run timing with more fish entering the spawning grounds than anticipated.

The tenth through twelfth fishing periods were all for 24 hours occurring on June 18-19, June 21-22, and June 25-26, respectively. Daily sonar counts were roughly matching that of anticipated counts and delta escapements were also above the anticipated. However, delta aerial surveys flown on both June 15 and June 22 indicated that spawning escapement had slowed, most likely due to the recent trend of 36-hour and 24-hour fishing periods. It should be noted that the survey conducted on June 22 was limited due to high winds that were encountered mid-survey. The limited June 22 survey indicated that delta escapement was improving on those streams that were observed. As of June 26, no appreciable rainfall had occurred for several weeks with many streams appearing to have low flows, likely limiting migration into those systems. On June 27 cumulative sockeye harvest was 1,069,418 versus an anticipated cumulative harvest of 425,997.

Fishing periods were 24 hours for June 28 and July 2. Daily sonar counts from Miles Lake were continuing to exceed anticipated projections. On June 29 the cumulative sonar count was 531,282 opposed to an objective goal of 393,464. A delta escapement aerial survey on June 27 was again limited due to high winds mid-survey. Those index streams that were observed all showed improved escapements since the previous survey. The delta escapement survey counted 31,775 sockeye salmon in the index streams. As of July 2 no significant rainfall had occurred with little flow in tributaries. At this time with harvest above expected, daily sonar counts exceeding the anticipated, and delta stock escapement on track, maintaining two 24-hour fishing periods per week remained justified.

Subsequent fishing periods 15 through 23 were all for 24 hours (Appendix B.26) targeting late run and enhanced sockeye salmon. The commercial drift gillnet fleet began shifting their efforts to Coghill District chum salmon in early July and Eshamy District sockeye in late July. Period 15 on July 5 had 196 permits actively fishing Copper River District down from 488 permits that fished in late May. The 23rd fishing period of August 2 had only 21 permit holders fishing in Copper River District.

Daily sonar counts continued to exceed anticipated counts through the remainder of the season until the sonar was removed on July 31. The total sonar count at season's end was 833,569 salmon. The upriver goal of 723,000 salmon had been realized.

Gulkana Hatchery enhanced sockeye comprised 64% of the commercial harvest on July 5. While that percentage is high, it was below that of previous years which began to confirm that the hatchery return was weaker than past years. The next fishing period of July 9 had 48% Gulkana Hatchery contribution. The hatchery contribution to the harvest peaked at 70% on July 12-13. Enhanced sockeye stocks began to decline in their contribution to the overall harvest until the end of the season.

Aerial surveys to assess Copper River Delta sockeye salmon escapement continued to be flown throughout the season. However, no surveys were conducted between July 14 and August 7 due to inclement weather. When surveys were conducted, they were often hampered by high winds and turbid water conditions from rainstorms, making observations difficult. Those streams surveyed continued to show improving escapement. The post-season delta sockeye salmon spawning escapement index was 71,065, which is 21% below the biological escapement goal of 90,000. The lower bound of the biological escapement goal is 74,000 sockeye salmon.

In early August the department shifts its management strategy to coho salmon for the Copper River District. Sockeye salmon continue to be harvested until mid-September, however in insignificant numbers as compared to the harvest of coho salmon. At season's end approximately 1,323,577 sockeye salmon had been commercially harvested in the Copper River District ranking it as the sixth largest harvest since 1974.

Approximately 39,524 chinook salmon were harvested at season's end ranking it as the thirteenth largest harvest since 1969.

2001 Coho Salmon Fishery Season Summary

The forecasted harvest of coho salmon was 305,000 fish with an actual harvest of 251,473 fish, approximately 17.5% below projections. Coho season officially began on August 6 with a single 24-hour period for the week. If escapements can support it, two fishing periods per week is the current recommendation from the Salmon Harvest Task Force. An appropriate consensual coho harvest management strategy has been a contentious issue for several seasons. In order to maximize quality, processors prefer two shorter 24-hour periods per week. Fishers tend to prefer a single longer fishing period per week, both for logistical and conservation reasons.

Two distinct fishing periods per week can potentially allow for two "clean up" harvests to occur when milling fish are more effectively harvested. The fishermen contend that a single longer fishing period allows a broader time frame for fish to mill in the estuary and still escape the fishery. Arriving at a consensus over harvest strategy between processors and fishers has proven difficult. An acceptable harvest strategy for the industry is further compounded with the concern of weak returns to the Copper River District since 1996. In 1997, coho salmon escapement into delta streams was low enough to impose a coho salmon bag limit reduction for sport fishers. Because of the recent history of poor coho salmon returns and inconclusive escapement data from 1998 in which inclement weather prohibited an accurate escapement index, the department intended to approach the season with extreme caution. The harvest strategy would be a single 24-hour fishing period per week until escapements could justify additional fishing time and as long as catch data continued to indicate there was some strength to the return.

The first fishing period for the coho season was for 24 hours commencing on August 6. A harvest of 6,526 fish by 28 permit holders was less than anticipated and aerial surveys indicated an escapement slightly below what was expected. Effort increased dramatically during the next fishing period on August 13 when 144 permit holders caught (Appendix B.4) 23,870 coho salmon. An aerial survey conducted in poor conditions on August 17 indicated spawning escapement roughly half of what was anticipated. Twenty-four hour fishing periods continued for the next two fishing periods that fell on August 27 and September 3, respectively. Harvest continued to remain slightly lower than anticipated and many area processors left for the season.

Aerial surveys conducted on August 25 and September 8 indicated coho salmon spawning escapement was improving. Due to less than anticipated escapement of coho salmon into area streams and the cautious approach of the department in the management of coho salmon, fishing periods were reduced from 24 hours to 12 hours. On September 7 and 14, 12-hour fishing periods were allowed with harvests of 35,765 and 30,048 coho salmon, respectively.

The fishing period of September 17 was for 24 hours. At this time most of the processors had ceased to buy coho salmon from Copper River District. The district was opened to allow harvest of coho salmon for donation to New York City rescue workers and the period extended to maximize the harvest for maximum donation. The harvest from this period was 430 coho salmon.

The last two fishing periods of September 22 and 26 were for 12-hours each. Only one processor in the area was purchasing coho salmon from Copper River District with two permit holders continuing to fish. The season concluded at the close of the September 26 fishing period with a season harvest of 251,473 coho salmon (Appendix B.5 and B.15).

Aerial surveys to index coho salmon escapement were flown on September 26 and October 15. Escapement into area streams continued to improve although at no time during the season did actual escapement match the anticipated escapement. The end season spawning index was 40,516 (Appendix B.16) compared to a biological escapement goal of 50,000 coho salmon. The lower bound of the biological escapement goal is 32,000 coho salmon.

BERING RIVER DISTRICT

Preseason Outlook and Harvest Strategy

Opening in early June, Bering River District is managed concurrently with Copper River District. The 2001 harvest of only 5,450 sockeye salmon from Bering River District was well below the recent ten-year average of 19,314. Similarly, the coho salmon harvest of 2,715 fish fell below the recent ten-year average of 106,577 (Appendix B.21). Overall, sockeye salmon escapement into Bering River District streams appears to have come in well below the goal of 32,000 at just over 8,000 fish. The Bering River drainage, the largest sockeye salmon spawning system in the district, had a peak index count of 7,750 fish versus an anticipated peak count of 23,512 sockeye salmon (Appendix B.23). Part of this shortfall can again be attributed to the lack of survey data from July 13 to August 8 due to poor weather. The coho salmon escapement goal was achieved with an escapement index of 30,007 fish for the Bering River District, although peak counts occurred two to three weeks later than anticipated as weather conditions precluded surveys throughout most of September (Appendix B.25).

2001 Sockeye Salmon Season Summary

Bering River District generally opens the second or third week of June. In 2001, the first period of June 4 for 36 hours was approximately six days earlier than normal. The sockeye salmon run timing into the Copper River District appeared to be occurring earlier than usual and harvest indicated a stronger return than anticipated. No fishing effort for Bering River District was reported for the first opener. The district was opened to fishing concurrently with Copper River District again on June 6 for a 36-hour period. Once again, Copper River District sockeye salmon returns were indicating early run strength with harvest above anticipated. There was no reported fishing activity for the second fishing period.

An aerial survey for Bering River Delta sockeye escapement was conducted on June 7. Approximately 4,700 sockeye salmon were observed versus an anticipated 711 fish.

The next three fishing periods were for 24 hours each occurring on June 11, June 14, and June 18. The June 18 period had the most fishing effort with five permit holders taking part in the fishery. The cumulative harvest of sockeye salmon was 2,051 after the fifth fishing period.

The next aerial survey that was conducted on June 15 indicated that spawning escapement of sockeye salmon was beginning to slow with 5,700 fish observed as opposed to an anticipated 6,538.

Twenty-four hour fishing periods occurred on June 21, June 25, June 28, July 2, July 5, July 9, and July 12. Very little fishing effort occurred during any of these openings with no effort for the last four periods (Appendix B.22).

Aerial surveys conducted after June 15 continued to indicate escapements below anticipated (Appendix B.23). With poor harvest and spawning escapements well below anticipated, the district was closed at the conclusion of the July 12 fishing period and was not to be reopened until the start of the coho salmon directed management season. At the conclusion of the season 5,450 sockeye salmon and 76 chinook salmon were harvested.

2001 Coho Salmon Season Summary

The coho salmon fishery is managed concurrently with the Copper River and typically begins in early August. In 2001 the Bering River District coho salmon fishery began on August 27 with a 24-hour fishing period. Five permit holders fished for the first period harvesting approximately 1,342 coho salmon.

Aerial surveys conducted on August 17 and 25 indicated that coho salmon escapement into Bering River spawning areas was well below anticipated levels.

The next fishing period on September 3 was also for 24 hours, with only four permits fishing with a harvest of 1,173 coho salmon. Also, at that time many processors were no longer purchasing salmon and had ceased operations. The last coho salmon harvest period was on September 7 for 12 hours.

An aerial survey conducted on September 8 indicated that escapement was still extremely poor and the fishery for the district was terminated. Additional surveys conducted on September 26 and October 15 indicated that escapement had dramatically improved, with peak spawning counts observed on September 15 with 30,007 fish. The biological escapement goal for coho salmon was realized.

COGHILL DISTRICT (PRIOR TO JULY 21)

Preseason Outlook and Harvest Strategy

Management strategy prior to July 21 (gillnet only fishery) is concerned primarily with the return of sockeye salmon to Coghill Lake and the return of chum salmon to WHN Hatchery (WHN). Coghill sockeye salmon are managed for a biological escapement goal of 20,000 to 30,000 spawners. For the 2001 season, management strategies were based on achieving a point goal of 25,000 sockeye salmon while hatchery chum salmon are managed to satisfy the allocation between common property fishery (CPF) harvest and Prince William Sound Aquaculture Corporation's (PWSAC) corporate escapement.

The 2001 wild sockeye salmon return to Coghill Lake was forecasted to be 117,000 fish. Meeting the 2001 point-escapement goal for Coghill Lake of 25,000 sockeye salmon left a forecast common property harvest of 92,000 fish.

The department's point estimate for the WHN Hatchery chum salmon return was 1.1 million fish. PWSAC's 2001 revenue goal for their non-pink salmon production was \$3.4 million. PWSAC planned to harvest both chum and sockeye salmon to meet their 2001 revenue goal. Based on preseason estimates, revenue and broodstock requirements equated to approximately 669,000 WHN chum salmon. With an average Coghill Lake forecast, the Coghill District was expected to open for a schedule of two periods per week beginning in early-June. Opening waters of the Esther Subdistrict for a CPF harvest depends upon the status of PWSAC's corporate harvest at WHN Hatchery. Fishing periods in the Esther Subdistrict are based on the strength of the WHN Hatchery chum salmon return and PWSAC's sales harvesting. If the drift gillnet fleet cannot harvest surplus chum salmon returning to WHN, the BOF has provided the department the authority to open the hatchery terminal area to seine gear prior to July 21 by regulation 5 AAC 24.368 (f).

2001 Season Summary

Coghill District opened on May 28, 2001 with a 24-hour fishing period (Appendix C.1). All waters of the Coghill District, including the WHN THA and SHA were open. The department anticipated that the drift gillnet fleet would likely begin fishing in the district on or about June 1. However, personnel at WHN Hatchery reported that up to 13,000 chum salmon were milling in Lake Bay in front of the hatchery indicating that the enhanced chum salmon run was possibly a week early. Rather than let fish quality deteriorate by waiting for the traditional June 1 fishing period, the department opened the chum salmon fishery on May 28.

Preliminary harvest estimates for the first period indicated that 23 permit holders harvested 34,982 chum salmon and 538 sockeye salmon. PWSAC began cost recovery efforts at WHN Hatchery on May 31, harvesting 14,503 chum salmon (Appendix F.1). Both common property and cost recovery harvests indicated early strength in the enhanced chum salmon run that justified putting the district on a fishing schedule until further notice. The second commercial fishing period occurred on May 31 for 24 hours. The area open to commercial harvest was reduced to exclude the waters of the WHN THA and SHA. Area restrictions were implemented to ensure PWSAC's cost recovery efforts could continue while still maintaining fish quality. The number of permit holders fishing in the district during the second commercial fishing period more than doubled to 62. With increased effort, the harvest from the second period of 49,320 chum salmon exceeded the catch during the first period by more than 15,000 fish. The third commercial fishing period in the district occurred on June 4 with 96 permit holders harvesting 89,084 chum salmon and 186 sockeye salmon. As of June 4, PWSAC's harvest of 115,346 chum salmon was 17% of the chum salmon needed to meet revenue goals and broodstock needs.

The Coghill River weir was installed on June 9. The anticipated escapement to Coghill Lake for June 15 was 202 sockeye salmon versus an actual count of thirty-four (Appendix C.3). There was little improvement in escapement to Coghill Lake for the next seven days. The actual daily counts rarely exceeded anticipated daily counts until June 21 when 243 sockeye salmon were counted through the weir. The anticipated daily count for that date was 147. The increase in daily passage was still not enough to meet the projected cumulative count of 1,342 sockeye salmon as the actual total stood at 793 fish. However, June 22 daily count of 775 sockeye salmon exceeded the anticipated daily and cumulative counts for the first time this season. In general beginning in late June, daily escapement to Coghill Lake surpassed the anticipated daily counts throughout the season with the largest daily count occurring on July 4 with 4,606 sockeye salmon counted at the weir.

The schedule of two 24-hour periods per week in waters of the Coghill District, excluding the WHN THA and SHA continued through July 6. PWSAC was also able to harvest sufficient chum salmon during this time. The area open to commercial fishing was further restricted beginning with the sixth period because PWSAC reported that the pace of cost recovery had slowed during the previous day. The fleet was not allowed to fish within waters of the Esther Subdistrict during the first twelve hours of the 24-hour period. In spite of the additional area restriction, 163 permit holders were still able to harvest 118,024 chum salmon and 736 sockeye salmon. The commercial fishing fleet's harvest was a total of 470,259 fish at the end of the sixth period. Through July 15, PWSAC harvested a total of 377,163 chum salmon that equated to 56% of their revenue goal and broodstock needs for chum salmon for the facility.

Concerns expressed by PWSAC regarding the slow pace of cost recovery prompted the department to reduce the area open to the common property fleet during. Drift gillnet permit holders were excluded from the waters of the Esther Subdistrict east of a line from Point Culross to Esther Light. Keeping a majority of the Esther Subdistrict closed during the seventh period provided PWSAC additional fish for cost recovery harvest while still maintaining the twice-weekly openings within the district. Even with less area, 167 drift gillnet permit holders were able to harvest 88,434 chum salmon and 1,435 sockeye salmon during the seventh period.

PWSAC indicated that they had achieved 75% of their chum salmon revenue goal and that the recent Esther Subdistrict closure had boosted the number of chum salmon available for cost recovery harvest. Fishing effort steadily increased in the Coghill District from 167 permit holders during the seventh fishing period to a season high of 209 permit holders during the eighth fishing period. The open area was changed for the eighth period to allow greater access to the Esther Subdistrict and only WHN SHA and THA were closed. In addition, Coghill District waters south of Point Pakenham remained closed. Closing waters adjacent to Coghill Lagoon was necessary to keep sockeye salmon escapement to Coghill Lake on track and allow the consistent schedule of openings in the district to continue. The harvest during the 24-hour period was the peak for the season with 129,768 chum salmon and 3,066 sockeye salmon being taken by the common property fleet.

Fishing effort remained strong in the district as the department was able to maintain the twice-weekly schedule of 24-hour periods for the next four periods. The number of permit holders fishing in the district did decline somewhat with each subsequent period but still remained quite high. While the chum salmon harvest steadily decreased, the sockeye salmon harvest steadily increased. During the ninth period, 195 permit holders harvested 70,305 chum salmon and 8,463 sockeye salmon. Since wild stock escapement to Coghill River appeared to be on track and PWSAC was confident of achieving their chum salmon revenue goal, the fleet was allowed access to waters adjacent to Coghill Lagoon and waters of the Esther Subdistrict west of a line from Point Culross to Esther Light. The number of permit holders fishing in the district and the number of chum salmon harvested during the tenth period decreased to 175 permit holders and 59,796 chum salmon. The number of sockeye caught was 15,335, nearly a two-fold increase from the previous period. During this period the fleet had complete access to the Esther Subdistrict, with only the WHN Hatchery THA and SHA remaining closed which may explain the increase in sockeye salmon catch. During the eleventh period, waters south of the latitude of Point Pakenham were once again closed to facilitate sockeye salmon escapement into Coghill Lake. Although effort declined, 170 permit holders landed 76,593 chum salmon and 7,600 sockeye salmon. Catches during the twelfth period remained consistent with 75,381 chum salmon and 6,417 sockeye salmon harvested with decreased effort of only 160 permit holders fishing. During this period, waters of the WHN Hatchery THA and SHA and Coghill District waters south of the latitude of Point Pakenham were closed. However on July 4, the ADF&G weir crew reported that 4,606 sockeye salmon had passed the weir and another estimated 3,500 fish were in the river. As of July 4, a total of 16,682 sockeye salmon had escaped into Coghill Lake. The anticipated total for this date was

8,506. Based on the strong passage of sockeye salmon, the previously announced closure south of Point Pakenham was rescinded. The Coghill Lake sockeye salmon escapement goal of 25,000 was met on July 9 when the cumulative weir count reached 25,946 sockeye salmon. A total of 38,433 sockeye salmon had passed through the weir by August 7.

Perhaps in response to strong sockeye return to Coghill Lake, the number of permits holders fishing during the thirteenth period, which began on July 12 and ended on July 14, increased to 182. Based on the chum salmon harvest to date, the return to WHN Hatchery appeared to be well above the preseason forecast. Since PWSAC had achieved 88% of their non-pink revenue goal and sockeye salmon escapement into Coghill Lake was almost twice the anticipated for this time of year, the duration of the period was increased to 48 hours. The area open to commercial harvest was the same as during the previous period. The sockeye salmon harvest increased to 11,538 while chum salmon harvest decreased slightly to 72,535 fish. PWSAC was able to harvest only 3,285 chum salmon on July 13, which increased the PWSAC non-pink salmon harvest to 908,892 chum salmon at the end of the thirteenth fishing period.

Since chum salmon harvests in the Coghill District remained strong in spite of increasing effort and PWSAC was confident they would reach their non-pink salmon revenue goal and chum salmon broodstock needs with minimal protection, the department increased the duration of the fourteenth period to 60 hours. Initially, waters of the Coghill District, excluding waters of the Esther Subdistrict east of a line from Point Culross to Esther Light were open. However, at 8:00 p.m. Friday July 13, waters of the entire Esther Subdistrict, excluding the WHN Hatchery THA and SHA were open for 24 hours. Regulatory closed waters in Coghill Lagoon were not in effect for the entire 60-hour period as the escapement goal of 25,000 sockeye salmon had been met. By the end of the period, 163 permit holders had harvested 51,630 chum salmon, 8,219 sockeye salmon, and 99,336 pink salmon. This was a dramatic increase in pink salmon harvest from the previous period when only 22,312 pink salmon were caught. On July 14, the Coghill River weir crew reported 468 sockeye salmon and 2,632 pink salmon had been counted through the weir. This brought the cumulative escapement of sockeye salmon to 30,377, almost twice the anticipated of 17,231, while pink salmon cumulative escapement stood at 49,404. This was somewhat unexpected as pink salmon escapement to Coghill District wild stock streams was less than expected for this time of year.

With escapement to Coghill Lake remaining strong and PWSAC at almost 92% of their non-pink salmon revenue goal, the department reopened the Coghill District on July 15 for 132 hours. During the period, fishing effort decreased by 20% to 126 permit holders. Sockeye and pink salmon harvests during the period increased to 21,535 and 179,959 fish, respectively, while chum salmon harvest continued to decline with only 46,658 fish harvested.

After July 21, when purse seine gear was allowed into the district, participation by the drift gillnet fleet substantially declined. During the sixteenth period that lasted 84 hours, 19 permit holders harvested 30 sockeye salmon, 71 pink salmon, and 4 chum salmon. There was no reported harvest by drift gillnet permit holders in the district until August 6, when during the 60 hour period, only one permit holder fished in the district. Due to confidentiality restrictions, that harvest cannot be reported. Broodstock collection was not as successful as anticipated even though the common property fleet was kept out of the Esther Subdistrict for most of the remaining periods in the Coghill District. Only 2,277 coho salmon were taken for broodstock and of those only 547 were successfully spawned at the hatchery. There was no reported harvest by the drift gillnet fleet after this period and the district closed for the season on Thursday, October 11.

The drift gillnet fleet harvested a total of 216 chinook salmon, 87,539 sockeye salmon, 3,185 coho salmon, 308,707 pink salmon, and 1,142,449 chum salmon. The total sockeye salmon harvest by the gillnet fleet

was approximately 7,000 fish less than the 10-year average and was the ninth largest harvest since 1983 while the pink salmon harvest exceeded the 10-year average by over 160,000 fish and was the seventh largest since 1983. Chum salmon harvests by the drift gillnet fleet surpassed the forecast harvest of 510,000 chum salmon by over 600,000 fish. This was the second largest chum salmon harvest by the drift gillnet fleet and exceeded the 10-year average by over 500,000 fish. PWSAC harvested 932,435 chum salmon, which exceeded their corporate escapement needs of 669,000 chum salmon by over 250,000. The chum salmon harvest along with 2,762 sockeye salmon met the PWSAC non-pink salmon revenue goal.

Total escapement to Coghill Lake through September 30 when the weir was removed was 38,558 sockeye salmon, 243,246 pink salmon, 263 chum salmon, 1,258 coho salmon, and 10 chinook salmon. The sockeye salmon return to Coghill Lake was the eleventh largest since 1970 and exceeded the 10-year average of 27,716 by over 10,000 fish. The pink salmon return was the seventh largest since 1970 and exceeded the 10-year average of 71,809 by over 170,000 fish. The actual escapement for all species was likely higher than counted as the high water conditions in the river necessitated removing weir pickets four times over the course of the season totaling 16 days.

UNAKWIK DISTRICT

2001 Season Summary

Unakwik District harvest for 2001 was 2,298 sockeye salmon with an incidental harvest of 44 chum salmon, three chinook salmon, and two coho salmon (Appendix C.9.). The district is traditionally managed concurrently with Coghill District. The sockeye salmon harvest was well below the 10-year average harvest of 5,879. The reduced harvest was likely due to strong returns and better fishing opportunities available in Coghill District. Unakwik District opened to both purse seine and gillnet gear on June 14 with a schedule of two 24-hour periods per week, primarily targeting sockeye salmon returns to Miners and Cowpen Lakes. Beginning July 9, two 48-hour periods were allowed followed by three 24-hour periods beginning July 16. The district remained closed for the season after the final 24-hour period that ended July 24.

ESHAMY DISTRICT

Preseason Outlook and Harvest Strategy

Wild stock sockeye salmon returns to Eshamy Lake were forecasted to total 79,300 fish, 35,000 of which were needed to meet the midpoint of the lake's biological escapement goal of 30,000 to 40,000 sockeye salmon. The Eshamy weir was funded for operation in 2001. Beginning in mid-July, the Eshamy District, including waters south of Loomis Creek, would open during scheduled periods if the escapement past the weir were tracking close to the anticipated number for that date. If escapement past Eshamy weir tracked below the anticipated curve, area restrictions would likely be imposed in order to improve wild stock escapement while harvesting enhanced sockeye salmon returning to Main Bay Hatchery. Onsite returns to Main Bay Hatchery were projected by PWSAC to be 639,700 sockeye salmon composed of 125,100 Eyak stock, and 514,600 Eshamy stock. However, the department's forecast for the sockeye salmon return to the hatchery was 101,000 Eyak stock, 47,800 Coghill Lake stock, and 613,000 Eshamy Lake

stock sockeye salmon. The disparity between the forecast is likely due to PWSAC forecasting returns of only 4 and 5-year old fish while the department's forecast includes the return of jack salmon as well.

The timing and frequency of common property openings in late July and August would be balanced to provide for wild stock escapement, PWSAC's revenue needs, hatchery broodstock, and to maintain a high quality commercial harvest. If PWSAC's non-pink salmon revenue goal was being achieved as planned, it was likely that the drift and set gillnet fleets would be given opportunity to harvest the projected 125,100 enhanced Eyak Lake stock and a portion of the 514,600 enhanced Eshamy stock sockeye salmon expected to return to Main Bay Hatchery.

Directed harvesting of the expected small numbers of enhanced Eyak Lake stock was planned to begin concurrently with the Copper River District opening in May. Twice weekly periods were expected to occur until mid-June when PWSAC would begin collecting Coghill stock brood fish. The Eyak Lake stock return to Main Bay Hatchery was forecasted to be 101,000 adults. Once PWSAC completed their broodstock collection of Coghill Lake stock sockeye, the department would assess PWSAC's progress towards meeting their corporate harvest goal at WHN. Management for the enhanced Eshamy Lake stock was expected to begin in mid-July. With no broodstock requirements from the Eshamy Lake stock return, the timing and frequency of common property openings in late July and August was to be balanced to provide for PWSAC's revenue needs and maintaining a high quality harvest.

Fishing time and area in Crafton Island Subdistrict was based on the status of PWSAC's cost recovery for non-pink salmon, escapement of wild pink and sockeye salmon in Eshamy District, and the strength of wild pink and chum salmon stocks returning to the Northwestern and Coghill Districts. Eshamy Bay was not anticipated to open for a directed commercial fishery in mid-July or August as the return of Eshamy Lake wild sockeye salmon return was expected to be too small to support a directed commercial harvest, especially in the absence of escapement information. When the waters of Eshamy Bay and Crafton Island Subdistrict were closed for the protection of pink and sockeye salmon escapement, there would be concurrent closures of the eastern shore of Chenega Island to purse seine gear to further minimize the interception of wild Eshamy Lake bound fish.

The hatchery operator for cost recovery harvests used the Special Harvest Area (SHA) at the head of Main Bay during periods when the commercial fishery was closed. The commercial fleet could use the SHA during scheduled periods. Unless opened by emergency order, the Alternating Gear Zone (AGZ) was to remain closed to commercial fishing to protect the hatchery barrier seine. It was expected that the barrier seine would be removed during the Eshamy stock's return.

2001 Season Summary

Waters of the entire Eshamy District opened for the season for 24 hours on May 17. Since the first sockeye salmon returning to Main Bay Hatchery are Eyak Lake stock that the hatchery is no longer propagating there was no broodstock collected from this stock. Given the early timing of this stock, there were no wild stock concerns, which allowed the department to open the entire district. During the first period, which was expected to include a cleanup of fish in front of the hatchery, the waters of the AGZ were open to the set gillnet fleet. Harvest and effort by set gillnet permit holders and drift gillnet permit holders was about equal with 27 drift gillnet permit holders catching 3,918 sockeye salmon and 1,253 chum salmon while 22 set gillnet permit holders landed 3,402 sockeye salmon and 212 chum salmon (Appendix D.1). Since catch was not as great as expected and PWSAC had agreed to two consecutive fishing periods in Main Bay at the beginning of the season, the department announced a second 24-hour period in the district beginning at 8:00

a.m. Tuesday, May 22. The AGZ was open to the drift gillnet fleet during the period. Effort on the part of both set and drift gillnet permit holders was less than the first period. Eighteen drift gillnet permit holders harvested 2,778 sockeye salmon and 920 chum salmon while 17 set gillnet permit holders harvested 5,033 sockeye salmon and six chum salmon. Once again harvest was not as great as expected and since wild stock interception was still not a concern and PWSAC was not collecting broodstock from the early returning Eyak Lake stock, a third commercial fishing period for 24 hours occurred on May 24. The alternating gear zone was open to set gillnet gear. The number of drift gillnet permit holders decreased to 17 and their sockeye salmon harvest was also less than the first period with 2,480 fish being caught. The number of set gillnet permit holders increased to 26 and they caught 5,519 sockeye salmon.

Since PWSAC was expected to begin the harvest of 50% of the Eyak Lake stock sockeye salmon returning to Main Bay Hatchery, there was an interruption to the twice-weekly schedule of open periods in the Eshamy District. After observing a buildup of 1,200 sockeye salmon in the AGZ, PWSAC elected to not allow fish quality to deteriorate while awaiting an appreciable buildup of Eyak Lake stock sockeye salmon. Any shortfall in sockeye salmon cost recovery was to be made up by harvest of additional Eshamy Lake stock return. On May 31, the entire district was open for 24 hours and during this period the AGZ was open to the drift gillnet fleet. Anadromous stream closures in the Main Bay Subdistrict were not in effect until further notice as well. The number of drift gillnet permit holders fishing during the fourth period increased to 26 and they harvested 8,236 sockeye salmon and 104 chum salmon, while the number of set gillnet permit holders decreased slightly to 23. Their catch of sockeye salmon was 4,778.

Commencing with the fifth 24-hour period in the district that began on June 4 at 8:00 a.m., waters of the AGZ were closed to allow PWSAC the opportunity to harvest sockeye salmon for cost recovery at Main Bay Hatchery. The remainder of the district was open and anadromous stream closures in the Main Bay Subdistrict were not in effect. Possibly because of the area restrictions, there was no reported harvest by drift gillnet permit holders during the period while 19 set gillnet permit holders reported a harvest of 1,176 sockeye salmon and 337 chum salmon. Waters of the Eshamy District opened for the sixth 24-hour period of the season on June 7, and waters of the AGZ were open to set gillnet gear. Effort decreased substantially as only 9 drift gillnet and 10 set gillnet permit holders participated with sockeye salmon catch at 1,770 and 1,052 respectively. Participation declined further during the next 24-hour period that began on June 11. During this period, only the Main Bay Subdistrict was open and anadromous stream closures in the subdistrict were not in effect. Four drift gillnet permit holders harvested 484 sockeye salmon while 7 set gillnet permit holders harvested 318 sockeye salmon. Following the end of Monday's period, the Eshamy District was closed until management of returning Eshamy stock sockeye salmon began in July. On July 4th, the department began installation of the Eshamy River weir.

Due to the strong return of chum salmon to the WHN Hatchery, PWSAC was able to achieve their non-pink salmon revenue goal entirely from the chum salmon return to WHN Hatchery and needed to collect broodstock and approximately 300,000 pounds of Eshamy Lake stock sockeye salmon to satisfy their non-pink revenue needs from the Eshamy stock sockeye salmon returning to Main Bay Hatchery. Since, the egg-take goal for Eshamy Lake stock sockeye salmon was 10.2 million green eggs, which equated to 6,670 females and 4,440 males to ensure adequate fertilization, a large part of the estimated 500,000 fish forecast to return to the hatchery would be available for harvest by the common property fleet. By July 11, PWSAC had harvested 800 sockeye salmon for broodstock. The department announced that the Main Bay Subdistrict would open for 24 hours beginning at 8:00 p.m. on July 12. Area open to the fleet would be increased depending on escapement to Eshamy Lake. Waters of the AGZ were open to the set gillnet fleet. Thirty-eight drift gillnet permit holders harvested 5,546 sockeye salmon, while 20 set gillnet permit holders caught 3,961 sockeye salmon.

By July 14, the department crew working at Eshamy weir had counted 2,030 sockeye salmon through the weir (Appendix D.3). The anticipated total for this date was 2,397, indicating the return was on track. PWSAC had harvested 4,676 sockeye salmon for cost recovery and had achieved 93% of their non-pink salmon revenue goal. The department announced that the Eshamy District would remain closed to allow PWSAC to continue cost recovery harvest unimpeded until further notice. Escapement to Eshamy Lake continued to improve and by July 18, 4,676 sockeye salmon had been counted past the weir. The anticipated escapement for the date was 3,237 and PWSAC reported that approximately 1,000 – 2,000 sockeye salmon were being taken each day for cost recovery. With escapement and cost recovery doing well, the waters of the Eshamy District, excluding the Main Bay Hatchery SHA, were opened for 24 hours on July 23 beginning at 8:00 a.m. There was a significant increase both in the number of drift gillnet permit holders fishing in the area and the number of sockeye caught. During the ninth period, 201 drift gillnet permit holders harvested 62,917 sockeye salmon while 27 set gillnet permit holders landed 12,788 sockeye salmon.

Since sockeye salmon harvest in the district, cost recovery, and escapement to Eshamy River were all performing well, waters of the Eshamy District, excluding the Main Bay Hatchery SHA were open for 36 hours beginning at 8:00 p.m. July 26. Even though effort and harvest remained high, the department was able to allow twice-weekly fishing for the remainder of the season. As effort and harvest fluctuated, the department used time and area closures to maintain the twice-weekly openings. Throughout August, the entire district was open at least 24 hours during each period, with additional time being allowed in the Main Bay Subdistrict to maintain fish quality.

By August 18, PWSAC had completed their non-pink salmon cost recovery harvest and broodstock collection at Main Bay Hatchery, but left the barrier seine in place to facilitate volitional entry of broodstock sockeye salmon into the freshwater brood pond. Waters of the Eshamy District, excluding the AGZ, were open for 24 hours beginning at 8:00 a.m. August 20. Waters of the Main Bay Subdistrict, excluding the AGZ, were open an additional 24 hours but because pink salmon escapement to Eshamy and Coghill systems was less than anticipated for that time of year, gillnet mesh size was restricted to a minimum of five and three-eighths inches. Even with the gear restriction in place, the harvest of sockeye salmon remained good, averaging 17,000 fish. The restriction was rescinded at 8:00 p.m. August 23 when results of aerial surveys in Coghill and Eshamy Districts indicated that wild stock pink salmon escapement was at or above the anticipated for the date. The department was able to open more area to commercial fishing as well. Waters of the entire district, excluding the AGZ, were open during the period that began at 8:00 p.m. on August 23. Waters of Eshamy Bay, east of 148° 00' 30" W. longitude and west of 147° 58' W. longitude and the Main Bay Subdistrict, excluding the AGZ, were open an additional 24 hours during the period. By August 23, 39,389 sockeye salmon had escaped into Eshamy Lake. The anticipated escapement for the date was 25,852 sockeye salmon.

Participation by permit holders utilizing either gillnet type continued to decline as did the numbers of sockeye salmon harvested per period. During a 72-hour period that began on August 27, 46 drift gillnet permit holders harvested 15,726 sockeye salmon while 16 set gillnet permit holders harvested 11,153 sockeye salmon. Effort by both user groups decreased even more after a 96-hour period that began on August 30 even though 43 drift gillnet permit holders harvested 25,261 sockeye salmon. The 12 set gillnet permit holders that fished during the period landed only 7,305 sockeye salmon. Effort diminished to less than a dozen permit holders after the end of August. The Eshamy District went on a schedule of two 48-hour periods week beginning September 10. Waters of the AGZ were open to set gillnet gear on Monday through Wednesday periods and to the drift gillnet fleet on all Thursday through Saturday periods. If one gear type was not fishing on the AGZ during its designated fishing period, the AGZ was open to the other gear type. During the three periods between September 3 and September 12, the total catch was less than

15,000 sockeye salmon for both gear types combined. The department announced five more commercial fishing periods in response to requests from various members of fleet. There was no reported harvest by either gear type after September 12.

Final escapement for Eshamy Lake was 55,187 sockeye salmon and 21,027 pink salmon. This year's total sockeye salmon escapement was the fifth largest since 1975. The sockeye escapement was well above the escapement range of 30,000 to 40,000 fish. Eshamy Lake sockeye salmon escapement began slowly but the total number of sockeye salmon quickly surpassed the anticipated within ten days of the weir's installation. Daily weir counts were generally above the anticipated as well. Generally, weir counts do not exceed 1,000 sockeye until after the first or second week in August, but this year there were daily counts over 1,000 sockeye salmon as early as mid-July. Daily counts of sockeye salmon at the weir were greater than 1,000 fish on seven days during the season, greater than 2,000 during four days, and on two occasions daily counts exceeded 6,000 fish.

Total sockeye salmon harvest for the district was 676,032 fish. This was more than twice the ten-year average and the largest commercial harvest on record since at least 1950. Other season catches included 72 chinook salmon, 495,325 pink salmon, 28,373 chum salmon, and 11,429 coho salmon.

GENERAL PURSE SEINE DISTRICTS

Preseason Outlook and Harvest Strategy

General purse seine districts include the Eastern, Northern, Unakwik, Coghill, Northwestern, Southwestern, Montague, and Southeastern Districts. Under the Prince William Sound Management and Salmon Enhancement Allocation Plan (5 AAC 24.370), Southwestern District is closed prior to July 18; Coghill District is closed to purse seine gear prior to July 21, except under 5 AAC 24.368(f) WALLY NOERENBERG (ESTHER ISLAND) HATCHERY MANAGEMENT PLAN ; and Esther Subdistrict may be opened to seine gear to prevent deterioration of fish quality of the harvestable surplus of chum salmon that is not being adequately harvested by the drift gillnet fleet. Beginning July 21, both purse seine and drift gillnet gear are allowed in Coghill District. Seine gear is allowed in the district as long as pink salmon are numerically predominant in the harvestable surplus. Fishing periods in all districts are established by emergency order.

General purse seine districts are managed to achieve wild pink and chum salmon escapement goals by district and allow for the orderly harvest of surplus wild and hatchery stocks. Escapement of pink and chum salmon is tracked through the season by weekly aerial surveys of 209 index streams. Management to achieve hatchery corporate escapement goals is accomplished by opening and closing subdistricts near the hatcheries. Subdistrict openings are also utilized to allow the fleet to target hatchery stocks when wild salmon escapement is weak.

Valdez Fisheries Development Association's (VFDA) Solomon Gulch Hatchery supports a pink salmon return that peaks in early July and a run of coho salmon that begins in August. All of VFDA's enhanced production returns to the Solomon Gulch Hatchery in Port Valdez, with the exception of a small run of coho salmon that returns to Boulder Bay near the Village of Tatitlek.

PWSAC pink salmon returns to Cannery Creek, WHN, and Armin F. Koernig (AFK) Hatcheries peak in mid-August. A moderate run of coho salmon at WHN Hatchery is incidental to the late pink salmon

fishery. The outlook for the general purse seine fishery in 2001 was for a total return of 32.1 million pink salmon composed of 27.5 million hatchery and 4.6 million wild stock pink salmon (58% PWSAC, 28% VFDA, 14% wild) (Appendix A.9). The forecasted common property fishery harvest was 17.3 million pinks, with an additional 12.0 million slated for corporate escapement and 1.4 million needed for wild stock escapement. The wild stock chum salmon forecast called for a total return of 850,000 fish with an escapement goal of 230,000. The forecast for enhanced chum salmon in seine districts was 230,000 fish returning to a remote release site in Montague District and 80,000 fish returning to AFK Hatchery.

When the Prince William Sound Salmon Harvest Task Force (SHTF) met prior to the fishing season, seine representatives on the task force reviewed changes to the fishery being considered for the 2001 season and made recommendations on management strategies to incorporate these anticipated changes. Main areas of concern voiced by the seine fishers and processors included moving the opening times from 8:00 am to 6:00 am and fishing earlier in the year in the Southwestern District. Fish and Wildlife Protection voiced enforcement issues against moving the openings to 6:00 am. The department agreed to fish earlier in the Southwestern District if early wild stock returns indicated a strong run.

VFDA's 2001 Annual Management Plan for the Solomon Gulch Hatchery called for their pink salmon return to be managed to meet a \$2.7 million revenue goal. Fish determined to be surplus to the association's needs were to be made available for common property harvesting. In 2001, two processors had contracts to purchase VFDA's cost recovery salmon. The cost recovery fishermen had contracts that required them to fish only on days when there was no common property fishery. Two processors operating at full capacity in 2001 would have improved VFDA's prospects for efficiently achieving the cost recovery goal and allowed for more timely common property openings targeting surplus enhanced fish. However, without having the ability to fish every day because of catcher boat contracts, it was determined that the best management strategy was to allow VFDA to reach approximately 33% of their revenue goal prior to the beginning of a common property fishery. This strategy accomplished three goals: 1) it allowed VFDA to reach their revenue goal in a timely fashion; 2) it allowed the department to assess the strength of the hatchery run; and 3) it allowed early-run wild stocks to escape into their natal streams.

According to PWSAC's annual management plans, the corporate escapement goal for pink salmon was based on broodstock needs of approximately 900,000 fish and a revenue goal of \$3.8 million. The department collectively managed the pink salmon returns to WHN, Cannery Creek and AFK Hatcheries to achieve the goal. Fish estimated to be surplus to the corporation's needs were made available for common property harvest. PWSAC's contract seiners were required to fish every day that fish were available for harvest, so no attempt was made to complete a large percentage of the cost recovery before allowing a common property fishery to occur.

2001 Chum Salmon Season Summary, All Seine Districts

The wild and enhanced chum salmon returns to PWS were strong and the area wide chum salmon harvest was the third largest on record in 2001 (Appendix E.9). Purse seiners were able to target wild chum salmon in the Eastern and Southeastern Districts and enhanced chum salmon returns in Montague and Southwestern Districts. The Port Chalmers remote release site in Montague District had a harvest of 440,000 chum salmon, which was nearly double the forecasted harvest. The first fishing period lasted sixty hours, starting June 1 and ending June 3. A seven-day per week fishing schedule was initiated on June 4. Fishing was allowed from 8:00 AM on Mondays until 8:00 PM. on Sundays. This schedule was maintained through July 15. Additional fishing periods occurred on July 16 (36 hours), July 19 (36 hours),

July 22 (12 hours), and July 24 (12 hours) to harvest a small buildup of surplus enhanced chum salmon at Port Chalmers, as wild stock pink salmon had not yet arrived.

This was the fourth year that chum salmon returned to the AFK Hatchery from two years of stocking aimed at establishing a chum salmon return to that facility. At the time of stocking, PWSAC hoped to be able to harvest most of the adults for cost recovery and take eggs for their Port Chalmers remote release. After two years of stocking, the program was abandoned, but the adults still remain to return. The forecast called for 80,000 chum salmon to return this year. PWSAC indicated that they would not need to cost recover these salmon as sufficient fish would be available at their WHN Hatchery. A three-day common property fishing period was announced inside the AFK Hatchery Special Harvest Area (SHA) on June 1, which was concurrent with Montague District opening. A seven-day a week fishing schedule was initiated on June 4 inside the AFK Hatchery SHA. This schedule was concurrent with the open periods of Port Chalmers Subdistrict within Montague District prior to July 18 and was designed to harvest the enhanced chum salmon returning to AFK Hatchery. Over 200,000 chum salmon were harvested at that location, which was two and one half times the preseason forecast. Commercial fishing was restricted to the area inside the SHA prior to July 18 in order to stay within the confines of the Southwestern District Management Plan.

The Board of Fisheries (BOF) approved change in the WHN Hatchery management plan, that allowed purse seine vessels to harvest enhanced chum salmon in Esther Subdistrict for the purpose of preventing deterioration of fish quality of chum salmon not being adequately harvested by the drift gillnet fleet, was not utilized this season. Gillnet effort was increased because of reduced fishing time in the Copper River District, stronger prices, and PWSAC taking most of their non-pink salmon cost recovery goal from these chum salmon.

Overall, wild stock chum salmon escapement exceeded the midpoint escapement goals in the Eastern, Northern, Southwestern, and Southeastern Districts. Coghill, Northwestern, and Montague Districts did not meet their minimum threshold goal. Eshamy and Unakwik Districts do not have a chum salmon escapement goal as no streams in those districts support a spawning population of chum salmon. It is estimated that over 300,000 wild stock chum salmon were harvested with the majority of the harvest coming from Eastern and Southeastern Districts.

On a sound-wide basis, chum salmon escapement was 55% over the goal (Appendix E.4, E.9 – E.12). Escapement for 2001 replaced the 2000 escapement as the third highest escapement since 1965, continuing a trend of increasing escapements since 1995. It is possible that chum salmon escapement in 2001 was greater in Coghill, Northwestern, and Montague Districts, but because of poor weather, aerial surveys were not completed during the time of peak escapement.

2001 Pink Salmon Season Summary, All Seine Districts

The pink salmon return of 38.2 million to Prince William Sound was 19% larger than the 32.1 million fish forecast and resulted in the sixth highest single season harvest of 35.2 million fish. This harvest follows the 1999 (highest single season harvest) and 2000 (third highest) harvests, continuing a trend of large returns (Appendix A.3). Returning adults in 2001 weighed an average of approximately 3.43 pounds. Based on otolith recoveries, an estimated 6.8 million wild stock pink salmon were harvested of which 98% were caught in the common property fishery. The ratio of enhanced pink salmon to wild pink salmon in the 2001 total commercial common property harvest was estimated to be 2.33:1. An estimated 2.0 million pink salmon escaped into Prince William Sound index streams to spawn, which ranks as the 7th highest

escapement since 1960 (Appendix E.4 – E.8). Only Coghill and Eshamy Districts failed to meet their minimum escapement goals. Approximately 57% (152 permit holders) of Area E salmon purse seine permit holders made at least one delivery during the 2001 season.

Similar to previous seasons, most fishing effort was directed at migration corridors used by hatchery fish in Eastern District during the early part of the season. Open areas in Eastern and Southeastern Districts outside these migration corridors were fished heavily during the lull between the early and late hatchery runs. Arrival of the PWSAC hatchery return was about normal but weaker than expected, which increased the harvest pressure on the eastern side of Prince William Sound. Returns to Cannery Creek and AFK Hatcheries were below forecast. This shortfall coupled with lagging wild stock escapements to Northern, Coghill, and Southwestern Districts and the northern portion of Montague District, and a fuel spill in Northern District resulted in additional pressure on the Eastern and Southeastern Districts. Wild stock returns to the Eastern and Southeastern Districts were strong and were able to support substantial fishing effort throughout the pink salmon return. Once the late run hatchery stocks started to arrive, effort in these districts was reduced until the second week of August when PWSAC revised their forecast downward based on run entry and sex ratios. Peak seining effort occurred on August 1 when 133 permit holders delivered fish.

Aerial surveys to assess early chum and pink salmon escapements in Eastern District began in late-June. In July, surveys began in all other seine districts. Southeastern District's pink salmon escapement index was 97% above the upper range of the escapement goal. Eastern District was 4% above the upper range of the escapement goal. Northwestern District was 23% above the upper range of the escapement goal. Montague District was 94% above the upper range of the escapement goal. Southwestern District was 52% above the upper range of the escapement goal. In Northern and Unakwik Districts, escapement was 28% above the upper range of the escapement goal. Eshamy District was 39% below threshold, and Coghill District was 46% below threshold. However, aerial surveys were not conducted in Eshamy and Coghill Districts during the time of peak escapement because of bad weather. Therefore, pink salmon escapements in those areas were higher than indicated by the aerial survey model. The total pink salmon escapement index count of 2.0 million fish is 27% above the escapement range for even year pink salmon.

Common property seine openings took place in every district except Northwestern District. Most seine harvest took place in those districts with high concentrations of enhanced fish. Late arrival of PWSAC hatchery returns put increased pressure on wild stocks. Fishing periods were allowed if aerial survey information indicated a surplus would be available. In general, pink salmon fishing periods occurred every two to three days during the last two weeks in July. The state vessel, *R/V Montague*, arrived in Southwestern District on July 22 and started collecting pink salmon otoliths July 23. Otolith information was used to determine the percentage of hatchery fish contributing to the pink salmon run in Southwestern District. Commercial fishing for pink salmon in Southwestern District began on July 18 as an assessment of pink salmon run strength. *R/V Montague* continued to sample otoliths from pink salmon entering Southwestern District until August 7 at which time the majority of the fish sampled were of hatchery origin. Using *R/V Montague* for sampling the stock composition and using the common property fleet to occasionally assess the abundance has worked well in judging timing and strength of wild and hatchery stock returns in western PWS.

Effective August 30, regulation 5AAC 39.325 regarding full retention of salmon taken in a commercial fishery was put into effect. Accordingly, the Prince William Sound commercial purse seine fishery in all affected districts closed at 12:00 AM, Thursday, August 30 and reopened immediately at 12:01 AM the same day with full retention of all salmon species required.

Eastern District

VFDA began harvesting their corporate escapement on June 23 at Solomon Gulch Hatchery using nine seine boats. The 2001 pink salmon revenue goal for VFDA was \$2.7 million. Based upon their sales contract with Peter Pan Seafoods and Bear & Wolf Seafoods, VFDA needed to harvest approximately 14.5 million pounds of pink salmon to meet their revenue goal. Initial harvests were tracking the anticipated run entry curve for a 10-11 million pink salmon return, and the average weight of pink salmon being harvested was approximately 3.5 pounds. The percentage of female pinks in the sales harvest at that time was roughly 25%, indicating that the return was running about on time, but was larger than forecast. A wild stock pink and chum salmon harvest occurred on June 22 in Eastern District excluding Port Valdez and Valdez Arm. A total of 71,560 pink and 9,894 chum salmon were harvested during this 12-hour period. Even though the Valdez portions of the district remained closed, approximately 28% of the pink salmon harvest came from hatchery production. The first commercial common property fishery targeting the VFDA pink salmon return occurred on July 3 as VFDA achieved 30% of its revenue goal on July 2. A total of 638,953 pink salmon (99% hatchery production) were harvested in a 12-hour period with nearly all the effort targeting the hatchery return.

VFDA continued corporate sales harvesting from July 3 through July 6 concurrently with commercial common property fishing periods. Early season common property fishery openings occur every other day but because fishing effort was not as great as expected, openings were daily and in conjunction with cost recovery until July 1 when effort increased. The third 12-hour opening on July 4 resulted in a harvest of 406,133 pink salmon by 23 permit holders. Otolith samples indicated that 100% of the catch was hatchery produced. The next common property open periods were on July 5 and July 6 for 12 hours each, after which common property seine openings were for 12 hours every other day through August 15. The common property fleet began to target hatchery as well as wild stocks on the July 20 open period, as seen from the dispersion of the fleet throughout the district and the otolith recoveries, which indicated that 50% of the harvest was from wild stocks. Surplus hatchery pink salmon were available inside Port Valdez, as VFDA had completed their cost recovery operation on July 23. Based on aerial escapement data, wild stock escapement remained strong for this entire period with some exceptions for specific systems. Salmon Harvest Task Force (SHTF) markers were used in many bays to provide a larger sanctuary area to protect arriving wild stock pink salmon and provide an adequate buffer to allow fishing to continue in the district. On August 16 it was determined that wild stock escapements to Port Fidalgo, Port Gravina, and Valdez Arm were lagging and that the district would remain closed pending an aerial survey as wild stock run entry slowed. The next fishing period occurred on August 19 with extensive use of SHTF markers to protect needed wild stock escapements. Following the August 19 fishing period and subsequent aerial survey that indicated lower than desired escapement, the district remained closed until the management priority switched to coho salmon. An aerial survey conducted after the August 17 fishing period indicated that the pink salmon escapement into Eastern District streams was approximately 15% below expected for that date. Pink salmon were still arriving, but at a slower rate as indicated by the August 19 catch of approximately 84,000 pink salmon (85% wild stock origin). The district closed for the season on September 27 with over 16.5 million salmon caught by the common property fleet.

Southeastern District

Southeastern District commercial seine harvest was managed so that open fishing periods were concurrent with open periods in Eastern District. The ability to open large areas in PWS on the same day at the same time effectively spread the fleet out preventing potential overharvest of salmon in one district. If wild stock

salmon escapement in other districts in PWS were close to anticipated numbers at the time, then they too were opened concurrently with Eastern and Southeastern Districts to further disperse effort.

Wild stock chum salmon escapements in Port Etches streams in Southeastern District were above the anticipated number from the very first aerial survey. When the first survey occurred on July 9, the number of chum salmon counted in streams was well above anticipated for that date with concentrations of additional chum salmon holding in nearby closed waters. The first fishing period occurred on July 12 in waters around the western shores of Hinchinbrook Island. Only 196 chum salmon were harvested in that 12-hour period. Nearly all of the harvest occurred in Port Etches. A second open period of the entire Southeastern District occurred on July 16 for 12 hours. Harvest for this period was the peak for the season with 8,654 chum salmon and 103,636 pink salmon caught by 11 permit holders. The second aerial survey was conducted on July 17 and again indicated a surplus of chum salmon. On July 18, the entire Southeastern District opened for a general salmon fishery as pink salmon escapement was near the expected level and chum salmon escapements were above expected levels at that time. Chum salmon harvest for this 12-hour period was 2,355 fish and pink salmon harvest was 65,852 fish. Commercial salmon openings were conducted every other day for 12 hours after this point until July 28 and from August 1 – 15. All fishing periods in Southeastern District were held concurrently with Eastern District openings, keeping effort relatively low. Subsequent aerial surveys indicated that escapements to Hinchinbrook Island were adequate for both chum and pink salmon but were lagging at times in Hawkins Island streams. Fishing area was restricted to either east or west of Middle Ground Buoy as necessary to promote escapement. Participation was generally light and varied from 1 to 13 permits.

Aerial surveys were curtailed because of bad weather from August 18 through September 8 at which time pink salmon run entry was for the most part complete. Areas of East and North Hawkins Island and Canoe Pass were slightly below anticipated escapement but overall Southeastern District was 92% above anticipated. The last open period of the season was on August 19 with one permit holder harvesting just over 5,000 pink salmon. Wild stocks accounted for 97% of the 516,377 pink salmon caught in Southeastern District, which closed for the season on September 27.

Southwestern District

The initial pink salmon opening in Southwestern District occurred in Point Elrington and Port San Juan Subdistricts on Wednesday, July 18 for 12 hours, which coincided with purse seine openings in three other districts. Harvest from this 12-hour opening was 200,468 pink salmon by twenty permit holders. Otoliths sampled from this catch indicated that 43% were of wild stock origin and Solomon Gulch Hatchery contributed 54%. While the high percentage of Solomon Gulch Hatchery pink salmon made it attractive to open the fishery again, it was determined that this hatchery component was likely declining and that any subsequent opening would likely take a larger percentage of wild stocks. Fish and Game's research vessel, *Montague* started recovering otoliths from pink salmon entering the Southwestern District on July 23. These samples indicated that 40% of the fish entering PWS through the district were wild stock origin, the VFDA component had indeed fallen to 24%, and the PWSAC component was 36%. Since one vessel could not indicate the volume of fish entering the district, a common property fishery was allowed. The Point Elrington and San Juan Subdistricts were opened for a 12-hour period on July 26. Thirty-seven seine boats fished in the Southwestern District during this opening, harvesting approximately 239,615 pink salmon. Otolith recoveries indicated that the wild stock component had fallen to 31%, with 17% VFDA hatchery fish and 52% PWSAC hatchery fish. The majority of the fleet remained in the Eastern and Southeastern Districts fishing VFDA enhanced stocks and wild stocks. Since the PWSAC contribution was increasing and the VFDA and wild stock components were decreasing in the harvest, a 12-hour opening was scheduled

for July 28, with a resulting harvest of 494,054 pink salmon. Wild stock and VFDA contribution had decreased again while the PWSAC component jumped to 65% of the catch. On July 30, Port San Juan and Point Elrington Subdistricts opened for a 12-hour fishing period. Approximately 725,300 pink salmon were harvested during this period. Otolith samples taken from this harvest indicated that 19% of the harvest was wild stock, 80% came from PWSAC hatcheries, and only 1% came from VFDA. With PWSAC stocks increasing quickly, another 12-hour period was scheduled for August 1 in Port San Juan and Point Elrington Subdistricts. Approximately 490,000 pink salmon were caught, of which 14% were of wild stock origin. An aerial survey on August 1 indicated that the district was 39% below the expected escapement. The district did not open again until August 7 to allow escapement to catch up. Otolith samples taken by *R/V Montague* on August 4 indicated that the PWSAC hatchery component of the pink salmon entering PWS was 86% and wild stocks were at 12%. PWSAC's cost recovery efforts at the AFK Hatchery were slowly improving. During a 12-hour fishing period on August 7, 56 permit holders harvested approximately 433,000 pink salmon. Otolith samples indicated that wild stock pink salmon had increased to 18% of the harvest while cost recovery at AFK Hatchery had begun to fall. An aerial survey on August 7 indicated that the cumulative pink salmon escapement into district streams was about 15% below expected with bay counts 54% less than expected. The percentage of females in cost recovery fish at AFK Hatchery was 11.4%, indicating that the return was still in the early stages. With cost recovery catches falling off, the district remained closed to allow hatchery pink salmon to enter the terminal area. *R/V Montague* returned to Cordova on August 7, so run entry information was available only from the commercial fleet. It was anticipated that with no commercial fishing in the district, hatchery and wild stock returns would rapidly increase. PWSAC revised their hatchery forecast to 10.6 million on August 11 and projected that the revenue goal would not be met. By August 14, hatchery cost recovery was over 500,000 fish behind schedule at AFK Hatchery and wild stock escapement in Southwestern District was 8% behind overall with a 53% deficit in the bay counts. Female percentage at the hatchery was 45%, indicating that the hatchery run was now on time. Additional fishing time in the district would not occur until the wild stock escapement increased and not in the hatchery subdistrict until the cost recovery harvests caught up with the projected cumulative harvest. An aerial survey on August 21 indicated that the district was still 14% behind the wild stock pink salmon escapement anticipated for that date. Cost recovery at AFK Hatchery was still behind the projection and female percentage was at 58% again indicating that run timing was as expected. By August 24, PWSAC was projecting that they would meet their revenue goal based on the strength of the WHN Hatchery return and by August 29 had achieved 94% of that goal. Commercial fishing was resumed on August 30 for 12 hours in Point Elrington Subdistrict and on the east side of Knight Island where wild stock escapements were as expected. Harvest for this period was 27,569 pink salmon distributed among 6 permits. The next period was on August 31 for 12 hours in Port San Juan Subdistrict and for 84 hours in the AFK Hatchery THA and SHA. Subsequently, Point Elrington and Port San Juan Subdistricts were opened for 60 hours on September 1 and again on September 4 for an additional 60 hours. Catch from August 31 to September 3 was over 385,000 pink salmon by 17 permit holders. During the September 4 period, effort was down to 3 permit holders and catch decreased to 70,000 pink salmon. This final harvest period was primarily for roe recovery. The district closed for the season on September 27 with over 3,400,000 salmon caught by the common property fleet.

Northern District

Northern District open periods were always concurrent with other districts in order to disperse the commercial fishing effort. The first open period was on July 12 for 12 hours in waters of Wells Bay targeting chum salmon. Perry Island Subdistrict did not open. By regulation, it can only open if Esther Subdistrict is open when managing for PWSAC cost recovery. Two purse seine boats participated in the first period harvesting 1,150 pink and 6,249 chum salmon. Otolith samples indicated that 82% of the pink

salmon harvest was from Solomon Gulch Hatchery. Six additional 12-hour periods in Wells Bay were held during July with one to three permits participating. An aerial survey conducted on July 23 indicated that wild stock pink salmon escapements were 60% below expected. PWSAC started cost recovery at Cannery Creek Hatchery on July 30 and were behind their projections from the outset. An aerial survey of Eaglek Bay and Unakwik Inlet on August 2 indicated that the western end of the district was 70% ahead of the anticipated wild stock pink salmon escapement. The sinking of the tender Windy Bay, and the subsequent fuel spill near the entrance to Unakwik Inlet prevented any commercial fishery in this area from taking advantage of the surplus wild stocks. The next complete aerial survey on August 8 indicated that wild stock escapements were approximately 30% below anticipated in Columbia, Long, and Wells Bays, and Unakwik Inlet. However, Eaglek Bay was some 400% above expected. Fuel sheen from the tender Windy Bay was seen in Eaglek Bay on the evening of August 6, and cleanup efforts were ongoing in this area. Consequently, no commercial fishing was allowed. A partial survey of the eastern half of the Northern District on August 13 indicated that Columbia and Long Bays were 87% above the anticipated wild stock escapement. A surplus of chum salmon was also seen in Long Bay on this survey. On August 19, the eastern portion of the district was opened for 12 hours to harvest wild stock pink and chum salmon. Seventeen permit holders harvested a total of 84,515 pink and 133 chum salmon. An aerial survey of district streams on August 23 indicated that escapements were 30 to 40% below expected in Long, Columbia, and Wells Bays and Unakwik Inlet, and well above expected in Eaglek Bay. PWSAC ended cost recovery operations at Cannery Creek Hatchery on August 28 with a total harvest of 1.1 million pink salmon. The next 12-hour fishing period occurred on August 30 including Perry Island Subdistrict and employed SHTF markers to protect late-arriving wild pink salmon. Cannery Creek Hatchery THA and SHA remained closed. A total of 16 boats fished during this period and harvested approximately 161,000 pink salmon. Effort fell to 6 permit holders for a similar 12-hour commercial period on August 31 and the total harvest was 31,736 pink salmon. There were four additional periods in Northern District during September with one to three participants primarily for roe recovery. The last three periods were in the Cannery Creek Hatchery THA and SHA only. The district closed for the season on September 27 with over 400,000 salmon caught by the common property fleet.

Montague District

All of the pink salmon harvest in Montague District through July 24 occurred in Port Chalmers Subdistrict incidental to directed harvest of hatchery enhanced chum salmon returns. A total of 142,624 pink salmon were harvested from this subdistrict prior to July 24. Otolith samples taken from pink salmon caught during this period indicated that most of the harvest was of wild stock origin. The first aerial survey of the district was flown on July 19 and indicated that escapement was 50% below anticipated with south Montague Island streams showing stronger counts than north Montague Island streams. A survey on August 1 showed a significant influx of pink salmon had occurred, bringing the combined counts 20% above the anticipated counts. The first district-wide fishing period occurred on August 3 for 12 hours, attracting 36 permit holders who harvested 75,000 pink salmon. Otolith samples taken from pink salmon caught during this period indicated that 65% of the harvest was of wild stock origin and 22% was from AFK Hatchery. Commercial salmon openings were conducted every other day for 12 hours after this point from August 5 – 15 and were concurrent with openings in other districts. Montague District received more effort than in typical years during this period because the hatchery run corridors were not open. During this series of August district-wide openings, effort ranged from 8 to 40 permit holders and the total harvest was 664,386 pink salmon. Otolith samples taken from pink salmon caught during these periods indicated that the AFK Hatchery component stayed roughly between 20 and 30%, but wild stocks accounted for 30 to 70%. It was not until an aerial survey on August 14 that the wild stock escapement in this district began to show the effects of this increase in fishing pressure. While combined counts for the district were over

50% above the anticipated, northern Montague Island streams were below the expected and bay counts were also lagging. Commercial fishing in the district was not reopened again until August 30 in order to allow late-timed wild pink salmon to escape. A 12-hour period on August 30 attracted no participants, as did a 60-hour period on September 1. This district was closed for the season on September 27.

Coghill District

Coghill District became a dual gear area on July 21, allowing purse seiners access to enhanced pink salmon returning to Wally H. Noerenberg (WHN) Hatchery and wild pink salmon returning to the district's streams. This season's sockeye salmon return to Coghill River was strong and commercial gillnet fishing was allowed to harvest the excess sockeye salmon throughout the return. The midpoint of the escapement goal range for sockeye salmon for Coghill Lake was met on July 9. Aerial survey information indicated a strong pink salmon return in July while most of the systems in Port Wells and Esther Passage were still below their expected escapement levels. As a result of the sockeye and pink salmon run strengths in Coghill River, the district north of the latitude of Point Pakenham was opened on July 21 for 84 hours and again on July 26 for 60 hours. Esther Subdistrict was also opened for 12 hours on July 22. All commercial purse seine fishing periods in this district were concurrent with purse seine openings in other areas in PWS. Pink salmon catches for the two periods were 43,000 for the July 21 period and there was no participation for the July 26 period. An aerial survey on July 28 indicated that most of the streams on the west side of Port Wells were below anticipated pink salmon escapement levels and the combined district was 22% below anticipated. The district north of Point Pakenham was opened again on August 6 for 60 hours to harvest Coghill River stocks with another 12-hour period in Esther Subdistrict on August 7. Forty-five permit holders harvested a total of 383,000 pink salmon. Hatchery stocks accounted for 96% of the catch. During this time frame, the cost recovery harvest at WHN Hatchery began to decrease, and fishing in Esther Subdistrict was curtailed to allow pink salmon to enter the hatchery terminal area. By August 11, when PWSAC revised their preseason forecast downward, catches were still not at the anticipated level for cost recovery at WHN Hatchery. An aerial survey on August 8 showed that Coghill District was still lagging behind the anticipated wild stock pink salmon escapement and another fishing period in the district was not anticipated until either the wild stock or hatchery runs improved. The focus of the PWSAC cost recovery shifted to WHN Hatchery as the runs at AFK and Cannery Creek Hatcheries continued to lag. The cost recovery harvest at WHN Hatchery did not show a clear upward trend until August 20, when it exceeded 250,000 and stayed at or near that level until August 25 when the catch dropped to 189,000 and continued to fall. On August 23, an aerial survey showed that combined escapement counts for the district were as expected with the exception of College Fiord and the west side of Port Wells. On August 25, PWSAC anticipated that they would achieve their cost recovery goal by the end of the month. As a result, commercial fishing was allowed in the district, excluding Esther Subdistrict and the hatchery THA and SHA for two, twelve-hour periods on August 30 and 31. SHTF markers were used on the west side of Port Wells to protect wild stock pink salmon. Participation (7 and 12 permits, respectively) and harvest (31,000 and 50,000 pink salmon, respectively) were relatively light and the hatchery component was 96%. Four additional periods were allowed in September and primarily targeted hatchery stocks in Esther Subdistrict. The last purse seine opening was on September 14 for 12 hours. By regulation, purse seine gear is legal gear in Coghill District while the harvestable surplus is predominately pink salmon by number. Coghill District reverted to gillnet gear only on September 17 and closed for the season on October 11.

Coho Salmon, Eastern District

Starting on July 29, the waters of Port Valdez were closed to protect coho salmon returning to Solomon Gulch Hatchery and to provide reasonable separation between the sport and commercial harvesters targeting the enhanced coho salmon return. Starting on September 4, two consecutive 12-hour open fishing periods with a 12-hour closure between them occurred in Port Valdez. This opening date was intentionally chosen to occur after Labor Day in order to clean up the remaining coho salmon near the hatchery after the sport fishing effort had diminished. These two open periods resulted in a harvest of 124,000 coho salmon. The purse seine fleet caught a total of 175,000 coho salmon in the Eastern District in 2001. Solomon Gulch Hatchery harvested nearly 22,000 coho salmon for cost recovery and used just over 1,500 for broodstock. The sport fish harvest of coho salmon was considered good by all accounts, but an actual number is not available although some estimates have ranged as high as 100,000 fish caught. Eastern District closed for the 2001 commercial fishing season on September 27.

Coho Salmon, Coghill District

The coho return to the WHN Hatchery was less than the 13.4 thousand forecast. PWSAC estimated the run size at 2,300 and was able to collect broodstock. There were six gillnet only periods in Coghill District targeting coho salmon in response to interest voiced by members of the fleet. There was no harvest in any of these periods. Recent hatchery remodeling resulted in a change to the coho salmon rearing program. Previously, coho salmon fingerlings were reared in a poor quality pond, now rearing occurs in a more efficient and sanitary raceway system. Total rearing capacity was reduced with the hope that the larger, healthier smolt will have an improved survival resulting in nearly the same number, or more, returning adults. Small returns in the past two years did not allow for sufficient broodstock to be collected to meet the egg-take goal for this species so smaller adult returns are expected in the next few years.

Conclusions and Recommendations

The department is currently working with fishing industry representatives to explore management options that can maximize utilization of the pink salmon resource while providing for corporate and wild stock escapement needs. After accounting for the wild stock escapement index, hatchery broodstock, and the commercial fishery, 2001's total return estimate for pink salmon is approximately 38.20 million fish. Few surplus hatchery produced pink salmon were remaining at the end of the season despite this being the sixth largest pink salmon harvest in PWS history. The pink salmon return was average in its arrival time with the peak common property catches occurring on July 10. In most years when pink salmon stocks around the state are high, the processing capacity in PWS will begin to diminish by August 20. The common property fleet harvested approximately 1.0 million pink salmon after August 20, which was well below the norm. Poor returns to AFK and Cannery Creek Hatcheries coupled with cost recovery efforts taking the majority of the late return, were responsible for the weak late-season catches. It was not necessary to limit harvests to match processing capacity during the peak of the return. Processing capacity available in PWS and other areas of the state was able to handle the daily volume. During years with large harvests statewide, pink salmon harvests in other regions clearly can have an influence on the conduct of the pink salmon fishery in PWS. The common property fleet harvested approximately 488,000 excess pink salmon in the Cannery Creek and AFK Hatchery SHA's after the hatchery egg takes were complete. A market is developing for pink salmon roe. By utilizing the carcass it becomes legal to extract the valuable roe. Some surplus will occur every year as estimating the number of fish available for hatchery broodstock is not precise. Ideally, this surplus would be less than 500,000 pink salmon for all hatcheries combined.

The department hopes to improve pink salmon utilization by broadening its ability to use otolith marks for improved forecasting and inseason management. With otolith-marked fish, the risks to wild stocks associated with a harvest decision can be evaluated prior to a fishery being announced. Post-fishery analysis can be used to further refine management. Stream escapements, commercial harvests, and migration routes can all be accurately characterized using otolith marks. As a management tool, otolith marks offer a great deal of useful information about wild and hatchery pink salmon interactions. Appendix F.8. provides the sound-wide pink salmon contribution to the commercial catch based on otolith marks.

Reliably forecasting the magnitude of the PWS return can assist local managers, hatchery operators, and the fishing industry in sufficiently preparing for the coming salmon season. The commercial harvest of 22.3 million pink salmon in 2001 exceeded the forecasted harvest by 5.0 million fish. Reliable statewide forecasts can help the entire industry identify and address if and where regional processing shortfalls are likely to occur. Traditional markets and outlets may be unwilling or unable to absorb consistent annual harvests of 100 million pink salmon from Alaska. This year the statewide harvest was over 100 million pink salmon but with the weak, late hatchery run in Prince William Sound, processing was not a problem. The issue of harvesting the later returning pink salmon will still need to be addressed locally and statewide when harvests return to the higher levels. At that time, post season surpluses comprised of late timed pink salmon are likely to occur.

2001 PRINCE WILLIAM SOUND AND COPPER RIVER SUBSISTENCE FISHERIES

Subsistence and personal use harvests (Appendices G.1 – G.6) continue to be minor in comparison to the commercial salmon harvest in the Prince William Sound Management area. The largest subsistence fisheries occur on the upper Copper River, upstream of regulatory markers above Haley Creek to the Copper River's confluence with the Slana River. A major change occurred in this fishery for the 2000 season. At the 1999 Prince William Sound Board of Fisheries meeting, the board made a positive Customary and Traditional Use finding for salmon stocks in Chitina Subdistrict on the upper Copper River. This resulted in the Chitina Subdistrict personal use fishery changing to a subsistence fishery. As a result, there are currently two subsistence fisheries in Upper Copper River District, Glennallen and Chitina Subdistricts. Alaska residents can participate in only one subsistence fishery in the Copper River drainage (Glennallen or Chitina Subdistrict).

In Prince William Sound and Copper and Bering River Districts, commercial permit holders may withhold a portion of their commercial catch for home use. Since 1994, all chinook salmon in Copper and Bering River Districts that are harvested, but not sold in the commercial fishery must be reported on a fish ticket. In 2001 the harvest of chinook salmon retained for home use was 938 and 2,113 sockeye salmon were also kept for home use.

The Prince William Sound Area includes all waters of Alaska between the longitude of Cape Fairfield and the longitude of Cape Suckling. Subsistence fishing permits are not required for marine finfish other than salmon. Herring spawn on kelp may be taken for subsistence purposes as described in 5 AAC 01.610(d)(1)(2). Herring spawn on kelp may be taken from above water from March 15 through June 15. Herring spawn on kelp may be harvested using dive gear only during periods open for the wild herring spawn-on-kelp commercial fishery. Lingcod may be taken for subsistence purposes only from July 1 through December 31. Herring, rockfish, and groundfish other than lingcod or rockfish may also be harvested for subsistence purposes in the Prince William Sound Area.

PRINCE WILLIAM SOUND AND LOWER COPPER RIVER

Boundary lines for Copper River District subsistence fishing are the same as for the commercial gillnet fishery. Subsistence fishing is allowed from May 15 until September 30. From May 15 until two days before the commercial opening of Copper River District, seven days a week. Once the commercial season has commenced, subsistence fishing is allowed only during commercial fishing periods or by emergency order. Within Copper River District, drift gillnets are the only legal gear and may have a maximum length of 50 fathoms with a maximum mesh size of 6 inches prior to July 15. In addition to the subsistence fishery, commercial fishermen may withhold a portion of their catch for home use. Any commercially caught chinook salmon not sold must be reported on a fish ticket.

In 2001, five subsistence permits were issued for Prince William Sound. All five permits were returned but none were fished. In Copper River District, 468 permits were issued in 2001, of which 288 were fished. A harvest of 826 chinook salmon and 3,072 sockeye salmon was reported from the 288 permits that fished.

The Batzulnetas subsistence fishery has relatively little effort. Between 1994 and 1996, as many as five permits were issued. In 2001 only one subsistence permit was issued for the fishery with a reported harvest of 55 sockeye salmon.

EASTERN AND SOUTHWESTERN DISTRICT SUBSISTENCE FISHERIES

Permitting for Southwestern and Eastern Districts subsistence areas began in 1988. Residents of both Chenega and Tatitlek are eligible for subsistence use permits in their respective areas. In 1991, a court ruling qualified all residents of Alaska for a subsistence permit in the Eastern and Southwestern Districts. Permit holders are allowed to fish in these areas from May 15 until two days before the first commercial fishing period. Once the commercial fishing season is established, subsistence fishing may occur only during commercial fishing periods. Two days after the closure of the commercial fishing season, subsistence harvesting is open to seven days per week fishing until September 30 in the Southwestern District and until October 31 in the Eastern District.

In 2001, 14 permits were issued for Eastern District and 8 permit holders reported fishing, harvesting a total of 114 sockeye, 230 coho, 60 pink, and 12 chum salmon. In Southwestern District, 16 permits were issued and 8 permit holders reported catching 2 chinook, 119 sockeye, 92 coho, 95 pink, and 146 chum salmon.

UPPER COPPER RIVER

GLENNALLEN SUBDISTRICT

Glennallen Subdistrict is that portion of the mainstem Copper River upstream of the McCarthy-McCarthy Bridge to the mouth of the Slana River. This subdistrict is open June 1 through September 30 for continuous fishing. Fish wheels and dip nets are legal gear. During the 1996 Board of Fisheries meeting, the Copper River District Salmon Fishery Management Plan was modified and a range of 60,000-75,000 subsistence salmon was established to accommodate the variability in harvest levels and allow for increased harvests between board cycles. Participants are allowed one permit per household and the permit identifies the gear type to be used. Total annual harvest cannot exceed 500 salmon for a household of two or more and 200 salmon for a household of one. No more than 5 chinook salmon may be taken by each dip net permit holder. Caudal fins must be clipped from all salmon that are harvested. Subsistence permits with completed harvest information are required to be returned to the department by September 30 of each year.

Since 1996, an average of 753 fish wheel and 315 dip net permits were issued. Harvest and effort in this subdistrict has been increasing over time. The average number of dip net permits is up 72% over the previous five-year period while the average number of fish wheel permits has increased by 24%. An average of approximately 70,500 salmon was harvested during the last 5 years compared to an average of 53,700 salmon during 1992 to 1996 seasons. Sockeye salmon dominate the harvest with approximately 95% of the catch, followed by chinook and coho salmon.

The 2001 chinook harvest for the subdistrict was 3,522 compared to a record harvest of 4,856 set in 2000. Reported harvest of 82,635 sockeye salmon was above the 1999 to 2001 average of 73,167 sockeye salmon.. From the permits received in the past, it appears approximately 25% of the chinook salmon subsistence harvest is landed by 2% of the permit holders, indicating that some individuals effectively target chinook salmon for subsistence uses.

CHITINA SUBDISTRICT

Chitina Subdistrict is the portion of the mainstem Copper River from a marker just above Haley Creek to the downstream edge of the McCarthy-McCarthy Road Bridge. The Alaska Board of Fisheries changed this fishery from a personal use fishery to a subsistence fishery in 1999. Regulations for the Chitina Subdistrict subsistence fishery remained similar to the Copper River Personal Use Salmon Dip Net Fishery regulations with three exceptions. The three exceptions included an adjustment to the annual bag limit, a maximum harvest level of wild stock sockeye salmon of 85,000-130,000, and permit holders are no longer required to possess a sport fishing license. Annual bag limits will continue to be 30 salmon for a household of two or more, and 15 salmon for a household of one, only one fish may be a chinook salmon. The Board of Fisheries determined that reducing the bag limit of chinook salmon from four in the personal use fishery to one in the subsistence fishery, provided for a reasonable opportunity to harvest a chinook salmon, but would also maintain chinook salmon harvests at historic levels. Based upon recent harvests the board determined that 100,000-150,000 salmon were necessary for subsistence needs to be met for the Chitina Subdistrict fishery. This number included contributions of hatchery fish, and after this contribution was subtracted, resulted in an 85,000-130,000 wild stock harvest level.

5 AAC 01.647 COPPER RIVER SUBSISTENCE SALMON FISHERIES PLANS requires the fishery to be opened between June 1 and June 11 depending on the strength and timing of the sockeye run. In 2001, the dip net fishery was opened by emergency order on June 10 for a 12-hour fishing period. Fishing appeared to be slow during the first period, which was followed by an 80-hour period on June 15 and another 80-hour period on June 22. On June 28, the department announced that the fishery would remain open continuously through September 30, unless closed by emergency order. The fishery remained open for the remainder of the season as expected.

Reported harvest for the Chitina Subdistrict subsistence fishery in 2001 was 3,104 chinook, 133,464 sockeye, and 2,584 coho salmon. There were 9,462 permits issued for the subdistrict in 2001 (Appendix G.5).

BATZULNETAS

In 1987, an interim subsistence fishery was provided by emergency regulation at Batzulnetas to settle the United States District Court case of John vs. Alaska. The Batzulnetas fishery encompasses all waters from the regulatory markers near the mouth of Tanada Creek and approximately one-half mile downstream from that mouth and in Tanada Creek between ADF&G regulatory markers identifying the open waters of the creek. The fishery may begin after June 1. Fishing periods during the month of June are one 48-hour

period per week. Beginning in July fishing periods are increased to 84 hours per week until September 1 when the fishery closes.

In 1987, the fishery was conducted near the mouth of Tanada Creek near the historical village site of Batzulnetas. Eight permits were issued in that year to individuals, or family groups, from Mentasta and Dot Lake and the fishery was conducted during July and August. A total harvest of 22 sockeye salmon was reported in 1987. The Board of Fisheries reviewed the fishery before the 1988 season and set seasons, eliminated the quota, and provided for additional gear types. Permits can be issued throughout the season and must be completed and returned to the department by September 30. No permits were issued for this fishery between 1988 and 1992 and 1996. Between 1993 and 2001 the average harvest was 211 sockeye salmon. From 1999 to 2001 only one permit was issued each year with a harvest of 55 sockeye salmon for each year.

2001 PRINCE WILLIAM SOUND HERRING FISHERIES

PRESEASON OUTLOOK AND HARVEST STRATEGY

The Prince William Sound (PWS) herring management area encompasses all coastal waters of the Gulf of Alaska between Cape Suckling and Cape Fairfield, extending offshore to 59° N. latitude. Five herring fisheries occur during the year.

During the spring season, two fisheries target herring for sac roe using either seine or gillnet gear. Two spawn-on-kelp fisheries harvest either naturally occurring spawn on kelp or spawn on kelp suspended in pounds. In the fall, a food/bait fishery occurs. Of the five herring fisheries, only the wild spawn-on-kelp and the food/bait fishery are open entry fisheries.

For management purposes, all herring fisheries target on what is treated as a single major stock of herring that spawns during the mid-April to early May period. At the 1994 BOF meeting in Cordova, the minimum spawning biomass threshold was raised from 8,400 to 22,000 tons for the PWS stock. No fishery may be opened if the estimated spawning biomass is below this level. The 22,000-ton threshold is 25% of the potential spawning biomass from an unfished stock. The higher threshold will establish manageable harvest levels while reducing the risk of driving the population to low abundance through overfishing. When the stock size is between 22,000 and 42,500 tons, the PWS Herring Management Plan (5 AAC 27.365) allocates the projected available surplus to the five fisheries based on a zero to 20 % harvest rate. The maximum harvest rate of 20% is applied when stock size is greater than 42,500 tons. The sac roe seine fishery is allocated 58.1% of the available surplus; the food/bait fishery 16.3%; the pound spawn-on-kelp fishery 14.2%; the wild spawn-on-kelp fishery 8.0 %; and the gillnet sac roe fishery is allocated 3.4%.

During the December 99 BOF meeting several regulatory changes to PWS herring fisheries took place. Two of the new regulations could affect all five herring fisheries. New regulations were created that will standardize PWS buyer, buyer's agent, or fisherman's fish ticket reporting requirements with those in other parts of the state and closed Tatitlek Narrows to all commercial herring fishing. The BOF also created new regulations that would increase the legal depth of a purse seine used in the fall food/bait fishery and specified herring spawn-on-kelp pound marking requirements.

There are 104 permanent and 2 interim purse seine permits in Prince William Sound. Purse seines can be 150 fathoms in length and 1000 meshes deep. Mesh size is not regulated. There are 24 gillnet permits in Prince William Sound. Gillnets are limited to 100 fathoms in aggregate length and 120 meshes in depth. Mesh size is regulated from a minimum of 2 1/8 inches to a maximum of 3 inches. Historic sac roe harvest is presented in Appendix H.4. There are 128 herring pound permits in Prince William Sound. Seine specifications for the closed pound fishery are the same as the sac roe seine fishery. Open and closed pound fisheries can be managed separately or in combination. The size of the pound is limited to 2,000 square feet at the surface and walls of a closed pound cannot exceed 30 feet in depth. The herring allocation for this fishery is divided among the number of permit holders and the department establishes the maximum number of blades of kelp a permit may maintain in the pound. The historic pound spawn-on-kelp fishery is given in Appendix H.7. The wild spawn-on-kelp fishery, utilizing native Prince William Sound kelp, occurs after a major spawning event takes place on marketable species of kelp. Wild kelp is taken by divers or by hand picking depending on the type of kelp available for harvest and market demand. The historic wild spawn-on-kelp fishery harvest is given in Appendix H.6. The food/bait fishery season may run from October 1 through January 31; however, industry concerns over product quality usually results in a delay of the season's opening date until November. Purse seine size is not restricted for the food/bait fishery and trawling or gillnetting may also occur. The historic food/bait fishery harvest is given in Appendix H.9. Historic fishery harvest values for all Prince William Sound fisheries are presented in Appendix H.13.

2001 SEASON SUMMARY

In September of 2000, the department canceled the 2000 food/bait fishery, and all 2001 spring herring fisheries including the seine and gillnet sac roe harvests, the spawn-on-kelp in pound fishery, and the wild spawn-on-kelp harvest. By regulation, the Prince William Sound herring food/bait fishery is scheduled to open on October 1 of each year. Based on observed spawning biomass, miles of spawn, hydroacoustic surveys, and the spawning population's age structure in 2001, it was anticipated that the 22,000-ton minimum spawning biomass threshold needed to conduct a commercial fishery would not be reached for the 2001-2002 herring year. The peak aerial biomass estimate in 2001 was 1,075 tons compared to 1,610 tons in 2000, 6,366 tons in 1999, and 13,817 tons in 1998. The preliminary hydroacoustic biomass estimate of adult herring from Spring 2001 was 7,022 tons +/- 1,778. An estimate of the 2001-2002 spawning biomass based on the Age Structure Analysis (ASA) model was not done.

Aerial surveys were then conducted from March 20 through April 26 to estimate biomass and document spawning activity. A total of 16.02 miles of spawn were observed this season with a majority of the spawn seen in the Eastern District. In comparison, there were 19.5 miles of spawn documented in 2000, 25.4 miles in 1999, 38.7 miles in 1998, 42.7 miles in 1997, and 27.2 miles in 1996. In general, from aerial observations it appears that the spawning biomass at Montague Island is less than in previous years. A total of 5.01 miles of spawn were documented in Port Gravina, 1.01 miles in Port Fidalgo, 0.25 miles in Tatitlek, 1.0 mile in Sheep and Simpson Bay, 5.25 miles at Montague Island and 3.5 miles of spawn were seen in Fairmont Bay. Peak spawning occurred on April 19 when 235 tons of herring were observed. Some additional spawning may have occurred on non-survey days and on days with inclement weather that precluded flying. The peak aerial biomass estimate for 2001 of 1,075 tons was distributed as follows: the Southeast Shore area had 97 tons; the Northeast shore had 380 tons; the North Shore had 40 tons; and the Montague Island area had 558 tons. No spawning activity was observed in the Naked Island area. There is a recognized imprecision in estimating biomass using aerial surveys, primarily because not all herring are visible from the air at all times. This is especially true in the Montague Island area where a majority of the PWS spawning biomass has been located in the past.

Size and age composition samples were collected at both Montague Island and from the Eastern District during the spring of 2001. At Montague Island, age-4, age-6, and age-7 year classes predominated the spawning biomass. Average weights ranged from 135 grams to 149 grams. The current hypothesis is that the 1996 year-class may have suffered high mortality from VHS during the summer of 1998. This could explain, in part, the overall low abundance seen during the spring of 1999, 2000 and 2001. Size and age composition samples from eastern PWS had consistently smaller fish with slightly different predominant age classes in the spawning population. Average sizes for samples collected at St. Matthews Bay ranged from 124 grams to 149 grams. Age-4 and age-6 year classes predominated these samples with age-7 being the third most prevalent year class.

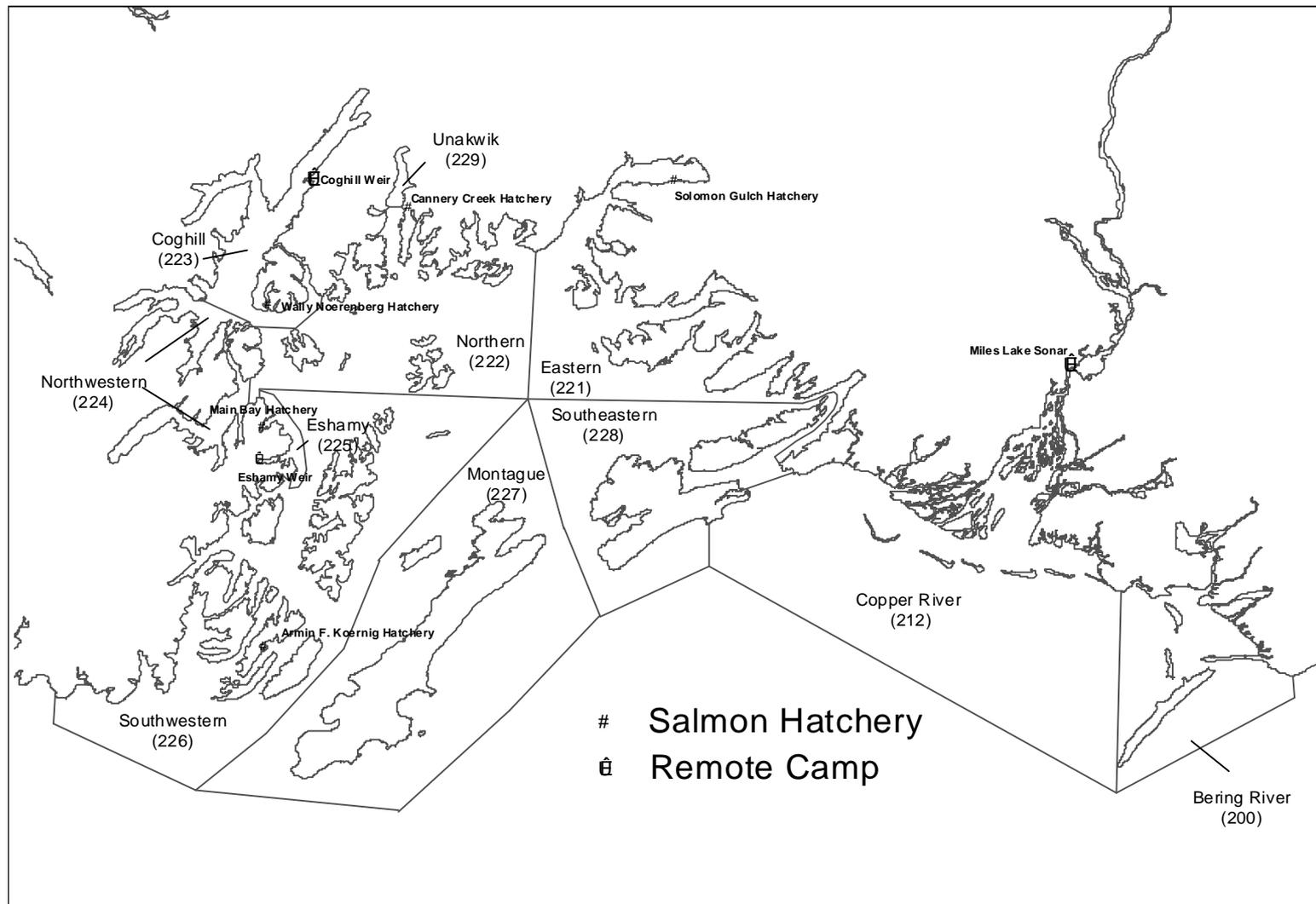
2001-2002 HERRING SEASON OUTLOOK

Given the PWS herring spawning population's current size and age structure, a commercial harvest is not anticipated in 2002. Consecutive years of low recruitment will further delay the recovery of the herring population to a sustainable size that is capable of supporting a commercial harvest. The department will continue to monitor the PWS herring biomass to assess growth and recruitment. An ongoing disease study will continue to examine the incidence of VHS in the PWS herring population.

LITERATURE CITED

- Fried, S.M. 1994. Pacific salmon spawning escapement goals for the Prince William Sound, Cook Inlet, and Bristol Bay areas of Alaska. Alaska Department of Fish and Game, Commercial Fisheries Division, Special Publication No. 8, Juneau.

APPENDIX A: PRINCE WILLIAM SOUND AREA WIDE INFORMATION



Appendix A.1. Prince William Sound Area showing commercial fishing districts, salmon hatcheries, weir locations, and Miles Lake sonar camp (Figure).

Appendix A.2. Commercial salmon harvest by species, gear type and district in the Prince Sound Management Area, 2001.

District ^a	Effort	Chinook	Sockeye	Coho	Pink	Chum	Total
Eastern	144	154	19,885	174,782	16,050,235	258,569	16,503,625
Northern	37	0	314	204	404,895	9,558	414,971
Coghill	66	8	2,398	356	648,335	3,802	654,899
Southwestern	113	48	95,927	7,084	3,072,848	229,670	3,405,577
Montague	98	324	3,631	14,956	807,010	442,317	1,268,238
Southeastern	28	20	849	952	534,538	44,493	580,852
Purse Seine	152	554	123,004	198,334	21,517,861	988,409	22,828,162
Bering River	15	76	5,450	2,715	0	0	8,241
Copper River	504	39,524	1,323,577	251,473	9,387	2,789	1,626,750
Unakwik	9	3	2,298	2	4	44	2,351
Coghill	288	216	87,539	3,185	308,707	1,142,449	1,542,096
Eshamy	294	47	499,972	10,423	367,588	21,316	899,346
Drift Gillnet	535	39,866	1,918,836	267,798	685,686	1,166,598	4,078,784
Eshamy	32	25	176,060	1,006	127,737	7,057	311,885
Set Gillnet	32	25	176,060	1,006	127,737	7,057	311,885
Solomon Gulch	1	0	0	21,781	3,970,310	0	3,992,091
Cannery Creek	1	0	0	0	1,089,998	0	1,089,998
Wally Noerenberg	1	0	2,762	0	4,937,169	932,435	5,872,366
Main Bay	1	0	40,311	0	7,396	0	47,707
Armin F. Koernig	1	0	0	0	2,909,441	3,593	2,913,034
Hatchery ^b	5	0	43,073	21,781	12,914,314	936,028	13,915,196
ADF&G Test Fisher	1	16	14	0	0	0	30
Donated Fish	17	0	0	5,141	0	0	5,141
Confiscated Fish	5	0	110	75	926	1,702	2,813
Total	23	16	124	5,216	926	1,702	7,984
<hr/>							
Prince William Sound							
Total		40,461	2,261,097	494,135	35,246,524	3,099,794	41,142,011

^a Does not include salmon taken for home use as reported on fish tickets.

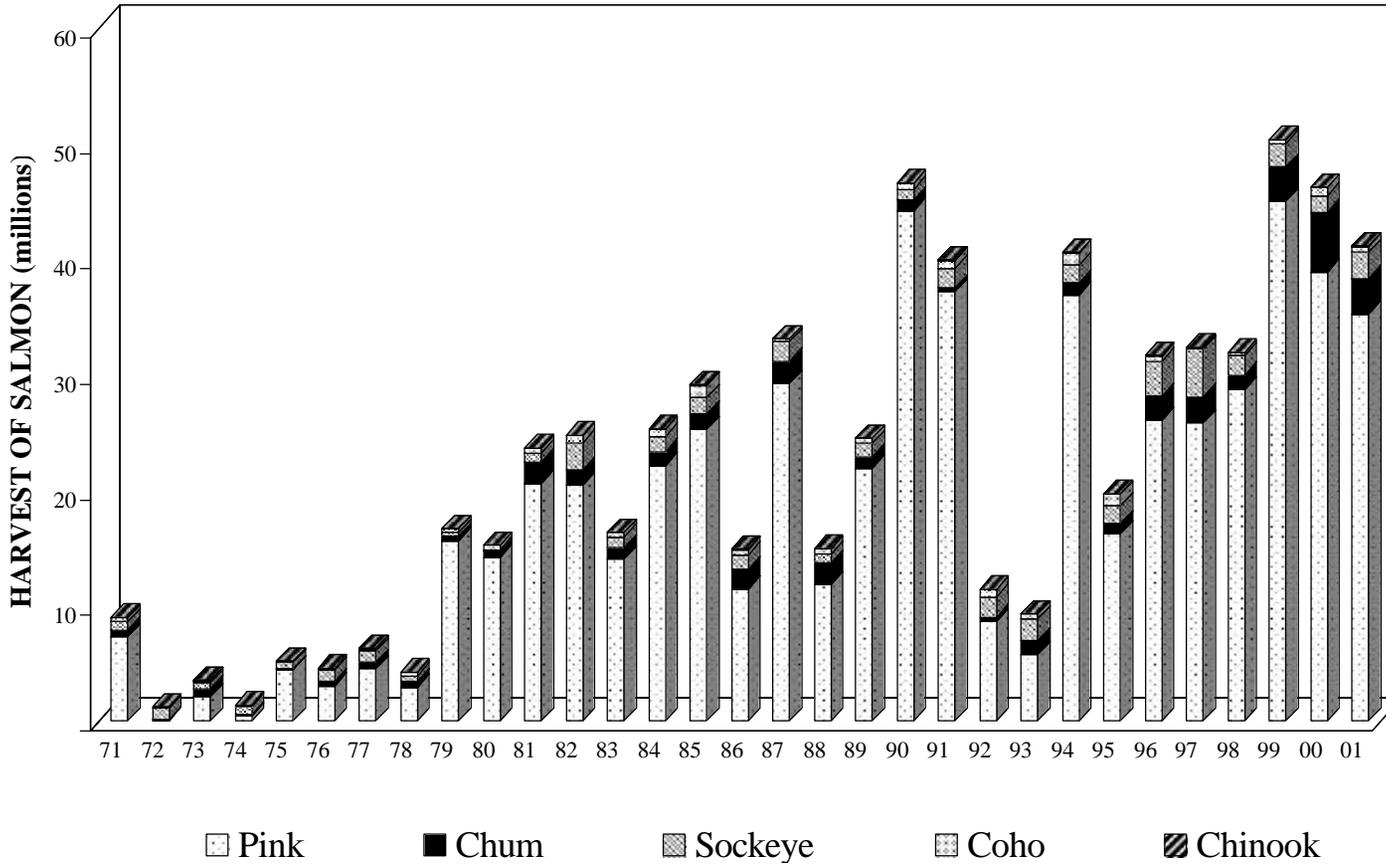
^b Hatchery sales for hatchery operating costs.

Appendix A.3. Commercial salmon harvest by species from all gear types,
Prince William Sound Area, 1971 - 2001.

Year ^a	Catch by Species					Total
	Chinook	Sockeye	Coho	Pink	Chum	
1971	20,142	741,945	327,697	7,312,730	579,552	8,982,066
1972	23,003	976,115	124,670	57,090	46,088	1,226,966
1973	22,638	473,044	199,019	2,065,844	740,017	3,500,562
1974	20,602	741,340	76,041	458,619	89,210	1,385,812
1975	22,325	546,634	84,109	4,453,041	101,286	5,207,395
1976	32,751	1,008,912	160,494	3,022,426	370,657	4,595,240
1977	22,864	943,943	179,417	4,536,459	573,166	6,255,849
1978	30,435	505,509	312,930	2,917,499	489,771	4,256,144
1979	20,078	369,583	315,774	15,615,810	349,615	16,670,860
1980	8,643	208,724	337,123	14,161,023	482,214	15,197,727
1981	20,782	784,469	396,163	20,558,304	1,888,822	23,648,540
1982	47,871	2,362,328	623,877	20,403,423	1,336,878	24,774,377
1983	53,879	908,469	365,469	13,977,116	1,048,737	16,353,670
1984	39,774	1,303,515	609,484	22,119,309	1,229,185	25,301,267
1985	43,735	1,464,563	1,025,046	25,252,924	1,321,538	29,107,806
1986	42,128	1,288,712	426,240	11,410,302	1,700,906	14,868,288
1987	41,909	1,737,989	175,214	29,230,303	1,919,415	33,104,830
1988 ^b	31,797	767,674	477,816	11,820,121	1,843,317	14,940,725
1989 ^b	32,006	1,175,238	424,980	21,886,466	1,001,809	24,520,499
1990 ^b	22,163	911,607	524,274	44,165,077	967,384	46,590,505
1991 ^c	35,355	1,734,544	641,854	37,135,561	352,321	39,899,635
1992 ^d	41,306	1,771,612	619,460	8,637,116	334,376	11,403,870
1993 ^e	32,005	1,851,133	445,612	5,761,097	1,186,365	9,276,212
1994 ^f	48,558	1,514,329	1,058,154	36,886,301	1,058,213	40,565,555
1995 ^f	67,083	1,523,464	992,798	16,221,493	864,245	19,669,083
1996 ^f	56,457	3,000,602	459,253	26,042,942	2,103,559	31,662,813
1997 ^f	52,482	4,163,074	83,113	25,836,563	2,227,190	32,362,422
1998 ^f	70,910	1,715,778	194,621	28,685,115	1,271,911	31,938,335
1999 ^f	63,434	2,035,293	244,754	45,003,656	2,989,255	50,336,392
2000 ^f	32,411	1,430,838	714,286	38,885,528	5,163,760	46,226,823
2001 ^f	40,461	2,261,097	494,135	35,246,524	3,099,794	41,142,011
Ten Year						
Average	50,000	2,074,067	545,391	26,909,537	1,755,120	31,334,114
(1991-00)						

- ^a Includes catches by all gear types and hatchery sales from the Eastern, Northern, Coghill, Unakwik, Northwestern, Eshamy, Southwestern, Montague, Southeastern, Copper River and Bering River districts.
- ^b Includes confiscated and educational special use permits. Also includes hatchery sales harvests and carcass sal
- ^c Includes confiscated and educational special use permits, hatchery sales harvests, donated and discarded catches
- ^d Includes catches from confiscated and educational special use permits, hatchery sales harvest and test fisheries.
- ^e Includes catches from confiscated permits, hatchery sales harvests, donated fish harvest and test fisheries.
- ^f Includes catches from confiscated permits, all hatchery sales harvests (including roe salvage) and test fisheries.

ALL SPECIES SALMON CATCH



Appendix A.4. Commercial salmon harvest by species for all gear types combined, Prince William Sound, 1971 - 2001.

Appendix A.5. Mean price and estimated exvessel value of the total commercial salmon harvest by gear type, Prince William Sound, 2001.

PURSE SEINE					
Species	Number	Pounds	Avg. Wt.	Price "	Value
Chinook	554	8,362	15.09	0.65	\$5,435
Sockeye	123,004	728,903	5.93	0.74	\$539,388
Coho	198,334	1,532,817	7.73	0.26	\$398,532
Pink	21,517,861	73,726,656	3.43	0.13	\$9,584,465
Chum	988,409	7,739,098	7.83	0.37	\$2,863,466
	22,828,162	83,735,836			\$13,391,287
DRIFT GILLNET					
Species	Number	Pounds	Avg. Wt.	Price	Value
Chinook	39,866	845,945	21.22	3.30	\$2,791,619
Sockeye	1,918,836	11,798,397	6.15	1.20	\$14,158,076
Coho	267,798	2,470,451	9.23	0.32	\$790,544
Pink	685,686	2,414,940	3.52	0.06	\$144,896
Chum	1,166,598	8,871,595	7.60	0.38	\$3,371,206
	4,078,784	26,401,328			\$21,256,342
SET GILLNET					
Species	Number	Pounds	Avg. Wt.	Price	Value
Chinook	25	386	15.44	2.04	\$787
Sockeye	176,060	1,096,263	6.23	0.77	\$844,123
Coho	1,006	8,429	8.38	0.20	\$1,686
Pink	127,737	440,951	3.45	0.05	\$22,048
Chum	7,057	52,751	7.47	0.38	\$20,045
	311,885	1,598,780			\$888,689
HATCHERY SALES ^b					
Species	Number	Pounds	Avg. Wt.	Price	Value
Chinook					
Sockeye	43,073	256,497	5.95	0.68	\$174,418
Coho	21,781	189,175	8.69	0.05	\$9,459
Pink	12,914,314	42,869,788	3.32	0.15	\$6,430,468
Chum	936,028	6,822,832	7.29	0.45	\$3,070,274
	13,915,196	50,138,292			\$9,684,619
OTHER GEAR ^c					
Species	Number	Pounds	Avg. Wt.	Price	Value
Chinook					
Sockeye	110	678	6.16	0.75	\$509
Coho	75	468	6.24	1.00	\$468
Pink	926	3,182	3.44	0.12	\$382
Chum	1,702	12,744	7.49	0.33	\$4,206
	2,813	17,072			\$5,564
Summary of Gear Type					
Gear Type	Value of Catch	No. of Permits	Average Earnings		
Purse Seine	\$13,391,287	152	\$88,101		
Drift Gillnet	\$21,256,342	535	\$39,731		
Set Gillnet	\$888,689	32	\$27,772		
Subtotal-					
Value of CPF Catch	\$35,536,318				
Hatchery	\$9,684,619				
Other Gear	\$5,564				
GRAND TOTAL	\$45,226,501				

^a Mean prices are estimated at the end of the season based on the average of cash buy advance prices paid by the canneries on the grounds. They do not reflect the spring paid by some companies.

^d Prices are an average of sales harvest prices excluding roe sales.

^c Includes the sales of confiscated fish.

Appendix A.6. Average price paid to permit holders for salmon, Prince William Sound, 1992-2001.

Species ^a	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
King Salmon										
Copper/Bering Districts	\$2.50	\$1.82	\$1.43	\$2.19	\$1.96	\$2.00	\$2.07	\$3.44	\$4.02	\$3.30
Prince William Sound	\$1.55	\$1.07	\$0.80	\$0.91	\$0.71	\$1.00	\$0.94	\$1.28	\$1.59	\$0.92
Sockeye Salmon										
Copper River	\$2.50	\$1.32	\$1.27	\$1.67	\$1.38	\$0.88	\$1.49	\$1.84	\$1.72	\$1.35
Bering River	\$2.50	\$1.40	\$1.06	\$1.44	\$1.21	\$0.88	\$1.35	\$1.81	\$1.72	\$1.35
Coghill/Unakwik District	\$1.55	\$0.93	\$0.94	\$0.75	\$0.82	\$0.80	\$1.24	\$1.60	\$1.14	\$0.77
Eshamy	\$1.55	\$0.86	\$1.19	\$1.06	\$0.85	\$0.80	\$1.11	\$0.89	\$1.14	\$0.77
General Purse Seine	\$1.55	\$0.83	\$0.88	\$0.94	\$0.73	\$0.85	\$1.06	\$1.18	\$0.90	\$0.74
Coho Salmon										
Copper/Bering Districts	\$0.90	\$0.80	\$0.74	\$0.52	\$0.53	\$0.30	\$0.46	\$0.58	\$0.57	\$0.32
Prince William Sound	\$0.90	\$0.77	\$0.60	\$0.42	\$0.36	\$0.30	\$0.33	\$0.33	\$0.42	\$0.26
Pink Salmon	\$0.18	\$0.16	\$0.16	\$0.18	\$0.07	\$0.12	\$0.13	\$0.15	\$0.15	\$0.13
Chum Salmon	\$0.55	\$0.68	\$0.45	\$0.45	\$0.13	\$0.27	\$0.22	\$0.21	\$0.28	\$0.37

^a Based on processor reports, fish tickets and other sources prior to 1995. After 1995 prices are based on processor reports. A weighted average is generally used. Prices generally do not reflect post season adjustments and are an estimate. Caution should be used if using these prices to estimate value.

Appendix A.7. Estimated exvessel value of the total commercial salmon harvest by gear type, Prince William Sound, 1991 - 2001.

PURSE SEINE

Species	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Chinook	1,732	2,044	379	1,104	1,169	570	3,422	4,386	7,427	2,706	5,435
Sockeye	113,493	313,794	169,236	432,156	205,178	111,337	151,532	127,854	141,923	195,169	539,388
Coho	49,165	277,682	21,288	208,661	327,260	314,773	125,946	124,325	329,317	965,404	398,532
Pink	8,148,452	2,950,733	1,469,531	12,537,403	6,736,581	4,445,231	6,795,323	8,565,392	9,456,108	13,728,606	9,584,465
Chum	107,202	125,639	22,344	164,181	152,047	386,967	1,742,759	950,912	3,128,816	3,964,546	2,863,466
	\$8,420,044	\$3,669,892	\$1,682,778	\$13,343,505	\$7,422,236	\$5,258,878	\$8,818,982	\$9,772,869	\$13,063,591	\$18,856,431	\$13,391,287

DRIFT GILLNET

Species	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Chinook	1,310,334	2,504,789	1,180,382	1,534,059	3,573,848	2,259,958	2,367,538	3,341,148	5,510,840	2,698,417	2,791,619
Sockeye	11,817,211	18,901,370	11,767,820	9,209,486	12,864,113	23,037,225	19,796,170	13,223,761	20,048,000	13,554,212	14,158,076
Coho	3,328,387	4,155,833	2,702,999	7,129,685	4,207,678	1,450,095	57,798	379,366	733,022	2,486,184	790,544
Pink	104,274	213,996	115,040	127,997	165,462	12,028	83,398	249,293	43,612	177,559	144,896
Chum	928,104	1,037,032	3,091,611	2,393,837	1,709,831	1,229,842	1,567,526	1,035,808	1,529,765	3,550,614	3,371,206
	\$17,488,310	\$26,813,021	\$18,857,852	\$20,395,065	\$22,520,932	\$27,989,149	\$23,872,430	\$18,229,376	\$27,865,239	\$22,466,986	\$21,256,342

SET GILLNET

Species	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Chinook	1,156	1,973	848	121	182	148	159	25	592	2,902	787
Sockeye	1,300,375	1,355,943	517,182	638,164	181,653	697,572	1,055,286	177,723	407,497	912,603	844,123
Coho	1,625	8,321	4,343	3,513	2,003	612	340	336	1,877	3,346	1,686
Pink	7,587	248,170	48,618	117,298	18,892	2,373	20,477	16,659	8,721	53,160	22,048
Chum	191,271	22,316	97,911	18,675	21,018	11,312	17,242	337	13,630	25,641	20,045
	\$1,502,013	\$1,636,724	\$668,901	\$777,770	\$223,747	\$712,017	\$1,093,504	\$195,079	\$432,317	\$997,652	\$888,689

HATCHERY SALES

Species	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Chinook	0	27,218	26,736	11,526	11,692	91	1,252	22,621	0	0	0
Sockeye	0	1,573,671	371,621	358,077	380,378	444,198	1,381,948	953,857	143,855	478	174,418
Coho	216,146	352,390	11,712	82,571	28,759	100,413	7,090	63,980	0	2	9,459
Pink	2,573,773	2,196,778	1,472,128	7,222,015	4,157,847	4,076,578	5,814,214	6,283,525	6,312,337	6,358,529	6,430,468
Chum	14,609	157,616	1,576,882	1,598,524	895,509	1,430,814	1,758,276	1,261,354	2,380,321	4,007,449	3,070,274
	\$2,804,528	\$4,307,673	\$3,459,882	\$9,272,731	\$5,474,186	\$6,052,094	\$8,965,780	\$8,585,338	\$8,836,513	\$10,366,458	\$9,684,619

OTHER GEAR

Species	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Chinook	3,699	143	154	143	25	76	0	5,004	448	1,266	0
Sockeye	9,638	80,141	52,272	3,686	27,880	2,582	2,085	2,085	68,525	5,944	509
Coho	2,967	5,293	751	89	479	0	0	10	106	0	468
Pink	7,971	2,066	9,084	28,287	88,152	0	1	271	81,476	0	382
Chum	1,718	13,389	16,066	35,139	4,234	1	190	13	358	600	4,206
	\$25,993	\$101,031	\$78,327	\$67,344	\$120,771	\$2,659	\$2,276	\$7,383	\$150,913	\$7,811	\$5,564

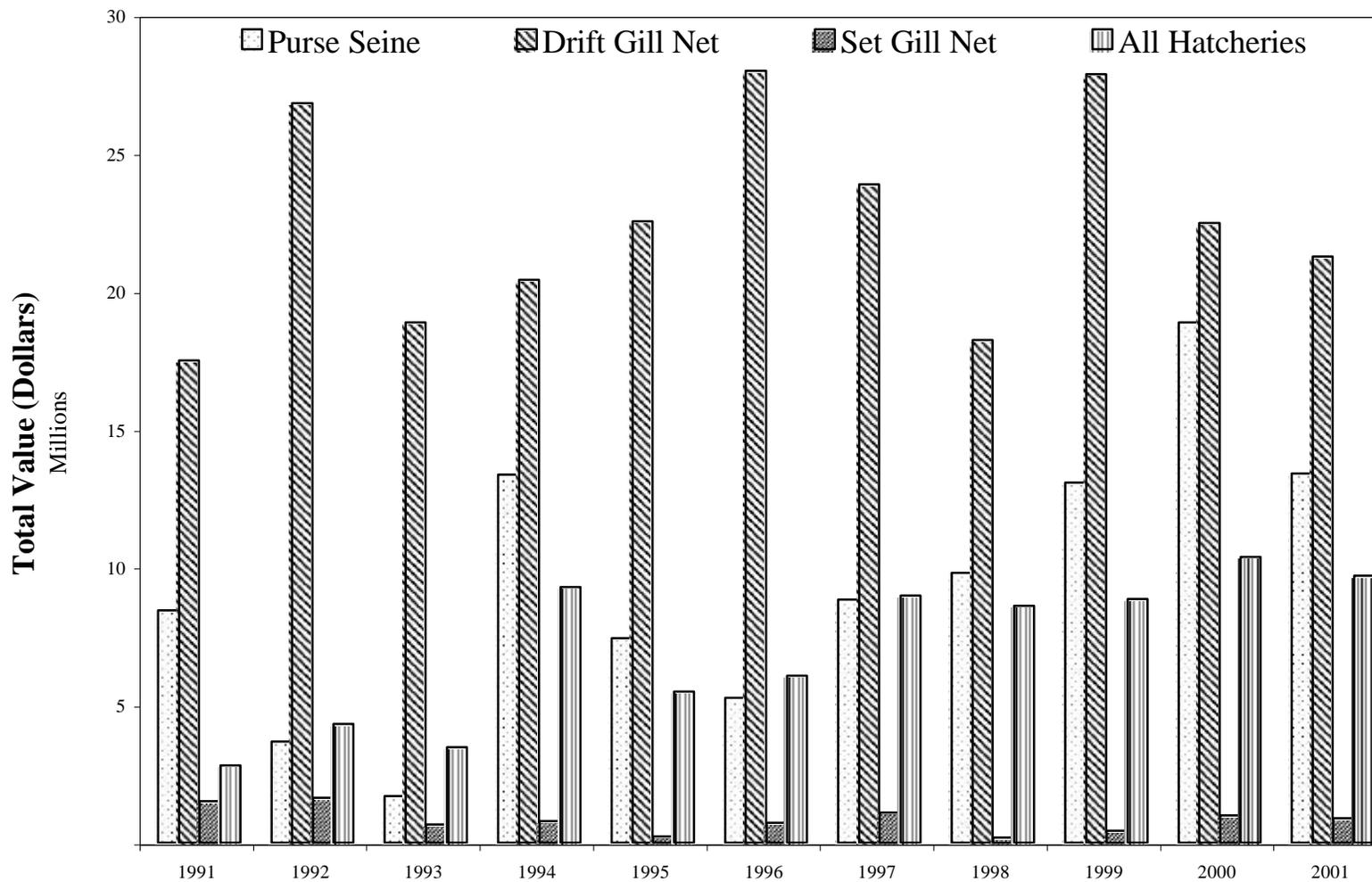
AVERAGE EARNING\$

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Purse Seine	\$33,281	\$17,729	\$11,686	\$78,032	\$39,691	\$58,432	\$77,359	\$65,590	\$93,983	\$143,942	\$88,101
Drift Gillnet	\$33,696	\$50,782	\$36,688	\$39,990	\$43,477	\$54,989	\$45,909	\$34,922	\$53,280	\$41,994	\$39,731
Set Gillnet	\$51,794	\$54,557	\$22,297	\$29,914	\$8,606	\$26,371	\$42,058	\$12,192	\$20,587	\$35,630	\$27,772

NUMBER OF PERMITS FISHED

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Purse Seine	253	207	144	171	187	90	114	149	139	131	152
Drift Gillnet	519	528	514	510	518	509	520	522	523	535	535
Set Gillnet	29	30	30	26	26	27	26	16	21	28	32

Historic Value of Prince William Sound Fisheries



Appendix A.8. Exvessel value of the commercial salmon harvest by gear type, 1991 - 2001.

Appendix A.9. Preseason harvest projections for the 2001 commercial salmon fishery by district and species, Prince William Sound Area.

COMMERCIAL HARVEST (1,000's of fish)										
District ^a	Chinook		Sockeye		Coho		Pink		Chum	
	Point Estimate	Range	Point Estimate	Range	Point Estimate	Range	Point Estimate	Range	Point Estimate	Range
Copper River ^u	48.6	26.7-70.5	430.0	0.0 - 890.0	305.0	83.7-525.0				
Bering River ^c					117.0	0.0-258.0				
Coghill ^u			92.0	0.0-188.0						
Eshamy			44.3	19.8-68.2						
General P.W.S. Districts			10.5	8.1-12.8			3,200.0	0.0-8,200.0	620.0	420.0-820.0
Total Wild Stock	48.6	26.7-70.5	576.8	27.9 - 1,159.0	422.0	83.7-783.0	3,200.0	0.0-8,200.0	620.0	420.0-820.0
Solomon Gulch					137.9	105.7-170.1	3,600.0	1,600.0-4,600.0		
Armin F. Koernig ^c							4,700.0	3,500.0-5,700.0	80.0	50.0-110.0
Wally Noerenberg ^c					27.0	10.6-33.1	2,700.0	900.0-4,200.0	510.0	190.0-1,550.0
Cannery Creek							3,100.0	2,000.0-3,800.0		
Main Bay ^f			581.0	560.0 - 602.0						
Gulkana			400.0	240.0-1,040.0						
Total Hatchery			981.0	800.0-1,642.0	164.9	116.3-203.2	14,100.0	6,500.0-18,300.0	590.0	240.0-1,660.0
Total Hatchery and Wild	48.6	26.7-70.5	1,557.8	827.0 - 2801.0	586.9	200.0-986.2	17,300.0	6,500.0-26,500.0	1,210.0	660.0-2,480.0

^a Formal forecast procedures are used for estimating wild stock returns for pink and chum salmon in Prince William Sound. Hatchery contributions are based on known fry releases and average marine survival rates. General P.W.S. sockeye production is based upon average harvest. Harvest estimates are made only for those species which constitute a significant portion of the catch. The harvest projections do not include salmon projected for harvest by hatcheries for coho and chinook.

^b Formalized forecast procedures are used for Copper River chinook and sockeye returns. Copper River coho catches are based on mean annual harvest.

^c Bering River coho harvest estimates are based on mean annual harvest.

^d Coghill sockeye returns are formally forecast using a sibling relationship model for the major age class and spawner recruit relationships for other age classes. The Coghill District's wild pink and chum harvest is included in the "General PWS Districts" projection.

^e WHN chum harvest estimate includes all on-site and remote returns of chum salmon.

^f Main Bay sockeye harvest estimate includes all on-site and remote returns of sockeye salmon.

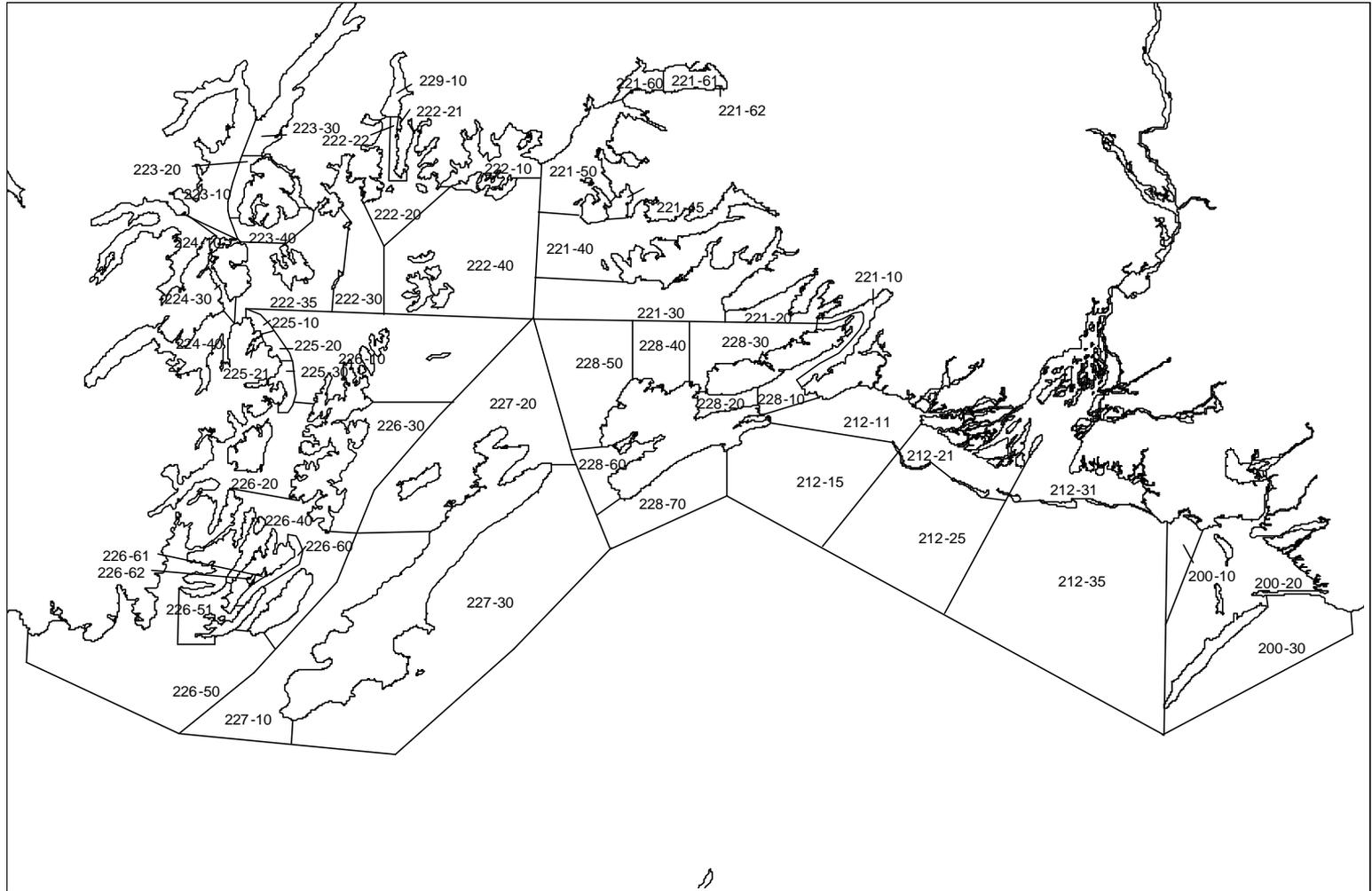
Appendix A.10. A listing of finfish processors, their location of operation, and type of product processed, Prince Willam Sound Area 2001.

Executive Names, Address Location of Operations	Processor Code	Type of Product	Executive Names, Address Location of Operations	Processor Code	Type of Product
Alaska Native Seafoods P.O.Box 5551 Port Graham, Alaska 99603 Patrick Kelly	F4670	Salmon	Great Pacific Seafoods, Inc. P.O. Box 710 Whittier, AK 99693 Andrea Tesch	F1267	Salmon
Alaska Smokin Pauls Whittier Boat Harbor Whittier, AK 99693 Paul McMullin	F3933	Salmon	Icicle Seafoods Inc. P.O. Box 8 Seward, Alaska 99664 Tim Schmidt	F0135	Salmon
Bear and Wolf Salmon Co. 4209 21st Ave W. Seattle, WA 98199 Peter Kuttel	F4287	Salmon	Inlet Fish Processors P.O. Box 114 Kenai, Alaska 99611 Scott Earsley	F2806 F4682	Salmon
Brooks Alaskan Seafood 6221 Petersburg St. Anchorage, Alaska 99507 Michael Brooks	F4750	Salmon	Nautilus Foods P.O. Box 727 Valdez, AK 99686 Tom Waterer	F2003	Salmon
Cook Inlet Processing P.O. Box 8163 Nikiski, Alaska 99635 Tim Blott	F0186 F1155	Salmon	Norquest Seafoods P.O. Box 260 Cordova, AK 99574 Bill Gilbert	F1484 F1486	Salmon
Copper River Salmon P.O. Box 342 Cordova, Alaska 99574 John Gregory	F4698	Salmon	North Pacific Processors, Inc. P.O. Box 1040 Cordova, Alaska 99574 Ken Roemhildt	F0232	Salmon
Copper River Seafoods P.O. Box 158 Cordova, AK 99574 Robyn McKenzie	F2977	Salmon	Ocean Beauty Seafoods P.O. Box 548 Cordova, AK 99574 Hap Symmonds	F1930	Salmon
Deep Creek Custon Packing P.O. Box 39229 Ninilchik, Alaska 99639 Jeff Berger	F1051	Salmon	Pagan Fisheries Box 447 Girdwood, AK John Herschleb	F4345	Salmon
FAVCO Box 190968 Anchorage, AK 99519 Bill Buck	F0398	Salmon	Peter Pan Seafoods, Inc. P.O. Box 1027 Valdez, Alaska 99686 Mark Hansen	F1041	Salmon
Glacier Creek H.C. Box 8610 Bird Creek, AK 99540 Steve Aberle	F1826 F1876	Salmon	Polar Sea Box 8163 Nikiski, AK 99635 Bill Fejes	F4054	Salmon

-continued-

Appendix A.10. (page 2 of 2)

Executive Names, Address Location of Operations	Processor Code	Type of Product	Executive Names, Address Location of Operations	Processor Code	Type of Product
Potter's Own Fine Fish Box 1472 Cordova, AK 99574 Carol Potter	F3346	Salmon	Snug Harbor Box 701 Kenai, AK 99611 Brenda Stoops	F3894	Salmon
Prime Select Seafoods, Inc. P.O. Box 846 Cordova, Alaska 99574 Susan Laird	F1816	Salmon	Valdez Fisheries Development P.O. Box 125 Valdez, Alaska 99686 Dave Cobb/Laura Weaver	F1355	Salmon Salmon roe
Prince William Sound Aquacu P.O. Box 1110 Cordova, Alaska 99574 Monica Bradley	F1901,F1903 F2465 F2902 F3468	Salmon Salmon roe	Wild Salmon P.O. Box 1389 Cordova, AK 99574 Dennis Zadra	F4567	Salmon
R & J Seafoods P.O. Box 165 Kenai, Alaska 99611 Juanita Meier	F3411	Salmon			
Sea Hawk Seafoods P.O. Box 247 Valdez, AK 99686 Cary Cox	F0223	Salmon			



Appendix A.11. Prince William Sound Area showing commercial fishing districts and statistical reporting areas, 2001 (Figure).

APPENDIX B: COPPER AND BERING RIVER DISTRICTS

Appendix B.1. Commercial salmon catch by species in the Copper River District,
1974-2001.

Year	Catch by Species					Total
	Chinook	Sockeye	Coho	Pink	Chum	
1974	18,980	607,766	46,625	9,839	664	683,874
1975	19,644	335,384	53,805	236	807	409,876
1976	31,479	865,195	111,900	3,392	178	1,012,144
1977	21,722	602,737	131,356	23,185	335	779,335
1978	29,062	249,872	220,338	3,512	2,233	505,017
1979	17,678	80,528	194,885	1,295	107	294,493
1980	8,454	18,908	225,299	3,966	198	256,825
1981	20,178	477,662	310,154	23,952	1,799	833,745
1982	47,362	1,177,632	454,763	7,154	1,177	1,688,088
1983	52,500	626,735	234,243	7,345	2,217	923,040
1984	38,957	900,043	382,432	32,194	6,935	1,360,561
1985	42,214	927,553	587,990	19,061	5,966	1,582,784
1986	40,670	780,808	295,980	3,016	17,614	1,138,088
1987	41,001	1,180,782	111,599	31,635	14,796	1,379,813
1988	30,741	576,950	315,568	2,775	11,022	937,056
1989	30,863	1,025,923	194,454	25,877	5,845	1,282,962
1990	21,702	844,778	246,797	1,596	7,545	1,122,418
1991	34,787	1,206,811	385,086	1,246	20,220	1,648,150
1992	39,810	970,938	291,627	1,664	5,807	1,309,846
1993	29,727	1,398,234	281,469	9,579	13,002	1,732,011
1994	47,061	1,152,220	677,633	12,079	19,055	1,908,048
1995	65,675	1,271,822	542,658	19,809	56,100	1,956,064
1996	55,646	2,356,365	193,042	6,372	25,533	2,636,958
1997	51,273	2,955,431	18,656	8,483	2,465	3,036,308
1998	68,827	1,341,692	108,232	20,829	5,022	1,544,602
1999	62,337	1,682,559	153,061	10,205	25,321	1,933,483
2000	31,259	880,334	304,944	9,804	5,363	1,231,704
2001	39,524	1,323,577	251,473	9,387	2,789	1,626,750
Ten Year Average (1991-00)	48,640	1,521,641	295,641	10,007	17,789	1,893,717

Appendix B.2. Anticipated and actual weekly catch and escapement of sockeye salmon in the Copper River District drift gillnet fishery, 2001.

Semi-Weekly Date	Fishing Time (Hrs.)	Actual Catch	Anticipated Catch ^a	Anticipated Cumulative Escapement ^b	Actual Cumulative Escapement ^c
May 16 Wed	12	79,949	15,580	392	426
May 19 Sat	12	149,191	28,051	4,173	2,215
May 23 Wed			41,666	15,640	17,360
May 26 Sat	12	206,040	48,477	33,246	89,612
May 30 Wed	24	105,780	49,975	69,143	187,125
June 2 Sat	60	62,360	52,751	106,063	235,838
June 6 Wed	36	118,479	37,230	164,340	293,757
June 9 Sat	36	80,813	29,098	211,088	335,348
June 13 Wed	24	41,939	20,072	261,370	377,546
June 16 Sat	24	44,329	26,765	294,505	404,189
June 20 Wed	24	60,815	22,978	327,635	433,432
June 23 Sat	24	63,103	28,369	351,251	455,569
June 27 Wed	24	56,620	24,985	379,050	505,355
June 30 Sat	24	47,862	27,468	401,013	542,444
July 4 Wed	24	49,330	31,207	436,501	597,273
July 7 Sat	24	50,354	30,289	466,092	622,225
July 11 Wed	24	42,472	27,090	514,940	669,385
July 14 Sat	24	27,304	25,803	551,240	710,850
July 18 Wed	24	16,206	21,912	599,086	754,644
July 21 Sat	24	8,435	17,699	632,936	775,546
July 25 Wed	24	5,012	11,848	665,216	788,717
July 28 Sat	24	3,070	9,269	683,086	811,611
August 1 Wed	24	2,252	5,300	701,661	
August 4 Sat	24	728	3,725	710,839	
August 8 Wed	24	577	2,660	717,724	
August 11 Sat			1,726	719,920	
August 15 Wed	24	347	540	721,879	
Total	624	1,323,367	642,533		

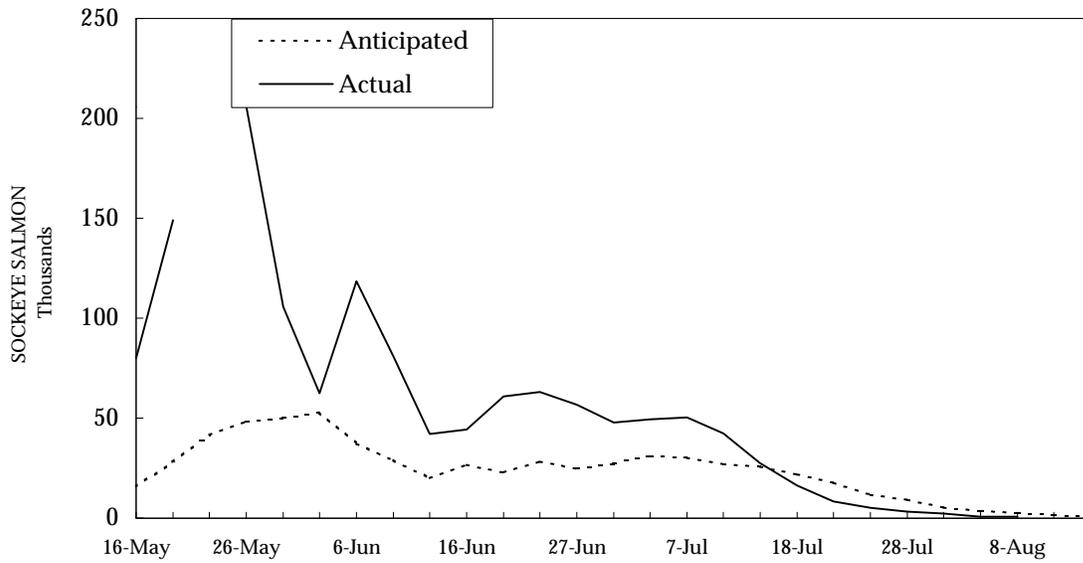
^a Based on average historic catches for comparable dates (1992-1999).

^b Based on historical escapements at Miles Lake sonar, includes upriver chinook escapement component and sockeye broodstock for the Gulkana Hatchery. Does not include sockeye escapements for the Copper/Bering delta streams.

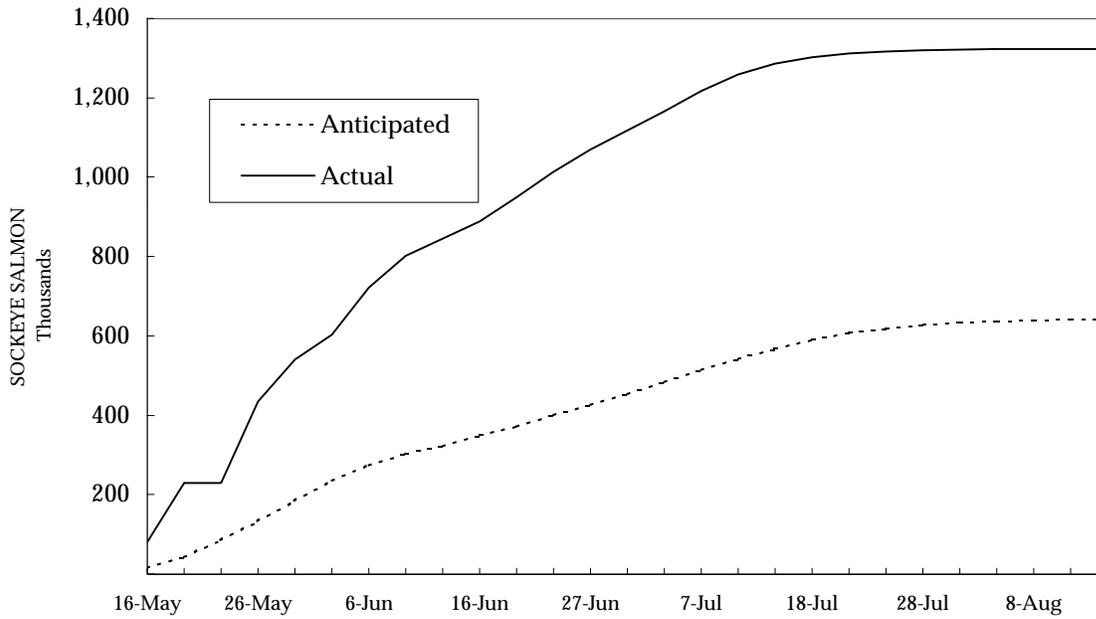
^c Escapement estimate from sonar counters at Miles Lake. Sonar counts ended August 3

COPPER RIVER DISTRICT COMMERCIAL SOCKEYE HARVEST, 2001

Semi-weekly Harvest



Cumulative Harvest



Appendix B.3. Anticipated versus actual semi-weekly and cumulative harvest of sockeye salmon in the Copper River drift gillnet fishery, 2001.

Appendix B.4. Commercial salmon harvest by period in the Copper District drift gillnet fishery, 2001.

Period	Date ^a	Hours Permits		Chinook		Sockeye		Coho		Pink		Chum		
				Landings	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
01	05/17-05/17	12	456	556	5,588	120,848	79,949	479,501	0	0	1	5	679	4,680
02	05/21-05/21	12	404	545	7,856	161,166	149,191	882,563	0	0	0	0	64	474
03	05/25-05/25	12	488	753	6,642	144,887	206,040	1,228,650	0	0	0	0	117	665
04	05/28-05/29	24	476	793	3,759	81,284	105,780	645,871	2	12	0	0	152	966
05	05/31-06/02	60	440	539	2,058	45,092	62,360	384,059	0	0	0	0	2	14
06	06/04-06/05	36	378	811	4,411	90,491	118,479	728,723	0	0	0	0	181	1,239
07	06/07-06/08	36	367	655	2,664	58,286	80,813	479,918	0	0	0	0	98	741
08	06/11-06/12	24	324	419	1,629	36,891	41,939	263,288	7	44	2	8	11	81
09	06/14-06/15	24	299	389	1,228	29,436	44,329	279,943	7	46	0	0	127	896
10	06/18-06/19	24	305	477	1,068	25,522	60,815	373,350	5	31	6	23	22	161
11	06/21-06/22	24	241	346	642	14,440	63,103	388,171	25	170	0	0	699	4,250
12	06/25-06/26	24	273	403	653	11,574	56,620	350,632	67	459	19	86	127	871
13	06/28-06/29	24	230	344	422	7,014	47,862	303,282	119	769	169	641	48	285
14	07/02-07/03	24	248	355	218	4,484	49,330	309,244	321	2,438	489	1,711	37	280
15	07/05-07/06	24	196	267	338	3,362	50,354	314,838	617	4,747	338	1,480	76	566
16	07/09-07/10	24	219	296	155	2,593	42,472	264,468	958	7,119	789	2,947	41	283
17	07/12-07/13	24	173	219	66	1,171	27,304	169,070	592	4,720	786	2,577	26	229
18	07/16-07/17	24	179	224	39	831	16,206	102,044	1,844	13,713	3,693	13,617	117	811
19	07/19-07/20	24	79	89	45	306	8,435	53,935	870	5,989	943	3,549	40	277
20	07/23-07/24	24	37	53	14	178	5,012	31,336	498	3,890	500	1,774	61	292
21	07/26-07/27	24	22	27	4	47	3,070	18,535	401	3,440	233	1,099	17	57
22	07/30-07/31	24	30	33	16	211	2,252	13,817	851	7,139	302	1,175	28	130
23	08/02-08/03	24	21	21	4	60	728	4,586	2,237	18,166	678	2,682	7	25
24	08/06-08/07	24	28	31	0	0	577	3,477	6,526	56,497	395	1,595	2	18
25	08/13-08/14	24	144	191	4	97	347	2,315	23,870	198,983	43	133	9	69
26	08/20-08/21	24	158	261	0	0	43	296	38,917	362,826	1	3	1	8
27	08/27-08/28	24	170	285	1	20	44	273	47,704	463,315	0	0	0	0
28	09/03-09/04	24	157	269	0	0	120	960	58,098	550,574	0	0	0	0
29	09/07	12	131	164	0	0	2	11	35,765	355,602	0	0	0	0
30	09/14	12	95	142	0	0	1	6	30,048	277,222	0	0	0	0
31	09/17-09/18	24	2	2	0	0	0	0	430	4,332	0	0	0	0
32	09/22	12	2	2	0	0	0	0	494	4,608	0	0	0	0
33	09/26	12	1	1	0	0	0	0	200	2,056	0	0	0	0
Total		504	9,962	39,524	840,291	1,323,577	8,077,162	251,473	2,348,907	9,387	35,105	2,789	18,368	
Average Weight					21.26		6.10		9.34		3.74		6.59	

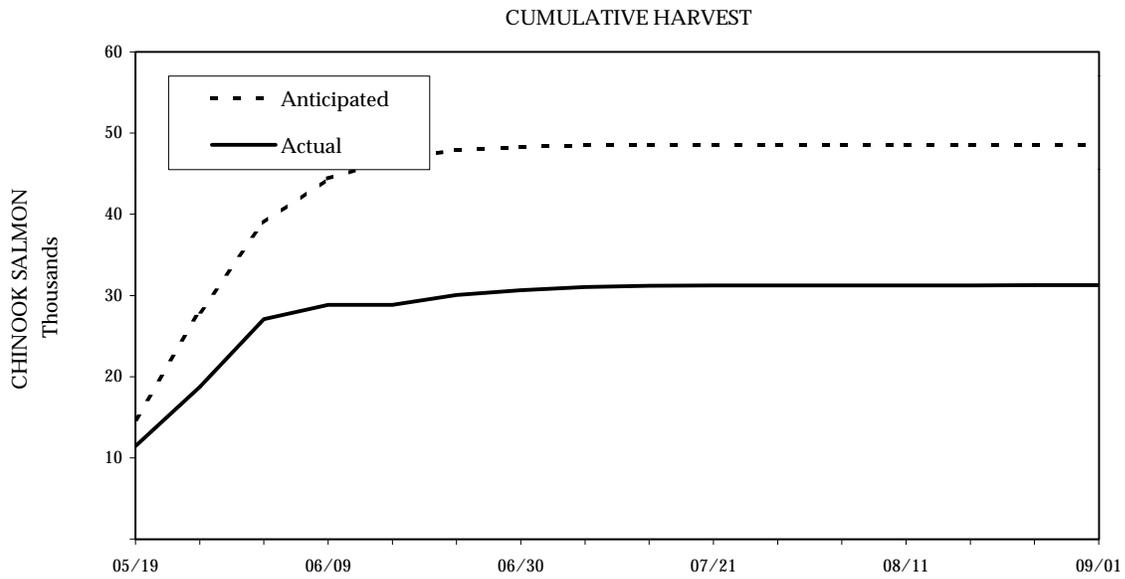
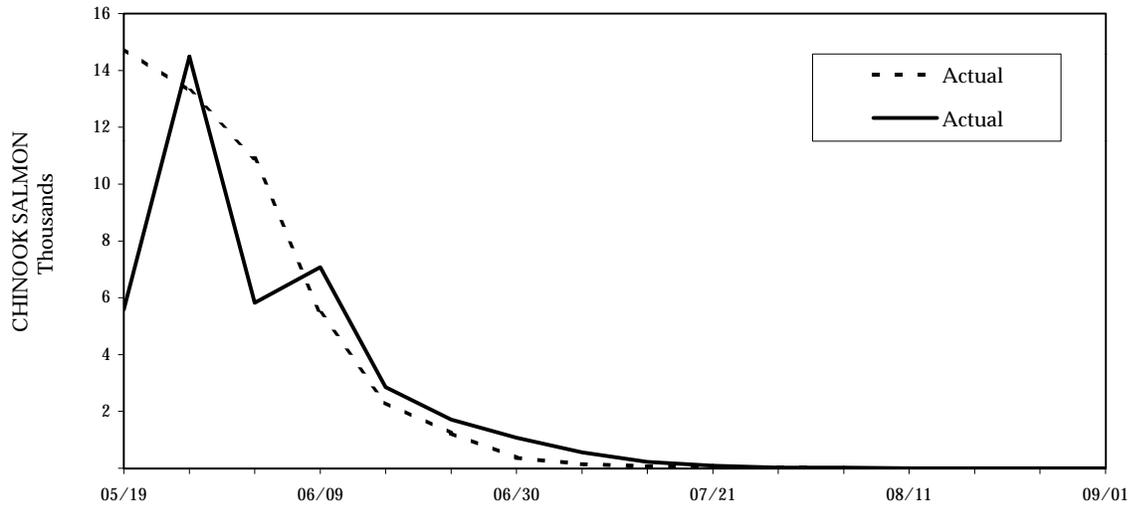
Appendix B.5. Anticipated and actual weekly catch of chinook and coho salmon in the Copper River District drift gillnet fishery, 2001.

Week Ending Date	Length of Fishing Periods (Hrs)	Chinook		Coho	
		Actual Catch	Anticipated Catch ^a	Actual Catch	Anticipated Catch ^a
19-May	12	5,588	14,757	0	1
26-May	12 and 12	14,490	13,283	0	12
2-Jun	24 and 60	5,825	10,903	2	21
9-Jun	36 and 36	7,075	5,451	0	36
16-Jun	24 and 24	2,857	2,311	14	45
23-Jun	24 and 24	1,710	1,234	30	126
30-Jun	24 and 24	1,075	373	186	223
7-Jul	24 and 24	556	147	938	459
14-Jul	24 and 24	221	77	1,550	1,251
21-Jul	24 and 24	84	34	2,714	1,892
28-Jul	24 and 24	18	12	899	2,825
4-Aug	24 and 24	20	5	3,088	6,459
11-Aug	24	0	5	6,526	19,580
18-Aug	24	4	1	23,870	37,148
25-Aug	24	0	0	38,917	57,279
1-Sep	24	1	0	47,707	65,017
8-Sep	24 and 12	0	0	93,863	57,228
15-Sep	12	0	0	30,048	34,859
22-Sep	24 and 12	0	0	924	13,284
29-Sep	12	0	0	200	5,552
6-Oct					1,131
13-Oct					91
Season Total		39,524	48,593	251,476	304,519

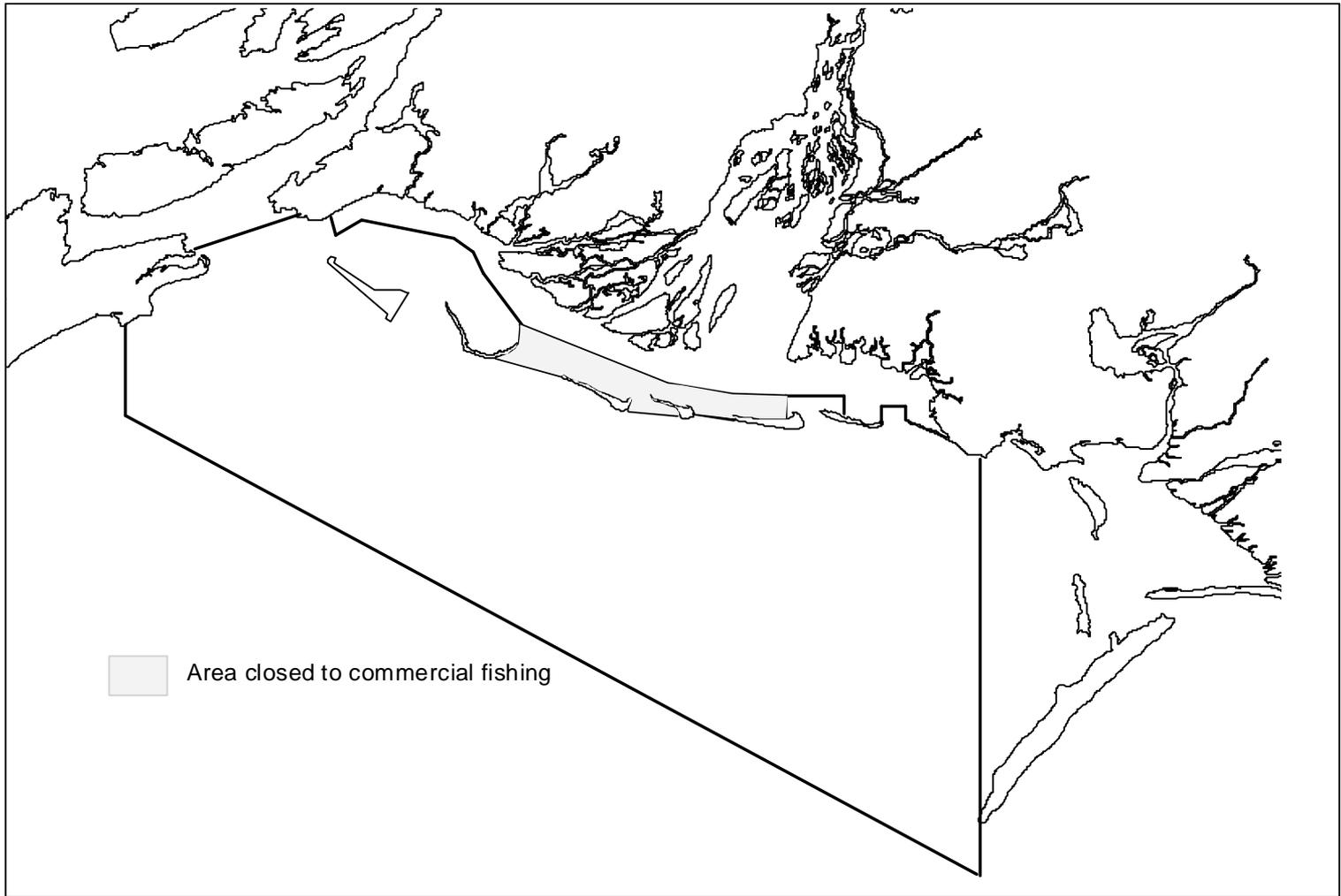
^aBased on average historic catches for comparable dates (1969 - 1993).

^bThe anticipated cumulative harvest through July 23.

COPPER RIVER DISTRICT CHINOOK SALMON WEEKLY COMMERCIAL HARVEST



Appendix B.6. Anticipated versus actual weekly and cumulative harvest of chinook salmon in the Copper River drift gillnet fishery, 2001.



Appendix B.7. Copper River District area closed to chinook salmon harvest during the first fishing period, 2001.

Appendix B.8. Daily sockeye salmon escapement estimates at Miles Lake sonar, 2001.

Date	Water Level ^a	Estimated Daily Escapement				Escapement Objective		0600 Count	Projected Daily
		North Bank	South Bank	Daily	Cumulative	Daily	Cumulative		
16-May	39.06	18	37 ^b	55	426 ^b	392	392		
17-May	39.18	20	41 ^b	61	487	939	1,331		
18-May	39.27	90	482 ^d	572	1,059	1,320	2,650		
19-May	39.28	150	1,006	1,156	2,215	1,523	4,173		1,270
20-May	39.36	146	982	1,128	3,343	1,533	5,706		1,021
21-May	39.50	199 ^e	1,328	1,527	4,870	2,127	7,834		1,168
22-May	39.52	361	4,204	4,565	9,435	3,094	10,928		3,110
23-May	39.45	1,034 ^e	6,891	7,925	17,360	4,712	15,640		7,843
24-May	39.37	7,730	12,022	19,752	37,112	4,896	20,536		8,740
25-May	39.36	6,146	21,538	27,684	64,796	5,229	25,765		30,360
26-May	39.43	4,820	19,996	24,816	89,612	7,481	33,246		28,143
27-May	39.51	1,174	19,340	20,514	110,126	9,789	43,035		19,952
28-May	39.64	1,508	16,108	17,616	127,742	7,004	50,039		14,772
29-May	39.83	4,462	24,830	29,292	157,034	8,257	58,297		12,487
30-May	40.02	6,236	23,855	30,091	187,125	10,847	69,143		25,044
31-May	40.20	2,114	15,114	17,228	204,353	11,357	80,500		11,476
01-Jun	40.38	602	14,128	14,730	219,083	13,015	93,515		10,324
02-Jun	40.57	384	16,371	16,755	235,838	12,548	106,063		10,263
03-Jun	40.74	452	11,540	11,992	247,830	14,302	120,365		7,446
04-Jun	40.95	716	11,364	12,080	259,910	15,784	136,149		8,911
05-Jun	41.01	720	17,530	18,250	278,160	14,264	150,413		16,053
06-Jun	41.04	600 ^f	14,997	15,597	293,757	13,927	164,340		9,456
07-Jun	41.32	495	18,999 ^f	19,494	313,251	16,273	180,613	4,703	18,812
08-Jun	41.28	109	10,312	10,421	323,672	15,557	196,169	3,013	12,052
09-Jun	41.25	93	11,583	11,676	335,348	14,919	211,088	1,982	7,928
10-Jun	41.34	328	9,333	9,661	345,009	14,340	225,428	2,603	10,412
11-Jun	41.58	327	7,767	8,094	353,103	13,259	238,687	1,497	5,988
12-Jun	41.86	546	10,092	10,638	363,741	11,634	250,321	1,739	6,956
13-Jun	42.12	915	12,890	13,805	377,546	11,049	261,370	3,175	12,700
14-Jun	42.22	482	10,839	11,321	388,867	11,897	273,268	3,417	13,668
15-Jun	42.26	301	7,463	7,764	396,631	10,646	283,914	1,952	7,808
16-Jun	42.38	441	7,117	7,558	404,189	10,592	294,505	1,734	6,936
17-Jun	42.57	668	8,219	8,887	413,076	9,065	303,570	1,421	5,684
18-Jun	42.82	365	6,231	6,596	419,672	8,095	311,665	1,655	6,620
19-Jun	43.01	447	6,956	7,403	427,075	8,398	320,063	1,539	6,156
20-Jun	43.14	502	5,855	6,357	433,432	7,572	327,635	1,999	7,996
21-Jun	43.26	300	6,351	6,651	440,083	7,688	335,323	1,068	4,272
22-Jun	43.35	411	5,013	5,424	445,507	8,073	343,396	1,554	6,216
23-Jun	43.37	651	9,411	10,062	455,569	7,855	351,251	1,462	5,848
24-Jun	43.49	959	10,354	11,313	466,882	7,702	358,953	2,556	10,224
25-Jun	43.56	1,161	10,992	12,153	479,035	6,881	365,834	2,263	9,052
26-Jun	43.43	1,205	12,868	14,073	493,108	6,727	372,561	2,533	10,132
27-Jun	43.42	918	11,329	12,247	505,355	6,488	379,050	2,826	11,304
28-Jun	43.43	466	11,306	11,772	517,127	7,365	386,414	3,270	13,080
29-Jun	43.42	628	13,527	14,155	531,282	7,150	393,564	1,356	5,424
30-Jun	43.44	664	10,498	11,162	542,444	7,449	401,013	2,442	9,768
01-Jul	43.43	558	13,054	13,612	556,056	7,818	408,831	2,366	9,464

-Continued-

Appendix B.8. (Page 2 of 2)

Date	Water Level ^a	Estimated Daily Escapement				Escapement Objective		0600 Count	Projected Daily
		North Bank	South Bank	Daily	Cumulative	Daily	Cumulative		
02-Jul	43.38	599	13,624	14,223	570,279	8,913	417,744	3,220	12,880
03-Jul	43.41	690	12,326	13,016	583,295	9,192	426,936	3,048	12,192
04-Jul	43.59	508	13,470	13,978	597,273	9,565	436,501	3,333	13,332
05-Jul	43.56	462	11,060	11,522	608,795	9,581	446,082	3,627	14,508
06-Jul	43.38	646	7,215	7,861	616,656	9,521	455,603	1,915	7,660
07-Jul	43.17	718	4,851	5,569	622,225	10,489	466,092	1,382	5,528
08-Jul	42.98	1,815	7,805	9,620	631,845	11,097	477,189	2,241	8,964
09-Jul	42.81	2,429	9,183	11,612	643,457	12,734	489,923	3,411	13,644
10-Jul	42.76	1,562	9,822	11,384	654,841	11,960	501,883	2,690	10,760
11-Jul	42.67	2,725	11,819	14,544	669,385	13,057	514,940	2,788	11,152
12-Jul	42.58	2,390	13,793	16,183	685,568	12,074	527,014	2,729	10,916
13-Jul	42.50	1,489	12,689	14,178	699,746	12,927	539,941	4,779	19,116
14-Jul	42.38	1,147	9,957	11,104	710,850	11,300	551,240	2,745	10,980
15-Jul	42.36	1,702	9,044	10,746	721,596	12,456	563,697	2,249	8,996
16-Jul	42.43	2,172	10,135	12,307	733,903	11,436	575,132	2,720	10,880
17-Jul	42.51	1,860	7,958	9,818	743,721	11,680	586,812	2,194	8,776
18-Jul	42.64	1,738	9,185	10,923	754,644	12,274	599,086	2,666	10,664
19-Jul	42.82	1,272	8,492	9,764	764,408	13,241	612,326	2,492	9,968
20-Jul	43.06	549	6,359	6,908	771,316	10,979	623,306	1,874	7,496
21-Jul	43.45	358	3,872	4,230	775,546	9,630	632,936	1,396	5,584
22-Jul	43.89	240	2,676	2,916	778,462	9,177	642,113	492	1,968
23-Jul	44.24	219	1,607	1,826	780,288	8,637	650,750	625	2,500
24-Jul	44.17	496	3,456	3,952	784,240	7,691	658,441	514	2,056
25-Jul	43.82	1,130	3,347	4,477	788,717	6,775	665,216	1,023	4,092
26-Jul	43.62	1,077	4,048	5,125	793,842	6,389	671,605	1,387	5,548
27-Jul	43.41	2,147	7,505	9,652	803,494	6,166	677,770	1,838	7,352
28-Jul	43.29	2,589	5,528	8,117	811,611	5,316	683,086	1,964	7,856
29-Jul	43.23	2,179	5,423	7,602	819,213	5,227	688,314	1,229	4,916
30-Jul	43.15	2,527	5,524	8,051	827,264	4,755	693,069	1,410	5,640
31-Jul	43.06	1,751 ^g	4,554 ^g	6,305	833,569	4,452	697,521	1,359	5,436

^a Meters above sea level.

^b South bank counts are estimates.

^c Cumulative includes visual oscilloscope counts from May 10 through May 15

^d South bank counter was deployed on the tripod at noon

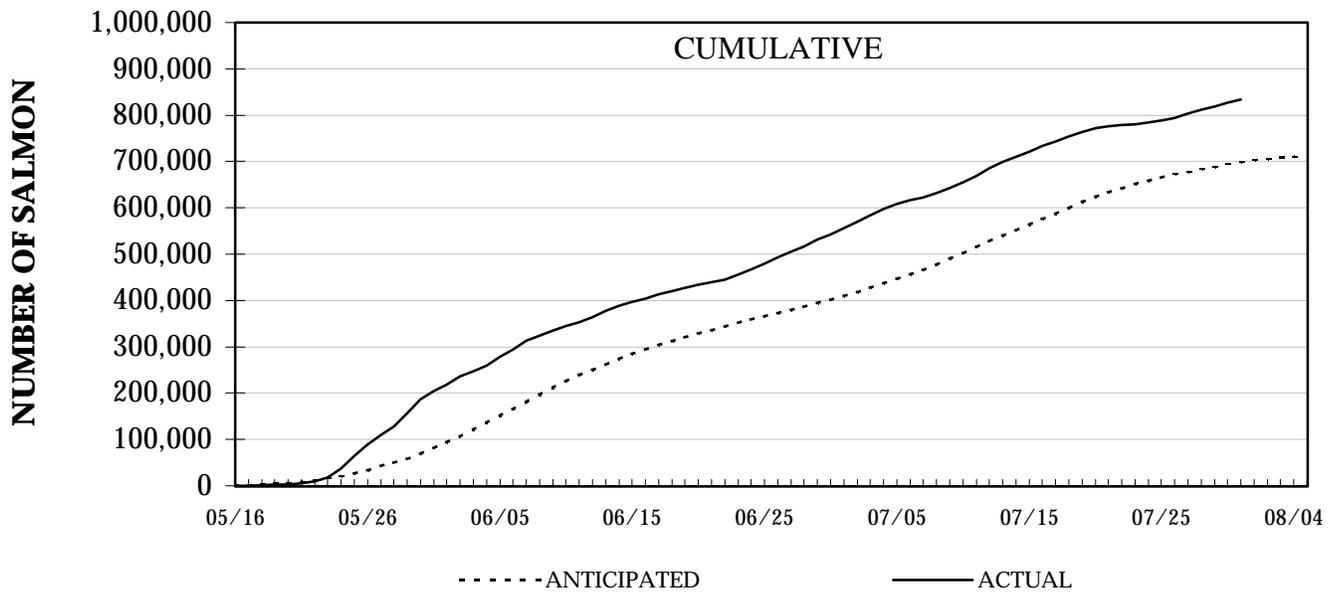
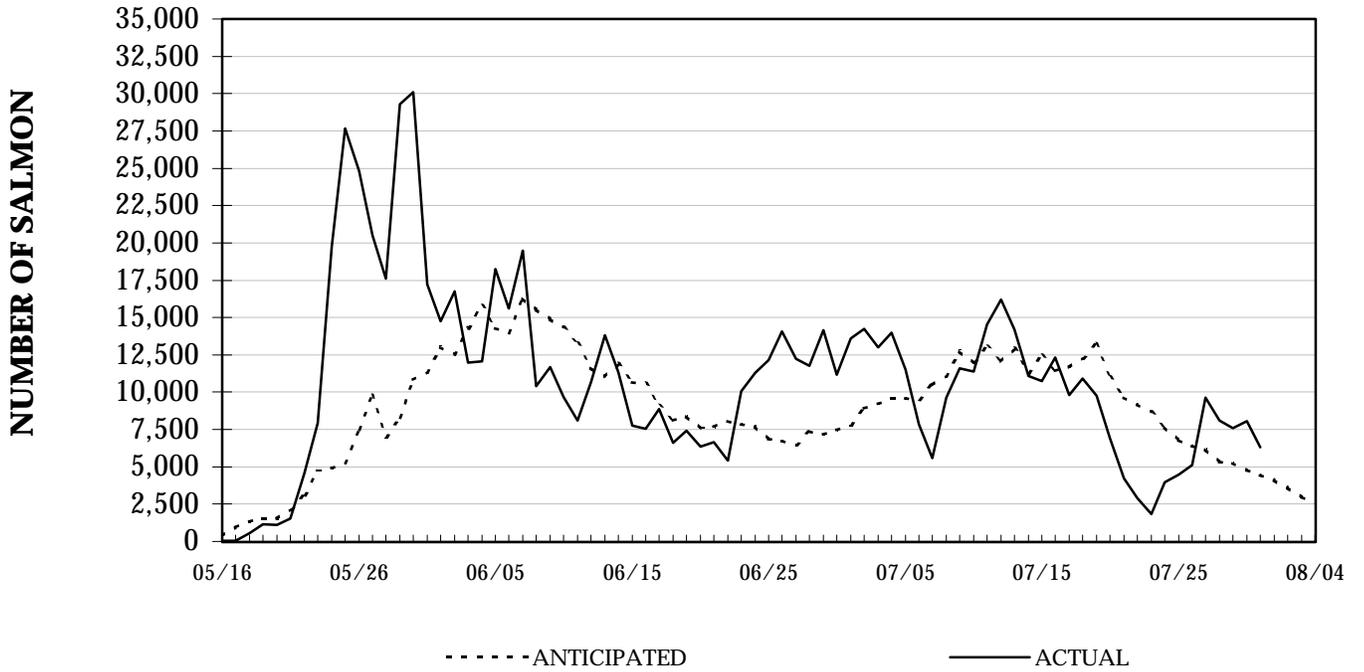
^e Extrapolated using 15% of south bank counts

^f Switched from visual oscilloscope to machine counts

^g Sonar off for the season at midnight

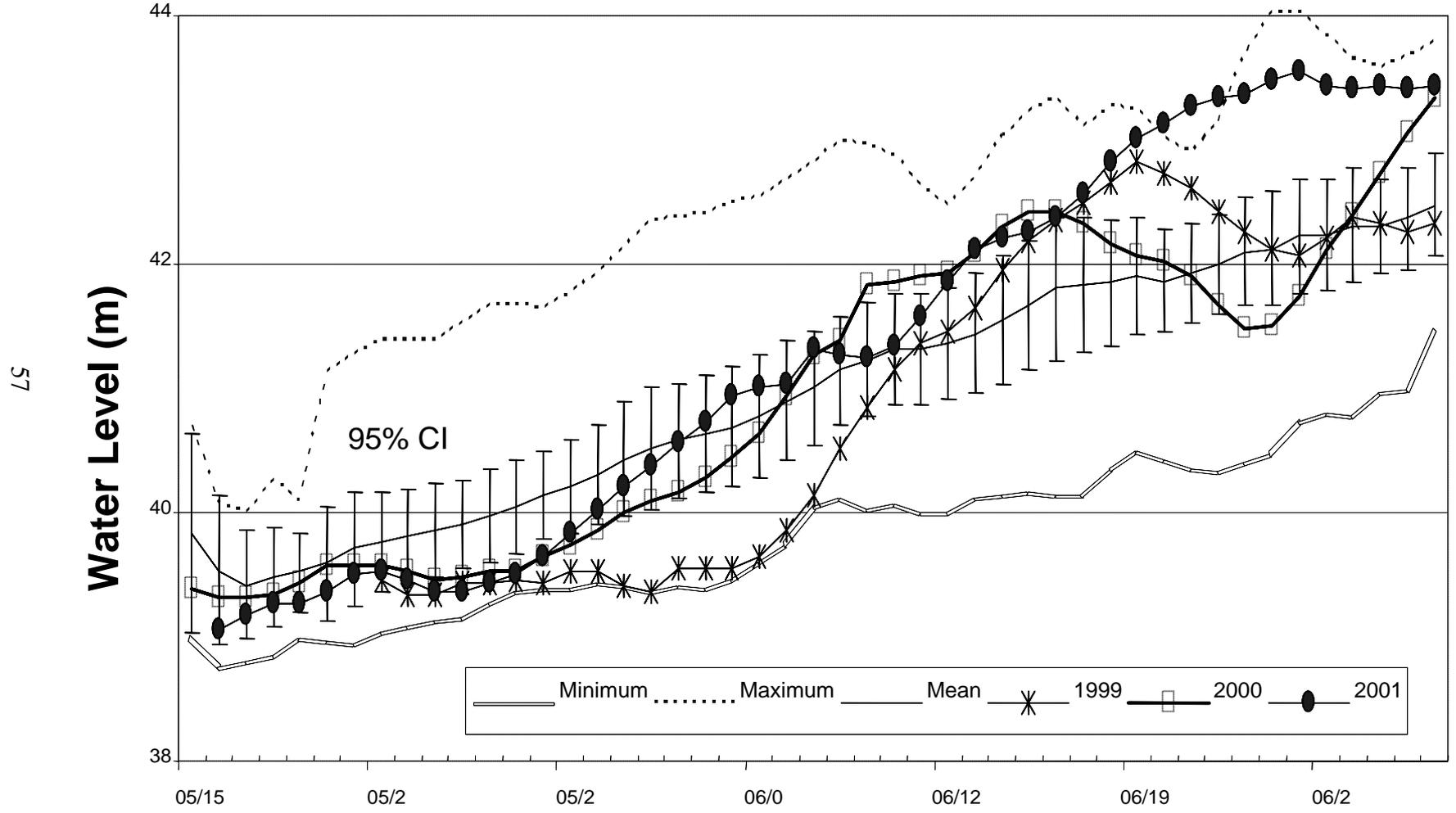
2001 MILES LAKE SONAR COUNTS

DAILY



Appendix B.9. Anticipated versus actual daily and cumulative salmon escapement, Miles Lake sonar, 2001.

Measured Water Level at the Million Dollar Bridge 1982-2001



Appendix B.10. Measured water level at the Million Dollar Bridge from 1982 - 2001.

Appendix B.11. Aerial escapement indices by date and location for sockeye salmon returning to the Copper River Delta, 2001.

Copper River Delta ^a		Aerial Escapement Indices by Survey Date						
System and Drainage	Survey System	June 8	June 15	June 22	June 27	July 6	July 13	Aug. 8
Eyak River	Eyak River	290	60	330	1,490	50	400 *	2,300
	West Shore Beaches	0	150	1,100	1,550	4,050	2,700 *	2,860
	East Shore Beaches	1,100	0	250	100	0	900 *	600
	Middle Arm Beaches ^b	900	2,000	1,900	2,000	5,000	2,900 *	2,200
	North Shore Beaches	0	0	1,800	0	0	500 *	400
	Hatchery Creek Delta	0	0	800	0	200	600 *	900
	Hatchery Creek	0	4	10	800	150	350 *	150
	Power Creek Delta	0	0	200	0	300	250 *	100
	Power Creek	0	2	10	0	200	2,200 *	75
Ibek Creek	Ibek Creek	NS	NS	NS	NS	NS	NS	220
Alaganik Slough	Alaganik Slough	0	0	80	280 *	20	NS	NS
	McKinley Lake	NS	NS	200	1,100	6,100	5,000	1,800
	Salmon Creek West Fork	NS	NS	0	0	0	450	4,800
	Salmon Creek East Fork	NS	NS	0	0	0	0	4,850
26/27 Mile Creek	26/27 Mile Creek	5	400	2,000	4,000 *	3,700	3,350	2,250
39 Mile Creek	39 Mile Creek	NS	NS	0	200	1,300	2,000	8,500
Goat Mountain	Goat Mountain Creek	NS	NS	NS	NS	0	0	0
Pleasant Creek	Pleasant Creek	NS	NS	NS	8,100 *	1,500	1,980	0
Martin River	Martin River - Lower	730	172	1,240	1,455	88	750	NS
	Ragged Point River	NS	NS	NS	NC	0	400	520
	Ragged Point Lake Outlet	NS	NS	NS	NC	0	0	220
	Ragged Point Lake	NS	NS	NS	NS	0	0	1,200
	Martin River - Upper ^b	360	130	260	1,400	950	100 *	600
	Martin Lake Outlet	1,200	850	0	NC	1,500	600 *	250
	Martin Lake	1,500	6,300	6,500	2,000	1,900	4,900 *	400
	Martin Lake Feeders	0	0	0	NS	600	1,600 *	2,400
	Pothole River	NS	NS	NS	NS	140	250 *	100
	Pothole Lake	NS	NS	NS	NS	0	0	400
Little Martin River	Little Martin River	0	0	0	NS	500 *	0	2
	Little Martin Lake	0	0	0	NS	0	325 *	475
Tokun	Tokun Springs	35	35	35 *	NS	0	60	225
	Tokun River	2	60	60 *	NS	70	150	600
	Tokun Lake Outlet	2,200	2,200 *	0	NS	1,000	0	50
	Tokun Lake	800	100	3,400 *	NS	1,500	180	1,750
Martin River Slough	Martin River Slough	600	100	4,610	7,300 *	3,250	4,600	480
Copper River Aerial Survey Daily Total		9,722	12,563	24,785	31,775	34,068	37,495	41,677
Anticipated Escapement		3,242	7,970	20,437	27,022	43,831	47,787	44,635

-Continued-

Appendix B.11. (page 2 of 4)

Copper River Delta ^a		Aerial Escapement Indices by Survey Date				
System and Drainage	Survey System	Aug.17	Aug.25	Sept. 8	Sept. 26	Oct. 15
Eyak River	Eyak River	0	0	0	0	0
	West Shore Beaches	NS	3,920	NS	0	0
	East Shore Beaches	NS	0	250	0	0
	Middle Arm Beaches ^b	NS	2,500	NS	1,000	0
	North Shore Beaches	NS	200	NS	0	0
	Hatchery Creek Delta	NS	750	NS	0	0
	Hatchery Creek	NS	120	NS	500	50
	Power Creek Delta	NS	600	NS	0	0
	Power Creek	NS	1,200	NS	0	500
Ibek Creek	Ibek Creek	0	0	800	200	1,500 *
Alaganik Slough	Alaganik Slough	NS	NS	10	0	0
	McKinley Lake	280	3,200	500	0	0
	Salmon Creek West Fork	3,500	6,000	0	0	0
	Salmon Creek East Fork	1,350	1,000	0	NS	0
26/27 Mile Creek	26/27 Mile Creek	550	350	50	0	0
39 Mile Creek	39 Mile Creek	8,200	9,000 *	6,000	500	NS
Goat Mountain	Goat Mountain Creek	5 *	0	0	0	NS
Pleasant Creek	Pleasant Creek	0	0	0	0	0
Martin River	Martin River - Lower	45	100 *	0	0	0
	Ragged Point River	25	1,000 *	20	0	0
	Ragged Point Lake Outlet	1,300	400 *	400	0	0
	Ragged Point Lake	200	1,500 *	600	500	0
	Martin River - Upper ^b	450	400	50	0	0
	Martin Lake Outlet	300	250	0	0	0
	Martin Lake	0	150	0	0	200
	Martin Lake Feeders	400	50	0	100	0
	Pothole River	0	0	10	0	0
	Pothole Lake	1,660 *	1,200	725	1,000	0
	Little Martin River	0	0	0	500	0
Little Martin Lake	400	180	60	15	0	
Tokun	Tokun Springs	10	100	10	0	0
	Tokun River	175	600	200	50	0
	Tokun Lake Outlet	50	30	25	10	0
	Tokun Lake	900	3,000	850	1,600	200
Martin River Slough	Martin River Slough	NS	10	0	0	0
Copper River Aerial Survey Daily Total		19,800	37,810	10,560	5,975	2,450
Anticipated Escapement		44,485	41,509	30,040	12,924	2,009

-Continued-

Appendix B.11. (page 3 of 4)

Copper River Delta ^b System and Drainage Survey System		Estimated Escapement		
		Site ^c	System ^a	Anticipated
Eyak River	Eyak River	400	10,800	14,043
	West Shore Beaches	2,700		
	East Shore Beaches	900		
	Middle Arm Beaches ^b	2,900		
	North Shore Beaches	500		
	Hatchery Creek Delta	600		
	Hatchery Creek	350		
	Power Creek Delta	250		
	Power Creek	2,200		
Ibek Creek	Ibek Creek	1,500	1,500	
Alaganik Slough	Alaganik Slough	280	11,730	13,650
	McKinley Lake	1,800		
	Salmon Creek W Fork	4,800		
	Salmon Creek E Fork	4,850		
26/27 Mile Creek	26/27 Mile Creek	4,000	4,000	3,643
39 Mile Creek	39 Mile Creek	9,000	9,000	9,367
Goat Mountain	Goat Mountain Creek	5	5	1,024
Pleasant Creek	Pleasant Creek	8,100	8,100	897
Martin River	Martin River - Lower	100	12,935	29,808
	Ragged Point River	1,000		
	Ragged Point Outlet	400		
	Ragged Point Lake	1,500		
	Martin River - Upper ^b	100		
	Martin Lake Outlet	600		
	Martin Lake	4,900		
	Martin Lake Feeders	1,600		
	Pothole River	250		
	Pothole Lake	1,660		
	Little Martin River	500		
Little Martin Lake	325			
Tokun	Tokun Springs	35	5,695	9,172
	Tokun River	60		
	Tokun Lake Outlet	2,200		
	Tokun Lake	3,400		
Martin River Slough	Martin River Slough	7,300	7,300	6,574
Copper River Aerial Survey Daily Total			71,065	
Anticipated Escapement Index				88,178

-Continued-

Appendix B.11. (page 4 of 4)

- ^a The survey sites represent most of the known sockeye salmon spawning locations in the Copper River Delta drainage. Weather permitting, the sites are surveyed weekly. The surveys provide information about the relative strength of escapement among years and within a year, time for spawning sites and relative escapement strength among sites. The indices are not intended to provide an actual estimate of escapement for coastal stocks, but have been used for that purpose in the absence of any other escapement estimating method. The abbreviations used in the table have the following meaning: NS = no survey, NC = surveyed but no count due to poor conditions. The + sign after some counts indicates that the count is the minimum estimate seen in less than ideal conditions. The symbol * indicates that this survey count was used as the peak survey for the site without duplication of counts for survey sites along migratory corridors (see footnote b).
- ^b The sites typically have very protracted run timing or two temporally segregated spawning populations at the same sites. Aerial counts from more than one day may be marked with an asterisk and used in the escapement estimate if the surveyor indicates that these counts represented different fish.
- ^c The escapement estimates for each site is marked with an asterisk. Where the survey site is a terminal spawning area, the peak count is used. However, if the site is a schooling area for migratory fish bound for sites further upstream, the count which minimizes possible duplicate of counts across dates is selected.
- ^d This stream is not included in the estimated escapement delta wide, it is a non-index stream.
- ^e The sum of the estimates by site within a system.

Appendix B.12. Copper River and Bering River area sockeye salmon escapement estimates, 1993 - 2001.

Stream/Lake ^{a,b}	1993	1994	1995	1996	1997	1998	1999	2000	2001
Eyak Lake	16,400	18,040	17,720	16,110	^d	16,300	18,100	20,500	7,400
Hatchery Creek	1,100	2,800	3,700	1,900	^d	3,300	200	2,800	950
Power Creek	700	500	650	1,200	^d	1,500	1,400	6,700	2,450
Ibek Creek	^d	800	^d	100	^d	^d	50	^d	1,500
McKinley Lake	7,700	12,700	13,100	8,600	8,500	11,300	400	2,850	2,080
Salmon Creek	3,000	420	200	2,600	3,100	3,300	7,100	4,220	9,650
26/27 Mile Creek	1,625	4,900	2,000	1,440	1,700	1,800	3,800	3,300	4,000
39 Mile Creek	4,000	7,000	5,400	6,200	9,300	11,500	12,000	6,500	9,000
Goat Mountain	^d	600	650	1,000	350	300	60	60	5
Pleasant Creek	2,270	1,400	1,600	1,400	5,000	1,000	7,615	2,300	8,100
Martin River	1,500	4,700	1,500	2,700	1,100	2,700	2,800	2,650	200
Ragged Pt. R./Lake	1,325	0	6,200	1,540	4,400	4,800	5,900	3,600	2,900
Martin Lake	6,700	13,100	9,450	9,000	13,100	13,600	19,150	22,900	7,100
Pothole Lake	700	950	1,200	1,160	300	1,500	2,100	3,050	1,910
L. Martin Lake	1,900	1,760	2,500	300	470	750	1,800	830	825
Tokun Lake/River	3,400	2,850	7,150	7,150	5,750	8,950	7,600	6,485	5,695
Martin River Slough	5,400	5,850	3,350	3,070	4,000	4,900	10,900	9,300	7,300
Copper Delta Total	57,720	78,370	76,370	65,470	57,070	87,500	100,975	98,045	71,065
Upper Copper R. ^c	833,387	715,577	599,265	906,239	1,148,079	866,957	850,951	587,497	833,569
Copper R. Dist. Tot.	891,107	793,947	675,635	971,709	1,205,149	954,457	951,926	685,542	904,634
Bering River/Lake	23,120	23,000	28,650	22,420	^d	21,600	39,030	21,050	7,750
Shepherd Creek	3,100	1,400	2,600	2,000	1,400	^d	1,215	950	60
Stillwater Cr.	500	800	900	1,100	700	400	950	320	320
Kushtaka Lake	205	150	400	990	65	500	1,100	700	293
Katalla River	800	1,200	900	800	700	900	3,900	1,200	400
Bering R. Area Tot.	27,725	26,550	33,450	27,310	2,865	23,400	46,195	24,220	8,823
Copper/Bering Total	918,832	820,497	709,085	999,019	1,208,014	977,857	998,121	709,762	913,457

^a The escapement figures in this table are based on peak aerial survey estimates and sonar counts from a majority of known salmon spawning areas in the Copper and Bering River Delta. These indices are not intended to provide a true estimate of total escapement for the coastal stocks, but a comparable index based upon the best data currently available. An effort has been made to standardize the estimates across years.

^b The areas in this table represent combined survey sites corresponding to the "system" designations for the current year survey results presented elsewhere in this report.

^c Upriver escapement estimate from Miles Lake sonar counts.

^d Peak escapement estimates were not possible for these systems due to poor weather conditions.

Appendix B.13. Aerial survey indices of chinook salmon escapement to the upper Copper River, 1992 - 2001.

Location ^a	Yearly Survey Indices										
	1992 ^u	1993	1994	1995 ^u	1996	1997	1998	1999	2000	2001	10 Year Average 1985-1994
East Fork Chistochina			508		2,050	2,245	740	82	580	0	582
Gulkana River	1,156	1,682			2,321	2,250	1,407	1,012	1,990	462	1,384
Mendeltna Creek	126	121			370	350	280	38	125	80	127
Kiana Creek	65	430			723	455	700	216	154	153	260
St. Anne Creek			250		117	900	515	486	70	47	107
Manker Creek			75		192	466	828	69	50	23	103
Grayling Creek			2		164	330	527	88	91	67	94
Little Tonsina River			4		45	55	NC	93	24	6	137
Indian River			47		207	270	48	2	61	0	18
Total Survey Index	1,347	3,119	0	6,189	7,321	5,045	2,086	3,145	838	2,812	

^a The escapement figures in this table are based on peak aerial survey estimates and weir counts from a majority of the known spawning areas in the upper Copper River drainage. These indices are not intended to provide a true estimate of total escapement for these stocks, but a comparable index based upon the best data currently available. An effort has been made to standardize the estimate across years, however counts were obtained only as environmental conditions allowed and may not necessarily correspond to periods of peak abundance. Missing counts are generally a result of bad weather, high water or other factors that prevent surveys for that given year.

^b Due to poor weather conditions surveys were conducted late and are not comparable.

Appendix B.14. Aerial survey indices of sockeye salmon escapement to the upper Copper River drainage, 1992 - 2001.

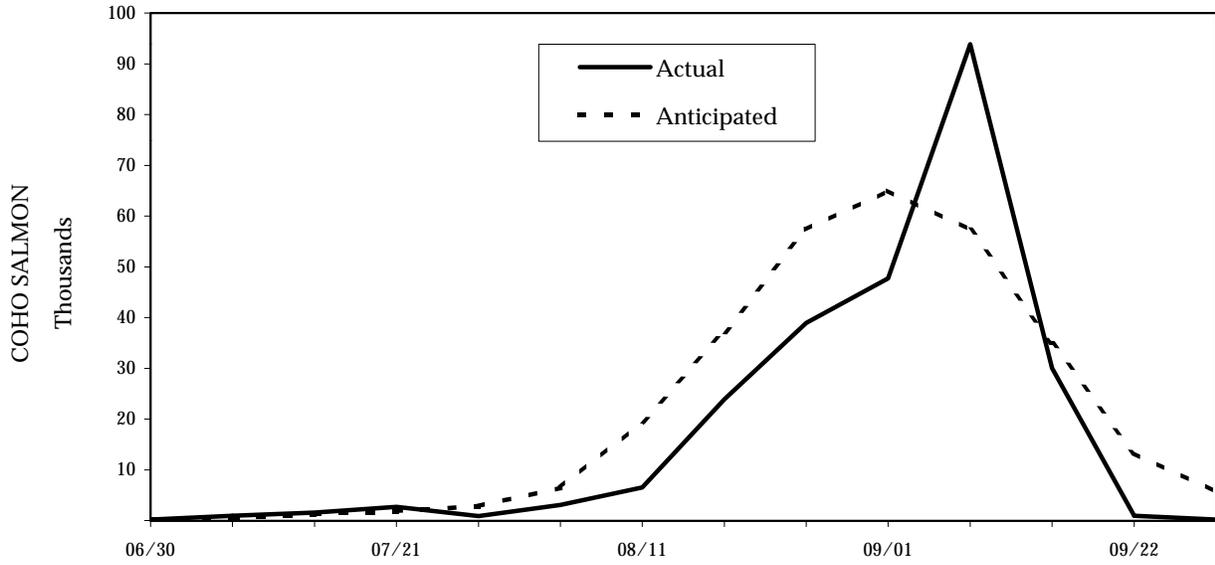
Location ^a	Year survey Indices										10 Year Average 1983-92
	1992	1993 ^c	1994 ^c	1995 ^c	1996	1997	1998	1999	2000	2001	
Fish Lake	4,250				4,800		4,900	1,880	5,000	5,000	6,418
Bad Crossing 1&2	500				780		7,800	195	19	2,000	2,604
Suslota Lake	1,350				4,100		1,060	0	3,000	2,500	1,416
Dickey Lake	46				0		350	11	0	1	115
Keg Creek	630				850	420	160	125	0	1	725
Mahlo Creek	250				3,800	11,800	12,300	325	1,000	400	2,648
St. Anne Creek	450				3,500	4,800	4,100	1,300	1,100	300	4,888
Fish Cr.-Mentasta	480				400		1,400	450	800	3,500	963
Swede Lake	875				20		770	270	135	500	531
Tana River	740										1,345
Mentasta Lake	600				2,800		6,100	715	1,200	13,000	3,277
Tanada Lake	2,250		6,270	3,100				350	3,200	200	3,849
Salmon Creek	1,500							0	500	1,500	825
Paxson Inlt-Mud Cr	6,450				16,800		15,200	5,700	2,200	7,000	6,560
Mud Creek and Lake	425				240			20	30	300	172
Mendeltna Creek	1,750				1,250	400		120	2,800	800	2,470
Paxson Lake Outlet	950						200	1,800	1,000	200	2,661
Mud Cr.- Summit L.	3,800						700	820	140	450	7,445
Long Lake	1,050										1,577
Tonsina Lake	1,350										1,080
Totals	29,696										51,569

a The escapement figures in this table are based on peak aerial survey estimates and weir counts from a majority of the known spawning areas in the upper Copper River drainage. These indices are not intended to provide a true estimate of total escapement for these stocks, but a comparable index based upon the best data currently available. An effort has been made to standardize the estimate across years, however counts were obtained only as environmental conditions allowed and may not necessarily correspond to periods of peak abundance. Missing counts are generally a result of bad weather, high water or other factors that prevent surveys for that given year.

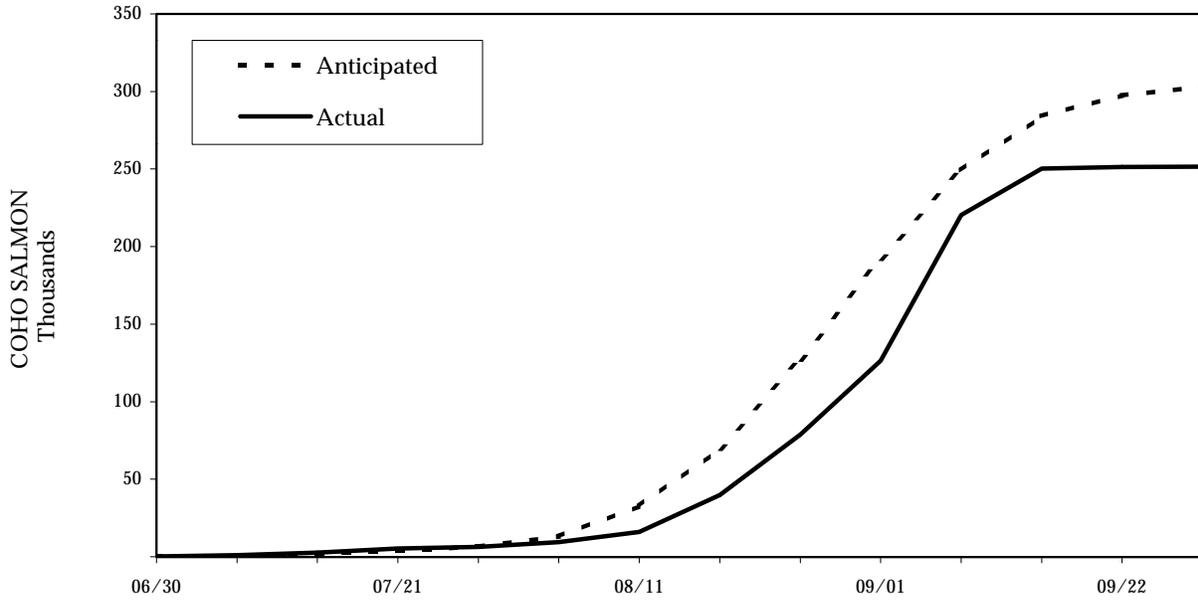
b No survey flown.

c The Tanada Lake system was the only system surveyed in 1994 and 1995, no surveys were flown in 1993.

COPPER RIVER DISTRICT COHO SALMON WEEKLY COMMERCIAL HARVEST



CUMULATIVE HARVEST



Appendix B.15. Anticipated versus actual weekly and cumulative harvest of coho salmon in the Copper River drift gillnet fishery, 2001.

Appendix B.16. Aerial escapement indices by date and location for coho salmon returning to the Copper River Delta, 2001.

Copper River Delta ^a		Aerial Escapement Indices by Survey Date ^b				
System and Drainage	Survey System	August 17	August 25	Sept. 8	Sept. 26	Oct. 15
Eyak River	Eyak River	1,600	5,200	4,000	5,500 *	1,200
	East Shore Beaches	NS	0	1,400	1,200 *	200
	West Shore Beaches	NS	0	NS	650 *	70
	Middle Arm Beaches	NS	1,500	NS	200 *	0
	North Shore Beaches	NS	0	NS	250 *	2,550
	Hatchery Creek Delta	NS	750	NS	350 *	100
	Hatchery Creek	NS	0	NS	100 *	300
	Power Creek Delta	NS	600	NS	400 *	400
	Power Creek	NS	0	NS	80 *	2,700
Ibek Creek	Ibek Creek	60	500	4,200	13,000	14,000 *
Scott River	Scott Lake ^c	0	0	100	200 *	200
	Scott River ^c	NS	NC	0	200 *	270
	Elsner Lake ^c	0	0	20	200 *	20
Alaganik Slough	Alaganik Slough	NS	0	55	20 *	0
	18/20 Mile Creek	0	20	85	420 *	140
	McKinley Lake	0	500	100	800 *	30
	Salmon Creek West Fork	0	200	10	100 *	200
	Salmon Creek East Fork	0	0	0	100 *	500
26/27 Mile Creek	26/27 Mile Creek	400	400 *	260	110	325
39 Mile Creek	39 Mile Creek	0	0	1,800 *	1,600	NS
Goat Mountain Cr.	Goat Mountain Creek	0	0	20	330 *	NS
Pleasant Creek	Pleasant Creek ^c	0	25	130	210 *	0
Martin River	Martin River - Lower	1,030	1,040	220	255 *	550
	Ragged Point River	300	0	110	220 *	70
	Ragged Point Lake Outle	50	0	200	20 *	0
	Ragged Point Lake	0	0	0	200 *	50
	Martin River - Upper	700	400	200	3,500 *	20
	Martin Lake Outlet	300	0	50	0 *	0
	Martin Lake	0	1,200	0	11 *	125
	Martin Lake Feeders	0	0	0	300 *	120
	Pothole River	0	80	50	80	140 *
	Pothole Lake	0	0	0	100	250 *
	Little Martin River	120	0	2,250	3,000 *	2,800
	Little Martin Lake	0	0	0	10 *	0
	Tokun Springs	300	700	10	1,100 *	400
	Tokun River	175	200	50	500 *	975
	Tokun Lake Outlet	0	0	0	0 *	8
Tokun Lake	0	100	0	0 *	0	
Martin River Slough	Martin River Slough	NS	110	2,800	4,100 *	400
Copper River Aerial Survey Daily Total		5,035	13,525	18,120	39,416	29,113
Anticipated Escapement ^c		9,573	15,639	34,745	32,751	25,281

-continued-

Appendix B.16. (page 2 of 3)

Copper River Delta ^a		Estimated Escapement		
System and Drainage	Survey System	Site ^d	System ^e	Anticipated
Eyak River	Eyak River	5,500	8,730	6,100
	East Shore Beaches	1,200		
	West Shore Beaches	650		
	Middle Arm Beaches	200		
	North Shore Beaches	250		
	Hatchery Creek Delta	350		
	Hatchery Creek	100		
	Power Creek Delta	400		
	Power Creek	80		
Ibek Creek	Ibek Creek	14,000	14,000	6,600
Scott River	Scott River ^c	200		
	Elsner Lake ^c	200		
	Scott Lake ^c	200		
Alaganik Slough	Alaganik Slough	20	1,440	3,550
	18/20 Mile Creek	420		
	McKinley Lake	800		
	Salmon Creek West Fork	100		
	Salmon Creek East Fork	100		
26/27 Mile Creek	26/27 Mile Creek	400	400	400
39 Mile Creek	39 Mile Creek	1,800	1,800	3,650
Goat Mountain Cr.	Goat Mountain Creek	330	330	1,450
Pleasant Creek	Pleasant Creek ^c	210	210	
Martin River	Martin River - Lower	255	255	8,900
	Ragged Point River	220	440	
	Ragged Point Lake Outlet	20		
	Ragged Point Lake	200		
	Martin River - Upper	3,500	3,500	
	Martin Lake Outlet	0	311	
	Martin Lake	11		
	Martin Lake Feeders	300		
	Pothole River	140	390	
	Pothole Lake	250		
	Little Martin River	3,000	3,010	
	Little Martin Lake	10		
	Tokun Springs	1,100	1,600	
Tokun River	500			
Tokun Lake Outlet	0			
Tokun Lake	0			
Martin River Slough	Martin River Slough	4,100	4,100	9,550
Copper River Aerial Survey Total			40,516	
Anticipated Escapement				49,950

-continued-

Appendix B.16. (page 3 of 3)

- ^a The survey sites represent most of the known coho salmon spawning locations in the Copper River Delta drainage. Weather permitting, the sites are surveyed weekly. The surveys provide information about the relative strength of escapement among years and within a year, time for spawning sites and relative escapement strength among sites. The indices are not intended to provide an actual estimate of escapement for coastal stocks but have been used for that purpose in the absence of any other escapement estimating method. The abbreviations used in the following table have the following meaning: NS = no survey, NC = surveyed but no count due to poor conditions. A + sign after a count indicates that the count is a minimum estimate, made in less than ideal conditions. The symbol * indicates that this survey count was used as the peak survey for the site.
- ^b For systems not flown on any given survey the expected for that system was subtracted from the total anticipated.
- ^c This stream is not included in the estimated escapement delta wide, it is a non-index stream.
- ^d The escapement estimates for each site is marked with an asterisk. Where the survey site is a terminal spawning area the peak count is used. However, if the site is a schooling area for migratory fish bound for sites further upstream, the count which minimizes possible duplication of counts across dates is selected.
- ^e The sum of the estimates by site within the index systems.

Appendix B.17. Copper River Delta and Bering River coho salmon escapement estimates, 1992 - 2001.

Stream/Lake ^{a,b}	1992	1993	1994	1995	1996	1997	1998 ^c	1999	2000	2001
Eyak Lake	5,710	NC ^d	9,900	4,050	5,100	6,800		1,250	2,130	7,800
Hatchery Creek	1,100	NC ^d	700	170	0	1,400		300	1,900	450
Power Creek	1,000	NC ^d	700	300	0	2,700		2,700	1,450	480
Ibek Creek	9,600	NC ^d	3,060	3,000	6,300	4,700		4,600	7,000	14,000
Scott & Elsner River	550	1,580	1,600	540	1,000	2,200		2,500	300	600
18/20 Mile	915	1,750	3,300	2,550	3,800	3,300		610	420	420
McKinley Lake	800	700	2,100	400	NC ^d	1,100		50	120	800
Salmon Creek	0	1,400	0	1,250	1,500	2,500		3,080	2,600	200
26/27 Mile	475	1,500	1,300	1,300	1,480	2,300		2,610	1,000	400
39 Mile	1,900	1,600	4,150	3,800	5,250	6,100		3,650	5,000	1,800
Goat Mountain	480	650	1,000	2,800	1,000	1,400		650	430	330
Pleasant Cr. ^c	8	NS	45	100	40	620		1,220	45	45
Martin River	1,900	4,540	10,600	5,000	15,400	NC ^d		3,900	4,500	3,755
Ragged Pt. River/Lk	310	300	0	100	0	80		275	330	440
Martin Lake	65	150	0	10	0	NC ^d		600	1,350	311
Pothole Lake	300	730	0	300	140	60		600	245	390
Little Martin Lake	10,800	6,400	200	1,500	700	10,500		3,600	3,000	3,010
Tokun River/Lake	510	950	1,780	1,900	1,300	1,300		1,130	710	1,600
Martin River Slough	8,140	11,200	5,120	5,950	4,100	10,500		12,900	10,600	4,100
Copper Delta Total	44,563	33,450	45,555	35,020	47,110	57,560		46,225	43,130	40,931

Katalla R.	2,760	4,400	4,500	4,500	6,800	8,000		3,000	2,800	2,900
Bering Lake	3,540	5,900	5,800	10,600	6,000	14,800		13,800	10,370	21,040
Dick Creek	1,250	200	100	100	0	1,300		1,270	2,500	760
Shepherd Cr.	NS	600	900	800	NC ^d	NC ^d		200	450	300
Nichawak R.	1,970	4,100	2,000	2,700	2,000	4,300		4,800	4,300	1,300
Gandil R.	600	1,250	950	1,350	1,000	1,900		3,000	600	900
Controller Bay	6,180	13,600	14,300	7,400	11,000	12,100		5,220	5,360	2,807
Bering Area Total	16,300	30,050	28,550	27,450	26,800	42,400		31,290	26,380	30,007
Copper/Bering Total	60,863	63,500	74,105	62,470	73,910	99,960		77,515	69,510	70,938

^a The escapement figures in this table are based on peak aerial survey estimates counts from a majority of the known salmon spawning areas in the Copper and Bering River Delta. These indices are not intended to provide a true estimate of total escapement for the coastal stocks, but a comparable index based upon the best data currently available. An effort has been made to standardize the estimates across years, however counts were obtained only as environmental conditions allowed and may not necessarily correspond to periods of peak abundance. Missing counts are generally a result of bad weather, high water, turbulence or other factors that prevent surveys for that given year.

^b The areas in this table represent combined survey sites corresponding to the "system" designations for the current year survey results presented elsewhere in this report.

^c Not an indexed stream.

^d Due poor stream or weather conditions these systems are listed as "NC" no count. See Appendix B.15. for weekly observations.

^e Due to weather conditions and timing of surveys no peak estimate was possible.

Appendix B.18. Estimated age and sex composition of sockeye salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2001.

		Brood Year and Age Class								Total
		1998	1997		1996			1995		
		0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	
Strata Combined:	5/17 - 7/27									
Sampling dates:	5/18 - 7/3									
Sample size:	3,898									
Female	Percentage of sample	0.0	3.8	2.3	0.0	41.1	0.2	0.0	1.7	49.2
	Number in catch	626	49,923	30,193	185	543,515	2,718	429	22,200	649,790
Male	Percentage of sample	0.1	5.6	2.5	0.1	40.2	0.1	0.2	1.8	50.7
	Number in catch	1,298	74,332	33,474	750	531,712	1,850	2,305	24,397	670,119
Total	Percentage of sample	0.1	9.4	4.8	0.1	81.5	0.3	0.2	3.5	100.0
	Number in catch	1,924	124,255	63,666	935	1,076,349	4,569	2,734	46,598	1,321,030
	Standard error	839	6,548	4,658	623	8,840	1,296	932	4,332	

Appendix B.19. Estimated age and sex composition of chinook salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2001.

		Brood Year and Age Class										Total
		1998		1997		1996		1995		1994		
		0.2	1.1	1.2	2.1	1.3	2.2	1.4	2.3	1.5	2.4	
Strata Combined:	5/17 - 6/6											
Sampling dates:	5/17 - 6/6											
Sample size:	1,845											
Female	Percentage of sample	0.1	0.1	3.8	0.2	33.6	0.1	9.8	0.6	0.1	0.0	48.3
	Number in catch	30	28	1,544	69	13,694	54	3,974	240	24	12	19,669
Male	Percentage of sample	0.0	0.1	8.2	0.1	30.8	0.1	11.9	0.4	0.0	0.1	51.6
	Number in catch	12	30	3,324	28	12,529	57	4,851	150	12	31	21,024
Total	Percentage of sample	0.1	0.1	12.0	0.2	64.5	0.3	21.7	1.0	0.1	0.1	100.0
	Number in catch	42	59	4,868	97	26,252	111	8,825	390	36	43	40,722
	Standard error	33	42	327	51	482	53	416	90	21	25	

Appendix B.20. Estimated age and sex composition of coho salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2001.

		Brood Year and Age Class			
		1998	1997	1996	
		1.1	2.1	3.1	Total
Strata Combined:	05/31 - 09/15				
Sampling dates:	08/14 - 09/15				
Sample size:	1,621				
Female	Percentage of sample	16.8	21.3	0.5	38.5
	Number in catch	42,532	53,878	1,201	97,611
Male	Percentage of sample	25.5	35.9	0.1	61.4
	Number in catch	64,475	90,857	176	155,508
Total	Percentage of sample	42.3	57.1	0.5	100.0
	Number in catch	107,221	144,735	1,377	253,333
	Standard error	3,378	3,380	505	

Appendix B.21. Commercial salmon catch by species in the Bering River District, 1973 - 2001.

Year	Catch by Species					Total
	Chinook	sockeye	Coho	Pink	Chum	
1973	285	15,426	65,348	2	5	81,066
1974	32	4,208	28,615	7	2	32,864
1975	162	21,637	24,162	0	0	45,961
1976	228	30,908	42,423	43	1	73,603
1977	127	14,445	47,218	192	221	62,203
1978	331	33,554	91,097	266	2,391	127,639
1979	385	139,015	114,046	6,895	23,094	283,435
1980 ^a	0	0	108,872	0	0	108,872
1981	200	55,585	82,626	9,882	8,307	156,600
1982	254	129,667	144,752	47	333	275,053
1983	610	179,273	117,669	851	4,615	303,018
1984	330	91,784	214,632	309	20,408	327,463
1985	215	26,561	419,276	214	9,642	455,908
1986	128	19,038	115,809	15	243	135,233
1987	34	16,926	15,864	54	7	32,885
1988	19	7,152	86,539	23	181	93,914
1989	30	9,225	26,952	7	2	36,216
1990	14	8,332	42,952	2	1	51,301
1991	28	19,181	110,951	4	195	130,359
1992	21	19,721	125,616	4	1	145,363
1993	130	33,951	115,833	82	22	150,018
1994	121	27,926	259,003	34	63	287,147
1995	44	21,585	282,045	26	229	303,929
1996	111	37,712	93,763	0	30	131,616
1997	23	9,651	97	2	0	9,773
1998	70	8,439	12,284	5	2	20,800
1999	42	13,697	9,852	204	96	23,891
2000	5	1,279	56,329	0	0	57,613
2001	76	5,450	2,715	0	0	8,241
Ten Year Average (1991-00)	60	19,314	106,577	36	64	126,051

^a In 1980 no fishing was allowed prior to August 11.

Appendix B.22. Commercial salmon harvest by period in the Bering River District drift gillnet fishery, 2001.

Period	Date ^a	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
					Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
03	06/11-06/12	24	2	4	0	0	429	2,582	0	0	0	0	0	0
04	06/14-06/15	24	3	3	26	624	1,300	7,432	0	0	0	0	0	0
05	06/18-06/19	24	5	7	16	474	1,322	7,927	0	0	0	0	0	0
06	06/21-06/22	24	2	4	6	100	961	6,021	0	0	0	0	0	0
07	06/25-06/26	24	4	6	28	774	1,052	6,415	0	0	0	0	0	0
08	06/28-06/29	24	1	2	0	0	386	2,505	0	0	0	0	0	0
13	08/27-08/28	24	5	6	0	0	0	0	1,342	11,590	0	0	0	0
14	09/03-09/04	24	4	4	0	0	0	0	1,173	10,846	0	0	0	0
15	09/07	12	1	1	0	0	0	0	200	2,058	0	0	0	0
Total			15	37	76	1,972	5,450	32,882	2,715	24,494				
Average Weight					25.95		6.03		9.02					

^a For starting times of specific openings refer to Appendix B.26.

Appendix B.23. Aerial escapement indices by date and location for sockeye salmon returning to the Bering River Delta, 200 1.

Bering River Delta ^a		June 8	June 15	June 22	June 27	July 6	July 13
System and Drainage	Survey System						
Bering River	Bering River	4,000	2,200	1,150	200 *	NS	200
	Bering Lake	700	3,500	5,000	7,550 *	NS	6,100
	Dick Creek	0	0	0	0 *	NS	450
	Shepherd Creek - Lagoon	NS	NS	0	50	NS	0 *
	Shepherd Creek	NS	NS	NS	0	NS	50 *
	Carbon Creek	NS	NS	NS	NS	NS	10 *
	Clear Creek	NS	NS	NS	NS	NS	0
	Kushtaka Lake	NS	NS	NS	0	NS	0
	Shockum Creek	NS	NS	NS	0	NS	0
	Katalla River ^b	Katalla River	0	0	200	200	NS
Bering River Aerial Survey Daily Index		4,700	5,700	6,350	8,000	0	7,210
Anticipated Escapement Index ^c		711	6,538	7,850	13,004	23,541	23,777

Bering River Delta ^a		August 8	August 17	August 25	Sept. 8	Sept. 26	Oct. 15
System and Drainage	Survey System						
Bering River	Bering River	300	0	0	0	0	0
	Bering Lake	4,200	850	1,130	700	6	0
	Dick Creek	1,300	750	300	400	20	0
	Shepherd Creek - Lagoon	0	0	0	0	0	0
	Shepherd Creek	0	0	NS	0	0	0
	Carbon Creek	0	NS	NS	0	NS	0
	Clear Creek	320 *	97	0	0	0	NS
	Kushtaka Lake	10	43 *	90	4	0	NS
	Shockum Creek	0	250 *	15	0	0	NS
	Katalla River ^b	Katalla River	80	80	0	0	0
Bering River Aerial Survey Daily Index		6,210	2,070	1,535	1,104	26	0
Anticipated Escapement Index ^c		10,149	6,037	3,682	1,080	1,429	0

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Appendix B.23 (page 2 of 2).

Bering River Delta ^a		Estimated Escapements		
System and Drainage	Survey System	Site ^d	System ^f	Anticipated
	Bering River	200	7,750	23,512
	Bering Lake	7,550		
	Dick Creek	0		
	Shepherd Creek - Lagoon	0	60	6,045
	Shepherd Creek	50		
	Carbon Creek	10		
	Clear Creek	320	320	1,585
	Kushtaka Lake	43	293	3,278
	Shockum Creek	250		
Katalla River ^b	Katalla River	400		
Bering River Aerial Survey Daily Index			8,423	
Anticipated Escapement Index ^c				34,420

^a The survey sites represent most of the known sockeye salmon spawning locations in the Bering River drainage. Weather permitting, the sites are surveyed weekly. The surveys provide information about the relative strength of escapement among years and within a year, time for spawning sites and relative escapement strength among sites. The indices are not intended to provide an actual estimate of escapement for coastal stocks but have been used for that purpose in the absence of any other escapement estimating method. The abbreviations used in the following table have the following meaning: NS = no survey, NC = surveyed but no count due to poor conditions. The + sign after some counts indicates that the count is the minimum estimate seen in less than ideal conditions. The symbol * indicates that this survey count was used as the peak survey for the site without duplication of counts for survey sites along migratory corridors (see footnote d).

^b This stream is not included in the estimated escapement delta wide, it is a non-index stream.

^c For systems not flown on any given survey the expected for that system was subtracted from the total anticipated for that survey.

^d The escapement estimates for each site is marked with an asterisk. Where the survey site is a terminal spawning area the peak count is used. However, if the site is a schooling area for migratory fish bound for sites further upstream, the count which minimizes possible duplication of counts across dates is selected.

^e Due to poor weather conditions during peak of run, no estimate was possible.

^f The sum of the estimates by site within a system.

Appendix B.24. Anticipated and actual weekly catch and escapement of coho salmon in the Bering River District drift gillnet fishery, 2001.

Week Ending Date	Fishing Time (Hrs.)	Coho Catch		Coho Escapement	
		Actual Catch	Anticipated Catch ^a	Actual Aerial Index	Anticipated Index ^b
18-Aug			2,008	150	5,260
25-Aug			14,593	865	8,324
1-Sep	24	1,342	31,649	NS	17,989
8-Sep	24 and 12	1,373	34,714	3,420	18,859
15-Sep			24,778	NS	18,838
22-Sep			7,041	NS	14,836
29-Sep			1,454	30,007	7,866
6-Oct			217	NS	4,886
13-Oct				NS	4,737
20-Oct				20,195	4,028
Season Total		2,715	116,454	54,637 #	105,623

^aBased on average historic catches for comparable dates (1969-1996).

^bBased on average historic aerial escapement surveys for comparable dates (1984 - 1992).

Appendix B.25. Aerial escapement indices by date and location for coho salmon returning to the Bering River Delta, 2001.

Bering River Delta ^a System and Drainage, Survey System		Aerial Escapement Indices by Survey Date				
		August 17	August 25	Sept. 8	Sept. 26	Oct. 15
Bering River	Bering River ^b	0	15	320	200 *	0
	Bering Lake	0	800	1,650	20,840 *	16,200
	Dick Creek	0	0	200	760 *	650
Shepherd Drainage	Shepherd Creek - Lagoon	0	0	20	200 *	0
	Shepherd Creek	0	NS	20	100 *	20
	Carbon Creek	NS	NS	0	NS	5
Katalla River	Katalla River	150	50	200	2,900 *	1,050
Lower Bering River	Gandil River	NS	NS	500	900 *	425
	Nichawak River	NS	NS	150	1,300 *	250
Controller Bay	Campbell River	NS	NS	20	0 *	0
	Edwardes River	NS	NS	310	2,507 *	1,500
	Okalee River	NS	NS	30	300 *	95
	Other Clear Streams	NS	NS	NS	NS	NS
Bering River Aerial Survey Daily Index		150	865	3,420	30,007	20,195
Anticipated Aerial Index^d		5,260	8,324	18,859	7,866	4,028

Bering River Delta ^a System and Drainage, Survey System		Estimated Escapement		
		Site ^e	System ^f	Anticipated
Bering River	Bering River ^b	200	21,800	5,600
	Bering Lake	20,840		
	Dick Creek	760		
Shepherd Drainage	Shepherd Creek - Lagoon	200	300	
	Shepherd Creek	100		
	Carbon Creek	0		
Katalla River	Katalla River	2,900	2,900	6,650
Lower Bering River	Gandil River	900	2,200	9,900
	Nichawak River	1,300		
Controller Bay	Campbell River	0	2,807	2,500
	Edwardes River	2,507		
	Okalee River	300		
	Other Clear Streams	NS		
Bering River/Controller Bay Aerial Survey Total			30,007	
Anticipated Aerial Index				24,650

^a The survey sites represent most of the known coho salmon spawning locations in the Bering River drainage. Wea sites are surveyed weekly. The surveys provide information about the relative strength of escapement among year time for spawning sites and relative escapement strength among sites. The indices are not intended to provide an escapement for coastal stocks but have been used for that purpose in the absence of any other escapement estimates. abbreviations used in the following table have the following meaning: NS = no survey, NC = surveyed but no co conditions. The + sign after some counts indicates that the count is the minimum estimate seen in less than ideal conditions. The symbol * indicates that this survey count was used as the peak survey for the site without duplication of counts along migratory corridors (see footnote e).

^b Bering River counts include coho observed in the Don Miller Hill tributaries.

^c This stream is not included in the estimated escapement delta wide, it is a non-index stream.

^d Systems not flown on a survey, the expected for that system was subtracted from the total anticipated.

^e The escapement estimates for each site is marked with an asterisk. Where the survey site is a terminal spawning count is used. However, if the site is a schooling area for migratory fish bound for sites further upstream, the most possible duplication of counts across dates is selected.

^f The sum of the estimates by site within a system

Appendix B.26. Summary of periods and emergency orders issued for the commercial salmon gillnet fisheries in the Bering and Copper River Districts, 200

Bering River District (200)			Copper River District (212)			Emergency Orders Issued
Periods	Dates	Hours Fished	Periods ^a	Dates	Hours Fished	
			01	05/17	12	2-F-E-01-01 ^b
			02	05/21	12	2-F-E-03-01
			03	05/25	12	2-F-E-05-01
			04	05/28-05/29	24	2-F-E-07-01
			05	05/31-06/02	60	2-F-E-09-01, 2-F-E-12-01
01	06/04-06/05	36	06	06/04-06/05	36	2-F-E-13-01
02	06/07-06/08	36	07	06/07-06/08	36	2-F-E-15-01
03	06/11-06/12	24	08	06/11-06/12	24	2-F-E-18-01
04	06/14-06/15	24	09	06/14-06/15	24	2-F-E-20-01
05	06/18-06/19	24	10	06/18-06/19	24	2-F-E-22-01
06	06/21-06/22	24	11	06/21-06/22	24	2-F-E-24-01
07	06/25-06/26	24	12	06/25-06/26	24	2-F-E-28-01
08	06/28-06/29	24	13	06/28-06/29	24	2-F-E-32-01
09	07/02-07/03	24	14	07/02-07/03	24	2-F-E-34-01
10	07/05-07/06	24	15	07/05-07/06	24	2-F-E-36-01
11	07/09-07/10	24	16	07/09-07/10	24	2-F-E-43-01
12	07/12-07/13	24	17	07/12-07/13	24	2-F-E-44-01
			18	07/16-07/17	24	2-F-E-45-01
			19	07/19-07/20	24	2-F-E-46-01
			20	07/23-07/24	24	2-F-E-48-01
			21	07/26-07/27	24	2-F-E-61-01
			22	07/30-07/31	24	2-F-E-62-01
			23	08/02-08/03	24	2-F-E-71-01
			24	08/06-08/07	24	2-F-E-71-01
			25	08/13-08/14	24	2-F-E-73-01
			26	08/20-08/21	24	2-F-E-81-01
13	08/27-08/28	24	27	08/27-08/28	24	2-F-E-82-01
14	09/03-09/04	24	28	09/03-09/04	24	2-F-E-91-01
15	09/07	12	29	09/07	12	2-F-E-96-01
			30	09/14	12	2-F-E-103-01
			31	09/17-09/18	24	2-F-E-105-01, 2-F-E-106-01
			32	09/22	12	2-F-E-109-01
			33	09/26	12	2-F-E-111-01

^a The Copper River schedule is typically two 24-hour periods per week; from 7:00 a.m. Monday to 7:00 a.m. Tuesday and from 7:00 p.m. Thursday to 7:00 p.m. Friday. All 12-hours periods began at 7:00 a.m.

^b The following waters were closed to commercial fishing during the 12-hour period on May 17:
The waters inside of a line from the Steamboat marker to the U.S.C.G. light on the west side of Pete Dahl entrance to the ADF&G marker located on the east side of Pete Dahl entrance and from the U.S.C.G. light on the west side of Grass Island entrance to the ADF&G marker located on the east side of Grass Island entrance and from the U.S.C.G light on the west side of Kokenhenik Island entrance to the ADF&G marker located on the east side of Kokenhenik Island entrance and all waters west of the ADF&G marker at Coffee Creek.

APPENDIX C: COGHILL AND UNAKWIK DISTRICTS

Appendix C.1. Commercial salmon harvest by period in the Coghill District drift gillnet and purse seine fisheries, Prince William Sound, 2001.

Period	Date ^a	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
					Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
DRIFT GILLNET														
01	05/28-05/29	24	23	65	10	146	538	4,304	0	0	0	0	34,982	298,783
02	05/31-06/01	24	62	124	28	422	344	2,161	0	0	0	0	49,320	396,741
03	06/04-06/05	24	96	262	27	417	186	1,199	0	0	0	0	89,084	666,965
04	06/07-06/08	24	126	320	14	211	175	1,075	0	0	0	0	101,658	795,545
05	06/11-06/12	24	147	334	15	189	326	1,993	0	0	0	0	77,191	611,670
06	06/14-06/15	24	163	419	13	210	736	4,674	0	0	0	0	118,024	915,530
07	06/18-06/19	24	167	348	10	146	1,435	10,053	1	7	1	3	88,434	681,419
08	06/21-06/22	24	209	522	10	123	3,066	20,427	0	0	2	9	129,768	1,004,077
09	06/25-06/26	24	195	396	9	106	8,463	55,690	0	0	17	69	70,305	535,985
10	06/28-06/29	24	175	373	11	127	15,335	101,102	18	143	197	777	59,796	454,424
11	07/02-07/03	24	170	342	9	86	7,600	50,531	40	324	1,317	4,721	76,593	574,969
12	07/05-07/06	24	160	296	28	243	6,417	41,844	83	618	5,565	21,764	75,381	541,493
13	07/09-07/11	48	182	481	12	128	11,538	73,776	137	987	22,312	77,562	72,535	518,506
14	07/12-07/14	60	163	462	9	84	8,219	53,914	440	3,438	99,336	352,564	51,630	361,647
15	07/16-07/20	132	126	569	11	151	21,535	131,661	2,306	16,571	173,959	621,922	46,658	330,647
16	07/21-07/24	84	19	32	0	0	1,596	9,598	117	900	5,930	21,442	1,086	7,882
19	08/06-08/08	60	1	1	0	0	30	182	2	16	71	282	4	32
25	09/14	12	2	2	0	0	0	0	41	382	0	0	0	0
Total		684	228	5,348	216	2,789	87,539	564,184	3,185	23,386	308,707	1,101,115	1,142,449	8,696,315
Average Weight						12.91		6.44		7.34		3.57		7.61
PURSE SEINE														
01	07/21-07/24	84	15	15	1	10	975	5,702	70	481	43,161	149,059	3,425	29,314
02	07/26-07/28	60	45	51	7	44	1,332	8,102	144	1,094	383,502	1,304,759	377	2,864
05	08/30	12	7	7	0	0	65	419	30	269	31,051	99,183	0	0
06	08/31	12	12	12	0	0	0	0	0	0	50,452	166,599	0	0
07	09/01-09/03	60	10	17	0	0	17	105	17	138	91,544	283,103	0	0
08	09/04-09/06	60	3	11	0	0	9	60	95	860	39,437	129,573	0	0
09	09/07-09/10	84	1	1	0	0	0	0	0	0	5,963	20,277	0	0
10	09/14	12	1	1	0	0	0	0	0	0	3,225	10,965	0	0
Total		384		115	8	54	2,398	14,388	356	2,842	648,335	2,163,518	3,802	32,178
Average Weight						6.75		6.00		7.98		3.34		8.46
Combined Total				5,463	224	2,843	89,937	578,572	3,541	26,228	957,042	3,264,633	1,146,251	8,728,493
Average Weight						12.69		6.43		7.41		3.41		7.61

^a Starting date of period.

Appendix C.2. Commercial salmon catch by species in the Coghill District, Prince William Sound, 1983 - 2001.

CATCH BY SPECIES						
Year	Chinook	Sockeye	Coho	Pink	Chum	Total
DRIFT GILLNET						
1983	340	38,273	1,013	233,263	234,022	506,911
1984	396	94,956	563	897,496	264,878	1,258,289
1985	380	339,296	1,131	454,531	246,824	1,042,162
1986	617	381,565	789	68,887	218,971	670,829
1987	352	377,454	13,396	712,897	318,842	1,422,941
1988	501	82,294	41,307	1,314,061	346,388	1,784,551
1989	364	106,114	80,737	628,522	194,584	1,010,321
1990	126	11,988	128,605	1,907,510	301,209	2,349,438
1991	92	3,888	78,363	231,501	34,223	348,067
1992	242	57,919	86,782	167,384	182,433	494,760
1993	576	66,532	37,898	141,279	635,208	881,493
1994	390	12,928	50,879	58,334	554,181	676,712
1995	468	57,797	29,343	161,493	379,659	628,760
1996	575	177,530	20,926	59,447	612,969	871,447
1997	862	227,231	5,618	154,969	689,977	1,078,657
1998	605	59,463	2,925	383,604	347,317	793,914
1999	401	106,028	1,114	32,408	689,210	829,161
2000	269	176,452	82,869	88,228	1,643,801	1,991,619
2001	216	87,539	3,185	308,707	1,142,449	1,542,096
Ten Year Average (1991-00)	448	94,577	39,672	147,865	576,898	859,459
PURSE SEINE						
1983	0	175	16	41,048	8,958	50,197
1984	0	21	0	10,911	1,126	12,058
1985	85	10,757	112	69,242	19,330	99,526
1986	186	18,514	98	145,706	27,078	191,582
1987	58	38,899	1,956	865,671	59,252	965,836
1988	63	1,623	15,787	1,600,481	11,755	1,629,709
1989	61	2,030	39,484	3,296,965	124,639	3,463,179
1990	2	286	11,819	785,278	10,951	808,336
1991	11	1,562	621	1,980,074	11,519	1,993,787
1992	6	765	27,382	196,503	1,603	226,259
1993	46	6,250	1,760	352,468	3,645	364,169
1994	50	21,060	30,517	3,538,760	3,575	3,593,962
1995	33	20,670	5,337	917,200	2,597	945,837
1996	1	2,640	5,319	1,484,422	463	1,492,845
1997	7	5,694	1,269	1,875,617	33,139	1,915,726
1998	20	1,702	1,531	2,845,157	21,600	2,870,010
1999	34	3,229	338	3,509,722	621,349	4,134,672
2000	1	2,984	31,991	3,271,314	1,338	3,307,628
2001	8	2,398	356	648,335	3,802	654,899
Ten Year Average (1991-00)	21	6,656	10,607	1,997,124	70,083	2,084,490
COMBINED GEARS						
1983	340	38,448	1,029	274,311	242,980	557,108
1984	396	94,977	563	908,407	266,004	1,270,347
1985	465	350,053	1,243	523,773	266,154	1,141,688
1986	803	400,079	887	214,593	246,049	862,411
1987	410	416,353	15,352	1,578,568	378,094	2,388,777
1988	564	83,917	57,094	2,914,542	358,143	3,414,260
1989	425	108,144	120,221	3,925,487	319,223	4,473,500
1990	128	12,274	140,424	2,692,788	312,160	3,157,774
1991	103	5,450	78,984	2,211,575	45,742	2,341,854
1992	248	58,684	114,164	363,887	184,036	721,019
1993	622	72,782	39,658	493,747	638,853	1,245,662
1994	440	33,988	81,396	3,597,094	557,756	4,270,674
1995	501	78,467	34,680	1,078,693	382,256	1,574,597
1996	576	180,170	26,245	1,543,869	613,432	2,364,292
1997	869	232,925	6,887	2,030,586	723,116	2,994,383
1998	625	61,165	4,456	3,228,761	368,917	3,663,924
1999	435	109,257	1,452	3,542,130	1,310,559	4,963,833
2000	270	179,436	114,860	3,359,542	1,645,139	5,299,247
2001	224	89,937	3,541	957,042	1,146,251	2,196,995
Ten Year Average (1991-00)	469	101,232	50,278	2,144,988	646,981	2,943,949

Appendix C.3. Daily salmon escapement through the Coghill River weir,
Prince William Sound, 2001.

Date	Sockeye		Pink ^b		Chum		Coho		Chinook	
	Daily	Cum.	Daily	Cum.	Daily	Cum.	Daily	Cum.	Daily	Cum.
06/10	0	0	0	0	0	0	0	0	0	0
06/11	0	0	0	0	0	0	0	0	0	0
06/12	0	0	0	0	0	0	0	0	0	0
06/13	0	0	0	0	0	0	0	0	0	0
06/14	0	0	0	0	0	0	0	0	0	0
06/15	34	34	0	0	0	0	0	0	1	1
06/16	46	80	0	0	0	0	0	0	0	1
06/17	5	85	0	0	0	0	0	0	0	1
06/18	136	221	0	0	0	0	0	0	0	1
06/19	213	434	0	0	0	0	0	0	0	1
06/20	116	550	0	0	0	0	0	0	0	1
06/21	243	793	0	0	0	0	0	0	0	1
06/22	775	1,568	0	0	0	0	0	0	0	1
06/23	603	2,171	0	0	0	0	0	0	0	1
06/24	608	2,779	0	0	1	1	0	0	0	1
06/25	875	3,654	0	0	1	2	0	0	1	2
06/26	1,001	4,655	0	0	1	3	0	0	0	2
06/27	704	5,359	3	3	0	3	0	0	1	3
06/28	20	5,379	0	3	0	3	0	0	0	3
06/29	954	6,333	6	9	4	7	0	0	2	5
06/30	164	6,497	4	13	0	7	0	0	0	5
07/01	2,163	8,660	73	86	1	8	0	0	1	6
07/02	2,310	10,970	278	364	6	14	0	0	0	6
07/03	1,106	12,076	333	697	2	16	0	0	0	6
07/04	4,606	16,682	881	1,578	4	20	0	0	0	6
07/05	3,580	20,262	3,096	4,674	9	29	0	0	0	6
07/06	262	20,524	402	5,076	2	31	0	0	0	6
07/07	1,384	21,908	3,030	8,106	5	36	0	0	0	6
07/08	2,041	23,949	5,257	13,363	2	38	0	0	0	6
07/09	1,997	25,946	4,312	17,675	6	44	0	0	0	6
07/10	1,096	27,042	7,361	25,036	2	46	1	1	0	6
07/11	1,260	28,302	11,413	36,449	12	58	0	1	0	6
07/12	850	29,152	5,441	41,890	6	64	0	1	0	6
07/13	757	29,909	4,882	46,772	12	76	0	1	0	6
07/14	468	30,377	2,632	49,404	3	79	0	1	0	6
07/15	1,329	31,706	13,024	62,428	8	87	0	1	0	6
07/16	887	32,593	11,010	73,438	3	90	0	1	0	6
07/17	1,244	33,837	17,285	90,723	3	93	0	1	0	6
07/18	692	34,529	23,342	114,065	11	104	0	1	0	6
07/19	422	34,951	24,400	138,465	14	118	0	1	0	6
07/20	242	35,193	11,465	149,930	8	126	0	1	0	6
07/21	83	35,276	3,907	153,837	2	128	0	1	1	7
07/22	a	35,276		153,837		128		1		7
07/23	a	35,276		153,837		128		1		7
07/24	a	35,276		153,837		128		1		7
07/25	2,016	37,292	20,400	174,237	0	128	0	1	0	7
07/26	46	37,338	2,183	176,420	0	128	0	1	0	7
07/27	153	37,491	384	176,804	0	128	2	3	0	7
07/28	72	37,563	1,381	178,185	0	128	0	3	0	7
07/29	80	37,643	2,002	180,187	0	128	0	3	0	7
07/30	71	37,714	2,610	182,797	0	128	0	3	0	7
07/31	270	37,984	14,189	196,986	7	135	0	3	1	8
08/01	99	38,083	7,130	204,116	4	139	1	4	0	8
08/02	119	38,202	9,258	213,374	10	149	1	5	0	8
08/03	104	38,306	7,897	221,271	13	162	3	8	0	8
08/04	34	38,340	5,746	227,017	28	190	1	9	0	8
08/05	17	38,357	1,938	228,955	13	203	3	12	0	8
08/06	42	38,399	5,029	233,984	21	224	27	39	0	8
08/07	34	38,433	4,192	238,176	10	234	15	54	0	8
08/08	16	38,449	2,350	240,526	3	237	4	58	0	8

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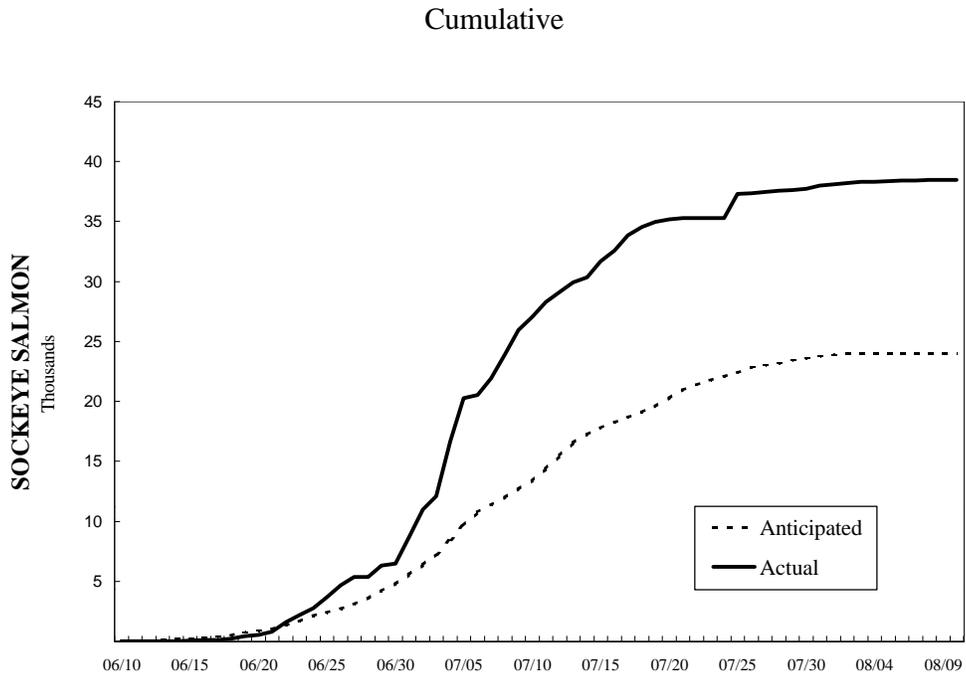
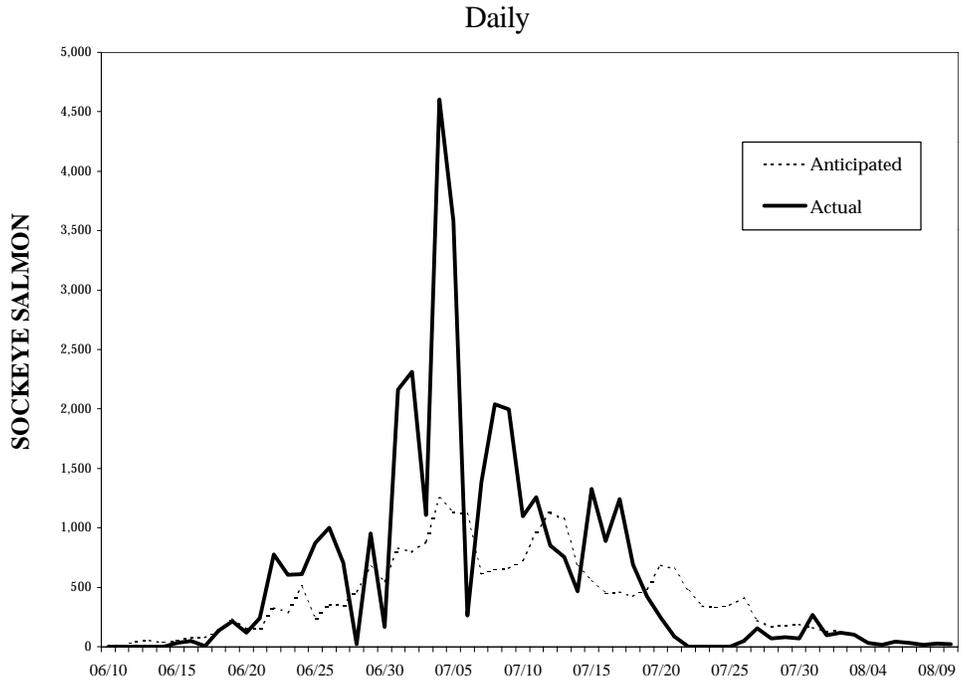
Appendix C.3. (page 2 of 2)

Date	Sockeye		Pink ^a		Chum		Coho		Chinook	
	Daily	Cum.	Daily	Cum.	Daily	Cum.	Daily	Cum.	Daily	Cum.
08/09	25	38,474	623	241,149	4	241	3	61	0	8
08/10	24	38,498	496	241,645	4	245	11	72	0	8
08/11	7	38,505	99	241,744	10	255	7	79	0	8
08/12	6	38,511	170	241,914	2	257	9	88	1	9
08/13	2	38,513	84	241,998	1	258	7	95	0	9
08/14	7	38,520	234	242,232	2	260	6	101	0	9
08/15	6	38,526	107	242,339	3	263	6	107	1	10
08/16	4	38,530	101	242,440	0	263	18	125	0	10
08/17	5	38,535	73	242,513	0	263	16	141	0	10
08/18	6	38,541	69	242,582	0	263	45	186	0	10
08/19	2	38,543	35	242,617	0	263	51	237	0	10
08/20	a	38,543		242,617		263		237		10
08/21	a	38,543		242,617		263		237		10
08/22	a	38,543		242,617		263		237		10
08/23	a	38,543		242,617		263		237		10
08/24	0	38,543	380	242,997	0	263	24	261	0	10
08/25	4	38,547	214	243,211	0	263	43	304	0	10
08/26	4	38,551	21	243,232	0	263	52	356	0	10
08/27	3	38,554	14	243,246	0	263	35	391	0	10
08/28	a	38,554		243,246		263		391		10
08/29	a	38,554		243,246		263		391		10
08/30	a	38,554		243,246		263		391		10
08/31	a	38,554		243,246		263		391		10
09/01	a	38,554		243,246		263		391		10
09/02	a	38,554		243,246		263		391		10
09/03	0	38,554	0	243,246	0	263	11	402	0	10
09/04	0	38,554	0	243,246	0	263	36	438	0	10
09/05	a	38,554		243,246		263		438		10
09/06	a	38,554		243,246		263		438		10
09/07	a	38,554		243,246		263		438		10
09/08	2	38,556	0	243,246	0	263	54	492	0	10
09/09	1	38,557	0	243,246	0	263	26	518	0	10
09/10	0	38,557	0	243,246	0	263	25	543	0	10
09/11	1	38,558	0	243,246	0	263	21	564	0	10
09/12	0	38,558	0	243,246	0	263	14	578	0	10
09/13	0	38,558	0	243,246	0	263	41	619	0	10
09/14	0	38,558	0	243,246	0	263	79	698	0	10
09/15	0	38,558	0	243,246	0	263	127	825	0	10
09/16	0	38,558	0	243,246	0	263	78	903	0	10
09/17	0	38,558	0	243,246	0	263	140	1,043	0	10
09/18	0	38,558	0	243,246	0	263	23	1,066	0	10
09/19	0	38,558	0	243,246	0	263	3	1,069	0	10
09/20	0	38,558	0	243,246	0	263	13	1,082	0	10
09/21	0	38,558	0	243,246	0	263	22	1,104	0	10
09/22	0	38,558	0	243,246	0	263	28	1,132	0	10
09/23	0	38,558	0	243,246	0	263	36	1,168	0	10
09/24	0	38,558	0	243,246	0	263	4	1,172	0	10
09/25	0	38,558	0	243,246	0	263	12	1,184	0	10
09/26	0	38,558	0	243,246	0	263	19	1,203	0	10
09/27	0	38,558	0	243,246	0	263	4	1,207	0	10
09/28	0	38,558	0	243,246	0	263	16	1,223	0	10
09/29	0	38,558	0	243,246	0	263	31	1,254	0	10
09/30	0	38,558	0	243,246	0	263	4	1,258	0	10

^aWeir pickets were pulled due to high water.

^bCount may be incomplete. The Coghill weir is designed to prohibit the passage of sockeye salmon, but smaller pink salmon may pass through the weir uncounted.

COGHILL LAKE SOCKEYE SALMON ESCAPEMENT



Appendix C.4. Anticipated daily and cumulative sockeye salmon escapement versus actual

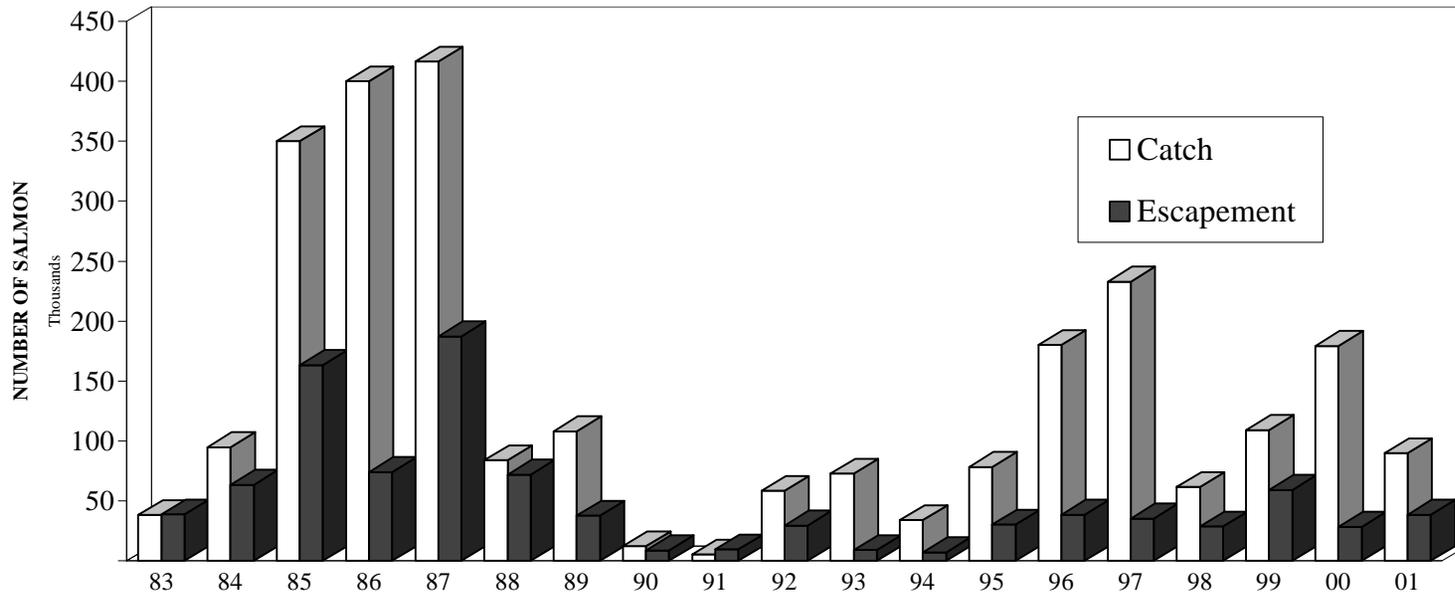
Appendix C.5. Salmon escapement by species in the Coghill District,
Prince William Sound, 1970 - 2001.

Year	Sockeye ^a	Pink ^b	Chum ^b
1970	35,200	95,170	11,880
1971	15,000	62,160	6,600
1972	51,000	30,960	28,160
1973	55,000	493,780	72,610
1974	22,333	56,940	29,280
1975	34,855	452,430	3,640
1976	9,056	57,090	25,670
1977	31,562	130,510	43,940
1978	42,284	85,450	18,160
1979	48,281	70,980	6,330
1980	142,253	214,930	23,340
1981	156,112	106,450	2,050
1982	180,314	368,380	22,130
1983	38,783	310,330	61,410
1984	63,622	429,450	19,690
1985	163,311	296,970	22,140
1986	71,095	101,600	13,140
1987	187,263	147,060	24,510
1988	72,052	37,070	39,240
1989	37,751	45,510	22,680
1990	8,949	49,110	26,020
1991	9,752	98,580	6,070
1992	29,642	23,611	10,003
1993	9,232	41,837	8,430
1994	7,264	65,648	14,176
1995	30,382	46,029	11,596
1996	38,693	104,781	19,669
1997	35,517	52,961	3,101
1998	28,923	85,968	22,764
1999	59,311	168,816	5,057
2000	28,446	29,862	255
2001	38,558	243,246	263
10 Year Average (1991-2000)	27,716	71,809	10,112

^a Escapement count of sockeye salmon past the Coghill River weir.

^b Pink and chum escapements estimated for streams in district by aerial surveys revised in 1990.

SOCKEYE SALMON CATCH AND ESCAPEMENT IN THE COGHILL DISTRICT



Appendix C.6. Sockeye salmon catch and escapement in the Coghill District, Prince William Sound, 1983 - 2001.

Appendix C.7 Estimated age and sex composition of sockeye salmon harvested in the Coghill District commercial common property drift gillnet fisheries, 2001.

		Brood Year and Age Class							Total
		1998	1997		1996		1995		
		0.2	0.3	1.2	1.3	2.2	1.4	2.3	
Strata Combined:	06/01 - 09/16								
Sampling dates:	06/21 - 07/13								
Sample size:	1,233 ^a								
Female	Percentage of sample	0.0	0.5	5.6	46.9	0.6	0.1	1.8	55.5
	Number in catch	0	444	5,437	45,470	617	78	1,712	53,757
Male	Percentage of sample	0.0	0.0	5.6	36.0	1.2	0.2	1.3	44.3
	Number in catch	26	26	5,395	34,892	1,202	166	1,259	42,966
Total	Percentage of sample	0.0	0.5	11.3	83.0	1.9	0.3	3.1	100.0
	Number in catch	26	470	10,971	80,388	1,820	243	2,971	96,889
	Standard error	26	231	1,054	1,247	483	149	542	

^a Scales with resorbed edges were not included in sample: strata 1 had 15 resorbed scale, strata 2 had 11 resorbed scales, strata 3 had 26 resorbed scales.

Appendix C.8. Temporally stratified age and sex composition of the sockeye salmon escapement through the weir on the outlet stream of Coghill Lake, 2001.

		Brood Year and Age Class								Total
		1998	1997			1996		1995		
		1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	
Stratum dates: 06/15 - 07/03										
Sampling dates: 06/28 - 07/01										
Sample size: 451										
Female	Percentage of sample	0.0	0.0	1.8	0.0	43.5	0.2	0.4	0.4	46.3
	Number in escapement	0	0	214	0	5,248	27	54	54	5,596
Male	Percentage of sample	0.0	0.0	4.2	0.2	48.3	0.2	0.0	0.7	53.7
	Number in escapement	0	0	509	27	5,837	27	0	80	6,480
Total	Percentage of sample	0.0	0.0	6.0	0.2	91.8	0.4	0.4	1.1	100.0
	Number in escapement	0	0	723	27	11,085	54	54	134	12,076
	Standard error	0	0	135	27	156	38	38	60	
Stratum dates: 07/04 - 07/15										
Sampling dates: 07/06 - 07/07										
Sample size: 450										
Female	Percentage of sample	0.0	0.2	1.3	0.0	51.8	0.0	0.4	0.2	54.0
	Number in escapement	0	44	262	0	10,164	0	87	44	10,600
Male	Percentage of sample	0.4	0.2	5.1	0.0	38.7	0.7	0.4	0.4	46.0
	Number in escapement	87	44	1,003	0	7,590	131	87	87	9,030
Total	Percentage of sample	0.4	0.4	6.4	0.0	90.4	0.7	0.9	0.7	100.0
	Number in escapement	87	87	1,265	0	17,754	131	174	131	19,630
	Standard error	62	62	227	0	272	75	87	75	
Stratum dates: 07/16 - 08/25										
Sampling dates: 07/21 - 07/31										
Sample size: 428										
Female	Percentage of sample	0.0	0.2	3.5	0.0	41.1	0.0	0.0	0.5	45.3
	Number in escapement	0	16	240	0	2,813	0	0	32	3,101
Male	Percentage of sample	0.7	0.0	2.3	0.2	50.2	0.2	0.0	0.9	54.7
	Number in escapement	48	0	160	16	3,436	16	0	64	3,740
Total	Percentage of sample	0.7	0.2	5.8	0.2	91.4	0.2	0.0	1.4	100.0
	Number in escapement	48	16	400	16	6,250	16	0	96	6,841
	Standard error	28	16	78	16	93	16	0	39	
Strata Combined: 06/15 - 09/30										
Sampling dates: 06/28 - 07/31										
Sample size: 1,329										
Female	Percentage of sample	0.0	0.2	1.9	0.0	47.3	0.1	0.4	0.3	50.1
	Number in escapement	0	60	716	0	18,225	27	141	129	19,297
Male	Percentage of sample	0.4	0.1	4.3	0.1	43.7	0.5	0.2	0.6	49.9
	Number in escapement	135	44	1,672	43	16,864	174	87	232	19,250
Total	Percentage of sample	0.4	0.3	6.2	0.1	91.0	0.5	0.6	0.9	100.0
	Number in escapement	135	103	2,388	43	35,089	200	228	361	38,547
	Standard error	68	64	276	31	327	86	95	104	

Appendix C.9. Commercial salmon harvest by period in the Unakwik District drift gillnet fisheries, Prince William Sound, 2001.

DRIFT GILLNET

Period	Date ^{a,b,c}	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
					Numbers	Pounds								
02	06/18-06/19	24	1	1	0	0	10	71	0	0	0	0	1	9
06	07/02-07/03	24	7	10	1	14	1,393	10,363	0	0	4	10	18	127
07	07/05-07/06	24	2	2	0	0	111	840	0	0	0	0	11	82
08	07/09-07/11	48	1	1	0	0	646	4,848	0	0	0	0	0	0
09	07/12-07/14	48	1	1	2	26	64	446	1	7	0	0	1	7
11	07/19-07/20	24	2	2	0	0	74	488	1	9	0	0	13	93
Total			9	17	3	40	2,298	17,056	2	16	4	10	44	318
Average Weight						13.33		7.42		8.00		2.50		7.23

^a For area and opening times refer to Appendix C.11.

^b Starting date of period.

^c No purse seine harvest in the Unakwik District during 2001.

Appendix C.10. Commercial salmon catch by species in the Unakwik District, Prince William Sound, 1990 - 2001.

CATCH BY SPECIES						
Year	Chinook	Sockeye	Coho	Pink	Chum	Total
DRIFT GILLNET						
1990	3	247	127	9,986	23	10,386
1991	13	4,482	11	12,299	118	16,923
1992	3	2,224	13	3,972	94	6,306
1993	5	14,691	4	3,338	978	19,016
1994	0	548	0	300	0	848
1995	8	2,116	0	1	36	2,161
1996	3	6,063	0	17	694	6,777
1997	3	3,411	0	0	177	3,591
1998	10	13,651	55	1,932	586	16,234
1999	4	8,544	5	0	296	8,849
2000	0	1,119	0	0	20	1,139
2001	3	2,298	2	4	44	2,351
Ten Year Average (1991-0)	5	5,685	9	2,186	300	8,184
PURSE SEINE						
1990 ^a						
1991	0	819	3	121,068	79	121,969
1992	0	42	2	13,264	119	13,427
1993	0	79	0	3,233	67	3,379
1994	0	226	102	388,901	73	389,302
1995 ^a						
1996 ^a						
1997 ^a						
1998 ^a						
1999	1	386	0	0	2	389
2000	0	0	0	20,485	0	20,485
2001 ^a						
Ten Year Average (1991-0)	0	259	18	91,159	57	91,492
COMBINED GEARS						
1990	3	247	127	9,986	23	10,386
1991	13	5,301	14	133,367	197	138,892
1992	3	2,266	15	17,236	213	19,733
1993	5	14,770	4	6,571	1,045	22,395
1994	0	774	102	389,201	73	390,150
1995	8	2,116	0	1	36	2,161
1996	3	6,063	0	17	694	6,777
1997	4	3,797	0	0	179	3,980
1998	10	13,651	55	1,932	586	16,234
1999	5	8,930	5	0	298	9,238
2000	0	1,119	0	20,485	20	21,624
2001	3	2,298	2	4	44	2,351
Ten Year Average (1991-0)	5	5,879	20	56,881	334	63,118

^aNo catch recorded.

Appendix C.11. Summary of periods, dates, hours open, and emergency orders issued for the commercial salmon fisheries in the Coghill and Unakwik Districts, Prince William Sound, 2001

UNAKWIK 229				Emergency Orders Issued	COGHILL 223			
Periods		Hours Open	Periods		Hours Open	Emergency Orders Issued		
P/S	GN		Dates				P/S	GN
					01	05/28-05/29	24	2-F-E-08-01 ^a
					02	05/31-06/01	24	2-F-E-11-01 ^b
					03	06/04-06/05	24	2-F-E-14-01 ^b
					04	06/07-06/08	24	2-F-E-16-01 ^b
					05	06/11-06/12	24	2-F-E-19-01 ^b
01	01	06/14-06/15	24	2-F-E-21-01 ^c	06	06/14-06/15	24	2-F-E-21-01 ^d
02	02	06/18-06/19	24	2-F-E-23-01 ^c	07	06/18-06/19	24	2-F-E-23-01 ^e
03	03	06/21-06/22	24	2-F-E-25-01 ^c	08	06/21-06/22	24	2-F-E-25-01 ^f
04	04	06/25-06/26	24	2-F-E-29-01 ^c	09	06/25-06/26	24	2-F-E-29-01 ^e
05	05	06/28-06/29	24	2-F-E-33-01 ^c	10	06/28-06/29	24	2-F-E-33-01 ^b
06	06	07/02-07/03	24	2-F-E-35-01 ^c	11	07/02-07/03	24	2-F-E-35-01 ^f
07	07	07/05-07/06	24	2-F-E-37-01 ^c	12	07/05-07/06	24	2-F-E-37-01, 2-F-E-38-01 ^b
08	08	07/09-07/11	48	2-F-E-43-01 ^c	13	07/09-07/11	48	2-F-E-43-01 ^g
09	09	07/12-07/14	48	2-F-E-44-01 ^c	14	07/12-07/14	60	2-F-E-44-01 ^h
10	10	07/16-07/17	24	2-F-E-45-01 ^c				
					15	07/15-07/20	132	2-F-E-45-01, 2-F-E-46-01 ⁱ
11	11	07/19-07/20	24	2-F-E-46-01 ^c	01	07/21-07/24	84	2-F-E-57-01, 2-F-E-58-01 ^j
12	12	07/23-07/24	24	2-F-E-48-01 ^c				
					02	07/26-07/28	60	2-F-E-63-01 ^k
					03	08/01-08/04	84	2-F-E-66-01 ^k
					04	08/06-08/08	60	2-F-E-68-01, 2-F-E-69-01 ^l
					05	08/30	12	2-F-E-84-01 ^m
					06	08/31	12	2-F-E-85-01 ^m
					07	09/01-09/03	60	2-F-E-86-01 ⁿ
					08	09/04-09/06	60	2-F-E-93-01 ^o
					09	09/07-09/10	84	2-F-E-94-01 ^p
					10	09/14	12	2-F-E-98-01 ^p
						09/16-09/17	26	2-F-E-105-01 ^p
						09/19-09/21	36	2-F-E-108-01 ^q
						09/22-09/24	36	2-F-E-110-01 ^q
						09/27-09/30	84	2-F-E-112-01 ^q
						10/02-10/04	48	2-F-E-114-01 ^q
						10/08-10/11	72	2-F-E-115-01 ^r

^a All waters of the Coghill District including the Wally Noerenberg Hatchery (WNH) Terminal Harvest Area (THA) and Special Harvest Area (SHA) were open.

^b Waters of the Coghill District, excluding the WNH THA and SHA were open.

^c The entire Unakwik District was open.

^d Waters of the Coghill District, excluding the Esther Subdistrict, was open for 24 hours. The Esther Subdistrict, e WNH THA and SHA was open for 12 hours.

^e Waters of the Coghill District, excluding waters of the Esther Subdistrict east of a line from Point Culross to Esther Light, were open.

^f Waters of the Coghill District, south of 61° N. latitude, excluding the WNH THA and SHA, were open.

-Continued-

Appendix C.11. (page 2 of 2)

- ^g Waters of the Coghill District, excluding the WNH THA and SHA were open from 8:00 a.m. July 9 until 8:00 a.m. July 10. Beginning 8:00 a.m. July 10 until 8:00 a.m. July 1, waters of the Coghill District, excluding waters of the Esther Subdistrict east of a line from Point Culross were open. Regulatory closed waters in Coghill Lagoon were not in effect.
- ^h Waters of the Coghill District, excluding waters of the Esther Subdistrict east of a line from Point Culross to Esther Light, were open. Regulatory closed waters in Coghill Lagoon were not in effect.
- ⁱ Waters of the Coghill District, excluding waters of the Esther Subdistrict east of a line from Point Culross to Esther Light, were open. Regulatory closed waters in Coghill Lagoon were not in effect. In addition, waters of the Esther Subdistrict, excluding the Noerenberg Hatchery THA and SHA were open for 4
- ^j Waters of the Coghill District, north of the latitude of Point Pakenham, were open for 84 hours. Regulatory closed waters inside Coghill Lagoon were not in effect. In addition, waters of the Esther Subdistrict, excluding the WNH THA and SHA were open for 12 hours.
- ^k Waters of the Coghill District, north of the latitude of Point Pakenham, were open. Regulatory closed waters inside Coghill Lagoon were not in effect.
- ^l Waters of the Coghill District, north of the latitude of Point Pakenham, were open for 60 hours. Regulatory closed waters inside Coghill Lagoon were not in effect. In addition, waters of the Esther Subdistrict, excluding the WNH THA and SHA were open for 12 hours.
- ^m Waters of the Coghill District, excluding the WNH THA and SHA and waters of Bettles, Hummer, and Pigot Bay inside the yellow SHTF markers, were open.
- ⁿ Waters of the Coghill District, excluding the WNH THA and SHA up to a line of buoys in front of the barrier seine and waters of Bettles, Hummer, and Pigot Bay inside the yellow SHTF markers, were open.
- ^o Waters of the Coghill District, excluding the WNH THA and SHA up to a line of buoys in front of the barrier seine, were open.
- ^p Waters of the Esther Subdistrict, including the WNH, were open. The SHA remained closed.
- ^q Waters of the Coghill District, excluding the Esther Subdistrict and WNH THA and SHA, were open.
- ^r All waters of the Coghill District were open.

APPENDIX D: ESHAMY DISTRICT

Appendix D.1. Commercial salmon harvest by period in the Eshamy District drift gillnet and set gillnet fisheries, Prince William Sound, 2001.

Period	Date ^{ab}	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
					Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
DRIFT GILLNET														
01	05/17-05/18	24	27	43	14	202	3,918	23,834	0	0	0	0	1,253	10,416
02	05/21-05/22	24	18	27	7	235	2,778	16,279	0	0	0	0	920	7,582
03	05/24-05/25	24	17	27	8	158	2,480	15,022	0	0	0	0	1,288	10,424
04	05/31-06/01	24	26	35	1	9	8,236	51,022	0	0	0	0	104	828
06	06/07-06/08	24	9	12	0	0	1,770	10,646	0	0	0	0	90	683
07	06/11-06/12	24	4	4	3	75	484	2,907	0	0	0	0	28	181
08	07/12-07/13	24	38	61	0	0	5,546	35,103	18	147	5,225	18,962	2,047	15,187
09	07/23-07/24	24	201	386	1	11	62,917	391,614	1,713	12,361	17,175	63,552	3,754	27,268
10	07/26-07/28	36	251	604	5	79	73,733	467,910	1,800	13,898	24,148	82,768	3,040	22,623
11	07/30-08/01	48	231	603	2	31	66,398	422,212	2,544	12,966	47,150	164,998	3,435	25,690
12	08/02-08/04	48	190	532	1	12	55,810	355,781	1,279	10,371	41,112	145,828	2,050	15,814
13	08/06-08/08	48	184	499	3	32	50,930	319,421	839	6,954	51,616	179,355	1,430	10,181
14	08/09-08/11	48	154	313	0	0	32,981	206,251	482	4,065	39,381	129,152	638	3,812
15	08/13-08/15	48	119	263	1	2	27,277	162,494	559	3,907	27,381	93,568	143	1,084
16	08/16-08/18	48	112	212	0	0	18,465	113,439	578	4,292	28,862	99,424	554	2,608
17	08/20-08/22	48	39	95	0	0	16,092	98,496	130	1,086	22,744	80,680	527	2,099
18	08/23-08/25	48	55	126	1	7	19,856	119,983	361	1,800	29,037	98,776	5	38
19	08/27-08/30	72	46	90	0	0	15,726	95,205	79	678	17,238	61,415	7	58
20	08/30-09/03	96	43	107	0	0	25,261	149,321	13	114	11,214	39,756	3	18
21	09/03-09/06	72	10	19	0	0	4,038	22,230	4	26	3,585	14,342	0	0
22	09/07-09/09	60	11	12	0	0	3,642	20,642	8	870	1,222	4,890	0	0
23	09/10-09/12	48	3	3	0	0	1,634	7,301	16	113	498	1,244	0	0
Total		960	294	4,073	47	853	499,972	3,107,113	10,423	73,648	367,588	1,278,710	21,316	156,594
Average Weight						18.15		6.21		7.07		3.48		7.35
SET GILLNET														
01	05/17-05/18	24	22	32	3	54	3,402	20,700	0	0	0	0	212	1,556
02	05/21-05/22	24	17	29	0	0	5,033	28,966	0	0	0	0	6	50
03	05/24-05/25	24	26	44	10	162	5,519	33,440	0	0	0	0	383	3,058
04	05/31-06/01	24	23	51	1	15	4,778	29,694	0	0	0	0	293	2,363
05	06/04-06/05	24	19	26	4	54	1,176	7,091	0	0	0	0	337	2,789
06	06/07-06/08	24	10	16	5	78	1,052	7,165	0	0	0	0	504	3,802
07	06/11-06/12	24	7	7	0	0	318	1,920	0	0	0	0	135	976
08	07/12-07/13	24	20	28	0	0	3,961	25,611	4	29	1,187	4,570	1,749	12,450
09	07/23-07/24	24	27	58	0	0	12,788	83,579	83	689	3,465	12,411	841	6,156
10	07/26-07/28	36	29	96	0	0	16,015	104,667	67	604	4,400	15,780	714	5,085
11	07/30-08/01	48	28	116	0	0	16,765	106,184	111	822	9,523	34,005	866	6,096
12	08/02-08/04	48	28	107	0	0	17,710	114,593	92	754	8,997	31,535	364	2,944
13	08/06-08/08	48	28	124	1	15	17,976	113,156	88	757	13,095	46,485	276	2,288
14	08/09-08/11	48	28	80	0	0	13,768	86,918	191	1,549	12,346	43,315	155	1,357
15	08/13-08/15	48	26	82	1	8	10,879	66,062	75	681	10,709	35,508	82	666
16	08/16-08/18	48	28	72	0	0	11,597	70,840	97	826	14,961	50,128	72	601
17	08/20-08/22	48	18	43	0	0	9,575	56,254	43	364	18,108	60,550	41	296
18	08/23-08/25	48	16	42	0	0	11,153	67,844	49	453	18,528	62,561	14	118
19	08/27-08/30	72	12	27	0	0	7,305	42,254	49	417	7,775	27,596	7	50
20	08/30-09/03	96	9	26	0	0	3,720	19,850	7	58	3,939	13,688	6	50
21	09/03-09/06	72	4	6	0	0	913	5,561	19	180	539	2,159	0	0
22	09/07-09/09	60	1	2	0	0	657	3,914	31	246	165	660	0	0
Total		936	32	1,114	25	386	176,060	1,096,263	1,006	8,429	127,737	440,951	7,057	52,751
Average Weight						15.44		6.23		8.38		3.45		7.47
Combined Total				5,187	72	1,239	676,032	4,203,376	11,429	82,077	495,325	1,719,661	28,373	209,345
Average Weight						17.21		6.22		7.18		3.47		7.38

^a Starting date of period.

^b For area and opening times refer to Appendix D.9.

Appendix D.2. Commercial salmon catch by species in the Eshamy District,
Prince William Sound, 1987 - 2001.

CATCH BY SPECIES						
Year	Chinook	Sockeye	Coho	Pink	Chum	Total
DRIFT GILLNET						
1987	2	642	3	3,225	7,060	10,932
1988	94	50,868	794	348,873	206,060	606,689
1989 ^a						
1990	110	12,967	574	165,362	264,772	443,785
1991	107	296,234	468	44,516	202,183	543,508
1992	158	373,596	1,017	153,018	50,974	578,763
1993	8	80,807	673	45,974	27,045	154,507
1994	2	61,848	623	254,535	9,497	326,505
1995	21	29,851	1,468	60,712	13,284	105,336
1996	19	179,064	1,056	19,043	23,552	222,734
1997	17	475,498	426	146,324	34,768	657,033
1998	2	98,002	252	101,068	343	199,667
1999	30	86,032	2,036	127,082	13,120	228,300
2000	634	235,085	5,396	375,250	27,511	643,876
2001	47	499,972	10,423	367,588	21,316	899,346
Ten Year Average (1991-00)	100	191,602	1,342	132,752	40,228	366,023
SET GILLNET						
1987	31	5,387	336	86,677	45,099	137,530
1988	100	18,321	283	180,456	93,577	292,737
1989 ^a						
1990	56	10,204	532	369,589	94,494	474,875
1991	76	184,028	504	20,075	49,394	254,077
1992	101	144,568	1,242	390,097	4,695	540,703
1993	55	101,717	832	84,568	20,369	207,541
1994	9	97,664	628	311,134	6,908	416,343
1995	19	30,814	695	28,118	6,621	66,267
1996	13	132,268	309	16,648	9,276	158,514
1997	12	196,005	163	76,610	8,475	281,265
1998	1	25,533	91	33,916	214	59,755
1999	131	74,378	1,092	43,443	11,101	130,145
2000	41	101,105	662	139,008	12,319	253,135
2001	25	176,060	1,006	127,737	7,057	311,885
Ten Year Average (1991-00)	46	108,808	622	114,362	12,937	236,775
COMBINED GEAR						
1987	33	6,029	339	89,902	52,159	148,462
1988	194	69,189	1,077	529,329	299,637	899,426
1989 ^a						
1990	166	23,171	1,106	534,951	359,266	918,660
1991	183	480,262	972	64,591	251,577	797,585
1992	259	518,164	2,259	543,115	55,669	1,119,466
1993	63	182,524	1,505	130,542	47,414	362,048
1994	11	159,512	1,251	565,669	16,405	742,848
1995	40	60,665	2,163	88,830	19,905	171,603
1996	32	311,332	1,365	35,691	32,828	381,248
1997	29	671,503	589	222,934	43,243	938,298
1998	3	123,535	343	134,984	557	259,422
1999	161	160,410	3,128	170,525	24,221	358,445
2000	675	336,190	6,058	514,258	39,830	897,011
2001	72	676,032	11,429	495,325	28,373	1,211,231
Ten Year Average (1991-00)	146	300,410	1,963	247,114	53,165	602,797

^a Fishing was closed due to oil contamination on the beaches.

Appendix D.3. Daily salmon escapement through the Eshamy weir,
Prince William Sound, 2001.

Date	Sockeye ^a		Pink ^b		Chum		Coho		Chinook	
	Daily	Cum.	Daily	Cum.	Daily	Cum.	Daily	Cum.	Daily	Cum.
07/04	45	45	0	0	0	0	0	0	0	0
07/05	272	317	0	0	2	2	0	0	0	0
07/06	311	628	0	0	7	9	0	0	0	0
07/07	21	649	0	0	1	10	0	0	0	0
07/08	106	755	0	0	2	12	0	0	0	0
07/09	199	954	0	0	8	20	0	0	0	0
07/10	235	1,189	0	0	13	33	0	0	0	0
07/11	74	1,263	0	0	5	38	0	0	0	0
07/12	506	1,769	0	0	4	42	0	0	0	0
07/13	261	2,030	0	0	6	48	0	0	0	0
07/14	295	2,325	0	0	3	51	0	0	0	0
07/15	1,209	3,534	2	2	21	72	0	0	0	0
07/16	908	4,442	0	2	17	89	0	0	0	0
07/17	234	4,676	0	2	8	97	0	0	0	0
07/18	269	4,945	0	2	4	101	0	0	0	0
07/19	212	5,157	0	2	15	116	0	0	0	0
07/20	304	5,461	3	5	9	125	0	0	0	0
07/21	44	5,505	6	11	6	131	0	0	0	0
07/22	2,704	8,209	12	23	12	143	0	0	0	0
07/23	2,758	10,967	32	55	4	147	0	0	0	0
07/24	472	11,439	18	73	7	154	0	0	0	0
07/25	2,808	14,247	44	117	11	165	0	0	0	0
07/26	2,154	16,401	25	142	1	166	0	0	0	0
07/27	447	16,848	7	149	0	166	0	0	0	0
07/28	302	17,150	12	161	0	166	0	0	0	0
07/29	1,038	18,188	20	181	1	167	0	0	0	0
07/30	122	18,310	2	183	0	167	0	0	0	0
07/31	398	18,708	7	190	1	168	0	0	0	0
08/01	519	19,227	15	205	0	168	0	0	0	0
08/02	215	19,442	25	230	0	168	0	0	0	0
08/03	72	19,514	5	235	0	168	0	0	0	0
08/04	171	19,685	7	242	1	169	0	0	0	0
08/05	88	19,773	5	247	3	172	0	0	0	0
08/06	794	20,567	83	330	0	172	0	0	0	0
08/07	977	21,544	99	429	0	172	0	0	0	0
08/08	708	22,252	73	502	0	172	0	0	0	0
08/09	291	22,543	25	527	1	173	0	0	0	0
08/10	511	23,054	66	593	0	173	0	0	0	0
08/11	86	23,140	39	632	0	173	0	0	0	0
08/12	613	23,753	105	737	0	173	0	0	0	0
08/13	598	24,351	123	860	0	173	1	1	0	0
08/14	530	24,881	152	1,012	0	173	0	1	0	0
08/15	408	25,289	31	1,043	0	173	0	1	0	0
08/16	269	25,558	96	1,139	0	173	0	1	0	0
08/17	695	26,253	218	1,357	0	173	0	1	0	0
08/18	1,281	27,534	393	1,750	0	173	0	1	0	0
08/19	714	28,248	477	2,227	0	173	1	2	0	0
08/20	6,800	35,048	1,244	3,471	1	174	7	9	0	0
08/21	1,077	36,125	942	4,413	0	174	9	18	0	0
08/22	1,120	37,245	831	5,244	0	174	5	23	0	0
08/23	2,144	39,389	1,020	6,264	0	174	5	28	0	0
08/24	1,004	40,393	725	6,989	0	174	6	34	0	0
08/25	1,658	42,051	916	7,905	0	174	7	41	0	0

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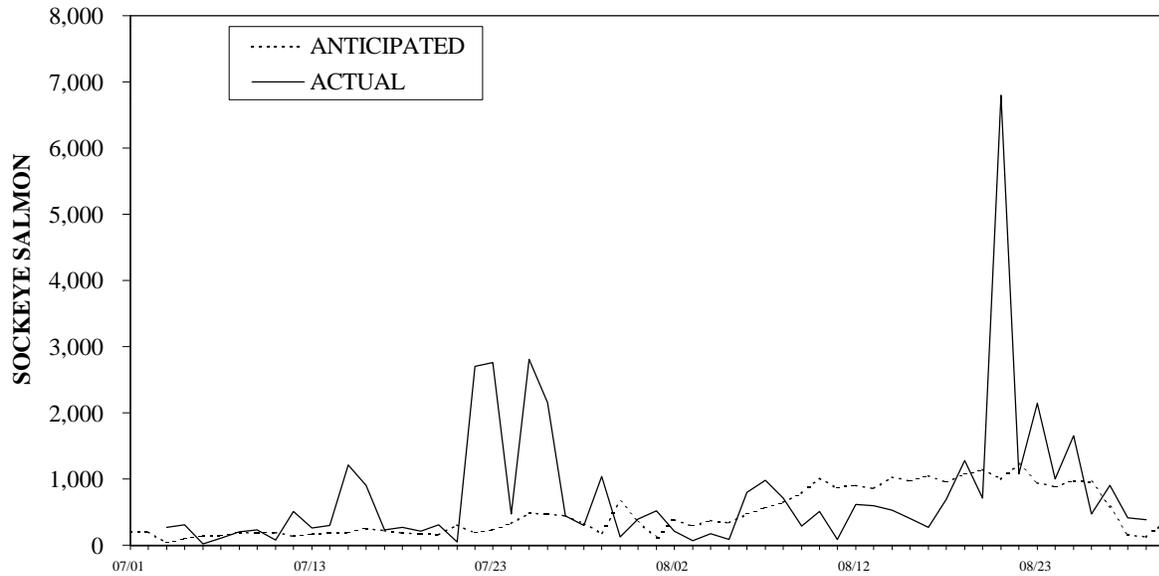
Appendix D.3. (page 2 of 2)

Date	Sockeye ^a		Pink ^b		Chum		Coho		Chinook	
	Daily	Cum.	Daily	Cum.	Daily	Cum.	Daily	Cum.	Daily	Cum.
08/26	473	42,524	633	8,538	0	174	6	47	0	0
08/27	904	43,428	687	9,225	1	175	7	54	0	0
08/28	6,365	49,793	3,119	12,344	0	175	25	79	0	0
08/29	1,029	50,822	1,011	13,355	0	175	18	97	0	0
08/30	859	51,681	900	14,255	0	175	16	113	0	0
08/31	774	52,455	911	15,166	0	175	21	134	0	0
09/01	606	53,061	950	16,116	0	175	40	174	0	0
09/02	243	53,304	937	17,053	0	175	23	197	0	0
09/03	199	53,503	1,042	18,095	1	176	14	211	0	0
09/04	212	53,715	755	18,850	0	176	13	224	0	0
09/05	413	54,128	905	19,755	0	176	40	264	0	0
09/06	381	54,509	708	20,463	0	176	28	292	0	0
09/07	438	54,947	322	20,785	0	176	28	320	0	0
09/08	240	55,187	242	21,027	0	176	15	335	0	0
Totals	55,187		21,027		176		335		0	

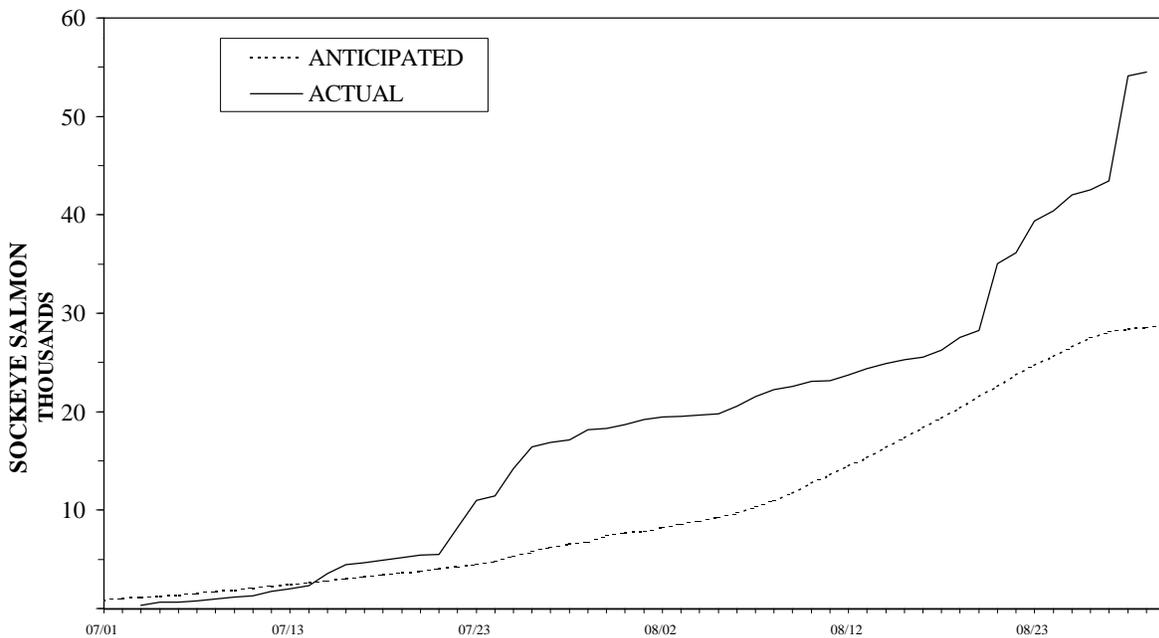
^a The weir is designed to prohibit passage of sockeye salmon, smaller pink salmon may pass through the weir uncounted.

2001 ESHAMY LAKE SOCKEYE ESCAPEMENT

Daily



Cumulative



Appendix D.4. Anticipated daily and cumulative sockeye salmon escapement versus actual escapement past the Eshamy River weir, 2001.

L6

Appendix D.5. Salmon escapement by species at the Eshamy weir, Prince William Sound, 1967-2001.

Year	Escapement by Species ^a					Total
	Chinook	Sockeye	Coho	Pink	Chum	
1967	0	10,821	192	10,433	1	21,447
1968	1	68,048	450	919	1	69,419
1969	0	61,196	96	3,095	2	64,389
1970	0	11,460	25	387	0	11,872
1971	0	954	97	3,179	0	4,230
1972 ^c		28,683				28,683
1973	0	10,202	205	1,698	0	12,105
1974 ^c		633				633
1975 ^c		1,724				1,724
1976 ^c		19,367				19,367
1977	0	11,746	230	32,080	0	44,056
1978	0	12,580	20	552	0	13,152
1979	0	12,169	5	3,654	1	15,829
1980	5	44,263	128	963	2	45,361
1981	1	23,048	249	5,956	13	29,267
1982	0	6,782	79	1,056	79	7,996
1983	0	10,348	40	7,047	4	17,439
1984	2	36,121	881	3,970	0	40,974
1985	0	26,178	96	6,271	0	32,545
1986	2	6,949	55	1,004	31	8,041
1987 ^d						
1988	2	31,747	48	1,205	1	33,003
1989	1	57,232	0	6,283	210	63,726
1990	0	14,477	43	2,209	5	16,734
1991	2	46,229	907	31,241	17	78,396
1992	1	36,237	52	3,004	5	39,299
1993	1	42,893	92	3,435	9	46,430
1994	1	64,660	1,184	12,061	87	77,993
1995	7	21,701	1,076	18,601	407	41,792
1996	2	5,271	108	7,959	9	13,349
1997	2	39,015	111	15,142	18	54,288
1998 ^d						
1999	1	27,057	194	32,756	3	60,011
2000	2	22,653	151	20,515	381	43,702
2001	0	55,187	335	21,027	176	76,725
10 Year Average (1991-2000)	2	33,968	431	16,079	104	50,584

^a For break down of jacks versus adult sockeye see specific year's daily escapement enumeration table.

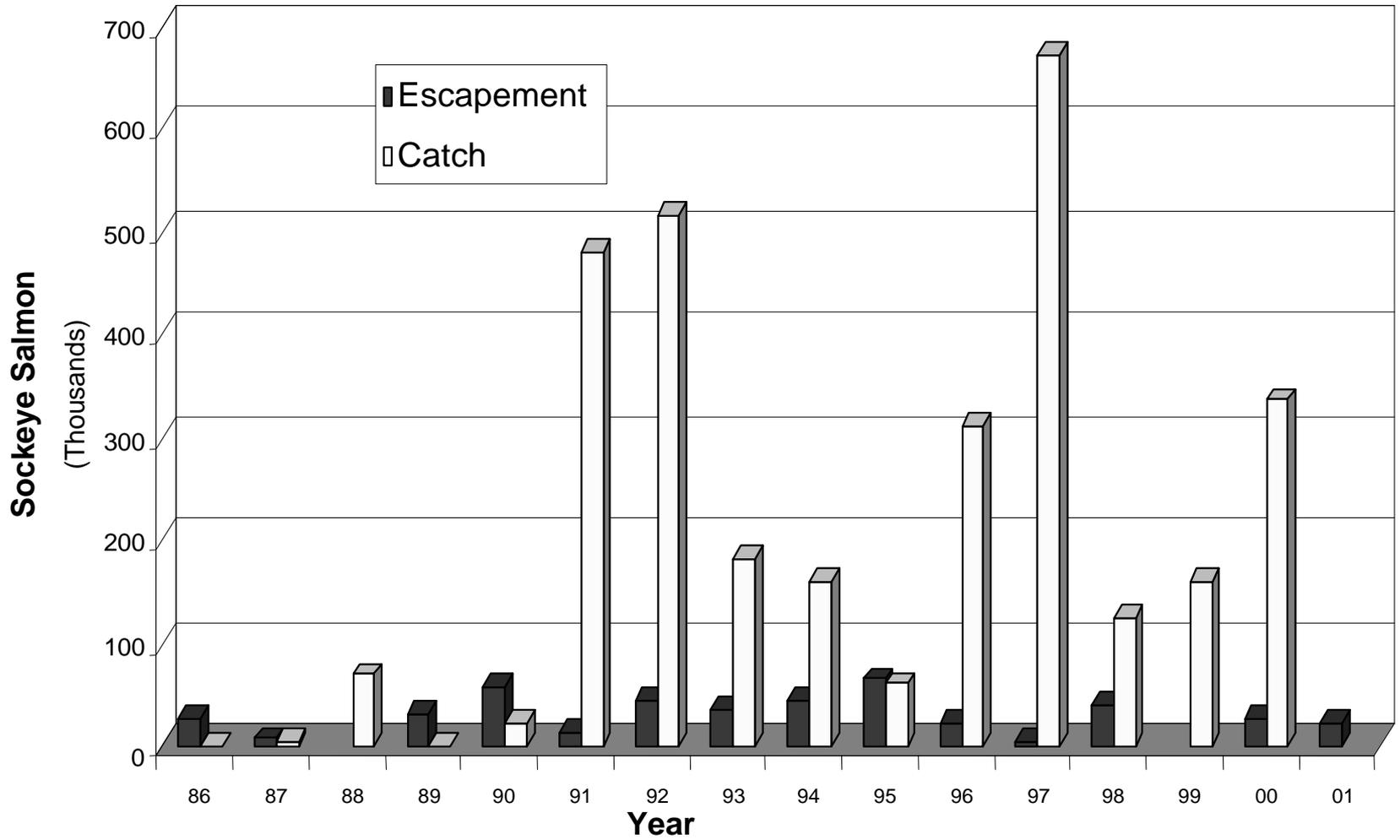
^b Enumeration low due to holes in weir. Actual escapement is estimated to be more than 3,000.

^c Incidental passage of salmon other than sockeye was not recorded for each year.

^d The Eshamy weir was not in operation during this year.

SOCKEYE SALMON CATCH AND ESCAPEMENT IN THE ESHAMY DISTRICT

66



Appendix D.6. Sockeye salmon catch and escapement in the Eshamy District, Prince William Sound, 1986 - 2001.

Appendix D.7. Temporally stratified age and sex composition of sockeye salmon harvested in the Eshamy District commercial common property gillnet fishery, 2001.

		Brood Year and Age Class						Total
		1998	1997		1996		1995	
		1.1	1.2	2.1	1.3	2.2	2.3	
<u>Strata Combined:</u>	07/12 - 08/22							
Sampling dates:	07/25 - 08/22							
Sample size:	1821 ^a							
Female	Percentage of sample	0.0	49.9	0.0	1.2	0.9	0.0	52.0
	Number in catch	0	322,456	0	7,688	6,115	254	336,513
Male	Percentage of sample	0.0	45.6	0.0	1.0	1.3	0.0	48.0
	Number in catch	199	294,789	254	6,600	8,206	0	310,047
Total	Percentage of sample	0.0	95.5	0.0	2.2	2.2	0.0	100.0
	Number in catch	199	617,245	254	14,288	14,321	254	646,560
	Standard error	199	3,311	254	2,320	2,388	254	

^a Scales with resorbed edges were not included in sample: strata 1 had 11 resorbed scales, strata 2 had 32 resorbed scales, strata 3 had 16 resorbed scales, strata 4 had 90 resorbed scales, and strata 5 had 154 scales.

Appendix D.8. Temporally stratified age and sex composition of the sockeye salmon escapement through the weir at the head of Eshamy Lagoon, 2001.

		1998	1997		1996		1995	Total
		1.1	1.2	2.1	1.3	2.2	2.3	
Stratum dates:		07/04 - 07/24						
Sampling dates:		07/15 - 07/16						
Sample size:		444						
Female	Percentage of sample	0.0	50.5	0.0	2.7	2.5	0.0	55.6
	Number in escapement	0	5,771	0	309	283	0	6,364
Male	Percentage of sample	1.1	39.0	0.0	2.5	1.8	0.0	44.4
	Number in escapement	129	4,457	0	283	206	0	5,075
Total	Percentage of sample	1.1	89.4	0.0	5.2	4.3	0.0	100.0
	Number in escapement	129	10,228	0	593	490	0	11,439
	Standard error	57	167	0	120	110	0	
Stratum dates:		07/25 - 08/14						
Sampling dates:		07/27 - 07/28						
Sample size:		458						
Female	Percentage of sample	0.0	52.8	0.0	8.1	2.4	0.2	63.5
	Number in escapement	0	7,103	0	1,086	323	29	8,541
Male	Percentage of sample	0.7	32.1	0.0	2.0	1.7	0.0	36.5
	Number in escapement	88	4,314	0	264	235	0	4,901
Total	Percentage of sample	0.7	84.9	0.0	10.0	4.1	0.2	100.0
	Number in escapement	88	11,417	0	1,350	558	29	13,442
	Standard error	51	225	0	189	125	29	
Stratum dates:		08/15 - 09/08						
Sampling dates:		08/15 - 08/16						
Sample size:		447						
Female	Percentage of sample	0.0	45.4	0.0	2.7	6.9	0.4	55.5
	Number in escapement	0	13,763	0	814	2,102	136	16,814
Male	Percentage of sample	0.7	38.5	0.2	2.0	2.9	0.2	44.5
	Number in escapement	203	11,661	68	610	881	68	13,492
Total	Percentage of sample	0.7	83.9	0.2	4.7	9.8	0.7	100.0
	Number in escapement	203	25,424	68	1,424	2,983	203	30,306
	Standard error	117	528	68	304	427	117	
Strata Combined:		07/04 - 09/08						
Sampling dates:		07/15 - 08/16						
Sample size:		1,349						
Female	Percentage of sample	0.0	48.3	0.0	4.0	4.9	0.3	57.5
	Number in escapement	0	26,637	0	2,209	2,708	165	31,718
Male	Percentage of sample	0.8	37.0	0.1	2.1	2.4	0.1	42.5
	Number in escapement	420	20,433	68	1,158	1,322	68	23,469
Total	Percentage of sample	0.8	85.3	0.1	6.1	7.3	0.4	100.0
	Number in escapement	420	47,070	68	3,366	4,030	233	55,187
	Standard error	140	597	68	377	459	121	

Appendix D.9. Summary of periods, dates, hours open, and emergency orders issued for the commercial salmon fisheries in the Eshamy District, Prince William Sound, 2001.

Main Bay Subdistrict (225-21)			Crafton Island Subdistrict (225-10, 20, 30)			Emergency Orders Issued
Periods	Dates	Hours Open	Periods	Dates	Hours Open	
01	05/17-05/18	24	01	05/17-05/18	24	2-F-E-02-01 ^a
02	05/21-05/22	24	02	05/21-05/22	24	2-F-E-04-01 ^b
03	05/24-05/25	24	03	05/24-05/25	24	2-F-E-06-01 ^a
04	05/31-06/01	24	04	05/31-06/01	24	2-F-E-11-01 ^b
05	06/04-06/05	24	05	06/04-06/05	24	2-F-E-14-01 ^c
06	06/07-06/08	24	06	06/07-06/08	24	2-F-E-16-01 ^a
07	06/11-06/12	24				2-F-E-17-01 ^d
08	07/12-07/13	24				2-F-E-37-01 ^e
09	07/23-07/24	24	09	07/23-07/24	24	2-F-E-47-01 ^f
10	07/26-07/28	36	10	07/26-07/28	36	2-F-E-60-01 ^f
11	07/30-08/01	48	11	07/30-08/01	48	2-F-E-62-01 ^f
12	08/02-08/04	48	12	08/02-08/04	48	2-F-E-71-01 ^f
13	08/06-08/08	48	13	08/06-08/08	48	2-F-E-72-01 ^f
14	08/09-08/11	48	14	08/09-08/10	24	2-F-E-73-01 ^g
15	08/13-08/15	48	15	08/13-08/14	24	2-F-E-74-01 ^h
16	08/16-08/18	48	16	08/16-08/17	24	2-F-E-80-01 ⁱ
17	08/20-08/22	48	17	08/20-08/22	24	2-F-E-81-01 ^j
18	08/23-08/25	48	18	08/23-08/25	48	2-F-E-82-01, 2-F-E-87-01 ^k
19	08/27-08/30	72	19	08/27-08/30	96	2-F-E-88-01 ^l
20	08/30-09/03	96	20	08/30-09/03	96	2-F-E-89-01, 2-F-E-90-01 ^m
21	09/03-09/06	72	21	09/03-09/06	72	2-F-E-91-01, 2-F-E-92-01 ⁿ
22	09/07-09/09	60	22	09/07-09/09	60	2-F-E-96-01 ^b
23	09/10-09/12	48	23	09/10-09/12	48	2-F-E-96-01 ^o
24	09/13-09/15	48	24	09/13-09/15	48	2-F-E-96-01 ^o
25	09/17-09/19	48	25	09/17-09/19	48	2-F-E-96-01 ^o
26	09/20-09/22	48	26	09/20-09/22	48	2-F-E-96-01 ^o
27	09/24-09/26	48	27	09/24-09/26	48	2-F-E-96-01 ^o
28	09/27-09/30	48	28	09/27-09/30	48	2-F-E-96-01 ^o

^a All waters of the Eshamy District were open. The alternating gear zone (AGZ) was open to set gillnet gear.

^b All waters of the Eshamy District were open. The AGZ was open to drift gillnet gear.

^c Waters of the Eshamy District, excluding the AGZ, were open.

^d Only the Main Bay Subdistrict was open. The AGZ was open to drift gillnet gear.

^e Only the Main Bay Subdistrict was open. The AGZ was open to set gillnet gear.

^f Waters of the Eshamy District, excluding the Main Bay Hatchery Special Harvest Area (SHA), were open.

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Appendix D.9. (page 2 of 2)

- ⁸ Waters of the Eshamy District, excluding the Main Bay Hatchery SHA, were open for 24 hours. Only the Main Bay Subdistrict, excluding the Main Bay Hatchery (MBH) SHA was open for an additional 24-hours.
- ⁹ Waters of the Eshamy District, up to a line of buoys in Main Bay, was open for 24 hours. Only the Main Bay Subdistrict, up to a line of buoys in front of the barrier seine, was open an additional 24 hours.
- ¹ Waters of the Eshamy District, excluding the AGZ, were open for 24 hours. Only the Main Bay Subdistrict, excluding the AGZ was open an additional 24 hours.
- ^J Waters of the Eshamy District, excluding the AGZ, was open for 24 hours. Only the Main Bay Subdistrict, excluding the AGZ were open an additional 24 hours. Legal gillnet mesh size was restricted to a minimum of five and three-eighths inches.
- ^A Waters of the Eshamy District, excluding the AGZ, were open for 24 hours. Only the Main Bay Subdistrict excluding the AGZ and waters of Eshamy Bay, east of 148° 00' 30" W. longitude and west of 147° 58' W. longitude was open an additional 24 hours. Legal gillnet mesh size restriction was rescinded 8:00 p.m. Thursday, August 23.
- ¹ Waters of the Eshamy District, excluding the AGZ, were open for 24 hours. Only the Main Bay Subdistrict excluding the AGZ and waters of Eshamy Bay, east of 148° 00' 30" W. longitude and west of 147° 58' W. longitude was open an additional 48 hours.
- ^m Waters of the Eshamy District were open for 48 hours. Only the Main Bay Subdistrict and waters of Eshamy Bay, east of 148° 00' 30" W. longitude and west of 147° 58' W. longitude was open an additional 48 hours. The AGZ was open to drift gillnet gear.
- ⁿ Waters of the Eshamy District were open for 24 hours. Only the Main Bay Subdistrict and waters of Eshamy Bay, east of 148° 00' 30" W. longitude and west of 147° 58' W. longitude was open an additional 48 hours. The AGZ was open to set gillnet gear. Duration of opening in entire district extended to 72 hours.
- ^o Openings in waters of the Eshamy District went on a twice-weekly schedule effective 8:00 a.m. Monday, September 10 Waters of the Eshamy District were open from 8:00 a.m. Monday through 8:00 a.m. Wednesday and from 8:00 a.m. Thursday until 8:00 a.m. Saturday. The AGZ was open to set gillnet gear Monday through Wednesday and drift gillnet gear Thursday through Saturday. If one gear type was not fishing in the AGZ during its fishing period, then the AGZ was open to the other gillnet type.

APPENDIX E: PRINCE WILLIAM SOUND PURSE SEINE DISTRICTS

Appendix E.1. Prince William Sound commercial purse seine harvest by day, 2001.

Date	Chinook				Sockeye		Coho		Pink		Chum	
	Permits	Landings	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
06/01	8	8	4	125	540	5,675	0	0	0	0	1,103	9,392
06/02	14	14	2	37	203	2,112	0	0	0	0	4,861	41,271
06/03	18	18	13	210	78	795	0	0	0	0	5,730	46,063
06/04	8	8	5	85	0	0	0	0	0	0	1,043	8,872
06/05	7	7	4	109	10	58	0	0	0	0	2,078	17,822
06/06	17	18	18	321	0	0	0	0	0	0	5,428	46,927
06/07	16	16	4	71	0	0	0	0	0	0	7,838	70,892
06/08	17	17	20	360	0	0	0	0	0	0	7,256	61,768
06/09	26	27	22	442	3	16	0	0	4	10	14,728	125,808
06/10	24	24	23	515	0	0	0	0	0	0	12,841	110,242
06/11	21	22	12	240	1	6	0	0	0	0	6,740	55,201
06/12	25	27	9	164	1	7	1	4	0	0	7,405	62,203
06/13	28	28	11	185	0	0	0	0	0	0	12,206	101,433
06/14	34	37	21	431	1	8	0	0	2	8	31,431	257,025
06/15	11	11	6	108	0	0	0	0	0	0	9,587	81,220
06/16	20	20	6	160	1	7	0	0	0	0	12,780	107,531
06/17	36	37	2	52	2	14	0	0	13	42	21,038	170,259
06/18	24	24	26	270	0	0	0	0	3	12	15,206	121,676
06/19	27	28	7	156	3	19	1	8	31	101	13,178	102,769
06/20	23	26	14	359	0	0	0	0	19	76	19,075	151,923
06/21	21	23	4	40	9	58	0	0	11	87	20,152	161,554
06/22	58	59	33	337	310	1,914	40	318	72,088	239,825	44,710	352,996
06/23	22	22	4	65	0	0	0	0	318	1,113	25,239	198,441
06/24	25	29	7	110	0	0	1	7	126	591	23,910	181,251
06/25	22	31	17	242	8	49	7	54	162	1,214	29,275	234,751
06/26	36	42	5	62	0	0	2	11	16	54	31,382	252,301
06/27	16	16	5	48	0	0	1	6	55	207	12,216	95,966
06/28	25	27	2	30	2	15	2	13	41	138	18,627	147,612
06/29	85	91	17	251	1,569	9,611	33	241	423,840	1,474,782	27,409	215,392
06/30	16	16	2	38	20	100	0	0	37	105	14,038	103,007
07/01	11	11	14	140	8	45	8	59	45,434	139,390	11,991	94,230
07/02	17	24	5	57	1	6	1	8	68	236	28,501	202,154
07/03	28	39	0	0	11	66	0	0	638,964	2,051,715	2,233	15,642
07/04	33	42	2	45	4	20	1	8	406,147	1,419,029	15,114	102,825
07/05	33	41	10	71	3,320	9,979	4	22	454,650	1,466,380	6,888	52,443
07/06	119	181	21	328	389	2,033	39	360	1,644,288	5,770,819	28,854	211,746
07/07	6	6	0	0	0	0	0	0	0	0	16,032	117,616
07/08	122	177	4	37	164	967	20	144	1,449,151	5,088,222	38,493	310,731
07/09	2	3	0	0	0	0	0	0	119	415	2,782	24,060
07/10	121	200	9	52	450	2,719	72	534	2,024,249	7,059,298	22,529	162,267
07/11	2	5	2	7	4,089	14,589	0	0	1,652	5,844	11,201	82,070
07/12	124	185	4	65	436	2,676	4,588	16,042	1,265,612	4,582,020	54,985	406,537
07/14	126	160	9	52	349	2,067	3,147	11,153	1,515,807	5,211,020	24,512	168,876
07/15	1	1	0	0	0	0	0	0	0	0	304	2,096
07/16	128	185	19	205	861	5,216	354	2,758	1,664,331	5,893,986	24,096	188,011
07/17	7	8	5	196	152	913	40	311	43,851	141,239	5,132	32,721
07/18	123	158	14	110	3,623	21,203	1,258	9,620	1,284,784	4,372,380	18,177	129,910
07/20	126	142	16	151	889	5,410	516	3,784	914,493	3,130,135	28,723	222,660
07/22	119	124	4	47	1,529	9,383	791	5,849	548,457	1,866,777	24,032	189,822
07/23	2	2	0	0	225	1,143	20	132	6,769	22,338	548	4,486
07/24	111	119	11	146	920	5,519	535	4,199	627,023	2,157,444	20,670	168,223
07/26	104	106	13	86	16,163	98,571	1,329	10,405	471,039	1,588,973	21,738	184,422
07/28	98	105	12	139	25,863	158,972	1,759	22,386	766,415	2,483,640	21,369	166,318
07/30	58	75	9	94	29,626	187,764	872	6,200	799,593	2,553,639	2,361	18,419
08/01	133	138	13	181	17,409	93,549	1,600	13,199	696,083	2,328,480	11,368	89,852
08/03	104	104	4	67	953	5,947	1,380	11,061	395,675	1,329,135	13,478	106,907
08/05	81	82	3	58	743	4,670	11,509	61,511	270,148	955,050	9,023	81,472
08/07	117	127	8	57	8,237	50,993	2,396	18,415	898,623	3,046,845	2,575	20,975
08/08	1	1	0	0	8	55	1	15	10,604	37,116	6	52
08/09	54	57	0	0	535	3,316	1,157	9,365	190,040	639,545	3,816	30,548
08/11	75	75	9	160	881	5,547	2,575	19,753	219,344	763,602	20,360	163,011

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Appendix E.1. (page 2 of 2)

Date	Chinook		Sockeye		Coho		Pink		Chum			
	Permits	Landings	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds		
08/13	94	96	7	156	758	4,570	4,773	43,483	306,268	1,047,558	8,972	72,474
08/15	83	84	1	18	949	6,292	8,560	74,965	306,168	1,016,161	8,505	68,694
08/19	47	48	0	0	355	2,154	1,568	14,475	174,190	591,179	19,011	145,183
08/30	29	33	0	0	253	1,541	317	2,549	219,690	736,726	23	188
08/31	28	40	0	0	28	172	6	42	305,061	1,046,817	0	0
09/01	15	18	0	0	23	141	15	138	95,181	299,042	0	0
09/02	4	5	0	0	7	44	0	0	48,102	165,444	0	0
09/03	11	16	0	0	14	84	17	138	155,206	484,839	0	0
09/04	27	28	0	0	1	6	19,709	112,342	26,478	84,267	1,258	6,225
09/05	45	51	1	14	1	5	105,266	856,985	3,409	11,591	228	1,610
09/06	15	34	0	0	16	92	18,498	166,359	80,044	264,877	11	54
09/07	1	1	0	0	0	0	0	0	5,963	20,277	0	0
09/08	2	2	0	0	0	0	714	7,144	0	0	0	0
09/09	1	1	0	0	0	0	2,546	23,682	0	0	0	0
09/11	1	1	0	0	0	0	285	2,560	0	0	0	0
09/13	1	1	0	0	0	0	0	0	6,994	22,382	0	0
09/14	2	5	0	0	0	0	0	0	25,151	81,131	0	0
09/15	1	1	0	0	0	0	0	0	5,846	18,708	0	0
09/19	1	1	0	0	0	0	0	0	3,931	12,580	0	0
Totals	148	3,922	554	8,362	123,004	728,903	198,334	1,532,817	21,517,861	73,726,656	988,409	7,739,098
Average Weight				15.09		5.93		7.73		3.43		7.83

Appendix E.2. Commercial salmon harvest by species, all gear and districts combined, Prince William Sound, 1971 - 2001.

CATCH BY SPECIES						
Year ^a	Chinook	Sockeye	Coho	Pink	Chum	Total
1971	3,551	88,368	30,551	7,310,964	574,265	8,007,699
1972 ^b	547	197,526	1,634	54,783	45,370	299,860
1973	2,405	124,802	1,399	2,056,878	729,839	2,915,323
1974 ^b	1,590	129,366	801	448,773	88,544	669,074
1975	2,519	189,613	6,142	4,452,805	100,479	4,751,558
1976	1,044	112,809	6,171	3,018,991	370,478	3,509,493
1977	648	310,358	843	4,513,082	572,610	5,397,541
1978	1,042	222,083	1,495	2,913,721	485,147	3,623,488
1979	2,015	150,040	6,843	15,607,620	326,414	16,092,932
1980	189	189,816	2,952	14,157,057	482,016	14,832,030
1981	404	251,222	4,383	20,524,470	1,878,716	22,659,195
1982	255	1,055,099	24,362	20,396,222	1,335,368	22,811,306
1983	1,048	92,111	10,496	14,038,796	1,041,309	15,183,760
1984	489	311,955	12,420	22,086,806	1,201,842	23,613,512
1985	1,104	493,278	19,753	25,056,663	1,280,093	26,850,891
1986	1,330	488,715	12,277	11,407,271	1,683,049	13,592,642
1987	874	540,109	47,751	29,198,507	1,904,494	31,691,735
1988	1,037	183,572	75,709	11,817,323	1,832,114	13,909,755
1989	1,113	140,090	203,574	21,860,582	995,962	23,201,321
1990	447	58,497	234,525	44,163,479	959,838	45,416,786
1991	445	507,815	145,311	37,134,311	331,906	38,119,788
1992	1,475	780,932	202,311	8,635,448	328,568	9,948,734
1993	2,148	418,948	48,310	5,761,436	1,173,341	7,404,183
1994	1,376	334,183	121,518	36,874,188	1,039,095	38,370,360
1995	1,364	230,057	140,314	16,045,396	702,216	17,119,347
1996	700	606,525	172,448	26,036,570	2,077,996	28,894,239
1997	1,186	1,197,776	64,360	25,828,078	2,224,725	29,316,125
1998	2,013	365,591	74,105	28,664,281	1,266,887	30,372,877
1999	1,055	339,037	81,841	44,993,247	2,963,838	48,379,018
2000	1,133	548,790	353,013	38,875,724	5,158,397	44,937,057
2001	861	932,070	239,947	35,237,137	3,097,005	39,507,020
Ten Year Average (1991-00)	1,290	532,965	140,353	26,884,868	1,726,697	29,286,173

^aIncludes purse seine, drift gillnet and set gillnet catches from all P.W.S. fishing districts; Eastern, Northern Unakwik, Coghill, Northwestern, Eshamy, Southwestern, Montague and Southeastern. Also includes hatchery sales harvests, confiscated fish, donated and discarded fish catch, the surimi study fish, and special use educational permit catches.

^bGeneral purse seine season closed.

Appendix E.3. Commercial pink salmon harvest for all gear types, by district, Prince William Sound, 1975-2001 (includes purse seine, drift gillnet, and set gillnet catches from all Prince William Sound districts; Unakwik catches are included in the Northern District. Does not include hatchery cost recovery, confiscated and test fish harvests).

Year	DISTRICT								Total
	Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	
1975	712,328	171,657	303,597	420,891		1,673,887	118,467	875,456	4,276,283
1976	1,380,943	384,267	217,696	207,190		589,458		82,366	2,861,920
1977	1,673,044	147,964	230,215	208,727		930,469	77,104	824,374	4,091,897
1978	1,516,076	933,013	13,059					216,696	2,678,844
1979	4,500,032	115,886	38,560	59,423		5,111,073	1,347,413	4,160,925	15,333,312
1980	3,140,134	1,271,177	134,876	306,109		7,507,776	950	1,271,389	13,632,411
1981	4,797,583	1,194,621	34,155	46,874		10,371,220	278,879	3,221,268	19,944,600
1982	2,959,601	2,331,903	1,000,524	520,972	3,997	10,801,771	6,444	747,116	18,372,328
1983	2,430,063	1,021,345	273,131	714,522		5,957,068	158,241	1,482,013	12,036,383
1984	4,525,029	2,194,904	996,483	1,412,822	544,082	10,197,349	11,587	1,245,042	21,127,298
1985	6,715,143	1,002,872	523,773	527,132	58,183	10,843,752	1,448,809	2,733,562	23,853,226
1986	2,488,540	944,871	214,593	285,184	43,061	6,374,535		147,268	10,498,052
1987	6,964,549	2,419,611	1,578,568	750,877	89,902	13,341,940	111,011	955,988	26,212,446
1988	481,324	286,743	2,932,072	7,738	529,329 ^a	5,411,424 ^a		1,776	9,650,406
1989	3,151,096	6,464,090	3,925,487	181,565				73,177	13,795,415
1990	7,970,364	5,482,585	2,692,788	891,444	534,951	17,811,479	10,658	12,325	35,406,594
1991	2,617,222	4,150,612	2,211,575		64,591	17,849,425			26,893,425
1992	489,228	1,142,061	363,887		543,115	3,039,775			5,578,066
1993		413,308	493,747		130,542	2,475,798			3,513,395
1994	11,554,320	7,171,038	3,597,094		565,669	3,408,093			26,296,214
1995	4,235,638	3,656,119	1,078,693		88,830	1,707,745	18,239	11,418	10,796,682
1996 ^b	6,059,063	5,039,988	1,543,869		35,691	5,046,919			17,725,530
1997 ^c	4,534,365	3,162,822	2,030,586		222,934	5,929,544	65,107	28,040	15,973,398
1998 ^c	2,231,061	5,035,736	3,228,761		134,984	8,425,853	430,525	350,081	19,837,001
1999	12,305,629	4,981,085	3,542,130		170,525	9,511,998	189,641	914,907	31,615,915
2000	9,819,466	4,093,620	3,359,542	17,223	514,258	9,308,399	87,634	549,763	27,749,905
2001	16,050,235	404,899	957,042		495,325	3,072,848	807,010	534,538	22,321,897
10 year Average (1991-00)	5,982,888	3,884,639	2,144,988	17,223	247,114	6,670,355	158,229	370,842	18,597,953

^a These districts were closed due to the Exxon Valdez oil spill.

^b Eastern and Northern District totals include discarded salmon.

^c Montague District totals include discarded salmon.

Appendix E.4. Aerial escapement indices for pink and chum salmon by district,
Prince William Sound, 2001.

PINK SALMON (ODD CYCLE)					
District	Escapement Goal	Desired Escapement Range	1977-99 Mean Index	Observed Escapement Index ^a	Deviation From Goal
Eastern	422,000	380,000 - 465,000	497,248	436,585	3.5%
Northern/Unakwik	128,000	115,000 - 141,000	138,483	163,573	27.8%
Coghill	178,000	160,000 - 196,000	135,031	148,665	-16.5%
Northwestern	83,000	75,000 - 92,000	93,517	102,294	23.2%
Eshamy	5,700	5,100 - 6,200	5,710	2,963	-48.0%
Southwestern	116,000	105,000 - 128,000	152,763	176,503	52.2%
Montague	162,000	146,000 - 179,000	248,364	314,323	94.0%
Southeastern	333,000	300,000 - 366,000	513,085	655,480	96.8%
Total	1,427,700			2,000,386	40.1%

CHUM SALMON					
District	Escapement Goal	Desired Escapement Range	1976-00 Mean Index	Observed Escapement Index ^a	Deviation From Goal
Eastern	98,100	87,200 - 109,000	100,613	198,683	102.5%
Northern/Unakwik	33,075	29,400 - 36,750	38,017	75,473	128.2%
Coghill	33,325	29,600 - 37,050	20,252	13,388	-59.8%
Northwestern	21,350	19,000 - 23,700	14,165	6,373	-70.1%
Eshamy	0	0 - 0	31	700	
Southwestern	3,825	3,400 - 4,250	2,283	5,187	35.6%
Montague	12,825	11,400 - 14,250	3,985	10,408	-18.8%
Southeastern	22,500	20,000 - 25,000	20,044	37,526	66.8%
Total	225,000			347,738	54.6%

^a Based on weekly aerial survey counts of 208 index spawning streams in Prince William Sound. This does not represent the total spawning escapement but rather a comparable annual index.

Appendix E.5. Pink salmon harvests and escapement indices, including hatchery sales harvests and broodstock, Prince William Sound, 1971 - 2001. Historical data revised in 1989.

Year	PINK SALMON ESCAPEMENTS ^a									Hatchery		Common Property Catch ^b	Total Run ^c
	Eastern	Northern/ Unakwik	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total	Sales	Brood		
	1965	257,853	59,820	91,584	159,011	9,340	65,380	77,042	255,926	975,956			
66	544,980	288,710	135,440	79,960	11,720	115,570	42,220	204,570	1,423,170			2,699,418	4,122,588
67	255,240	144,200	65,240	82,980	5,020	42,950	10,020	236,610	842,260			2,626,340	3,468,600
68	364,930	151,120	108,020	117,430	10,770	172,770	52,350	179,120	1,156,510			2,452,168	3,608,678
69	160,600	94,770	39,020	23,830	0	57,890	1,550	26,910	404,570			4,828,579	5,233,149
70	387,090	125,360	95,170	82,660	7,610	66,790	73,880	140,660	979,220			2,809,996	
71	352,800	126,210	62,160	14,320	1,710	79,140	296,730	179,480	1,112,550			7,310,964	8,423,514
72	344,470	83,900	30,960	39,020	1,100	29,530	33,140	79,060	641,180			54,783	695,963
73	309,040	69,660	493,780	2,910	0	52,320	119,520	177,780	1,225,010			2,056,878	3,281,888
74	256,880	206,750	56,940	163,930	6,240	160,980	11,750	94,650	958,120			448,773	1,406,893
1975	412,560	38,260	452,430	4,990	0	77,270	85,380	194,670	1,265,560			4,452,805	5,718,365
76	472,080	139,600	57,090	68,150	5,840	52,120	13,790	117,590	926,260			3,018,995	3,945,255
77	390,930	69,980	130,510	80,890	16,450	178,670	152,960	277,780	1,298,170	7,745	16,112	4,514,431	5,844,258
78	279,120	163,010	85,450	132,300	5,430	258,980	56,690	164,030	1,145,010	114,188	40,432	2,780,073	4,079,703
79	642,220	200,730	70,980	124,020	0	231,300	219,400	728,630	2,217,280	223,748	54,207	15,393,223	17,888,458
1980	535,960	189,140	214,930	159,260	13,100	133,470	118,400	307,680	1,671,940	346,728	145,061	13,434,024	15,597,753
81	599,340	243,170	106,450	51,210	3,990	93,630	255,420	359,870	1,713,080	707,037	268,501	19,286,542	21,975,160
82	573,070	332,560	368,380	174,290	15,080	195,950	132,380	482,860	2,274,570	1,354,732	239,945	18,858,647	22,727,894
83	481,950	168,410	310,330	196,630	12,610	161,290	230,200	601,680	2,163,100	686,963	258,062	13,309,461	16,347,586
84	1,209,740	593,310	429,450	452,370	16,860	345,760	191,810	792,560	4,031,860	415,393	341,259	21,683,076	26,471,588
1985	750,530	214,210	296,970	199,190	1,410	181,270	332,240	645,510	2,621,330	1,209,960	640,340	23,959,698	28,431,328
86	356,380	141,420	101,600	81,490	3,840	74,980	44,680	155,830	960,220	905,464	466,471	10,498,052	12,830,207
87	514,570	132,960	147,060	75,390	3,450	112,920	149,260	330,630	1,466,240	2,691,190	1,158,908	26,125,769	31,442,107
88	362,370	143,850	37,070	73,780	490	126,440	67,990	152,540	964,530	1,632,701	824,302	9,650,406	13,071,939
89	359,730	106,530	45,510	68,540	19,470	176,230	181,760	315,000	1,272,770	5,737,911	856,927	13,854,209	23,796,279
1990	443,660	131,580	49,110	115,870	17,870	150,100	113,572	304,090	1,325,852	6,691,160	749,910	35,430,821	46,239,241
91	474,380	165,930	98,580	101,320	18,800	197,095	247,890	533,170	1,837,165	5,201,860	1,324,255	31,178,750	40,295,731
92	204,383	72,915	23,611	42,308	2,709	66,953	47,156	95,070	555,105	2,626,248	802,117	5,578,099	9,984,715
93	315,209	95,614	41,837	46,011	9,348	98,573	144,784	315,093	1,066,469	2,212,403	893,462	3,548,694	7,721,028
94	615,240	178,151	65,648	141,290	11,799	144,594	60,084	196,378	1,413,184	10,521,439	1,467,755	26,364,862	39,767,240
1995	396,696	84,447	46,029	50,582	10,182	82,490	183,448	336,310	1,190,184	5,090,152	1,154,635	10,975,079	18,410,050
96	584,236	218,022	104,781	86,709	3,000	63,337	92,966	330,285	1,483,336	8,291,205	1,264,701	17,745,365	28,784,607
97	345,725	65,260	52,961	53,740	914	112,010	206,943	585,135	1,422,688	9,854,675	1,048,485	15,973,403	28,299,251
98	377,700	213,288	85,968	97,485	4,644	280,335	161,275	199,410	1,420,105	8,825,226	933,503	19,836,055	31,014,889
99	622,502	214,723	168,816	52,340	6,900	163,347	381,054	853,180	2,462,862	13,130,211	1,511,755	31,615,915	48,720,743
2000	554,984	168,247	223,646	66,078	4,286	131,648	227,881	282,258	1,659,028	11,125,819	977,075	27,749,905	41,511,827
01	436,585	163,573	148,665	102,294	2,963	176,503	314,323	655,480	2,000,386	12,914,314	1,094,146	22,195,086	38,203,932
EVEN CYCLE AVG. (1966-00)													
Avg.	470,404	196,719	126,292	120,799	7,910	142,795	85,667	237,702	1,388,289	4,404,192	687,711	12,282,973	17,202,789
ODD CYCLE AVG. (1965-99)													
Avg.	425,182	129,393	150,995	78,431	6,450	123,173	188,943	400,465	1,503,034	4,589,859	790,754	13,456,121	18,785,677

^aCoghill and Northwestern escapement figures correspond to current district boundaries.

^bIncludes the common property harvest of both wild and hatchery stocks. Does not include hatchery sales harvests.

^cRepresents the sum of the commercial catch, hatchery sales, brood (including roe recoveries), plus the escapement index. Does not account for wild stock escapement into non-index streams.

Appendix E.6. Weekly aerial estimates of pink salmon escapement by statistical area, Prince William Sound, 2001.

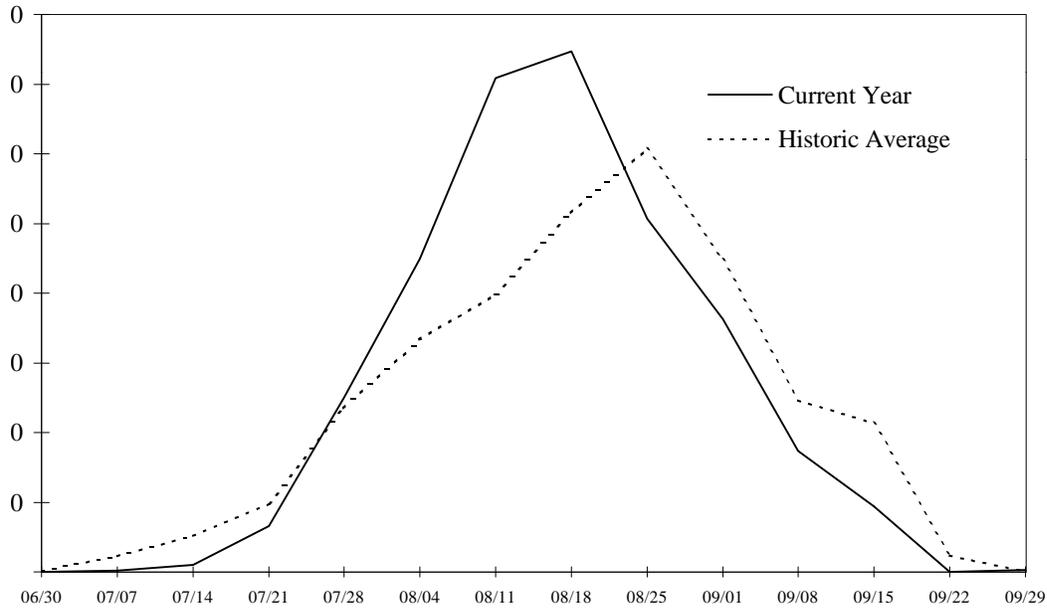
Survey Location	Statistical Area	Week Ending Dates ^a																Adjusted Total			
		06/16	06/23	06/30	07/07	07/14	07/21	07/28	08/04	08/11	08/18	08/25	09/01	09/08	09/15	09/22	09/29		10/06	10/13	
Orca Inlet	22110	NS	NS	NS	0	300	4,000	9,550	12,200	24,400	38,000	5,500	NS	1,020	NS	NS	0	NS	NS	51,381	
Simpson & Sheep Bay	22120	NS	0	0	0	610	4,250	23,850	NS	35,500	39,050	30,200	NS	9,400	NS	NS	23	NS	NS	81,971	
Port Gravina	22130	NS	0	0	860	7,300	13,400	23,710	NS	57,350	41,350	50,700	NS	50,200	NS	NS	21	NS	NS	159,582	
Port Fidalgo	22140	0	0	60	560	1,850	10,115	9,100	NS	25,300	28,400	21,050	NS	20,700	NS	NS	12	NS	NS	72,662	
Valdez Arm	22150	0	0	85	100	300	10,750	6,745	NS	15,700	20,300	19,820	NS	28,650	NS	NS	0	NS	NS	69,609	
Port Valdez	22161	NS	NS	NS	NS	NS	NS	150	NS	700	900	250	NS	300	NS	NS	0	NS	NS	1,380	
Eastern District Total		0	0	145	1,520	10,360	42,515	73,105	12,200	158,950	168,000	127,520	NS	110,270	NS	NS	56	NS	NS	436,585	
Columbia & Long Bay	22210	NS	0	0	0	0	410	NS	3,200	4,700	7,400	NS	21,600	NS	NS	0	NS	NS	NS	32,669	
Wells Bay & Unakwik Inlet	22220	NS	0	0	0	350	5,310	12,101	21,010	7,410	27,752	33,130	9,150	NS	NS	1,870	NS	NS	NS	86,088	
Eaglek Bay	22230	NS	NS	NS	NS	0	1,000	820	11,700	NS	31,100	9,050	NS	NS	NS	570	NS	NS	NS	40,699	
Northern District Total		NS	0	0	0	350	6,720	12,921	35,910	12,110	66,252	42,180	30,750	NS	NS	2,440	NS	NS	NS	159,456	
Upper Unakwik Inlet	22910	NS	NS	NS	NS	0	0	300	400	NS	300	3,500	NS	NS	NS	100	NS	NS	NS	4,117	
Unakwik District (229) Total		NS	NS	NS	NS	0	0	300	400	NS	300	3,500	NS	NS	NS	100	NS	NS	NS	4,117	
West Side Port Wells	22310	NS	NS	NS	NS	0	200	8,900	8,220	18,860	NS	29,100	9,500	NS	NS	NS	110	NS	NS	47,350	
Esther Passage	22320	NS	NS	NS	NS	0	0	0	400	NS	3,550	450	NS	NS	NS	20	NS	NS	NS	3,744	
College Fiord	22330	NS	NS	NS	NS	0	20,000	26,000	30,000	25,000	NS	45,000	22,000	NS	NS	NS	0	NS	NS	97,571	
Coghill District Total		NS	NS	NS	NS	0	20,200	34,900	38,220	44,260	NS	77,650	31,950	NS	NS	NS	130	NS	NS	148,665	
Passage Canal & Cochrane	22410	NS	NS	NS	NS	0	130	800	4,700	NS	14,250	8,000	NS	NS	NS	90	NS	NS	NS	24,178	
Culross Passage	22430	NS	NS	NS	NS	0	1,000	100	3,300	1,300	NS	25,550	35,500	NS	NS	NS	0	NS	NS	56,471	
Port Nellie Juan	22440	NS	NS	NS	NS	0	1,050	2,550	3,400	7,350	NS	14,100	4,900	NS	NS	NS	0	NS	NS	21,645	
Northwestern District Total		NS	NS	NS	NS	0	2,180	3,450	11,400	16,050	NS	53,900	48,400	NS	NS	NS	90	NS	NS	102,294	
Crafton/Eshamy	22530	NS	NS	NS	NS	NS	0	0	300	700	NS	1,250	1,200	NS	NS	NS	0	NS	NS	2,963	
Eshamy District Total		NS	NS	NS	NS	NS	0	0	300	700	NS	1,250	1,200	NS	NS	NS	0	NS	NS	2,963	
Chenega Is. & Dangerous Passage	22620	NS	NS	NS	NS	NS	NS	5,190	17,800	29,800	36,950	32,350	37,550	NS	16,240	NS	NS	NS	NS	88,727	
East Knight Is.	22630	NS	NS	NS	NS	NS	0	100	8,000	4,000	2,500	2,500	12,000	NS	3,000	NS	NS	NS	NS	16,351	
Bainbridge & Latouche Passage	22640	NS	NS	NS	NS	NS	NS	150	1,800	1,840	3,450	12,950	42,750	NS	26,400	NS	NS	NS	NS	63,318	
Port Bainbridge	22650	NS	NS	NS	NS	NS	NS	400	3,000	3,500	5,000	450	3,000	NS	1,750	NS	NS	NS	NS	8,107	
Southwestern District Total		NS	NS	NS	NS	NS	0	5,840	30,600	39,140	47,900	48,250	95,300	NS	47,390	NS	NS	NS	NS	176,503	
Montague Strait	22710	NS	NS	NS	NS	NS	320	8,900	37,850	60,950	99,150	80,260	92,700	NS	37,060	NS	NS	NS	NS	211,561	
Green Island	22720	NS	NS	NS	NS	NS	10	660	10,120	30,200	41,570	51,270	47,550	NS	9,675	NS	NS	NS	NS	102,762	
Montague District Total		NS	NS	NS	NS	NS	330	9,560	47,970	91,150	140,720	131,530	140,250	NS	46,735	NS	NS	NS	NS	314,323	
Orca Is. & East Hawkins	22810	NS	NS	NS	0	NS	0	3,000	500	2,200	NS	NS	0	NS	NS	NS	NS	NS	NS	3,111	
Hawkins Cutoff	22820	NS	NS	NS	0	NS	48,300	135,500	129,900	101,200	NS	NS	760	NS	NS	NS	NS	NS	NS	222,875	
North Hawkins & Canoe Passage	22830	NS	NS	NS	0	NS	6,400	24,100	37,600	29,200	NS	NS	1,270	NS	NS	NS	NS	NS	NS	53,706	
Double Bay	22840	NS	NS	NS	0	NS	10,550	24,800	30,500	54,000	NS	NS	5,960	NS	NS	NS	NS	NS	NS	77,766	
Johnstone Point	22850	NS	NS	NS	0	NS	11,500	32,000	23,500	25,000	NS	NS	1,900	NS	NS	NS	NS	NS	NS	51,512	
Port Etches	22860	NS	NS	NS	0	20	NS	40,100	76,200	100,400	166,300	NS	NS	23,000	NS	NS	NS	NS	NS	246,510	
Southeastern District Total		NS	NS	NS	0	20	NS	116,850	295,600	322,400	377,900	NS	NS	32,890	NS	NS	NS	NS	NS	655,480	
TOTAL OF 9 DISTRICTS		0	0	145	1,520	10,380	65,575	250,425	449,511	708,960	746,630	506,652	362,780	173,910	94,125	NS	2,816	NS	NS	0	2,000,386

^aThere are a total of 209 streams included in the systematic aerial survey program. The survey program commences in the Eastern District where the earliest escapements in the Sound occur. Weather and conditions permitting, each stream is flown weekly. Failure to fly a survey due to run timing or bad survey conditions is denoted by NS (no survey). A notation of NC (no count) occurs when a stream is flown but no count is possible because of survey conditions (ie. water clarity). During the peak of the pink salmon run many streams are flown twice weekly to provide fisheries managers with more timely escapement data. In cases where more than one survey per week was flown the weekly observation shown in this table is the average of the two counts if observing conditions during both were good or, the maximum of the two counts if conditions during the minimum count were poor.

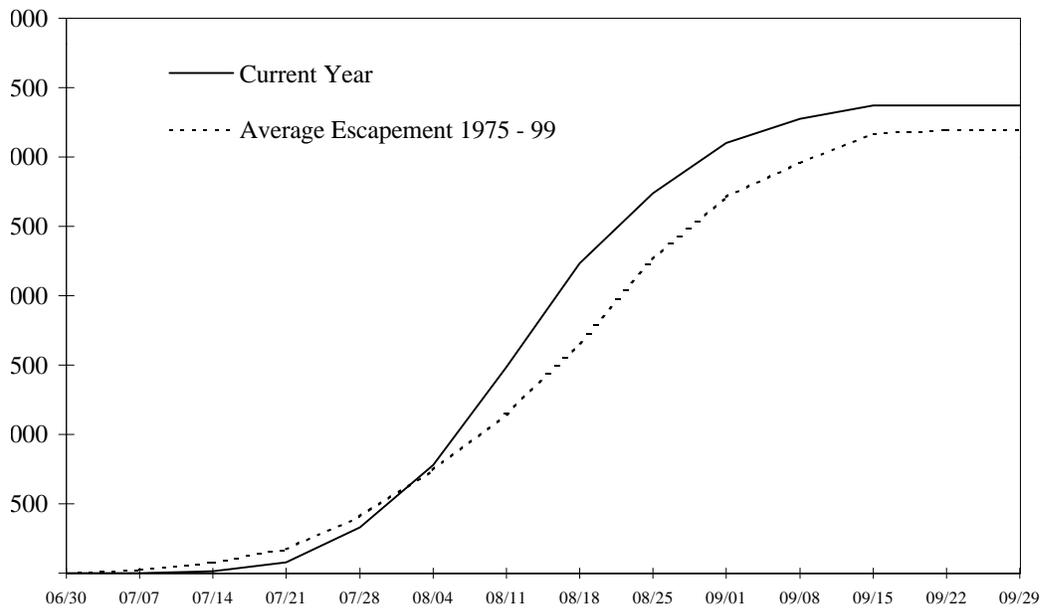
^bThe adjusted total is an escapement estimate based a geometric method used since the inception of the systematic survey program in the early 1960's. In this method, aerial observers are assumed to count without error or bias. Linear interpolations between observations are used to estimate numbers of fish in the stream on days when no surveys are flown. All daily observations and interpolations are summed across the season. Because fish seen on day $i+1$ may include fish seen on day i , the sum of all daily observations and interpolations must be divided by some residence time for fish in the streams to account for duplicate observations. The residence time of 17.5 days which has historically been used in this calculation is from tagging data completed by National Marine Fisheries Service on Olsen Creek in the early 1960's. Since observer bias does occur and since both observer bias and stream life are stream specific, adjusted totals in this table may be used for interannual comparisons but should not be interpreted as the true escapement.

PWS PINK STREAM COUNTS - ALL DISTRICTS

CURRENT YEAR VS. 1975 - 1999 ODD YEAR AVERAGE

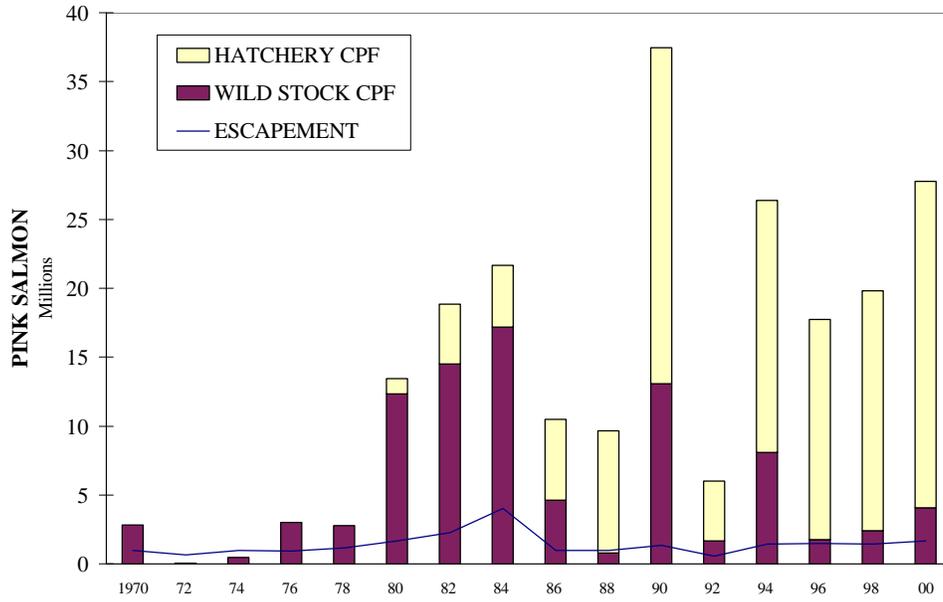


CUMULATIVE

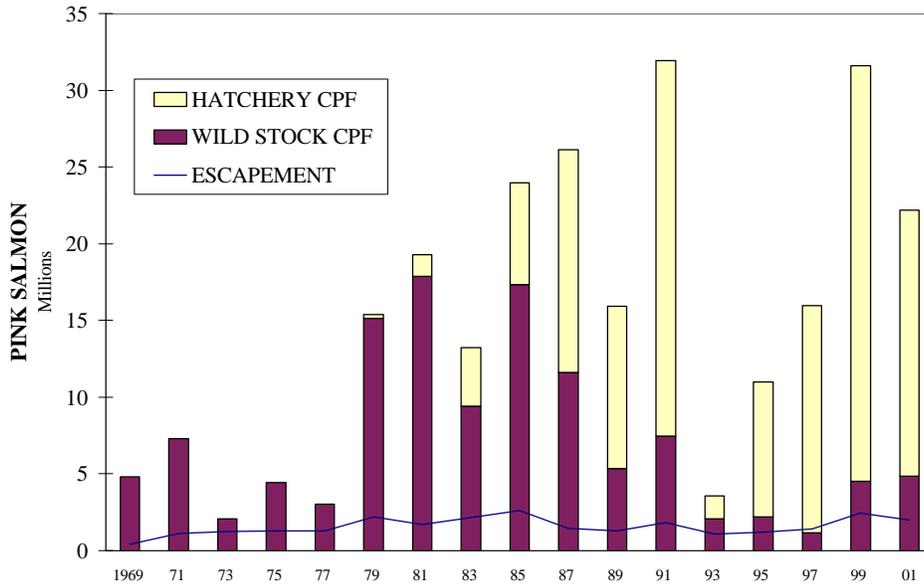


Appendix E.7. Current year and historic weekly pink salmon escapement performance of index spawning streams, Prince William Sound, 2001.

PINK SALMON EVEN YEAR CATCH AND ESCAPEMENT



PINK SALMON ODD YEAR CATCH AND ESCAPEMENT



Appendix E.8. Pink salmon catch and escapement, even years (1970 - 2000), and odd years (1969 - 2001), Prince William Sound, Alaska.

Appendix E.9. Chum salmon harvests and escapement indices, including hatchery sales harvests and broodstock, Prince William Sound, 1971 - 2001.

CHUM SALMON ESCAPEMENTS ^a													
Year	Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total	Hatchery		Common Property Catch ^b	Total Run ^c
										Sales	Brood		
1965	69,180	20,980	20,768	18,907	0	1,829	17,500	46,480	195,644			201,043	396,687
66	75,690	24,870	10,540	5,770	0	2,180	14,100	9,410	142,560			426,628	569,188
67	74,570	23,270	7,450	1,670	0	6,200	4,980	9,070	127,210			274,234	401,444
68	48,960	10,620	8,780	800	0	580	220	4,610	74,570			342,939	417,509
69	58,690	17,340	8,410	780	0	0	0	6,320	91,540			320,977	412,517
70	34,430	4,020	11,880	2,720	0	550	0	7,950	61,550			230,661	292,211
71	49,730	11,870	6,600	5,600	100	1,430	27,990	6,450	109,770			574,265	684,035
72	112,950	70,760	28,160	22,980	0	4,010	3,340	26,990	269,190			45,370	314,560
73	213,170	140,030	72,610	13,250	0	1,020	3,110	48,080	491,270			729,839	1,221,109
74	72,010	55,510	29,280	6,580	0	240	80	3,200	166,900			88,544	255,444
1975	30,040	8,910	3,640	430	0	1,280	140	2,850	47,290			100,479	147,769
76	16,260	29,430	25,670	8,300	0	90	0	770	80,520			370,478	450,998
77	47,880	48,600	43,940	10,090	0	700	0	8,280	159,490			575,839	735,329
78	90,250	27,480	18,160	12,940	0	790	0	6,550	156,170			485,147	641,317
79	42,630	17,320	6,330	8,770	0	90	0	5,140	80,280			324,040	404,320
1980	26,720	27,880	23,340	3,060	0	2,040	70	6,710	89,820			412,948	502,774
81	71,560	28,670	2,050	15,130	0	710	0	16,010	134,130	118		1,745,869	1,880,117
82	146,120	68,580	22,130	21,880	0	1,530	0	25,260	285,500	0	86,200	1,335,368	1,707,068
83	143,800	85,720	61,410	31,660	340	3,170	0	21,410	347,510	0	44,000	1,030,546	1,422,056
84	129,190	59,080	19,690	7,920	0	20	0	8,650	224,550	4,886	3,000	1,196,785	1,429,221
1985	111,310	33,410	22,140	13,290	0	620	0	4,470	185,240	3,840	0	1,302,090	1,491,170
86	126,690	50,740	13,140	17,420	0	1,890	0	8,830	218,710	20,683	12,523	1,662,366	1,914,282
87	183,620	38,700	24,510	26,460	0	1,690	0	44,020	319,000	2,549	15,574	1,902,063	2,239,186
88	258,560	75,420	39,240	40,780	0	2,350	500	66,930	483,780	42,694	108,271	1,792,616	2,427,361
89	112,080	46,470	22,680	27,430	320	11,690	0	22,640	243,310	129,551	74,513	862,551	1,309,925
1990	115,100	112,480	26,020	37,020	0	80	1,050	7,275	299,025	24,554	107,284	935,284	1,366,147
91	86,360	19,080	6,070	8,960	0	2,800	925	9,203	133,398	13,471	114,814	318,435	580,118
92	48,804	12,903	10,003	11,072	300	2,940	783	3,881	90,686	57,392	183,940	271,176	603,194
93	54,102	24,975	8,430	18,966	0	1,300	30	19,172	126,975	475,148	140,330	706,196	1,448,649
94	40,476	23,942	14,176	12,992	100	2,225	0	4,057	97,968	380,365	114,654	677,848	1,270,835
1995	75,655	28,899	11,596	4,883	0	2,250	1,000	23,200	147,483	231,539	172,542	486,510	1,038,074
96	137,908	55,568	19,669	24,405	0	2,231	5,216	47,334	292,331	1,066,705	253,751	1,011,291	2,624,078
97	93,146	19,429	3,101	8,387	0	800	4,000	43,274	172,137	811,179	178,933	1,413,546	2,575,795
98	86,227	28,867	22,764	7,553	0	1,602	10,690	52,103	209,806	519,215	179,875	747,672	1,656,568
99	242,713	36,691	5,057	4,544	0	2,393	8,725	36,181	336,304	777,180	207,073	2,186,658	3,507,215
2000	196,253	23,655	20,488	10,150	16	11,440	66,202	34,969	363,173	1,729,876	85,441	3,428,521	5,607,011
01	198,683	75,473	133,388	6,373	700	5,187	10,408	37,526	467,738	936,028	171,046	2,153,920	3,728,732
1965-99													
AVG	97,857	40,207	22,522	12,971	51	2,215	4,893	19,872	203,312	328,499	112,688	882,993	1,276,258

^aCoghill and Northwestern escapement figures correspond to current district boundaries.

^bIncludes the common property harvest of both wild and hatchery stocks. Does not include hatchery sales harvests.

^cRepresents the sum of the common property catch, hatchery sales and brood, plus the escapement index. Does not account for wild stock escapement into non-index streams.

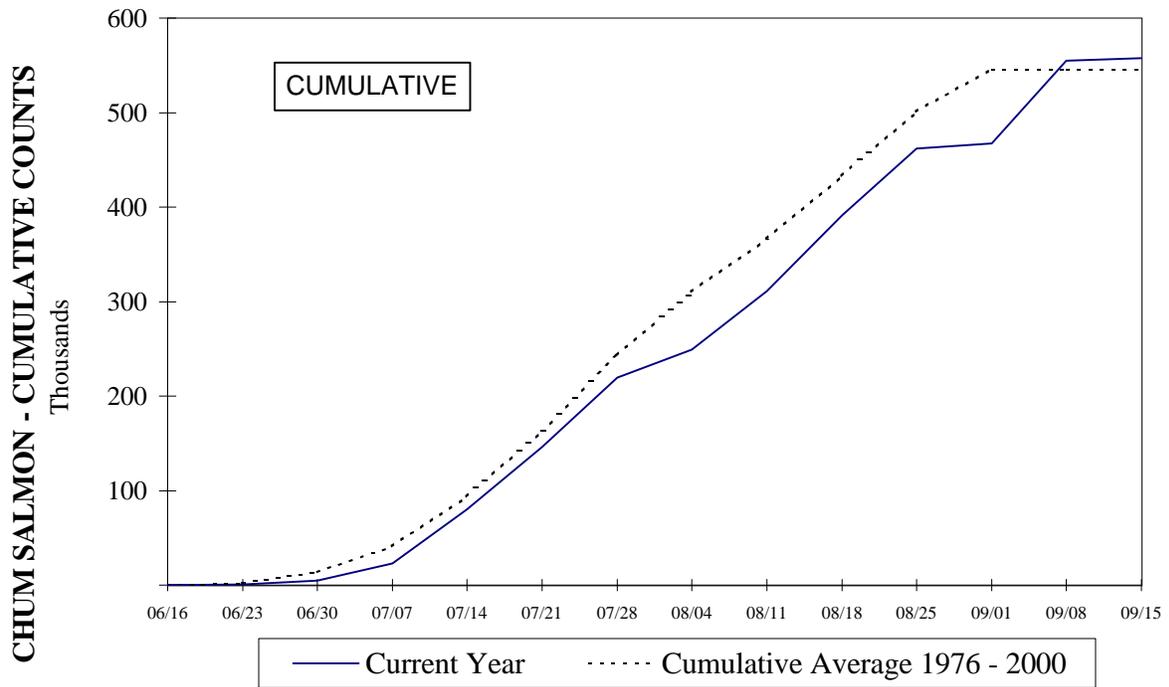
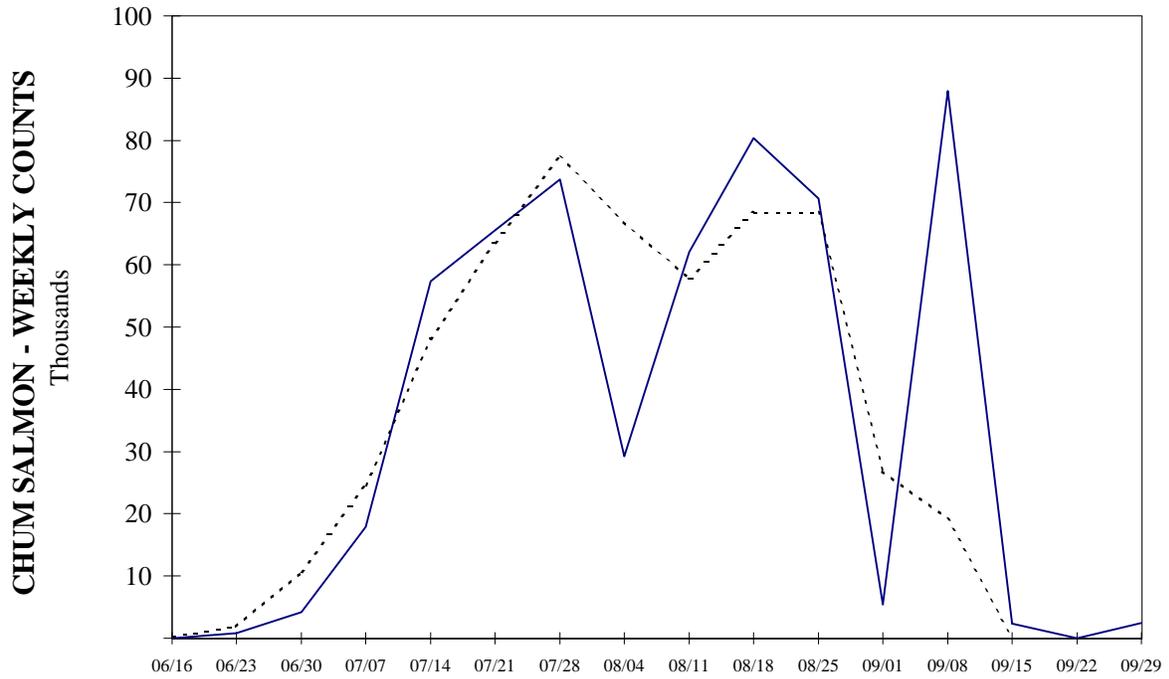
Appendix E.10. Weekly aerial estimates of chum salmon escapement by statistical area, Prince William Sound, 2001.

Survey Location	Statistical Area	Week Ending Dates ^a																Adjusted Total ^b		
		06/16	06/23	06/30	07/07	07/14	07/21	07/28	08/04	08/11	08/18	08/25	09/01	09/08	09/15	09/22	09/29		10/06	10/13
Orca Inlet	22110	NS	NS	NS	0	30	100	350	1,000	1,200	1,500	0	NS	0	NS	NS	0	NS	NS	2,443
Simpson & Sheep Bay	22120	NS	0	0	0	1,500	2,100	5,300	NS	5,400	14,900	1,200	NS	1,200	NS	NS	0	NS	NS	18,210
Port Gravina	22130	40	300	1,811	5,350	23,750	32,100	27,310	NS	18,650	13,100	24,110	NS	13,000	NS	NS	0	NS	NS	85,877
Port Fidalgo	22140	0	0	510	1,220	11,060	12,620	9,110	NS	3,550	12,100	4,750	NS	11,800	NS	NS	2,230	NS	NS	43,422
Valdez Arm	22150	0	300	750	2,115	5,200	5,600	2,870	NS	1,700	12,250	7,900	NS	27,550	NS	NS	220	NS	NS	48,731
Port Valdez	22161	NS	NS	NS	NS	NS	NS	0	NS	0	0	0	NS	0	NS	NS	0	NS	NS	0
Eastern District Total		40	600	3,071	8,685	41,540	52,520	44,940	1,000	30,500	53,850	37,960	NS	53,550	NS	NS	2,450	NS	NS	198,683
Columbia & Long Bay	22210	NS	0	115	1,550	1,400	3,800	2,010	NS	900	3,600	3,700	NS	32,700	NS	NS	0	NS	NS	44,518
Wells Bay & Unakwik Inlet	22220	NS	200	1,000	6,640	8,000	7,935	9,320	1,000	2,900	2,000	8,950	0	1,100	NS	NS	0	NS	NS	24,890
Eaglek Bay	22230	NS	NS	NS	NS	0	140	6	1,240	500	NS	5,700	0	NS	NS	NS	0	NS	NS	6,065
Northern District Total		NS	200	1,115	8,190	9,400	11,875	11,336	2,240	4,300	5,600	18,350	0	33,800	NS	NS	0	NS	NS	75,473
Upper Unakwik Inlet	22910	NS	NS	NS	NS	0	0	0	0	0	NS	0	0	NS	NS	NS	0	NS	NS	0
Unakwik District (229) Total		NS	NS	NS	NS	0	0	0	0	0	NS	0	0	NS	NS	NS	0	NS	NS	0
West Side Port Wells	22310	NS	NS	NS	NS	0	310	630	3,620	3,550	NS	4,250	2	NS	NS	NS	10	NS	NS	6,642
Esther Passage	22320	NS	NS	NS	NS	0	0	0	0	0	NS	250	0	NS	NS	NS	0	NS	NS	250
College Fjord	22330	NS	NS	NS	NS	0	0	1,500	0	4,000	NS	5,000	0	NS	NS	NS	20	NS	NS	6,496
Coghill District Total		NS	NS	NS	NS	0	310	2,130	3,620	7,550	NS	9,500	2	NS	NS	NS	30	NS	NS	13,388
Passage Canal & Cochrane	22410	NS	NS	NS	NS	100	170	827	2,380	1,800	NS	1,720	100	NS	NS	NS	0	NS	NS	3,849
Culross Passage	22430	NS	NS	NS	NS	10	0	0	100	0	NS	750	0	NS	NS	NS	0	NS	NS	850
Port Nellie Juan	22440	NS	NS	NS	NS	140	100	100	600	500	NS	1,000	0	NS	NS	NS	0	NS	NS	1,674
Northwestern District Total		NS	NS	NS	NS	250	270	927	3,080	2,300	NS	3,470	100	NS	NS	NS	0	NS	NS	6,373
Crafton/Eshamy	22530	NS	NS	NS	NS	NS	600	0	0	50	NS	100	0	NS	NS	NS	0	NS	NS	700
Eshamy District Total		NS	NS	NS	NS	NS	600	0	0	50	NS	100	0	NS	NS	NS	0	NS	NS	700
Chenega Is. & Dangerous Passage	22620	NS	NS	NS	NS	NS	NS	610	2,600	2,240	2,030	1,050	450	NS	50	NS	NS	NS	NS	0
East Knight Is.	22630	NS	NS	NS	NS	NS	0	0	0	50	0	0	0	NS	0	NS	NS	NS	NS	0
Bainbridge & Latouche Passage	22640	NS	NS	NS	NS	NS	NS	310	450	400	50	0	550	NS	0	NS	NS	NS	NS	0
Port Bainbridge	22650	NS	NS	NS	NS	NS	NS	150	300	500	400	150	100	NS	0	NS	NS	NS	NS	0
Southwestern District Total		NS	NS	NS	NS	NS	0	1,070	3,350	3,190	2,480	1,200	1,100	NS	50	NS	NS	NS	NS	0
Montague Strait	22710	NS	NS	NS	NS	NS	0	70	3,270	920	900	0	2,800	NS	1,900	NS	NS	NS	NS	0
Green Island	22720	NS	NS	NS	NS	NS	0	50	1,010	940	1,240	25	1,370	NS	380	NS	NS	NS	NS	0
Montague District Total		NS	NS	NS	NS	NS	0	120	4,280	1,860	2,140	25	4,170	NS	2,280	NS	NS	NS	NS	0
Orca Is. & East Hawkins	22810	NS	NS	NS	0	0	NS	0	0	10	NS	NS	0	NS	NS	NS	NS	NS	NS	10
Hawkins Cutoff	22820	NS	NS	NS	0	260	NS	700	1,250	1,600	1,220	NS	NS	0	NS	NS	NS	NS	NS	2,938
North Hawkins & Canoe Passage	22830	NS	NS	NS	0	10	NS	0	50	170	100	NS	NS	0	NS	NS	NS	NS	NS	197
Double Bay	22840	NS	NS	NS	600	400	NS	650	1,700	1,620	2,300	NS	NS	0	NS	NS	NS	NS	NS	4,367
Johnstone Point	22850	NS	NS	NS	150	400	NS	550	750	1,100	900	NS	NS	0	NS	NS	NS	NS	NS	2,236
Port Etches	22860	NS	NS	NS	250	5,100	NS	11,350	7,950	7,800	11,720	NS	NS	600	NS	NS	NS	NS	NS	27,778
Southeastern District Total		NS	NS	NS	1,000	6,170	NS	13,250	11,700	12,290	16,250	NS	NS	600	NS	NS	NS	NS	NS	37,526
TOTAL OF 9 DISTRICTS		40	800	4,186	17,875	57,360	65,575	73,773	29,270	62,040	80,320	70,605	5,372	87,950	2,330	NS	2,480	NS	0	347,738

^aThere are a total of 209 streams included in the systematic aerial survey program. The survey program commences in the Eastern District where the earliest escapements in the Sound occur. Weather and conditions permitting, each stream is flown weekly. Failure to fly a survey due to run timing or bad survey conditions is denoted by NS (no survey). A notation of NC (no count) occurs when a stream is flown but no count is possible because of survey conditions (ie. water clarity). During the peak of the pink salmon run many streams are flown twice weekly to provide fisheries managers with more timely escapement data. In cases where more than one survey per week was flown the weekly observation shown in this table is the average of the two counts if observing conditions during both were good or, the maximum of the two counts if conditions during the minimum count were poor.

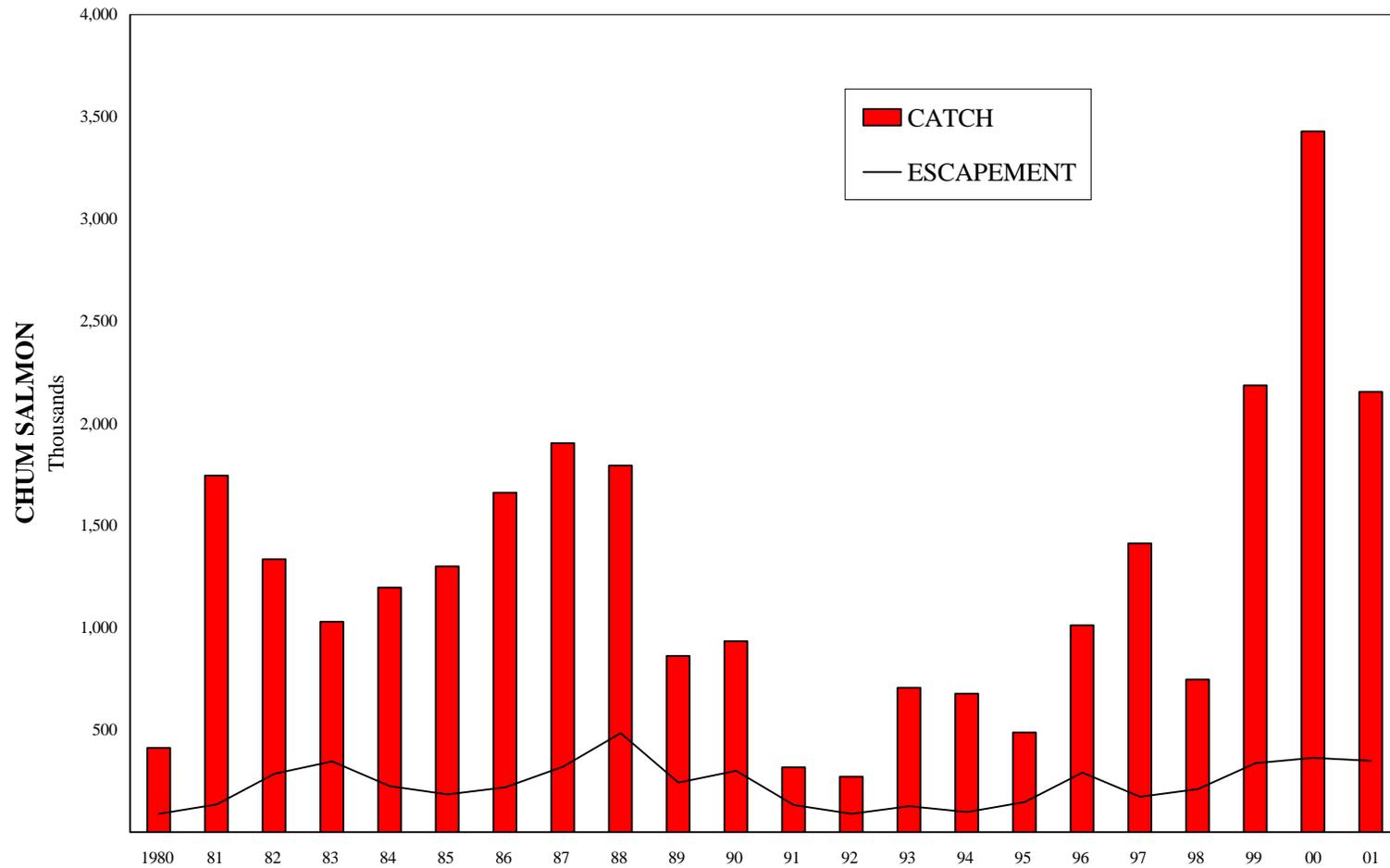
^bThe adjusted total is an escapement estimate based a geometric method used since the inception of the systematic survey program in the early 1960's. In this method, aerial observers are assumed to count without error or bias. Linear interpolations between observations are used to estimate numbers of fish in the stream on days when no surveys are flown. All daily observations and interpolations are summed across the season. Because fish seen on day $i+1$ may include fish seen on day i , the sum of all daily observations and interpolations must be divided by some residence time for fish in the streams to account for duplicate observations. The residence time of 17.5 days which has historically been used in this calculation is from tagging data completed by National Marine Fisheries Service on Olsen Creek in the early 1960's. Since observer bias does occur and since both observer bias and stream life are stream specific, adjusted totals in this table may be used for interannual comparisons but should not be interpreted as the true escapement.

PWS CHUM STREAM COUNTS - ALL DISTRICTS
CURRENT YEAR VS. 1976 - 2000 HISTORICAL AVERAGE



Appendix E.11. Current year and historical weekly chum salmon escapement performance from index spawning streams, Prince William Sound, 2001.

CHUM SALMON CATCH AND ESCAPEMENT



Appendix E.12. Chum salmon catch and escapement, Prince William Sound, 1980 - 2001.

Appendix E.13. Aerial survey escapement counts of sockeye salmon from selected systems,
Prince William Sound, 2001.

Stream Name	Stream Number	Week Ending Date ^a									
		07/14	07/21	07/28	08/04	08/11	08/18	08/25	09/01	09/08	09/15
Sheep River	36	0	0	0	NS	0	0	1	NS	0	NS
Whalen Creek	80	0	0	0	NS	0	1	0	0	0	NS
Fidalgo River	86	0	0	0	NS	0	0	0	0	1	NS
DuckRiver	116	0	0	0	NS	0	0	0	0	4	NS
Naomoff River	127	0	0	0	NS	0	1	0	0	0	NS
Billy's Hole	218	0	110	120	NS	250	50	200	0	200	NS
Wells River	234	0	0	0	NS	0	0	0	0	6	NS
Cowpen Creek	242	0	0	0	500	0	NS	40	110	NS	NS
Miner's River	244	100	250	500	500	650	NS	700	50	NS	NS
Red Creek	300	0	250	0	0	0	NS	100	0	NS	NS
Coghill River	322	0	3,000	0	0	1,000	NS	0	0	NS	NS
Halferty Creek	454	0	0	0	0	0	NS	0	0	NS	NS
Cochrane Creek	461	0	0	0	0	0	NS	0	0	NS	NS
Shrode Creek	476	0	0	350	1,000	450	NS	750	110	NS	NS
Gumboot Creek	507	NS	0	100	0	0	NS	0	0	NS	NS
Eshamy River	511	NS	0	450	2,000	3,500	NS	2,500	0	NS	NS
Jackpot River	608	NS	NS	1,250	1,500	2,200	1,600	600	300	NS	20
Brizgaloff Creel	623	NS	NS	0	0	0	0	0	0	NS	75
Bainbridge Cree	630	NS	NS	0	400	300	350	250	50	NS	4
Total		100	3,610	2,770	5,900	8,350	2,002	5,141	620	211	99

^a Counts contained in this table are obtained in conjunction with the regular pink and chum aerial survey program. Many of these sockeye systems are difficult to survey by air and thus the counts do not necessarily represent total live abundance

Appendix E.14. Estimated age and sex composition of Prince William Sound commercial chum salmon catches, by district, 2001.

		Brood Year and Age Class				Total
		1998	1997	1996	1995	
		0.2	0.3	0.4	0.5	
Coghill District						
Strata Combined:		05/28 - 07/24				
Sampling dates:		06/02 - 07/11				
Sample size:		2,515				
Female	Percentage of sample	12.2	29.0	15.8	0.2	57.1
	Number in catch	136,569	325,517	176,948	2,097	641,131
Male	Percentage of sample	9.0	17.2	13.8	0.4	40.4
	Number in catch	101,145	192,792	155,135	4,308	453,381
Total	Percentage of sample	21.2	47.0	31.2	0.6	100.0
	Number in catch ^a	238,009	527,485	349,842	6,849	1,122,186
	Standard error	8,766	11,631	9,672	1,723	
Montague District						
Strata Combined:		06/01 - 08/15				
Sampling dates:		06/12 - 06/20				
Sample size:		588				
Female	Percentage of sample	1.7	10.7	26.0	0.2	38.6
	Number in catch	7,303	46,011	111,740	730	165,785
Male	Percentage of sample	2.2	9.0	16.7	0.5	28.4
	Number in catch	9,494	38,707	71,572	2,191	121,965
Total	Percentage of sample	4.1	24.5	70.2	1.2	100.0
	Number in catch	17,528	105,167	301,626	5,112	429,433
	Standard error	3,507	7,622	8,104	1,922	
Eastern District						
Stratum dates:		06/21 - 06/28				
Sampling date:		06/23 - 06/23				
Sample size:		393				
Female	Percentage of sample	5.1	10.9	29.5	0.5	46.1
	Number in catch	17,402	37,413	100,929	1,740	157,484
Male	Percentage of sample	3.3	9.7	39.9	1.0	53.9
	Number in catch	11,311	33,063	136,602	3,480	184,456
Total	Percentage of sample	8.4	20.6	69.5	1.5	100.0
	Number in catch	28,713	70,476	237,531	5,220	341,940
	Standard error	4,790	6,986	7,954	2,118	
All Districts combined						
Strata Combined:		05/28 - 08/15				
Sampling dates:		06/02 - 07/11				
Sample size:		3,496				
Female	Percentage of sample	8.5	21.6	20.6	0.2	50.9
	Number in catch	161,274	408,941	389,618	4,567	964,400
Male	Percentage of sample	6.4	14.0	19.2	0.5	40.1
	Number in catch	121,950	264,563	363,310	9,980	759,802
Total	Percentage of sample	15.0	37.1	46.9	0.9	100.0
	Number in catch	284,250	703,128	888,999	17,182	1,893,559
	Standard error	10,587	15,562	14,916	3,339	

Appendix E.15. Summary of periods, dates, hours open, and emergency orders issued by district, for the commercial purse seine salmon fishery, Prince William Sound, 2001.
See Appendix C.11. for Unakwik District openings.

Eastern (221)		Northern (222)		Coghill (223)		Southwestern (226)		Montague (227)		Southeastern (228)		Emergency Orders Issued
Dates	Hours Open	Dates	Hours Open	Dates	Hours Open	Dates	Hours Open	Dates	Hours Open	Dates	Hours Open	
						06/01-06/03	60 ^a	06/01-06/03	60 ^a			2-F-E-10-01
						06/04-06/10	156 ^a	06/04-06/10	156 ^a			2-F-E-10-01
						06/11-06/17	156 ^a	06/11-06/17	156 ^a			2-F-E-10-01
						06/18-06/24	156 ^a	06/18-06/24	156 ^a			2-F-E-10-01
06/22	12 ^a											2-F-E-27-01
						06/25-07/01	156 ^a	06/25-07/01	156 ^a			2-F-E-10-01
06/29	12 ^a											2-F-E-30-01
07/01	12 ^b											2-F-E-31-01
						07/02-07/08	156 ^a	07/02-07/08	156 ^a			2-F-E-10-01
07/03	12 ^c											2-F-E-39-01
07/04	12 ^c											2-F-E-40-01
07/05	12 ^c											2-F-E-41-01
07/06	12 ^d											2-F-E-42-01
07/08	12 ^d											2-F-E-49-01
						07/09-07/15	156 ^a	07/09-07/15	156 ^a			2-F-E-10-01
07/10	12 ^e											2-F-E-50-01
07/12	12 ^f	07/12	12 ^a							07/12	12 ^a	2-F-E-51-01
07/14	12 ^g	07/14	12 ^a							07/14	12 ^b	2-F-E-52-01
07/16	12 ^g	07/16	12 ^a							07/16	12 ^b	2-F-E-54-01
						07/16-07/17	36 ^a	07/16-07/17	36 ^a			2-F-E-53-01
07/18	12 ^g	07/18	12 ^a			07/18	12 ^b			07/18	12 ^b	2-F-E-55-01
								07/19-07/20	36 ^a			2-F-E-56-01
07/20	12 ^g	07/20	12 ^a							07/20	12 ^b	2-F-E-57-01
				07/21-07/24	84 ^a							2-F-E-57-01
07/22	12 ^h	07/22	12 ^a	07/22	12 ^b			07/22	12 ^b	07/22	12 ^c	2-F-E-58-01
07/24	12 ⁱ	07/24	12 ^a					07/24	12 ^b	07/24	12 ^c	2-F-E-59-01
07/26	12 ^h	07/26	12 ^a			07/26	12 ^c			07/26	12 ^b	2-F-E-63-01
				07/26-07/28	60 ^a							2-F-E-63-01
07/28	12 ^h	07/28	12 ^a			07/28	12 ^c			07/28	12 ^b	2-F-E-64-01
07/30	12 ^j					07/30	12 ^c			07/30	12 ^b	2-F-E-65-01
08/01	12 ^k					08/01	12 ^c			08/01	12 ^c	2-F-E-66-01
				08/01-08/04	84 ^a							2-F-E-66-01
08/03	12 ^k							08/03	12 ^c	08/03	12 ^c	2-F-E-67-01
08/05	12 ⁱ							08/05	12 ^c	08/05	12 ^b	2-F-E-68-01
				08/06-08/08	60 ^a							2-F-E-68-01
08/07	12 ⁱ			08/07	12 ^b	08/07	12 ^d	08/07	12 ^c	08/07	12 ^b	2-F-E-69-01
08/09	12 ^m							08/09	12 ^c	08/09	12 ^b	2-F-E-70-01
08/11	12 ⁿ							08/11	12 ^c	08/11	12 ^b	2-F-E-75-01
08/13	12 ⁿ							08/13	12 ^c	08/13	12 ^b	2-F-E-76-01
08/15	12 ^o							08/15	12 ^c	08/15	12 ^b	2-F-E-78-01
08/19	12 ^p	08/19	12 ^b							08/19	12 ^b	2-F-E-79-01
		08/30	12 ^c	08/30	12 ^c	08/30	12 ^d	08/30	12 ^d	08/30	12 ^b	2-F-E-84-01
		08/31	12 ^c	08/31	12 ^c							2-F-E-85-01
				08/31-09/03	84 ^d							2-F-E-85-01, 2-F-E-86-01
09/04	12 ^q	09/01-09/03	60 ^c	09/01-09/03	60 ^d			09/01-09/03	60 ^d	09/01-09/03	60 ^b	2-F-E-86-01
				09/04-09/06	60 ^e	09/04-09/06	60 ^f					2-F-E-97-01
09/05	12 ^r											2-F-E-93-01
09/06-09/07	36 ^s											2-F-E-99-01
				09/07-09/10	84 ^f	09/07-09/10	84 ^f					2-F-E-101-01
09/08-09/10	60 ^t											2-F-E-94-01
09/11-09/13	60 ^u	09/11-09/13	60 ^d			09/11-09/13	60 ^g					2-F-E-94-01
				09/14	12 ^f							2-F-E-95-01, 2-F-E-102-01
09/14-09/17	84 ^v	09/14-09/17	84 ^d									2-F-E-98-01
		09/19-09/23	108 ^d			09/17-09/20	84 ^h					2-F-E-104-01
						09/22-09/25	84 ^h					2-F-E-100-01
												2-F-E-107-01
												2-F-E-110-01

-continued-

Eastern District

- ^a Waters of the Eastern District, south of the latitude of Black Point, were open.
- ^b Eastern District waters west of 146 ° 30.62' W. longitude were open. Waters of Simpson and Sheep Bays, west of Gravina Point, were closed.
- ^c Waters of the Eastern District west of a north-south line running from 100 yards east of the regulatory marker at Perkins Point to the south side of Port Valdez to the regulatory closed waters of the tanker terminal were open. Waters of Simpson and Sheep Bays, west of Gravina Point, were closed.
- ^d Within the Eastern District, waters west of a line from the grain elevators on the north shore of Port Valdez to the Alyeska Security Zone on the south shore at 146° 22' W. longitude were open. In addition, all waters of the Valdez small boat harbor and all waters within 50 yards of the entrance to the harbor were closed.
- ^e In the Eastern District, waters east of 146° 28' W. longitude within 1,000 yards of the shoreline were closed. All other Eastern District waters were open. In addition, the regulatory closed waters at the head of Port Valdez were not in effect.
- ^f In the Eastern District, waters east of 146° 28' W. longitude within 1,000 yards of the shoreline were closed. All other Eastern District waters were open. In addition, the regulatory closed waters at the head of Port Valdez were not in effect. Waters of Sawmill Bay, Jack Bay and Galena Bay inside the yellow Salmon Harvest Task Force (SHTF) markers were also closed.
- ^g Waters of the Eastern District west of a line from the grain elevators on the north shore of Port Valdez to the brown oil boom container van located between Allison Point and Solomon Gulch Hatchery were open. Waters east of 146° 28' W. longitude within 500 yards of the shoreline were also closed. In addition, all waters of the Valdez small boat harbor and all waters within 50 yards of the entrance to the harbor were closed. Waters of Sawmill Bay, Jack Bay and Galena Bay inside the SHTF markers were also closed.
- ^h Eastern District waters west of 146 ° 30.62' W. longitude were open. Waters of Sawmill Bay, Jack Bay and Galena Bay inside the SHTF markers were also closed.
- ⁱ Waters of the Eastern District west of a line from the grain elevators on the north shore of Port Valdez to the brown oil boom container van located between Allison Point and Solomon Gulch Hatchery were open. Waters east of 146° 28' W. longitude within 1,000 yards of the shoreline were also closed. In addition, all waters of the Valdez small boat harbor and all waters within 50 yards of the entrance to the harbor were closed. Waters of Sawmill Bay, Jack Bay and Galena Bay inside the SHTF markers were also closed.
- ^j In the Eastern, water south of a line from Entrance Point to Potato Point were open. Waters of Sawmill Bay, Jack Bay and Galena Bay inside the SHTF markers were closed.
- ^k Eastern District waters west of 146 ° 30.62' W. longitude were open. Waters of Sawmill Bay, Jack Bay, Galena Bay, and Sheep Bay inside the SHTF markers were closed. The Port Fidalgo Subdistrict was also closed.
- ^l In the Eastern District, water south of a line from Entrance Point to Potato Point were open. Waters of Sawmill Bay, Jack Bay, Galena Bay, and Sheep Bay inside the SHTF markers were closed. The Port Fidalgo Subdistrict was also closed.
- ^m Waters of the Eastern District, south of the latitude of Black Point, were open. Waters of Sheep Bay, St. Matthews Bay, Galena Bay, Olsen Bay, Irish Cove, Landlocked Bay, and Beartrap Bay inside the SHTF markers were closed. The Port Fidalgo Subdistrict was also closed.
- ⁿ Waters of the Eastern District, south of the latitude of Black Point, were open. Waters of Sheep Bay, St. Matthews Bay, Galena Bay, Olsen Bay, Irish Cove, Landlocked Bay, and Beartrap Bay inside the SHTF markers were closed.
- ^o In the Eastern, waters south of a line from Entrance Point to Potato Point were open. Waters of St. Matthews Bay, Olsen Bay, Irish Cove, Sheep Bay, Jack Bay, Galena Bay, Sawmill Bay, Beartrap Bay inside the SHTF markers were closed. The Port Fidalgo Subdistrict was also closed.
- ^p Waters of the Eastern District, south of the latitude of Black Point, were open. Waters of St. Matthews Bay, Olsen Bay, Irish Cove, Sheep Bay, and Beartrap Bay inside the SHTF markers were closed.
- ^q Within the Eastern District, waters west of a line from the grain elevators on the north shore of Port Valdez to the Alyeska Security Zone on the south shore at 146° 22' W. longitude and north of a line from Entrance Point to Potato Point were open. In addition, all waters of the Valdez small boat harbor and all waters within 50 yards of the entrance to the harbor were closed. Regulatory closed waters at the head of Port Valdez were not in effect.
- ^r Waters of the Eastern District west of a line from the grain elevators on the north shore of Port Valdez to the brown oil boom container van located between Allison Point and Solomon Gulch Hatchery and north of a line from Entrance Point to Potato Point were open. Waters east of 146° 28' W. longitude within 1,000 yards of the shoreline were also closed. In addition, all waters of the Valdez small boat harbor and all waters within 50 yards of the entrance to the harbor were closed. Waters of Sawmill Bay, Jack Bay and Galena Bay inside the SHTF markers were also closed. Regulatory closed waters at the head of Port Valdez were not in effect.

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Eastern District

^s Waters of Port Valdez north of a line from Entrance Point to Potato Point and outside a line from the brown oil boom container located between Solomon Gulch Hatchery and Allison Point, along the yellow SERVS buoys around VFDA Hatchery to the brown oil boom container east of the hatchery between VFDA and PetroStar were open. In addition, all waters of the Valdez small boat harbor and all waters within 50 yards of the entrance to the harbor were closed. Regulatory closed waters at the head of Port Valdez were not in effect.

^t Waters of the Eastern District outside a line from the brown oil boom container located between Solomon Gulch Hatchery and Allison Point, along the yellow SERVS buoys around VDFA Hatchery to the brown oil boom container east of the hatchery between VFDA and PetroStar were open. In addition, all waters of the Valdez small boat harbor and all waters within 50 yards of the entrance to the harbor were closed. Regulatory closed waters at the head of Port Valdez were not in effect. Waters of Sawmill, Bay, Galena, Landlocked, St. Matthews, Olsen, Beartrap, and Sheep Bays and Irish Cove inside the yellow Salmon Harvest Task Force markers and the Port Fidalgo Subdistrict were also closed.

^u Waters of the Eastern District outside a line from the brown oil boom container located between Solomon Gulch Hatchery and Allison Point, along the yellow SERVS buoys around VDFA Hatchery to the brown oil boom container east of the hatchery between VFDA and PetroStar were open. In addition, all waters of the Valdez small boat harbor and all waters within 50 yards of the entrance to the harbor were closed. Regulatory closed waters at the head of Port Valdez were not in effect. Waters of Sawmill, Bay, Galena, Landlocked, St. Matthews, Olsen, Beartrap, and Sheep Bays and Irish Cove inside the yellow Salmon Harvest Task Force markers and the Port Fidalgo Subdistrict were also closed. At 9:00 a.m. September 11, the U.S. Coast Guard closed Port Valdez to entry of commercial vessel traffic. The previously announced boundary around the hatchery was no longer in effect as all waters of Port Valdez east of 146° 30' W. longitude were closed.

^v Waters of the Eastern north of the latitude of Rocky Point were open. Waters of the Eastern District outside a line from the container brown oil boom container located between Solomon Gulch Hatchery and Allison Point, along the yellow SERVS buoys around VDFA Hatchery to the brown oil boom container east of the hatchery between VFDA and PetroStar were open. In addition, all waters of the Valdez small boat harbor and all waters within 50 yards of the entrance to the harbor were closed. Regulatory closed waters at the head of Port Valdez were not in effect. In addition, waters of the expanded Security Zone around the Alyeska Terminal were also closed to fishing.

Northern District

^a Waters of the Northern District north of a line from Granite Point to Unakwik Point were open.

^b Northern District waters east of Iceberg Point on Glacier Island were open.

^c In the Northern District, waters of Long Bay, Granite Bay, Cedar Bay, Wells Bay, and Siwash Bay inside the yellow SHTF markers remained closed. In addition, the Cannery Creek Hatchery THA and SHA were closed.

^d Only the waters of the Cannery Creek Hatchery THA and SHA were open.

Coghill District

^a Waters of the Coghill District, north of the latitude of Point Pakenham, were open. Regulatory closed waters inside Coghill Lagoon were not in effect.

^b In the Coghill District, waters of the Esther Subdistrict, excluding the Noerenberg Hatchery THA and SHA, were open.

^c Waters of Coghill District, excluding the Esther Subdistrict, Noerenberg Hatchery THA and SHA, were open. In addition, waters of Bettles Bay, Hummer Bay, and Pigot Bay, inside the yellow SHTF markers, were closed.

^d Waters of the Coghill District, including the Noerenberg Hatchery THA and SHA up to a line of buoys in front of the barrier seine were open. In addition, waters of Bettles Bay, Hummer Bay, and Pigot Bay, inside the yellow SHTF markers, were closed.

^e Waters of the Esther Subdistrict, including the Noerenberg Hatchery THA and SHA up to a line of buoys in front of the barrier seine were open.

^f Waters of the Esther Subdistrict, including the Noerenberg Hatchery THA were open.

Southwestern District

^a In the Southwestern District, only the Armin F. Koenig (AFK) Hatchery SHA was open. Anadromous stream closures in the Southwestern District were not in effect.

^b Waters of the Point Elrington and Port San Juan Subdistricts, including the AFK THA and SHA, were open.

Appendix E.15. (Page 4 of 4)

^c Waters of the Point Elrington and Port San Juan Subdistricts, excluding the AFK THA and SHA, were open.

^d Waters of the Point Elrington Subdistrict, waters east of Knight Island south of 60° 21' N. latitude, and waters north of the latitude of Point Helen, were open.

^e Waters of the Port San Juan Subdistrict were open for 12 hours. In addition, the AFK Hatchery THA and SHA, up to a line of buoys in front the barrier seine, were open for 84 hours.

^f Waters of the Port San Juan Subdistrict, the AFK Hatchery THA and SHA, up to a line of buoys in front the barrier seine, were open.

^g Waters of the Port San Juan Subdistrict and the AFK Hatchery THA were open.

^h Waters of the AFK Hatchery THA and SHA were open.

Montague District

^a In the Montague District, only the Port Chalmers Subdistrict was open. Anadromous stream closures and regulatory closed waters in the Port Chambers Subdistrict were not in effect.

^b In the Montague District, only the Port Chalmers Subdistrict was open. Anadromous stream closures and regulatory closed waters in the Port Chambers Subdistrict were in effect.

^c All waters of the Montague District were open.

^d Waters of the Montague District, south of 60° 13' N. latitude, were open.

Southeastern District

^a Southeastern District waters, west of the longitude of Middle Ground Buoy were open.

^b All waters of the Southeastern District were open.

^c Southeastern District waters, east of the longitude of Middle Ground Buoy were open.

APPENDIX F: HATCHERY RETURNS

Appendix F.1. Daily salmon sales harvests and sex ratios at the Wally Noerenberg Hatchery, 2001. Broodstock and sex ratio data provided by the Prince William Sound Aquaculture Corporation.

HATCHERY SALES HARVEST IN NUMBERS OF FISH				
Date	Pink Salmon % Female	Pink	Sockeye	Chum
05/31		0	0	14,503
06/01		0	0	37,266
06/02		0	0	7,909
06/03		0	0	25,464
06/04		0	0	30,204
06/05		0	0	23,611
06/06		0	0	44,220
06/07		0	0	20,928
06/08		0	0	6,535
06/09		0	0	17,455
06/10		0	0	29,935
06/11		0	0	7,734
06/13		0	0	48,143
06/14		0	0	47,099
06/15		0	0	14,157
06/16		0	0	22,656
06/17		0	0	39,415
06/18		0	0	35,364
06/19		0	0	76,872
06/20		0	0	60,280
06/21		0	0	37,114
06/22		0	0	15,073
06/23		0	0	27,981
06/24		0	0	30,641
06/25		0	0	22,505
06/26		0	0	14,469
06/28		0	0	32,964
07/01		0	0	13,664
07/02		0	0	15,242
07/03		0	0	16,550
07/04		0	0	18,929
07/05		0	0	8,324
07/07		0	0	19,824
07/09		0	0	12,996
07/11		0	2,762	9,581
07/13		0	0	3,285
07/23		24,489	0	5,927
07/25		39,551	0	3,423
07/27		64,547	0	2,914
07/29	8.7%	75,352	0	6,739
07/31	8.2%	41,861	0	932

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HATCHERY SALES HARVEST IN NUMBERS OF FISH

Date	Pink Salmon % Female	Pink	Sockeye	Chum
08/02	15.4%	58,698	0	2,037
08/03	15.1%	80,582	0	382
08/04	18.2%	164,653	0	0
08/05	19.3%	251,541	0	1,189
08/06	21.3%	260,807	0	0
08/07	25.6%	163,903	0	0
08/08	26.0%	96,541	0	0
08/09	32.4%	118,488	0	0
08/10	34.6%	98,191	0	0
08/11	38.0%	197,256	0	0
08/12	37.6%	152,204	0	0
08/13	41.4%	122,652	0	0
08/14	42.7%	89,201	0	0
08/15	46.7%	109,085	0	0
08/16	49.7%	225,067	0	0
08/17	50.7%	186,224	0	0
08/18	49.4%	152,835	0	0
08/19		79,919	0	0
08/20		254,853	0	0
08/21		250,053	0	0
08/22	55.2%	272,445	0	0
08/23		233,856	0	0
08/24		224,372	0	0
08/25		189,134	0	0
08/26		168,082	0	0
08/27		140,422	0	0
08/28		66,123	0	0
08/29		158,235	0	0
08/30		63,878	0	0
08/31		62,069	0	0
Totals		4,937,169	2,762	932,435

SALES SUMMARY:

	Pink	Sockeye	Chum
Pounds Sold	16,072,137	18,231	6,803,110
Average Weights:	3	7	7
Roe Sales/Lbs:	21,344		

BROODSTOCK SUMMARY:

	Pink	Chum	Coho
Fish spawned at hatchery	140,105	100,710	547
Green/bad/excess	59,254	19,254	913
Eggtake mortality	125,644	51,082	817
Total available broodstock	325,003	171,046	2,277
Estimated unharvested return	0	0	0
Estimated return to hatchery	325,003	171,046	2,277

Appendix F.2. Daily salmon sales harvests and sex ratios at the Armin F. Koernig Hatchery, 2001 Broodstock and sex ratio data provided by the Prince William Sound Aquaculture Corporation.

HATCHERY SALES HARVESTS IN NUMBERS OF FISH

Date	Pink Salmon % Female	Pink	Chum
07/25		71,346	1,339
07/27		52,219	1,121
07/28		25,271	581
07/29		35,942	552
07/31		15,865	0
08/02	4.6%	57,837	0
08/03	7.3%	39,977	0
08/04	6.0%	32,346	0
08/05	7.9%	133,530	0
08/06	10.4%	138,575	0
08/07	11.4%	101,415	0
08/08	15.0%	73,396	0
08/09	19.0%	56,718	0
08/10	20.5%	105,701	0
08/11	27.5%	46,528	0
08/12	29.5%	176,315	0
08/14	34.8%	103,194	0
08/16	40.4%	63,043	0
08/17	39.7%	125,149	0
08/18	46.7%	169,545	0
08/19		158,015	0
08/20	48.0%	112,588	0
08/21	48.0%	118,262	0
08/22	48.0%	200,715	0
08/23		70,524	0
08/24	54.6%	83,356	0
08/25		136,694	0
08/26		114,726	0
08/27		75,459	0
08/29		143,654	0
08/30		71,536	0
Totals		2,909,441	3,593

SALES SUMMARY:	Pink	Chum
Pounds Sold	9,353,267	19,722
Average Weight:	3.21	5.49
Roe Sales	21,344	

PINK BROODSTOCK SUMMARY:	
Spawned at hatchery	208,420
Excessed/green/bad	103,054
Fishway/system mortality	27,232
Total available broodstock	338,706
Estimated unharvested return	0
Estimated return to hatchery	338,706

Appendix F.3. Daily pink salmon sales harvests and sex ratios at the Solomon Gulch Hatchery, 2001. Sex ratios and broodstock data provided by the Valdez Fisheries Development Association, Inc.

HATCHERY SALES HARVESTS IN NUMBERS OF FISH			
Date	Pink Salmon		Coho
	% Female	Pink	
06/23		18,064	0
06/24	11.0%	34,752	0
06/25	16.0%	49,378	0
06/26	12.0%	186,057	0
06/27	16.0%	206,929	0
06/28	21.0%	266,859	0
06/30	19.0%	141,909	0
07/01	22.0%	296,341	0
07/02	19.0%	349,998	0
07/03	18.0%	157,475	0
07/04	27.0%	198,857	0
07/05	25.0%	194,246	0
07/07	31.0%	213,978	0
07/09	36.0%	242,327	0
07/11		184,611	0
07/13	33.0%	239,901	0
07/14		31,483	0
07/15		288,763	0
07/17		195,438	0
07/19		187,268	0
07/21		24,575	0
07/23		108,555	0
08/17		26,790	0
08/20		11,166	0
08/21		19,203	0
08/22		15,023	0
08/23		21,073	0
08/24		26,377	0
08/25		768	0
08/27		17,478	0
08/29		169	0
08/30		13,187	0
09/04		888	788
09/06		328	5,166
09/07		80	3,453
09/10		16	3,636
09/19		0	6,045
10/04		0	1,255
10/09		0	1,438
Totals		3,970,310	21,781

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Appendix F.3. (page 2 of 2)

SALES SUMMARY:	pink	coho
Total Pounds Sold:	14,062,968	189,175
Average Weights:	3.54	8.69
Roe Sales (lbs.)	64,128	17,652
PINK BROODSTOCK SUMMARY:		
Spawned at hatchery	186,054	
Green/bad/excess	131,121	
System mortalities	4,355	
Total available broodstock	321,530	
Estimated creek spawners	14,066	
Fish estimated remaining above weir	0	
Estimated return to hatchery	335,596	
COHO BROODSTOCK SUMMARY:		
Spawned at hatchery	801	
Green/bad/excess	310	
System mortalities	467	
Total available broodstock	1,578	
Estimated creek/bay spawners	0	
Fish estimated remaining above weir	0	
Estimated return to hatchery	1,578	

Appendix F.4. Daily pink salmon sales harvests and sex ratios at the Cannery Creek Hatchery, 2001. Broodstock and sex ratio data provided by the Prince William Sound Aquaculture Corporation.

HATCHERY SALES IN NUMBERS OF FISH

Date	% Female	Pink
07/30		6,564
08/02		53,643
08/03		52,820
08/04	14.1%	64,519
08/05	12.9%	117,946
08/06	14.4%	71,643
08/07	20.0%	53,826
08/08	23.0%	25,276
08/09	29.6%	101,390
08/10	33.1%	31,011
08/11	33.3%	53,853
08/12	31.9%	20,698
08/13	40.4%	52,159
08/14	45.7%	71,901
08/15	45.2%	83,864
08/16	43.2%	12,283
08/17	45.6%	92,822
08/18	45.6%	42,262
08/19	43.8%	1,687
08/28		79,831
Totals		1,089,998

SALES SUMMARY:	Pink
Pounds Sold:	3,358,283
Average Weight:	3.08
Roe Sales (lbs)	8,834

PINK BROODSTOCK SUMMARY:	
Spawned at hatchery	212,262
Green/bad/excess	76,891
Mortality	139,706
Total available broodstock	428,859
Estimated unharvested return	0
Estimated return to hatchery	428,859

Appendix F.5. Daily salmon sales harvests at the Main Bay Hatchery, 2001. Broodstock data provided by the Prince William Sound Aquaculture Corporation.

HATCHERY SALES HARVEST IN NUMBERS OF FISH

Date	Sockeye	Pink
07/12	1,913	834
07/18	8,471	393
07/26	4,455	425
08/05	9,597	1,632
08/09	11,071	2,351
08/12	4,804	1,761
Totals	40,311	7,396

SALES SUMMARY:	Sockeye	Pink
Pounds Sold	238,266	23,133
Average Weights:	5.91	3.13

MAIN BAY SOCKEYE BROODSTOCK SUMMARY:

Main Bay Late Stock/Eshamy Lake

Good	4,546
Green/bad/excess	443
System mortalities	5,519
Estimated return to Hatchery	10,508

Appendix F.6 Sales harvests of salmon by species from private nonprofit hatcheries as reported on fish tickets, Prince William Sound, 1977 - 2001.

Year	Hatchery ^b	Catch by Species ^a				Total
		Sockeye	Coho	Pink	Chum	
1977	AFK			15,545		15,545
1978	AFK			114,188		114,188
1979	AFK			223,748		223,748
1980	AFK, N			346,728	6	346,734
1981	AFK			707,037	118	707,155
1982	AFK			1,354,732		1,354,732
1983	AFK			616,963		616,963
1984	AFK, SG			415,393	4,886	420,279
1985	AFK, SG			1,209,960	3,840	1,213,800
1986	AFK, SG		2,156	905,464	20,683	928,303
1987 ^c	AFK, SG, E, CC		7,015	2,691,190	2,549	2,700,754
1988	AFK, SG, E		6,110	1,632,701	42,694	1,681,505
1989 ^d	AFK, SG, WNH, CC, MB		52,307	7,812,373	131,362	7,996,042
1990	AFK, SG, WNH, CC		14,199	8,732,658	24,554	8,771,411
1991	AFK, SG, WNH, CC		52,625	5,955,561	13,471	6,021,657
1992	AFK, SG, WNH, CC, MB	163,086	73,530	3,049,394	57,392	3,343,402
1993	AFK, SG, WNH, CC, MB	113,738	3,259	2,212,403	475,148	2,804,548
1994	AFK, SG, WNH, CC, MB	79,541	22,454	10,521,439	380,365	11,003,799
1995	AFK, SG, WNH, CC, MB	63,326	13,248	5,100,819	231,539	5,408,932
1996 ^e	AFK, SG, WNH, CC, MB	86,911	38,945	8,291,205	1,066,683	9,483,744
1997	AFK, SG, WNH, CC, MB, C	266,335	2,933	9,854,675	811,179	10,935,122
1998	AFK, SG, WNH, CC, MB, C	148,288	20,199	8,825,226	519,215	9,512,928
1999	AFK, SG, WNH, CC, GH	28,777	0	13,130,211	777,180	13,936,168
2000	AFK, SG, WNH, CC, MB	218	1	11,125,819	1,729,876	12,855,914
2001	AFK, SG, WNH, CC, MB	43,073	21,781	12,914,314	936,028	13,915,196
TOTAL		993,293	330,762	117,759,746	7,228,768	126,312,569

^a Includes salmon harvested by private nonprofit hatcheries in Prince William Sound to generate revenues to offset operating costs. Does not include carcass sales or fish processed only for roe extraction after egg takes.

^b Hatcheries: AFK = Armin F. Koernig (PWSAC) (formerly Port San Juan Hatchery)
 E = Esther Hatchery (PWSAC), renamed WNH in 1989
 SG = Solomon Gulch Hatchery (VFDA)
 N = NERKA Inc.
 CC = Cannery Creek (PWSAC) (formerly operated by ADF&G)
 WHN = Wally Noerenberg Hatchery (PWSAC) (formerly Esther Hatchery)
 MB = Main Bay (PWSAC) (formerly operated by ADF&G)
 GH = Gulkana Hatchery (Crosswind Lake Weir)(formerly operated by ADF&G)

^c PWSAC administered a sales harvest at the state owned Cannery Creek hatchery. A majority of the coho salmon sold were carcasses and surplus brood fish from the Solomon Gulch hatchery.

^d PWSAC administered a sales harvest at the state owned Main Bay Hatchery to harvest a surplus of chum salmon due to closure of the common property fishery.

^e Includes 269,848 pink salmon Peter Pan Seafoods bought from VFDA and then discarded after roe salvage. Also includes approximately 250,000 chum processed by PWSAC for meal production and roe salvage.

Appendix F.7. Summary of pink and chum salmon returns to Prince William Sound hatcheries, 2001.

Pink salmon returns to P.W.S. hatcheries from otoliths^a

Hatchery	2000 Fry Release	2001 Forecast Return	Estimated Total Return	Marine Survival	Estimated C.P.F. Contribution	Estimated Sales Harvest Contribution ^b	Escmt. and Brood ^c	Eggs Taken (millions)
Solomon Gulch	195,763,690	8,900,000	15,726,771	8.0%	11,458,958	3,932,080	335,596	230.0
A. F. Koernig	142,537,692	7,400,000	4,810,346	3.4%	1,668,025	2,803,175	338,706	172.9
Wally Noerenberg	116,069,339	5,400,000	7,181,110	6.2%	1,906,503	4,949,180	325,003	117.1
Cannery Creek	132,236,317	5,800,000	2,121,305	1.6%	589,171	1,103,072	428,859	152.2
Total Pink Salmon	586,607,038	27,500,000	29,839,532	5.1%	15,622,657	12,787,507	1,428,164	672.2

Chum salmon returns to P.W.S. hatcheries

Hatchery	2000 Fry Release	2001 Forecast Return	Estimated Total Return	Estimated C.P.F. Comm Catch	Sales Harvest ^b	Escmt. and Brood ^c	Eggs Taken (millions)
A.F. Koernig	0	80,000	144,833	144,833	3,593		0.0
Wally Noerenberg	57,712,566	1,130,000	2,148,752	1,045,271	932,435	171,046	112.4
Port Chalmers	18,882,739	230,000	442,317	442,317	0		0.0
Total Chum Salmon	76,595,305	1,440,000	2,293,585	1,190,104	936,028	171,046	112.4

^a Contribution estimates of pink and chum salmon from PWS hatcheries are based on analysis of otolith recoveries and location of catch as reported on fish tickets.

^b Does not include carcass sales which are part of the broodstock.

^c Includes broodstock, overmature/green fish, holding mortalities, excess fish and fish processed for roe extraction. Does not include watershed spawners, unseen mortalities or fish remaining in the bay.

Appendix F.8. Historical catch contributions, thermally marked otolith releases, and total returns of pink salmon to Prince William Sound hatcheries, 1995 - 2002.

Solomon Gulch

Brood Year	Return Year	Fry Release	Thermal Mark Applied to Fry Release	Broodstock	Total Cost Recovery Harvest	Hatchery Contribution to CR Harvest	Hatchery Contribution to Other Harvest	Hatchery Contribution to the CPF	Total Hatchery Return	Estimated Marine Survival
1995	1997	233,088,327	233,088,327	356,271	2,431,007	2,428,010	0	4,005,264	6,789,545	2.9%
1996	1998	188,862,094	188,862,094	334,551	3,428,348	3,076,945	0	1,226,679	4,638,175	2.5%
1997	1999	195,162,163	195,162,163	581,397	4,379,659	4,354,601	0	9,465,378	14,401,376	2.5%
1998	2000	213,906,642	213,906,642	315,404	4,033,635	3,983,473	0	7,635,581	11,934,458	5.6%
1999	2001	195,763,690	195,763,690	335,596	3,970,310	3,932,080	0	11,458,958	15,726,771	8.0%
2000	2002	203,897,201	203,897,201							

Armin F. Koernig

Brood Year	Return Year	Fry Release	Thermal Mark Applied to Fry Release	Broodstock	Total Cost Recovery Harvest	Hatchery Contribution to CR Harvest	Hatchery Contribution to Other Harvest	Hatchery Contribution to the CPF	Total Hatchery Return	Estimated Marine Survival
1995	1997	108,636,976	108,636,976	0	3,206,683	3,139,053	0	3,815,265	6,954,318	6.4%
1996	1998	52,384,532	52,384,532	343,978	1,634,956	1,582,038	0	5,037,454	6,963,470	13.3%
1997	1999	148,323,538	148,323,538	294,446	2,814,760	2,994,037	0	5,108,346	8,389,898	7.9%
1998	2000	133,156,995	133,156,995	235,813	2,017,913	1,998,334	0	4,646,469	6,880,616	5.2%
1999	2001	142,537,692	142,537,692	338,706	2,929,441	2,803,175	0	1,668,025	4,810,346	3.4%
2000	2002	150,287,930	150,287,930							

Wally Noerenberg

Brood Year	Return Year	Fry Release	Thermal Mark Applied to Fry Release	Broodstock	Total Cost Recovery Harvest	Hatchery Contribution to CR Harvest	Hatchery Contribution to Other Harvest	Hatchery Contribution to the CPF	Total Hatchery Return	Estimated Marine Survival
1995	1997	176,431,919	176,431,919	409,455	2,280,868	2,321,255	0	3,464,254	6,194,964	3.5%
1996	1998	106,440,456	106,440,456	264,143	2,437,615	2,427,120	0	4,817,354	7,508,617	7.0%
1997	1999	103,675,208	103,675,208	274,664	3,860,431	3,861,891	0	4,828,682	8,966,850	8.6%
1998	2000	123,869,678	123,869,678	252,512	3,536,232	3,520,212	0	4,980,503	8,753,227	7.1%
1999	2001	116,069,339	116,069,339	325,003	4,937,169	4,949,180	0	1,906,503	7,181,110	6.2%
2000	2002	127,651,881	127,651,881							

Cannery Creek

Brood Year	Return Year	Fry Release	Thermal Mark Applied to Fry Release	Broodstock	Total Cost Recovery Harvest	Hatchery Contribution to CR Harvest	Hatchery Contribution to Other Harvest	Hatchery Contribution to the CPF	Total Hatchery Return	Estimated Marine Survival
1995	1997	140,441,131	140,441,131	319,329	1,897,259	1,852,317	0	3,608,272	5,779,918	4.1%
1996	1998	136,838,852	136,838,852	304,945	1,324,307	1,305,144	0	4,869,014	6,479,103	4.7%
1997	1999	137,571,564	137,571,564	294,446	2,076,361	2,014,448	0	5,414,942	7,722,850	5.6%
1998	2000	131,195,588	131,195,588	280,811	1,538,039	1,575,341	0	4,688,206	6,544,358	5.0%
1999	2001	132,236,317	132,236,317	428,859	1,089,998	1,103,072	0	589,171	2,121,305	1.6
2000	2002	139,226,716	139,226,716							

Appendix F.9 Estimated total hatchery and wild stock production of pink salmon, Prince William Sound, 1977 - 2001.

Year ^b	Total Return by Hatchery ^a						Total Hatchery Production	Total Wild Stock Component ^c	Revised Total Hatchery Production ^d	Revised Total Wild Stock Component ^d
	Solomon Gulch (VFDA)	Armin F Koernig (PWSAC)	Wally Noerenberg (PWSAC)	Main Bay (ADF&G - PWSAC)	Cannery Cr. (ADF&G - PWSAC)					
1977		27,857				27,857	5,816,401			
1978		154,620				154,620	3,925,083			
1979		552,955				552,955	17,335,503			
1980		1,493,489			90,348	1,583,837	14,013,916			
1981		2,264,854			141,440	2,406,294	19,568,866			
1982		5,134,363		35,000	764,214	5,933,577	16,794,317			
1983	91,445	3,722,502		496,850	469,441	4,780,238	11,567,348			
1984	131,075	2,800,000		1,200,000	1,139,000	5,270,075	21,201,513			
1985	485,607	5,030,616		383,000	2,594,000	8,493,223	19,938,105			
1986	1,217,250	4,964,000		232,000	853,000	7,266,250	5,563,957			
1987	5,290,321	7,613,161	3,011,955	328,000	2,131,726	18,375,163	13,066,944			
1988	1,034,204	6,076,493	3,866,618	100,000	227,688	11,305,003	1,766,936			
1989	3,297,851	2,628,627	5,718,794	0	5,540,665	17,185,937	6,610,342	19,052,529	4,743,750	
1990	8,923,567	6,809,090	13,553,591	d	2,534,297	31,820,545	14,418,696	33,315,579	12,923,662	
1991	5,691,176	5,117,569	11,690,234	0	8,501,296	31,000,275	9,295,456	32,750,955	7,544,776	
1992	1,864,031	2,391,140	2,006,127	0	1,519,716	7,781,014	2,203,701	8,579,332	1,405,383	
1993	1,112,314	1,528,425	1,492,039	0	712,223	4,845,001	2,875,916	6,177,575	1,542,942	
1994	12,735,021	1,744,142	6,145,508	0	9,640,886	30,265,557	9,501,683	35,100,601	4,666,639	
1995	6,765,357	856,048	2,314,276	0	5,072,900	15,008,581	3,401,469	14,475,842	3,934,208	
1996	6,990,211	1,766,881	5,136,516	0	6,516,672	20,410,280	8,374,327	24,284,522	4,500,085	
1997	7,012,054	6,605,685	5,571,768	0	4,513,121	23,702,628	4,596,623	24,611,085	3,688,166	
1998 ^e	4,638,175	6,963,470	7,508,617	0	6,479,103	25,589,365	5,254,369			
1999 ^e	14,401,376	8,389,898	8,966,850	0	7,722,850	39,480,974	9,426,391			
2000 ^e	11,934,458	6,880,616	8,753,227	0	6,544,358	34,112,659	7,394,140			
2001 ^e	15,726,634	4,809,906	7,180,686	0	2,121,102	29,838,328	6,818,740			

^a Prior to 1987, there was no definitive or statistically valid method of separating hatchery and wild stock composition in the commercial catch. The above estimates are based on presumed wild stock exploitation rates which in turn are determined by the wild stock escapement estimate. The wild stock escapement index is only a minimum estimate. The true wild stock escapement is not known. Consequently estimates prior to 1987 may exaggerate hatchery contributions somewhat.

In 1987 returning adults from the Cannery Creek, Armin F. Koernig and Esther hatcheries were marked with half length coded wire tags (CWT). In a jointly funded program conducted by ADF&G and PWSAC, these marked fish were recovered and analyzed to estimate hatchery contributions to the fishery (Geiger, 1990).

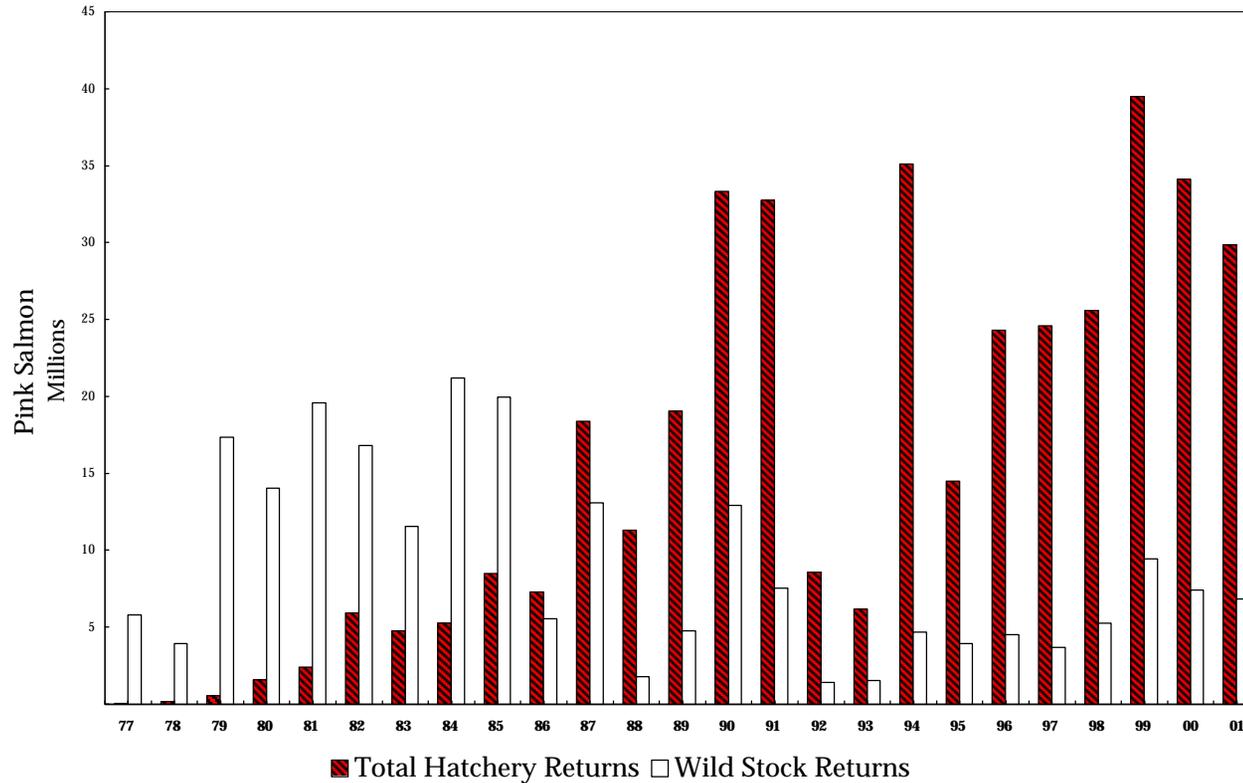
^b Hatchery totals include cost recovery harvests, broodstock collection and escapement, and estimated common property fishery interception.

^c Total wild stock return represents the estimated wild stock catch plus the aerial escapement index. 1999 wild stock component = 6,963,529 catch plus 2,462,862 escapement index.

^d Revised contribution based on individual hatchery CWT adjustment factors (corrected in 2001).

^e Hatchery totals from otoliths.

Hatchery and Wild Stock Pink Salmon Returns Prince William Sound



Appendix F.10. Estimated total pink salmon returns to hatcheries and wild stock systems, Prince William Sound, 1977 - 2001.

Appendix F.11. Historical catch contributions, coded wire tag (CWT) and thermally marked otolith releases, and total returns of pink salmon to all hatcheries combined, Prince William Sound, 1977 - 2001.

Brood Year	Return Year	Fry Release ^a	CWT/Otolith Applied to Fry Release ^b	Broodstock ^a	Total Cost Recovery Harvest ^c	Hatchery Contribution to CR Harvest ^b	Hatchery Contribution to Other Harvest ^d	Hatchery Contribution to the CPF ^a	Total Hatchery Return	Estimated Marine Survival	Revised Total Hatchery Return ^e	Revised Estimated Marine Survival ^e
1975	1977	1,000,000	0	16,112	15,545	7,745	0	4,000	27,857	2.79%		
1976	1978	11,010,577	0	40,432	114,188	114,188	0	0	154,620	1.40%		
1977	1979	16,950,784	0	54,207	223,748	223,748	0	275,000	552,955	3.26%		
1978	1980	25,600,739	0	145,061	346,728	346,728	0	1,092,048	1,583,837	6.19%		
1979	1981	24,194,000	0	268,501	707,037	707,037	0	1,430,747	2,406,285	9.95%		
1980	1982	91,076,000	0	239,945	1,354,732	1,354,732	0	4,303,900	5,898,577	6.48%		
1981	1983	91,951,000	0	258,062	686,963	686,963	0	3,338,366	4,283,391	4.66%		
1982	1984	115,107,533	0	341,259	415,393	415,393	0	3,313,423	4,070,075	3.54%		
1983	1985	116,336,000	0	640,340	1,209,960	1,209,960	0	6,259,923	8,110,223	6.97%		
1984	1986	191,306,265	0	466,471	905,464	905,464	0	5,662,315	7,034,250	3.68%		
1985	1987	231,538,713	646,561	1,158,908	2,691,190	2,691,190	0	14,197,065	18,047,163	7.79%		
1986	1988	218,830,647	568,688	824,302	1,632,701	1,632,701	0	8,748,000	11,205,003	5.12%		
1987	1989	532,045,966	939,498	856,927	7,853,419	5,767,911	0	10,561,099	17,185,937	3.23%	19,052,529	3.78%
1988	1990	507,688,297	1,074,099	749,910	8,732,658	6,691,160	0	24,379,475	31,820,545	6.27%	33,315,579	6.78%
1989	1991	615,139,948	1,128,899	1,324,255	6,119,141	5,201,860	3,573,805	20,900,355	31,000,275	5.04%	32,750,955	5.58%
1990	1992	603,519,636	1,091,403	789,880	3,049,394	2,626,248	30,290	4,345,805	7,792,223	1.29%	8,579,332	1.51%
1991	1993	495,700,200	823,128	921,073	2,639,982	1,544,727	14,648	2,392,162	4,872,610	0.98%	6,177,575	1.39%
1992	1994	567,320,470	950,976	1,422,306	10,308,169	7,613,582	56,396	21,173,273	30,265,557	5.33%	35,100,601	6.47%
1993	1995	488,575,978	941,811	1,154,635	5,057,418	4,703,457	78,020	9,072,469	15,008,581	3.07%	14,475,842	3.18%
1994	1996	613,158,229	1,017,782	544,531	8,285,166	5,363,551	0	14,502,198	20,410,280	3.33%	24,284,522	4.18%
1995	1997	651,675,427 ^f	1,079,354	841,448	9,776,254	8,907,382	0	13,953,798	23,702,628	3.64%	24,611,085	3.99%
1996	1998	484,525,934 ^f	484,525,934	1,247,617	8,825,226	8,391,247	0	15,950,501	25,589,365	5.28%		
1997	1999	542,356,070 ^f	542,356,934	1,444,953	13,130,211	13,224,977	0	24,817,348	39,480,974	6.56%		
1998	2000	602,128,903 ^f	602,128,903	1,084,540	11,125,819	11,077,360	0	21,950,759	34,112,659	5.67%		
1999	2001	586,607,038 ^f	586,607,038	1,428,164	12,914,314	12,787,507	0	15,622,657	29,839,532	5.10%		

^a Data for BY 1985 and 1987 - 1995 provided by the ADF&G CWT project. PWSAC provided data for all other years. Starting in 1994, broodstock number includes fish processed for roe as reported by PWSAC.

^b Data for brood years 1985 - 1995 years provided by the ADF&G CWT project, succeeding years data from thermally marked otoliths. Sales numbers include inter-hatchery contributions.

^c Data for all years from ADF&G fish ticket information.

^d Includes donated and/or discarded fish in 1991. Data provided by the ADF&G CWT project.

^e Revised contribution based on individual hatchery CWT adjustment factors.

^f All BY 1995 - 1999 fry released bore thermal otolith marks.

Appendix F.12. Hatchery contributions to the common property pink salmon seine fishery in the Eastern District, Prince William Sound, 2001.

Period	Catch Date	SGH	%	CCH	%	WNH	%	AFK	%	Wild	%	Total
01	06/22	17,643	28.4	0	0.0	0	0.0	0	0.0	44,434	71.6	62,077
02	06/29	282,557	66.7	0	0.0	0	0.0	0	0.0	141,278	33.3	423,835
03	07/01	0	0.0	0	0.0	0	0.0	0	0.0	45,372	100.0	45,372
04	07/03	632,297	99.0	0	0.0	0	0.0	0	0.0	6,656	1.0	638,953
05	07/04	406,133	100.0	0	0.0	0	0.0	0	0.0	0	0.0	406,133
06	07/05	407,869	100.0	0	0.0	0	0.0	0	0.0	0	0.0	407,869
07	07/06	1,567,762	92.7	0	0.0	0	0.0	0	0.0	123,307	7.3	1,691,069
08	07/08	1,297,817	89.6	0	0.0	0	0.0	0	0.0	150,909	10.4	1,448,726
09	07/10	1,850,720	91.7	0	0.0	0	0.0	0	0.0	168,247	8.3	2,018,967
10	07/12	839,657	69.8	0	0.0	0	0.0	0	0.0	363,434	30.2	1,203,091
11	07/14	1,060,560	70.8	0	0.0	0	0.0	0	0.0	436,701	29.2	1,497,261
12	07/16	986,235	63.5	0	0.0	0	0.0	0	0.0	565,872	36.5	1,552,107
13	07/18	661,717	65.6	0	0.0	0	0.0	0	0.0	346,613	34.4	1,008,330
14	07/20	407,147	49.0	0	0.0	8,663	1.0	0	0.0	415,810	50.0	831,619
15	07/22	130,932	27.1	0	0.0	0	0.0	0	0.0	352,510	72.9	483,442
16	07/24	258,382	44.8	0	0.0	6,009	1.0	0	0.0	312,462	54.2	576,852
17	07/26	56,398	30.2	1,945	1.0	0	0.0	1,945	1.0	126,409	67.7	186,697
18	07/28	69,356	29.5	2,477	1.1	2,477	1.1	0	0.0	161,006	68.4	235,316
19	07/30	55,709	75.0	1,032	1.4	0	0.0	0	0.0	17,538	23.6	74,278
20	08/01	24,564	13.5	5,669	3.1	3,779	2.1	0	0.0	147,383	81.3	181,395
21	08/03	48,516	17.9	2,854	1.1	8,562	3.2	0	0.0	211,187	77.9	271,118
22	08/05	22,642	10.5	0	0.0	9,057	4.2	4,528	2.1	178,874	83.2	215,102
23	08/07	0	0.0	3,141	9.3	3,141	9.3	785	2.3	26,697	79.1	33,764
24	08/09	5,535	4.2	8,302	6.3	5,535	4.2	0	0.0	113,467	85.4	132,839
25	08/11	1,328	1.0	3,983	3.1	6,638	5.2	2,655	2.1	112,853	88.5	127,458
26	08/13	5,932	5.3	8,304	7.4	2,373	2.1	0	0.0	96,092	85.3	112,700
27	08/15	2,924	3.3	18,516	20.7	1,949	2.2	975	1.1	65,292	72.8	89,654
28	08/19	0	0.0	9,668	11.5	1,758	2.1	879	1.0	72,072	85.4	84,377
29	09/04	0	0.0	33	11.5	6	2.1	3	1.0	245	85.4	287
31	09/06-09/07	0	0.0	7	11.5	1	2.1	1	1.0	55	85.4	64
Total		11,100,329	69.2	65,930	0.4	59,947	0.4	11,771	0.1	4,802,774	29.9	16,040,752

Appendix F.13. Hatchery contributions to the common property pink salmon seine fishery in the Northern District, Prince William Sound, 2001.

Period	Catch Date	SGH	%	CCH	%	WNH	%	AFK	%	Wild	%	Total
01	07/12	945	82.1	0	0.0	0	0.0	0	0.0	205	17.9	1,150
02	07/14	13,521	82.1	0	0.0	0	0.0	0	0.0	2,939	17.9	16,460
03	07/16	3,022	82.1	0	0.0	0	0.0	0	0.0	657	17.9	3,679
04	07/18	8,324	82.1	0	0.0	0	0.0	0	0.0	1,810	17.9	10,134
05	07/20	0	0.0	0	0.0	0	0.0	0	0.0	7,646	100.0	7,646
07	07/24	0	0.0	0	0.0	0	0.0	0	0.0	2,135	100.0	2,135
09	07/28	0	0.0	0	0.0	0	0.0	0	0.0	2,948	100.0	2,948
11	08/19	0	0.0	0	0.0	0	0.0	0	0.0	84,515	100.0	84,515
12	08/30	0	0.0	79,669	49.5	29,443	18.3	6,928	4.3	45,030	28.0	161,070
13	08/31	0	0.0	0	0.0	31,307	98.6	0	0.0	429	1.4	31,736
14	09/01-09/03	0	0.0	813	1.8	42,285	94.5	813	1.8	813	1.8	44,725
15	09/11-09/13	0	0.0	233	1.8	12,140	94.5	233	1.8	233	1.8	12,840
16	09/14-09/17	0	0.0	399	1.8	20,730	94.5	399	1.8	399	1.8	21,926
17	09/19-09/23	0	0.0	71	1.8	3,717	94.5	71	1.8	71	1.8	3,931
Total		25,812	6.4	81,186	20.1	139,622	34.5	8,445	2.1	149,831	37.0	404,895

Appendix F.14. Hatchery contributions to the common property pink salmon drift gillnet and seine fisheries in the Coghill District, Prince William Sound, 2001.

Period	Catch Date	SGH	%	CCH	%	WNH	%	AFK	%	Wild	%	Total
07	06/18-06/19	0	23.2	0	1.8	0	41.1	0	0.0	0	33.9	1
08	06/21-06/22	0	23.2	0	1.8	1	41.1	0	0.0	1	33.9	2
09	06/25-06/26	4	23.2	0	1.8	7	41.1	0	0.0	6	33.9	17
10	06/28-06/29	46	23.2	4	1.8	81	41.1	0	0.0	67	33.9	197
11	07/02-07/03	306	23.2	24	1.8	541	41.1	0	0.0	447	33.9	1,317
12	07/05-07/06	1,292	23.2	99	1.8	2,286	41.1	0	0.0	1,888	33.9	5,565
13	07/09-07/11	5,180	23.2	398	1.8	9,164	41.1	0	0.0	7,570	33.9	22,312
14	07/12-07/14	23,060	23.2	1,774	1.8	40,799	41.1	0	0.0	33,703	33.9	99,336
15	07/16-07/20	40,383	23.2	3,106	1.8	71,447	41.1	0	0.0	59,022	33.9	173,959
16	07/21-07/24	11,396	23.2	877	1.8	20,162	41.1	0	0.0	16,656	33.9	49,091
19	08/06-08/08	0	0.0	7,991	2.1	359,600	93.8	0	0.0	15,982	4.2	383,573
20	08/30	0	0.0	647	2.1	29,110	93.8	0	0.0	1,294	4.2	31,051
21	08/31	0	0.0	1,051	2.1	47,299	93.8	0	0.0	2,102	4.2	50,452
22	09/01-09/03	0	0.0	5,722	6.3	82,962	90.6	1,907	2.1	954	1.0	91,544
23	09/04-09/06	0	0.0	2,465	6.3	35,740	90.6	822	2.1	411	1.0	39,437
24	09/07-09/10	0	0.0	373	6.3	5,404	90.6	124	2.1	62	1.0	5,963
25	09/14	0	0.0	202	6.3	2,923	90.6	67	2.1	34	1.0	3,225
Total		81,667	8.5	24,732	2.6	707,525	73.9	2,920	0.3	140,198	14.6	957,042

Appendix F.15. Hatchery contributions to the common property pink salmon drift and set gillnet fisheries in the Eshamy District, Prince William Sound, 2001.

Period	Catch Date	SGH	%	CCH	%	WNH	%	AFK	%	Wild	%	Total
08	07/12-07/13	0	0.0	329	5.1	4,275	66.7	658	10.3	1,151	17.9	6,412
09	07/23-07/24	0	0.0	1,058	5.1	13,760	66.7	2,117	10.3	3,705	17.9	20,640
10	07/26-07/28	0	0.0	1,464	5.1	19,032	66.7	2,928	10.3	5,124	17.9	28,548
11	07/30-08/01	0	0.0	2,906	5.1	37,782	66.7	5,813	10.3	10,172	17.9	56,673
12	08/02-08/04	0	0.0	2,570	5.1	33,413	66.7	5,140	10.3	8,996	17.9	50,119
13	08/06-08/08	0	0.0	3,319	5.1	43,141	66.7	6,637	10.3	11,615	17.9	64,711
14	08/09-08/11	0	0.0	2,653	5.1	34,485	66.7	5,305	10.3	9,284	17.9	51,727
15	08/13-08/15	0	0.0	2,893	7.6	25,072	65.8	3,375	8.9	6,750	17.7	38,090
16	08/16-08/18	461	1.1	5,074	11.6	27,216	62.1	4,152	9.5	6,919	15.8	43,823
17	08/20-08/22	0	0.0	2,817	6.9	27,469	67.2	7,748	19.0	2,817	6.9	40,852
18	08/23-08/25	0	0.0	780	1.6	35,089	73.8	7,798	16.4	3,899	8.2	47,565
19	08/27-08/30	0	0.0	410	1.6	18,452	73.8	4,100	16.4	2,050	8.2	25,013
20	08/30-09/03	0	0.0	248	1.6	11,178	73.8	2,484	16.4	1,242	8.2	15,153
21	09/03-09/06	0	0.0	68	1.6	3,042	73.8	676	16.4	338	8.2	4,124
22	09/07-09/09	0	0.0	23	1.6	1,023	73.8	227	16.4	114	8.2	1,387
23	09/10-09/12	0	0.0	8	1.6	367	73.8	82	16.4	41	8.2	498
Total		461	0.1	26,620	5.4	334,797	67.6	59,240	12.0	74,217	15.0	495,335

Appendix F.16. Hatchery contributions to the common property pink salmon seine fishery in the Southwestern District, Prince William Sound, 2001.

Period	Catch Date	SGH	%	CCH	%	WNH	%	AFK	%	Wild	%	Total
03	06/11-06/17	7	52.1	0	0.0	0	3.2	0	3.2	5	41.5	13
04	06/18-06/24	15	52.1	0	0.0	1	3.2	1	3.2	12	41.5	29
05	06/25-07/01	44	52.1	0	0.0	3	3.2	3	3.2	35	41.5	84
06	07/02-07/08	5	52.1	0	0.0	0	3.2	0	3.2	4	41.5	9
07	07/09-07/15	1,031	52.1	0	0.0	63	3.2	63	3.2	820	41.5	1,977
08	07/16-07/17	2,559	52.1	0	0.0	157	3.2	157	3.2	2,037	41.5	4,909
09	07/18	104,499	52.1	0	0.0	6,398	3.2	6,398	3.2	83,173	41.5	200,468
10	07/26	42,432	17.7	27,456	11.5	39,936	16.7	54,912	22.9	74,880	31.3	239,615
11	07/28	42,047	8.5	78,838	16.0	136,653	27.7	105,118	21.3	131,397	26.6	494,054
12	07/30	7,635	1.1	68,714	9.5	129,793	17.9	381,745	52.6	137,428	18.9	725,315
13	08/01	15,316	3.1	66,369	13.5	142,948	29.2	199,106	40.6	66,369	13.5	490,107
14	08/07	4,563	1.1	41,065	9.5	77,567	17.9	228,138	52.6	82,130	18.9	433,463
15	08/30	0	0.0	3,519	12.8	5,572	20.2	15,838	57.4	2,640	9.6	27,569
16	08/31-09/03	0	0.0	8,023	2.1	16,046	4.2	357,013	92.7	4,011	1.0	385,093
17	09/04-09/06	0	0.0	1,461	2.1	2,923	4.2	65,028	92.7	731	1.0	70,143
Total		220,152	7.2	295,445	9.6	558,060	18.2	1,413,520	46.0	585,671	19.1	3,072,848

Appendix F.17. Hatchery contributions to the common property pink salmon seine fishery in the Montague District,
Prince William Sound, 2001.

Period	Catch Date	SGH	%	CCH	%	WNH	%	AFK	%	Wild	%	Total
02	06/04-06/10	1	14.3	0	0.0	0	0.0	0	0.0	3	85.7	4
03	06/11-06/17	0	14.3	0	0.0	0	0.0	0	0.0	2	85.7	2
04	06/18-06/24	145	14.3	0	0.0	0	0.0	0	0.0	869	85.7	1,014
05	06/25-07/01	41	14.3	0	0.0	0	0.0	0	0.0	246	85.7	287
06	07/02-07/08	73	14.3	0	0.0	0	0.0	0	0.0	436	85.7	509
07	07/09-07/15	9,642	14.3	0	0.0	0	0.0	0	0.0	57,850	85.7	67,492
08	07/16-07/17	6,264	14.3	0	0.0	0	0.0	0	0.0	37,587	85.7	43,851
09	07/19-07/20	2,773	14.3	0	0.0	0	0.0	0	0.0	16,636	85.7	19,409
10	07/22	323	14.3	0	0.0	0	0.0	0	0.0	1,941	85.7	2,264
11	07/24	153	2.0	458	5.9	458	5.9	1,681	21.6	5,042	64.7	7,792
12	08/03	1,468	2.0	4,403	5.9	4,403	5.9	16,144	21.6	48,432	64.7	74,849
13	08/05	0	0.0	1,655	6.7	0	0.0	5,516	22.2	17,653	71.1	24,824
14	08/07	0	0.0	3,085	6.7	0	0.0	10,284	22.2	32,909	71.1	46,278
15	08/09	1,417	3.6	4,960	12.5	9,211	23.2	7,794	19.6	16,297	41.1	39,679
16	08/11	0	0.0	7,520	9.0	15,040	17.9	20,053	23.9	41,360	49.3	83,974
17	08/13	2,030	1.1	28,427	15.1	32,488	17.2	44,671	23.7	81,219	43.0	188,835
18	08/15	2,145	1.0	38,615	18.8	38,615	18.8	64,358	31.3	62,213	30.2	205,947
Total		26,475	3.3	89,123	11.0	100,215	12.4	170,502	21.1	420,695	52.1	807,010

Appendix F.18. Hatchery contributions to the common property pink salmon seine fishery in the Southeastern District, Prince William Sound, 2001.

Period	Catch Date	SGH	%	CCH	%	WNH	%	AFK	%	Wild	%	Total
01	07/12	22	2.1	0.0	0.0	11	1.0	0	0.0	1,008	96.9	1,041
03	07/16	2,159	2.1	0.0	0.0	1,080	1.0	0	0.0	100,397	96.9	103,636
04	07/18	1,881	2.9	0.0	0.0	0	0.0	0	0.0	63,971	97.1	65,852
05	07/20	0	0.0	0.0	0.0	1,234	2.4	0	0.0	50,585	97.6	51,819
06	07/22	0	0.0	0.0	0.0	0	0.0	0	0.0	30,359	100.0	30,359
07	07/24	0	0.0	0.0	0.0	671	1.7	0	0.0	39,573	98.3	40,244
08	07/26	0	0.0	0.0	0.0	0	0.0	688	1.5	44,039	98.5	44,727
09	07/28	0	0.0	0.0	0.0	0	0.0	0	0.0	34,097	100.0	34,097
11	08/01	0	0.0	2458.1	10.0	0	0.0	0	0.0	22,123	90.0	24,581
12	08/03	0	0.0	654.1	1.3	1,962	3.9	0	0.0	47,092	94.7	49,708
13	08/05	0	0.0	3022.2	10.0	0	0.0	0	0.0	27,200	90.0	30,222
14	08/07	0	0.0	0.0	0.0	940	7.7	940	7.7	10,340	84.6	12,220
15	08/09	0	0.0	0.0	0.0	0	0.0	0	0.0	17,522	100.0	17,522
16	08/11	0	0.0	0.0	0.0	440	5.6	0	0.0	7,472	94.4	7,912
17	08/13	0	0.0	0.0	0.0	0	0.0	0	0.0	4,733	100.0	4,733
18	08/15	0	0.0	0.0	0.0	0	0.0	0	0.0	10,567	100.0	10,567
19	08/19	0	0.0	0.0	0.0	0	0.0	0	0.0	5,298	100.0	5,298
Total		4,062	0.8	6,134	1.1	6,337	1.2	1,628	0.3	516,377	96.6	534,538

Appendix F.19. Hatchery contributions to the common property pink salmon drift gillnet and seine fisheries in the Unakwik District, Prince William Sound, 2001.

Period	Catch Date	SGH	%	CCH	%	WNH	%	AFK	%	Wild	%	Total
06	07/02-07/03	0	0.0	0	0.0	0	0.0	0	0.0	4	100.0	4
Total		0	0.0	0	0.0	0	0.0	0	0.0	4	100.0	4

APPENDIX G: SUBSISTENCE AND PERSONAL USE FISHERIES

Appendix G.1. Subsistence salmon harvest by species and gear type, Prince William Sound and Upper Copper River, 2001.

Area	Permits Issued	Permits Fished	Gear Type	Chinook	Sockeye	Coho	Pink	Chum	Other ^a	Total
Prince William Sound	5	0	Drift Gillnet	0	0	0	0	0	0	0
	0	0	Purse Seine	0	0	0	0	0	0	0
	0	0	Set Gillnet	0	0	0	0	0	0	0
P.W.S. TOTAL	5	0		0	0	0	0	0	0	0
Copper River Flats	468	288	Drift Gillnet	826	3,072	70	0	2	1	3,971
Upper Copper River	408	267	Dip Net	280	7,992	17	0	0	5	8,294
	832	711	Fish Wheel	2,974	68,345	1,010	0	19	190	72,538
Eastern	14	8	Drift Gillnet and Dip Net	0	114	230	60	12	0	416
Southwestern	16	8	Drift Gillnet and Dip Net	2	119	92	95	146	0	454
Batzulnetas	1	1	Fish Wheel	0	55	0	0	0	0	55
Total	1,744	1,283		4,082	79,697	1,419	155	179	196	85,728

^aIncludes flounder and Dolly Varden as well as misc. salmon species.

Appendix G.2. Salmon catch and effort in the Prince William Sound subsistence fishery, 1965 - 2001.

Year	Permits		Catch ^a						
	Issued	Returned	Chinook	Sockeye	Coho	Pink	Chum	Unknown	Total
1965	22	16				179	25		204
1966	3	3		3	19	20	50		92
1967	4	3			4	4			8
1968	4	3			20	156		22	198
1969	7	3			16				16
1970	1	1							0
1971	3	2				46			46
1972	0								0
1973	19	16			289				289
1974	3	1							0
1975	2	0							0
1976	0								0
1977	4	4							0
1978	3	2							0
1979	15	2							0
1980	26	15		7	6				13
1981	12	8		3	29		2		34
1982	35	27		84	4	31	24		143
1983	26	21		22	36	9	79		146
1984	8	8		10		11	2		23
1985	22	16	1	27	16	14	26		84
1986	25	14		5	15				20
1987	18	17	5	31	6		16		58
1988	7	7	2	51	7	10	9		79
1989	11	7	0	0	0	0	3	0	3
1990	8	7	0	0	7	4	0	0	11
1991	9	5	0	2	0	0	0	0	2
1992	10	6	0	20	0	0	0	0	20
1993	6	6	1	104	10	0	0	0	115
1994	5	4	0	0	0	0	0	0	0
1995	4	2	0	0	0	0	0	0	0
1996	10	7	0	0	0	0	0	0	0
1997	4	3	0	3	0	0	0	0	3
1998	4	3	0	0	0	0	0	0	0
1999	3	3	0	0	0	0	0	0	0
2000	3	3	0	0	0	0	0	0	0
2001	3	3	0	0	0	0	0	0	0

^a Includes catches from Prince William Sound, exclusive of the Copper River Flats.

Appendix G.3. Salmon catch and effort in the Copper River District subsistence gillnet fishery, 1965-2001.

Year	Total Issued	Permits Issued			Catch			
		Fished ^a	Not Fished	Not returned	Chinook	Sockeye	Coho	Total
1965	31	15	5	11	12	459	85	556
1966	45	21	10	14	47	175		222
1967	61	37	19	5	83	153		236
1968	17	7	8	2	11	36		47
1969	49	20	13	16	16	63	85	164
1970	32	24	3	5	66	179		245
1971	29	17	9	3	10	32	4	46
1972	104	75	5	24	149	569	53	771
1973	94	89	N/A	5	153	326	180	659
1974	9	3	2	4	5	4	2	11
1975	2	2	N/A	0	0	5	0	5
1976	27	14	N/A	13	1	10	0	11
1977	23	22	N/A	1	10	71	0	81
1978	34	9	19	6	37	18	12	67
1979	49	21	20	8	45	26	17	88
1980	39	18	17	4	19	27	17	63
1981	72	30	21	21	48	145	104	297
1982	108	48	42	18	60	634	106	802 ^b
1983	87	31	42	14	79	107	57	254 ^b
1984	118	57	47	14	68	324	135	549 ^b
1985	94	67	27	0	88	261	83	433 ^b
1986	88	57	28	3	86	348	47	481 ^b
1987	95	39	50	6	49	359	14	510 ^b
1988	114	57	40	17	59	226	42	440 ^b
1989	75	32	32	11	56	339	51	454 ^b
1990	88	40	39	12	60	469	82	680 ^{c,d}
1991	129	71	44	14	136	830	38	1,009 ^{c,d}
1992	126	67	47	12	142	785	42	999 ^{c,d}
1993	111	50	43	18	120	428	29	579 ^{c,d}
1994	101	60	37	4	164	474	67	708 ^d
1995	126	72	41	13	154	692	31	880 ^{c,d}
1996	176	101	57	18	276	969	47	1,294 ^{c,d}
1997	269	165	78	26	200	1,001	1,777	2,989 ^{c,d}
1998	245	144	87	14	295	850	680	1,832 ^{c,d}
1999	294	175	100	19	353	1,330	682	2,379 ^{c,d}
2000	416	293	107	16	689	4,360	44	5,118 ^b
2001	468	288	151	29	826	3,072	70	3,971 ^b

^aIncludes all permit holders, successful or unsuccessful.

^bTotal also includes pink, chum and/or dolly varden.

^cData updated in 2000.

^dTotal includes whitefish, dolly varden, and/or other misc. species.

Appendix G.4. Salmon catch and effort in the Eastern District (Tatitlek) and Southwestern District (Chenega) subsistence fisheries, Prince William Sound, 1988 - 2001.

Year	Permits		Catch						Total
	Issued	Fished	Chinook	Sockeye	Coho	Pink	Chum	Unknown	
EASTERN									
1988 ^b	17	9	2	210	211	143	245	0	811
1989 ^b	14	7	1	107	653	33	43	0	837
1990 ^b	13	3	0	5	241	10	4	0	260
1991 ^b	17	7	0	107	984	320	28	0	1,439
1992 ^b	16	5	2	441	369	30	49	0	891
1993	18	7	2	512	305	144	74	180	1,217
1994	14	4	0	50	143	50	70	0	313
1995 ^a	15								
1996	6	1	0	0	38	0	0	0	38
1997	6	3	0	107	45	0	54	0	206
1998 ^b	11	3	0	2	321	4	28	0	355
1999	17	8		344	541	31	31	0	947
2000	12	3		140	468	40	40	0	688
2001	14	8		114	230	60	12	0	416

SOUTHWESTERN									
1988	10	5	1	50	8	251	294	0	604
1989	8	7	0	322	0	554	180	0	1,056
1990	7	2	1	36	5	20	2	0	64
1991	12	4	3	345	42	195	53	0	638
1992	14	8	1	526	23	313	99	0	962
1993 ^b	22	17	2	875	60	232	124	0	1,293
1994	16	8	5	192	77	402	161	0	837
1995	10	5	2	152	67	67	41	0	329
1996 ^b	7	4	0	135	9	125	46	0	315
1997	5	4	44	193	30	110	272	0	649
1998	4	3	13	114	20	65	119	0	331
1999	14	7	57	499	62	168	101	0	887
2000	12	6	24	39	229	211	143	0	646
2001	16	8	2	119	92	95	146	0	454

^a No permits were returned.

^b Data updated 2001.

Appendix G.5. Salmon catch by species and numbers of permits by gear type for the Upper Copper River subsistence and personal use fisheries, 1981- 2001.

Year	Permits Issued			Reported Catch ^a			Reported Catch by Species			Total Salmon Catch	
	Dip Net	Wheel	Total	% Dip Net	Wheel	Total	Chinook	Sockeye	Coho	Reported	Estimated
1981	3,555	523	4,078	52%	48%	55,796	1,913	53,008	849	55,770	68,654
1982	5,475	615	6,090	62%	38%	100,734	2,532	96,799	1,246	100,577	109,557
1983	6,911	630	7,541	67%	33%	108,228	5,421	100,995	1,690	108,106	118,599
1984 s	104	458	562	6%	94%	20,597	366	20,101	120	20,587	28,617
p	5,311	17	5,328	100%		46,241	1,592	44,079	552	46,223	50,714
s&p	5,415	475	5,890	70%	30%	67,903	2,007	65,078	789	67,874	79,331
1985	4,153	533	5,686	57%	43%	52,733	1,673	50,488	544	52,705	64,164
1986 s ^b	39	366	405	3%	97%	25,781	622	24,890	264	25,776	28,417
p	3,966	65	4,031	98%	2%	42,695	2,294	39,794	521	42,609	44,047
s&p	4,005	431	4,436	62%	38%	68,476	2,916	64,684	785	68,385	72,464
1987 s ^b	59	372	431	4%	96%	25,271	531	21,615	105	22,251	34,080
p	4,186	73	4,259	99%	1%	43,409	2,749	40,285	393	43,427	46,908
s&p	4,245	445	4,690	64%	36%	68,680	3,280	61,900	498	65,678	80,988
1988 s	70	339	409	9%	91%	21,481	693	20,391	260	21,344	30,558
p	4,205	46	4,251	97%	3%	41,730	2,723	38,533	450	41,706	45,855
s&p	4,275	385	4,660	68%	32%	62,545	3,416	58,924	710	63,050	76,413
1989 s	78	308	386	8%	92%	27,732	745	26,835	65	27,645	29,216
p	4,447	137	4,584	94%	6%	56,544	2,160	53,505	825	56,490	58,941
s&p	4,525	445	4,970	66%	34%	84,156	2,905	80,340	890	84,135	88,157
1990 s	95	311	406	9%	91%	30,663	610	29,947	87	30,644	32,504
p	5,631	58	5,689	99%	1%	67,988	2,594	63,793	1,446	67,833	70,812
s&p	5,726	369	6,095	71%	29%	98,633	3,204	93,740	1,533	98,477	103,316
1991 s	293	418	711	16%	84%	37,761	1,217	36,289	213	37,719	41,159
p	6,222	NA	6,222	100%		82,767	3,947	75,499	3,264	82,710	85,059
s&p	6,515	418	6,933	74%	26%	120,528	5,164	111,788	3,477	120,429	126,218
1992 s	151	504	655	10%	90%	44,448	1,368	42,689	330	44,387	47,031
p	6,387	NA	6,387	100%		89,840	3,337	84,981	1,487	89,805	91,683
s&p	6,538	504	7,042	70%	30%	134,288	4,705	127,670	1,817	134,192	138,714
1993 s	14	759	773	1%	99%	50,044	1,308	48,582	70	49,960	54,762
p	7,914	NA	7,914	100%		93,747	2,729	89,629	1,358	93,716	97,767
s&p	7,928	759	8,687	65%	35%	143,791	4,037	138,211	1,428	143,676	152,529
1994 s	267	703	970	10%	90%	64,658	1,827	62,717	55	64,599	70,326
p	7,061	NA	7,061	100%		95,903	3,596	90,332	1,903	95,831	99,822
s&p	7,328	703	8,031	64%	36%	160,561	5,423	153,049	1,958	160,430	170,148
1995 s	191	665	856	7%	93%	51,517	1,762	48,903	821	51,486	55,290
p	6,760	NA	6,760	100%		85,997	4,568	76,670	4,726	85,964	88,617
s&p	6,951	667	7,616	65%	35%	137,104	6,330	125,573	5,547	137,450	143,907
1996 s	219	631	850	11%	89%	50,843	1,388	48,747	522	50,657	54,092
p	7,198	NA	7,198	100%		99,511	3,493	92,590	3,295	99,378	101,972
s&p	7,417	631	8,048	70%	30%	150,354	4,881	141,337	3,817	150,035	156,064
1997 s	286	847	1,133	10%	90%	80,961	2,439	78,188	177	80,804	85,578
p	9,086	NA	9,086	100%		151,387	5,336	145,881	155	151,372	154,467
s&p	9,372	847	10,219	69%	31%	231,517	7,775	224,069	332	232,176	240,045
1998 s	272	738	1,010	13%	87%	63,633	1,751	61,268	507	63,526	66,838
p	10,006	NA	10,006	100%		143,027	6,583	134,299	2,100	142,982	143,027
s&p	10,278	738	11,016	73%	27%	206,769	8,334	195,567	2,607	206,508	209,865
1999 s	336	766	1,104	12%	88%	76,633	3,058	72,901	292	76,251	80,947
p	9,943	NA	9,943	100%		145,612	5,755	137,729	2,095	145,579	149,877
s&p	10,279	766	11,047	70%	30%	222,245	8,813	210,630	2,387	221,830	230,824
2000 ^c g	464	787	1,251	14%	86%	63,739	4,782	58,241	511	63,534	64,885
c	8,151	NA	8,151	100%		110,095	3,037	103,329	3,540	109,906	114,681
g&c	8,615	787	9,402	69%	31%	173,834	7,819	161,570	4,051	109,906	179,566
2001 g	408	832	1,240	10%	90%	80,618	3,254	76,337	1,027	80,618	87,268
c	9,462	NA	9,462	100%		122,445	2,731	117,440	2,274	122,445	139,152
g&c	9,870	832	10,702	64%	36%	203,063	5,985	193,777	3,301	203,063	226,420

^a Includes all reported species

^b Subsistence dip net catch estimated

^c Personal use changed to subsistence in 2000

1984 - 1999

s = subsistence

p = personal use

s&p = total catch

2000 - 2001

g = Glennallen Subdistrict

c = Chitina Subdistrict

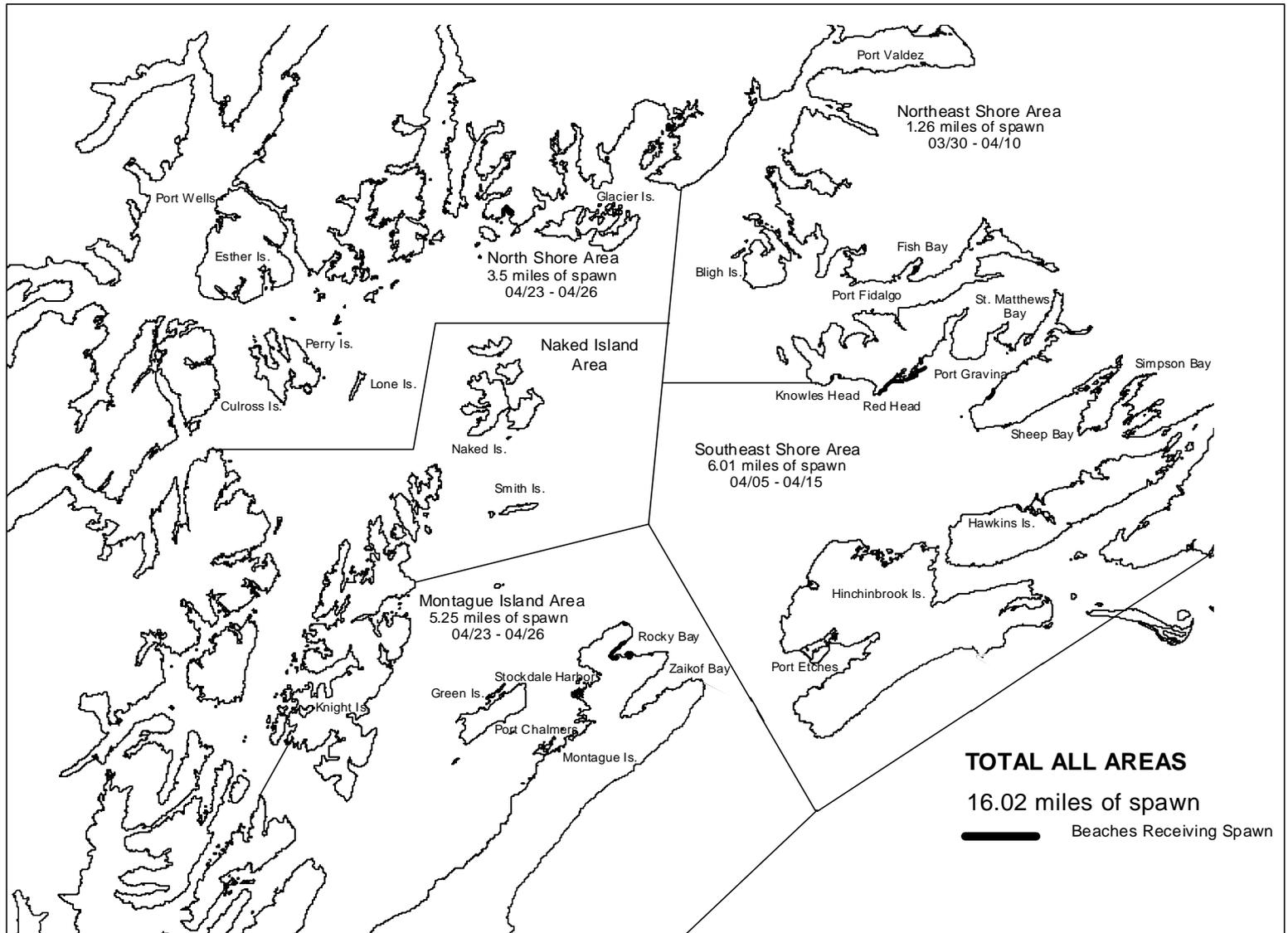
g&c = total catch

Appendix G.6. Personal use salmon harvest by district, species and gear type, Prince William Sound Management Area, 2001.

District	Permits	Landings	Gear					
			Type	Chinook ^a	Sockeye	Coho	Pink	Chum
Copper River	289	937	DGN	935	2,113	24	0	0
Bering River	1	1	DGN	3	0	0	0	0
Coghill	7	8	PS	4	16	19		2
Montague	1	1	PS	1	0	0	0	0
Eshamy	6	6	SGN	2	30	1	0	0
Eshamy	4	4	DGN	1	0	0	0	0
Total	304	953		945	2,159	44	0	2

^a In 1994 the BOF passed regulation 5 AAC 24.356 requiring all chinook salmon taken in the Copper River and Bering River Districts, but not sold, be reported on fish tickets.

APPENDIX H: HERRING FISHERIES



Appendix H.1. Location of spawning herring and miles of spawn observed during aerial surveys in Prince William Sound, 2001.

Appendix H.2. Prince William Sound commercial Pacific herring harvest summary with fishing location and effort by gear type, 2001.

Fishery	Fishing Information				Harvest and Use (tons)	
	Area	Date	Duration	Effort	Spawn-on-kelp	Pacific Herring
Sac Roe Purse Seine	NO OPENINGS					
	Total					0.0
Sac Roe Gillnet	NO OPENINGS					
	Total					0.0
Wild spawn-on-kelp	NO OPENINGS					
	Total ^a					0.0 ^b
Pound spawn-on-kelp	NO OPENINGS					
	Total ^c					0.0 ^d
Food/Bait Fishery	NO OPENINGS					
	Total					0.0
<u>Harvest and Use - Total</u>						0.0

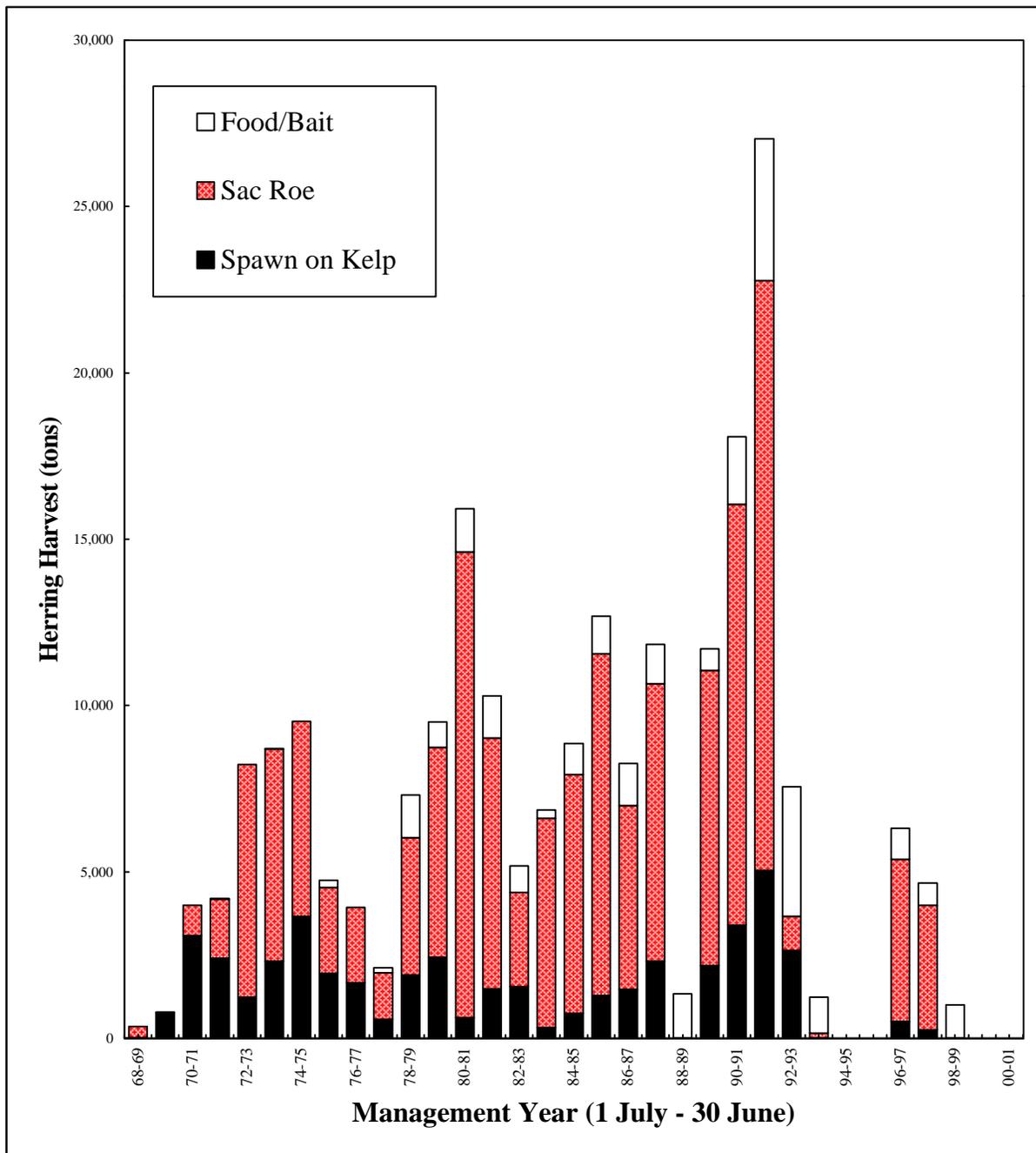
^a The harvest of naturally occurring herring spawn on native kelp in Prince William Sound.

^b The biomass of herring subjected to removal of reproductive capacity of the population based on the assumptions that 10% of the biomass of pre-spawning herring consists of eggs and that 80% of the weight of harvested spawn on kelp consists of eggs.

^c The harvest of herring spawn on kelp produced in net pens or pounds.

^d The biomass of herring subjected to stress mortality and removal of reproductive capacity of the population based on the assumption that 12.5 tons of herring are needed to produce one ton of spawn on kelp.

All Fisheries Herring Harvest Prince William Sound



Appendix H.3. Prince William Sound commercial herring harvest by management year and fishery, 1968-2001.

Appendix H.4. Pacific herring sac roe seine and gillnet fishery effort, anticipated harvest, and actual harvest, Prince William Sound, 1969-2001.

Calendar Year	Seine Fishery							Gillnet Fishery							Total Harvest (tons)
	Opening Dates	Hours	Effort (Boats)	Guideline Harvest ^a	Harvest (tons)	CPUE (tons/Boat Hr)	Estimated Roe %	Opening Dates	Hours	Effort (Boats)	Guideline Harvest ^a	Harvest (tons)	CPUE (tons/Boat Hr)	Estimated Roe %	
1969	3/01 - 6/30		5		325.4										325.4
1970	3/01 - 6/30														
1971	3/01 - 6/30		12		919.2										919.2
1972	3/01 - 6/30		18		1,777.2										1,777.2
1973	4/23 - 5/09		31		6,991.9										6,991.9
1974	4/10 - 4/17		72		6,371.0			4/10 - 4/17		3		3.8			6,374.8
1975	4/15 - 4/22	14.0	76		5,853.8	5.50			14.0						5,853.8
1976	5/08 & 6/01	13.0	66		2,584.2	3.01			13.0						2,584.2
1977	4/09 - 4/10	38.0	58		2,265.6	1.03		4/09 - 04/10	38.0	1		1.6	0.04		2,267.1
1978	4/17 - 4/21 ^b	106.0	75	5,000	1,329.5	0.17		4/17 - 04/21	106.0	38		61.7	0.02		1,391.2
1979	4/07 - 4/19	215.5	89	5,000	4,138.0	0.22		CLOSED ^c							4,138.0
1980	4/01 - 4/09	162.0	76	5,000	6,042.2	0.49		4/17 - 5/05		16		264.4			6,306.7
1981	4/01 - 4/09	60.0	106	5,000	13,768.2	2.16		4/16 - 4/18	53.0	18		234.5	0.25		14,002.8
1982	4/23	2.0	95	5,000	7,148.3	37.62	10-14%	4/24 - 4/26	54.0	18		393.9	0.41	12-15%	7,542.2
1983	4/13	1.0	103 ^d	5,000	2,728.5	26.49	11.0%	4/21 - 4/22	24.0	22		105.4	0.20	11.0%	2,833.9
1984	4/14	3.0	105 ^e	5,000	5,946.1	18.88	10-11%	4/18 - 4/22	59.0	23	250	342.7	0.25	8-14%	6,288.8
1985	4/28 - 4/29	4.0	103 ^f	5,000	6,764.1	16.42	10-12%	4/29 - 5/01	34.0	21	250	413.3	0.58	10-12%	7,177.4
1986	4/17	3.0	106	5-7,000	9,828.1	30.91	11.0%	4/24 - 4/28	90.0	24	3-400	448.6	0.21	11.4%	10,276.7
1987	4/08 - 4/09	1.5	96	3-5,000	4,982.2	34.60	10.0%	4/10 - 4/11	24.0	24	2-300	533.3	0.93	9.5%	5,515.5
1988	4/21 - 4/22	2.0	105	4-5,000	7,977.3	37.99	10.5%	4/23	5.5	24	275	353.0	2.67	10.0%	8,330.3
1989	Season Closed ^g			6,400							375				0.0
1990	4/12	0.3	96	6,038	8,362.1	290.35	10.0%	4/13	4.0	24	353	505.4	5.26	10.6%	8,867.5
1991	4/09, 4/10, & 4/19	1.3	104	11,233	11,923.0 ^h	85.32	10.5%	4/18	10.5	24	657	742.0	2.94	11.06%	12,665.1
1992	4/13, 4/17, & 4/21	2.0	104	14,100	16,784.2 ⁱ	80.69	10.0%	4/23 - 4/24	11.0	24	825	940.6	3.56	10.8%	17,724.8
1993	No Harvest			15,586				4/15, 4/17-4/19	36.0	24	912	1,029.9	1.19	11.01%	1,029.9
1994	Season Closed ^j			0	151.0 ^k						0				151.0
1995	Season Closed ^j			0							0				0.0
1996	Season Closed ^j			0							0				0.0
1997	4/13, 4/15	1.8	71	2,965	4,703.5	36.80	9.75%	4/09	2.5	22	175	175.7	3.19	8.00%	4,879.2
1998	4/06	0.5	46	3,367	3,329.7	144.77	9.6%	4/11, 4/12	6.5	20	197	415.1	3.19	11.0%	3,744.8
1999	Season Closed ^j			3,447							202				0.0
2000	Season Closed ^j			0							0				
2001	Season Closed ^j			0							0				

^a Guideline harvest based on pre-season harvest projection beginning in 1986.

^b An additional opening on 6/14 for 6 hours resulted in no harvest.

^c Gillnet fishery closed by Board of Fisheries action.

^d Of 103 boats participating, 72 actually made deliveries.

^e Of 105 boats participating, 101 actually made deliveries.

^f Of 103 boats participating, 62 made deliveries at Montague Island and 90 made deliveries in the north-shore area.

^g All Pacific herring commercial sac roe and spawn-on-kelp fisheries in Prince William Sound were closed during the spring of 1989 due to the potential for contamination of catches from the T/V Exxon Valdez oil spill.

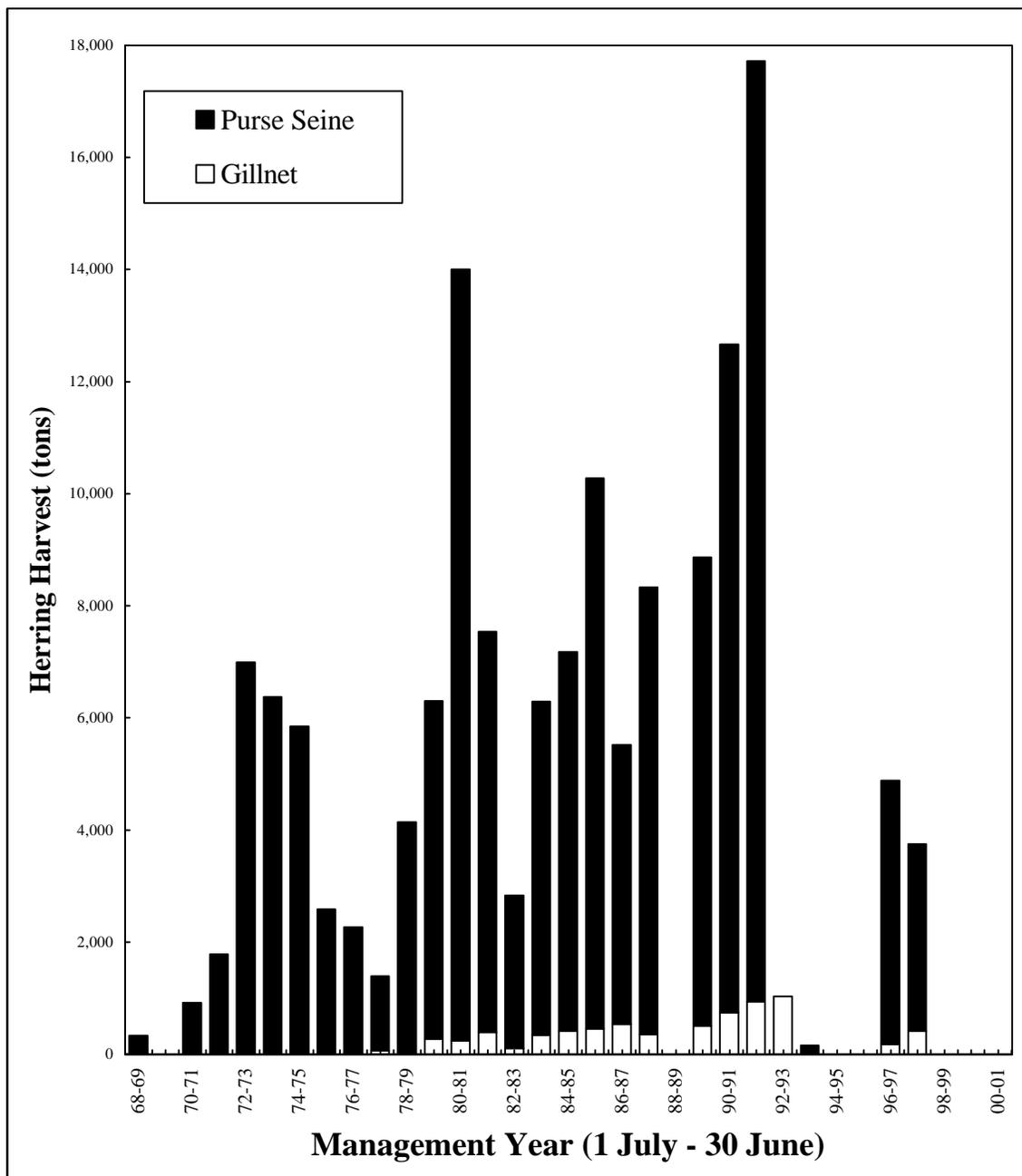
^h Total for 1991 includes a 92.2 ton test fishing set made by ADF&G for aerial survey calibration.

ⁱ Total for 1992 includes a 192.5 ton test fishing catch made by ADF&G for aerial survey calibration.

^j Season closed due to low herring abundance.

^k Harvest for 1994 consisted of a single test fishing catch made by ADF&G for aerial survey calibration.

Sac Roe Herring Harvest by Fishery Prince William Sound



Appendix H.5. Prince William Sound commercial herring sac roe purse seine and gillnet harvest by management year, 1968-2001.

Appendix H.6. Pacific herring spawn-on-kelp harvests from natural spawning, Prince William Sound, 1969 - 2001.

Calendar Year	Fishery Dates	Hours	Effort (Divers)	Guideline Harvest (tons)	Harvest by Kelp Species and Grounds Price (\$/lb)								Spawn-on-Kelp Harvest		Herring Utilized ^a (tons)
					Ribbon		Sieve		Fucus		Other		(lb)	(tons)	
					Percent	Price	Percent	Price	Percent	Price	Percent	Price			
1969	5/18-5/31		3									5,424	2.7	21.7	
1970	4/19-6/06		34									190,374	95.2	761.5	
1971	4/18-5/15		159									769,481	384.7	3,077.9	
1972	4/30-5/20		397									600,453	300.2	2,401.8	
1973	4/23-5/26		176									306,358	153.2	1,225.4	
1974	4/22-5/04		143									580,588	290.3	2,322.4	
1975	4/25-5/10		328									916,919	458.5	3,667.7	
1976	4/21- ?		279									485,043	242.5	1,940.2	
1977	4/27-12/31		104									417,000	208.5	1,668.0	
1978	4/20-4/30		66	165	23%		50%				27% ^b	141,268	70.6	565.1	
1979	4/25-5/03		97	200								474,242	237.1	1,897.0	
1980	4/23-4/30	10	458	200	60%	\$1.25	40%	\$0.85				603,880	301.9	2,415.5	
1981	4/25	12	196	200	38%	\$1.25	60%	\$0.85				122,532	61.3	490.1	
1982	5/05-5/08	73	152	187	83%	\$1.42	11%	\$0.95			2%	291,430	145.7	1,165.7	
1983	4/27	12	185	187	51%	\$2.00-2.45	35%	\$1.50-1.70			6%	298,362	149.2	1,193.4	
1984	Season Closed ^d		225 ^e	187							14% ^c				
1985	5/06 & 5/08	20	106	169	51%	\$1.25	49%	\$0.50				60,832	30.4	243.3	
1986	4/30-5/03	86	29	142	97%	\$1.75		\$0.80			^b	95,205	47.6	380.8	
1987	4/15-4/17	44	59	103	90%	\$1.70		\$0.85			^b	176,485	88.2	705.9	
1988	4/29 & 4/30	12	159	103	64%	\$1.50	24%	\$0.75-1.00			12% ^b	194,762	97.4	779.0	
1989	Season Closed ^f			110											
1990	4/21-4/22	16	134	104	37%	\$0.99	6%	\$0.52			57% ^b	237,575	118.8	950.3	
1991	5/11-5/17	95	48	195					100%	\$0.75-0.85		215,147	107.6	860.8	
1992	4/24-4/30	101	217	243	21%	\$0.70			76%	\$0.40	3%	504,663	252.3	2,018.7	
1993	4/19-4/24	114	83	268					100%	\$0.55		325,181	162.6	1,300.7	
1994	Season Closed ^g			110											
1995	Season Closed ^g			0											
1996	Season Closed ^g			0											
1997	4/25 & 4/26	26.4	45	56.4					100%			52,800	26.4	211.2	
1998	4/22-4/27	62	35	464	16%	\$0.80			84%	\$0.50		34,695	17.3	138.8	
1999	Season Closed ^g			475											
2000	Season Closed ^g			0											
2001	Season Closed ^g			0											

^a Indicates the annual removal of reproductive capacity from the population based on the assumption that average fish roe recovery is 10%, and 80% of spawn-on-kelp harvest weight consists of eggs.

^b Hair kelp.

^c Mostly *Macrocystis* spp. Some hair kelp.

^d Season remained closed due to lack of suitable spawn.

^e Permits issued.

^f All Pacific herring commercial sac roe and spawn-on-kelp fisheries in Prince William Sound were closed during the spring of 1989 due to the potential for contamination of catches from the *T/V Exxon Valdez* oil spill.

^g Season remained closed due to low herring abundance.

Appendix H.7. Pacific herring spawn-on-kelp harvest produced in pounds, Prince William Sound, 1979 - 2001.

Calendar Year	Fishery Dates ^c	Effort				Guideline Harvest (tons)	Blades per Permit Holder		Spawn-on-Kelp Harvest (tons)			Herring Utilized ^b (tons)
		CFEC Permits ^d	Permits Committed ^e	Producing Permits ^a			Closed ^f	Open ^g	Ribbon	Macrocystis	Total	
				Closed ^f	Open ^g							
1979		2	0									
1980	4/14	14	4	2		8			0.9	0.4	1.3	16.6
1981	4/14	18	18	7		16			8.6	1.1	9.7	120.7
1982	4/29-5/10	25	20	18		26			25.1	0.5	25.5	319.2
1983	4/30-5/04	47	38	26		26			17.7	10.1	27.7	346.7
1984	4/24-5/08	65	45	37		26			6.4	18.8	25.2	315.1
1985	4/25-5/07	81	59	50		40			12.1	28.1	40.2	502.1
1986	4/21-4/28	104	82	81		60			0	72.2	72.2	903.0
1987	4/10-4/21	111	111	108		85			0	61.2	61.2	765.1
1988	4/12-4/23	122	122	119		85			0	123.2	123.2	1,540.5
1989	Season Closed ^h											
1990	4/11-4/26	128	128	122		118			0	98.8	98.8	1,235.3
1991	4/07-4/20	126	126	119		220	1,200		0	202.4	202.4	2,530.5
1992	4/07-4/24	127	127	127		276	1,770		0	242.2	242.2	3,027.7
1993	4/10-4/22	128	124	52		305	1,950		0	106.4	106.4	1,330.5
1994	Season Closed ⁱ											
1995	Season Closed ⁱ											
1996	Season Closed ⁱ											
1997	4/10-5/6	128	116	7	84	725	410	640	0	34.3	34.3	290.5
1998	j	128	36	13	20	823	425	660	0	10.7	10.7	104.3
1999	k	128	27	7	2	843	435	680	0	6.2	6.2	48.8
2000	Season Closed ⁱ					0						
2001	Season Closed ⁱ					0						

^a Number of permits that were successful in producing spawn-on-kelp product. Due to the group cooperation in this fishery production is frequently reported for a few individuals whose pounds did not produce spawn-on-kelp product.

^b The equivalent harvest of Pacific herring due to stress mortality and the removal of reproductive capacity from the population based on the assumption that 12.5 tons of Pacific herring are used to produce 1 ton of spawn-on-kelp product.

^c Dates that the fishery was opened to seines for the capture and placement of Pacific herring into pounds.

^d Prior to 1994, Commission's permits issued to applicants registering prior to the March 1 deadline. After 1994, the number of permits represents limited entry permits.

Beginning in 1997, permit holders were allowed to operate pounds in open or closed configuration, and required to state intended configuration prior to season.

^e The number of individuals receiving an equal allocation of the guideline harvest. Prior to 1994 this represents the number of individual pounds constructed

by the April 1 deadline. Beginning in 1997, this number represents permit holders stating intended configuration prior to season.

^f A pound fished in a closed configuration consists of a rectangular floating frame with webbing suspended below, that encloses herring and kelp for period of time during spawning.

^g A pound fished in an open configuration consists of a rectangular floating frame with either no webbing suspended below, or with webbing that permits volitional entry and exit of herring on at least one side.

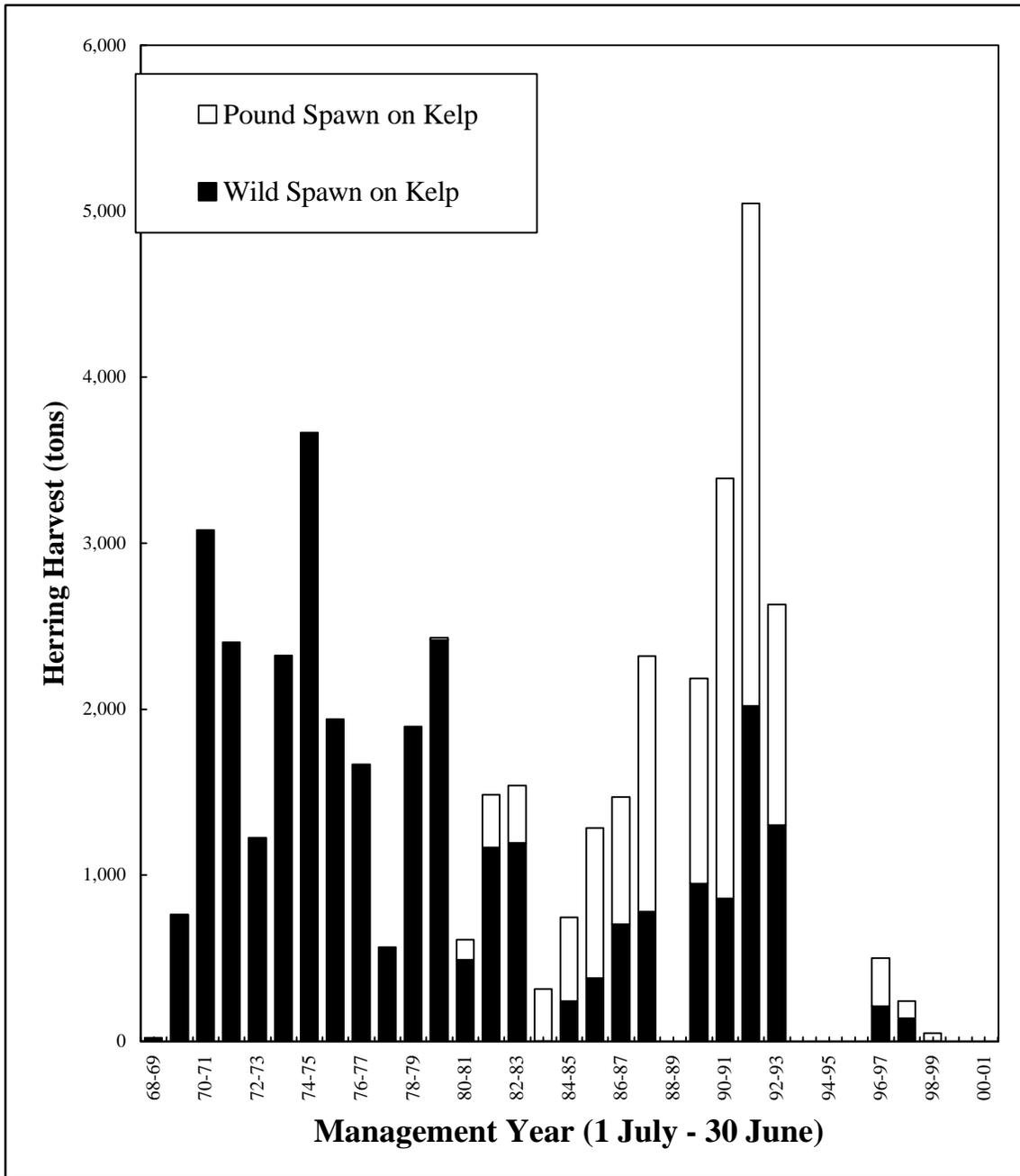
^h All Pacific herring commercial sac roe and spawn-on-kelp fisheries in Prince William Sound were closed during the spring of 1989 due to the potential for contamination of catches from the *TV Exxon Valdez* oil spill.

ⁱ Season closed due to low herring abundance.

^j Opening dates for each area were: Montague Island 4/04, Eastern 4/05, Northern 4/09, and Southeastern 4/13. All areas closed by regulation on 12/31/98.

^k Opening dates for each area were: Montague Island 04/01, St. Matthews Bay 04/20. All areas closed by emergency order on 04/25/99.

Spawn on Kelp Herring Usage Prince William Sound



Appendix H.8. Prince William Sound commercial spawn-on-kelp herring usage by management year, 1968-2001.

Appendix H.9. Prince William Sound commercial Pacific herring food/bait fishery effort and harvests, management years 1969-2001.

Harvest Management Year	Fishing Dates		Guideline Harvest	Purse Seine		Pair Trawl		Mid-Water Trawl		Otter Trawl		Total Harvest (tons)
	Opened	Closed		Effort (Boats)	Harvest (tons)	Effort (Boats)	Harvest (tons)	Effort (Boats)	Harvest (tons)	Effort (Boats)	Harvest (tons)	
	1969-1970	10/01/69		- 06/30/70 ^a		-	14.0					
1970-1971	10/01/70	- 06/30/71 ^a										0.0
1971-1972	10/01/71	- 06/30/72 ^a		-	20.0							20.0
1972-1973	10/01/72	- 05/09/73 ^a		-	9.0							9.0
1973-1974	08/27/73	- 04/17/74 ^a		-	8.5							8.5
1974-1975	07/15/74	- 03/10/75	^b									0.0
1975-1976	06/01/75	- 06/25/75 ^c	^b	4	226.7							226.7
1976-1977	02/01/77	- 03/09/77	^b									0.0
1977-1978	10/01/77	- 02/28/78	^b	-	17.0							162.3
1978-1979	10/16/78	- ? ^d	^b	-	195.4	7	988.7	-	9.4	-	81.0	1,274.4
1979-1980	09/16/79	- 02/28/80 ^e	1,400	-	510.8	4	145.1	-	103.2	-	2.6	761.7
1980-1981	09/15/80	- 11/07/80	1,400	-	1,030.4	6	275.7					1,306.1
1980-1982	09/15/81	- 09/30/81	1,400	7	1,189.4	-	73.1					1,262.5
1982-1983	09/15/82	- 01/31/83	1,400	6	797.3							797.3
1983-1984	09/15/83	- 01/31/84	1,400	-	257.6							257.6
1984-1985	09/15/84	- 01/31/85	1,400	-	936.2							936.2
1985-1986	09/01/85	- 02/15/86	1,400	6	1,118.1							1,118.1
1986-1987	09/01/86	- 10/24/86	1,400	6	1,276.2							1,276.2
1987-1988	09/02/87	- 11/12/87 ^f	1,400	7	1,189.4							1,189.4
1988-1989	11/01/88	- 11/05/88	1,400	8	1,335.3							1,335.3
1989-1990	11/01/89	- 01/31/90	1,694	-	646.1							646.1
1990-1991	09/21/90	- 11/24/90 ^g	3,151	5	1,955.0			-	60.8			2,015.9
1991-1992	10/01/91	- 10/14/91	3,956	14	4,258.5							4,258.5
1992-1993	10/01/92	- 10/22/92	3,416 ^h	17	3,900.3							3,900.3
1993-1994	10/07/93	- 10/10/93	978 ⁱ	8	1,087.0							1,087.0
1994-1995	Season Closed ^j											0.0
1995-1996	Season Closed ^j											0.0
1996-1997	11/01/96	- 11/03/96	825	6	933.9							933.9
1997-1998 ^k	11/1/97,2/19/98	02/28/98	945	12	679.7							679.7
1998-1999	11/02/98	- 11/04/98, 11/06/98	967	11 ^l	1,003.3							1,003.3
1999-2000	Season Closed ^j											0.0
2000-2001	Season Closed ^j											0.0
2001-2002	Season Closed ^j											0.0

^a Openings set by regulation. Ending date coincides with regulatory ending of sac roe season.

^b No Official quota, but unofficial goal was 1,500 tons.

^c Harvest from special June food-and-bait fishery opening. Although this harvest actually occurred at the end of the 1975 management year, it is included in the 1976 harvest management year to be consistent with other food-and-bait harvests which occur after spring sac roe fisheries.

^d Fishery closed from 1 January to 6 January 1979.

^e Fishery closed from 1 January to 15 February 1980.

^f Fishing season opened by regulation on September 1, 1987 in the General District. The north-shore and east-shore Pacific herring districts opened on September 23. The season was closed by emergency order on October 6 for a period of five weeks, reopened on November 9, and closed for the duration of the 1987-88 season on November 12, 1987.

^g Fishery open from September 21 until November 24. The Montague Island area was open from September 24 until November 24.

^h Preseason guideline harvest level based on spawn deposition biomass estimate. Final guideline harvest based on age-structured analysis was issued in January 1993 and was 4,373 tons.

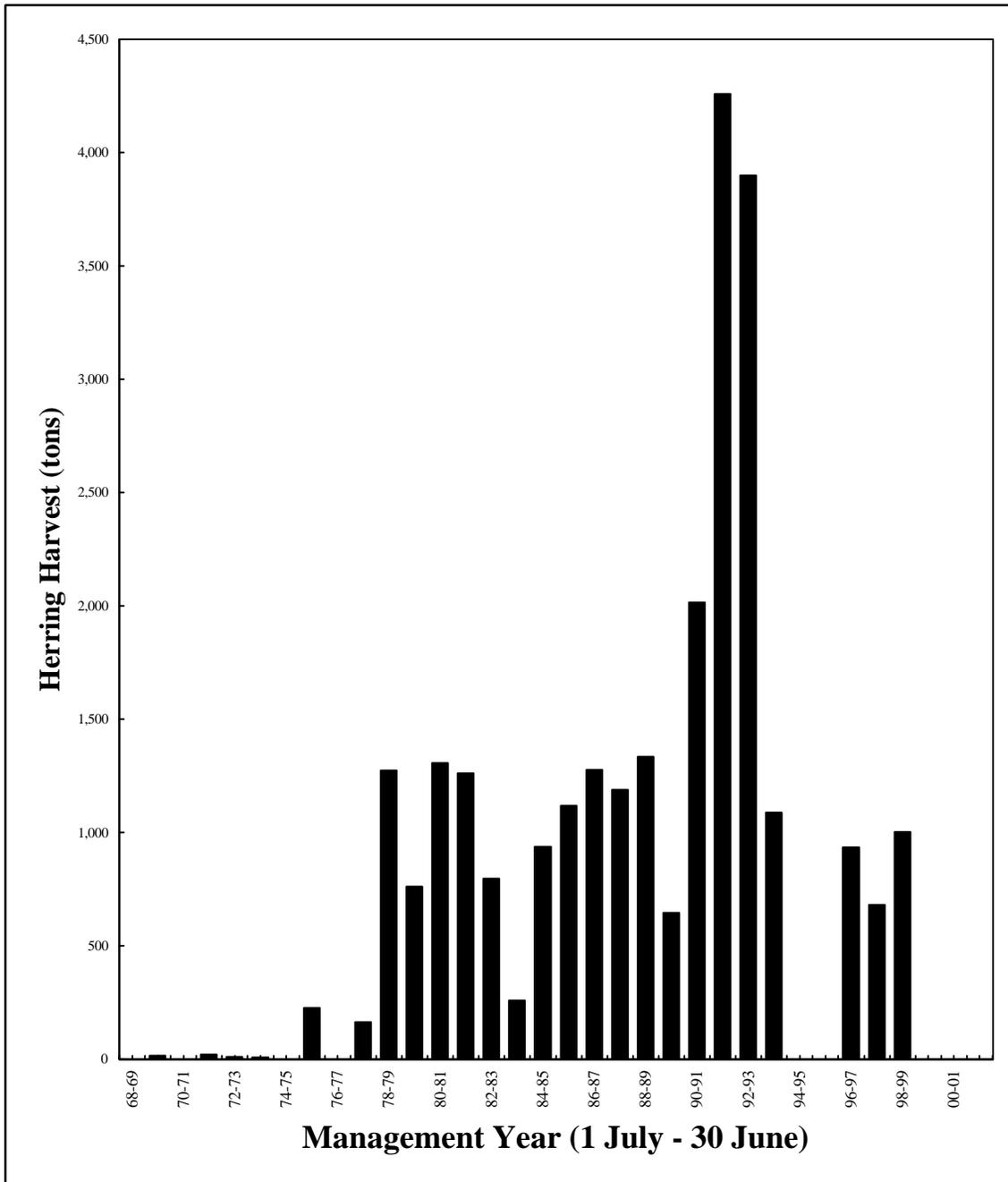
ⁱ Preseason guideline harvest level based on preliminary aerial survey biomass estimate of 40,000 tons.

^j Season closed due to low herring abundance.

^k Season reopened in spring 1998 based on final age structured assessment modelling. Of the total harvest, 578.1 tons were taken in November 1997 and 101.6 tons were taken in February 1998.

^l Includes sale from ADF&G test fishing near Knowles Head, 31 October 1998.

Food/Bait Herring Harvest Prince William Sound



Appendix H.10. Prince William Sound commercial food/bait herring harvest, management years 1968-2001.

Appendix H.11. Annual Pacific herring biomass indices for harvest management years 1973-2000 and the forecast of prefishery run biomass for 2000, Prince William Sound.

Harvest Management Year	Total Spring Use and Harvest Mortality ^a (tons)	Aerial Survey Estimates					Unexploited Escapement Biomass		Pre-Fishery Run Biomass	Observed Peak Acoustic Biomass Estimates		Prior Year Forecast (tons)
		Peak Biomass Estimate ^b (tons)	Maximum Possible Observed Biomass ^c	Miles of Spawn ^d	Mile Days of Spawn ^e	Spawn Deposition Surveys ^f (tons)	Age Structured Analysis ^g (tons)	Age Structured Analysis ^g (tons)		Fall (tons)	Spring (tons)	
1973-1974	6,375	41,080	107,290	38.5	75.2							
1974-1975	5,854			34.2	42.4							
1975-1976	2,584	7,330	25,247	32.8	33.7							
1976-1977	2,267	16,830	17,460	39.3	73.5							
1977-1978	1,391	13,410	36,540	28.7	36.3							
1978-1979	4,138	42,100	107,390	54.5	73.2							
1979-1980	6,323	62,110	122,050	50.5	73.9			58,221	63,290			
1980-1981	14,124	77,810	161,690	85.4	140.1			63,494	76,890			
1981-1982	7,861	68,790	97,620	49.0	65.1			56,823	64,366			
1982-1983	3,181	41,850	107,710	67.4	99.8	22,000 ^h		65,949	68,753			
1983-1984	6,604	58,870	158,760	60.1	86.8	58,089		77,021	83,037			
1984-1985	7,679	20,830	60,954	101.2	149.5			96,694	104,034			
1985-1986	11,180	15,180	54,820	72.4	152.3			74,740	85,543			
1986-1987	6,281	26,530	52,192	65.3	155.9			71,773	76,891			
1987-1988	9,871	34,270	67,175	166.3	236.9	53,785		123,346	132,633		43,992	
1988-1989	ⁱ	56,915	186,708	98.4	185.8	49,914		119,237	119,237		54,899	
1989-1990	10,103	57,900	145,013	94.1	144.4	127,478		89,613	99,783		51,692	
1990-1991	15,196	42,765	141,375	58.0	64.8	140,964		64,836	78,985		96,666	
1991-1992	20,752	53,835	130,569	74.7	99.5	128,263		77,598	96,860		121,342	
1992-1993	2,360	20,725	109,865	20.4	40.8			22,735	24,873		134,133	
1993-1994	151	19,640	154,008	14.6	20.0	17,069		16,559	16,559	20,998	29,787	
1994-1995	0	7,113	20,868	20.4	32.3	20,022		18,104	18,104	13,840	19,009	
1995-1996	0	10,691	37,771	27.2	39.1	27,670		27,909	27,909	26,776	25,353	
1996-1997	5,170	10,858	57,114	42.7	56.0	23,171		33,387	37,925	3,086	44,095	
1997-1998	3,849	13,817	50,124	38.7	48.5			34,726	38,389		25,045	
1998-1999	49	6,366		25.4	37.8			28,310	28,362		23,802	
1999-2000	0			19.5	24.6				23,987		39,557	
2000-2001												

^a Represents the common property seine and gillnet sac roe harvest, and equivalent use of herring in closed pound SOK fisheries.

^b Largest single day aerial estimate of Pacific herring biomass in short tons.

^c The sum of all daily aerial biomass estimates for a given year.

^d Total linear miles of spawn.

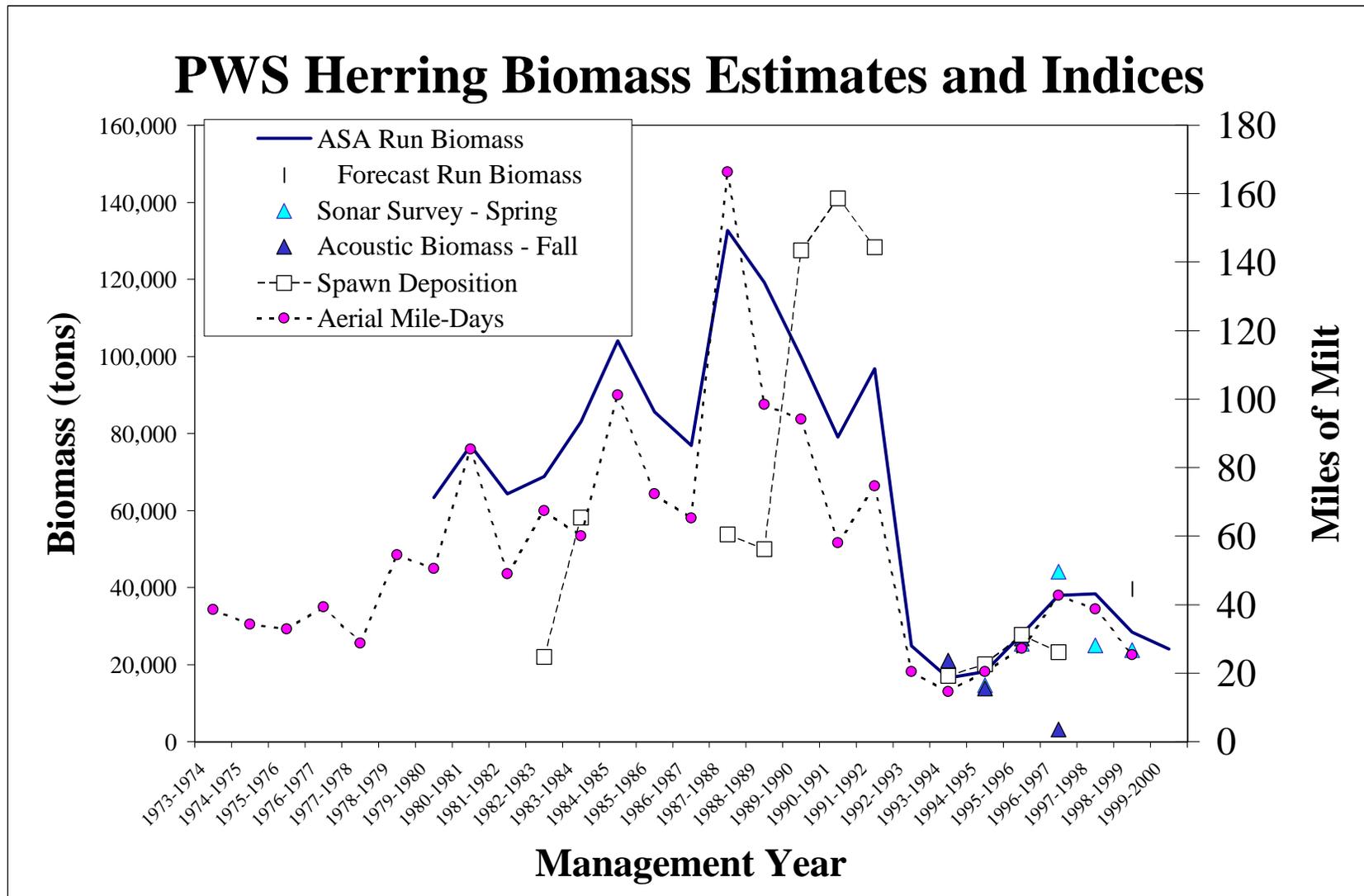
^e The sum of the daily observed linear miles of Pacific herring spawn.

^f Estimates are made from underwater surveys of spawn deposition.

^g Unexploited escapement and run biomass estimates from age structured analysis, February 1998.

^h Partial estimate of spawning biomass from feasibility study.

ⁱ All Pacific herring commercial sac roe and spawn-on-kelp fisheries in Prince William Sound were closed during the spring of 1989 due to the potential for contamination of catches from the *TV Exxon Valdez* oil spill.



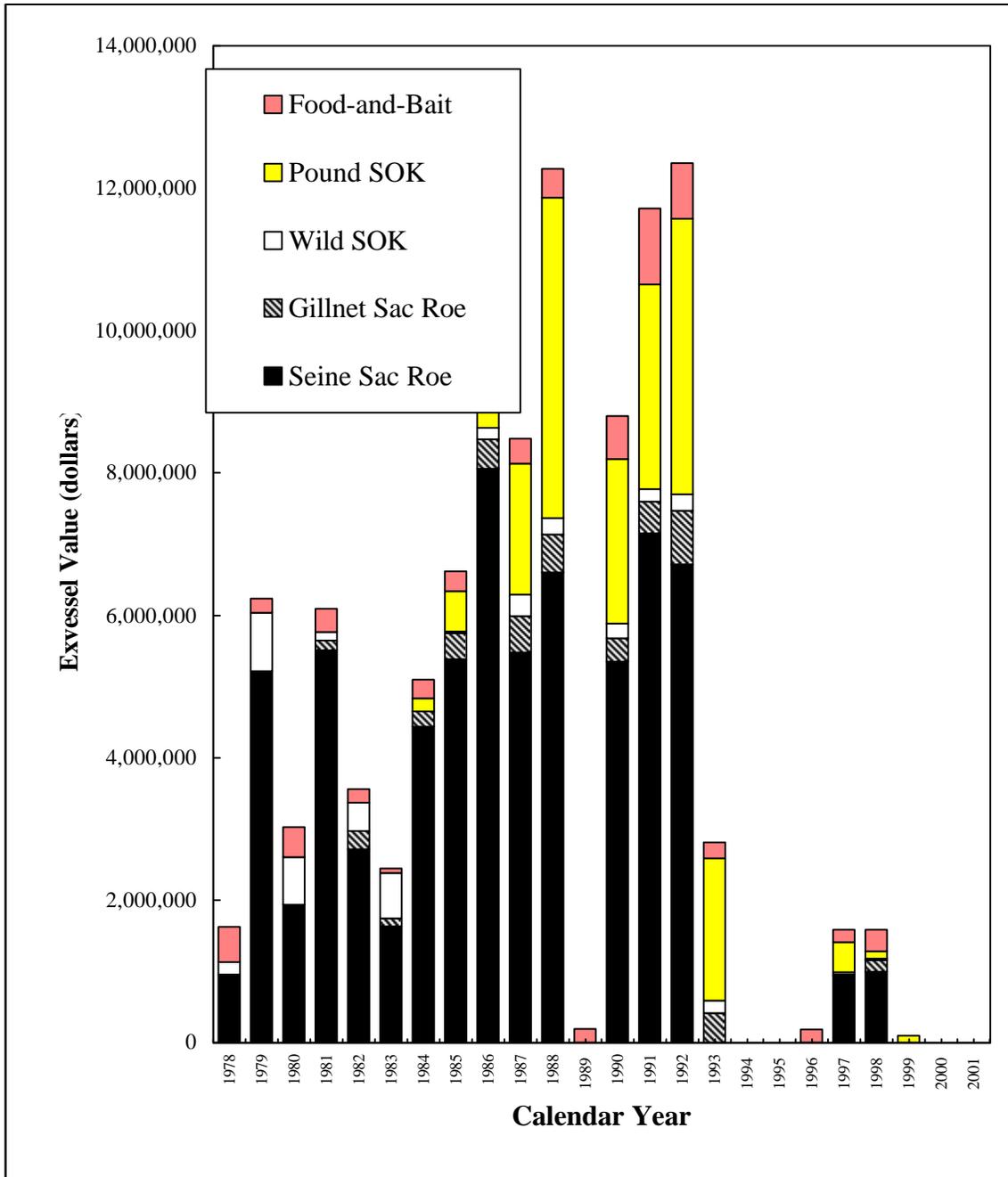
Appendix H.12. Prince William Sound annual herring biomass indices by management year, 1973-2000, and forecast run biomass for 2000 from ASA modeling.

Appendix H.13. Mean price and estimated exvessel value of the commercial Pacific herring harvest by gear type based on verbal post season estimates from processors and permit holders, Prince William Sound, calendar years 1978-2001.

Calendar Year	Sac Roe Fisheries				Spawn on Kelp Fisheries				Food-and-Bait Fishery		
	Purse Seine		Gillnet		Wild Spawn on Kelp		Pounds		Mixed Gear		
	Price per ton	Total Value	Price per ton	Total Value	Price per lb	Total Value	Price per lb ^a	Total Value	Price per ton	Total Value	TOTAL VALUE
1978	\$ 720	\$ 956,800			\$ 1.25	\$ 175,000			\$ 380	\$ 489,820	\$ 1,621,700
1979	\$ 1,260	\$ 5,213,880			\$ 1.74	\$ 821,280			\$ 300	\$ 196,800	\$ 6,231,960
1980	\$ 320	\$ 1,933,760			\$ 1.09	\$ 667,080			\$ 300	\$ 424,800	\$ 3,025,640
1981	\$ 400	\$ 5,508,000	\$ 580	\$ 135,720	\$ 1.00	\$ 122,000			\$ 260	\$ 328,120	\$ 6,093,840
1982	\$ 380	\$ 2,716,240	\$ 640	\$ 251,520	\$ 1.29	\$ 397,320			\$ 220	\$ 194,260	\$ 3,559,340
1983	\$ 600	\$ 1,634,400	\$ 1,040	\$ 109,200	\$ 2.10	\$ 634,200			\$ 260	\$ 70,980	\$ 2,448,780
1984	\$ 760	\$ 4,435,360	\$ 640	\$ 218,880	NO HARVEST		\$ 3.50	\$ 176,439	\$ 260	\$ 265,460	\$ 5,096,139
1985	\$ 760	\$ 5,380,800	\$ 900	\$ 371,700	\$ 0.48	\$ 19,200	\$ 7.09	\$ 569,058	\$ 250	\$ 279,500	\$ 6,620,258
1986	\$ 820	\$ 8,058,960	\$ 920	\$ 412,160	\$ 1.70	\$ 159,800	\$ 8.00	\$ 1,155,200	\$ 180	\$ 229,680	\$ 10,015,800
1987	\$ 1,100	\$ 5,480,200	\$ 960	\$ 511,680	\$ 1.70	\$ 299,200	\$ 15.00	\$ 1,836,000	\$ 300	\$ 356,700	\$ 8,483,780
1988	\$ 840	\$ 6,600,000	\$ 1,400	\$ 537,000	\$ 1.20	\$ 232,000	\$ 18.00	\$ 4,500,000	\$ 300	\$ 400,590	\$ 12,236,500
1989	SEASON CLOSED								\$ 300	\$ 193,830	\$ 193,830
1990	\$ 640	\$ 5,351,744	\$ 640	\$ 323,456	\$ 0.90	\$ 213,840	\$ 11.40	\$ 2,305,080	\$ 300	\$ 605,130	\$ 8,799,250
1991	\$600	\$ 7,153,800	\$ 600	\$ 445,200	\$ 0.80	\$ 172,160	\$ 9.00	\$ 2,880,000	\$ 250	\$ 1,064,625	\$ 11,715,785
1992	\$ 400	\$ 6,713,680	\$ 800	\$ 752,480	\$ 0.46	\$ 232,116	\$ 8.00	\$ 3,875,200	\$ 200	\$ 780,060	\$ 12,353,536
1993	NO HARVEST		\$ 400	\$ 411,960	\$ 0.55	\$ 178,860	\$ 10.00	\$ 2,000,000	\$ 200	\$ 217,400	\$ 2,808,220
1994	SEASON CLOSED								SEASON CLOSED		
1995	SEASON CLOSED								SEASON CLOSED		
1996	SEASON CLOSED								\$ 200	\$ 187,000	\$ 187,000
1997	\$ 200	\$ 940,600	\$ 80	\$ 14,080	\$ 0.61	\$ 32,000	\$ 8.00	\$ 426,816	\$ 250	\$ 170,000	\$ 1,583,496
1998	\$ 300	\$ 999,000	\$ 375	\$ 156,000	\$ 0.65	\$ 23,000	\$ 5.00	\$ 107,000	\$ 295	\$ 296,000	\$ 1,581,000
1999	SEASON CLOSED						\$ 8.00	\$ 99,000	SEASON CLOSED		
2000	SEASON CLOSED								SEASON CLOSED		
2001	SEASON CLOSED								SEASON CLOSED		

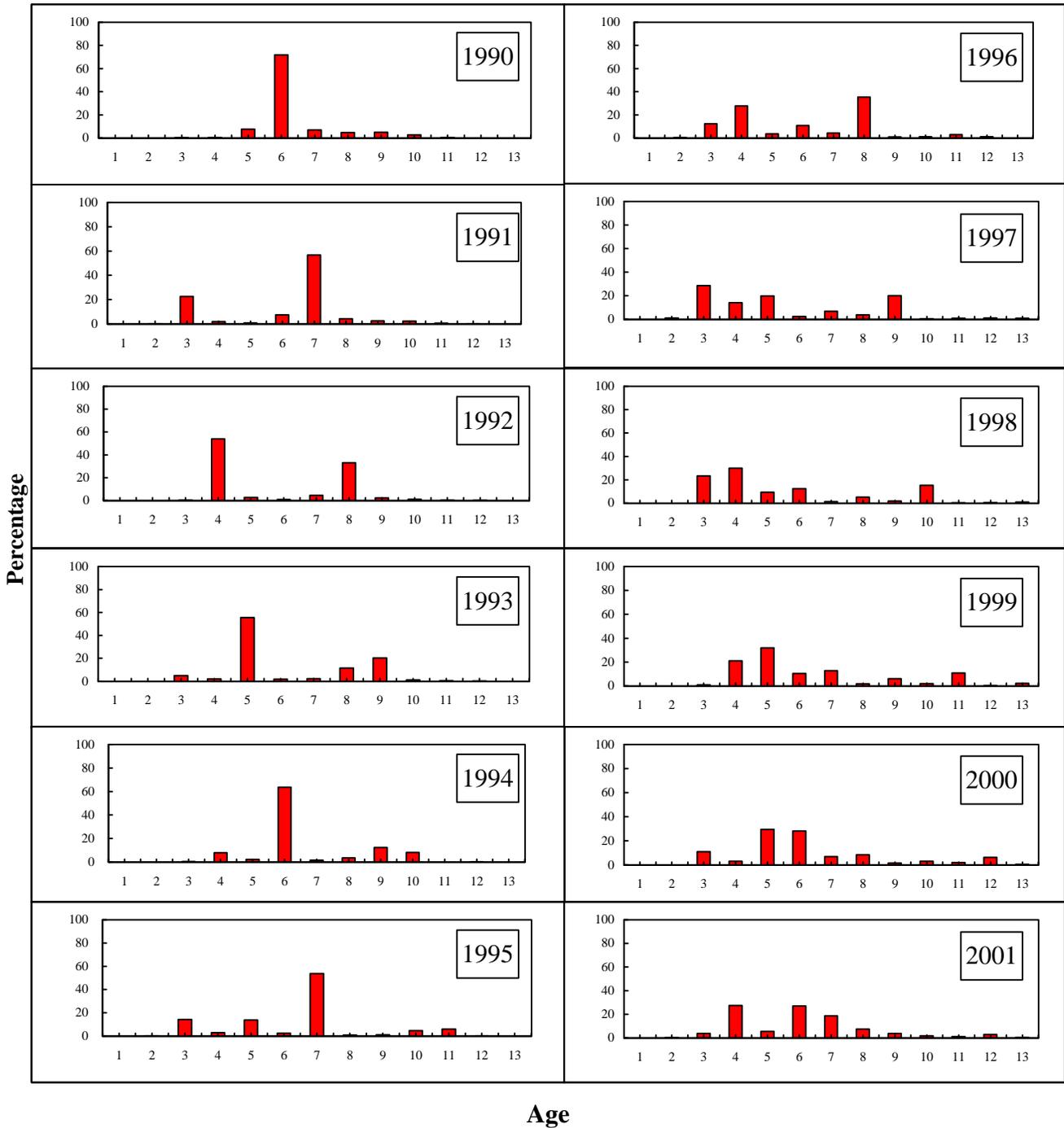
^a The price per pound for spawn on kelp in pounds is based on the final product weight, not harvest weight.

Exvessel Value of Herring Fisheries Prince William Sound



Appendix H.14. Average annual exvessel value of commercial herring fisheries, Prince William Sound, calendar years 1978-2001.

Prince William Sound Herring Spring Run Biomass Age Composition



Appendix H.15. Percentage contribution by weight of each age to the spring run biomass, Prince William Sound, 1990-2001.

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