# 2006 Prince William Sound Area Finfish Management Report

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**Divisions of Sport Fish and Commercial Fisheries** 



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Weights and measures (metric)		General		Measures (fisheries)	
centimeter	cm	Alaska Administrative		fork length	FL
deciliter	dL	Code	AAC	mideye-to-fork	MEF
gram	g	all commonly accepted		mideye-to-tail-fork	METF
hectare	ha	abbreviations	e.g., Mr., Mrs.,	standard length	SL
kilogram	kg		AM, PM, etc.	total length	TL
kilometer	km	all commonly accepted		2	
liter	L	professional titles	e.g., Dr., Ph.D.,	Mathematics, statistics	
meter	m	•	R.N., etc.	all standard mathematical	
milliliter	mL	at	@	signs, symbols and	
millimeter	mm	compass directions:		abbreviations	
		east	Е	alternate hypothesis	$H_A$
Weights and measures (English)		north	N	base of natural logarithm	e
cubic feet per second	ft <sup>3</sup> /s	south	S	catch per unit effort	CPUE
foot	ft	west	W	coefficient of variation	CV
gallon	gal	copyright	©	common test statistics	$(F, t, \chi^2, etc.)$
inch	in	corporate suffixes:	-	confidence interval	CI
mile	mi	Company	Co.	correlation coefficient	CI
nautical mile	nmi	Corporation	Corp.	(multiple)	R
		Incorporated	Inc.	correlation coefficient	K
ounce	oz lb	Limited	Ltd.		
pound		District of Columbia	D.C.	(simple)	r
quart	qt	et alii (and others)	et al.	covariance	cov 。
yard	yd	` '		degree (angular )	
TD:		et cetera (and so forth)	etc.	degrees of freedom	df
Time and temperature		exempli gratia		expected value	E
day	d	(for example)	e.g.	greater than	>
degrees Celsius	°C	Federal Information	FIG	greater than or equal to	≥
degrees Fahrenheit	°F	Code	FIC	harvest per unit effort	HPUE
degrees kelvin	K	id est (that is)	i.e.	less than	<
hour	h	latitude or longitude	lat. or long.	less than or equal to	<b>≤</b>
minute	min	monetary symbols	Φ	logarithm (natural)	ln
second	S	(U.S.)	\$, ¢	logarithm (base 10)	log
		months (tables and		logarithm (specify base)	$\log_{2}$ , etc.
Physics and chemistry		figures): first three		minute (angular)	'
all atomic symbols		letters	Jan,,Dec	not significant	NS
alternating current	AC	registered trademark	® 	null hypothesis	$H_{O}$
ampere	A	trademark	TM	percent	%
calorie	cal	United States		probability	P
direct current	DC	(adjective)	U.S.	probability of a type I error	
hertz	Hz	United States of		(rejection of the null	
horsepower	hp	America (noun)	USA	hypothesis when true)	α
hydrogen ion activity (negative log of)	pН	U.S.C.	United States Code	probability of a type II error (acceptance of the null	
parts per million	ppm	U.S. state	use two-letter	hypothesis when false)	β
parts per thousand	ppt,		abbreviations	second (angular)	<u>`</u>
-	<b>%</b> 0		(e.g., AK, WA)	standard deviation	SD
volts	V			standard error	SE
watts	W			variance	
				population	Var
				sample	var
				1	

# FISHERY MANAGEMENT REPORT NO. 08-30

# 2006 PRINCE WILLIAM SOUND AREA FINFISH MANAGEMENT REPORT

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Jeremy Botz, Richard Brenner, Glenn Hollowell, Bert Lewis, and Steve Moffitt

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

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#### **ABSTRACT**

The 2006 Prince William Sound (PWS) Area commercial salmon harvest was 27.2 million fish (Figure 1). The harvest was comprised of 21.7 million pink salmon *Oncorhynchus gorbuscha*, 2.5 million sockeye *O. nerka*, 2.2 million chum *O. keta*, 763,720 coho *O. kisutch*, and 31,634 Chinook salmon *O. tshawytscha*. Approximately 60% of the harvest, 16.3 million fish, was common property harvest and 10.9 million were sold for hatchery cost recovery (exclusive of broodstock, post egg-take roe sales). Personal use, educational permits, and donated fish accounted for less than 1%. While hatchery returns of chum and pink salmon were below forecast levels, hatchery returns of sockeye and coho salmon to PWS were more than twice the forecast level. Prince William Sound Aquaculture Corporation (PWSAC) failed to achieve either the pink or chum salmon cost recovery goal. This was the third consecutive year of PWSAC cost recovery shortfalls.

Based on an informal survey of salmon processors in the PWS and Copper River area, the preliminary estimated value of the combined commercial salmon harvest is \$52.1 million, including hatchery sales. During the 2006 season, 494 drift gillnet permit holders fished. Drift gillnet harvest is valued at an estimated \$27.4 million, setting average exvessel earnings at \$55,452. Set gillnet harvest is valued at an estimated \$862,000 dollars setting average exvessel earnings of the 26 participating permits at \$33,173. Seine fishery harvest was worth an estimated \$11.3 million for an average exvessel value of \$102,390 for the 111 permit holders that participated this year. Revenue generated for hatchery operations (exclusive of roe/meal sales) was approximately \$12.5 million.

The PWS and Copper River drainage personal use and subsistence fisheries harvested a total of 220,000 fish. Approximately 9,000 subsistence and personal use permits were issued to Alaska residents.

Sport fish permit holders landed a total of 22,000 salmon in PWS and the Copper River drainage.

The commercial Pacific herring *Clupea pallasi* fishery in Prince William Sound was closed in 2006 for the eighth consecutive year because the spawning biomass remained below the 22,000 tons regulatory threshold.

Key words: Prince William Sound, Copper River, salmon, harvest, drift gillnet, set gillnet, purse seine, commercial salmon harvest, salmon enhancement, PWSAC, VFDA, hatchery, cost recovery, sport fishery, subsistence fishery, personal use fishery, escapement, sockeye salmon, *Oncorhynchus nerka*, pink salmon, *Oncorhynchus gorbuscha*, chum salmon, *Oncorhynchus* keta, Chinook salmon, *Oncorhynchus tshawytscha*, coho salmon, *Oncorhynchus* kisutch, Pacific herring, *Clupea pallasi*.

# PRINCE WILLIAM SOUND AND COPPER RIVER COMMERCIAL SALMON FISHERIES

#### MANAGEMENT AREA DESCRIPTION

The Prince William Sound (PWS) management area encompasses all coastal waters and inland drainages entering the north central Gulf of Alaska between Cape Suckling and Cape Fairfield (Figure 1 and Figure 4). 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 5 species of salmon harvested by the commercial fishery. The management objective for all districts is the achievement of spawning escapement goals for the major stocks while allowing for the orderly harvest of all fish surplus to spawning requirements. In addition, the Alaska Department of Fish and Game (ADF&G) follows regulatory plans to manage fisheries and allow private non-profit (PNP) hatcheries to achieve cost recovery and broodstock objectives.

Six hatcheries contribute to the area's fisheries. Prince William Sound Aquaculture Corporation (PWSAC) operates 5 of the hatcheries. Gulkana Hatchery (GH) in Paxson augments production of sockeye salmon *Oncorhynchus nerka* in the Copper River. Cannery Creek Hatchery (CCH)

located on the north shore of PWS, and Armin F. Koernig (AFK) Hatchery in southwestern PWS produce pink salmon *O. gorbuscha*, Wally Noerenberg Hatchery (WNH) in northwestern PWS produces pink, chum *O. keta*, and coho salmon *O. kisutch* and Main Bay Hatchery (MBH) in western PWS produces sockeye salmon. Valdez Fisheries Development Association (VFDA) operates Solomon Gulch Hatchery (SGH) in Port Valdez and produces pink and coho salmon.

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

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

When Pacific Herring *Clupea pallasi* spawning biomass allows, an annual harvest level is determined for each of the 5 commercial fisheries. 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. The guideline harvest level established by the Prince William Sound Herring Management Plan, 5 AAC 27.365 govern all of the herring fisheries. The management objective for herring is to target fisheries on a high quality segment of the biomass while maintaining a minimum spawning biomass.

#### OVERVIEW OF AREA WIDE SALMON FISHERIES

The 2006 Prince William Sound Area commercial salmon harvest was 27.2 million fish (Table 1). The harvest was comprised of 21.7 million pink, 2.5 million sockeye, 2.2 million chum, 761,044 coho, and 31,634 Chinook salmon. Harvests of sockeye and coho salmon were above the 10-year average while harvests of the other 3 salmon species were below (Table 2). The 2006 preliminary estimated exvessel values for the 3 gear groups for both wild and enhanced salmon excluding hatchery cost recovery is \$11,347,734 (28.6%) for seine, \$27,393,197 (69.2%) for drift gillnet, and \$862,493 (2.2%) for set gillnet (Table 3). The average prices paid to fishermen were comparable to those paid in previous years (Table 4). Approximately 60% of the harvest, 16.3 million fish, was common property harvest and 10.9 million fish were sold for hatchery cost recovery (exclusive of post egg-take roe sales). Personal use, educational permits, and donated fish accounted for less than 1%. While hatchery returns of pink and chum salmon were below forecast levels, they were present in levels adequate to support hatchery cost recovery. In spite of this, PWSAC failed to achieve their cost recovery goal. This was the third consecutive year of PWSAC cost recovery short falls. No commercial fisheries for herring occurred in 2006 as a result of the spawning biomass being below the regulatory threshold of 22,000 metric tons of herring.

As the result of amendments made to the Prince William Sound Management and Salmon Enhancement Allocation Plan, (5 AAC 24.370) at the December, 2005 Alaska Board of Fisheries (BOF) meeting, and as the result of the 5-year average enhanced exvessel value for the purse seine gear group falling below 45%, seine permit holders were granted exclusive access to the Esther Subdistrict from June 1–July 21. Additionally, given that the 5-year average enhanced

exvessel value for the set gillnet gear group exceeded 5%, set gillnet permit holders were limited to no more than 36 hours per week after July 10.

### SALMON SEASON SUMMARY BY DISTRICT

#### **COPPER RIVER DISTRICT**

For more detailed information on this district see Appendices A1–A20, and Appendix E.

The Department of Fish and Game, with direction from the Alaska 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 5 AAC 24.360 Copper River District Salmon Management Plan. At the December, 1999 BOF meeting in Valdez, 5 AAC 24.361 COPPER RIVER CHINOOK SALMON FISHERY MANAGEMENT PLAN was amended to provide ADF&G both the tools and the discretion to manage early season fisheries as necessary to maintain the spawning escapement within the range of 28,000 to 55,000 Chinook salmon. In 2003 the BOF modified the spawning escapement goal to 24,000 or greater Chinook salmon. At the December 2005 BOF meeting, the Copper River Chinook Salmon Fishery Management plan was further amended to limit the number of commercial openings inside of the barrier islands, in weeks 20 and 21, to no more than 1 per week in order to increase the number of early Chinook salmon available to users in the uppermost reaches of the Copper River.

Management tools currently available to ADF&G, such as inriver sonar, aerial survey observations, and harvest data, provide fishery managers with indices of abundance that are used to regulate Copper River fisheries. Accurately monitoring inriver movement of salmon between the commercial fishing district and the Miles Lake sonar has long been recognized as a useful tool that could add precision to early season management actions. Working in the lower Copper River in May has proven to be challenging. Initial fish monitoring results may be used to confirm that inriver migration has begun, and may also provide an indicator to evaluate inriver escapement in response to commercial fishing effort before reliable Miles Lake sonar escapement trends are available. Beginning in 2002, the department, in cooperation with the Native Village of Eyak (NVE), established a lower river assessment project at the 27-mile bridge using split beam sonar to provide additional salmon migration information closer to the fishing grounds. Frequently this sonar has been available to monitor salmon migration when ice conditions at the Million Dollar Bridge delayed installation of the Miles Lake sonar.

In managing commercial harvest to provide for upriver escapement and allocations, the department's primary monitoring tool is the escapement index provided by the sonar counters at Miles Lake. Since 1996, combined upriver subsistence and personal use harvests have ranged from a low of 132,000 salmon in 2002 to a high of 225,000 in 1997 with an average of 180,000. A general increasing trend in subsistence harvests is reflected annually through additions to the inriver goal. Additionally, aerial escapement indices, marked otolith 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. Achieving biological escapement goals and satisfying other management plan provisions have remained the department's primary management objectives.

The Copper River District commercial fishing season has historically opened in mid May. This followed decades of "book openings" that ran from Monday mornings to Friday evenings.

Starting in 1968 periods were established in-season by emergency order. In general, fishing time has steadily been reduced over the years in response to increased efficiency of the commercial fleet, changing patterns in the fishery, and reallocations by the Alaska 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 current upriver sustainable escapement goal (SEG) for wild stock sockeye salmon is 300,000 to 500,000 fish. Adopted in 1972 and placed into regulation in 1980 (Fried 1994), the sockeye salmon spawning escapement goal was 300,000 fish until 2003 when the BOF adopted a range of 300,000–500,000 as the SEG (5 AAC 24.360(a)).

The Copper River District Salmon Management Plan outlines the biological and allocation categories that comprise the inriver goal for the Miles Lake sonar.

The components of the 2006 inriver goal were as follows:

Spawning escapement	300,000 to 500,000 sockeye
Other salmon	17,500 salmon
Subsistence/Personal Use harvest	178,500 salmon
Sport fishery	15,000 salmon
Gulkana broodstock	20,000 sockeye
Gulkana Hatchery surplus	106,000 sockeye
Total	637,000 to 837,000 salmon

Of the 7 categories contained within the inriver goal, the most significant increases over time have been in the hatchery surplus, subsistence, and personal use categories. In the early 1980s, the Miles Lake sonar minimum inriver goal was 350,000 salmon. Since that time, the minimum inriver goal has been as high as 768,000, primarily in response to large forecasts of enhanced sockeye salmon and increasing subsistence and personal use harvests.

The category of subsistence and personal use salmon within the inriver goal is set annually using the average of the previous 5 years harvests. In 2006, the 5-year average harvest from both the Glennallen Subdistrict and Chitina Subdistrict were combined and incorporated into the inriver goal. The number of hatchery surplus sockeye salmon within the inriver goal is determined annually using the Gulkana Hatchery run forecast to determine the surplus escapement of hatchery fish required to not exceed the average wild stock exploitation rate of 67% 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. A significant percentage of the hatchery surplus is taken during July and August in these upriver fisheries.

# **Preseason Outlook and Harvest Strategy**

The 2006 commercial harvest forecast for the Copper River District was 47,000 Chinook, 1.35 million sockeye, and 294,000 coho salmon, (Table 6). Enhanced sockeye salmon returns to the Gulkana Hatchery, (GH) were forecast to be 378,901 fish. PWSAC requires approximately 20,000 fish for broodstock leaving 359,000 hatchery sockeye salmon available for commercial, subsistence and sport harvests. The 2006 inriver goal for salmon passing Miles Lake was

636,718 to 836,718 fish. This number equated to a preseason sonar goal of 616,227 to 809,790 salmon by July 31, the normal season ending date for sonar counting at Miles Lake.

The traditional fishing schedule for the Copper River District is two evenly spaced periods per week, with periods generally occurring on Mondays and Thursdays. The duration of fishing periods is adjusted by emergency order as needed.

During years when the Miles Lake sonar is not active prior to the first opening, early season management of the Copper River District is based on actual harvest versus anticipated harvest combined with environmental conditions, fishing effort, harvest consistency throughout the period, and lower river sonar counts in response to commercial fishing effort taken into account. In late May, sonar counts and commercial harvest information become the primary factors governing management of the fishery. By mid June, aerial estimates of sockeye salmon escapement in Copper River Delta systems are also considered when scheduling commercial fishing periods. Because of the many spawning systems in the Copper River Delta, an actual weekly escapement index of selected sockeye and coho salmon systems is compared to an anticipated weekly escapement index. The SEG for Copper River Delta sockeye salmon stocks is 55,000 to 130,000.

Typically, coho salmon management begins in the second week of August. The historical precedent is to provide an initial single opening per week of 24-hours that is increased to either 48-hours, or a second fishing period is added as harvest or aerial survey numbers warrant. Aerial escapement estimates for the early portion of the coho salmon run are frequently not immediately available as other species of salmon remain in tributaries and can make accurate aerial identification problematic. Additionally, weather at this time of the year can make weekly survey flights difficult. The SEG for the Copper River Delta is 32,000 to 67,000 coho salmon.

#### Sockeye and Chinook Salmon Fishery Season Summary

The total run size for sockeye salmon to the Copper River District in 2006 was 2,593,215 fish with 57.8% commercially harvested, 6.7% harvested by upriver subsistence and personal use users, and an estimated 0.3% by upriver sport users. Sport users on the Copper River Delta harvested an estimated <0.1%. Educational permit and subsistence harvest in the Copper River District totaled an estimated 0.2%. The remaining 34.1% comprised the upriver and delta wild spawning sockeye escapement with an additional 1.0% returning to the Gulkana hatchery (Appendix A1). Overall, 69.0% of the sockeye salmon entering the Copper River originated from upriver wild spawning systems, 20.5% from delta spawning systems and 10.5% from the Gulkana hatchery (Appendix A2). The 2006 total Chinook run was 99,639 fish with 31.1% of those commercially harvested and <0.1% harvested through educational permits in the Copper River District, 5.0% harvested by upriver personal use and subsistence users, 4.7% harvested by upriver sport users, and the remaining 58.3%, (58,113) were spawning escapement (Appendix A3). This is within the SEG of 24,000 or more for Copper River Chinook salmon as defined by the Alaska Board of Fisheries in 5 AAC 24.361(a). The entire Chinook salmon run originated from wild upriver stocks.

The Copper River commercial sockeye salmon harvest was 1,496,754, 48.5% above the projected 1,007,402 and 2.5% below the 10-year average of 1,535,618 sockeye salmon (Appendix A4). The harvest of 30,278 Chinook salmon was 35% below the 10-year average of 46,814 fish. Escapement to the upper Copper River, 959,706 salmon, surpassed the minimum inriver escapement goal range of 637,000 to 837,000 salmon (Appendices A5 and A6) The

escapement index count for the Copper River delta systems was 98,896 sockeye salmon, and was within the SEG range of 55,000–130,000 (Appendix A10).

Based on strontium chloride otolith mark analysis, 163,691 Gulkana Hatchery sockeye salmon were harvested in the Copper River commercial fishery in 2006 accounting for 10.9% of the total sockeye salmon commercial harvest (Appendix E6). This is below the previous 10-year average of 324,355 hatchery sockeye salmon (Appendix E7). The majority were 5-year-old fish from the 2001 Gulkana Hatchery release of 13.9 million fry (Appendix E8). Additionally in 2006, there were an estimated 64,090 Main Bay Hatchery (MBH) sockeye salmon harvested in the Copper River District (Appendix E6).

The Miles Lake north bank sonar became operational on May 12 and observed salmon escapement on the second day of operation, with 18 fish counted. South bank sonar, as the result of extensive shore ice, became functional 11 days later on May 23 with 126 fish counted. Initially, on May 14, the river height was approximately 2.5 meters below the historical average. By May 25 the river height had increased approximately 1 meter (Appendix A7). This rapid increase in water level cleared shore ice and facilitated installation of the south bank sonar on May 23. The commercial fishing season opened on Monday, May 15, with a cumulative sonar estimate of 114 fish. The lower river sonar began observing fish passage through Flag Point Channel on May 8 with an estimated 32 fish counted for that day.

The first Copper River District commercial fishing period started at 7:00 am on May 15 and was open for 12 hours as was the second opening on Friday, May 19 at 7:00 am. During the second period, waters inside of the barrier islands from Copper Sands to Coffee Creek were closed by regulation (5 AAC 24.361(b)). The harvest from the first period was 2,989 Chinook, and 26,610 sockeye salmon. The second period showed slightly fewer Chinook salmon harvested from the outside waters with 2,626 landed, but significantly more sockeye salmon with 80,596 landed (Appendix A8). This compares to an expected harvest level of 80,956 sockeye and 7,347 Chinook salmon (Appendix A9).

The third 12-hour period occurred on Monday, May 22 with a harvest of 4,027 Chinook and 106,897 sockeye salmon. The inside waters were open during this period. The harvest during this period was above the expected level of 93,849 sockeye salmon, and below the level of 5,795 expected for Chinook salmon. From May 12 to May 22, escapement past the Miles Lake north bank sonar was sporadic, but typical for this site, with 0 to 102 fish counted per day. The cumulative count as of May 22 was 402 salmon. The minimum daily passage required to meet the inriver escapement goal was 7,700 fish towards a cumulative goal of 22,867 for that day.

On Wednesday, May 24 the decision was made by local research and management staff that an opening during the second half of that week was not possible given the cumulative escapement shortfall of over 31,000 salmon. Over the next 3 days, levels of salmon passage at the Miles Lake sonar slowly increased. On Saturday, May 27, a total of 11,102 fish had passed the sonar versus a minimum cumulative inriver goal of 79,009 fish by this date. The decision to open the fishery on Monday, May 29 was postponed from Saturday, May 27 to the following day to maximize the amount of sonar data available for the decision. The escapement deficit as of midnight Saturday, May 27 was 67,907 salmon. This increased to 73,957 at midnight the following day. Passage by the Miles Lake sonar remained depressed until Monday, May 29 when actual passage of 17,990 fish at the counters exceeded the minimum escapement goal of 13,820 for this date. Cumulative passage for May 29 was 36,802, versus a minimum inriver goal of 106,589 fish. Passage for

Tuesday, May 30 was just over double the daily minimum inriver goal, with 34,122 salmon passing the sonar by midnight. A 24-hour period, from 7:00 am Thursday, June 1 until 7:00 am Friday June 2, was announced on Wednesday, May 31. Harvest from this period was 199,193 sockeye and 3,349 Chinook salmon. This period saw the highest level of fleet participation in 2006, with 464 permit holders making deliveries. Salmon passage at the Miles Lake sonar remained high from May 31 through June 3, averaging just over 50,000 salmon per day. This level surpassed the previous record of 47,303 set on May 28, 1982. On Friday, June 2, the actual cumulative escapement surpassed the anticipated cumulative escapement, and a 12-hour opening was announced for Saturday, June 3, from 7:00 am to 7:00 pm. Harvest from this period was 54,845 sockeye and 1,917 Chinook salmon. The sixth period of the 2006 season was announced on Sunday, June 4, and was scheduled for 7:00 am Monday, June 5 through 7:00 am Tuesday, June 6. Harvest from this period was 57,534 sockeye and 3,328 Chinook salmon. Cumulative harvest through June 6 was 525,675 sockeye and 18,236 Chinook salmon. The expected cumulative harvest for this date was 563,251 sockeye and 39,588 Chinook salmon.

The next 4 periods from June 8–20 were all 36-hour openings beginning on Monday mornings at 7:00 am, or Thursday evenings at 7:00 pm. These periods showed declining vessel participation in the Copper River District as the Bering River District and other areas in Prince William Sound were opened to commercial drift gillnet harvest. Harvests from these periods ranged from 62,465 to 69,807 sockeye and 1,240 to 3,401 Chinook salmon (Appendix A8).

The first delta aerial survey of the season was flown on June 14 under excellent observational conditions. A total of 8,940 sockeye salmon were counted in index systems on the Copper River delta between Cordova and Point Martin. This was within the SEG range for this statistical week of 7,313–17,285 sockeye salmon (Appendix A10).

In response to daily fish passage at the sonar above the daily minimum inriver goal and an aerial survey count that was within the SEG, a 48-hour period from 7:00 pm on Thursday, June 22 to 7:00 pm on Saturday, June 24 was announced. The commercial sockeye salmon harvest from this period, 129,183 fish, was approximately double the harvests from any of the previous 4 periods, and likely the result of the increased time coupled with minus tides. On June 26, a 36-hour opening was announced, during which 83,906 sockeye and 573 Chinook salmon were harvested with 294 vessels delivering during the period. This is less than half of the Chinook harvest of previous periods and more than double the anticipated harvest of 244 fish. Participation in the Copper River District gillnet fishery continued to decline with only 244 permits delivering 65,193 sockeye and 356 Chinook salmon during the following 48-hour period from June 29 to July 1. Thus, with adequate escapement, as documented both by aerial surveys and the sonar at Miles Lake, the remainder of the sockeye season in the Copper River District consisted of twice weekly 48-hour openings. The Gulkana hatchery contribution peaked during period 16, (July 10-12) with 17,111 (26.9%) enhanced sockeye salmon harvested. Main Bay contribution to the Copper River District harvest peaked several weeks earlier during period 11 (June 22–24) with 20,321 (15.7%) enhanced sockeye harvested (Appendix E6). Aerial delta surveys conducted on July 10 and July 18 both documented delta sockeye salmon escapement levels above the minimum SEG (Appendix A10). Participation and harvest in the Copper River District commercial fishery declined for the remainder of July. Salmon passage at Miles Lake remained generally elevated during July, with passage towards the end of the month above expected levels (Appendix A5). As was the case in 2005, salmon were still passing the sonar on July 31 at levels that were 2-3 times the minimum anticipated passage rate when the sonar was turned off for the

season. The total estimated salmon passage at Miles Lake for 2006 from May 23 through July 31 was 959,706 fish. This was above the 2006 minimum inriver goal range of 616,227 to 809,790 salmon. The 2006 salmon return was similar in many respects to returns that occurred in 1997 and 1997 where passage was slightly delayed early in the season, followed by highly compressed passage of over 30 thousand salmon per day. Overall, 2006 ranks as the second largest sonar count on record for a season. The highest passage occurred in 1997 when a total of 1,148,079 salmon were counted by the sonar at Miles Lake.

Management for sockeye salmon continued until the third week of August. The 48-hour period that occurred on August 3 had 6,385 sockeye salmon delivered by 31 permit holders. Effort and harvest increased for the remaining two 48-hour periods with 128 permits delivering 27,516 sockeye salmon during the August 7–9 opening, and 143 permits delivering 17,939 during the August 10–12 period. Coho harvests increased markedly during these periods as well with 15,712 and 9,028 delivered, respectively (Appendix A8).

The final 2006 escapement index value for delta sockeye salmon stocks was 98,896 and was well within the SEG range for delta stocks of 55,000–130,000 sockeye salmon. Additionally, this is the largest index for delta stocks since 1999 when the index count was 100,975 (Appendix A11).

Upper Copper River aerial survey index counts for sockeye and Chinook salmon may be found in Appendices A12 and A13, respectively.

The majority of the sockeye salmon harvested commercially, 75.3%, were 5-year-old fish from brood year 2001, with 4-year-old fish and 6-year-old fish making up 19.6% and 4.6%, respectively. Less than 1% of the return was 3-year-old fish from brood year 2003. Over half of the sockeye salmon harvested, 55.7%, were males. (Appendix A14). The majority of the Chinook salmon harvested commercially, 62.0%, were 5-year-old fish from brood year 2001, with 6-year-old and 4-year-old fish making up 21.4% and 16.2%, respectively. Less than 1% of the return was 7-year-old fish from brood year 1999. Over half of the Chinook salmon harvested, 54.1%, were males (Appendix A15).

# **Coho Salmon Fishery Season Summary**

The 2006 total delta coho salmon run size is estimated to be 512,689 fish. A total of 318,285 (62.1%) coho salmon were harvested commercially. Of these, 137 were retained as "homepacks"; 1 was harvested from the Copper River district in a subsistence gillnet; 2,715 (0.5%) were harvested by personal use dipnetters in Chitina; 212 (<0.1%) were harvested in the Glennallen subsistence fisheries, an estimated 12,460 (2.4%) were harvested by sport users on the Copper River delta near Cordova, and an estimated 191 were harvested by upriver sport users (Appendix A17). Additionally, 148 coho salmon were reported harvested in federally managed subsistence fisheries (Appendix F6). The delta spawning escapement is estimated at 178,540. The aerial survey index for this season was 89,270 and was above the SEG range of 32,000 to 67,000 fish (Appendix A19). This index value is within the range of those observed from 2002 to 2005 and well above those from the previous decade, where delta coho stock returns were substantially depressed (Appendix A20). The total run size for coho salmon in the Copper River in 2006 is not known given that the number of coho salmon migrating upriver is not assessed.

The coho salmon harvest of 318,285 was 8.2% above the projected harvest of 294,168 (Appendix A18). Aerial escapement estimates of coho salmon were hampered by unusually

stormy conditions in Cordova. Of the 4 surveys flown from early August to early October, only 2 were complete surveys (Appendix A19).

The department met with the PWS Salmon Harvest Task Force and the public in April, where discussions included Copper River coho salmon management. It was decided that a single 24-hour period per week schedule would be maintained until escapement warranted either extending or decreasing fishing time. Deciding on the most appropriate fishing strategy to apply to the coho salmon run has been a contentious issue in the past. Two distinct fishing periods per week potentially allow for 2 "clean up" harvests to occur when milling coho salmon may be vulnerable to harvest. Unlike upriver sockeye and Chinook salmon that migrate to distant interior systems, delta coho and delta sockeye salmon typically linger in the near-shore region for a period of time prior to entering fresh water. The contention is that a single long period per week will allow a broader window of time for these fish to mill in the estuary, thus a higher probability of escaping the fishery. Arriving at a harvest strategy consensus between processors and the fishing fleet has proven difficult to achieve.

For ADF&G, the pattern of weak coho salmon runs to the Copper River District from 1996 to 2001 overrides the harvest strategy concern. Prior to 2002, harvests fell below projections and seasons ended prematurely due to weak returns. In 1997, coho salmon escapement into delta streams was weak enough to close the commercial season and a bag limit reduction was imposed for sport fishers. In 1998, weather during the fall precluded an accurate assessment of coho salmon escapement. Because of the recent history of poor coho salmon runs and inconclusive escapement data, the department approached this season with caution.

An aerial survey, just prior to the start of the coho season, was conducted on August 7 under fair conditions with 1,320 coho salmon observed in index streams. This was below the 2,025–4,240 SEG range for this statistical week. However, given the presence of significant numbers of sockeye salmon in coho index streams, an accurate aerial count was problematic.

The first opening for coho salmon began at 7:00 am on Monday, August 14 with a single 24-hour period. The harvest from this period was 12,519 coho and 11,849 sockeye salmon with 163 permit holders participating. Stormy weather during this period was likely a factor in the low harvest levels, as many boats did not fish the entire period. The anticipated harvest for this period was 36,334. The second opening occurred on August 21 and was for 36-hours. During this period 213 vessels participated, landing a total of 60,690 coho salmon versus an anticipated harvest of 56,340 fish. An aerial survey was not possible during this week due to poor weather conditions.

The third opening during the 2006 coho season was on August 28 for 24-hours. During this period 275 permit holders fished, landing a total of 63,156 coho salmon. An aerial survey was flown on August 28 under very good conditions with 20,250 coho salmon observed. This was within the SEG range of 16,147–33,807 for this statistical week. A second 24-hour fishing period, from 7:00 pm August 31 until 7:00 pm September 1, was announced during this statistical week as the result of these observations. Harvest from this period was 52,218 coho salmon. The cumulative coho salmon harvest from the 2 periods during this statistical week was 115,374. This was nearly double the anticipated harvest of 63,220 for this statistical week.

A 24-hour commercial period occurred on Monday, September 4 and another on Thursday, September 7, with a harvest of 35,620 coho salmon by 274 permit holders and a harvest of 23,156 coho salmon by 194 permit holders, respectively. Harvests from these 2 periods were

ahead of the expected harvest of approximately 57,746 coho salmon. Commercial harvests likely would have been higher if not for the continued stormy weather conditions that PWS experienced in the late summer and early fall of 2006. The next 24-hour period was on September 11 with 131 vessels participating and a harvest of 17,538 coho salmon. The next delta aerial survey on Monday, September 11, with excellent observational conditions, counted a total of 87,650 coho salmon. This was more than double the SEG range of 18,286–38,285 coho salmon for that statistical week.

As the result of increased escapement levels, the management strategy shifted to 48-hour openings. The first of these openings occurred at 7:00 pm on Thursday, September 14, with 11,597 coho salmon harvested by 78 permit holders. This management strategy continued the following week with 48-hour openings starting on Monday, September 18 and Thursday, September 21, with 7,572 coho salmon delivered by 83 permit holders and 1,348 coho salmon delivered by 20 permit holders, respectively. As mentioned previously, weather was a controlling factor during the 2006 coho season: it hampered weekly aerial escapement surveys, as the volume of precipitation and subsequent runoff increased silt levels in index streams. Additionally, it limited the ability of the commercial vessel operators to work effectively on the fishing grounds. The heavy rains likely also had an effect on movement of the coho salmon into fresh water. It appears that time spent holding and milling in near shore regions was minimized, and that returning coho salmon moved more quickly into freshwater systems than normal.

Beginning on September 25, all openings were 156-hours in length, lasting from 7:00 am Monday until 7:00 pm Sunday. There were 11 permits that fished during the September 25 to October 1 delivering 465 coho salmon. During the October 2–8 opening there was 1 permit holder that fished, delivering 10 coho salmon. Two additional 156-hour openings occurred on October 9 and October 16 with no commercial deliveries reported.

The majority of the coho salmon harvested commercially, 60.1%, were 3-year-olds from brood year 2003, with 4-year-old and 5-year-old fish making up 39.6% and 0.2%, respectively. Just over half, 50.5%, of the coho salmon harvested were males (Appendix A16).

#### BERING RIVER DISTRICT

For more detailed information on this district see Appendices A20–A26.

#### Preseason Outlook and Harvest Strategy

Opening in early June, the Bering River District is managed concurrently with the Copper River District.

#### **Sockeye Salmon Season Summary**

The 2006 harvest of 36,867 sockeye salmon from the Bering River District was approximately double the 10-year harvest average of 18,536 fish (Appendix A21). The sockeye salmon aerial survey count in the Bering River District index streams was 14,671 salmon. This was below the SEG range of 23,000 to 35,000 fish. This may be due in part to the reduced numbers of surveys that were flown in this area due to poor weather conditions, and to surveys that were incomplete, or conducted under less than ideal observational conditions (Appendix A22).

The first period for the 2006 season began on June 5 and was for 24-hours. There were 23 permit holders who fished this period landing a total of 3,226 sockeye and 124 Chinook salmon. Harvest and effort generally declined over the next several weeks, stabilizing at a harvest of less

than 1,000 sockeye salmon per period, harvested by less than 6 boats during a given period, from June 22 to July 8. From July 10 to July 19, sockeye salmon harvest levels and effort peaked for the season, with 16,600 sockeye caught by 44 permit holders during the July 13–15 period. The following period, from July 17–19, 4,381 sockeye were landed by 32 permit holders. The increased harvests combined with depressed escapement numbers led to the closure of the Bering River district for the remainder of the sockeye season.

Aerial surveys were conducted on June 14, 24, July 1, 10, 18 and, August 7 for sockeye salmon escapement (Appendix A22).

### **Coho Salmon Season Summary**

As the result of poor flying weather during the 2006 coho salmon season, only 4 aerial surveys were conducted from August 7 through September 25. These surveys indicated that coho salmon escapement was near or above anticipated levels (Appendices A24 and A25). The Edwards River peak coho salmon escapement was observed on September 25 with 5,400 coho salmon counted. The Katalla and Okalee Rivers had peak observed escapements of 8,900 coho salmon on September 11 and 90 coho salmon on September 25, respectively. Bering Lake had a peak observed escapement on September 11 with 13,000 coho salmon counted. The Gandil River had a peak observed escapement of 640 on September 25 and the Nichawak River had a peak observed escapement on September 11 of 3,200 coho salmon.

The coho salmon harvest of 56,713 fish was above the recent 10-year average of 48,167 (Appendix A21). The coho salmon SEG range of 13,000 to 33,000 fish was exceeded with a peak escapement index of 33,192 fish (Appendix A24).

In 2006, the Bering River District coho salmon fishery began on August 14 with a 24-hour fishing period. The district was managed concurrently with the Copper River District until the close of the season on October 8. Peak fishing effort was during the 24-hour period starting on September 4 when 44 permit holders harvested 9,919 coho salmon. Peak harvest occurred when 27 permit holders harvested 12,686 coho salmon during the 48-hour period starting September 14. The actual total harvest of 56,713 was above the anticipated harvest of 48,167 coho salmon (Appendix A25). Commercial fishing and aerial surveys in the Bering River district were both problematic in 2006 as the result of unusually stormy conditions from early August through mid October.

#### COGHILL DISTRICT

For more detailed information on this district see Appendices B1–B8.

### **Preseason Outlook and Harvest Strategy**

The 2006 forecast of sockeye salmon returning to Coghill Lake was 54,000 fish. Meeting the minimum biological escapement goal of 25,000 sockeye salmon would leave 29,128 fish for the CPF (Table 6). Enhanced chum salmon returns to the Wally Noerenburg Hatchery (WNH) were forecast to be nearly 2.0 million fish (Table 6). PWSAC's projection for cost recovery and broodstock requirements was approximately 1.2 million fish, leaving 752,000 chum salmon for the CPF. An estimated 54,460 coho salmon were projected to return to the WNH (Table 6); of these, PWSAC's projection for broodstock requirements was approximately 1,100, leaving 53,360 available to the CPF.

PWSAC, elected to harvest 60% of the pink, chum and sockeye salmon as cost recovery before having CPF openings in the various hatchery subdistricts. The department retained the option of opening the CPF in the event that cost recovery did not keep pace with run entry in order to minimize loss of fish quality.

In December 2005, the Alaska Board of Fisheries modified the Prince William Sound Management and Salmon Enhancement Allocation plan 5 AAC 24.370. The modifications eliminated wild stocks and Valdez Fisheries Development Association enhanced fish from the existing plan and allocated only Prince William Sound Aquaculture Corporation (PWSAC) enhanced fish. Additionally, a 5-year average exvessel value is now used rather than annual value percentages. The drift gillnet and purse seine gear groups are each to receive 50% of the CPF value of PWSAC enhanced salmon stocks (excluding the set gillnet harvest). The trigger point, that allows access to specific areas for corrections in allocation, was changed from 40% to 45%, making the plan more responsive to allocation shortfalls. Exvessel values are calculated using prices from the Commercial Operators Annual Report and ADF&G harvest estimates of PWSAC enhanced fish by species and gear type.

Allocation decisions for the 2006 season were based on the 5-year (2000–2004) average value percentages for each gear type. These 5-year average values are: 56% drift gillnet, 44% purse seine, and 7% set gillnet. As a result, the purse seine gear group had exclusive access to the Esther Subdistrict in 2006 from June 1 through July 20, and the set gillnet gear group was limited to no more than 36-hours per week, beginning July 10. Additionally, as specified in regulation, the Granite Bay Subdistrict was closed to commercial fishing because the purse seine fleet was allowed to harvest enhanced salmon in the Esther Subdistrict prior to July 21. The board further directed that the commissioner may open the Esther Subdistrict if there is a buildup of returning hatchery fish stocks that would otherwise suffer a deterioration of quality.

#### **SEASON SUMMARY**

The Coghill weir was fully deployed and fish tight on June 9. The weir was maintained until July 25 when it was dismantled as the result of high water. Sockeye salmon escapement was 23,479 through July 25, and above the minimum level for that date required to achieve the SEG of 25,000 (Appendices B1, B2, and B3).

The CPF sockeye salmon harvest for the Coghill District was 102,379 fish. The total CPF chum salmon harvest was 563,800; and the CPF harvests for pink and coho salmon were 1,373,036 and 113,997, respectively (Appendices B4 and B5). PWSAC reported a cost recovery harvest of 808,384 chum salmon and a broodstock harvest of 217,146 chum salmon, as well as a total harvest of 2.6 million pink salmon for cost recovery and broodstock requirements.

There were 93,931 MBH sockeye harvested in the Coghill District commercial fishery, accounting for 91.7% of the 102,379 total sockeye salmon harvest (Appendix E9). There were 563,800 chum salmon harvested in this district by the CPF, with 552,838 (98.1%) of WNH origin, 2,539 (0.5%) straying from Port Chalmers in the Montague District, and 8,423 (1.5%) originating from wild stocks (Appendix E11). Of these fish, 96,435 sockeye and 266,233 chum salmon were harvested by the drift gillnet fleet and the remainder by the purse seine fleet (Appendices B4 and B5)

The common property gillnet fishery began in the Coghill District on June 5. A schedule of two 48-hour openings per week, coinciding with openings in the Copper River and Bering River districts was maintained through July 19 with management for the common property pink

salmon fishery beginning on the following day. During periods 5 and 6 (June 19-21 and June 22-24, respectively), as the result of diminished sockeye numbers past the Coghill weir, the northern portion of the Coghill District (Port Wells) was closed. The intent of this was to reduce harvest in the district on wild sockeye salmon stocks returning to Coghill Lake. Passage by the weir increased and was within the expected SEG range by the end of period 6. During these fishing periods and throughout the following week, ADF&G began getting reports of chum salmon building in portions of the Granite Bay Subdistrict. During this period of time, the cost recovery harvest of chum salmon at the WNH slowed considerably, with only 383,000 chum salmon harvested by June 21, and 421,000 by June 25 (Appendix E13). In accordance with 5 AAC24.370(5)(C)(ii), ADF&G made recommendations to the PWSAC General Manager that he request that ADF&G open portions of the Granite Bay Subdistrict to hatchery cost recovery harvest. The General Manager, on Wednesday, June 28, requested that a portion of the Granite Bay Subdistrict be opened for cost recovery with the condition that the department waive PWSAC's requisite funding of otolith sampling for this cost recovery fishery. Otolith sampling is a required condition of cost recovery whenever cost recovery occurs outside of an established hatchery SHA. Given that otolith sampling is a tool that the department and PWSAC use to determine the proportion of hatchery fish harvested for cost recovery, the department was unable to grant this request. A 12-hour CPF seine opening was announced in the Granite Bay and Esther subdistricts from 8:00 am to 8:00 pm on Friday, June 30. This was followed by a 48-hour CPF drift gillnet opening in the Granite Bay Subdistrict, from 8:00 am Monday, July 3 to 8:00 am, on July 5. Harvest from these 2 openings was 270,685 and 39,780 chum salmon, respectively. PWSAC declared chum cost recovery completed on July 27 (Appendix E13) with a final chum cost recovery harvest of 819,236. This was 174,764 fish below their cost recovery goal of 994,000 chum salmon.

On 20 separate occasions PWSAC requested that ADF&G expand the WNH SHA by Emergency Order (EO). These requests were granted to facilitate hatchery cost recovery harvest. On June 23 and 26, July 5, 19, 22, 26 and 29, and on August 2, 9, 12 and 16 the department expanded the SHA to within ½ nautical mile of the southern shore of Esther Island. On June 9, 14, 17 and 21 the SHA was expanded into portions of Lake and Quillian bays. On June 19 and 21 the SHA was expanded into portions of Esther Bay. On June 28 and July 4 the SHA was expanded into all waters of the THA, and on July 8 the SHA was expanded to include all waters of the Esther and Granite Bay subdistricts within 0.5 nautical mile of shore. As documented by otolith sampling and evaluation, salmon harvested for cost recovery at WNH were >99% hatchery produced fish.

On June 28 sockeye salmon cumulative escapement at the Coghill weir was 6,912, which was above the minimum SEG of 3,978 for that date. In response, deep gillnet gear was allowed starting with the June 29 fishing period, 4 days earlier than is defined in regulation (5 AAC 24.331(b)(6)). Additionally, anadromous stream closures were suspended within the Coghill Lagoon for this and the next 3 periods. The sockeye salmon harvest from June 29–July 1 was 22,465 fish and was 100% Main Bay Hatchery origin. Drift gillnet participation declined from 124 permits during the July 3–5 period to 67 the following period. Participation remained at approximately this level for the next week and a half. Beginning on July 21, in accordance with 5 AAC 24.370(e)(5)(B), the seine fleet was permitted in the Coghill District. Gillnet harvest declined sharply after July 19, and ended on July 29. Prior to the week of August 13, there were 2 periods per week, beginning at 8:00 am on Monday and at 8:00 am on Friday. There were no openings in the Coghill District from August 13–18 as wild pink salmon escapement levels lagged behind anticipated escapement levels and as PWSAC cost recovery only slowly

approached the \$3.9 million cost recovery goal. Daily 12-hour openings of the Coghill District began on August 19 and continued through September 8, when commercial landings of coho salmon surpassed landings of pink salmon and the district was closed to seine fishing. On September 9, at 8:00 am, the Coghill District reopened to gillnet harvest for 36-hours. From September 11 through October 1, the Coghill District opened for weekly 156-hour periods. During the first 2 openings, 39,454 coho salmon were harvested by 85 permit holders and 22,271 coho salmon were harvested by 60 permit holders, respectively. PWSAC requested a restriction of the fishery in the hatchery subdistrict while additional broodstock were collected as the result of sea lions destroying a sizeable portion of the broodstock during the week of September 17. The northern portion of the SHA was closed during the 156-hour period from September 25 to October 1. During this period 1,614 coho salmon were harvested by 20 permit holders. With less than 500 of the required 1,100 coho salmon in hand for broodstock purposes by the middle of the last week of September, PWSAC recommended closing off the majority of the SHA to commercial harvest. This SHA closure occurred during the last 2 periods of the season (Sunday, October 2 to Wednesday, October 4 (60 hours) and Wednesday, October 4 to Sunday, October 8 (96 hours), respectively). No commercial deliveries were reported during either of these periods. The 2006 coho salmon drift gillnet harvest for the Coghill District was 97,002 fish, which is over 5 times the 10-year average of 18,994 coho salmon. The 2006 coho salmon gillnet harvest from the Coghill District was only surpassed by the 1990 harvest of 128,605 fish (Appendix B6.)

The estimated age and sex compositions of sockeye salmon harvested in the commercial fishery and at the Coghill weir can be found in Appendices B7 and B9.

#### UNAKWIK DISTRICT

For more detailed information on this district see Appendices B10–B11.

#### **Preseason Outlook and Harvest Strategy**

The Unakwik District is the smallest district in the Prince William Sound management area. Both drift gillnet and purse seine gears are allowed during all fishing periods. This district was established for management of relatively small runs of sockeye salmon to Cowpen and Miners Lakes. Escapement enumeration is by aerial survey; however, water clarity is marginal, thus escapement indices are considered imprecise at best. A major pink salmon hatchery, Cannery Creek Hatchery, borders the southern boundary of the district.

#### **Season Summary**

The total 2006 Unakwik District harvest was 698 sockeye, 1 coho, 36 pink, 171 chum, and 1 Chinook salmon (Appendices B10 and B11). There were no reported landings by purse seine permit holders during the 2006 season. The sockeye salmon harvest in 2006 was the second smallest annual combined (gillnet and seine) harvest in the last 20 years. This harvest was also less than 10% of the 10-year average annual combined harvest of 8,157 (Appendix B11). The Unakwik District opened on June 5 for a 48-hour period, and followed a schedule of 2 evenly spaced periods per week, concurrent with that of the Copper River District, until the district was closed for the season on July 22. Peak harvest occurred during period 8 (June 29–July 1), with 177 sockeye salmon landed by 4 permit holders. There were a total of 18 deliveries made by 10 drift gillnet permit holders during the entire 2006 season.

#### ESHAMY DISTRICT

For more detailed information on this district see Appendices C1–C8.

#### **Preseason Outlook and Harvest Strategy**

The 2006 forecast of sockeye salmon returning to Eshamy Lake was 45,000. Meeting the midpoint BEG of 30,000, would leave approximately 15,000 fish for the common property set and drift gillnet fisheries. Total onsite returns to Main Bay Hatchery (MBH) were projected by PWSAC to be 573,400 sockeye salmon. Most of the projected run, 506,000 sockeye salmon, was stock of Coghill Lake origin, of which 7,930 fish were to be used for broodstock and 196,000 fish were to be harvested for cost recovery, with the remaining 302,000 fish available for harvest by participants in the common property fisheries. Once cost recovery goals had been achieved, a CPF opportunity was anticipated to occur within the hatchery subdistrict. The later timed Eshamy stock, projected at 8,500 fish, was to be available exclusively to the CPF. These fish represented the last of Eshamy stock production at the MBH, and therefore no broodstock was to be collected. At the April SHTF meeting, the first gillnet opening in the Crafton Island Subdistrict was slated to occur during the week of June 11. As indicated at the meeting, if needed, fishing periods were to be reduced to less than 12-hours, as an alternative to omitting a fishing period. Under the Prince William Sound Management and Salmon Enhancement Allocation plan (5 AAC 24.370), the set gillnet gear group allocation for 2006 is 4% of the 5-year average value of PWSAC enhanced salmon stocks. If the set gillnet gear group were to catch 5% or more of the 5-year average value of PWSAC enhanced stocks, then beginning July 10 the following year, they would be limited to no more than 36-hours of fishing time per week. Because the 5-year average value, from 2000 through 2004, was 6.3%, weekly time limits after July 10 were to be imposed.

## **Season Summary**

The Eshamy weir was fully deployed and fish tight on July 6. The weir was maintained and fish counted until August 25 (Appendices C1 and C2). Total escapement through the weir for the season consisted of 41,823 sockeye, 3,585 pink, 608 chum, and 196 coho salmon. The 2006 sockeye salmon escapement was above the 10-year average of 29,608 fish (Appendix C3) and above the BEG range of 20,000-40,000 for this system.

The run timing of Coghill Lake sockeye stock returning to the MBH was expected to be from mid June to late July, with the peak anticipated on July 4. PWSAC anticipated installing the barrier seine in mid June to begin broodstock collection. The initial commercial opening of the 2006 season was a 24-hour period on Monday, June 12 (Appendices C4 and C5). During this period 391 sockeye salmon were landed by 2 drift gillnet and 5 set gillnet permit holders. During the next 24-hour period, 26 drift gillnet permit holders landed a total of 5,166 sockeye salmon and 10 set gillnet permit holders landed a total of 3,415 sockeye salmon.

Through June 25, PWSAC harvested 48,000 sockeye salmon, or 25% of their preseason sockeye salmon revenue goal. In light of this robust cost recovery harvest, 24-hour periods occurred on Monday, June 26 at 8:00 am, and on Thursday, June 29 at 8:00 pm. The Main Bay Hatchery Subdistrict, excluding the SHA and THA, was open for both of these periods and was opened for all remaining periods, with the exception of the July 3 opening. Harvest from these 2 periods totaled 170,008 sockeye salmon for both gillnet gear types.

On Monday, July 3, PWSAC announced that they would be increasing their sockeye salmon cost recovery goal from \$1.18 million to \$1.68 million in an effort to receive increased economic benefits from an unexpectedly robust return. By that date, PWSAC had harvested a total of 137,000 sockeye salmon for cost recovery, which represented 70% of the *preseason* sockeye salmon cost recovery goal.

There were 2 harvest periods during the week of July 2. A 12-hour period occurred on Monday, July 3, with 82 drift gillnet permit holders landing 28,923 sockeye salmon, and 19 set gillnet permit holders landing 13,497 sockeye salmon. On Thursday, July 6, a 24-hour period occurred with a total of 100 drift gillnet permit holders landing 54,655 sockeye salmon and 21 set gillnet permit holders landing 21,486 sockeye salmon.

From July 3 to July 9, PWSAC harvested approximately 80,000 additional sockeye salmon for cost recovery. The total cost recovery harvest through Sunday, July 9 was 217,000 sockeye salmon, thus surpassing their initial goal of 196,000 fish and approaching the updated goal of 248,000 sockeye salmon.

During the week of July 9, there were two 24-hour periods for the drift gillnet fleet, and one 24-hour and one 12-hour period, in accordance with 5 AAC 24.370(f), for the set gillnet fleet. The set and drift gillnet fishing periods on Monday, July 10 were concurrent, with both 24-hour fishing periods beginning at 8:00 am. During the Thursday, July 13 fishing periods, both gear groups started at 8:00 am, with the set gillnet closing at 8:00 pm that evening, and the drift gillnet closing at 8:00 am on Friday morning. The starting times for the 12-hour set gillnet periods were changed from an evening opening to a morning opening based on discussions that occurred the previous April at the SHTF meeting. The drift gillnet harvest from this week totaled 84,849 sockeye salmon and the set gillnet harvest was 20,509 sockeye salmon. On Thursday, July 13, PWSAC announced that 235,000 sockeye salmon had been harvested towards the updated harvest goal (248,000 sockeye salmon), and that cost recovery would continue once the updated harvest goal had been met. The final updated harvest goal was stated as now being a minimum of 40% of the actual return.

Through July 15, a total of 276,000 sockeye salmon had been harvested for Main Bay cost recovery. Additionally, the CPF harvest from the Eshamy District was 402,899 through July 15. With the inclusion of the 7,900 sockeye salmon collected for broodstock by PWSAC and deducting the wild sockeye salmon of approximately 5,000 harvested by the CPF in the Eshamy District, a cost recovery harvest of 40.5% of the overall return to the Eshamy District was determined.

The following week, July 16–22, a 24-hour period and a 48-hour period were opened for the drift gillnet fleet, with the set gillnet fleet maintaining the one 24-hour and one 12-hour period a week schedule. Combined CPF harvest for this week was 48,335 sockeye salmon. This is a drop of over 50% compared to the previous weeks combined commercial harvest.

With the peak of the Coghill Lake return past, the weekly CPF and PWSAC harvests declined sharply. Only 18,569 sockeye salmon were harvested by the CPF fleet and 16,578 by PWSAC from July 23–29. This trend continued with a CPF harvest of 10,104 sockeye salmon by 27 permits during the week of July 30–August 5.

MBH cost recovery ended on August 3, with a total of 345,733 enhanced and 2,423 wild sockeye salmon harvested (Appendix E17). An overall total of 1.03 million sockeye salmon produced by

MBH returned to PWS. The commercial harvest of MBH produced fish in Area E was 668,780, or 64.7% of the total return. This total return was the third largest sockeye return on record for the MBH, and is above the previous 10-year average of 669,405 (Appendix E18).

During the week of August 6–August 12, 8,868 sockeye salmon were harvested by 17 permit holders in the Eshamy District. On August 15, the Eshamy River cumulative escapement was 27,822 sockeye salmon. With a minimum BEG of 15,423 for that date, the Eshamy Lagoon was opened to commercial fishing on Thursday, August 17. An overall harvest of 11,564 was taken from the South Crafton Island Subdistrict (statistical area 225-30), with 20 drift gillnet permit holders and 1 set gillnet permit holder fishing during this period. Additionally, the August 17 period was the last period where there were set gillnet deliveries during the 2006 season. Harvest from the following week, August 20–26, declined to 4,335 sockeye salmon taken by 19 permit holders. The final drift gillnet harvest for the season, 440 sockeye salmon landed by 3 permit holders, occurred the following week. All harvest from the final 2 weeks of the season came from the South Crafton Island Subdistrict, where portions of the Eshamy Lagoon were opened to commercial harvest.

The peak harvest for both drift and set gillnet in the Eshamy District occurred during the third period, June 26–27, when 91 drift gillnet permit holders harvested 71,705 sockeye salmon and 18 set gillnet permit holders harvested 24,551 sockeye salmon. In total, 178 drift gillnet and 26 set gillnet permit holders participated in the Eshamy District harvest in 2006.

The estimated age and sex compositions of sockeye, harvested in the commercial fishery and at the Eshamy weir can be found in Appendices C7 and C8.

#### GENERAL PURSE SEINE DISTRICTS

For more detailed information on this district see Appendices D1–D12.

#### Preseason Outlook and Harvest Strategy

The 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 monitored through the season by weekly aerial surveys of 208 index streams. Management to achieve hatchery corporate escapement goals is accomplished by opening and closing hatchery subdistricts. Subdistrict openings are also utilized to target fishing effort on hatchery stocks when wild salmon escapement is weak.

The 2006 pink salmon forecast for PWS was 31.5 million fish. This estimate includes 4.7 million wild stock fish, 11.6 million VFDA fish, and 15.3 million PWSAC hatchery fish. The basis for the hatchery forecast was the release of approximately 600 million pink salmon fry in 2004. Approximately 7.9 million pink salmon (53%) of the projected 15.3 million pink salmon returning to the PWSAC hatcheries were estimated to be needed for cost recovery and broodstock. The remaining 7.6 million PWSAC fish were intended to be available for CPF. Approximately 4.6 million pink salmon (40%) of the projected 11.6 million pink salmon returning to the VFDA hatchery were anticipated to be needed for cost recovery and broodstock. The remaining 7.0 million VFDA fish were intended to be available for CPF. The price that VFDA and PWSAC receive for their sales harvest fish influences the actual CPF and cost recovery harvest proportions of enhanced stocks. A total of 2.6 million wild stock pink salmon are projected to be available for harvest leaving 2.0 million fish in the escapement.

The 2006 chum salmon forecast total return in Prince William Sound was 3.50 million fish. The majority (84%) was anticipated to be the result of PWSAC hatchery production. PWSAC forecasts a run of 1.97 million chum salmon to WNH. PWSAC planned to harvest 1.3 million chum salmon (66% of the total return) for cost recovery and broodstock. The remaining 670,000 chum salmon were anticipated to be available for the purse seine CPF. PWSAC also forecast a 480,000 enhanced chum salmon run to Port Chalmers and 380,000 fish to AFK. All Port Chalmers chum salmon are intended for harvest by the purse seine CPF. Based on the department's wild chum salmon forecast of 531,000 fish, there was a potential CPF of 330,000 wild chum salmon.

At the April, 2006 SHTF meeting, ADF&G identified potentially poor 2006 pink salmon returns based on poor returns and very dry spawning conditions in the 2004 parent year. The SHTF discussed the pink salmon harvest strategy in anticipation of a potential poor pink salmon return. The strategy would initially focus fishing effort in hatchery terminal areas to allow for a continued CPF while limiting wild stock interception. The department would open additional areas as wild stock aerial survey estimates indicated adequate numbers of returning fish to meet escapement goals.

Both VFDA and PWSAC produced moderate numbers of coho salmon in 2006. PWSAC's expected 2006 return of coho salmon to WNH was 58,500 fish. Approximately 1,400 fish were required for broodstock leaving 57,000 fish for CPF. The Coghill District is managed for pink salmon after July 21, when the harvestable surplus is predominantly pink salmon. The 2006 return of coho salmon to the VFDA hatchery was anticipated to be 238,000 fish. A total of 1,000 salmon were anticipated to be needed for VFDA broodstock. Port Valdez was closed to CPF north of a line from Entrance Point to Potato Point beginning on August 26. Port Valdez was open on September 5 to target surplus VFDA produced coho salmon.

## **Chum Salmon Season Summary**

The PWS 2006 chum salmon purse seine CPF of 1.03 million fish was composed of approximately 124,000 wild fish and 913,000 hatchery fish (Appendix D). This harvest composition is calculated as the total purse seine chum salmon harvest multiplied by the hatchery and wild proportions of total PWS harvest contribution estimates. PWSAC fell more than \$400,000 short of the 2006 chum salmon cost recovery goal despite adequate numbers of fish. A portion of that loss was recovered from roe sales of 22,000 chum salmon (female only count) for \$110,000.

Aerial surveys to assess wild chum salmon escapements in the Eastern and Northern Districts began in mid June. Surveys in all other purse seine districts started in early July. Wild chum salmon escapement estimates were equal to or exceeded anticipated counts in all areas. CPF targeting wild chum stocks was limited by low pink salmon escapement estimates. Pink and chum salmon travel and spawn in the same areas creating a mixed species/stock fishery. In mixed species/stock fisheries, if one component requires protection from fishing effort because of low numbers it limits fishing on stocks that are not of concern.

The escapement estimate of 229,940 chum salmon was well above the SEG of 91,000 fish. The chum salmon escapement was at least double the escapement goal for all districts (Appendix D). The Eastern, Northern, and Southeastern Districts comprise 68% of the expected chum salmon escapement goal.

#### **Pink Salmon Season Summary**

Pink salmon returns in 2006 were generally late and weaker than forecast. Because of that run entry pattern, all CPFs were delayed until PWSAC announced it had completed 100% of cost recovery. PWSAC fell more than \$340,000 short of the 2006 pink salmon cost recovery goal despite adequate numbers of fish. A portion of that loss was recovered from roe sales of 178,000 fish (female only count) for \$186,000. The department was not informed of the cost recovery shortfall until it was announced postseason at the PWSAC Board of Directors meeting on October 2.

Aerial surveys to assess early chum and pink salmon escapements in the Eastern and Northern Districts began in mid June. Surveys began in all other PWS districts in July. Despite limited fishing opportunity, pink salmon escapement in the Eastern, Southwestern, and Southeastern districts ended below the SEG.

#### **Eastern District Summary**

VFDA's 2006 Solomon Gulch Hatchery pink salmon run was forecast to be 11.59 million fish, assuming a 5.21% marine survival from the 2004 fry release of 222.5 million. The 2006 cost recovery goal was approximately \$2.7 million and VFDA would require 4.50 million pink salmon for cost recovery and 323,000 salmon for broodstock. Approximately 7.4 million pink salmon were forecast to be available for CPF.

The 2006 VFDA enhanced pink salmon return of 8.60 million pink salmon was below forecast and composed of 4.84 million CPF fish and 3.76 million cost recovery fish. The VFDA cost recovery harvest was composed of 3.75 million VFDA fish and 103,000 wild pink salmon. Additionally VFDA harvested 62,000 pink salmon (34,500 females) for roe during the egg-take process. The majority of VFDA pink salmon were harvested in the Eastern District with a CPF harvest of 5.71 million fish composed of 4.67 million VFDA fish and 1.01 million wild stock fish. Approximately 136,000 VFDA pink salmon were harvested in the Port Chalmers Subdistrict remote release chum salmon fishery. The 2006 Eastern District harvest was composed of 5.71 million pink salmon, 113,079 chum salmon, 4,818 sockeye salmon, 223,481 coho salmon, and 24 Chinook salmon (Appendix D).

The presence of approximately 100,000 wild stock fish in the cost recovery was a surprise concern for ADF&G and VFDA. The department expanded the SHA to Entrance Point, at the mouth of Port Valdez, at the beginning of cost recovery operations. Cost recovery and run-entry monitoring were aided by an expanded SHA. Fishing at Entrance Point also helped to maintain the high fish quality for which VFDA has developed a reputation. Additionally the harvest rate and female percentages allowed managers to gauge run strength and timing. It is likely that the interception of the wild stock fish occurred in the expanded SHA near the entrance of Port Valdez. In the future managers will need to be cautious about expanding the SHA for extended times without sampling the cost recovery to gauge wild stock composition.

Starting in mid July, after initial slow run entry, pink and chum salmon aerial escapement estimates at stream mouths were above anticipated counts. Concurrently, the VFDA pink salmon return slowed and harvest effort began to increase on wild stocks in the district. As fishing pressure increased the frequency of openings was reduced from an every-other day VFDA/Port Valdez schedule to a 2 periods per week schedule. Stream mouth and combined (bay, mouth, and stream) escapement estimates were above anticipated counts by early August.

Wild stock pink salmon escapement was below the SEG range in the Eastern District. The 2006 adjusted aerial pink salmon survey index was 248,592 fish, below the even year SEG mid point of 677,500 pink salmon. By the end of season, the mouth counts were 85% higher than anticipated. This indicated that an adequate number of fish were present in the district but had not yet entered the steams to be counted towards the SEG. The 2006 adjusted aerial survey index of 109,403 chum salmon was above the SEG mid point of 90,000 chum salmon (Appendix D).

The purse seine fleet harvested approximately 220,000 VFDA enhanced coho salmon in 2006. VFDA harvested 16,000 coho salmon (5,000 females) for roe during the egg-take process. The waters of Port Valdez north of the latitude of Rocky Point were opened on September 5 to allow the harvest of coho salmon returning to Solomon Gulch Hatchery (Appendix D). VFDA expressed concern that allowing the fleet into Port Valdez near the hatchery could jeopardize coho salmon broodstock collection. The department provided a closed area buffer around the hatchery to protect coho broodstock.

The majority of purse seine wild chum salmon harvest in PWS occurred in the Eastern District with a harvest of 110,853 wild fish an additional 2,226 hatchery fish.

#### **Southeastern District Summary**

The Southeastern District had limited time and fishing effort in the 2006 season. A total of 10 Southeastern District CPF periods were scheduled intermittently as escapement estimates allowed but always concurrently with the Eastern District openings. A total of 16 permits reported 25 landings in the Southeastern District. Peak effort and harvest occurred on July 21 when 20,092 pink and 9,744 chum salmon were harvested. Of the 10 CPF periods, 5 periods had no fishing effort. The 2006 Southeastern District harvest was composed of 21,805 pink, 17,171 chum, 65 sockeye salmon, and 34 coho salmon, and 7 Chinook salmon (Appendix D).

Southeastern District wild stock pink salmon escapement remained below the anticipated escapement count for most of season. Because of the poor escapement, fishing opportunity was limited. The 2006 adjusted aerial pink salmon survey index was 178,009 fish, well below the even year SEG range of 215,000–470,000 fish. The 2006 adjusted aerial chum salmon survey index was 26,739 fish above the SEG of 8,000 chum salmon (Appendix D).

#### **Southwestern District Summary**

Fishing in the Southwestern District started in late May to target remote release chum salmon at the AFK SHA. Eight consecutive 156-hour periods were initiated in the Southwestern District on May 29 through July 23 to harvest enhanced chum salmon. The AFK chum salmon remote release returned a harvest of 107,569 (28%) of the 380,000 forecast. That harvest was composed of 78,012 WNH and 27,798 Port Chalmers fish. No chum salmon with AFK thermal marks were harvested at AFK. Interestingly, 15,376 MBH sockeye salmon were harvested in the AFK SHA during those initial eight 156-hour periods. There were 8,839 sockeye salmon harvested during the remainder of the season for a total of 24,215 fish. The department has been concerned about the interception of wild sockeye during early-season fishing in the Southwestern District. For that reason early-season fishing area is limited to only the AFK SHA. Despite the limited area a significant number of sockeye salmon were harvested. Otolith sampling revealed that they were all of MBH origin and ADF&G kept the same fishing area open. The enhanced sockeye salmon interception at the AFK SHA is likely related to the MBH sockeye salmon return that exceeded the forecast by over 50%. The department arranged with Icicle Seafood and their seine fleet to

report any abnormal sockeye salmon harvest (>500 fish) in this fishery. They also provided an opportunity to sample the harvest to determine stock composition. This is an important arrangement because the long 156-hour periods could allow for the harvest of an excessive number of fish without reporting until the next week.

In 2006 PWSAC fell 11% short of their 2.68 million pink salmon cost recovery goal at AFK with a harvest of 2.38 million fish. The broodstock goal of 418,000 fish was exceed by 10% (42,000 fish). A portion of the cost recovery shortfall was recovered from roe sales of 59,000 pink salmon (female only count). The AFK enhanced pink salmon return of 4.76 million fish was 80% of PWSAC's preseason 5.89 million fish projection. The total Southwestern District pink salmon CPF harvest of 3.27 million fish was composed of 247,000 wild stock, 2.35 million AFK, 439,000 WNH, 222,000 CCH, and 6,700 VFDA fish.

Run entry at AFK was weak and late, with a daily average of 37,000 pink salmon harvested for cost recovery from July 24 to August 4. The average daily cost recovery harvest for that time period in 2005 was 169,000 and in 2004 was 86,000. Run entry gradually increased through the rest of the season with a daily average of 140,000 pink salmon harvested from August 5 to 18. Pink salmon CPF did not start until August 19 because of the slow cost recovery progress.

A large concentration (>250,000) of pink salmon were reported in Prince of Wales passage. In the past AFK enhanced pink salmon were known to hold in this area and it was assumed that most of those fish were hatchery fish. The department opened the CPF in Prince of Wales Passage despite lower than anticipated Southwestern District escapement counts because of the past stock composition of fish holding in this area. A total of 373,000 pink salmon were harvested from that area during this single 12-hour period. Otoliths analyzed for thermal marks determined that approximately 9,000 wild pink salmon were harvested during that period in Prince of Wales Passage. The department considered that the risk of harvesting an unknown number of wild pink salmon was outweighed by the opportunity to clean-up more than 350,000 hatchery pink salmon.

The Southwestern District did not meet the pink salmon SEG in 2006. The wild stock pink salmon escapement of 118,205 fish was below the mid point of the even year SEG of 207,500. The Southwestern District has minimal chum salmon and has no SEG or population estimates for that species. Of the 247,000 wild pink salmon harvested in the Southwestern District, the majority were harvested at the northern end of the Port San Juan Subdistrict. It is unknown how many of those fish were destined for the Southwestern District or other areas in the sound. In the future, if there are escapement concerns, ADF&G should limit the open fishing area in the Port San Juan Subdistrict to a point south of Bishop Rock. Keeping this area closed may reduce wild stock interception while allowing the harvest of hatchery stocks.

Pink salmon harvest management was based on aerial survey escapement data, test fishing in the Southwestern District, harvest rates, and terminal area run entry. Test fishing in the Southwestern District by the R/V Solstice provided pink salmon harvest rate, stock composition and sex ratio data. Test fishing at Point Elrington found low abundance with 15 minute sets capturing 250–750 pink salmon composed of 5–15% females. During seasons of high abundance the catch rate is commonly 1,500 and greater for each set. On July 23, the fish were composed of 59% wild stocks, and 41% hatchery stocks. The hatchery stocks were composed of 7% VFDA, 12% Cannery Creek, 17% Wally Noerenberg, and 5% AFK pink salmon. The wild stock proportion dropped as low as 30% during the test fishing and the harvest rate never increased. The female

proportion increased suggesting that the run was progressing without building in volume. Because of the proportion of wild stocks in the area and low wild stock escapements ADF&G limited the area open for CPF to hatchery terminal areas.

#### **Northern District Summary**

In 2006 PWSAC fell 51% short of their 2.38 million pink salmon CCH cost recovery goal with a harvest of 1.16 million fish. However, the broodstock goal of 318,000 fish was exceeded by 36% (114,000 fish). A portion of that shortfall was recovered from roe sales of 63,000 pink salmon (female only count). The CCH enhanced pink salmon return of 2.47 million fish was only 48% of PWSAC's 5.23 million projection. PWSAC harvested approximately 1.16 million fish (with 8,830 wild stock fish) for cost recovery at CCH. Northern District wild stock pink salmon escapement indices were above anticipated escapements for most of the season. Wild stock pink escapement of 208,397 fish was within the even year SEG range of 175,000–390,000 fish. Wild stock chum salmon escapement of 52,039 was above the 20,000 fish SEG (Appendix D).

The Northern District was open for thirty 12-hour CPF periods with the majority of the harvest (83%) occurring in the first 15 periods. Marginal escapement in Eaglek Bay required that the area west of Point Pellew remain closed for the entire season. During the first period, on July 10, an unexpectedly high number of chum salmon (51,000) were harvested in the Northern District. The department was concerned that these were wild fish but otolith analysis determined that most of those fish were of WNH origin. The department did not open the second period until August 7 almost a month later, because of marginal wild and hatchery pink salmon returns. The 2006 Northern District harvest was composed of 1.3 million pink salmon, 51,947 chum salmon, 895 sockeye salmon, and 14,346 coho salmon. The 1.3 million pink salmon CPF harvest was composed of 149,680 wild stock pink salmon and 984,781 CCH, 190,079 WNH, and 7,200 VFDA fish (Appendices D and E).

# **Montague District Summary**

Montague District wild stock pink salmon escapements were above anticipated levels for the entire season. Wild stock pink escapement of 149,798 fish was above the even year SEG mid point of 122,500. The Montague District had no wild chum salmon escapement and has no chum salmon escapement goals (Appendix D).

A fishing schedule of 8 consecutive 156-hour periods was initiated in the Montague District on May 29 through July 23 to harvest enhanced chum salmon. The peak Port Chalmers harvest occurred during the 3 periods between June 12 and July 2. A total of 144,000 pink salmon were harvested in the Port Chalmers chum salmon fishery. The Port Chalmers Subdistrict had a harvest of 445,762 chum salmon. The harvest represented 92% of PWSAC's forecast return of 480,000 chum salmon. Based on otolith sampling, the harvest was composed of 394,705 Port Chalmers remote release fish, 45,710 WNH fish, and 5,347 wild stock fish. Additionally, 27,798 Port Chalmers chum salmon were harvested in the Southwestern District and were likely part of a remote release chum salmon fishery in the AFK SHA. However, the chronic problems with the PWSAC chum salmon marking program makes it impossible to determine the true origin of those fish. Additionally, 4,196 Port Chalmers chum salmon were harvested in the Copper River District (Appendix E20). The 2006 Montague District harvest was composed of 445,762 chum salmon, 144,417 pink salmon, 1,808 sockeye salmon, 28 coho salmon, and 185 Chinook salmon (Appendix D). Because of below anticipated escapement estimates, the Montague District was

closed for the remainder of the season after the Port Chalmers remote release chum salmon fishery ended (Appendices D and E).

### **Coghill District Summary**

PWSAC's 2006 forecast for pink salmon returning to WNH was 4.46 million fish. With goals of 176,000 pink salmon for broodstock, and approximately 2.20 million pink salmon for cost recovery, PWSAC would require 49% of the anticipated return of pink salmon to WNH for PWSAC corporate escapement needs.

In 2006 PWSAC exceeded their 2.03 million pink salmon WNH cost recovery goal with a harvest of 2.28 million fish. The broodstock goal of 176,000 was exceeded by 45% (80,000 fish). An additional \$58,000 was recovered from roe sales of 56,000 pink salmon (female count only). The WNH enhanced pink salmon return (CPF, cost recovery, and broodstock) of 3.98 million fish was 89% of PWSAC's 4.46 million projection. PWSAC harvested approximately 2.28 million fish (including 18,725 wild stock and 10,592 VFDA fish) for cost recovery at WNH. Coghill District wild stock pink salmon escapement indices were above anticipated escapements for most of the season. Wild stock pink salmon escapement of 145,511 fish was within the even year SEG range of 115,000–250,000 fish. Wild stock chum escapement of 15,900 was above the 8,000 SEG (Appendix D).

In late June, approximately 250,000 chum salmon were holding in the Granite Bay Subdistrict, and chum salmon cost recovery was behind the anticipated level. PWSAC declined to harvest fish in that area, ADF&G opened the area, and ~280,000 fish were harvested from the Granite Bay Subdistrict. Partially as a result of this inaction, PWSAC fell more than \$500,000 short of the 2006 chum salmon cost recovery goal despite adequate numbers of fish. A portion of that shortfall was recovered from roe sales of 22,000 chum salmon (female only count) for \$110,000. The broodstock goal of 223,000 was almost met with 217,146 fish. PWSAC achieved 76% of their 1.08 million fish cost recovery goal with a harvest of 819,236 chum salmon. The hatchery chum salmon harvest in the Coghill District (CPF and cost recovery) was 1.38 million fish, 70% of the 1.97 million forecast. That harvest was composed of 563,800 (40%) CPF fish and 819,236 (60%) cost recovery fish.

Despite exclusive access to the Esther Subdistrict from June 1 to July 21 the purse seine fleet only harvested 52.7% (297,567) of the chum salmon in the Coghill District while the gillnet fleet took 47.2% (266,233 fish). A total of 8,423 wild chum salmon were harvested in the Coghill District. PWSAC requested that the Esther Subdistrict remain closed for cost recovery and broodstock for most of the season and the purse seine fleet had only 2 CPF periods from June 1 to July 21. The department has a long standing wild chum salmon management concern. The recent regulatory expansion of the area at Point Culross may increase the interception of wild chum salmon. Future management discussions should include the option of restricting time and/or area at Point Culross.

# PRINCE WILLIAM SOUND AND COPPER RIVER SUBSISTENCE FISHERIES

For more detailed information on this district see Appendices F1–F6.

The Prince William Sound Subsistence Management 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 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. Additionally, herring, smelt, rockfish, and other groundfish may also be harvested for subsistence purposes in the Prince William Sound Area.

Subsistence and personal use harvests have increased in recent years, both in the Prince William Sound and upper Copper River management areas. The largest subsistence fisheries occur on the upper Copper River, from upstream of regulatory markers 200 yards above Haley Creek to the Copper River's confluence with the Slana River.

A major change occurred in the upper Copper River fishery for the 2003 season. At the 2003 Prince William Sound Alaska Board of Fisheries meeting, the board reversed its 1999 positive finding for Customary and Traditional Use of salmon stocks in the Chitina Subdistrict. This finding resulted in the Chitina Subdistrict subsistence fishery reverting back to a personal use fishery. As a result, there are currently only 2 subsistence fisheries north of Miles Lake: the Glennallen fishery, where the gear is primarily fishwheels and dipnets, and the Batzulnetas subsistence fishery, which is also primarily a dipnet and fishwheel fishery. In response to increased harvest, the BOF, during the December 2005 meeting, voted to increase the Glennallen Subdistrict subsistence fishery component of the Miles Lake sonar inriver goal from a range of 60,000–75,000 to range of 61,000–82,500 salmon.

# **Prince William Sound and Lower Copper River**

Boundary lines for Copper River District subsistence fishing are the same as for the commercial drift gillnet fishery. Subsistence fishing is allowed from May 15 until 2 days before the commercial opening of Copper River District, 7 days per week. Once the commercial season has commenced, subsistence fishing is allowed only during commercial fishing periods or by emergency order. Two days following the closure of the Copper River District to commercial salmon fishing, subsistence fishing is allowed, 7 days a week, until September 30. Within the Copper River District, drift gillnets are the only legal gear and nets may have a maximum length of 50 fathoms with a maximum mesh size of 6 inches prior to July 15. In 2006, 421 permits were issued, of which 22 were not returned. Of the 399 permits that were returned, 121 permit holders reported not fishing. A harvest of 779 Chinook, 4,355 sockeye, and 1 coho salmon was reported from the 300 permits that fished (Appendix F1).

In 2006, 11 subsistence permits were issued for the Prince William Sound general subsistence district. Nine permits were returned. Seven permit holders reported that they did not fish. The 2 permit holders that fished reported a harvest total of 20 sockeye and 30 pink salmon (Appendix F2).

In addition to traditional subsistence harvest, both residents and non-residents engaged in commercial fishing are permitted to retain any portion of their commercial finfish catch for said person's own use ("home pack"); these fish can not be bartered or sold, but may be used as bait in another commercial fishery (5 AAC 39.010). Any commercially caught Chinook salmon not sold must be reported on a fish ticket. During the 2006 season in Area E, 1,669 sockeye, 779 Chinook, 147 coho, 4 chum and 3 pink salmon in total were reported as retained from 533 landings made by 270 commercial permit holders (Appendices A1, A17, and F3).

In 2005, the federal government began issuing permits allowing subsistence harvests on federal lands in PWS and the lower Copper River area. Legal gear types are dipnet, rod and reel, or spear. In 2006 a total of 49 federal permits were issued. Of the 48 permits returned, 150 sockeye and 100 coho salmon were reported as harvested. Current and historical federal harvest numbers are listed in Appendix F6.

### **Tatitlek and Chenega Area Subsistence Fisheries**

Two subsistence areas were established in 1988 primarily to provide opportunities for customary and traditional use of salmon by residents of Tatitlek and Chenega villages. The Chenega area includes the entirety of the Southwestern District, as described in 5 AAC 24.200 (i), as well as a portion of the Montague District along the northwestern shore of Green Island from the westernmost tip to the northernmost tip of the island (5 AAC 01.648(a)). The Tatitlek subsistence area is located south of Valdez narrows in portions of the Northern and Eastern districts (5 AAC 01.648(b)). Residents of both Chenega and Tatitlek are eligible for subsistence permits in their respective areas. In 1989, a court ruling qualified all residents of Alaska for a subsistence permit in both of these subsistence areas, however permits may only be issued in these villages. Permit holders are allowed to fish in these areas from May 15, seven days per week, until 2 days before the initial commercial fishing period in the associated commercial fishing districts: Southwestern District (Chenega) or Eastern District (Tatitlek). Once the commercial fishing season is established, the area and time within these subsistence areas is defined by the area and time in the associated commercial fishing district. Two days after the closure of the commercial fishing season in associated commercial fishing district, the subsistence fisheries are open, 7 days per week, until September 30 in the Chenega subsistence area and until October 31 in the Tatitlek subsistence area.

In 2006, 11 permits were issued for the Chenega subsistence area, of which 6 permits were returned. Of those returned permits, 4 permit holders reported fishing, with a total harvest of 159 sockeye, 1 coho, 28 pink, and 111 chum salmon. In the Tatitlek area, 12 permits were issued with 2 permits returned. One permit holder reported not fishing. The 1 permit holder that did fish reported harvesting 3 sockeye, 18 coho, 35 pink, and 25 chum salmon (Appendix F4).

#### **UPPER COPPER RIVER**

# Glennallen Subdistrict Subsistence Fishery

The Glennallen Subdistrict is that portion of the main stem Copper River upstream of the 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 Alaska Board of Fisheries meeting, 5 AAC 01.616 was modified, and a harvest range of 60,000–75,000 subsistence salmon was established to accommodate for variability in harvest levels and allow for increased harvests between board cycles; this harvest range was increased by the board to 61,000–82,500 in 2005. Participants are allowed 1 permit per household per year and the permit identifies the single gear type to be used. Total annual harvest, assuming that additional salmon were requested by the permit holder, can not exceed 200 salmon for a household of 1 and 500 salmon for a household of 2 or more. No more than 5 Chinook salmon may be taken by each dip net permit holder. Both tips of the caudal fin must be clipped on all harvested salmon. Subsistence permits, with completed harvest information, are required to be returned to ADF&G by October 31 of each year.

In 2006, a total of 984 permits were issued to both fish wheel and dip net users for the Glennallen Subdistrict. The 2006, 2,770 Chinook and 57,710 sockeye salmon were harvested in the Glennallen Subdistrict. This compares to the previous 10-year average of 60,717 sockeye and 2,805 Chinook salmon for this district. Total effort has remained somewhat constant since 1996, with an average number of 1,064 permits issued and 72,707 salmon harvested per season. Historically, sockeye salmon dominate the harvest, representing approximately 95% of the reported harvest, followed by Chinook and coho salmon (Appendices A1, A3, and F5). Additionally, approximately 25% of the Chinook salmon harvested were landed by 2% of the permit holders, indicating that some individuals effectively target Chinook salmon for subsistence uses.

In 2002, the federal government began issuing permits allowing subsistence harvests on federal lands in the Glennallen Subdistrict. Legal types of fishing gear are dipnet, fish wheel, or spear. In 2006, a total of 254 federal permits were issued. Of the 171 permits returned, 16,711 sockeye, 430 Chinook and 28 coho salmon were reported harvested. Current and historical federal harvest numbers are listed in Appendix F6.

# **Batzulnetas Subsistence Fishery**

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, as described in 5 AAC 01.647(i), 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; salmon may be taken, as established by emergency order, starting June 1; fishing periods during the month of June are limited to 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 BOF 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 ADF&G by October 31. No permits were issued for this fishery between 1988 and 1992 and 1996. Between 1993 and 2002 the average harvest was 211 sockeye salmon. From 1999 to 2002 only 1 permit was issued each year with a harvest of 55 sockeye salmon in 1999, 55 sockeye salmon in 2000, 62 sockeye salmon in 2001, and 208 sockeye salmon in 2002. In 2004 one permit was issue with a reported harvest of 182 salmon. There were no reported harvests in the Batzulnetas subsistence fishery in either 2005 or 2006.

## **Chitina Subdistrict Personal Use Fishery**

The Chitina Subdistrict is the portion of the main stem Copper River from the downstream edge of the McCarthy Road Bridge to a marker 200 yards above Haley Creek. The Alaska Board of Fisheries changed this fishery from a personal use fishery to a subsistence fishery starting in 2000; the fishery was again designated a personal use fishery 2003. Regulations for the Chitina Subdistrict personal use fishery remained similar to the Copper River subsistence fishery regulations, with 3 exceptions: 1) permit holders are required to possess a sport fishing license, 2) permit holders are only allowed to take salmon using dip net, and 3) permit holders are limited

to 1 Chinook salmon per household. The BOF determined that retaining the bag limit of 1 Chinook salmon provided for a reasonable opportunity to harvest Chinook salmon, and would also maintain Chinook salmon harvests at historic levels. Annual bag limits will continue to be 15 salmon for a household of one, and 30 salmon for a household of 2 or more individuals. Based upon recent harvests, the board determined that a range of 100,000–150,000 sockeye salmon was necessary for personal use needs to be met in the Chitina Subdistrict fishery. This range includes a hatchery contribution range of 15,000–20,000 fish, resulting in an 85,000–130,000 wild sockeye salmon stock harvest allocation.

The Copper River Personal Use Dip Net Salmon Fishery Management Plan (5 AAC 77.591) requires the Chitina Subdistrict personal use fishery to be opened on June 1; an emergency order (EO) may be issued to close the fishery, effective June 1, and an EO to reopen the season shall be issued on or before June 11 depending on the strength and timing of the sockeye run. Additionally, inseason adjustments to the fishery, as necessitated by fluctuations in salmon escapement, shall be made by EO. In 2006, there were 9 EOs issued to make adjustments to the dip net fishery. The first period started on June 9 and the last period closed on August 31. The fishery is then open by regulation from Sept 1–30.

Reported harvest for the Chitina Subdistrict personal use fishery in 2006 was 2,663 Chinook, 123,261 sockeye, and 2,715 coho salmon. Average 10-year harvests for these species were 3,453, 109,164, and 2,158, respectively. The sockeye salmon harvest was within the 10-year total harvest range of 75,747 (2002) to 146,311 (1997) fish. There were 8,633 permits issued for the subdistrict in 2006 (Appendices A1, A3, F5, and F6).

In 2002, the federal government began issuing permits allowing subsistence harvests on federal lands in the Chitina Subdistrict. The only legal gear type is a dipnet. In 2006, a total of 76 federal permits were issued. Of the 49 permits returned, 1,379 sockeye, 13 Chinook and 20 coho salmon were reported harvested. Current and historical federal harvest numbers are listed in Appendix F6.

# PRINCE WILLIAM SOUND AND COPPER RIVER SALMON ENHANCEMENT

For more detailed information on this district see Appendix E.

Fisheries enhancement has played a significant role in Prince William Sound and Copper River salmon production for over 3 decades. Natural salmon production in PWS and the Copper River systems continue to demonstrate wide fluctuations as the result of environmental factors. These include stream bed scouring, de-watering, and redd freeze-out on the spawning grounds, all of which can potentially contribute to lowered in-river survival rates. Hatchery facilities in PWS and the upper Copper River were initiated by the Fisheries Research and Enhancement Division (FRED) of ADF&G in the mid 1970s, and are currently operated by 2 non-profit corporations: the Prince William Sound Aquaculture Corporation (PWSAC) and the Valdez Fisheries Development Association (VFDA). These 2 non-profit corporations are among 15 other non-profit corporations in the state of Alaska that maintain and operate private hatcheries that produce salmon for harvest in common property fisheries. PWSAC is the regional hatchery association and largest producer of hatchery salmon in Alaska, with a permitted capacity of 655.8 million eggs. PWSAC is the largest producer of enhanced pink salmon in Alaska, with a permitted capacity of 435.0 million eggs. This is nearly double the permitted capacity of the next largest producer, VFDA, which has a permitted capacity of 230.0 million pink salmon eggs.

PWSAC is also the largest producer of enhanced chum salmon in Alaska, with a permitted capacity of 165.0 million eggs. PWSAC is the second largest producer of sockeye salmon in the state, with a permitted capacity of 47.8 million eggs. In addition to the aforementioned species, PWSAC and VFDA have a permitted coho capacity of 4.0 million and 2.0 million eggs, respectively. Furthermore, PWSAC has a 4.0 million egg Chinook salmon permitted capacity, which has not been utilized since 1996 when Chinook salmon eggs were last harvested at the AFK Hatchery. Permitted egg capacities, in millions of eggs, for the 7 largest aquaculture associations in Alaska are listed below:

Hatchery non-profit corporation	Chinook salmon	chum salmon	coho salmon	pink salmon	sockeye salmon	total
Cook Inlet Aquaculture Assn. (CIAA)	4.00	0.00	6.16	235.00	50.01	295.17
Douglas Island Pink and Chum (DIPAC)	0.95	121.00	1.65	60.00	33.50	217.10
Kodiak Island Aquaculture Assn. (KIAA)	0.30	25.00	2.80	215.00	20.60	263.70
Northern Southeast Regional Aquaculture Assn. (NSRAA)	8.70	160.80	10.40	0.30	2.00	182.20
Prince William Sound Aquaculture Assn. (PWSAC)	4.00	165.00	4.00	435.00	47.75	655.75
Southern Southeast Regional Aquaculture Assn. (SSRAA)	5.50	128.30	10.90	0.00	2.70	147.40
Valdez Fisheries Development Assn. (VFDA)	0.30	0.00	2.00	230.00	0.00	232.30
all others	3.08	40.00	8.90	86.00	5.00	142.98
Statewide egg capacity totals (millions)	26.83	640.10	46.81	1,261.30	161.56	2,136.60

In 2006, PWSAC and VFDA together contributed 86.1% of the total Area E salmon harvest of 27.2 million fish (Table 1, Appendices E1 and E2). PWSAC produced 43.1% (5.2 million fish) and VFDA produced 40.4% (4.8 million fish) of the pink salmon harvested in the Area E common property commercial salmon fisheries. PWSAC also produced 88.4% of the commercial common property sockeye salmon harvest in area E and 37.6% of the commercial common property sockeye salmon harvest. An additional 275,382 enhanced VFDA and 131,497 enhanced PWSAC coho salmon were harvested in the commercial common property fishery, representing 54.5% of the overall coho salmon CPF harvest in Area E.

#### **Gulkana Hatchery**

The Gulkana Hatchery (GH) consists of 2 rearing facilities, (Gulkana I and II) located above Paxson Lake on the east fork of the Gulkana River approximately 260 miles north of Cordova. This facility is owned by ADF&G and has been managed by PWSAC since 1993. Gulkana I was constructed in 1973 after spawning sockeye were identified in several warm water springs adjacent to the east fork of the Gulkana River. These springs produce approximately 1,600 l/s, of which 1,100–1,600 l/s are required for hatchery operations. Gulkana II was constructed in 1987. Chinook salmon were reared at this facility and released in limited quantities at Monsoon Lake and in the Gulkana River from 1987–1991. The combined facilities have released between 80 thousand and 32.3 million fry annually since 1974 (Appendix E8). Annual total Gulkana

produced sockeye salmon runs since 1997 have ranged from 91,640 to over 668,500 fish (Appendix E7).

In 2006, the overall run of sockeye salmon produced by the Gulkana hatcheries totaled 272,940 fish (Appendix E1). This was higher than the forecast run of 260,000 sockeye salmon. A total of 24,703 sockeye salmon were harvested for broodstock. The commercial gillnet fleet harvested an estimated 60.0% of the total return, or 163,691 sockeye salmon.

The 2006 GH sockeye salmon harvest contributions by period and the historical GH contributions, fry release, total hatchery return and estimated marine survival may be found in Appendices E6–E8.

# Wally Noerenberg Hatchery

The Wally Noerenberg Hatchery (WNH) is owned by PWSAC and was built in 1985 using monies borrowed from the State of Alaska's Fisheries Enhancement Revolving Loan Fund. WNH is located at the terminus of Lake Bay on the southern end of Esther Island in PWS, in the Coghill District. Water for hatchery operations is supplied by Esther Lake, a 200 hectare lake with a volume of 2.5 million cubic meters. A pipeline from the lake produces approximately 22,000 l/s, of which 5,500–11,000 l/s are required for hatchery operations. WNH currently produces pink, chum and coho salmon. Sockeye and Chinook salmon were also cultured at WNH, however the sockeye salmon program was transferred to the Main Bay Hatchery in 1990 and the Chinook salmon program was discontinued in 1997 to increase coho salmon production.

In 2006, the overall return of chum salmon produced by the WNH (excluding remote releases) totaled 1.79 million fish (Appendix E1). These fish originated from brood years 2000-2003 releases. Cumulative survival rates for these brood years were 2.2%, 3.6%, 0.7% and 0.6%, respectively (PWSAC 2006). The overall return was slightly lower than the anticipated return of 1.97 million chum salmon that was projected preseason. A total of 819,236 chum salmon were harvested for hatchery cost recovery at WNH and were worth approximately \$2.7 million dollars. This was approximately 15% below the chum cost recovery goal. Additionally, 28,531 pounds of roe, worth \$110,240, was sold from chum salmon harvested for broodstock purposes. The commercial fleet harvested 42.9% of the total WNH chum salmon run, with 466,474 harvested by purse seine fleet, 292,016 harvested by the drift gillnet fleet, and 8,090 harvested by the set gillnet fleet. A total of 217,146 chum salmon were harvested for broodstock and roe sales purposes. In addition to releases at the WNH facility, there are 2 remote release sites, Port Chalmers located between Green Island and Montague Island, and Sawmill Bay, adjacent to the AFK hatchery. The harvest of Port Chalmers remote release chum salmon was 432,684, slightly below the forecast run of 478,000. The total return of hatchery chum salmon to the Southwestern District was 110,333, with 9,163 harvested for hatchery cost recovery and the remainder harvested by the commercial fleet.

In 2006, the overall return of pink salmon produced by the WNH totaled 3.76 million fish (Appendix E1). These fish originated entirely from the BY2004 release and had a survival rate of 4.5% (PWSAC 2006). The overall return was lower than the preseason projection of 4.46 million pink salmon. A total of 2.33 million pink salmon, worth approximately \$1.6 million, were harvested for hatchery cost recovery. Additionally, 32,441 pounds of roe, worth \$58,090, was sold from fish harvested for broodstock purposes. The commercial fleet harvested 1.46 million WNH pink salmon, 38.8% of the total pink salmon return to this facility. A total of 256,679 pink salmon were harvested by PWSAC for broodstock and roe sales purposes (Appendix E13).

In 2006, the overall return of coho salmon produced by the WNH totaled 177,501 fish (Appendix E1). These fish originated entirely from the BY2003 release and had a survival rate of 16.8% (PWSAC 2006). The overall run was higher than the preseason projection of 78,000 coho salmon. The commercial fleet harvested 113,997 WNH coho salmon, 85.3% of the total coho salmon run to this facility. PWSAC harvested 2,079 coho salmon for broodstock purposes.

Historical pink, chum and coho salmon harvest contributions, fry release, total hatchery return and estimated marine survival for the WNH are located in Appendices E1, E2, E3, E5, E12 and E13.

## **Main Bay Hatchery**

The Main Bay Hatchery/Rearing Facility was constructed in 1981, is owned by ADF&G, and has been operated under contract by PWSAC since 1991. The MBH is situated in the Eshamy District, approximately 20 miles west of the northern end of Knight Island. Water for hatchery operations is supplied by Main Lake, a 334 hectare lake with a volume of 140 million cubic meters. A pipeline from the lake produces approximately 5,500 l/s, of which 4,100–5,500 l/s are required for hatchery operations. Originally built to raise chum salmon, Main Bay currently produces only sockeye salmon, although pink salmon were produced until 1990. The MBH has annually released between 300 thousand and 10.8 million sockeye salmon since 1986 (Appendix E19).

In 2006, the overall return of sockeye salmon produced by the Main Bay hatchery totaled 1.04 million fish (Appendix E1). The anticipated run was 514,000 sockeye salmon. A total of 350,742 sockeye salmon, worth approximately \$2.17 million, nearly twice the initial sockeye salmon cost recovery goal of \$1.15 million dollars, were harvested for hatchery cost recovery. The commercial fleets harvested 64.6% of the total return, or 669,280 sockeye salmon. A total of 15,854 fish were harvested for broodstock purposes.

Detailed MBH contributions to the CPF, cost recovery and total contribution summaries as well as historical fry release information are located in Appendices E14–E19.

## **Solomon Gulch Hatchery**

The Solomon Gulch Hatchery (SGH) is owned by the state of Alaska and is managed by VFDA. This facility is located near Valdez, 2 miles from the southern terminus of the Alaska pipeline. Water for hatchery operations is supplied by Solomon Lake, a 324 hectare lake with a volume of 48.1 million cubic meters. A pipeline from the lake produces approximately 8,300 l/s, of which 553–8,300 l/s are required for hatchery operations. SGH produces coho and pink salmon.

In 2006, the overall return of pink salmon produced by the SGH totaled 9.18 million fish (Appendix E1). These fish originated entirely from the BY2004 release and had a survival rate of approximately 4.08% (VFDA 2006). The overall return was less than the preseason projection of 11.57 million pink salmon. A total of 3.86 million pink salmon, worth approximately \$3.0 million dollars, were harvested for hatchery cost recovery. Additional revenue was generated by selling 18,832 pounds of roe, worth \$94,160, from fish harvested for broodstock purposes. Also \$3,747 was generated from the sale of 115,301 broodstock carcasses. The commercial fleet harvested 4.84 million SGH pink salmon, 53.4% of the total pink salmon return to this facility.

Historical pink salmon harvest contributions, fry release, total hatchery return and estimated marine survival for the SGH are located in Appendix E3. SGH's contribution to pink salmon

harvests in the Eastern district is located in Appendix E20. The 2006 cost recovery summary is located in Appendix E21. A summary of coho salmon runs to PWS hatcheries are located in Appendix E1.

# **Cannery Creek Hatchery**

The Cannery Creek Hatchery was constructed in 1978 and is owned by ADF&G and has been operated by PWSAC under contract since 1988. CCH is located in Unakwik Inlet, approximately halfway between Valdez and Whittier. The facility was originally constructed as a combined pink and chum salmon hatchery. Water for hatchery operations is supplied by Cannery Lake which has a surface area of 53 hectares. The chum program was not as successful as the pink salmon program due to the extremely cold lake water from January through March and was discontinued in 1990.

In 2006, the overall return of pink salmon produced by the CCH totaled 2.92 million fish (Appendix E1). These fish originated entirely from the BY2004 release and had a survival rate of approximately 2.30% (PWSAC 2006). The overall return was approximately half of the preseason projection of 5.23 million pink salmon. A total of 1.16 million pink salmon, worth approximately \$0.8 million, were harvested for hatchery cost recovery. Additionally 34,079 pounds of roe, worth \$65,758, was sold from fish harvested for broodstock purposes. The commercial fleet harvested 1.32 million CCH pink salmon, 45.2% of the total pink salmon return to this facility. A total of 431,920 pink salmon were harvested for broodstock and roe sale purposes.

Historical pink salmon harvest contributions, fry release, total hatchery return and estimated marine survival for the CC hatchery are located in Appendices E2, E3, E24 and E25.

# **Armin F. Koernig Hatchery**

The Armin F. Koerning Hatchery (AFKH) was converted from an existing cannery in 1974 and is owned by PWSAC. The AFKH is located on Evans Island in southern PWS, 2 miles from the village of Chenega. Water for hatchery operations is supplied by San Juan Lake which has an area of 6 hectares. A pipeline from the lake produces approximately 1,700 l/s, of which approximately 200–1,382 l/s are required for hatchery operations. AFKH currently produces only pink salmon, although chum salmon were produced there in 1996 and 1997. Additionally, chum salmon from WNH are remotely released from this facility.

In 2006, the overall return of pink salmon produced at AFKH totaled 5.23 million fish (Appendix E1). These fish originated from the BY2004 release and had a survival rate of 3.97% (PWSAC 2006). This was close to the anticipated return of 5.89 million pink salmon. A total of 2.38 million pink salmon, worth approximately \$1.61 million, were harvested for hatchery cost recovery. An additional 34,000 pounds of roe, worth \$61,841, was processed from fish harvested for broodstock purposes. A total of 459,670 pink salmon were harvested for broodstock and roe sales purposes. The commercial fleet harvested 45.9% of the total return, 2.4 million pink salmon.

Historical AFKH pink salmon harvest contributions to the Southwest District, fry release, total hatchery return and estimated marine survival for AFKH are located in Appendices E3, E28 and E29.

#### 2006 PRINCE WILLIAM SOUND HERRING FISHERIES

For more detailed information on this district see Appendix G.

# **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. A total of 5 herring fisheries may occur annually. During the spring season, 2 fisheries target herring for sac roe using either seine or gillnet gear and 2 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 may occur. Of the 5 herring fisheries, only the wild spawn-on kelp and the food/bait fishery are open entry fisheries. Each of these fisheries is managed depending on observed population size and age structure.

For management purposes, all herring fisheries target what is treated as a single major stock of herring that spawns from mid April to early May. 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 5 fisheries based on a 0–20% 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%. The sac roe fishery has dominated catches with a peak in the early 1990s followed by a precipitous decline in harvest and a fishery closure in 8 of the past 10 years (Appendix G1).

During the 1999 and 2003 BOF meetings several regulatory changes were made to PWS herring fisheries. In 1999, regulations were standardized for PWS herring buyer, buyer's agent, and fishers' fish ticket reporting requirements with those in other parts of the state. The 1999 BOF further 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. Also in December 1999 the BOF closed Tatitlek Narrows to all commercial herring fishing. This closure was repealed at the 2003 BOF meeting (5 AAC 27.350 (b), repealed 24 April 2003). The 2003 BOF meeting placed into regulation the requirement that a CFEC permit holder who intends to operate in the pound fishery must register with the department's Cordova office by March 15 of that year. A further regulation change included restricting the number of kelp blades annually based on the number of permit holders registered.

The Prince William Sound herring purse seine fishery is comprised of 104 permanent and 2 interim permits. Purse seines can be 150 fathoms long and 1,025 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 during the spring sac roe fishery (1 March through 30 June). Gillnets may be 150 fathoms in aggregate length for the food and bait fishery. Mesh size is regulated from a minimum of 2 1/8 inches to a maximum of 3 inches. Historical sac roe harvest is presented in Appendices G2 and G3. 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 ADF&G establishes the maximum number of blades of kelp a permit may maintain in the pound based on the number of permits registered to fish by 15 March. The historical pound spawn-on-kelp harvest peaked in the early 1990s and has declined since that time with multiple season closures (Appendix G4). The natural 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 historical natural spawn-on-kelp fishery harvest is given in Appendix G5. Once instituted, pound fisheries, dominated harvests compared to wild spawn-on-kelp (Appendix G6). The food/bait fishery season is authorized to 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 and trawling or gillnetting are permitted in the food/bait fishery. The historical food/bait fishery harvest is given in Appendices G7 and G8. Historical fishery harvest values for all Prince William Sound fisheries are presented in Appendix G9.

# **Season Summary**

Based on current herring stock assessment information, all 2006 spring herring fisheries, including the purse seine and gillnet sac roe harvests, the spawn-on-kelp in pound fishery, and the wild spawn-on-kelp harvest, were closed. The Prince William Sound herring biomass estimate for 2006 was below the minimum spawning biomass threshold of 22,000 tons. According to Prince William Sound herring management plan (5 AAC 27.365(b)), no fishery may be opened if the estimated spawning biomass is below this threshold level.

Age Structured Assessment modeling was used to project the 2006 biomass of Pacific herring. The PWS herring biomass forecast for 2006 was 17,544 tons (Appendix G10). Hydroacoustic, net sampling, and aerial surveys were also conducted to assess herring biomass, disease prevalence, age composition, and growth.

Acoustic surveys were conducted with the ADF&G R/V Solstice and the F/V Kyle David (contracted by the Prince William Sound Science Center) during the last week of March, 2006. Broad scale sonar surveys were conducted in eastern Prince William Sound up to Valdez, the Naked Island archipelago, western Knight Island bays (including Mummy Bay to Point Helen), northern Prince of Wales Passage, Sawmill Bay, and north and central Montague Island. Detailed acoustics data were collected on major concentrations of herring in the St. Matthews Bay to Red Head area and in Sawmill Bay. Preliminary analysis of that data has not yet been completed. Age compositions from acoustics survey samples were 91% age-2 and 8% age-3 herring in Sawmill Bay on 12 March, and 22% age-2, 29% age-3, and 18% age-4 herring in Olsen Bay on 22 March.

Spawning samples were collected from late March through mid April. Two samples were collected from Hell's Hole, and 1 sample each from Snug Corner Cove and Landlocked Bay. Age composition samples were 67% age-7 on 26 March and 70% age-7 on 27 March in Hell's Hole, 53% age-7 in Snug Corner Cove on 27 March, and 37% age-6 and 29% age-7 in Landlocked Bay on 14 April.

Herring disease assessment has been included as part of the annual age, sex, and size assessment ADF&G has completed each spring since 1993. In March and April, the department examined

herring for prevalence of focal skin reddening and the pathogen *Ichthyophonus hoferi*. Prevalence of focal skin reddening associated with viral hemorrhagic septicemia virus (VHSV) was low; however, prevalence of *I. hoferi* was high (25%) and is consistent with the increasing age of the predominant 1999 age class (Appendix G12). If this trend continues, mortality of the predominant age class may increase significantly. The department will continue to monitor these disease indices next spring. Aerial surveys documented a peak aerial biomass estimate of 400 tons of herring. An estimated 262 tons of herring were seen in Southeast Shore Area, 325 tons in Northeast Shore Area, and 22 tons in the Montague Island Area. A total of 21.7 miles of spawn were observed in spring 2006. 11.0 mile-days of spawn were documented in Southeast Shore Area, 9.6 mile-days in Northeast Shore Area, and 1.1 mile-days in the Montague Island Area (Appendix G1).

# 2006–2007 Herring Season Outlook

Given the PWS herring spawning population current size and age structure, a commercial harvest is not anticipated in 2007. Consecutive years of low recruitment will further delay the recovery of the herring population to a size that is capable of supporting a sustainable 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.

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# **TABLES AND FIGURES**

**Table 1.**–Prince William Sound Management Area commercial salmon harvest by gear type and district, 2006.

District	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Eastern	106	24	4,813	220,805	5,707,742	112,981	6,046,365
Northern	72	1	895	14,346	1,331,740	51,479	1,398,461
Coghill	87	9	5,944	16,995	1,348,377	297,567	1,668,892
Southwestern	66	1	24,215	13,690	3,269,037	107,569	3,414,512
Montague	51	185	1,808	28	144,417	445,762	592,200
Southeastern	16	7	65	34	21,805	17,171	39,082
Unakwik	0	0	0	0	0	0	0
Purse Seine		227	37,740	265,898	11,823,118	1,032,529	13,159,512
Bering River	117	238	36,867	56,713	54	39	93,911
Copper River	490	30,278	1,496,754	318,285	30,844	17,203	1,893,364
Coghill	190	71	96,435	97,002	24,659	266,233	484,400
Eshamy	178	15	381,911	5,429	89,755	30,841	507,951
Unakwik	10	1	698	1	36	171	907
Drift Gillnet		30,603	2,012,665	477,430	145,348	314,487	2,980,533
Eshamy	26	9	124,087	352	20,863	9,883	155,194
Set Gillnet		9	124,087	352	20,863	9,883	155,194
				.=			
Solomon Gulch	1	0	0	17,198	3,855,271	24	3,872,493
Cannery Creek	1	0	0	0	1,164,563	0	1,164,563
Wally Noerenberg	1	0	120	0	2,283,758	819,236	3,103,114
Main Bay	1	0	348,156	0	1,227	775	350,158
Armin F. Koernig	1	0	0	0	2,379,170	4,523	2,383,693
Hatchery <sup>a</sup>		0	348,276	17,198	9,683,989	824,558	10,874,021
Educational Permit	1	11	16	0	50	20	97
Personal Use	269	781	1,598	166	10	5	2,560
Donated Fish	72	3	1,376	0	0	0	2,300
Misc.	342	795	1,728	166	60	25	2,774
1,11001	572	173	1,720	100	00	23	2,774
Prince William Sound	<u> </u>						
Total		31,634	2,524,496	761,044	21,673,378	2,181,482	27,172,034

<sup>&</sup>lt;sup>a</sup> Hatchery sales for hatchery operating costs.

**Table 2.**—Total commercial salmon harvest by species from all gear types, Prince William Sound Area, 1971–2006.

	Harvest									
Year <sup>a</sup>	Chinook	Sockeye	Coho	Pink	Chum	Total				
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 <sup>a</sup>	31,797	767,674	477,816	11,820,121	1,843,317	14,940,725				
1989 <sup>a</sup>	32,006	1,175,238	424,980	21,886,466	1,001,809	24,520,499				
1990 <sup>a</sup>	22,163	911,607	524,274	44,165,077	967,384	46,590,505				
1991 <sup>b</sup>	35,355	1,734,544	641,854	37,135,561	352,321	39,899,635				
1992 <sup>c</sup>	41,306	1,771,612	619,460	8,637,116	334,376	11,403,870				
1993 <sup>d</sup>	32,005	1,851,133	445,612	5,761,097	1,186,365	9,276,212				
1994 <sup>e</sup>	48,558	1,514,329	1,058,154	36,886,301	1,058,213	40,565,555				
1995 <sup>e</sup>	67,083	1,523,464	992,798	16,221,493	864,245	19,669,083				
1996 <sup>e</sup>	56,457	3,000,602	459,253	26,042,942	2,103,559	31,662,813				
1997 <sup>e</sup>	52,482	4,163,074	83,113	25,836,563	2,227,190	32,362,422				
1998 <sup>e</sup>	70,910	1,715,778	194,621	28,685,115	1,271,911	31,938,335				
1999 <sup>e</sup>	63,434	2,035,293	244,754	45,003,656	2,989,255	50,336,392				
2000 <sup>e</sup>	32,411	1,430,838	714,286	38,885,528	5,163,760	46,226,823				
2001 <sup>e</sup>	40,461	2,261,097	494,135	35,246,524	3,099,794	41,142,011				
2002 <sup>e</sup>	39,706	2,262,134	650,331	18,950,931	6,373,491	28,276,593				
2003 <sup>e</sup>	49,227	2,838,679	502,135	51,136,305	3,779,657	58,306,003				
2004 <sup>e</sup>	39,142	1,892,525	619,884	23,531,483	2,001,918	28,084,952				
2005	36,118	1,988,771	536,675	59,896,419	1,996,956	64,446,609				
10-Year Average	48,035	2,358,879	449,919	35,321,547	3,100,749	41,278,295				
2006 <sup>e</sup>	31,634	2,524,496	761,044	21,673,378	2,181,482	27,172,034				

a Includes confiscated and educational special use permits. Also includes hatchery sales harvests and carcass sales.

<sup>&</sup>lt;sup>b</sup> Includes confiscated and educational special use permits, hatchery sales harvests, donated and discarded catches.

<sup>&</sup>lt;sup>c</sup> Includes harvests from confiscated and educational special use permits, hatchery sales harvest, and test fisheries.

<sup>&</sup>lt;sup>d</sup> Includes harvests from confiscated permits, hatchery sales harvests, donated fish harvest, and test fisheries.

<sup>&</sup>lt;sup>e</sup> Includes harvests from confiscated permits, all hatchery sales harvests (excluding roe salvage), and test fisheries.

**Table 3.**—Mean price and estimated exvessel value of the total commercial salmon harvest by gear type, Prince William Sound, 2006.

PURSE SEINE			Average		
Species	Number	Pounds <sup>a</sup>	Weight	Price <sup>a</sup>	Value
Chinook	227	3,890	17.14	\$1.27	\$4,940
Sockeye	37,740	209,509	5.55	\$1.05	\$219,984
Coho	265,898	2,338,911	8.80	\$0.61	\$1,426,736
Pink	11,823,118	41,800,790	3.54	\$0.16	\$6,688,126
Chum	1,032,529	9,114,990	8.83	\$0.33	\$3,007,947
Chum	13,159,512	53,468,090	0.03	Ψ0.55	\$11,347,734
DRIFT GILLNET	13,137,312	33,400,070	Average		Ψ11,5+7,75+
Species	Number	Pounds	Weight	Price	Value
Chinook	30,603	626,574	20.47	\$5.02	\$3,145,401
Sockeye	2,012,665	11,465,039	5.70	\$1.69	\$19,375,916
Coho	477,430	4,317,508	9.04	\$0.92	\$3,972,107
Pink	145,348	540,697	3.72	\$0.10	\$54,070
Chum	314,487	2,562,735	8.15	\$0.33	\$845,703
CHum	2,980,533	19,512,553	0.15	ψ0.55	\$27,393,197
SET GILLNET b	2,700,333	17,312,333	Average		Ψ21,373,171
Species	Number	Pounds	Weight	Price	Value
Chinook	9	119	13.22	\$1.20	\$143
Sockeye	124,087	714,984	5.76	\$1.15	\$822,232
Coho	352	2,789	7.92	\$0.67	\$1,869
Pink	20,863	75,678	3.63	\$0.11	\$8,325
Chum	9,883	80,879	8.18	\$0.37	\$29,925
Chum	155,194	874,449	0.10	Ψ0.57	\$862,493
HATCHERY SALES °	155,174	0/4,44/	Average		Ψ002, +73
Species	Number	Pounds	Weight	Price	Value
Chinook	0	0	,, eigne	\$0.00	\$0
Sockeye	348,276	1,713,887	4.92	\$1.27	\$2,173,808
Coho	17,198	138,894	8.08	\$0.74	\$102,792
Pink	9,683,989	35,698,714	3.69	\$0.20	\$7,300,390
Chum	824,558	7,248,218	8.79	\$0.40	\$2,893,174
Chum	10,874,021	44,799,713	0.77	ψ0.10	\$12,470,164
OTHER GEAR d	10,074,021	44,777,713	Average		Ψ12,+70,10+
Species	Number	Pounds	Weight	Price	Value
Chinook	0	0	0	\$0	\$0
Sockeye	$\overset{\circ}{0}$	$\overset{\circ}{0}$	ő	\$0	\$0
Coho	$\overset{\circ}{0}$	$\overset{\circ}{0}$	ő	\$0	\$0
Pink	0	$\overset{\circ}{0}$	0	\$0	\$0
Chum	$\overset{\circ}{0}$	$\overset{\circ}{0}$	0	\$0	\$0 \$0
Chain	0	0	0	\$0	\$0
				No. of	Average
Gear Type		Value of Catch		Permits	Earnings
Purse Seine		\$11,347,734		111	\$102,232
Drift Gillnet		\$27,393,197		494	\$55,452
Set Gillnet		\$862,493		26	\$33,173
Subtotal-		,			. ,
Value of CPF Catch		\$39,603,423			
Hatchery		\$12,470,164			
Other Gear		\$0			
GRAND TOTAL		\$52,073,587			

<sup>&</sup>lt;sup>a</sup> Mean prices are based on weighted average prices given voluntarily by processors and hatchery operators. Pounds of fish are based on fish ticket reporting and does not represent pounds reported in ADF&G Commercial Operator Annual Reports.

<sup>&</sup>lt;sup>b</sup> Sockeye salmon price is based on the received price to the hatchery operator.

Number and pounds from fish ticket data. Value from hatchery annual reports.

<sup>&</sup>lt;sup>d</sup> Includes the sales of confiscated fish.

Table 4.—Average price paid to permit holders for salmon, Prince William Sound, 1991–2006.

	Chinook	salmon		Sockeye salm		Coho sa	almon	Pink Salmon	Chum Salmon		
	Copper	<b>D</b> :			Coghill			Copper	ъ.		
	and Bering	Prince William	Connor	Bering	and Unakwik		General	and Bering	Prince William		
	Districts	Sound	Copper River	River	Districts	Eshamv	Purse Seine	Districts	Sound	PWS	PWS
1991	\$1.65	\$1.00	\$1.28	\$1.28	\$1.28	\$1.28		\$0.65	\$0.45	\$0.12	\$0.40
1992	\$2.50	\$1.55	\$2.50	\$2.50	\$1.55	\$1.55	\$1.55	\$0.90	\$0.90	\$0.18	\$0.55
1993	\$1.82	\$1.07	\$1.32	\$1.40	\$0.93	\$0.86		\$0.80	\$0.77	\$0.16	\$0.68
1994	\$1.43	\$0.80	\$1.27	\$1.06	\$0.94	\$1.19	\$0.88	\$0.74	\$0.60	\$0.16	\$0.45
1995	\$2.19	\$0.91	\$1.67	\$1.44	\$0.75	\$1.06	\$0.94	\$0.52	\$0.42	\$0.18	\$0.45
1996	\$1.96	\$0.71	\$1.38	\$1.21	\$0.82	\$0.85	\$0.73	\$0.53	\$0.36	\$0.07	\$0.13
1997	\$2.00	\$1.00	\$0.88	\$0.88	\$0.80	\$0.80	\$0.85	\$0.30	\$0.30	\$0.12	\$0.27
1998	\$2.07	\$0.94	\$1.49	\$1.35	\$1.24	\$1.11	\$1.06	\$0.46	\$0.33	\$0.13	\$0.22
1999	\$3.44	\$1.28	\$1.84	\$1.81	\$1.60	\$0.89	\$1.18	\$0.58	\$0.33	\$0.15	\$0.21
2000	\$4.02	\$1.59	\$1.72	\$1.72	\$1.14	\$1.14	\$0.90	\$0.57	\$0.42	\$0.15	\$0.28
2001	\$3.30	\$0.92	\$1.35	\$1.35	\$0.77	\$0.77	\$0.74	\$0.32	\$0.26	\$0.13	\$0.37
2002	\$3.34	\$0.92	\$1.29	\$1.29	\$0.64	\$1.14	\$0.56	\$0.35	\$0.26	\$0.09	\$0.15
2003	\$3.48	\$0.48	\$1.16	\$1.16	\$0.80	\$0.80	\$0.71	\$0.48	\$0.42	\$0.08	\$0.17
2004	\$4.69	\$0.82	\$1.81	\$1.81	\$0.85	\$0.85	\$0.55	\$0.69	\$0.39	\$0.10	\$0.20
2005	\$4.70	\$0.94	\$1.79	\$1.79	\$1.03	\$1.03	\$0.54	\$0.83	\$0.75	\$0.08	\$0.18
10-year Average	\$3.30	\$0.96	\$1.47	\$1.44	\$0.97	\$0.94	\$0.78	\$0.51	\$0.38	\$0.11	\$0.22
2006	\$5.03	\$1.27	\$1.83	\$1.79	\$1.15	\$1.15	\$1.05	\$0.92	\$0.61	\$0.16	\$0.33

*Note:* These prices are based on weighted average prices given voluntarily by processors and hatchery operators and do not represent prices reported in the ADF&G Commercial Operators Annual Report. These prices are an estimate, and do not reflect postseason adjustments and bonuses. Caution should be used if estimating value from these prices.

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**Table 5**.–Estimated exvessel value of the total commercial salmon harvest by gear type, Prince William Sound, 1994–2006.

PURSE SEINE														
	Species	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	Chinook	1,104		570	3,422	4,386	7,427	2,706	5,435	1,353	924	1,270	1,787	4,940
	Sockeye	432,156		111,337	151,532	127,854	141,923	195,169	539,388	58,142	847,966	46,573	207,022	219,984
	Coho	208,661	327,260	314,773	125,946	124,325	329,317	965,404	398,532	69,207	226,619	121,688	103,312	1,426,730
	Pink	12,537,403		4,445,231	6,795,323	8,565,392		13,728,606	9,584,465	2,425,505	10,716,380		13,104,242	6,688,126
	Chum	164,181	152,047	386,967	1,742,759	950,912	3,128,816	3,964,546	2,863,466		1,717,083.00	1,228,965	773,620	3,007,947
	-	\$13,343,505	\$7,422,236	\$5,258,878	\$8,818,982	\$9,772,869	\$13,063,591	\$18,856,431	\$13,391,287	\$4,977,731	\$13,508,972	\$5,692,047	\$14,189,982	\$11,347,734
DRIFT GILLNET														
	Species Chinook	1.534.059	3,573,848	2.259.958	2,367,538	2 241 140	5,510,840	2 (00 417	2,791,619	2,691,215	3,810,019	4.050,947	3,575,253	3.145.401
			12,864,113		19,796,170	3,341,148		2,698,417				13,436,808		
	Sockeye Coho	7,129,685	4,207,678	1,450,095	57,798	379,366	733,022	2,486,184	790,544	2,027,738	1,762,604	3,561,659	2,374,703	3,972,10
	Pink	127,997	165,462	1,430,093	83,398	249,293	43,612	177,559	144,896	23,889	27,904	12,134	84,308	54,070
	Chum	2.393.837		1.229.842			1.529.765	3,550,614	3.371.206		821.818		1.965.383	845,703
	Ciluiii										\$ 20,214,316			
SET GILLNET		\$20,393,003	\$22,320,932	\$27,989,149	\$23,872,430	\$18,229,370	\$27,803,239	\$22,400,980	\$21,230,342	\$21,914,390	\$ 20,214,310	\$22,038,101	\$23,646,631	\$27,393,19
SET GILLIVET	Species													
	Chinook	121	182	148	159	25	592	2,902	787	765	0	189	0	143
	Sockeye	638,164	181,653	697,572		177,723	407,497	912,603	844,123	1,701,077	1,070,058		608,528	822,232
	Coho	3,513	2,003	612	340	336	1,877	3,346	1,686	388	1,611	1,635	4,737	1,869
	Pink	117,298		2,373	20,477	16,659	8,721	53,160	22,048	10,848	6,324	7,439	23,542	8,325
	Chum	18,675	21,018	11,312	17,242	337	13,630	25,641	20,045	27,638	6,742	17,261	6,880	29,925
		\$777,770	\$223,747	\$712,017	\$1,093,504	\$195,079	\$432,317	\$997,652	\$888,689	\$1,740,716	\$1.084.735	\$481,233	\$643,687	\$862,493
HATCHERY SAI	LES	, ,	,-	, , , , , ,	, , , , , , , ,	, ,	, - ,-	, ,	, ,	, ,,.	, , ,	,	,	, ,
	Species													
	Chinook	11,526	11,692	91	1,252	22,621	0	0	0	15	0	0	0	(
	Sockeye	358,077	380,378	444,198		953,857	143,855	478	174,418	418,114	1,769,179		2,383,400	2,173,808
	Coho	82,571	28,759	100,413	7,090	63,980	0	2	9,459	1	0	35,733	0	102,792
	Pink	7,222,015	4,157,847	4,076,578		6,283,525	6,312,337	6,358,529	6,430,468	4,989,921	6,068,403	5,718,678	7,288,894	7,300,390
	Chum	1,598,524	895,509	1,430,814	1,758,276	1,261,354	2,380,321	4,007,449	3,070,274	3,794,069	1,643,243	779,268	1,704,693	2,893,174
		\$9,272,731	\$5,474,186	\$6,052,094	\$8,965,780	\$8,585,338	\$8,836,513	\$10,366,458	\$9,684,619	\$9,202,119	\$9,480,825	\$7,530,699	\$11,376,987	\$12,470,164
OTHER GEAR														
	Species													
	Chinook	143		76		5,004	448	1,266	0	200	26		81	(
	Sockeye	3,686		2,582	2,085	2,085	68,525	5,944	509	1,324	195	614	289	(
	Coho	89		0	0	10	106		468	0	0		0	(
	Pink	28,287	88,152	0	1	271	81,476		382	0	2812		0	(
	Chum	35,139	4,234	1	190	13	358	600	4,206	5	0		0	(
		\$67,344	\$120,771	\$2,659	\$2,276	\$7,383	\$150,913	\$7,811	\$5,564	\$1,529	\$3,033	\$1,107	\$370	\$0
AVERAGE EARN	JINGS	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
A VERAGE LARI	Purse Seine	\$78,032	\$39,691	\$58,432	\$77,359	\$65,590	\$93,983	\$143,942	\$88,101	\$41.481	\$127,443	\$54,210	\$137,767	\$102,232
	Drift Gillnet	\$39,990		\$54,989	\$45,909	\$34,922	\$53,280	\$41,994	\$39,731	\$41,461	\$39,327	\$42,219	\$46,807	\$55,452
	Set Gillnet	\$29.914	\$8.606	\$26,371	\$42.058	\$12.192	\$20.587	\$35,630	\$27,772	\$62.168	\$38,741	\$17,823	\$23.840	\$33,173
	Bet Gilliet	Ψ22,211	φο,σσσ	Ψ20,571	Ψ12,050	Ψ12,172	Ψ20,507	Ψ55,050	ΨΖ1,112	ψ02,100	Ψ30,711	Ψ17,023	Ψ23,010	Ψ33,172
NUMBER OF PE	RMITS FISHED													
	Purse Seine	171	187	90		149	139	131	152	120	106		103	111
	Drift Gillnet	510		509	520	522	523	535	535	534	514	522	508	494
	Set Gillnet	26	26	27	26	16	21	28	32	28	28	27	27	26

**Table 6.**—Preseason harvest or total run projections for the 2006 commercial common property salmon fishery by district and species, Prince William Sound Area.

		Chinook	Soci	keve	Coh	0	I	Pink	Chum	
		Point	Point		Point		Point		Point	
District/facility <sup>a</sup>	Forecast type <sup>b</sup>	Estimate Range	Estimate	Range	Estimate	Range	Estimate	Range	Estimate	Range
Copper River <sup>c</sup>	commercial harvest	47 30 - 64	1,351 3	383 - 1,632	294	42 - 546				
Bering River d	commercial harvest		19	9 - 28	48	0 - 105				
Coghill e	commercial harvest		29	0 - 145						
Eshamy <sup>e</sup>	commercial harvest		15	0 - 51						
Unakwik f	commercial harvest		8	5 - 11						
General PWS Districts	s commercial harvest						2,660	0 - 6,030	440	288 - 592
Total Wild Stock		47	1,422 3	383 - 1,639	342	42 - 556	2,660	0 - 6,030	440	288 - 592
Solomon Gulch <sup>g</sup>	total return						,	,330 - 17,110		
Armin F. Koernig <sup>g</sup>	total return						,	,663 - 8,115	379	267 - 492
Wally Noerenberg g, h	total return				54 3	36 - 73	4,457 2	,353 - 6,561	1,969	1,055 - 2,905
Cannery Creek <sup>g</sup>	total return						5,230 4	,094 - 6,366		
Main Bay <sup>g,i</sup>	total return		514 4	110 - 619						
Gulkana <sup>j</sup>	commercial harvest		379 2	208 - 550						
Total Hatchery			893 4	160 - 828	54 (	36 - 73	27,146 9	,457 - 21,028	2,348	1,088 - 2,946
Total										
Hatchery and Wild		47	2,315		396		29,806		2,788	

<sup>&</sup>lt;sup>a</sup> Formal forecast procedures are used for estimating wild stock runs of pink and chum salmon in PWS. Hatchery contributions are based on known fry releases and average marine survival rates. Harvest estimates are made only for species that constitute a significant portion of the catch.

b The Alaska Department of Fish and Game provided forecasts of commercial harvest for all wild stocks and Gulkana Hatchery sockeye salmon. All forecasts provided by the nonprofit aquaculture associations were for total runs. The harvest projections do not include salmon harvest by hatcheries for cost recovery.

<sup>&</sup>lt;sup>c</sup> Formalized sibling model forecast procedures are used for Copper River sockeye salmon runs. Copper River Chinook and coho salmon harvest estimates are based on the mean annual harvest (5-year for Chinook and 10-year for coho salmon).

d Bering River coho salmon harvest estimates are based on 10-year mean annual harvest.

Formalized sibling model forecast procedures are used for Coghill and Eshamy District sockeye salmon runs. The Coghill District's wild pink and chum salmon harvest is included in the "General PWS Districts" projection.

The Unakwik District sockeye salmon harvest estimate is based on the 10-year mean annual harvest.

<sup>&</sup>lt;sup>g</sup> Harvest projections calculated by hatchery operator - not by ADF&G.

h Wally Noerenberg Hatchery chum salmon harvest estimate includes all on-site and remote release runs of chum salmon.

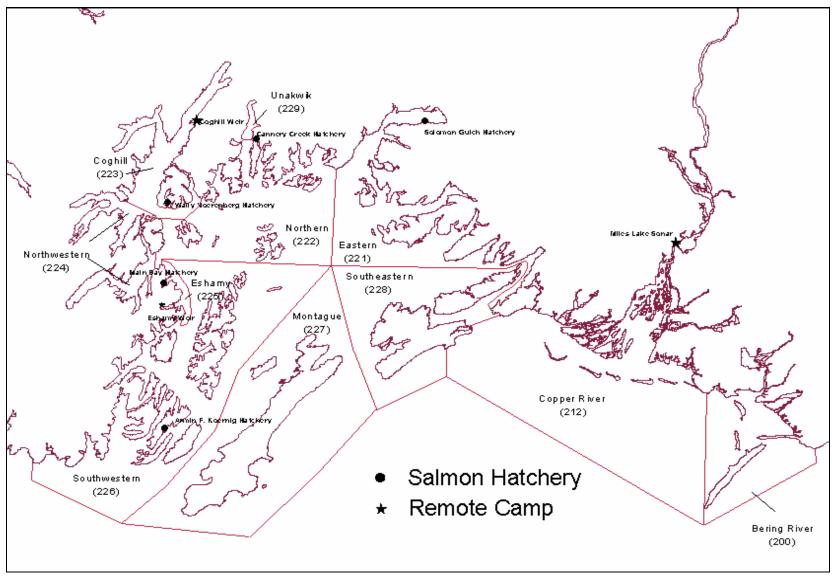
<sup>&</sup>lt;sup>i</sup> Main Bay sockeye salmon harvest estimate includes all on-site and remote release runs of sockeye salmon.

j Wild fish runs are estimated by fishing district and enhanced runs are estimated by facility of origin. The Alaska Department of Fish and Game completed all wild stock forecasts and the Gulkana Hatchery forecast. Valdez Fisheries Development Association provided the Solomon Gulch Hatchery pink salmon forecast and Prince William Sound Aquaculture Association provided all other enhanced forecasts except the Gulkana Hatchery forecast.

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**Table 7**.—A listing of finfish processors, their location of operation, and type of product processed, Prince William Sound area, 2006.

Processor name	Company name	Address	Executive name	Type of product
F/V Polar Bear	Alaskan Marine Resources, LLC	PO Box 1976, Cordova, AK, 99574	Charles Smith	Salmon roe
F/V Royal Sea	Bear & Wolf, LLC	4209 21st Ave W. Suite 400, Seattle, WA, 98199	Peter Kuttel	Salmon and Salmon roe
F/V Prince William	Steven R Smith	PO Box 1724, Cordova, AK, 99574	Steven R Smith	Salmon roe
F/V Meghan Denise	Wild Salmon	PO Box 1389, Cordova, AK, 99574	Dennis M Zadra	Salmon
Copper River Fine Seafoods	Copper River Fine Seafoods, Inc	PO Box 158, Cordova, AK, 99574	William A Bailey III	Salmon
Fees Custom Seafood	Edward W Fee	9321 Arlene St # 10 , Anchorage, AK, 99502	Edward W Fee	Salmon and Salmon roe
Favco, Inc	Favco, Inc	PO Box 190968, Anchorage, AK, 99519	Randy Rau	Salmon
Great Pacific Seafoods- Whittier	Great Pacific Seafoods, Inc	Whittier Ave , Whittier, AK, 99693	Glen Brackett	Salmon
Great Pacific Seafoods- Anchorage	Great Pacific Seafoods, Inc	4401 W. Old Int. Airport Rd , Anchorage, AK, 99502	Judi Murdock	Salmon
Seward Fisheries	Icicle Seafoods, Inc	601 Port Ave , Seward, AK, 99664	Charles McEldowney	Salmon and Salmon roe
Inlet Fish Producers-Kenai	Inlet Fish Producers, Inc	PO Box 114, Kenai, AK, 99611	Robert Utrup	Salmon
Norquest Seafoods- Cordova	Trident Seafoods, Inc	5245 Shilshole Ave N W , Seattle, WA, 98107	Bill Gilbert	Salmon and Salmon roe
North Pacific Processors- Cordova	North Pacific Processors, Inc	PO Box 31179, Seattle, WA, 98103	Ken Roemhildt	Salmon and Salmon roe
Ocean Beauty- Cordova	Ocean Beauty Seafoods, Inc	PO Box 548 , Cordova, AK, 99574	Hap Symmonds	Salmon and Salmon roe
Ocean Beauty- Seward	Ocean Beauty Seafoods, Inc	PO Box 570, Seward, AK, 99664	William Fejes	Salmon and Salmon roe
Peter Pan- Valdez	Peter Pan Seafoods, Inc	South Harbor Drive , Valdez, AK, 99686	Mark Hansen	Salmon and Salmon roe
Prime Select Seafood	Prime Select Seafoods, Inc	PO Box 846, Cordova, AK, 99574	Susan Laird	Salmon
Nautilus Foods Processors	Waterkist Corporation	PO Box 727, Valdez, AK, 99686	Tom Waterer	Salmon



**Figure 1.**—Prince William Sound Management Area showing commercial fishing districts, salmon hatcheries, weir locations, and Miles Lake sonar camp.

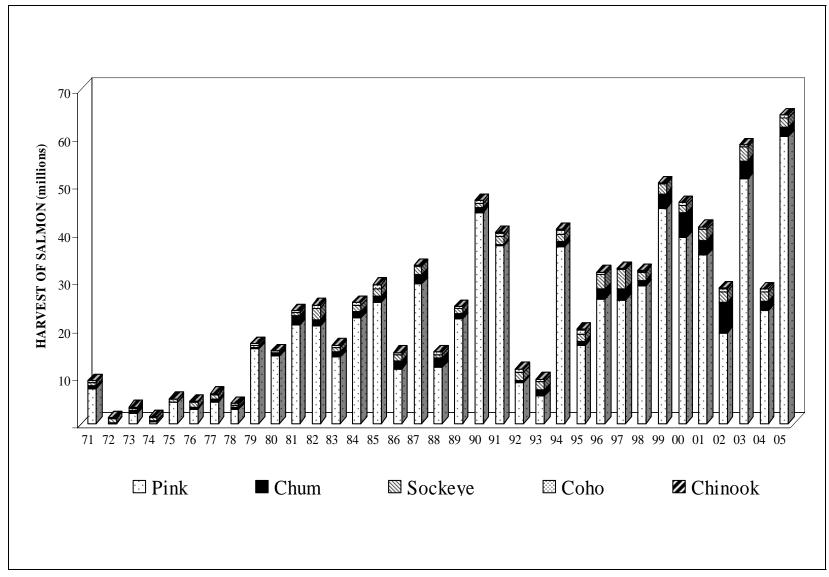


Figure 2.—Commercial salmon harvests in Prince William Sound, 1971–2006.

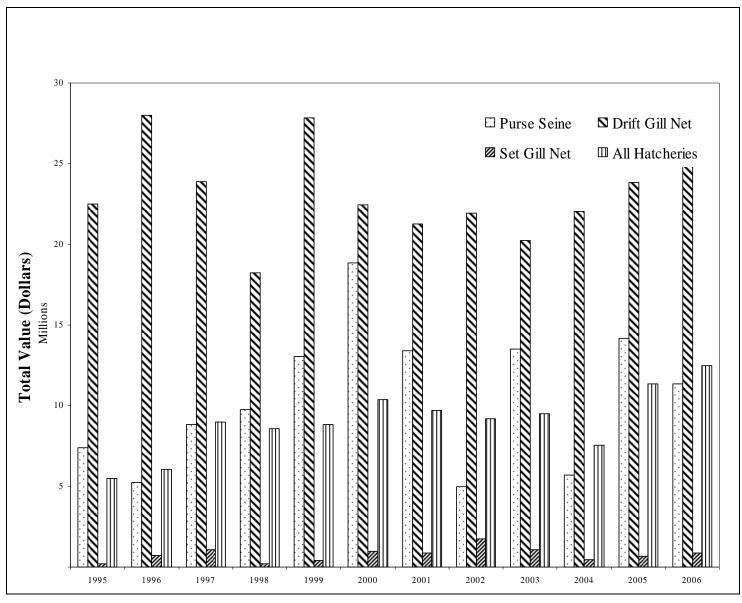


Figure 3.–Exvessel value of the commercial salmon harvest by gear type, 1995–2006.

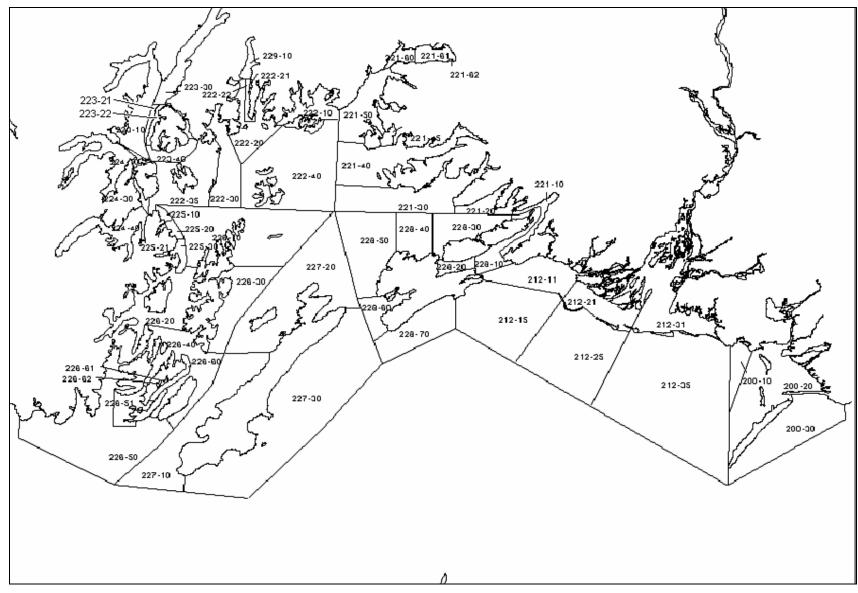


Figure 4.—Prince William Sound Area showing commercial fishing districts and statistical reporting areas, 2006.

# **APPENDIX A**

**Appendix A1.**—Total estimated sockeye salmon runs to the Copper River by end user or destination, 1997–2006.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2006 percentages
Commercial harvest <sup>a</sup>	2,955,431	1,341,692	1,682,559	880,334	1,323,577	1,248,503	1,188,052	1,048,004	1,331,664	1,496,754	57.72%
Commercial, homepack <sup>a</sup>	0	1,435	1,333	651	2,113	1,138	4,077	525	1,785	1,598	0.06%
Commercial, donated <sup>a</sup>	0	0	0	434	0	128	35	74	83	114	0.00%
Educational drift gillnet permit <sup>a</sup>	0	0	0	0	0	151	0	0	42	16	0.00%
Subsistence (Cordova, drift gillnet) <sup>b</sup>	1,001	850	1,330	4,360	3,072	3,067	1,607	1,822	728	4,355	0.17%
Federal Subsistence (PWS/Chugach Nat'l Forest, dipnet, spear, rod and									109	150	0.01%
Subsistence (Batzulnetas, dipnet, fish wheel or spear) <sup>b</sup>	427	582	55	0	62	208	164	182	0	0	0.00%
Subsistence (Glennallen Subdistrict, dipnet, fish wheel or	78,188	61,268	72,901	58,241	79,117	47,892	47,719	52,130	60,966	52,605	2.03%
Federal Subsistence (Glennallen subdistrict, dipnet, fish wheel or						7,950	13,616	17,609	14,446	16,711	0.64%
Personal Use (Chitina Subdistrict, dipnet) <sup>b</sup>	146,311	134,299	137,945	103,329	121,304	75,747	80,134	93,182	106,797	103,859	4.01%
Federal Subsistence (Chitna subdistrict, dipnet)						575	717	1,550	746	1,379	0.05%
Upriver sport harvest <sup>c</sup>	12,293	11,184	11,101	12,361	8,169	7,761	7,108	6,464	8,135	7,527	0.29%
Delta sport harvest <sup>c</sup>	972	2,015	2,855	2,189	298	798	631	952	656	519	0.02%
Upriver spawning escapement <sup>d</sup>	749,683	510,585	466,124	302,404	504,654	586,530	463,745	454,055	518,287	613,284	23.65%
Delta spawning escapement <sup>e</sup>	114,140	175,000	201,950	196,090	142,130	151,470	146,300	138,770	116,812	197,792	7.63%
Hatchery broodstock/excess <sup>f</sup>	129,017	119,130	130,735	73,115	80,485	60,254	44,961	6,695	91,058	96,552	3.72%
Total estimated sockeye salmon run size	4,187,463	2,358,040	2,708,888	1,633,508	2,264,981	2,192,172	1,998,866	1,822,014	2,252,314	2,593,215	100%

a Numbers are from fish ticket data.

b Data is from returned state and federal subsistence permits

<sup>&</sup>lt;sup>c</sup> 2006 Sport harvest data unavailable at time of writing. Numbers are average of previous 5 years Sport harvests.

Upriver spawning escapement prior to 1999 is based on the Miles Lake sonar passage multiplied by the percentage of sockeye salmon in the total upriver subsistence and personal use fisheries to adjust the Miles Lake sonar count to sockeye salmon only. The upriver subsistence, personal use, sport, hatchery broodstock, and onsite surplus are then subtracted from the adjusted Miles Lake sonar counts. Beginning in 1999 sockeye salmon spawning escapement is based on the Miles Lake sonar passage minus the Chinook salmon inriver midpoint abundance estimate, upriver subsistence, personal use, sport, hatchery broodstock and onsite surplus.

<sup>&</sup>lt;sup>e</sup> Delta spawning escapement estimated by doubling the peak aerial survey index.

Hatchery broodstock and on site excess are from published and unpublished ADF&G PWS hatchery contribution reports.

**Appendix A2.**—Total estimated sockeye salmon runs to the Copper River by origin, 1997–2006.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2006 percentages
Upriver wild contribution <sup>a</sup>	3,365,147	1,224,711	971,338	645,826	1,571,649	1,374,673	1,383,912	1,358,419	1,724,944	1,774,212	68.4%
Delta wild contribution <sup>b</sup>	416,633	456,404	618,269	512,992	380,101	392,805	411,798	369,672	311,646	531,210	20.5%
Gulkana contributions <sup>c</sup>	405,682	676,925	1,119,282	474,690	313,230	424,694	203,156	93,922	215,724	287,793	11.1%
Total estimated sockeye salmon run size	4,187,463	2,358,040	2,708,888	1,633,508	2,264,981	2,192,172	1,998,866	1,822,014	2,252,314	2,593,215	100.0%

<sup>&</sup>lt;sup>a</sup> Upriver wild contribution prior to 1999 is based on the Miles Lake sonar count multiplied by the percent of sockeye salmon harvested in upriver subsistence fisheries, added to this is the commercial Copper River harvest and Copper River subsistence harvest. Subtracted from this are the delta wild stock and the Gulkana hatchery contributions to these two fisheries. Beginning in 1999, the Upriver wild contribution is based on the Miles Lake sonar passage minus the Chinook salmon inriver abundance estimate, added to this is the commercial Copper River harvest and Copper River subsistence harvest. Subtracted from this are the delta wild stock, delta sport harvest and the Gulkana hatchery contributions to these two fisheries.

b Delta wild contribution is calculated by dividing the delta escapement, (2x survey counts) by the estimated number of sockeye past the Miles Lake sonar. This is multiplied by the total harvest from the Copper River District. Added to this is the delta escapement and delta sport harvest.

<sup>&</sup>lt;sup>c</sup> Gulkana contribution is based on CWT recovery from 1995–2003, 2004 and 2005 contribution is based on strontium marks of commercial and subsistence samples and historical average of sport CWT percentage.

**Appendix A3.**–Total estimated Chinook salmon run to the Copper River by end user or destination, 1997–2006.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2006 percentages
Commercial harvest <sup>a</sup>	51,273	68,827	62,337	31,259	39,524	38,734	47,721	38,191	34,624	30,278	30.39%
Commercial, homepack <sup>a</sup>	1,243	1,411	1,115	740	935	773	1,073	539	760	779	0.78%
Commercial, donated <sup>a</sup>	0	0	0	6	0	4	3	5	11	3	0.00%
Educational drift gillnet permit <sup>a</sup>	0	0	0	0	0	25	0	0	92	11	0.01%
Subsistence (Cordova, drift gillnet) <sup>b</sup>	200	295	353	689	826	549	710	1,106	219	779	0.78%
Subsistence (Batzulnetas, dipnet, fish wheel or spear) <sup>b</sup>	0	0	0	0	0	0	0	0	0	0	0.00%
Subsistence (Glennallen Subdistrict, dipnet, fish wheel or spear) <sup>b</sup>	2,439	1,751	3,058	4,782	3,373	3,424	2,585	3,166	2,080	2,432	2.44%
Federal Subsistence (Glennallen subdistrict, dipnet, fish wheel or spear )						564	554	634	265	430	0.43%
Personal Use harvests (Chitina Subdistrict, dipnet) <sup>b</sup>	5,359	6,583	5,758	3,037	2,803	1,745	1,870	2,108	1,773	2,152	2.16%
Federal Subsistence (Chitna subdistrict, dipnet)						33	18	9	10	13	0.01%
Sport harvest <sup>c</sup>	8,346	8,245	6,742	5,531	4,904	5,098	5,717	3,435	4,092	4,649	4.67%
Upriver spawning escapement <sup>d</sup>	14,338	11,386	16,157	24,490	26,534	21,574	22,802	23,911	21,604	58,113	58.32%
Total estimated Chinook salmon run size	83,198	98,498	95,520	70,534	78,899	72,523	83,053	73,104	65,530	99,639	100.00%

<sup>&</sup>lt;sup>a</sup> Numbers are from fish ticket data.

b Data is from returned state and federal subsistence permits.

<sup>&</sup>lt;sup>c</sup> Upriver sport harvest only: there is no delta Chinook salmon sport harvest. The 2006 Sport harvest data unavailable at time of writing. The 2006 harvest estimate is average of previous 5 years Sport harvests.

d Upriver spawning escapement is calculated by taking the inriver abundance estimate and from that subtracting the subsistence, personal use and sport harvests. Prior to 1999 inriver abundance was calculated using aerial and foot surveys, from 1999–2005 inriver estimates were calculated using mark–recapture studies. Since 2003 the Alaska Board of Fish has directed that the SEG be 24,000 or more Chinook salmon. Prior to that from 1999–2002 the board directed that the spawning escapement range be 28,000–55,000 Chinook salmon. Prior to this, at the 1996 board meeting ADF&G was directed to reduce the harvest potential of Chinook salmon by 5%.

**Appendix A4**.—Total commercial salmon harvest by species in the Copper River District, 1976–2006.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
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
2002	38,734	1,248,503	504,223	3,677	31,627	1,826,764
2003	47,721	1,188,052	363,489	12,934	10,110	1,622,306
2004	38,191	1,048,004	467,859	5,175	3,386	1,562,615
2005	34,624	1,331,664	263,465	34,987	3,515	1,668,255
10-Year Average	46,814	1,535,618	262,844	12,185	11,513	1,868,975
2006	30,278	1,496,754	318,285	30,844	17,203	1,893,364

Appendix A5.—Daily sockeye salmon escapement estimates at Miles Lake sonar, 2006.

		J	Estimated Da	aily Escap	ement				
							inimum		
ъ.	Water	North	South	ъ. п	G 1.4		ent Objective	0600	Projected
Date	Level (m)	Bank	Bank	Daily	Cumulative	Daily	Cumulative	Count	Daily
05/09				#N/A	#N/A		NA		NA
05/10				#N/A	#N/A		NA		NA
05/11				#N/A	#N/A		NA		0
05/12		0	NA	0	0		NA		0
05/13		18	NA	18	18		NA		0
05/14	39.28	24	NA	24	42		NA		0
05/15	39.04	72	NA	72	114		NA		0
05/16	39.42	78	NA	78	192	365	365		0
05/17	39.63	102	NA	102	294	579	944		0
05/18	39.79	18	NA	18	312	1,737	2,681		0
05/19	39.89	18	NA	18	330	3,045	5,727		0
05/20	40.02	72	NA	72	402	4,433	10,160		0
05/21	39.77	0	NA	0	402	5,008	15,168		0
05/22	39.83	0	NA	0	402	7,700	22,867		0
05/23	39.91	12	126	138	540	8,783	31,650		0
05/24	40.14	6	621	627	1,167	9,696	41,347		0
05/25	40.38	16	1,623	1,639	2,806	11,079	52,425	216	864
05/26	40.65	16	2,690	2,706	5,512	13,656	66,082	534	2,136
05/27	40.93	64	5,526	5,590	11,102	12,927	79,009	1,002	4,008
05/28	41.30	408	7,302	7,710	18,812	13,760	92,769	1,506	6,024
05/29	41.39	1,256	16,734	17,990	36,802	13,820	106,589	3,054	12,216
05/30	41.23	4,272	29,850	34,122	70,924	15,065	121,654	5,796	23,184
05/31	41.20	11,480	40,236	51,716	122,640	13,240	134,894	10,218	40,872
06/01	41.36	7,344	43,794	51,138	173,778	15,183	150,077	10,968	43,872
06/02	41.26	9,832	37,902	47,734	221,512	13,733	163,809	11,472	45,888
06/03	41.24	7,712	44,508	52,220	273,732	13,603	177,412	11,142	44,568
06/04	41.45	6,392	28,386	34,778	308,510	12,564	189,976	7,464	29,856
06/05	41.67	3,472	13,122	16,594	325,104	13,639	203,615	3,996	15,984
06/06	41.64	3,336	16,158	19,494	344,598	11,592	215,207	3,426	13,704
06/07	41.40	1,584	15,330	16,914	361,512	12,707	227,915	3,558	14,232
06/08	41.27	1,520	12,690	14,210	375,722	13,315	241,229	4,080	16,320
06/09	41.31	1,760	10,716	12,476	388,198	11,471	252,700	3,276	13,104
06/10	41.36	2,056	14,304	16,360	404,558	10,285	262,985	3,402	13,608
06/11	41.62	1,736	9,750	11,486	416,044	9,416	272,401	3,252	13,008
06/12	42.00	1040	7,560	8,600	424,644	8,340	280,742	1,650	6,600
06/13	42.25	864	10,452	11,316	435,960	7,292	288,034	2,292	9,168
06/14	42.40	888	15,462	16,350	452,310	7,130	295,164	2,580	10,320
06/15	42.59	1,312	18,420	19,732	472,042	7,560	302,724	3,690	14,760
06/16	42.88	920	9,960	10,880	482,922	7,447	310,171	1,770	7,080
06/17	43.14	992	9,096	10,088	493,010	7,395	317,567	2,208	8,832
06/17	43.14	1,544	10,908	12,452	505,462	7,206	324,773	1,338	5,352
06/19	43.20	1,504	16,380	17,884	523,346	7,479	332,252	2,670	10,680
06/20	43.20	1,120	13,608	14,728	538,074	7,479	339,394	3,936	15,744
06/21	42.80	1,120	14,370	15,386	553,460	6,968	346,362	3,048	12,192
									10,248
06/21	42.80	736	14,370	15,386	568,926	6,712	340,362 353,075	2,562	

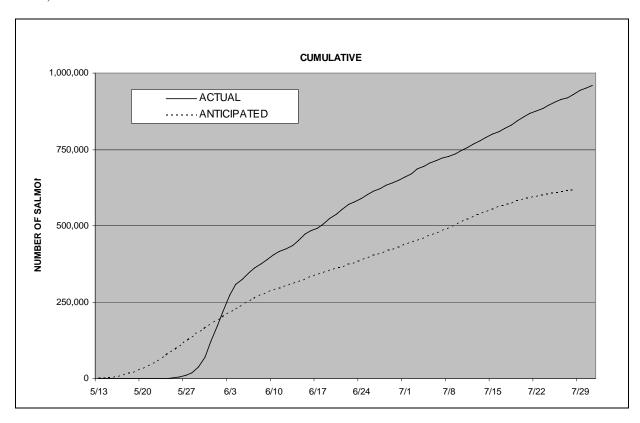
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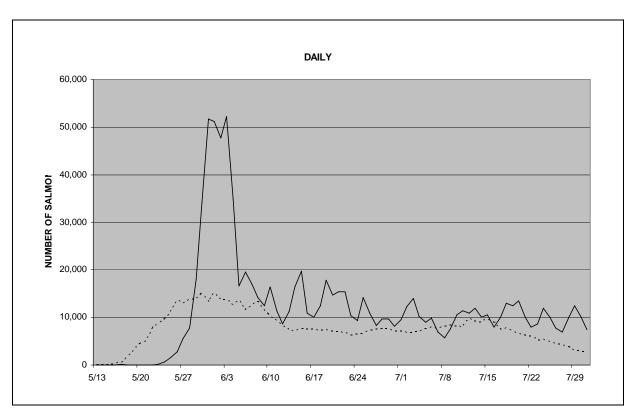
**Appendix A5**.–Page 2 of 2.

			<b>Estimated</b>	Daily Esca	pement				
						M	inimum		
	Water	North	South			Escapem	ent Objective	0600	Projected
Date	Level (m)	Bank	Bank	Daily	Cumulative	Daily	Cumulative	Count	Daily
06/23	42.36	672	9,756	10,428	579,354	6,311	359,385	2,766	11,064
06/24	42.28	624	8,658	9,282	588,636	6,314	365,700	2,094	8,376
06/25	42.10	1,360	12,846	14,206	602,842	6,508	372,208	3,516	14,064
06/26	42.16	296	10,662	10,958	613,800	7,232	379,439	2,964	11,856
06/27	42.15	656	7,614	8,270	622,070	7,380	386,819	1,932	7,728
06/28	42.02	1,000	8,622	9,622	631,692	7,528	394,347	2,082	8,328
06/29	42.06	840	8,916	9,756	641,448	7,625	401,972	2,484	9,936
06/30	42.23	576	7,494	8,070	649,518	7,049	409,022	1,482	5,928
07/01	42.32	664	8,904	9,568	659,086	7,124	416,146	1,800	7,200
07/02	42.40	1,184	11,040	12,224	671,310	6,819	422,965	2,814	11,256
07/03	42.52	872	13,152	14,024	685,334	6,824	429,789	3,042	12,168
07/04	42.69	864	9,312	10,176	695,510	7,168	436,957	2,490	9,960
07/05	42.89	2,024	6,972	8,996	704,506	7,673	444,630	2,040	8,160
07/06	43.13	1,080	8,760	9,840	714,346	7,888	452,519	2,400	9,600
07/07	43.50	552	6,348	6,900	721,246	7,564	460,083	1,908	7,632
07/08	43.51	1,048	4,572	5,620	726,866	8,061	468,143	1,488	5,952
07/09	43.48	1,232	6,336	7,568	734,434	8,342	476,485	1,278	5,112
07/10	43.29	896	9,702	10,598	745,032	8,048	484,533	2,322	9,288
07/11	43.08	2,632	8,778	11,410	756,442	7,930	492,463	3,198	12,792
07/12	43.20	1,728	9,096	10,824	767,266	9,794	502,257	1,980	7,920
07/13	43.26	1,472	10,458	11,930	779,196	9,241	511,498	3,156	12,624
07/14	43.44	1,696	8,382	10,078	789,274	8,968	520,466	2,682	10,728
07/15	43.56	1,424	9,084	10,508	799,782	9,614	530,080	3,825	15,300
07/16	43.53	752	7,158	7,910	807,692	9,017	539,097	1,428	5,712
07/17	43.27	792	9,192	9,984	817,676	7,382	546,479	1,818	7,272
07/18	42.89	1,256	11,670	12,926	830,602	7,797	554,276	2,280	9,120
07/19	42.70	1,336	11,148	12,484	843,086	7,154	561,430	1,938	7,752
07/20	42.64	3,752	9,728	13,480	856,566	6,497	567,927	2,220	8,880
07/21	42.64	2,080	8,010	10,090	866,656	6,286	574,213	2,340	9,360
07/22	42.62	1,248	6,678	7,926	874,582	6,014	580,228	1,752	7,008
07/23	42.59	1,904	6,660	8,564	883,146	5,114	585,342	1,422	5,688
07/24	42.52	1,880	10,050	11,930	895,076	5,282	590,624	2,862	11,448
07/25	42.66	2,040	7,962	10,002	905,078	4,777	595,401	2,388	9,552
07/26	42.84	1,210	6,636	7,846	912,924	4,451	599,852	1,608	6,432
07/27	42.85	1,000	5,934	6,934	919,858	4,123	603,975	1,668	6,672
07/28	42.73	2,632	7,326	9,958	929,816	3,844	607,819	1,512	6,048
07/29	42.70	3,200	9,294	12,494	942,310	3,099	610,918	2,898	11,592
07/30	42.78	2,432	7,530	9,962	952,272	2,750	613,668	2,784	11,136
07/31	43.01	1,440	5,994	7,434	959,706	2,559	616,227	1,968	7,872

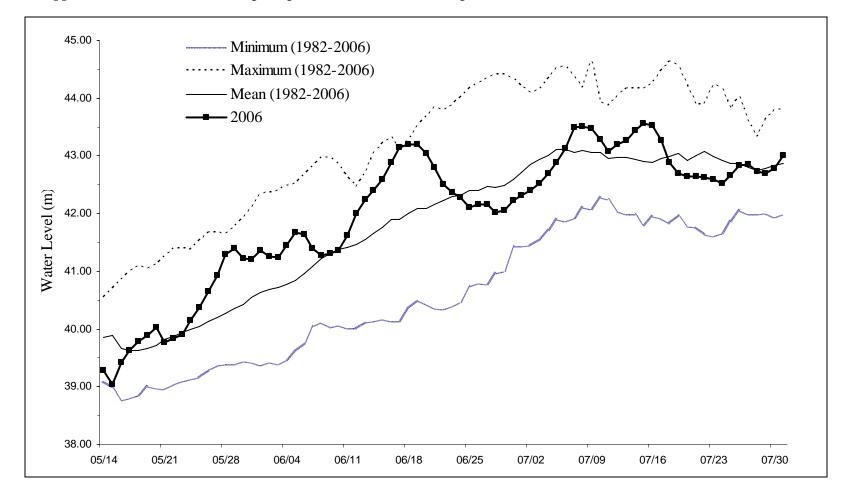
*Note*: North bank deployed 5/12/06, south bank deployed on 5/23.

**Appendix A6.**—Anticipated versus actual daily and cumulative salmon escapement, Miles Lake sonar, 2006.





**Appendix A7.**–Measured water stage height at the Million Dollar Bridge, 2006.



Appendix A8.—Copper River District commercial drift gillnet salmon harvest by period, 2006.

		Emergency Order	r		_	Chin	ook	Sock	кеуе	Co	ho	Pir	ık	Chu	ım
Period a	Date	Issued	Hours	Permits	Landings	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
1	05/15-05/15	2-F-E-001-06	12	462	537	2,989	63,621	26,610	157,787	0	0	0	0	0	0
2 <sup>b</sup>	05/19-05/19	2-F-E-002-06	12	460	580	2,626	52,381	80,596	471,744	3	31	0	0	8	62
3	05/22-05/22	2-F-E-003-06	12	446	610	4,027	70,908	106,897	628,957	5	41	0	0	7	68
4	06/01-06/02	2-F-E-005-06	24	464	1,010	3,349	62,500	199,193	1,165,913	3	20	0	0	450	2,587
5	06/03-06/03	2-F-E-006-06	12	457	547	1,917	36,683	54,845	315,081	0	0	0	0	124	1,088
6	06/05-06/06	2-F-E-007-06	24	444	690	3,328	68,706	57,534	333,315	2	17	0	0	185	1,620
7	06/08-06/09	2-F-E-010-06	36	417	730	3,401	74,301	62,465	358,670	2	13	0	0	57	504
8	06/12-06/13	2-F-E-014-06	36	410	759	2,867	62,794	69,807	402,515	51	372	0	0	159	1,164
9	06/15-06/17	2-F-E-019-06	36	352	618	1,979	46,024	66,802	382,760	18	156	3	11	287	1,904
10	06/19-06/20	2-F-E-023-06	36	291	470	1,240	28,631	68,791	387,313	4	34	1,380	5,049	3,390	23,926
11	06/22-06/24	2-F-E-031-06	48	327	762	1,182	26,336	129,183	726,089	42	257	1,166	4,644	4,342	31,361
12	06/26-06/27	2-F-E-035-06	36	294	593	573	12,247	83,906	465,866	44	355	971	3,910	2,093	16,314
13	06/29-07/01	2-F-E-041-06	48	244	503	356	7,878	65,193	361,614	191	1,593	342	1,409	626	4,946
14	07/03-07/05	2-F-E-046-06	48	217	445	196	4,160	53,853	294,105	316	2,298	2,747	11,104	638	4,680
15	07/06-07/08	2-F-E-053-06	48	194	470	101	2,017	62,635	349,787	58	430	6,235	21,488	1,135	9,404
16	07/10-07/12	2-F-E-059-06	48	212	480	51	972	63,652	351,754	401	3,211	8,112	33,388	1,347	10,330
17	07/13-07/15	2-F-E-065-06	48	176	355	33	503	43,731	245,886	568	4,360	3,792	15,440	1,137	8,523
18	07/17-07/19	2-F-E-070-06	48	162	311	27	349	39,150	223,628	369	2,873	2,955	12,054	723	5,600
19	07/20-07/22	2-F-E-078-06	48	73	170	12	192	25,823	145,975	234	1,641	560	1,995	187	1,415
20	07/24-07/26	2-F-E-085-06	48	67	100	1	17	10,260	57,986	579	4,004	543	2,316	175	1,484
21	07/27-07/29	2-F-E-088-06	48	85	175	3	43	26,040	146,830	1,160	8,802	507	2,073	5	28
22	07/31-08/02	2-F-E-100-06	48	91	184	2	44	28,868	165,582	2,399	18,599	522	1,903	22	170
23	08/03-08/05	2-F-E-103-06	48	31	36	0	0	6,385	35,919	1,207	8,699	109	443	76	258
24	08/07-08/09	2-F-E-106-06	48	128	257	4	44	27,516	157,700	15,712	126,770	403	1,712	14	68
25	08/10-08/12	2-F-E-111-06	48	143	207	12	75	17,939	104,320	9,028	72,644	269	986	9	52
26	08/14-08/15	2-F-E-114-06	24	163	225	0	0	11,849	68,850	12,519	102,809	199	818	5	40
27	08/21-08/22	2-F-E-120-06	36	213	449	2	16	4,864	28,639	60,690	522,494	18	75	0	0
28	08/28-08/29	2-F-E-123-06	24	275	530	0	0	1,226	7,397	63,156	557,232	6	23	1	8
29	08/31-09/01	2-F-E-131-06	24	271	395	0	0	662	3,921	52,218	476,674	3	11	0	0
30	09/04-09/05	2-F-E-134-06	24	274	382	0	0	373	2,241	35,620	328,096	0	0	0	0
31	09/07-09/08	2-F-E-137-06	24	194	234	0	0	68	410	23,156	211,807	1	3	0	0
32	09/11-09/12	2-F-E-139-06	24	131	198	0	0	11	63	17,538	154,510	0	0	0	0

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**Appendix A8**.–Page 2 of 2.

		Emergency Orde	r		_	Chin	ook	Sock	кеуе	C	oho	Pir	ık	Chum	
Period a	Date	Issued	Hours	Permits	Landings	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
33	09/14-09/16	2-F-E-146-06	48	78	124	0	0	13	76	11,597	111,719	1	3	1	5
34	09/18-09/20	2-F-E-149-06	48	83	131	0	0	10	61	7,572	75,240	0	0	0	0
35	09/21-09/23	2-F-E-151-06	48	20	24	0	0	4	24	1,348	13,660	0	0	0	0
36	09/25-10/01	2-F-E-152-06	156	11	12	0	0	0	0	465	4,320	0	0	0	0
37	10/02-10/08	2-F-E-155-06	156	1	1	0	0	0	0	10	110	0	0	0	0
38	10/09-10/15	2-F-E-158-06	156	0	0	0	0	0	0	0	0	0	0	0	0
39	10/16-10/22	2-F-E-159-06	156	0	0	0	0	0	0	0	0	0	0	0	0
Total			1896	490	14,304	30,278	621,442	1,496,754	8,548,778	318,285	2,815,891	30,844	120,858	17,203	127,609
Average	Average Weight						20.52		5.71		8.85		3.92		7.42

The waters of the Copper River District were open for all periods.
 Waters of the Copper River District outside of the inside closure area as described in 5 AAC 24.350(1)(B) were open to commercial fishing.

**Appendix A9.**—Anticipated and actual semi-weekly harvest and escapement of Chinook and sockeye salmon in the Copper River District drift gillnet fish

			Anticipated	Actual	Anticipated	Actual	Anticipated	Actual
~		Fishing	Sockeye	Sockeye	Chinook	Chinook	Salmon	Salmon
_	Weekly		salmon	salmon	salmon	salmon	Cumulative	Cumulative
Date	~	(Hours)	Harvest <sup>a</sup>	Harvest	Harvest a		Escapement b	
05/13	Sat	0	0	0	2,265	0	NA	18
05/17	Wed	12	33,081	26,610	6,679	2,989	944	294
05/20	Sat	12	80,956	80,596	7,347	2,626	10,160	402
05/24	Wed	12	93,849	106,897	5,795	4,027	41,347	1,167
05/27	Sat	0	110,400	0	5,664	0	79,009	11,102
05/31	Wed	0	64,217	0	3,962	0	134,894	122,640
06/03	Sat	36	109,037	254,038	5,257	5,266	177,412	273,732
06/07	Wed	24	71,711	57,534	2,619	3,328	227,915	361,512
06/10	Sat	36	56,223	62,465	2,561	3,401	262,985	404,558
06/14	Wed	36	32,529	69,807	1,384	2,867	295,164	452,310
06/17	Sat	36	59,247	66,802	1,294	1,979	317,567	493,010
06/21	Wed	36	32,769	68,791	412	1,240	346,362	553,460
06/24	Sat	48	53,138	129,183	594	1,182	365,700	588,636
06/28	Wed	36	41,161	83,906	244	573	394,347	631,692
07/01	Sat	48	56,495	65,193	276	356	416,146	659,086
07/05	Wed	48	47,810	53,853	149	196	444,630	704,506
07/08	Sat	48	66,665	62,635	131	101	468,143	726,866
07/12	Wed	48	45,685	63,652	49	51	502,257	767,266
07/15	Sat	48	58,932 25,551	43,731	59	33	530,080	799,782
07/19 07/22	Wed	48	25,551	39,150	21	27	561,430	843,086
07/26	Sat Wed	48 48	29,025	25,823	26 4	12	580,228 599,852	874,582
07/29		48	12,186	10,260 26,040	4	1		912,924 942,310
08/02	Sat Wed	48		28,868		3 2	610,918	942,310
08/02	Sat	48		6,385		0		
08/09	Wed	48		27,516		4		
08/09	Sat	48		17,939		12		
08/12	Wed	24		11,849		0		
08/19	Sat	0		0		0		
08/13	Wed	36		4,864		2		
08/25	Sat	0		4,804		0		
08/30	Wed	24		1,226		0		
09/02	Sat	24		662		0		
09/06	Wed	24		373		Ö		
09/09	Sat	24		68		Ö		
09/13	Wed	24		11		0		
09/16		48		13		0		
09/20		48		10		Ö		
09/23	Sat	48		4		0		
09/27	Wed	60		0		0		
09/30	Sat	96		0		0		
10/04	Wed	60		0		0		
10/07	Sat	96		0		0		
10/11	Wed	60		0		0		
Total		1,104	1,180,667	1,496,716		30,278	610,918	942,310
a D		<u> </u>	2,200,007	1,120,710		20,270	0109/10	/ T#901U

<sup>&</sup>lt;sup>a</sup> Based on average historical harvests for comparable dates (1992–1999).

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

<sup>&</sup>lt;sup>c</sup> Escapement estimate from sonar counters at Miles Lake. Sonar counts ended July 31.

Appendix A10.—Aerial escapement indices by statistical week and location for sockeye salmon returning to the Copper River Delta, 2006.

					V	Veekly	Escapement Indi	ces (Statistical Wee	ek Endi	ng Date	Listed)					
Survey System <sup>a</sup>	6/17	6/24	7/1	7/8 7/15	7/22	7/29	8/5 8/12 8/19	8/26 9/2	9/9	9/16 9/2	23 9/30	10/7 10/14	Site c	System d	Anticipa (by drain	
Eyak River														•		
Eyak River	320	120	240	2,300	4,200*		120	ns-silt		0	ns(silt)		4,200	31,310	9,972 - 2	23,571
West Shore Beaches	120	220	300	550	1,000		1,850*	ns-silt		1,200	ns(silt)		1,850			
East Shore Beaches	280	2,400	3,600	4,050	5500*		2,200	ns-silt		1,500	200		5,500			
Middle Arm Beaches b	1,250	$3,400^{b}$	1,150	1,700	1,700		3240 <sup>b</sup>	2,800	3	3400 <sup>b</sup>	ns(silt)		10,040			
North Shore Beaches	120	1,500	4,700*	800	400		80	ns-silt		0	ns(silt)		4,700			
Hatchery Creek Delta	0	90	370	2,100*	1,900		850	ns-silt		420	ns(silt)		2,100			
Hatchery Creek	ns	12	120	600	600*		90	ns-silt		40	ns(silt)		600			
Power Creek Delta	0	850	1,120*	1,100	400		40	ns-silt		0	ns(silt)		1,120			
Power Creek	ns	50	300	850	1,200*		120	ns-silt		0	ns(silt)		1,200			
Ibeck Creek																
Ibeck Creek	ns	0	0	ns(silt)	0		620*	100 (partial)		200	50		620	620		
Alaganik Slough																
Alaganik Slough	0	6	0	0	0		0	0		0	0		6	8,966	8,359 - 3	19,758
McKinley Lake Salmon Creek West	0	1,100	2,400	2,900	4,300*		1,600	ns-silt		1,460	0		4,300			
Fork	0	0	0	0	180		3,800*	1,200		0	0		3,800			
Salmon Creek East Fork	0	0	0	0	100		700	860		60	0		860			
26/27 Mile Creek																
26/27 Mile Creek	0	0	24	3,200*	850		650	290		420	0		3,200	3,200	2,182 –	5,157
39 Mile Creek																
39 Mile Creek	ns	0	0	80	750		2,700*	240		1,000	0		2,700	2,700	5,772 – 1	13,642
<b>Goat Mountain</b>																
Goat Mountain Creek	ns	0	18	0	0		1,450	0		0	0		1,450	1,450	549 –	1,298
Pleasant Creek																
Pleasant Creek	ns	1,750	3,920	6,600*	3,680		800			0	0		6,600	6,600	1,075 –	2,542
Martin River																
Martin River - Lower	340	350	420	400	450*		420	ns-silt		0	0		450	450		
Ragged Point River Ragged Point Lake	ns	0	250	0	650		470	ns-silt		0	0		650	3,050		
Outlet	ns	0	0	0	0		0	ns		0	0		0			
Ragged Point Lake	ns	0	0	0	0		600	ns	2.	,400*	0		2,400			

-continued-

Appendix A10.—Page 2 of 2.

		Weekly Escapement Indices (Statistical Week Ending Date Listed)																			
Survey System <sup>a</sup>	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5 8/1	2 8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14 \$	Site <sup>c</sup>	System <sup>d</sup>	Antici (by dra	
Martin River - Upper b	670	0	24		0	0		1,120	k		ns		0		0		1	,120	1,120		
Martin Lake Outlet	120	600	2,400		5,600* 12,700	0			)		ns		0		0			5,600 2,70	23,300	17,598 -	41,596
Martin Lake	2,800	3,210	8,400		*	8,200		4,00	)		ns		0		0			0			
Martin Lake Feeders	0	1,150	1,700		4,400	5,000*		3,10	)		ns		0		ns		5	,000			
Pothole River	0	110	950		1,700*	650		35	)		ns		0		ns		1	,700	5,600		
Pothole Lake	0	0	0		0	0		3,900	k		ns		3,600		ns		3	,900			
Little Martin River	0	0	0		0	0		60	k		ns		0		ns			60	600		
Little Martin Lake	0	0	0		0	120		540	k		ns		300		ns			540			
Tokun																					
Tokun Springs	0	6	120		400	65		750	k		ns		0		ns			750	4,280	5,352 -	12,649
Tokun River	80	360	140		350	70		530	k		ns		10		ns			530			
Tokun Lake Outlet	0	200	0		0	0			)		ns		0		ns			200			
Tokun Lake	2,800	1,650	2,150		900	280		2,800	k		ns		750		ns		2	2,800			
Martin River Slough																					
Martin River Slough	40	1,500	5650*		4,700	3,000		1,12	)		ns		0		ns		5	,650	5,650	4,141 -	9,787
Total	8,940	20,634	40,466	0	57,980	45,245	0	0 40,67	0	0	5,390	0	16,760	0	250	0	0		98,896		
Lower SEG Average SEG, (average	7,313	14,238	17,597	28,229	30,072	31,419	32,059	32,568 25,07	5 26,465	24,382	19,957 1	7,446	12,638	10,561	6,892	4,373	2,611				55,000
anticipated escapement)	11,222	21,850	27,004	43,318	46,147	48,214	49,196	49,977 38,48	40,611	37,415	30,624 2	6,772	19,394	16,206	10,576	6,711	4,006				84,400
Upper SEG		33,655	41,594	77,722	71,079	74,263	75,775	76,979 59,27	62,553	57,630	47,170 4	1,236	29,872	24,962	16,290	10,337	6,170				130,000

*Note*: \* Denotes peak counts.

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 c).

The sites typically have very protracted run timing or two temporally segregated spawning populations at the same sites. Aerial counts from more then one day may be astricted and used in the escapement estimate if the surveyor indicates that these counts represented different fish.

<sup>&</sup>lt;sup>c</sup> The escapement estimates for each site is in the astricted survey estimate. 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.

<sup>&</sup>lt;sup>d</sup> The sum of the estimates by site within a system.

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Appendix A11.—Copper River and Bering River area sockeye salmon escapement indices, 1995–2006.

Stream/Lake a, b	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Eyak Lake	c	16,300	18,100	20,500	7,400	13,375	12,900	14,300	9,130	26,290
Hatchery Creek	С	3,300	200	2,800	950	1,700	0	500	290	2,700
Power Creek	С	1,500	1,400	6,700	2,450	1,600	850	1,500	566	2,320
Ibek Creek	c	c	50	c	1,500	0	475	2,300	500	620
McKinley Lake	8,500	11,300	400	2,850	2,080	4,200	3,200	4,500	360	4,306
Salmon Creek	3,100	3,300	7,100	4,220	9,650	4,900	1,800	7,400	7,260	4,660
26/27 Mile Creek	1,700	1,800	3,800	3,300	4,000	850	475	1,125	3,000	3,200
39 Mile Creek	9,300	11,500	12,000	6,500	9,000	10,000	7,800	2,600	2,900	2,700
Goat Mountain	350	300	60	60	5	70	0	700	1,250	1,450
Pleasant Creek	5,000	1,000	7,615	2,300	8,100	2,425	6,850	3,525	50	6,600
Martin River	1,100	2,700	2,800	2,650	200	700	3,425	2,275	800	1,570
Ragged Pt. River/Lake	4,400	4,800	5,900	3,600	2,900	3,375	4,750	1,975	500	3,050
Martin Lake	13,100	13,600	19,150	22,900	7,100	10,600	18,900	17,300	23,300	23,300
Pothole Lake	300	1,500	2,100	3,050	1,910	8,400	1,500	1,350	1,200	5,600
L. Martin Lake	470	750	1,800	830	825	2,540	2,175	1,610	1,500	600
Tokun Lake/River	5,750	8,950	7,600	6,485	5,695	6,500	3,600	3,775	1,800	4,280
Martin River Slough	4,000	4,900	10,900	9,300	7,300	4,500	4,450	2,650	4,000	5,650
Copper River Delta Total	57,070	87,500	100,975	98,045	71,065	75,735	73,150	69,385	58,406	98,896
Upper Copper River d	1,148,079	866,957	850,951	587,497	833,569	819,886	700,618	669,646	855,125	959,706
<b>Copper River District Total</b>	1,205,149	954,457	951,926	685,542	904,634	895,621	773,768	739,031	913,531	1,058,602
Bering River/Lake	c	21,600	39,030	21,050	7,750	19,540	32,075	22,550	19,890	9,310
Shepherd Creek	1,400	ć	1,215	950	60	60	205	195	1,220	60
Stillwater Creek	700	400	950	320	320	350	375	500	0	140
Kushtaka Lake	65	500	1,100	700	293	265	185	15	230	61
Katalla River	700	900	3,900	1,200	400	4,500	17,000	1,875	9,550	5,100
Bering River Area Total	2,865	23,400	46,195	24,220	8,823	24,715	49,840	25,135	30,890	14,671
Copper/Bering River Total	1,208,014	977,857	998,121	709,762	913,457	920,336	823,608	764,166	944,421	1,073,273

<sup>&</sup>lt;sup>a</sup> 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.

<sup>&</sup>lt;sup>c</sup> Peak escapement estimates were not possible for these systems due to poor weather or water conditions.

<sup>&</sup>lt;sup>d</sup> Upriver escapement estimate from Miles Lake sonar counts.

Appendix A12.—Aerial survey indices of sockeye salmon escapement to the upper Copper River drainage, 1993–2006.

													10-Year
					7	Yearly Su	rvey Indic	es					Average
Location a	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	1983–1992 <sup>b</sup>
Fish Lake		4,800		4,900	1,880	5,000	5,000	125	1,300	0	281	7,250	6,418
Bad Crossing 1 & 2		780		7,800	195	19	2,000	157	90	30	5,120	620	2,604
Suslota Lake		4,100		1,060	0	3,000	2,500	1,500	2,750	1,975	1,230	1,300	1,416
Dickey Lake		0		350	11	0	1	0	0	10	55	185	115
Keg Creek		850	420	160	125	0	1	30	38	0	7	190	725
Mahlo Creek		3,800	11,800	12,300	325	1,000	400	5,000	6,850	500	1,950	5,000	2,648
St. Anne Creek		3,500	4,800	4,100	1,300	1,100	300	3,500	3,750	970	1,692	6,560	4,888
Fish Creek-Mentasta		400		1,400	450	800	3,500	900		c	3,330	3,700	963
Swede Lake		20		770	270	135	500	150	325	225	7	2,570	531
Tana River									250	c	c	1,392	1,345
Mentasta Lake		2,800		6,100	715	1,200	13,000	5,400	4,800	6,000	7,090	7,790	3,277
Tanada Lake 3	3,100				350	3,200	200	950	0	3,950	683	30	3,849
Salmon Creek					0	500	1,500	1,400	300	c	217	790	825
Paxson Inlet-Mud Creek		16,800		15,200	5,700	2,200	7,000	4,800	2,800	2,200	363	2,470	6,560
Mud Creek and Lake		240			20	30	300	30	75	5	145	310	172
Mendeltna Creek		1,250	400		120	2,800	800	1,875	1,200	50	318	700	2,470
Paxson Lake Outlet				200	1,800	1,000	200	140		5	155	270	2,661
Mud Creek Summit Lak	ce			700	820	140	450	2,800	3,900	40	c	1,800	7,445
Long Lake										c		1,400	1,577
Tonsina Lake										0		20	1,080
Totals 3	3,100	39,340	17,420	55,040	14,081	22,124	37,652	28,757	28,428	15,960	22,643	44,347	51,569

<sup>&</sup>lt;sup>a</sup> These escapement numbers 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 escapement for these stocks, but a comparable index based upon the best data currently available. An effort has been made to standardize the indices 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 prevented surveys for that given year.

b The 1983–1992 average used for anticipated estimate.

No survey flown.

Appendix A13.-Upper Copper River Chinook salmon aerial escapement index counts, 1977–2006.

		Copper Ri	ver					Tonsina	Drainage <sup>a</sup>	
		Upstream of Gu	ılkana <sup>a</sup>	Tazlina Dr	ainage <sup>a</sup>	Klutina D	rainage <sup>a</sup>	Little		
	Gulkana	East Fork	Indian	Mendeltna	Kiana	St. Anne	Manker	Tonsina	Greyling	
Year <sup>b</sup>	River c	Chistochina R.	River	Creek	Creek	Creek	Creek	River	Creek	Total
1977	729	132	d	73	91	10	15	d	d	1,050
1978	618 <sup>e</sup>	137	9	52 <sup>f</sup>	125 <sup>f</sup>	24 <sup>f</sup>	$20^{\rm f}$	285 <sup>f</sup>	92 <sup>f</sup>	1,362
1979	764	810	29	5 <sup>f</sup>	279 <sup>f</sup>	16 <sup>f</sup>	16 <sup>f</sup>	285 <sup>f</sup>	153 <sup>f</sup>	2,357
1980	712	575	24	$3^{\rm f}$	247	8 f	35 <sup>f</sup>	70 <sup>f</sup>	66 <sup>f</sup>	1,740
1981	77	120	d	51	191	19	33	191	107	789
1982	879 <sup>f</sup>	1260	179	$70^{\rm f}$	200 <sup>f</sup>	35 <sup>f</sup>	49 <sup>f</sup>	440 <sup>f</sup>	124 <sup>f</sup>	3,236
1983	589	575	41	12 <sup>f</sup>	166	87	141	330	287	2,228
1984	1,331	577	17	26 f,e	382 <sup>e</sup>	89 <sup>e</sup>	264 <sup>e</sup>	568	279	3,533
1985	224	360	14	$26^{\rm f}$	91 <sup>f</sup>	15 <sup>f</sup>	22 <sup>f</sup>	203 <sup>f</sup>	58 <sup>f</sup>	1,013
1986	1,484	618	d	76	328	182	251	424	224	3,587
1987	1,098	764	33	10	80	192	141	247	112	2,677
1988	831	709	d	25 <sup>f</sup>	249	64	119	78	167	2,242
1989	2,009	750	7	187	345	90	165	68 <sup>f</sup>	78	3,699
1990	$1,171^{f}$	645	15 <sup>f</sup>	323 <sup>f</sup>	$414^{\rm f}$	43 <sup>f</sup>	43	57	52 <sup>f</sup>	2,763
1991	1,223 <sup>f</sup>	925	18	310 <sup>e</sup>	522 <sup>e</sup>	130	107	59	159	3,453
1992	540	88	1	83 <sup>f</sup>	79 <sup>f</sup>	12 <sup>f</sup>	14 <sup>f</sup>	107	17 <sup>f</sup>	941
1993	693	d	d	d	d	d	d	d	d	693
1994	786	508	47	120	430	250	75	4 <sup>f</sup>	2 <sup>f</sup>	2,222
1995	285 <sup>e</sup>	37 <sup>f</sup>	2 <sup>f</sup>	32 <sup>f</sup>	111 <sup>f</sup>	$26^{\rm f}$	8 <sup>f</sup>	25 <sup>f</sup>	26 <sup>f</sup>	552
1996	1,364 <sup>e</sup>	450 <sup>e</sup>	11 <sup>e</sup>	360 <sup>e</sup>	723 <sup>e</sup>	117 <sup>e</sup>	164 <sup>e</sup>	25 <sup>e</sup>	143 <sup>e</sup>	3,357
1997	2,270	2,245 <sup>e</sup>	270 <sup>e</sup>	311 <sup>e</sup>	693 <sup>e</sup>	900 <sup>e</sup>	466 <sup>e</sup>	55 <sup>e</sup>	330 <sup>e</sup>	7,540
1998	1,407	740 <sup>e</sup>	48	280 <sup>e</sup>	700 <sup>e</sup>	515 <sup>e</sup>	843 <sup>e</sup>	60	527 <sup>e</sup>	5,120
1999	934 <sup>f</sup>	82 <sup>f</sup>	2 <sup>f</sup>	38 <sup>f</sup>	216 <sup>f</sup>	$486^{\mathrm{f}}$	69 <sup>f</sup>	93 <sup>f</sup>	88 <sup>f</sup>	2,008
2000	1,174	580	62	125	155 <sup>f</sup>	70	54 <sup>f</sup>	26 <sup>f</sup>	104 <sup>f</sup>	2,350
2001	556 <sup>f</sup>	0 <sup>g</sup>	0 <sup>g</sup>	80 <sup>f</sup>	154 <sup>f</sup>	75 <sup>f</sup>	24 <sup>f</sup>	7 <sup>f</sup>	73 <sup>f</sup>	969
2002	2,087	956	27	220	240	130	130	139	164	4,093
2003	2,113	160 <sup>f</sup>	4 <sup>f</sup>	d	200 <sup>f</sup>	85 <sup>f</sup>	d	d	d	2,562
2004	3,175	$38^{\rm f}$	d	73 <sup>f</sup>	$180^{\rm f}$	13 <sup>f</sup>	$9^{\rm f}$	$37^{\rm f}$	d	3,525
2005	824	195	h	h	i	d	d	h	h	h
2006	d	d	d	d	d	d	d	d	d	d
1977–1986 <sup>h</sup>		516	45	67	234	77	141	378	224	2,407
1987–1996 <sup>h</sup>		605	20	197	392	141	116	96	132	2,650
1997–2003 h	1,810	1,130	102	234	544	404	480	85	340	5,129

<sup>&</sup>lt;sup>a</sup> Some data published in Brady et al. 1991, but the remainder is unpublished.

Data in this table have been modified from previous year's reports. Past years table reporting accounted for estimates from outside of defined survey reaches and included extrapolated data.

<sup>&</sup>lt;sup>c</sup> Gulkana River index counts are those upstream and including the West Fork.

<sup>&</sup>lt;sup>d</sup> No aerial survey conducted or Chinook salmon counts not conducted.

Counts determined by two surveyors. In years where more than one surveyor was used, counts from the most experienced surveyor are listed.

f Survey flown outside of July 17–31.

<sup>&</sup>lt;sup>g</sup> Visibility poor due to high water conditions.

<sup>&</sup>lt;sup>h</sup> Surveys of the Tazlina, Tonsina and Indian river drainages discontinued following 2004.

Averages exclude years when surveys were flown outside July 17–31.

**Appendix A14.**—Estimated age and sex composition of sockeye salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2006.

Strata Combined:	05/15 - 10/02				В	rood Year	and A	ge Class				_
Sampling dates:	05/19 - 08/02	2004	200	3	20	02		2001		20	000	
Sample size:	4,686 <sup>a</sup>	0.1	0.2	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Female	Percentage of sample	0.0	0.2	0.0	1.6	6.6	0.0	33.1	0.6	0.2	1.9	44.3
	Number in harvest	0	2,257	0	24,586	99,218	0	496,052	9,255	2,837	28,462	662,667
Male	Percentage of sample	0.0	0.4	0.0	1.7	9.6	0.0	40.7	0.8	0.4	2.1	55.7
	Number in harvest	308	5,413	308	25,389	143,857	702	608,526	12,252	5,621	31,450	833,825
Total	Percentage of sample	0.0	0.5	0.0	3.3	16.2	0.0	73.8	1.4	0.6	4.0	100.0
	Number in harvest	308	7,670	308	49,975	243,075	702	1,104,840	21,507	8,457	59,912	1,496,754
	Standard error	308	1,543	308	3,981	7,809	499	9,385	2,674	1,644	4,370	

<sup>&</sup>lt;sup>a</sup> Fish with reabsorbed scales were excluded: strata 2 - 2; strata 3 - 6; strata 4 - 33; strata 5 - 32; strata 6 - 29; strata 7 - 30; strata 8 - 66, and strata 9 - 110.

**Appendix A15.**—Temporally stratified age and sex composition of Chinook salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2006.

<b>Strata Combined:</b>	05/15 - 09/16			Brood Year a	and Age C	Class			
Sampling dates:	05/16 - 06/10	2003	2002	2001		2000	)	1999	
Sample size:	1,568	1.1	1.2	1.3	2.2	1.4	2.3	1.5	Total
Female	Percentage of sample	0.0	6.3	30.5	0.4	7.2	0.3	0.0	44.7
	Number in harvest	0	1,923	9,234	112	2,190	92	0	13,549
Male	Percentage of sample	0.3	9.6	29.8	0.6	13.1	0.4	0.4	54.1
	Number in harvest	82	2,892	9,035	167	3,976	111	128	16,391
Total	Percentage of sample	0.3	16.0	61.1	0.9	20.7	0.7	0.4	100.0
	Number in harvest	82	4,831	18,494	278	6,261	203	128	30,278
	Standard error	43	297	399	77	330	69	61	

**Appendix A16.**—Estimated age and sex composition of coho salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2006.

Strata Combined:	05/15 - 10/02	Brood '	Year and Age Class		_
Sampling dates:	08/15 - 09/12	2003	2002	2001	
Sample size:	1,207	1,1	2.1	3.1	Total
Female	Percentage of sample	26.8	22.1	0.2	49.1
	Number in harvest	85,458	70,217	677	156,351
Male	Percentage of sample	33.0	17.6	0.0	50.5
	Number in harvest	104,893	55,876	113	160,882
Total	Percentage of sample	60.1	39.6	0.2	100.0
	Number in harvest	191,402	126,093	790	318,285
	Standard error	4,706	4,701	494	

Appendix A17.—Total estimated coho salmon run to the Copper River by end user or destination, 1997–2006.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2006 percentages
Commercial harvest <sup>a</sup>	18,656	108,232	153,061	304,944	251,473	504,223	363,489	467,859	263,465	318,285	62.08%
Commercial, homepack <sup>a</sup>	0	14	36	0	24	187	0	2	119	137	0.03%
Commercial, donated <sup>a</sup>	0	0	0	0	5,141	0	0	0	0	0	0.00%
Educational drift gillnet permit <sup>a</sup>	0	0	0	0	0	0	0	0	0	0	0.00%
Subsistence (Cordova, drift gillnet) <sup>b</sup>	1,777	680	682	44	70	28	36	46	15	1	0.00%
Federal Subsistence (PWS/Chugach Nat'l Forest, dipnet, spear, rod and reel)									141	100	0.02%
Subsistence (Batzulnetas, fish wheel, dip net or spear) <sup>b</sup>	0	0	0	0	0	na	na	0	0	0	0.00%
Subsistence (Glennallen Subdistrict, dip net or fish wheel) <sup>b</sup>	177	507	292	511	1,101	524	487	76	280	212	0.04%
Federal Subsistence (Glennallen subdistrict, dipnet or fish wheel)						81	152	152	70	28	0.01%
Personal Use (Chitina Subdistrict, dipnet) <sup>b</sup>	157	2,100	2,117	3,540	2,385	1,712	2,409	2,304	1,869	2,715	0.53%
Federal Subsistence (Chitna subdistrict, dipnet)						0	70	18	0	20	0.00%
Delta sport harvest <sup>c</sup>	2,729	3,941	6,954	4,155	12,052	6,525	14,166	14,512	10,168	12,460	2.43%
Upriver sport harvest <sup>c</sup>	96	289	24	324	92	384	277	131	72	191	0.04%
Upriver spawning escapement <sup>d</sup>	unknow n	unknown									
Delta spawning escapement <sup>e</sup>	115,120	79,700	92,450	86,260	82,192	179,630	144,360	199,960	202,164	178,540	34.82%
Total estimated coho salmon run size	138,712	195,463	255,616	399,778	354,530	693,294	525,446	685,060	478,363	512,689	100.00%

<sup>&</sup>lt;sup>a</sup> Numbers are from fish ticket data.

<sup>&</sup>lt;sup>b</sup> Data is from returned state and federal subsistence permits.

<sup>&</sup>lt;sup>c</sup> The 2006 harvest estimates unavailable at this time, harvest estimates shown are 5 year harvest averages.

<sup>&</sup>lt;sup>d</sup> Numbers of upriver coho salmon spawners is unavailable at this time.

<sup>&</sup>lt;sup>e</sup> The Delta spawning index is calculated by doubling the final peak aerial survey index.

**Appendix A18.**—Anticipated and actual weekly harvest of coho salmon in the Copper River District drift gillnet fishery, 2006.

Week Ending	Fishing Time	Anticipated	Actual
Date	(Hours)	Harvest <sup>a</sup>	Harvest
05/20	24	1	3
05/27	12	11	5
06/03	36	19	3
06/10	60	32	4
06/17	72	48	69
06/24	84	134	46
07/01	84	226	235
07/08	96	471	374
07/15	96	1,231	969
07/22	96	1,868	603
07/29	96	2,703	1,739
08/05	96	6,815	3,606
08/12	96	16,955	24,740
08/19	24	36,334	12,519
08/26	36	56,340	60,690
09/02	48	63,220	115,374
09/09	48	57,746	58,776
09/16	72	32,643	29,135
09/23	96	12,659	8,920
09/30	156	3,882	465
10/07	156	781	10
10/14	156	51	0
10/21	156		0
10/28	72		0
Total	1,944	294,168	318,285

<sup>&</sup>lt;sup>a</sup> Based on average historical harvests for comparable dates (1973–2005).

Appendix A19.—Aerial escapement indices by statistical week and location for coho salmon returning to the Copper River Delta, 2006.

		Weekly E	scapem	ent Ind	ices (Sta	ntistical Week E	nding Date Lis	ted)		
Drainage <sup>a</sup>	Survey System	29-Jul 5-Aug 12-Aug 19-Aug 26-Aug	2-Sep	9-Sep	16-Sep	23-Sep 30-Sep	7-Oct 14-Oct	Site c	System <sup>d</sup>	Anticipated, (by drainage)
Eyak River	Eyak River	300	ns-silt		1,800*	ns		1,800	2,460	6,916
	East Shore Beaches	0	ns-silt		0	0		0		
	West Shore Beaches	0	ns-silt		0	ns		0		
	Middle Arm Beaches	0	0		140*	ns		140		
	North Shore Beaches	0	ns-silt		0	ns		0		
	Hatchery Creek Delta	0	ns-silt		160*	ns		160		
	Hatchery Creek	0	ns-silt		0	ns		0		
	Power Creek Delta	0	ns-silt		40*	ns		40		
	Power Creek	0	ns-silt		320*	ns		320		
Ibeck Creek	Ibeck Creek	80	15,800		36,300*	14,300		36,300	36,300	6,227
Scott River	Scott Lake	0	200		40*	ns		200	200	
	Scott River	0	0		0	ns		0		
	Elsner Lake b	0	0		0	0		0		
Alaganik Slough	Alaganik Slough	0	0		0	0		0	2,340	4,020
_	18/20 Mile Creek	10	90		740*	90		740		
	McKinley Lake	0	ns-silt		0	1,400		1,400		
	Salmon Creek West Fork	0	0		40*	ns		40		
	Salmon Creek East Fork	0	0		160*	ns		160		
26/27 Mile Creek	26/27 Mile Creek	0	30		0	60		60	60	829
39 Mile Creek	39 Mile Creek	300	2,950		4,400*	1,200		4,400	4,400	3,831
Goat Mountain Cr.	Goat Mountain Creek	200	0		3,100*	1,600		3,100	3,100	1,181
Pleasant Creek	Pleasant Creek	50	1,180		7,030*	2,382		7,030	7,030	ŕ
Martin River	Martin River - Lower	50	ns-silt		1,800*	290		1,800	1,800	
	Ragged Point River	0	ns-silt		360*	65		360	360	849
	Ragged Point Lake Outlet	0	ns		0	ns		0		
	Ragged Point Lake	0	ns		0	ns		0		
	Martin River - Upper	250	ns		7,300*	220		7,300	7,300	6,522
	Martin Lake Outlet	0	ns		0	3,100*		0	2,900	1,936
	Martin Lake	0	ns		1,600*	ns		1,600	•	
	Martin Lake Feeders	0	ns		1,300*	ns		1,300		
	Pothole River	80	ns		120*	ns		120	120	1,370
	Pothole Lake	0	ns		0	ns		0		
	Little Martin River	0	ns		7,500*	ns		7,500	7,500	5,413

## Appendix A19.—Page 2 of 2.

					W	eekly E	scapem	ent Ind	ices (Sta	tistical	Week E	nding I	Date Lis	sted)		
Drainage <sup>a</sup> Survey	y System 29-J	ful :	5-Aug	12-Aug	19-Aug	26-Aug	2-Sep	9-Sep	16-Sep	23-Sep	30-Sep	7-Oct	14-Oct	Site c	System <sup>d</sup>	Anticipated, (by drainage)
Little I	Martin Lake			0			ns		0		ns			0		
Tokun	Springs			0			ns		700*		ns			700	700	1,376
Tokun	River			0			ns		0		ns			0		
Tokun	Lake Outlet			0			ns		0		ns			0		
Tokun	Lake			0			ns		0		ns			0		
Martin River Slough Martin	River Slough			0			ns		12,700*		6,600			12,700	12,700	9,531
Copper River Aerial Survey I	Daily Total N	NS	NS	1,320	NS	NS	20,250	NS	87,650	NS	31,307	NS	NS		89,270	
Lower SEG		86	1,225	2,025	5,846	9,298	16,147	21,447	18,286	16,908	15,542	17,896	8,474	9,841		32,000
Average SEG, (average antici	pated escapement) 1	34	1,914	3,164	9,134	14,528	25,229	33,510	28,571	26,418	24,284	27,962	13,241	15,377		50,001
Upper SEG	1	80	2,565	4,240	12,239	19,468	33,807	44,904	38,285	35,401	32,540	37,470	17,743	20,605		67,000

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.

<sup>&</sup>lt;sup>b</sup> This stream is not included in the estimated escapement delta wide, it is a non-index stream.

<sup>&</sup>lt;sup>c</sup> 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 further sites upstream, the count which minimizes possible duplication of counts across dates is selected.

d The sum of the estimates by site within the index systems.

**Appendix A20.**—Copper River Delta and Bering River coho salmon escapement indices, 1995–2006.

Stream/Lake <sup>a,b</sup>	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Eyak Lake	4,050	5,100	6,800	2,550	1,250	2,130	7,800	17,425	10,050	12,700	2,812	1,940
Hatchery Creek	170	0	1,400	1,200	300	1,900	450	1,400	0	1,450	0	160
Power Creek	300	0	2,700	4,900	2,700	1,450	480	2,000	1,500	500	40	360
Ibeck Creek	3,000	6,300	4,700	1,500	4,600	7,000	14,000	23,900	26,000	32,000	34,900	36,300
Scott & Elsner River c	540	1,000	2,200	750	2,500	300	600	2,400	125	475	1,400	200
18/20 Mile	2,550	3,800	3,300	1,300	610	420	420	1,450	205	1,560	610	740
McKinley Lake	400	NC d	1,100	400	50	120	800	2,200	0	275	140	1,400
Salmon Creek	1,250	1,500	2,500	2,100	3,080	2,600	200	1,100	725	6,100	2,250	200
26/27 Mile	1,300	1,480	2,300	700	2,610	1,000	400	240	275	850	820	60
39 Mile	3,800	5,250	6,100	2,100	3,650	5,000	1,800	4,500	1,250	3,120	9,900	4,400
Goat Mountain	2,800	1,000	1,400	800	650	430	330	160	125	450	4,500	3,100
Pleasant Creek c	100	40	620	450	1,220	45	210	0	2,000	3,950	3,790	7,030
Martin River	5,000	15,400	NC d	6,250	3,900	4,500	3,755	13,325	10,200	11,600	1,050	9,100
Ragged Point River/Lake	100	0	80	850	275	330	440	3,400	375	575	650	360
Martin Lake	10	0	NC d	300	600	1,350	311	1,850	6,300	4,475	24,100	2,900
Pothole Lake	300	140	60	1,500	600	245	390	3,400	4,000	500	140	120
Little Martin Lake	1,500	700	10,500	3,800	3,600	3,000	3,010	500	1,000	7,900	2,100	7,500
Tokun River/Lake	1,900	1,300	1,300	2,000	1,130	710	1,600	540	550	1,750	2,030	700
Martin River Slough	5,950	4,100	10,500	6,400	12,900	10,600	4,100	10,025	7,500	9,750	9,850	12,700
Copper Delta Total	35,020	47,110	57,560	39,850	46,225	43,130	41,096	89,815	72,180	99,980	101,082	89,270
Katalla River	4,500	6,800	8,000	5,100	3,000	2,800	2,900	5,000	10,000	6,500	12,100	8,900
Bering Lake	10,600	6,000		14,300			21,040	15,375	13,750	10,125	15,040	13,052
Dick Creek	100	0	1,300	0	1,270	2,500	760	1,700	2,050	2,750	362	1,660
Shepherd Creek	800	NC d	NC d	NC d	200	450	300	675	700	1,125	100	60
Nichawak River	2,700	2,000	4,300	2,500	4,800	4,300	1,300	1,420	900	1,475	6,900	3,200
Gandil River	1,350	1,000	1,900	950	3,000	600	900	330	900	2,000	4,450	640
Controller Bay	7,400	11,000	12,100	6,900	5,220	5,360	2,807	9,700	4,175	6,210	5,590	5,680
Bering Area Total	27,450	26,800	42,400	29,750	31,290	26,380	30,007	34,200	32,475	30,185	44,542	33,192

#### Copper/Bering Total 62,470 73,910 99,960 69,600 77,515 69,510 71,103 124,015 104,655 130,165 145,624 122,462

<sup>&</sup>lt;sup>a</sup> 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 indices 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.

**Appendix A21.**—Total commercial salmon harvest by species in the Bering River District, 1974–2006.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
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 <sup>a</sup>	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
2002	14	235	108,522	0	0	108,771
2003	151	18,266	59,481	33	0	77,931
2004	87	13,165	95,595	2	21	108,870
2005	277	77,464	43,030	9,327	14	130,112
10-Year Average	86	18,536	48,167	957	16	67,762
2006	238	36,867	56,713	54	39	93,911

<sup>&</sup>lt;sup>a</sup> In 1980 no fishing was allowed prior to August 11.

Appendix A22.—Aerial escapement indices by statistical week and location for sockeye salmon returning to the Bering River District, 2006.

						Weekly	Escapement	Indices (	Statistica	l Week E	nding Da	te Listed)	1		
														Α	Anticipated,
Drainage <sup>a</sup>	System	17-Jun	24-Jun	1-Jul	8-Jul 15-Jul	22-Jul	29-Jul 5-Aug	12-Aug	19-Aug 2	26-Aug 2-	Sep 9-Se	p 16-Sep	23-Sep Site	System d	(by drainage)
Bering River	Bering River	60	150	60	0	210*		170			ns	0	210	9,310	21,903
	Bering Lake	1,600	18	2,670	4,800	6500*		380			ns	0	6,500	)	
	Dick Creek Shepherd Creek	0	0	0	890	2600*		2,100			ns	0	2,600	)	
	- Lagoon	0	0	0	0	0		0			ns	0	C	60	4,375
	Shepherd Creek	0	0	0	0	40		60*			ns	0	60	)	
	Carbon Creek	0	ns	0	0	0		0			ns	0	0	)	
	Clear Creek	ns	ns	ns	ns	36		140*			ns	0	140	140	1,197
	Kushtaka Lake	ns	ns	ns	ns	0		55*			ns	6	55	5	
	Shockum Creek	ns	ns	ns	ns	0		0			ns	6	$\epsilon$	61	1,226
Katalla River <sup>1</sup>	Katalla River	0	820	1,800	4,700	5100*		4,600			ns	o	5,100	5,100	
Bering River District Weekly Index	7	1,660	988	4,530	NS 10,390	14,485	NS NS	7,505	NS	NS	0 N	S 12	NS	14,671	
Lower SEG Average SEG, (average anticipated		1,370	4,985	6,207	· ·	-	16,872 14,415	•		3,705 2,	,271 1,60	1 876	1,130		23,000
escapement)		1,710	6,221	7,746	11,656 21,075	21,145	21,054 17,988	16,089	8,229	4,623 2,	,834 1,99	8 1,093	1,410		28,701
Upper SEG		2,085	7,586	9,446	14,214 25,701	25,787	25,675 21,936	19,620	10,036	5,638 3,	,456 2,43	6 1,332	1,719		35,000

#### **Anticipated Escapement Index**

Note: \* Denotes peak count.

<sup>&</sup>lt;sup>a</sup> 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 c).

b This stream is not included in the estimated escapement for the Bering River drainage, it is a non-index stream.

When 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 estimate which minimizes duplicate counts across dates is selected.

<sup>&</sup>lt;sup>d</sup> The sum of the estimates by site within a system.

Appendix A23.—Bering River District commercial drift gillnet salmon harvest by period, 2006.

		<b>Emergency order</b>				Chi	inook	Soc	keye	Co	oho	]	Pink	C	Chum
<b>Period</b> <sup>a</sup>	Date	Issued	Hours	Permits La	andings -	No.	Pounds	No.	Pounds	No.	Pounds	No.	Pounds	No.	Pounds
01	06/05-06/06	2-F-E-007-06	24	23	26	124	2,246	3,226	18,994	0	0	0	0	0	(
02	06/08-06/09	2-F-E-010-06	36	21	25	59	909	2,387	13,675	0	0	0	0	0	C
03	06/12-06/13	2-F-E-014-06	36	6	7	20	384	690	3,956	0	0	0	0	0	C
04	06/15-06/17	2-F-E-019-06	36	6	8	10	146	1,451	8,308	0	0	0	0	0	0
05	06/19-06/20	2-F-E-023-06	36	4	5	5	133	1,300	7,146	0	0	0	0	0	0
06	06/22-06/24	2-F-E-031-06	48	2	4	1	24	859	4,951	0	0	0	0	0	0
07	06/26-06/27	2-F-E-035-06	36	0	0	0	0	0	0	0	0	0	0	0	0
08	06/29-07/01	2-F-E-041-06	48	4	4	4	78	663	3,702	2	14	0	0	0	0
09	07/03-07/05	2-F-E-046-06	48	5	5	1	18	962	5,307	0	0	0	0	0	0
10	07/06-07/08	2-F-E-053-06	48	4	4	1	5	856	4,731	0	0	0	0	0	0
11	07/10-07/12	2-F-E-059-06	48	14	16	3	62	3,464	19,366	5	37	0	0	2	16
12	07/13-07/15	2-F-E-065-06	48	44	102	6	90	16,600	95,813	79	623	32	143	26	213
13	07/17-07/19	2-F-E-070-06	48	32	44	4	85	4,381	24,425	43	315	22	92	11	77
14	08/14-08/15	2-F-E-114-06	24	1	1	0	0	3	15	34	240	0	0	0	0
15	08/21-08/22	2-F-E-120-06	36	0	0	0	0	0	0	0	0	0	0	0	0
16	08/28-08/29	2-F-E-123-06	24	10	17	0	0	1	7	3,250	29,259	0	0	0	0
17	08/31-09/01	2-F-E-131-06	24	15	29	0	0	3	20	6,904	62,183	0	0	0	0
18	09/04-09/05	2-F-E-134-06	24	44	72	0	0	8	51	9,919	91,297	0	0	0	0
19	09/07-09/08	2-F-E-137-06	24	35	76	0	0	2	12	11,588	104,807	0	0	0	0
20	09/11-09/12	2-F-E-139-06	24	39	76	0	0	2	14	9,056	81,446	0	0	0	0
21	09/14-09/16	2-F-E-146-06	48	27	78	0	0	7	43	12,686	113,185	0	0	0	0
22	09/18-09/20	2-F-E-149-06	48	24	44	0	0	2	11	3,147	28,649	0	0	0	0
23	09/21-09/23	2-F-E-151-06	48	0	0	0	0	0	0	0	0	0	0	0	0
24	09/25-10/01	2-F-E-152-06	156	0	0	0	0	0	0	0	0	0	0	0	0
25	10/02-10/08	2-F-E-155-06	156	0	0	0	0	0	0	0	0	0	0	0	0
Total			1,176	137	643	238	4,180	36,867	210,547	56,713	512,055	54	235	39	306
Average	Weight						17.56		5.71		9.03		4.35		7.85

Appendix A24.—Aerial escapement indices by statistical week and location for coho salmon returning to the Bering River District, 2006.

-					V	Veekly E	scapem	ent Indic	es (Statist	tical Wee	k Endir	g Date I	Listed)			
						•	•					8	,			Anticipated, (by
Drainage <sup>a</sup>	System	5-Aug	12-Aug	19-Aug	26-Aug	2-Sep	9-Sep	16-Sep	<b>23-Sep</b>	30-Sep	7-Oct	14-Oct	21-Oct	Site <sup>d</sup>	System <sup>e</sup>	drainage)
<b>Bering River</b>	Bering River b		0			ns		50		52*				52	14,712	7,720
	Bering Lake		40			ns		13000*		10,500				13,000		
	Dick Creek		0			ns		1660*		70				1,660		
	Shepherd Creek -															
	Lagoon		0			ns		ns		ns				0	60	
	Shepherd Creek		0			ns		ns		ns				0		
	Carbon Creek c		0			ns		ns		60				60		
Katalla River	Katalla River		500			ns		8900*		4,300				8,900	8,900	4,993
<b>Lower Bering</b>															ŕ	,
River	Gandil River		ns			ns		450		640*				640	3,840	2,910
	Nichawak River		ns			ns		3200*		3,100				3,200		
Controller																
Bay	Campbell River		ns			ns		190*		120				190	5,680	7,378
-	Edwardes River		ns			ns		3,820		5400*				5,400		
	Okalee River		ns			ns		60		90*				90		
	Other Clear															
	Streams		ns			ns		ns		ns				0		
Bering River																
District																
Weekly Index		NS	540	NS	NS		NS	31,330	NS	24,332	NS	NS	NS		33,192	
Lower SEG		434	487	2,533	4,002	8,732	8,803	6,969	5,041	4,199	5,156	1,042	1,692		,	13,000
Average SEG,																
(average																
anticipated																
escapement)		768	861	4,482	7,080	15,448	15,574	12,330	8,919	7,429	9,122	1,844	2,993			23,001
Upper SEG		1,102	1,236	6,431	10,158	22,165	22,345	17,691	12,797	10,659		2,645	4,294			33,000

The survey sites represent most of the known coho 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).

<sup>&</sup>lt;sup>b</sup> Bering River counts include coho observed in the Don Miller Hill tributaries.

<sup>&</sup>lt;sup>c</sup> This stream is not included in the estimated escapement delta wide, it is a non-index stream.

When 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 estimate which minimizes duplicate counts across dates is selected.

<sup>&</sup>lt;sup>e</sup> The sum of the estimates by site within a system.

**Appendix A25.**—Anticipated and actual weekly harvest and escapement of coho salmon in the Bering River District drift gillnet fishery, 2006.

Week Ending	Fishing	Actual	Anticipated	Actual Aerial	Anticipated
Date	Time (hours)	Harvest	Harvest <sup>a</sup>	Index b	Index <sup>c</sup>
06/10	24 and 36	0	10		
06/17	36 and 36	0	10		
06/24	36 and 48	0	23		
07/01	36 and 36	2	36		
07/08	48 and 48	0	16		
07/15	48 and 48	84	12		
07/22	48 and 0	43	4		
07/29	0	0	48		
08/05	0	0	48		768
08/12	0	0	1,648	540	861
$08/19^{d}$	24	34	8,052		4,482
08/26	36	0	13,453		7,080
09/02	24 and 24	10,154	14,133		15,448
09/09	24 and 24	21,507	8,276		15,574
09/16	24 and 48	21,742	2,110	31,330	12,330
09/23	48 and 48	3,147	264		8,919
09/30	156 <sup>e</sup>	0	24	24,332	7,429
10/07	156 <sup>f</sup>	0	0		9,122
Season Totals		56,713	48,167		

<sup>&</sup>lt;sup>a</sup> Based on the previous 10 year harvest average.

b Coho salmon surveys were actively conducted weather permitting beginning August 9.

<sup>&</sup>lt;sup>c</sup> Based on average historical aerial escapement surveys for comparable dates (1984–1992).

<sup>&</sup>lt;sup>d</sup> Coho salmon directed management began on August 14.

e Actual period duration was 9/25–10/1, having an 19-hour period of overlap in the subsequent statistical week.

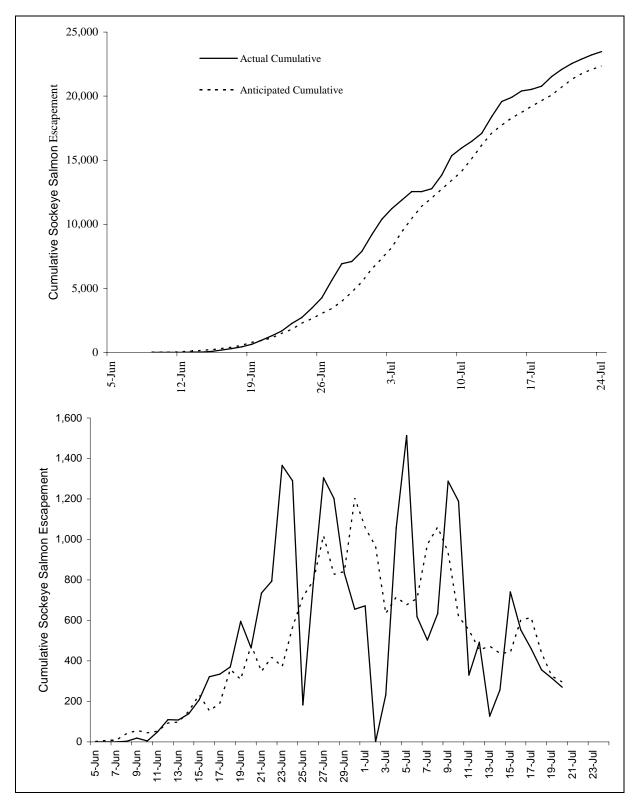
Actual period duration was 10/2–10/8, having an 19-hour period of overlap in the subsequent statistical week.

# **APPENDIX B**

 $\textbf{Appendix B1.-} Anticipated \ daily \ and \ cumulative \ salmon \ escapement \ versus \ actual \ escapement \ through the Coghill River weir, 2006.$ 

	S	ockeye	Projected	Projected	Sockeye		Pink	
Date		Cumulative			Below Weir	Daily		Comments
09-Jun	0	0		2		·		
10-Jun	0	0	7	10	0			
11-Jun	0	0	9	18	0			
12-Jun	3	3	40	59	0			
13-Jun	19	22	57	115	4			
14-Jun	5	27	45	160	5			
15-Jun	50	77	53	214	0			
16-Jun	110	187	93	307	13			
17-Jun	108	295	98	405	3			
18-Jun	139	434	151	556	5			
19-Jun	208	642	233	789	20			
20-Jun	322	964	153	942	4			
21-Jun	334	1,298	191	1,133	10			
22-Jun	370	1,668	358	1,491	30			
23-Jun	595	2,263	308	1,800	15			
24-Jun	464	2,727	476	2,276	65			
25-Jun	735	3,462	347	2,623	50			
26-Jun	794	4,256	418	3,041	110			
27-Jun	1,366	5,622	372	3,412	150			
28-Jun	1,290	6,912	566	3,978	310			
29-Jun	183	7,095	715	4,693	800			Collecting AWL data: holding fish
30-Jun	784	7,879	796	5,489	1,500			
01-Jul	1,304	9,183	1,019	6,508	600			
02-Jul	1,202	10,385	828	7,335	400			
03-Jul	833	11,218	841	8,176	500	2	2	
04-Jul	655	11,873	1,204	9,380	250			
05-Jul	672	12,545	1,058	10,438	150	25	25	
06-Jul	0	12,545	966	11,404	100	1	26	Starting second AWL sample: holding
07-Jul	233	12,778	633	12,038	600	18	44	
08-Jul	1,056	13,834	715	12,753	1,500	31	75	
09-Jul	1,513	15,347	677	13,429	800	56	131	
10-Jul	618	15,965	708	14,138	600	54	185	
11-Jul	503	16,468	975	15,113	300	87	272	7 chum through weir
12-Jul	633	17,101	1,061	16,173		931	1,203	
13-Jul	1,288	18,389		17,107	400	1,167	2,370	
14-Jul	1,189	19,578		17,728	750	647	3,017	
15-Jul	330	19,908		18,279		693	3,710	
16-Jul	492	20,400				43	3,753	
17-Jul	127	20,527			100	164	3,917	Starting third AWL sample: holding
18-Jul	257	20,784				1,748	5,665	
19-Jul	741	21,525				2,737	8,402	
20-Jul	553	22,078		20,686		5,781	14,183	
21-Jul	460	22,538				7,986	22,169	
22-Jul	356	22,894		21,739		5,371	27,540	
23-Jul	315	23,209				4,186	31,726	
24-Jul	270	23,479	296	22,359	300			Pickets pulled at 7 pm due to high water

**Appendix B2.**—Anticipated cumulative and daily sockeye salmon escapement versus actual escapement through the Coghill River weir, 2006.



Appendix B3.–Salmon escapement by species in the Coghill District 1970–2006.

Year	Sockeye <sup>a</sup>	Pink <sup>b</sup>	Chum <sup>b</sup>
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	223,646	20,488
2001	38,558	148,665	13,388
2002	28,323	54,882	7,430
2003	75,427	375,147	19,729
2004	30,569	36,717	5,000
2005	30,313	528,264	11,979
10-Year Average	39,408	177,985	12,861
2006	23,479	145,511	15,900

Note: Historical data revised in 1990.

<sup>&</sup>lt;sup>a</sup> Escapement count of sockeye salmon past the Coghill River weir.

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

Appendix B4.—Total Coghill District commercial common property salmon harvest by period in the drift gillnet fisheries, 2006.

		Emergency			_	Chin	ook	Socke	eye	Coh	10	Pinl	k	Chu	m
Period	Date	<b>Orders Issued</b>	Hours	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
01 <sup>a</sup>	06/05-06/07	2-F-E-009-06	48	3	6	6	70	19	115	0	0	0	0	838	6,317
$02^a$	06/08-06/10	2-F-E-012-06	48	6	18	7	86	91	544	0	0	0	0	4,940	45,228
$03^a$	06/12-06/14	2-F-E-016-06	48	17	46	9	151	144	899	0	0	0	0	8,621	74,062
$04^a$	06/15-06/17	2-F-E-021-06	48	36	101	3	32	522	3,094	0	0	0	0	16,572	147,189
05 <sup>b</sup>	06/19-06/21	2-F-E-025-06	48	41	86	4	45	4,569	27,124	0	0	0	0	11,608	97,667
06 <sup>c</sup>	06/22-06/24	2-F-E-033-06	48	50	224	4	41	3,696	21,894	210	1,675	5	23	54,363	474,952
07 <sup>a</sup>	06/26-06/28	2-F-E-037-06	48	72	141	2	30	8,048	48,689	1	5	14	45	21,466	183,914
$08^{d,e}$	06/29-07/01	2-F-E-043-06	48	80	163	2	17	20,093	116,183	50	386	881	3,365	25,000	192,368
09 <sup>f,e</sup>	07/03-07/05	2-F-E-048-06	48	124	278	7	78	17,433	100,156	60	435	1,363	4,792	39,780	330,654
10 <sup>d,e</sup>	07/06-07/08	2-F-E-055-06	48	67	124	0	0	6,728	36,869	58	460	997	3,642	19,318	153,033
11 <sup>d,e</sup>	07/10-07/12	2-F-E-061-06	48	71	140	0	0	9,996	55,371	41	333	2,453	9,256	26,124	199,958
12 <sup>g,e</sup>	07/13-07/15	2-F-E-067-06	48	78	174	21	130	18,196	92,455	104	825	5,849	22,476	26,446	199,159
14 <sup>h,e</sup>	07/17-07/19	2-F-E-072-06	48	67	117	2	20	6,499	36,655	235	1,787	8,683	34,061	7,852	60,577
15 <sup>i,e</sup>	07/21-07/22	2-F-E-080-06	24	21	28	4	28	280	1,589	57	451	2,891	11,849	2,569	19,872
16 <sup>i,e</sup>	07/24-07/25	2-F-E-086-06	24	5	5	0	0	94	559	4	36	978	3,909	710	5,679
17 <sup>i,e</sup>	07/28-07/29	2-F-E-089-06	24	1	1	0	0	2	13	0	0	262	839	21	200
18 <sup>i,e</sup>	07/31-08/01	2-F-E-101-06	36	0	0	0	0	0	0	0	0	0	0	0	0
19 <sup>i,e</sup>	08/04-08/05	2-F-E-104-06	24	0	0	0	0	0	0	0	0	0	0	0	0
20 <sup>j,e</sup>	08/07-08/07	2-F-E-107-06	12	0	0	0	0	0	0	0	0	0	0	0	0
21 <sup>j,e</sup>	08/11-08/11	2-F-E-110-06	12	0	0	0	0	0	0	0	0	0	0	0	0
$22^{k,e}$	08/19-08/19	2-F-E-119-06	12	0	0	0	0	0	0	0	0	0	0	0	0
23 <sup>l,e</sup>	08/20-08/20	2-F-E-126-06	12	0	0	0	0	0	0	0	0	0	0	0	0
24 <sup>l,e</sup>	08/21-08/21	2-F-E-126-06	12	0	0	0	0	0	0	0	0	0	0	0	0
25 <sup>l,e</sup>	08/22-08/22	2-F-E-126-06	12	0	0	0	0	0	0	0	0	0	0	0	0
26 <sup>l,e</sup>	08/23-08/23	2-F-E-127-06	12	0	0	0	0	0	0	0	0	0	0	0	0
27 <sup>l,e</sup>	08/24-08/24	2-F-E-127-06	12	0	0	0	0	0	0	0	0	0	0	0	0
$28^{m,e}$	08/25-08/25	2-F-E-128-06	12	1	1	0	0	0	0	17	178	283	990	3	18
29 <sup>m,e</sup>	08/26-08/26	2-F-E-128-06	12	0	0	0	0	0	0	0	0	0	0	0	0
$30^{m,e}$	08/27-08/27	2-F-E-130-06	12	0	0	0	0	0	0	0	0	0	0	0	0
$31^{m,e}$	08/28-08/28	2-F-E-130-06	12	0	0	0	0	0	0	0	0	0	0	0	0
$32^{m,e}$	08/29-08/29	2-F-E-130-06	12	0	0	0	0	0	0	0	0	0	0	0	0
33 <sup>m,e</sup>	08/30-08/30	2-F-E-130-06	12	0	0	0	0	0	0	0	0	0	0	0	0

### Appendix B4.—Page 2 of 2.

		Emergency			_	Chin	ook	Socke	eye	Col	10	Pinl	K	Chu	ım
Period	Date	<b>Orders Issued</b>	Hours	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
$34^{m,e}$	08/31-08/31	2-F-E-133-06	12	0	0	0	0	0	0	0	0	0	0	0	0
$35^{m,e}$	09/01-09/01	2-F-E-133-06	12	1	1	0	0	3	15	46	430	0	0	0	0
$36^{m,e}$	09/02-09/02	2-F-E-133-06	12	2	2	0	0	5	24	189	1,918	0	0	0	0
$37^{m,e}$	09/03-09/03	2-F-E-136-06	12	2	3	0	0	0	0	281	2,792	0	0	0	0
$38^{m,e}$	09/04-09/04	2-F-E-136-06	12	5	5	0	0	0	0	890	9,362	0	0	0	0
39 <sup>m,e</sup>	09/05-09/05	2-F-E-136-06	12	7	11	0	0	2	12	2,669	23,303	0	0	1	7
$40^{m,e}$	09/06-09/06	2-F-E-136-06	12	6	6	0	0	0	0	1,806	17,989	0	0	0	0
$41^{m,e}$	09/07-09/07	2-F-E-143-06	12	17	26	0	0	0	0	7,702	81,520	0	0	0	0
$42^{m,e}$	09/08-09/08	2-F-E-143-06	12	17	29	0	0	1	5	4,346	36,852	0	0	0	0
43 <sup>n,e</sup>	09/09-09/10	2-F-E-141-06	36	39	93	0	0	6	30	14,897	148,228	0	0	1	5
44 <sup>n,e</sup>	09/11-09/17	2-F-E-142-06	156	85	403	0	0	6	37	39,454	395,433	0	0	0	0
45 <sup>n,e</sup>	09/18-09/24	2-F-E-148-06	156	60	262	0	0	2	12	22,271	215,171	0	0	0	0
46°,e	09/25-10/01	2-F-E-153-06	156	20	37	0	0	0	0	1,614	14,752	0	0	0	0
47 <sup>p,e</sup>	10/02-10/04	2-F-E-156-06	60	0	0	0	0	0	0	0	0	0	0	0	0
48 <sup>p,e</sup>	10/04-10/08	2-F-E-157-06	96	0	0	0	0	0	0	0	0	0	0	0	0
Total				190	2,531	71	728	96,435	542,344	97,002	954,321	24,659	95,247	266,233	2,190,859
Averag	e Weight						10.25		5.62		9.84		3.86		8.23

- <sup>a</sup> Waters of the Coghill District, excluding the Granite Bay and Esther Subdistricts, were open.
- b Waters of the Coghill District south of the latitude of Esther Passage (60 degrees 55.81' N), excluding the Granite Bay and Esther Subdistricts, were open.
- Waters of the Coghill District south of 61 degrees north latitude, excluding the Granite Bay and Esther Subdistricts, were open.
- Waters of the Coghill District, excluding the Granite Bay and Esther Subdistricts, were open. Waters of the Coghill River lagoon were also open.
- <sup>e</sup> Gillnets greater than 60 meshes in depth were allowed.
- Waters of the Coghill District, including the Granite Bay Subdistrict (initial 24 hours), but excluding the Esther Subdistrict, were open.
- <sup>g</sup> Waters of the Coghill District, excluding the Granite Bay and Esther Subdistricts, were open.
- Waters of the Coghill District, including the Granite Bay Subdistrict (initial 12 hours), but excluding the Esther Subdistrict, were open.
- Waters of the Coghill District within one nautical mile of the east side of Port Wells north of Esther Rock, including the Granite Bay Subdistrict, were open.
- <sup>j</sup> Waters of the Coghill District within one nautical mile of the east side of Port Wells, excluding the Granite Bay Subdistrict, were open.
- k Waters of the Esther Subdistrict within one half nautical mile of Esther Island, excluding the THA and SHA, were open.
- Waters of the Esther Subdistrict within one half nautical mile of Esther Island, excluding the SHA, were open.
- Waters of the Esther Subdistrict within one half nautical mile of Esther Island, including the THA and SHA to a line of buoys in front of the barrier seine, were open.
- " Waters of the Coghill District, including the Esther subdistrict up to the line of buoys in front of the barrier seine, were open.
- <sup>o</sup> Waters of the Coghill District, including the SHA south of 60° 47.81'N. Lat., were open.
- <sup>p</sup> Waters of the Coghill District south of 60° 47.24'N. Lat. were open.

**Appendix B5.**—Total Coghill District commercial common property salmon harvest by period in the purse seine fisheries, 2006.

		Emergency				Chino		Socke	eye	Coh	10	Pin	ık	Ch	um
Period	d Date	<b>Orders Issued</b>	Hours Po	ermits La	ndings Nu	mber P	ounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
08 <sup>a</sup>	06/30-06/30	2-F-E-045-06	48	74	91	2	16	2,372	13,554	27	218	1,644	4,668	270,685	2,348,661
13 <sup>b</sup>	07/16-07/16	2-F-E-072-06	12	19	20	3	94	1,102	6,158	24	171	5,518	20,175	18,251	147,596
15°	07/21-07/22	2-F-E-080-06	24	9	10	0	0	108	549	7	62	6,394	20,017	3,288	29,390
16 <sup>d</sup>	07/24-07/25	2-F-E-086-06	24	2	3	0	0	114	683	10	101	2,325	10,797	202	1,613
17 <sup>d</sup>	07/28-07/29	2-F-E-089-06	24	10	13	0	0	189	939	77	734	71,209	219,567	873	7,561
18 <sup>d</sup>	07/31-08/01	2-F-E-101-06	36	29	45	3	52	1,454	7,228	192	1,493	270,151	963,650	2,762	23,542
19 <sup>d</sup>	08/04-08/05	2-F-E-104-06	24	38	49	1	33	459	2,231	104	881	212,711	764,292	1,070	7,545
20 <sup>e</sup>	08/07-08/07	2-F-E-107-06	12	15	16	0	0	24	120	41	290	22,878	83,745	364	3,154
21 <sup>e</sup>	08/11-08/11	2-F-E-110-06	12	3	3	0	0	34	186	50	418	28,588	96,294	50	429
$22^{f}$	08/19-08/19	2-F-E-119-06	12	16	17	0	0	11	76	8	62	48,687	192,623	0	0
23 <sup>g</sup>	08/20-08/20	2-F-E-126-06	12	9	9	0	0	17	101	20	188	57,339	218,993	3	27
$24^{g}$	08/21-08/21	2-F-E-126-06	12	10	14	0	0	14	107	55	604	129,419	454,434	8	75
$25^{g}$	08/22-08/22	2-F-E-126-06	12	11	11	0	0	1	5	17	166	20,625	79,293	0	0
26 <sup>g</sup>	08/23-08/23	2-F-E-127-06	12	13	15	0	0	15	86	207	2,118	79,273	276,214	1	9
27 <sup>g</sup>	08/24-08/24	2-F-E-127-06	12	10	10	0	0	1	4	78	753	24,465	90,782	0	0
28 <sup>h</sup>	08/25-08/25	2-F-E-128-06	12	4	4	0	0	3	18	277	2,676	30,618	111,229	0	0
29 <sup>h</sup>	08/26-08/26	2-F-E-128-06	12	5	6	0	0	7	34	692	7,289	62,861	229,613	2	20
$30^{\rm h}$	08/27-08/27	2-F-E-130-06	12	4	4	0	0	0	0	261	3,193	56,925	219,183	0	0
31 <sup>h</sup>	08/28-08/28	2-F-E-130-06	12	5	9	0	0	0	0	1,473	15,989	79,815	291,038	8	64
32 <sup>h</sup>	08/29-08/29	2-F-E-130-06	12	6	6	0	0	13	72	988	11,480	39,175	151,091	0	0
33 <sup>h</sup>	08/30-08/30	2-F-E-130-06	12	5	5	0	0	6	26	822	7,679	15,108	54,539	0	0
34 <sup>h</sup>	08/31-08/31	2-F-E-133-06	12	4	4	0	0	0	0	738	7,542	16,265	62,888	0	0
35 <sup>h</sup>	09/01-09/01	2-F-E-133-06	12	5	5	0	0	0	0	1,869	18,835	16,956	65,314	0	0
36 <sup>h</sup>	09/02-09/02	2-F-E-133-06	12	3	3	0	0	0	0	3,178	31,776	19,309	57,926	0	0
37 <sup>h</sup>	09/03-09/03	2-F-E-136-06	12	3	3	0	0	0	0		31,859	12,736	50,947	0	0
38 <sup>h</sup>	09/04-09/04	2-F-E-136-06	12	2	2	0	0	0	0	1,231	12,935	16,877	65,825	0	0
39 <sup>h</sup>	09/05-09/05	2-F-E-136-06	12	0	0	0	0	0	0	0	0	0	0	0	0
$40^{\rm h}$	09/06-09/06	2-F-E-136-06	12	0	0	0	0	0	0	0	0	0	0	0	0
41 <sup>h</sup>	09/07-09/07	2-F-E-143-06	12	0	0	0	0	0	0	0	0	0	0	0	0
42 <sup>h</sup>	09/08-09/08	2-F-E-143-06	12	3	3	0	0	0	0	1,365	13,668	506	2,029	0	0
Total				205	380	9	195	5,944	32,177	16,995	173,180	1,348,377	4,857,166	297,567	2,569,686
Avera	ge Weight	1. 41					21.67		5.41		10.19		3.60		8.64

Waters of the Esther subdistrict, within one half mile of shore, excluding the WNH THA and SHA, and waters of the Granite Bay subdistrict, were open.

<sup>&</sup>lt;sup>b</sup> Waters of the Granite Bay Sub-district were open.

Waters of the Coghill District within one nautical mile of the east side of Port Wells, including the Granite Bay subdistrict, were open.

Waters of the Coghill District within one nautical mile of the east side of Port Wells north of Esther Rock, including the Granite Bay subdistrict, were open.

Waters of the Coghill District within one nautical mile of the east side of Port Wells, excluding the Granite Bay subdistrict, were open.

Waters of the Esther Subdistrict within one half nautical mile of Esther Island, excluding the THA and SHA, were open.

Waters of the Esther Subdistrict within one half nautical mile of Esther Island, excluding the SHA, were open.

Waters of the Esther Subdistrict within one half nautical mile of Esther Island, including the THA and SHA to a line of buoys in front of the barrier seine, were open.

**Appendix B6.**—Total commercial common property harvest by species in the Coghill District, 1984–2006.

			Dri	ft Gillnet		
Year	Chinook	Sockeye	Coho	Pink	Chum	Total
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
2002	203	59,758	784	6,457	1,660,443	1,727,645
2003	114	161,872	9,900	44,419	726,431	942,736
2004	126	216,156	10,200	20,081	534,959	781,522
2005	115	94,748	52,416	72,110	880,967	1,100,356
10-Year Average	349	136,678	18,994	117,043	892,852	1,165,915
2006	71	96,435	97,002	24,659	266,233	484,400
				rse Seine		
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
2002	5	2,068	2,431	1,271,180	794,794	2,070,478
2003	15	125,641	724	11,439,915	750,834	12,317,129
2004	2	195	133	23,609	386,042	409,981
2005	1	10,722	1,558	3,246,778	275,783	3,534,842
10-Year Average	9	15,727	4,565	2,961,605	288,914	3,270,821
2006	9	5,944	16,995	1,348,377	297,576	1,668,901

**Appendix B6.**–Page 2 of 2.

		Com	bined Purse	Seine and Drift (	Gillnet	
Year	Chinook	Sockeye	Coho	Pink	Chum	Total
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
2002	208	61,826	3,215	1,277,637	2,455,237	3,798,123
2003	129	287,513	10,624	11,484,334	1,477,265	13,259,865
2004	128	216,351	10,333	43,690	921,001	1,191,503
2005	116	105,470	53,974	3,318,888	1,156,750	4,635,198
10-Year Average	358	152,405	23,559	3,078,648	1,181,767	4,436,736
2006	80	102,379	113,997	1,373,036	563,809	2,153,301

**Appendix B7.**—Estimated age and sex composition of sockeye salmon harvested in the Coghill District commercial common property drift gillnet and purse seine fisheries, 2006.

Stratum dates:	06/05 - 09/19	Brood Y	ear and Age Class	
Sampling date:	07/02 - 07/02	2002	2001	
Sample size:	82 <sup>a</sup>	1.2	1.3	Total
	Sample size	28	0	28
Female	Percentage of sample	34.1	0.0	34.1
	Number in harvest	34,959	0	34,959
	Sample size	53	1	54
Male	Percentage of sample	64.6	1.2	65.9
	Number in harvest	66,172	1,249	67,420
	Sample size	81	1	82
Total	Percentage of sample	98.8	1.2	100.0
	Number in harvest	101,130	1,249	102,379
	Standard error	1,249	1,249	

<sup>&</sup>lt;sup>a</sup> Age composition generated using length frequency data only.

**Appendix B8.**—Estimated age and sex composition of chum salmon harvested in the Coghill District commercial common property purse seine and drift gillnet fishery, 2006.

		Brood Year and Age Class						
		2003	2002	2001	2000	m . 1		
Purse Seine		0.2	0.3	0.4	0.5	Total		
Stratum dates: Sampling date: Sample size:	06/30 - 09/08 07/01 - 07/01 390							
Female	Sample size Percentage of sample Number in harvest	24 6.2 18,312	54 13.8 41,202	121 31.0 92,322	0 0.0 0	199 51.0 151,835		
Male	Sample size Percentage of sample Number in harvest	38 9.7 28,994	53 13.6 40,439	99 25.4 75,536	1 0.3 763	191 49.0 145,732		
Total	Sample size Percentage of sample Number in harvest Standard error	62 15.9 47,306 5,517	107 27.4 81,640 6,732	220 56.4 167,858 7,481	1 0.3 763 763	390 100.0 297,567		
<b>Drift Gillnet</b>								
Stratum dates: Sampling date: Sample size:	06/05 - 10/08 06/24 - 06/24 396							
Female	Sample size Percentage of sample Number in harvest	11 2.8 7,395	52 13.1 34,960	150 37.9 100,846	0 0.0 0	213 53.8 143,201		
Male	Sample size Percentage of sample Number in harvest	20 5.1 13,446	39 9.8 26,220	123 31.1 82,694	1 0.3 672	183 46.2 123,032		
Total	Sample size Percentage of sample Number in harvest Standard error	31 7.8 20,841 3,598	91 23.0 61,180 5,636	273 68.9 183,539 6,199	1 0.3 672 672	396 100.0 266,233		
<b>Drift Gillnet and</b>	Purse Seine Combined							
Strata Combined: Sampling dates: Sample size:	06/05 - 10/08 06/24 - 07/01 786 a							
Female	Sample size Percentage of sample Number in harvest	35 4.5 25,707	106 13.5 76,161	271 34.5 193,168	0 0.0 0	412 52.4 295,037		
Male	Sample size Percentage of sample Number in harvest	58 7.4 42,440	92 11.7 66,659	222 28.2 158,230	2 0.3 1,435	374 47.6 268,763		
Total	Sample size Percentage of sample Number in harvest Standard error	93 11.8 68,147 6,586	198 25.2 142,820 8,779	493 62.7 351,398 9,716	2 0.3 1,435 1,017	786 100.0 563,800		

<sup>&</sup>lt;sup>a</sup> Sample and harvest numbers reflect gillnet and purse seine fisheries combined.

**Appendix B9.**–Estimated age and sex composition of the sockeye salmon escapement through the weir on the outlet stream of Coghill Lake, 2006.

Strata Combined	Brood Year and Age Class <sup>a</sup>												
Sampling dates:	06/29 - 07/19	2004	20	03		2002		2001	<u> </u>	20	00	1999	
Sample size:	1,334	0.1	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.3	Total
Female	Percentage of sample	0.0	0.1	0.0	0.2	33.8	0.0	5.5	1.6	0.1	0.5	0.0	41.8
	Number in escapement		34	0	39	7,941	0	1,298	372	21	111	0	9,817
Male	Percentage of sample	0.1	0.2	0.9	0.0	47.7	0.2	7.2	0.6	0.4	0.8	0.1	58.2
	Number in escapement	21	42	205	0	11,207	39	1,689	151	97	198	13	13,662
Total	Percentage of sample	0.1	0.3	0.9	0.2	81.6	0.2	12.7	2.2	0.5	1.3	0.1	100.0
	Number in escapement	21	76	205	39	19,148	39	2,987	522	118	308	13	23,479
	Standard error	21	39	63	28	252	28	219	97	49	76	13	

<sup>&</sup>lt;sup>a</sup> Ages based on length frequency data.

**Appendix B10.**—Total commercial common property salmon harvest by period in the Unakwik District drift gillnet and purse seine fisheries, 2006.

		Emergency Orders				Chine	مماد	Sock	0710	Coh	•	Pinl	-	Chu	***
Period	Date a		Цопис В	ommita I	andinga	Number		Number		Number I		Number I		Number	
reriou	Date	188000	Hours F	eriiits L	<u>anumgs</u>	Number	Drift (		rounus	Number	ounus	Number	ounus	Number	<u>r ounus</u>
01	06/05-06/07	2-F-E-008-06	48	0	0	0	0	<u>) () () () () () () () () () () () () ()</u>	0	0	0	0	0	0	0
02		2-F-E-011-06		ő	ő	0	0	0	ő	ő	0	ő	0	ő	0
03		2-F-E-015-06		ő	0	0	0	0	0	Ő	ő	Ö	ő	ő	0
04		2-F-E-020-06	48	2	2	0	0	57	362	0	Ő	0	Ő	0	0
05		2-F-E-024-06	48	3	3	0	0	128	765	0	Ő	Ö	Ő	23	221
06		2-F-E-032-06	48	3	3	0	0	150	905	0	0	2	6	31	302
07		2-F-E-036-06	48	3	3	0	0	127	735	0	0	1	4	8	104
08		2-F-E-042-06		4	4	1	8	177	995	1	8	10	30	58	588
09		2-F-E-047-06		3	3	0	0	59	280	0	0	23	95	51	458
10	07/06-07/08	2-F-E-054-06	48	0	0	0	0	0	0	0	0	0	0	0	0
11	07/10-07/12	2-F-E-060-06	48	0	0	0	0	0	0	0	0	0	0	0	0
12	07/13-07/15	2-F-E-064-06	48	0	0	0	0	0	0	0	0	0	0	0	0
13	07/17-07/19	2-F-E-071-06	48	0	0	0	0	0	0	0	0	0	0	0	0
14	07/20-07/22	2-F-E-079-06	48	0	0	0	0	0	0	0	0	0	0	0	0
Total				10	18	1	8	698	4,042	1	8	36	135	171	1,673
Averag	ge Weight						8.0		5.8		8.0		3.8		9.8
							Purse								
01		2-F-E-008-06		0	0	0	0	0	0	0	0	0	0	0	0
02		2-F-E-011-06		0	0	0	0	0	0	0	0	0	0	0	0
03		2-F-E-015-06		0	0	0	0	0	0	0	0	0	0	0	0
04		2-F-E-020-06	48	0	0	0	0	0	0	0	0	0	0	0	0
05		2-F-E-024-06		0	0	0	0	0	0	0	0	0	0	0	0
06		2-F-E-032-06		0	0	0	0	0	0	0	0	0	0	0	0
07		2-F-E-036-06	48	0	0	0	0	0	0	0	0	0	0	0	0
08		2-F-E-042-06		0	0	0	0	0	0	0	0	0	0	0	0
09		2-F-E-047-06		0	0	0	0	0	0	0	0	0	0	0	0
10		2-F-E-054-06	48	0	0	0	0	0	0	0	0	0	0	0	0
11		2-F-E-060-06		0	0	0	0	0	0	0	0	0	0	0	0
12		2-F-E-064-06		0	0	0	0	0	0	0	0	0	0	0	0
13		2-F-E-071-06		0	0	0	0	0	0	0	0	0	0	0	0
14	07/20-07/22	2-F-E-079-06	48	0	0	0	0	0	0	0	0	0	0	0	0
Total				0	0	0	0	0	0	0	0	0	0	0	0
Averag	ge Weight								0.0		0.00		0.0		0.00

**Appendix B11.**—Total commercial common property salmon harvest by species in the Unakwik District, 1983–2006.

Year	Chinook	Sockeye Drift Gillnet	Coho	Pink	Chum	Total
1983	3	13,215	0	1,515	1,426	16,159
1984	$\overset{3}{2}$	18,522	0	27,742	7,125	53,391
1985	26	27,532	22	9,191	3,942	40,713
1986	5	25,759	1	1,973	2,463	30,201
1987	2	5,894	1	4,871	1,356	12,124
1988	15	8,589	0	281	1,504	10,389
1989	31	21,412	27	41,820	404	63,694
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
2002	5	9,825	14	0	761	10,605
2003	0	2,163	0	0	0	2,163
2004	5	7,438	1	0	168	7,612
2005	6	23,027	27	1,540	858	25,458
10-Year Average	4	7,754	10	349	360	8,478
2006	1	698	1	36	171	907
		Purse Seine				
1983	0	6	0	3,344	716	4,066
1984 <sup>a</sup>	0	0	0	0	0	0
1985	0	138	0	28,210	4,123	32,471
1986	0	76	0	4,718	4,675	9,469
1987	0	146	0	187,752	6,549	194,447
1988	0	667	7	57,844	23,860	82,378
1989 <sup>a</sup>	0	0	0	0	0	0
1990 <sup>a</sup>	0	0	0	0	0	0
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 <sup>a</sup>	0	0	0	0	0	0
1996 <sup>a</sup>	0	0	0	0	0	0
1997 <sup>a</sup>	0	0	0	0	0	0
1998 <sup>a</sup>	0	0	0	0	0	0
1999	1	386	0	0	2	389
2000	0	0	0	20,485	0	20,485
2001 <sup>a</sup>	0	0	0	0	0	0
2002	3	1,141	16	133	123	1,416
2003	0	1,017	0	2,261	20	3,298
2004 <sup>a</sup>	0	0	0	01.070	0	0
2005	0	80	0	81,858	0	81,938
10-Year Average	0	262	2	10,474	15	10,753
2006 <sup>a</sup>	0	0	0	0	0	0

**Appendix B11.**–Page 2 of 2.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
	C	ombined Gear				
1983	3	13,221	0	4,859	2,142	20,225
1984	2	18,522	0	27,742	7,125	53,391
1985	26	27,670	22	37,401	8,065	73,184
1986	5	25,835	1	6,691	7,138	39,670
1987	2	6,040	1	192,623	7,905	206,571
1988	15	9,256	7	58,125	25,364	92,767
1989	31	21,412	27	41,820	404	63,694
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 3	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	14,668	55	4,193	606	19,532
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
2002	8	10,966	30	133	884	12,021
2003	0	3,180	0	2,261	20	5,461
2004	5	7,438	1	0	168	7,612
2005	6	23,107	27	83,398	858	107,396
10-Year Average	4	8,157	12	11,049	377	19,599
2006	1	698	1	36	171	907

<sup>&</sup>lt;sup>a</sup> No harvest recorded.

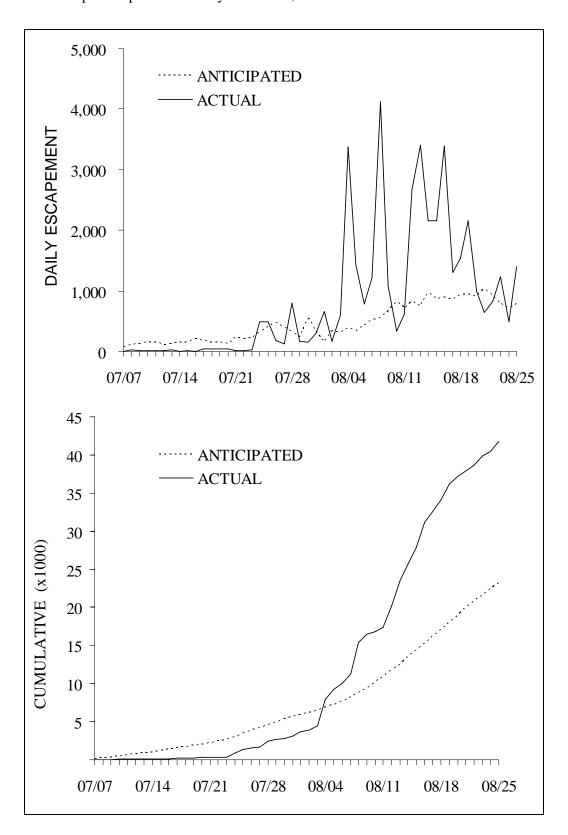
# **APPENDIX C**

Appendix C1.—Daily salmon escapement past the Eshamy River weir, 2006.

	Sockeye		Pink <sup>a</sup>		Chum			Coho	Chinook	
Date	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
07-Jul	2	2	0	0	0	0	0	0	0	0
08-Jul	33	35	0	0	27	27	0	0	0	0
09-Jul	12	47	0	0	27	54	0	0	0	0
10-Jul	10	57	0	0	22	76	0	0	0	0
11-Jul	8	65	0	0	8	84	0	0	0	0
12-Jul	9	74	0	0	16	100	0	0	0	0
13-Jul	32	106	0	0	35	135	0	0	0	0
14-Jul	3	109	0	0	12	147	0	0	0	0
15-Jul	12	121	0	0	10	157	0	0	0	0
16-Jul	5	126	0	0	12	169	0	0	0	0
17-Jul	48	174	0	0	9	178	0	0	0	0
18-Jul	40	214	0	0	2	180	0	0	0	0
19-Jul	47	261	0	0	42	222	0	0	0	0
20-Jul	39	300	0	0	32	254	0	0	0	0
21-Jul	12	312	0	0	50	304	0	0	0	0
22-Jul	13	325	0	0	19	323	0	0	0	0
23-Jul	33	358	0	0	12	335	0	0	0	0
24-Jul	494	852	6	6	74	409	0	0	0	0
25-Jul	491	1,343	0	6	26	435	0	0	0	0
26-Jul	187	1,530	1	7	3	438	0	0	0	0
27-Jul	129	1,659	1	8	8	446	0	0	0	0
28-Jul	798	2,457	3	11	13	459	0	0	0	0
29-Jul	162	2,619	0	11	14	473	0	0	0	0
30-Jul	157	2,776	2	13	23	496	0	0	0	0
31-Jul	301	3,077	2	15	6	502	0	0	0	0
01-Aug	652	3,729	3	18	7	509	0	0	0	0
02-Aug	164	3,893	0	18	5	514	0	0	0	0
03-Aug	598	4,491	7	25	5	519	0	0	0	0
04-Aug	3,370	7,861	10	35	24	543	0	0	0	0
05-Aug	1,429	9,290	9	44	11	554	0	0	0	0
06-Aug	782	10,072	6	50	6	560	0	0	0	0
07-Aug	1,220	11,292	8	58	12	572	3	3	0	0
08-Aug	4,111	15,403	25	83	19	591	2	5	0	0
09-Aug	1,082	16,485	15	98	6	597	2	7	0	0
10-Aug	331	16,816	22	120	4	601	0	7	0	0
11-Aug	614	17,430	14	134	0	601	0	7	0	0
12-Aug	2,677	20,107	140	274	5	606	19	26	0	0
13-Aug	3,404	23,511	172	446	0	606	17	43	0	0
14-Aug	2,154	25,665	216	662	2	608	0	43	0	0
15-Aug	2,157	27,822	63	725	0	608	22	65	0	0
15-Aug 16-Aug	3,396	31,218	276	1,001	0	608	23	88	0	0
17-Aug	1,305	32,523	125	1,126	0	608	6	94	0	0
17-Aug 18-Aug	1,546	34,069	365	1,491	0	608	6	100	0	0
_			292				12	112		
19-Aug	2,163	36,232		1,783	0	608			0	0
20-Aug 21-Aug	998	37,230	208	1,991	0	608 608	2	114	0	0
_	638	37,868	372	2,363	0		6	120	0	0
22-Aug	820	38,688	252	2,615	0	608	8	128	0	0
23-Aug	1,238	39,926	360	2,975	0	608	26	154	0	0
24-Aug	493	40,419	467	3,442	0	608	0	154	0	0
25-Aug	1,404	41,823	143	3,585	0	608	42	196	0	0

<sup>&</sup>lt;sup>a</sup> The weir is designed to prohibit passage of sockeye salmon, smaller pink salmon may pass through the weir uncounted.

**Appendix C2**.—Anticipated daily and cumulative sockeye salmon escapement versus actual escapement past the Eshamy River weir, 2006.



Appendix C3.—Salmon escapement by species past the Eshamy River weir, 1967–2006.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
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 <sup>a</sup>	0	954	97	3,179	0	4,230
1972 <sup>b</sup>		28,683				28,683
1973	0	10,202	205	1,698	0	12,105
1974 <sup>b</sup>		633				633
1975 <sup>b</sup>		1,724				1,724
1976 <sup>b</sup>		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 <sup>c</sup>						
1988	2	31,747	48	1,205	1	33,003
1989	1	57,232	0	7,782	210	65,225
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 <sup>c</sup>						
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
2002	0	40,478	14	4,843	1,072	46,407
2003	2	39,845	N/A	2,440	335	42,622
2004	0	13,443	0	1,518	0	14,961
2005	1	23,523	46	11,024	529	35,123
10-Year Average	1	29,608	107	13,025	280	43,021
2006	0	41,823	201	3,585	608	46,217

Note: For the break down of jacks versus adult sockeye salmon see specific year's daily escapement enumeration table.

<sup>&</sup>lt;sup>a</sup> Escapement estimate may be low due to holes in weir. Actual escapement is estimated to be more than 3,000 sockeye salmon.

b Passage of salmon other than sockeye salmon was not recorded.

The Eshamy River weir was not in operation.

**Appendix C4.**—Total drift gillnet common property salmon harvest by period in the Eshamy District, 2006.

-		Emergency													
		Orders				Ch	inook	So	ckeye	C	oho	Pi	ink	Cl	hum
Period	Date	Issued	Hours	Permits	Landings	Num.	Pounds	Num.	Pounds	Num.	Pounds	Num.	Pounds	Num.	Pounds
$01^{a,b}$	06/12-06/13	2-F-E-017-06	24	2	2	0	0	14	84	0	0	0	0	36	344
$02^{a,b}$	06/19-06/20	2-F-E-026-06	24	26	47	6	107	5,166	30,494	5	30	3	9	3,344	28,738
$03^{b,c}$	06/26-06/27	2-F-E-038-06	24	91	245	2	21	71,705	421,566	12	102	15	49	1,696	13,231
$04^{b,c,d}$	06/29-06/30	2-F-E-044-06	24	104	230	1	10	55,563	320,068	23	151	398	1,403	3,308	26,697
$05^{a,b,d}$	07/03-07/03	2-F-E-049-06	12	82	134	0	0	28,923	159,531	65	436	942	3,071	4,797	37,157
$06^{\rm b,d,e}$	07/06-07/07	2-F-E-056-06	24	100	240	2	16	54,655	300,712	148	1,115	2,301	8,204	4,615	36,038
$07^{\rm d,e}$	07/10-07/11	2-F-E-062-06	24	112	259	1	10	51,092	290,551	375	2,912	2,975	10,665	5,470	40,186
$08^{\rm d,e}$	07/13-07/14	2-F-E-068-06	24	106	206	1	38	33,757	185,597	152	1,296	3,347	11,171	3,122	24,416
$09^{\mathrm{d,f}}$	07/17-07/18	2-F-E-073-06	24	87	161	0	0	21,503	122,785	546	4,201	8,085	27,201	1,535	12,280
$10^{d,g}$	07/20-07/22	2-F-E-081-06	48	79	160	2	14	14,287	80,895	591	4,444	11,180	39,756	1,528	12,193
11 <sup>d,g</sup>	07/24-07/26	2-F-E-087-06	48	33	80	0	0	8,089	44,495	269	2,040	6,992	25,252	657	5,213
$12^{d,g}$	07/27-07/29	2-F-E-090-06	48	29	70	0	0	5,635	29,811	186	1,421	9,282	34,161	535	4187
$13^{d,h}$	07/31-08/02	2-F-E-102-06	48	17	43	0	0	4,302	22,631	118	924	7,036	25,632	89	734
$14^{\mathrm{d,h}}$	08/03-08/05	2-F-E-105-06	48	10	17	0	0	1,910	9,818	37	287	4,506	16,566	27	225
15 <sup>d,i</sup>	08/07-08/09	2-F-E-108-06	48	13	22	0	0	8,108	38,384	0	0	2,557	8,647	8	66
16 <sup>d,j</sup>	08/10-08/12	2-F-E-112-06	48	2	2	0	0	102	532	12	87	0	0	2	16
$17^{\mathrm{d,k}}$	08/14-08/16	2-F-E-115-06	48	7	12	0	0	813	4,874	92	854	5,641	20,363	34	252
$18^{\rm d,l}$	08/17-08/19	2-F-E-118-06	48	20	61	0	0	11,512	67,504	1,076	6,630	10,738	41,169	24	198
$19^{\mathrm{d,l}}$	08/21-08/23	2-F-E-121-06	48	19	50	0	0	4,085	24,268	1,617	7,439	10,653	38,809	10	85
$20^{d,m}$	08/24-08/26	2-F-E-122-06	48	2	4	0	0	250	1,506	33	297	2,783	11,131	4	32
$21^{d,n}$	08/28-08/30	2-F-E-124-06	48	3	3	0	0	330	2,672	57	462	321	963	0	0
$22^{d,m}$	08/31-09/02	2-F-E-132-06	48	1	1	0	0	110	550	15	105	0	0	0	0
$23^{d,o}$	09/04-09/06	2-F-E-135-06	48	0	0	0	0	0	0	0	0	0	0	0	0
$24^{d,m}$	09/07-09/09	2-F-E-138-06	48	0	0	0	0	0	0	0	0	0	0	0	0
$25^{d,o}$	09/11-09/13	2-F-E-140-06	48	0	0	0	0	0	0	0	0	0	0	0	0
26 <sup>d,m</sup>	09/14-09/16	2-F-E-147-06	48	0	0	0	0	0	0	0	0	0	0	0	0
Total				178	2,049	15	216	381,911	2,159,328	5,429	35,233	89,755	324,222	30,841	242,288
Average	Weight						14.40		5.65		6.49		3.61		7.86

Waters of the Eshamy District, excluding the Main Bay Subdistrict, were open.

Anadromous stream closures were not in effect within the Main Bay Subdistrict.

Waters of the Eshamy District, excluding the Main Bay SHA and AGZ, were open.

Gillnets greater than 60 meshes in depth were allowed.

Waters of the Eshamy District, excluding the Main Bay Subdistrict, were open. Waters of the Main Bay Subdistrict, excluding the SHA and AGZ, were open (12 hours).

Waters of the Eshamy District north of 60° 30.903' N. lat., excluding the Main Bay subdistrict SHA, were open.

Waters of the Eshamy District north of 60° 30.903' N. lat., excluding the Main Bay subdistrict, were open (24 hours). Waters of the Main Bay Subdistrict, excluding the SHA, were open.

Waters of the Main Bay Subdistrict, excluding the SHA, were open.

Waters of the Main Bay Subdistrict were open.

Waters of the Eshamy District north of 60° 29.349' N. lat, excluding the Main Bay AGZ, were open.

Waters of the Eshamy District were open.

Waters of the Eshamy District were open. Waters of Eshamy Bay and Lagoon, suspending the Eshamy River anadromous stream closure, were open (24 hours).

Waters of the Eshamy District, excluding the Main Bay AGZ, were open.

Waters of the Eshamy District were open. Waters of Eshamy Bay and Lagoon were open (24 hours).

Waters of the Eshamy District, including the Eshamy Lagoon, were open.

**Appendix C5.**—Total set gillnet common property salmon harvest by period in the Eshamy District, 2006.

	Emergency Orders				Chin	o ole	Sock	0770	Col	ho	Pin	1-	Chu	
Period		Hours	Permits	Landings	Number		Number	Pounds		Pounds	Number			
$01^{a,b}$	06/12- 2-F-E-017-06	24	5	13	1	26	377	2,224	0	0	1	3	135	1,160
$02^{a,b}$	06/19- 2-F-E-026-06	24	10	28	3	41	3,415	19.711	ĭ	10	ī	4	1,122	9.182
$03^{b,c}$	06/26- 2-F-E-038-06	24	18	70	1	12	24,551	147,552	7	61	342	1,303	1.261	10,755
$0.1^{b,c,d}$	06/29- 2-F-E-044-06	24	20	55	2	20	18,189	103,534	5	38	321	1,319	973	8,489
$05^{a,b,d}$	07/03- 2-F-E-049-06	12	19	62	0	0	13,497	76,507	28	229	778	2,932	1,712	14,462
$06^{b,d,e}$	07/06- 2-F-E-056-06	24	21	91	1	10	21,486	122,771	37	276	2,013	7,570	1,915	15,778
$07^{a,e}$	07/10- 2-F-E-062-06	24	22	73	0	0	13,246	75,718	27	206	1,499	5,259	1,222	8,411
$08^{\rm d,e}$	07/13- 2-F-E-068-06	12	22	51	1	10	7,263	41,321	21	167	702	2,599	473	3,779
$09^{\mathrm{d,f}}$	07/17- 2-F-E-073-06	24	17	55	0	0	7,595	43,870	43	368	2,342	8,201	400	3,418
$10^{\mathrm{d,f}}$	07/20- 2-F-E-081-06	12	17	40	0	0	4,950	28,639	39	334	2,294	7,925	306	2,543
11 <sup>d,f</sup>	07/24- 2-F-E-087-06	24	16	33	0	0	2,610	15,319	19	148	867	2,952	99	734
12 <sup>d,f</sup>	07/27- 2-F-E-090-06	12	17	37	0	0	2,235	12,591	49	356	1,183	4,410	111	938
13 <sup>d,g</sup>	07/31- 2-F-E-102-06	24	10	26	0	0	2,715	14,619	60	451	3,737	13,060	85	669
$14^{\rm d,g}$	08/03- 2-F-E-105-06	12	7	10	0	0	1,177	6,373	10	90	2,562	9,343	32	283
15 <sup>d,h</sup>	08/07- 2-F-E-108-06	24	5	10	0	0	658	3,530	0	0	906	2,960	21	178
16 <sup>d,i</sup>	08/10- 2-F-E-112-06	12	0	0	0	0	0	0	0	0	0	0	0	0
17 <sup>d,j</sup>	08/14- 2-F-E-115-06	24	1	3	0	0	71	401	4	37	1,137	5,121	16	100
18 <sup>d,k,l</sup>	08/17- 2-F-E-118-06	12	1	1	0	0	52	304	2	18	178	717	0	0
19 <sup>d,j,l</sup>	08/21- 2-F-E-121-06	24	0	0	0	0	0	0	0	0	0	0	0	0
20 <sup>d,k</sup>	08/24- 2-F-E-122-06	12	0	0	0	0	0	0	0	0	0	0	0	0
21 <sup>d,j,m</sup>	08/28- 2-F-E-124-06	24	0	0	0	0	0	0	0	0	0	0	0	0
22 <sup>d,k</sup>	08/31- 2-F-E-132-06	12	0	0	0	0	0	0	0	0	0	0	0	0
23 <sup>d,j,n</sup>	09/04- 2-F-E-135-06	24	0	0	0	0	0	0	0	0	0	0	0	0
24 <sup>d,k,n</sup>	09/07- 2-F-E-138-06	12	0	0	0	0	0	0	0	0	0	0	0	0
25 <sup>d,j,n</sup>	09/11- 2-F-E-140-06	24	0	0	0	0	0	0	0	0	0	0	0	0
26 <sup>d,k,n</sup>	09/14- 2-F-E-147-06	12	0	0	0	0	0	0	0	0	0	0	0	0
Total			26	658	9	119	124,087	714,984	352	2,789	20,863	75,678	9,883	80,879
Average	Weight					0.00		5.76		7.92		3.63		8.18

a Waters of the Eshamy District excluding, the Main Bay Subdistrict, were open.
b Anadromous stream closures were not in effect within the Main Bay Subdistrict.

Waters of the Eshamy District, excluding the Main Bay SHA and AGZ, were open.

<sup>&</sup>lt;sup>d</sup> Gillnets greater than 60 meshes in depth were allowed.

Waters of the Eshamy District, excluding the Main Bay Subdistrict, were open. Waters of the Main Bay Subdistrict, excluding the SHA and AGZ, were open (12 hours).

Waters of the Eshamy District north of 60° 30.903' N. lat., excluding the Main Bay Subdistrict SHA, were open.

Waters of the Main Bay Subdistrict, excluding the SHA, were open.

Waters of the Main Bay Subdistrict, excluding the AGZ, were open.

Waters of the Eshamy District north of 60° 29.349' N. lat were open.

Waters of the Eshamy District, excluding the Main Bay AGZ, were open.

Waters of the Eshamy District were open.

Waters of Eshamy Bay and Lagoon, suspending the Eshamy River anadromous stream closure, were open.

Waters of Eshamy Bay and Lagoon were open.

<sup>&</sup>lt;sup>n</sup> Waters of the Eshamy Lagoon were open.

**Appendix C6.**—Total commercial common property salmon harvest by species in the Eshamy District, 1988–2006.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
		Drift G	illnet			
1988	94	50,868	794	348,873	206,060	606,689
1989 <sup>a</sup>						
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
2002	428	589,199	3,532	122,365	104,284	819,808
2003	19	575,608	1,764	61,565	16,057	655,013
2004	21	215,460	1,467	55,832	43,228	316,008
2005	15	79,227	1,636	110,499	3,493	194,870
10-Year Average	123	303,315	2,799	148,662	28,767	483,666
2006	15	381,911	5,429	89,755	30,841	507,951
		Set Gi	llnet			
1988	100	18,321	283	180,456	93,577	292,737
1989 <sup>a</sup>						
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
2002	30	241,660	525	64,421	22,987	329,623
2003	0	215,733	663	28,537	6,265	251,198
2004	11	91,412	825	51,655	10,381	154,284
2005	0	109,532	882	126,135	3,452	240,001
10-Year Average	26	136,369	622	70,811	9,153	216,981
2006	9	124,087	352	20,863	9,883	155,194

**Appendix C6.**–Page 2 of 2.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
		Combine	d Gear			
1988	194	69,189	1,077	529,329	299,637	899,426
1989 <sup>a</sup>						
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
2002	458	830,859	4,057	186,786	127,271	1,149,431
2003	19	791,341	2,427	90,102	22,322	906,211
2004	32	306,872	2,292	107,487	53,609	470,292
2005	15	188,759	2,518	236,634	6,945	434,871
10-Year Average	150	439,683	3,421	219,473	37,920	700,646
2006	24	505,998	5,781	110,618	40,724	663,145

<sup>&</sup>lt;sup>a</sup> Fishing was closed because of oil contamination on the beaches.

**Appendix C7.**—Estimated age and sex composition of sockeye salmon harvested in the Eshamy District commercial common property gillnet fishery, 2006.

Strata Combined:	06/12 - 09/16			Bro	od Year and Ag	ge Class <sup>a</sup>			
Sampling dates:	06/27 - 07/23	200	03	2	002	2001		2000	
Sample size:	1,257	0.2	1.1	0.3	1.2	1.3	2.2	2.3	Total
Female	Percentage of sample	0.0	0.0	0.1	45.9	6.0	0.0	0.1	52.1
	Number in harvest	0	0	264	232,501	30,516	0	528	263,808
Male	Percentage of sample	0.1	0.1	0.0	43.9	3.6	0.1	0.1	47.7
	Number in harvest	264	462	0	222,036	18,071	264	264	241,362
Total	Percentage of sample	0.1	0.1	0.1	90.0	9.6	0.1	0.2	100.0
	Number in harvest	264	462	264	455,365	48,586	264	792	505,998
	Standard error	264	462	264	4,463	4,406	264	456	

<sup>&</sup>lt;sup>a</sup> Ages generated using length frequency data.

**Appendix C8.**—Estimated age and sex composition of the sockeye salmon escapement through the Eshamy River weir, 2006.

<b>Strata Combined:</b>	07/07 - 08/25		Brood	Year a	nd Age C	lass <sup>a</sup>		
Sampling dates:	07/25 - 08/18	2003	2002	2	200	01	2000	
Sample size:	1,431	1.1	1.2	2.1	1.3	2.2	2.3	Total
	Sample size	0	691	0	27	115	8	841
Female	Percentage of sample	0.0	48.1	0.0	1.8	8.4	0.7	58.9
	Number in escapement	0	20,113	0	741	3,510	280	24,645
	Sample size	1	488	1	19	78	2	589
	Number in escapement	21	14,178	29	539	2,307	66	17,141
	Sample size	1	1,180	1	46	193	10	1431
	Number in escapement	21	34,329	29	1,280	5,817	347	41,823
	Standard error	21	437	29	191	395	110	

<sup>&</sup>lt;sup>a</sup> Ages based on length frequency data.

# **APPENDIX D**

Appendix D1.—Prince William Sound commercial common property purse seine harvest by day, 2006.

			Chino	ok	Socke	ye	Coh	0	Pink		Chu	ım
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
05/31	3	3	8	148	4	20	0	0	0	0	292	2,342
06/02	3	3	28	324	0	0	0	0	0	0	862	7,620
06/04	4	4	10	172	0	0	0	0	0	0	653	5,950
06/06	6	6	31	472	1	6	0	0	0	0	1,534	15,544
06/07	1	1	0	0	0	0	0	0	0	0	205	1,948
06/08	7	7	2	40	0	0	0	0	0	0	2,099	23,366
06/09	3	4	8	124	0	0	0	0	0	0	3,330	33,762
06/10	7	7	1	18	0	0	0	0	0	0	5,867	61,012
06/11	5	5	0	0	0	0	0	0	0	0	3,124	31,319
06/12	12	20	0	0	0	0	0	0	0	0	20,868	224,357
06/13	7	7	15	245	0	0	0	0	0	0	12,372	123,840
06/14	11	11	5	132	0	0	0	0	0	0	17,638	193,359
06/15	29	36	28	583	45	259	2	14	2	10	65,467	605,047
06/16	14	14	0	0	0	0	0	0	0	0	13,098	129,406
06/17	26	27	4	60	5	40	0	0	0	0	32,532	299,907
06/18	9	9	0	0	27	161	0	0	0	0	7,365	66,736
06/19	26	26	2	33	142	714	0	0	0	0	21,223	205,562
06/20	15	16	4	38	0	0	0	0	0	0	8,780	86,467
06/21	36	46	6	139	2,958	15,260	7	27	32	95	32,701	305,247
06/22	6	7	0	0	599	3,596	0	0	0	0	5,751	53,427
06/23	38	41	4	71	905	5,050	1	6	27	80	27,811	251,776
06/24	9	9	0	0	135	818	0	0	27	81	6,828	70,796
06/25	37	37	0	0	459	2,447	0	0	416	1,302	30,553	270,745
06/26	19	19	0	0	324	1,957	0	0	554	1,432	14,120	136,032
06/27	31	32	10	178	294	1,576	1	6	2,881	8,644	29,992	263,183
06/28	24	25	2	20	198	1,092	0	0	5,637	18,252	11,841	105,717
06/29	17	18	8	134	1,208	6,171	5	34	541	1,919	20,962	159,659
06/30	74	90	2	16	2,196	12,519	13	90	1,319	3,531	269,599	2,338,885

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			Chin	ook	Soc	keye	Col	ho	Pink Chum		m	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
07/01	13	15	1	17	1,183	7,013	84	766	47,437	163,082	18,232	170,350
07/02	22	23	5	151	911	5,153	0	0	60,848	194,517	27,580	232,603
07/03	17	17	3	72	250	1,259	4	22	16,751	64,594	11,140	98,116
07/04	88	150	1	11	6	39	4	37	1,232,776	4,260,885	5,632	53,277
07/05	6	7	1	7	3,366	18,225	10	93	1,235	4,236	21,712	172,117
07/06	87	150	0	0	355	2,132	0	0	1,278,106	4,351,703	8,640	77,807
07/07	1	2	0	0	582	3,494	0	0	942	3,310	1,954	15,630
07/08	5	6	0	0	263	1,581	0	0	303	1,066	10,739	88,034
07/09	7	7	0	0	500	2,083	5	36	366	1,033	8,214	64,321
07/10	70	74	1	9	1,038	6,097	19	190	199,275	738,872	61,968	524,627
07/11	93	123	0	0	2,741	14,850	22	187	728,227	2,571,976	21,615	181,153
07/12	3	3	0	0	0	0	0	0	0	0	885	7,080
07/13	84	100	0	0	1,276	7,163	4	30	678,376	2,426,005	12,076	100,983
07/14	89	94	0	0	863	4,943	14	91	375,456	1,280,541	13,951	117,972
07/15	3	3	0	0	0	0	0	0	109	296	1,677	14,616
07/16	75	77	4	113	1,382	7,674	24	171	292,324	1,010,238	22,836	184,711
07/17	63	63	17	307	193	1,157	81	545	202,068	708,466	18,168	157,788
07/18	4	4	0	0	56	336	0	0	531	1,732	3,184	27,418
07/19	1	2	0	0	87	478	0	0	2,281	7,766	1,835	16,221
07/20	1	2	0	0	114	570	0	0	1,728	5,704	1,846	13,664
07/21	56	59	7	74	264	1,368	232	1,683	115,892	407,890	14,964	128,225
07/22	2	2	0	0	54	272	4	40	3,185	7,964	1,249	11,876
07/24	2	3	0	0	114	683	10	101	2,325	10,797	202	1,613
07/28	59	60	5	97	273	1,398	848	6,269	215,781	755,033	9,672	79,552
07/29	7	7	0	0	79	474	30	342	38,137	113,195	495	4,458
07/31	58	64	1	13	1,414	6,503	1,138	9,205	290,040	969,528	8,723	73,576
08/01	21	27	2	39	811	3,840	123	963	154,436	593,013	2,140	17,808
08/04	50	51	0	0	309	1,587	1,193	9,678	201,974	723,196	7,586	59,307
08/05	30	31	1	33	255	1,261	91	779	124,838	462,598	876	6,159

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			Chin	ook	Sock	eye	Co	oho	Pi	nk	Ch	um
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
08/07	71	73	0	0	144	777	1,795	15,330	123,409	427,888	14,926	119,408
08/11	58	58	0	0	263	1,534	4,376	26,302	192,533	631,215	13,128	108,452
08/14	58	58	0	0	60	383	2,472	16,170	92,069	291,496	9,584	77,007
08/19	83	87	0	0	272	1,566	305	2,584	507,407	1,728,378	38	274
08/20	75	98	0	0	2,318	13,079	423	3,504	770,016	2,746,169	63	544
08/21	75	82	0	0	404	2,330	188	1,704	501,484	1,777,848	33	277
08/22	72	77	0	0	957	5,781	3,985	16,433	370,216	1,382,901	59	437
08/23	74	82	0	0	925	5,658	980	8,740	575,302	2,033,169	41	318
08/24	60	68	0	0	1,224	7,642	1,527	13,713	418,050	1,621,931	97	772
08/25	41	42	0	0	577	3,446	1,264	11,725	242,805	902,966	38	329
08/26	47	54	0	0	851	5,000	11,600	64,006	385,155	1,387,758	5,926	21,403
08/27	34	38	0	0	309	1,814	647	6,601	240,340	875,244	19	163
08/28	41	48	0	0	282	1,769	3,412	33,338	290,985	1,054,953	157	1,342
08/29	30	31	0	0	143	899	1,553	16,612	176,182	644,677	1	6
08/30	22	22	0	0	252	1,587	2,211	21,803	85,935	301,369	3	20
08/31	21	22	0	0	162	930	3,238	32,287	104,240	366,299	86	639
09/01	15	18	0	0	279	1,533	2,920	29,279	98,764	367,916	8	60
09/02	6	6	0	0	18	111	3,204	31,975	61,742	208,585	0	0
09/03	17	23	0	0	21	126	3,212	32,146	225,032	874,418	0	0
09/04	4	4	0	0	27	162	1,263	13,172	44,165	150,798	0	0
09/05	45	62	0	0	14	83	121,123	1,110,577	544	4,521	693	5,958
09/06	33	34	0	0	0	0	46,534	412,143	100	200	225	2,176
09/07	14	16	0	0	0	0	19,558	171,763	0	0	112	1,104
09/08	16	16	0	0	0	0	16,930	147,982	524	2,164	112	1,103
09/09	15	15	0	0	4	25	7,315	68,572	25,541	92,037	16	161
09/10	7	7	0	0	0	0	2,570	23,143	18,543	66,756	4	46
Total	111	2,897	227	3,890	37,745	209,554	268,574	2,363,009	11,828,266	41,816,238	1,032,627	9,116,072
Average	e Weight			17.14		5.55		8.80		3.54		8.83

**Appendix D2.**—Total commercial salmon harvest by species, excluding Copper River and Bering River Districts, 1971–2006.

Year <sup>a</sup>	Chinook	Sockeye	Coho	Pink	Chum	Total
1971	3,551	88,368	30,551	7,310,964	574,265	8,007,699
1972 <sup>b</sup>	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 <sup>b</sup>	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
2002	958	1,013,396	37,586	18,947,254	6,341,864	26,341,058
2003	256	1,519,598	98,947	51,962,716	3,793,499	57,375,016
2004	864	831,356	56,430	23,526,306	1,998,511	26,413,467
2005	1,217	579,643	230,180	59,852,105	1,993,427	62,656,572
2006	1,118	990,880	388,722	21,691,138	2,164,338	25,236,196
1996–2005 Average	1,024	793,378	140,886	35,392,342	3,091,615	39,419,245
	1,021		1.0,000	22,372,312	2,071,012	27,117,213

<sup>&</sup>lt;sup>a</sup> Includes purse seine, drift gillnet, and set gillnet harvests. Also includes hatchery sales harvests, personal use, confiscated fish, donated and discarded fish, the surimi study fish, and special use educational permit harvests.

<sup>&</sup>lt;sup>b</sup> General purse seine season closed.

Appendix D3.–PWS commercial common property pink salmon harvest for all gear types, by district, 1975–2006.

Year	Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total
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	5,411,424		1,776	9,650,406
1989	3,151,096	6,464,090	3,925,487	181,565	a	a	a	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	6,059,063	5,039,988	1,543,869		35,691	5,046,919			17,725,530
1997 <sup>b</sup>	4,534,365	3,162,822	2,030,586		222,934	5,929,544	65,107	28,040	15,973,398
1998 <sup>b</sup>	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
2002	355,964	594,245	1,277,637		186,786	5,710,938	32,857	1,075	8,159,502
2003	14,945,744	5,909,643	11,439,915		90,102	5,789,419	60,287	514,452	38,749,562
2004	9,512,987	45,355	43,690		107,487	1,628,219	102,352	260,992	11,701,082
2005	20,516,356	10,175,784	3,318,875		236,634	11,376,513	844,658	770,570	47,239,390
2006	5,712,890	1,331,740	1,373,036		110,618	3,269,037	144,417	21,805	11,963,543
					·	<u> </u>	<u> </u>	·	
1996–2005 Average	9,633,087	3,944,318	3,074,205	17,223	219,473	6,580,065	291,119	436,046	24,107,318

Note: Includes purse seine, drift gillnet, and set gillnet harvests from all Prince William Sound districts; Unakwik harvests are included in the Northern District. Does not include hatchery cost recovery, confiscated, or test fish harvests.

<sup>&</sup>lt;sup>a</sup> These districts were closed due to the Exxon Valdez oil spill.

b Eastern and Northern District totals exclude discarded salmon.

**Appendix D4.**—Aerial escapement indices for pink and chum salmon by district, 2006.

		Pink Salmon			
		<b>Even Cycle</b>	1976-2004	Observed	Deviation
	<b>Escapement</b>	<b>Escapement</b>	<b>Even years</b>	Escapement	From
District	Midpoint	<b>Goal Range</b>	Mean Index	Index <sup>a</sup>	Midpoint
Eastern	677,500	425,000 - 930,000	475,825	248,592	-63.3%
Northern/Unakwik	282,500	175,000 - 390,000	165,000	208,397	-26.2%
Coghill	182,500	115,000 - 250,000	118,592	145,511	-20.3%
Northwestern	175,000	110,000 - 240,000	100,340	127,836	-27.0%
Eshamy	10,000	5,000 - 15,000	3,395	11,247	12.5%
Southwestern	207,500	130,000 - 285,000	121,030	118,205	-43.0%
Montague	122,500	75,000 - 170,000	99,132	149,798	22.3%
Southeastern	342,500	215,000 - 470,000	292,236	178,009	-48.0%
Total	2,000,000		1,375,550	1,187,595	-40.6%

		Chum	Salmon		
			1976-2005	Observed	Deviation
			Mean	<b>Escapement</b>	From
District	Escapement Range b		Index	Index <sup>a</sup>	Midpoint
Eastern	50,000	and up	107,632	109,403	118.8%
Northern/Unakwik	20,000	and up	39,137	52,039	160.2%
Coghill	8,000	and up	18,951	15,900	98.8%
Northwestern	5,000	and up	13,810	25,860	417.2%
Eshamy	None		71	660	NA
Southwestern c	None		2,746	7,293	NA
Montague <sup>c</sup>	None		4,126	10,642	NA
Southeastern	8,000	and up	27,585	26,739	234.2%
Total <sup>d</sup>	91,000	and up	207,115	229,940	152.7%

<sup>&</sup>lt;sup>a</sup> Based on weekly aerial survey counts of 209 index spawning streams in Prince William Sound. This does not represent the total spawning escapement but rather a comparable annual index.

<sup>&</sup>lt;sup>b</sup> Escapement goal changed to a lower range value with no upper end after the 2005 escapement goal review.

<sup>&</sup>lt;sup>c</sup> Escapement goal removed in 2003 after review.

<sup>&</sup>lt;sup>d</sup> Totals exclude districts without escapement goals (Eshamy, Southwestern, and Montague Districts).

**Appendix D5.**–Pink salmon escapement indices by district, 1971–2006.

Year	Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total
					Escapement Ir	ndices			
1965	257,853	59,820	91,584	159,011	9,340	65,380	77,042	255,926	975,956
1966	544,980	288,710	135,440	79,960	11,720	115,570	42,220	204,570	1,423,170
1967	255,240	144,200	65,240	82,980	5,020	42,950	10,020	236,610	842,260
1968	364,930	151,120	108,020	117,430	10,770	172,770	52,350	179,120	1,156,510
1969	160,600	94,770	39,020	23,830	0	57,890	1,550	26,910	404,570
1970	387,090	125,360	95,170	82,660	7,610	66,790	73,880	140,660	979,220
1971	352,800	126,210	62,160	14,320	1,710	79,140	296,730	179,480	1,112,550
1972	344,470	83,900	30,960	39,020	1,100	29,530	33,140	79,060	641,180
1973	309,040	69,660	493,780	2,910	0	52,320	119,520	177,780	1,225,010
1974	256,880	206,750	56,940	163,930	6,240	160,980	11,750	94,650	958,120
1975	412,560	38,260	452,430	4,990	0	77,270	85,380	194,670	1,265,560
1976	402,792	106,248	53,908	41,886	0	32,639	7,852	66,953	712,278
1977	409,082	47,897	320,680	72,591	0	179,682	185,174	302,561	1,517,667
1978	298,037	88,816	67,084	65,514	0	110,363	30,761	94,811	755,386
1979	755,752	271,952	125,544	155,077	0	286,489	308,412	998,751	2,901,977
1980	300,871	105,551	148,066	85,663	0	81,095	100,985	272,811	1,095,042
1981	650,401	206,282	140,436	108,158	0	137,759	488,066	435,217	2,166,319
1982	508,204	198,838	309,202	121,085	0	134,827	114,421	462,541	1,849,118
1983	450,165	138,993	284,164	171,938	0	145,779	217,597	594,470	2,003,106
1984	1,143,775	439,886	365,226	412,278	0	304,859	169,612	734,202	3,569,838
1985	720,386	166,768	238,728	181,797	0	152,429	316,483	571,406	2,347,997
1986	384,382	131,956	109,798	78,027	3,513	69,388	45,492	163,378	985,934
1987	517,221	114,522	67,761	67,809	3,450	129,192	144,085	328,177	1,372,217
1988	394,111	140,981	42,985	69,627	0	118,359	67,928	137,173	971,164
1989	357,249	95,445	48,802	72,591	18,578	168,518	164,540	307,953	1,233,676
1990	428,723	110,638	45,558	94,359	17,274	136,721	106,603	296,029	1,235,905
1991	427,069	159,909	84,790	89,437	19,152	176,887	239,782	528,766	1,725,792

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Year	Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total
					Escapement In	ndices			
1992	194,962	72,323	23,122	42,805	2,716	64,652	47,029	94,928	542,537
1993	314,727	95,602	41,666	45,847	9,348	98,573	144,784	315,093	1,065,640
1994	613,866	178,151	65,648	141,290	11,799	143,479	58,820	196,228	1,409,281
1995	396,696	84,447	46,029	50,582	10,182	82,490	183,448	336,310	1,190,184
1996	584,236	218,022	104,781	86,709	3,000	63,337	92,966	330,285	1,483,336
1997	345,725	65,260	52,961	53,740	914	112,010	206,943	585,135	1,422,688
1998	377,700	213,288	85,968	97,485	4,644	280,335	161,275	199,410	1,420,105
1999	622,502	214,723	168,816	52,340	6,900	163,347	381,054	853,180	2,462,862
2000	554,984	168,247	223,646	66,078	4,286	131,648	227,881	282,258	1,659,028
2001	436,585	163,573	148,665	102,294	2,963	176,503	314,323	655,480	2,000,386
2002	226,068	138,204	54,882	50,981	1,397	35,554	71,461	364,630	943,177
2003	957,327	262,502	375,147	103,931	5,206	130,356	320,494	691,769	2,846,732
2004	724,663	163,858	79,010	51,306	2,300	108,192	183,891	687,903	2,001,123
2005	1,025,756	579,079	528,264	401,640	32,396	272,572	566,002	1,330,407	4,736,116
2006	248,592	211,603	145,511	127,836	11,247	118,205	149,798	178,009	1,190,802
				Even Cycle	e Average (196	66–2006)			
	442,110	168,688	111,949	100,759	4,744	118,062	88,101	250,458	1,284,869
				Odd Cycle	e Average (197	1–2005)			
	491,537	158,736	187,401	97,807	5,618	131,828	222,902	471,430	1,753,338

*Note*: Historical data revised in 1989. Coghill and Northwestern escapement numbers correspond to current district boundaries. Northern District column includes both Northern and Unakwik district counts combined.

Appendix D6.—Weekly aerial survey indices of pink salmon escapement by statistical area, 2006.

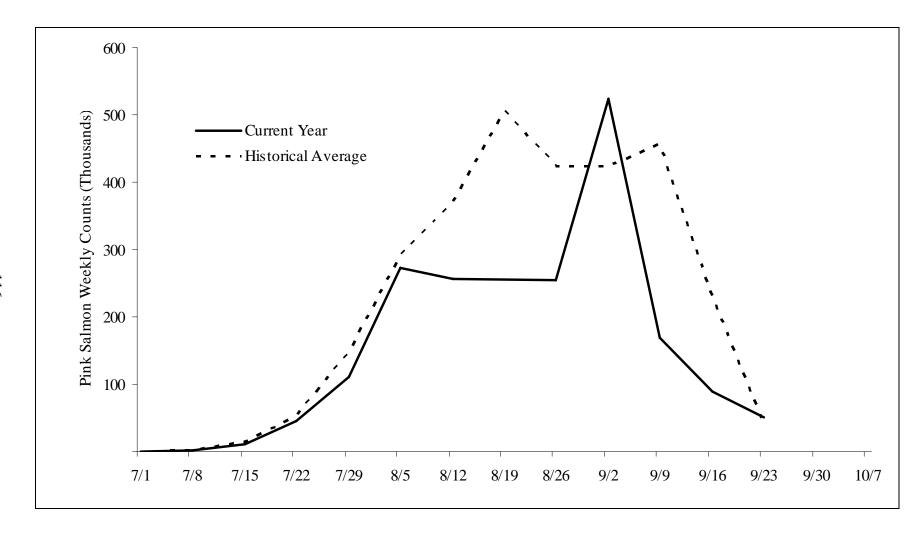
	Statistical					•	Weel	k Ending I	Dates <sup>a</sup>						Adjusted
Survey Location	Area	7/01	7/08	7/15	7/22	7/29	8/05	8/12	8/19	8/26	9/02	9/09	9/16	9/23	Total <sup>b</sup>
Orca Inlet	221-10	0	0	0	800	4,000	7,500	1,500	NS	NS	5,100	1,050	NS	45	13,275
Simpson & Sheep Bay	221-20	0	0	75	1,250	2,300	2,750	14,150	NS	NS	14,900	11,900	NS	9,705	29,926
Port Gravina	221-30	500	500	0	3,850	3,000	6,900	24,500	NS	NS	36,700	27,550	NS	5,750	75,986
Port Fidalgo	221-40	0	0	275	200	6,575	4,600	13,550	NS	NS	20,600	19,400	NS	15,830	52,430
Valdez Arm	221-50	0	150	2,080	7,190	8,910	12,400	31,410	NS	NS	31,100	32,400	NS	19,435	76,974
Port Valdez	221-61	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Eastern District		500	650	2,430	13,290	24,785	34,150	85,110	NS	NS	108,400	92,300	NS	50,765	248,592
Columbia & Long Bay	222-10	NS	NS	2,000	1,500	2,570	5,200	7,250	NS	NS	19,625	11,600	NS	50	34,157
Wells Bay & Unakwik Inlet	222-20	0	150	2,340	7,600	19,410	32,310	45,300	NS	16,900	58,300	15,550	21,300	0	139,240
Eaglek Bay	222-30	NS	210	440	885	6,110	5,350	13,710	NS	10,950	13,350	NS	4,520	NS	35,000
Northern District		0	360	4,780	9,985	28,090	42,860	66,260	NS	27,850	91,275	27,150	25,820	50	208,397
Upper Unakwik Inlet	22-910	NS	0	0	0	100	50	100	NS	100	3,000	NS	2,500	NS	3,206
Unakwik District		NS	0	0	0	100	50	100	NS	100	3,000	NS	2,500	NS	3,206
West Side Port Wells	223-10	NS	0	NS	8,925	11,500	39,700	9,800	NS	24,750	24,400	NS	5,475	NS	58,804
Esther Passage	22-320	NS	0	0	0	200	10	1,000	NS	3,200	4,600	NS	1,350	NS	12,217
College Fiord	22-330	NS	0	NS	300	6,000	50,000	40,000	NS	30,100	25,900	NS	12,200	NS	74,490
Coghill District		NS	0	0	9,225	17,700	89,710	50,800	NS	58,050	54,900	NS	19,025	NS	145,511
Passage Canal & Cochrane	22-410	NS	0	1,200	9,500	6,770	17,950	3,500	NS	26,000	17,100	NS	4,460	NS	61,864
Culross Passage	22-430	NS	0	0	700	850	60	300	NS	6,800	10,200	NS	4,850	NS	13,203
Port Nellie Juan	22-440	NS	0	400	750	3,700	19,000	1,900	NS	16,200	12,500	NS	5,950	NS	52,769
Northwestern District		NS	0	1,600	10,950	11,320	37,010	5,700	NS	49,000	39,800	NS	15,260	NS	127,836
Eshamy Bay	22-530	NS	0	0	25	1,000	NS	470	NS	1,200	6,900	NS	2,900	NS	9,783
Eshamy District		NS	0	0	25	1,000	NS	470	NS	1,200	6,900	NS	2,900	NS	9,783
Chenega Is. & Dangerous Pass.	22-620	NS	NS	800	NS	2,250	NS	9,140	NS	20,850	20,700	NS	2,975	NS	63,488
East Knight Is.	22-630	NS	NS	0	NS	325	NS	800	NS	1,500	1,000	NS	500	NS	10,244
Bainbridge & Latouche	22-640	NS	NS	0	NS	0	NS	105	NS	6,700	11,850	NS	8,025	NS	29,835
Port Bainbridge	22-650	NS	NS	0	NS	600	NS	3,800	NS	2,000	1,800	NS	450	NS	10,430
Southwestern District		NS	NS	800	NS	3,175	NS	13,845	NS	31,050	35,350	NS	11,950	NS	118,205
Montague Strait	22-710	NS	NS	41	NS	3,370	NS	27,900	NS	59,000	48,600	NS	9,300	NS	30,351
Green Is.	22-720	NS	NS	0	NS	342	150	6,375	NS	27,520	21,400	NS	2,810	NS	119,447
Montague District		NS	NS	41	NS	3,712	150	34,275	NS	86,520	70,000	NS	12,110	NS	149,798
Orca Is. & East Hawkins	22-810	NS	NS	0	0	600	75	NS	NS	NS	600	500	NS	NS	2,075
Hawkins Cutoff	22-820	NS	NS	0	1,000	5,300	12,900	NS	NS	NS	10,300	4,650	NS	NS	23,970
North Hawkins & Canoe Pass.	22-830	NS	NS	1,400	0	2,300	3,275	NS	NS	NS	12,900	4,120	NS	NS	20,513
Double Bay	22-840	NS	NS	100	150	2,000	12,300	NS	NS	NS	15,700	6,600	NS	NS	24,963
Johnstone Point	22-850	NS	NS	0	1,100	3,900	5,600	NS	NS	NS	19,200	7,500	NS	NS	23,838
Port Etches	22-860	NS	NS	430	500	7,200	34,700	NS	NS	NS	54,500	25,850	NS	NS	82,650
Southeastern District		NS	NS	1,930	2,750	21,300	68,850	NS	NS	NS	113,200	49,220	NS	NS	178,009
TOTAL OF 9 DISTRICTS		500	1,010	11,581	46,225	111,182	272,780	256,560	NS	253,770	522,825	168,670	89,565	50,815	1,189,338

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*Note*: NS = No Survey.

- There are a total of 208 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 (i.e., 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.
- b The adjusted total is an escapement estimate based a geometric method used since the inception of the systematic survey program in the early 1960s. 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 has historically been used in this calculation and is from tagging studies completed by National Marine Fisheries Service on Olsen Creek in the early 1960s. Because observer bias does occur and because 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.

Appendix D7.—Current year and historical weekly pink salmon escapement performance of index spawning streams, 2006.



Appendix D8.–Total chum salmon harvests and escapement indices, including hatchery sales harvests and broodstock, 1965–2006.

												Common	
				Chum	Salmon Esca	pements <sup>a</sup>				Hatch	ery	Property	Total
Year	Eastern	Northern	Coghill	Northwest	Eshamy	Southwest	Montague	Southeast	Total	Sales	Brood	Harvest <sup>b</sup>	Run <sup>c</sup>
1965	69,180	20,980	20,768	18,907	0	1,829	17,500	46,480	195,644			201,043	396,687
1966	75,690	24,870	10,540	5,770	0	2,180	14,100	9,410	142,560			426,628	569,188
1967	74,570	23,270	7,450	1,670	0	6,200	4,980	9,070	127,210			274,234	401,444
1968	48,960	10,620	8,780	800	0	580	220	4,610	74,570			342,939	417,509
1969	58,690	17,340	8,410	780	0	0	0	6,320	91,540			320,977	412,517
1970	34,430	4,020	11,880	2,720	0	550	0	7,950	61,550			230,661	292,211
1971	49,730	11,870	6,600	5,600	100	1,430	27,990	6,450	109,770			574,265	684,035
1972	112,950	70,760	28,160	22,980	0	4,010	3,340	26,990	269,190			45,370	314,560
1973	213,170	140,030	72,610	13,250	0	1,020	3,110	48,080	491,270			729,839	1,221,109
1974	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
1976	16,031	23,971	31,398	2,000	0	0	0	100	73,500			370,478	443,978
1977	38,710	33,719	79,957	7,270	0	400	0	6,149	166,205			575,839	742,044
1978	92,065	25,715	15,966	15,884	0	500	0	6,100	156,230			485,147	641,377
1979	48,212	18,850	7,823	6,026	0	0	0	3,914	84,825			324,040	408,865
1980	21,595	17,836	20,919	1,800	0	2,500	270	7,193	72,113	6		412,948	485,067
1981	67,702	28,231	2,389	14,135	0	650	0	15,630	128,737	118		1,745,869	1,874,724
1982	151,529	60,354	21,586	11,036	0	1,300	0	15,950	261,755	0	86,200	1,335,368	1,683,323
1983	109,414	78,610	55,127	26,017	0	2,000	0	14,407	285,575	0	44,000	1,030,546	1,360,121
1984	97,001	48,466	13,500	5,150	0	0	0	4,625	168,742	4,886	3,000	1,196,785	1,373,413
1985	37,310	24,561	14,514	10,256	0	500	20	2,450	89,611	3,840	0	1,302,090	1,395,541
1986	129,882	46,263	16,300	20,743	0	1,987	0	12,363	227,538	20,683	12,523	1,662,366	1,923,110
1987	189,855	27,134	22,472	25,571	0	1,150	300	46,420	312,902	2,549	15,574	1,902,063	2,233,088
1988	255,515	78,297	42,536	41,468	0	2,055	500	64,609	484,980	42,694	108,271	1,792,616	2,428,561
1989	115,385	44,823	22,434	25,252	300	10,891	0	20,574	239,659	129,551	74,513	862,551	1,306,274
1990	109,072	126,480	20,494	33,421	50	3,945	957	7,241	301,660	24,554	107,284	935,284	1,368,782
1991	66,483	18,153	7,055	9,034	0	2,075	925	9,203	112,928	13,471	114,814	318,435	559,648

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												Common	
				Chum	Salmon Esca	pements <sup>a</sup>				Hatch	ery	Property	Total
Year	Eastern	Northern	Coghill	Northwest	Eshamy	Southwest	Montague	Southeast	Total	Sales	Brood	Harvest <sup>b</sup>	Run <sup>c</sup>
1992	47,292	12,458	7,583	10,258	300	2,940	784	3,891	85,506	57,392	183,940	271,176	598,014
1993	49,904	19,265	7,404	17,692	0	1,250	30	19,173	114,718	475,148	140,330	706,196	1,436,392
1994	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
1996	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
1997	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
1998	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
1999	242,713	36,886	5,057	4,544	0	2,393	8,725	36,181	336,499	777,180	207,073	2,186,658	3,507,410
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
2001	198,683	75,473	13,388	6,373	700	5,187	10,408	37,526	347,738	936,028	171,046	2,153,920	3,608,732
2002	94,046	30,531	7,430	16,194	60	3,985	565	104,906	257,717	2,580,936	209,833	3,760,934	6,809,420
2003	198,921	44,565	19,729	12,736	110	12,373	9,015	116,131	413,580	1,540,227	200,933	3,981,763	6,136,503
2004	108,833	42,456	9,685	10,371	0	1,810	4,170	42,344	219,669	528,676	208,795	1,473,242	2,430,382
2005	113,135	30,657	11,979	12,696	500	1,951	0	25,547	196,465	535,773	280,881	1,461,146	2,474,265
2006	109,403	52,069	15,900	25,860	660	7,293	10,642	26,739	248,565	824,558	217,146	1,356,997	2,647,266
Avg.	99,229	38,105	18,942	12,044	55	2,481	4,762	24,365	199,982	477,407	131,425	1,057,264	1,636,924

Note: Does not account for wild stock escapement into non-index streams.

<sup>&</sup>lt;sup>a</sup> Coghill and Northwestern District escapement numbers correspond to current district boundaries. The Northern District column includes Unakwik District counts.

b Includes the commercial common property harvest of both wild and hatchery stocks. Does not include hatchery sales harvests.

c Represents the sum of the common property harvest, hatchery sales and brood(including roe recovery), plus the escapement index.

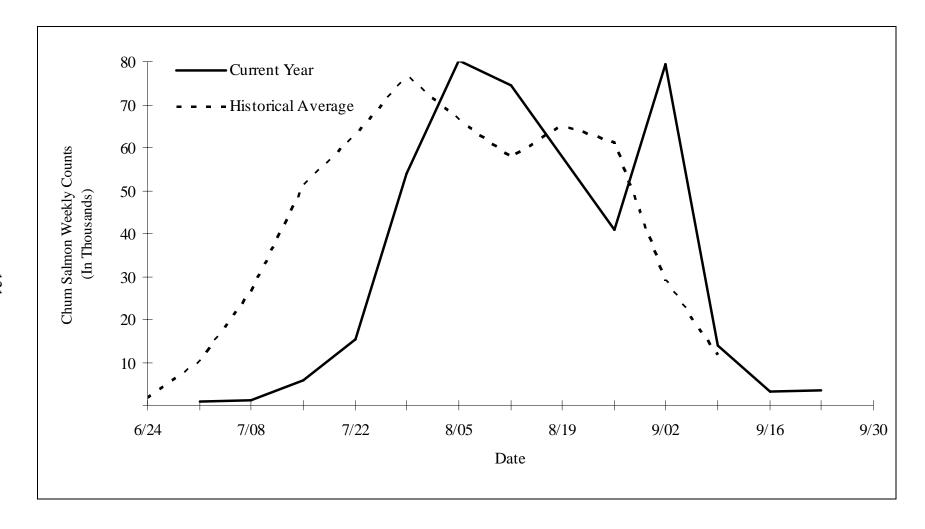
Appendix D9.—Weekly aerial survey indices of chum salmon escapement by statistical area, 2006.

	Statistical						Wash	Ending Da	atas a						Adjusted
Survey Location	Area	7/01	7/08	7/15	7/22	7/29	8/05	8/12	8/19	8/26	9/02	9/09	9/16	9/23	Total b
Orca Inlet	22-110	0	0	40	1,000	2,000	2,000	0/12	NS	NS	430	110	NS	9/23	2,938
Simpson & Sheep Bay	22-110	0	1	190	1,320	2,600	8,500	6,075	NS	NS NS	7,950	735	NS	750	14,632
Port Gravina	22-120	800	850	3,000	4,050	7,130	19,875	13,630	NS	NS	18,820	2,165	NS	100	50,804
Port Fidalgo	22-130	0	0	3,000	250	575	2,550	4,360	NS	NS NS	5,910	2,103	NS	600	14,287
Valdez Arm	22-140	25	75	780	3,550	9,420	14,340	9,700	NS	NS NS	7,280	2,900	NS	1.900	26,742
Port Valdez	22-150	NS	NS	NS	3,330 NS	9,420 NS	14,340 NS	9,700 NS	NS	NS NS	7,280 NS	2,900 NS	NS	1,900 NS	20,742 NS
Eastern District	22-101	825	926	4.040	10.170	21.725	47,265	33,765	NS	NS NS	40,390	8,005	NS	3,350	109,403
Columbia & Long Bay	22-210	NS	NS	700	1,150	400	7,500	2,210	NS	NS NS	2,100	850	NS	0	8.076
Wells Bay & Unakwik Inlet	22-210	30	60	500	1,700	5,950	8,110	14,920	NS	10,650	12,550	1,165	1,050	0	38,286
Eaglek Bay	22-230	NS	0	30	0	920	1,250	3,100	NS	1,450	1,290	NS	120	NS	5,677
Northern District	22 230	30	60	1,230	2,850	7,270	16,860	20,230	NS	12,100	15,940	2,015	1,170	0	52,039
Upper Unakwik Inlet	22-910	NS	0	0	0	0	0	0	NS	0	50	NS	25	NS	30
Unakwik District	22 )10	NS	0	0	0	0	0	0	NS	0	50	NS	25	NS	30
West Side Port Wells	22-310	NS	0	NS	200	3,550	1,500	5,300	NS	10,130	2,280	NS	290	NS	11,471
Esther Passage	22-320	NS	0	0	0	0	0	150	NS	320	100	NS	0	NS	1,041
College Fiord	22-330	NS	0	NS	1	600	0	2,000	NS	3,000	250	NS	0	NS	3,389
Coghill District		NS	0	0	201	4,150	1,500	7,450	NS	13,450	2,630	NS	290	NS	15,900
Passage Canal & Cochrane	22-410	NS	45	300	705	4,310	400	7,400	NS	4,900	1,350	NS	150	NS	14,524
Culross Passage	22-430	NS	0	0	0	0	0	0	NS	500	520	NS	0	NS	851
Port Nellie Juan	22-440	NS	12	0	650	4,230	500	3,650	NS	1,270	750	NS	295	NS	10,485
Northwestern District		NS	57	300	1,355	8,540	900	11,050	NS	6,670	2,620	NS	445	NS	25,860
Eshamy Bay	22-530	NS	151	20	0	0	NS	50	NS	60	225	NS	0	NS	660
Eshamy District		NS	151	20	0	0	NS	50	NS	60	225	NS	0	NS	660
Chenega Is. & Dangerous Pass.	22-620	NS	NS	0	NS	725	NS	650	NS	855	1,540	NS	250	NS	3,801
East Knight Is.	22-630	NS	NS	0	NS	0	NS	0	NS	0	0	NS	10	NS	21
Bainbridge & Latouche Pass	22-640	NS	NS	0	NS	15	NS	50	NS	650	1,560	NS	280	NS	2,460
Port Bainbridge	22-650	NS	NS	0	NS	300	NS	200	NS	200	20	NS	25	NS	988
Southwestern District		NS	NS	0	NS	1,040	NS	900	NS	1,705	3,120	NS	565	NS	7,293
Montague Strait	22-710	NS	NS	0	NS	540	NS	700	NS	4,880	3,165	NS	495	NS	2,485
Green Is.	22-720	NS	NS	0	NS	175	10	330	NS	2,080	930	NS	140	NS	8,157
Montague District		NS	NS	0	NS	715	10	1,030	NS	6,960	4,095	NS	635	NS	10,642
Orca Is. & East Hawkins	22-810	NS	NS	0	0	0	0	NS	NS	NS	0	10	NS	NS	5
Hawkins Cutoff	22-820	NS	NS	0	40	1,400	1,250	NS	NS	NS	1,020	430	NS	NS	2,721
North Hawkins & Canoe Pass	22-830	NS	NS	0	0	110	160	NS	NS	NS	1,290	500	NS	NS	1,645
Double Bay	22-840	NS	NS	0	0	1,650	1,000	NS	NS	NS	1,570	365	NS	NS	2,688
Johnstone Point	22-850	NS	NS	0	100	1,800	2,800	NS	NS	NS	1,250	190	NS	NS	4,400
Port Etches	22-860	NS	NS	300	510	5,550	8,640	NS	NS	NS	5,150	2,255	NS	NS	15,280
Southeastern District		NS	NS	300	650	10,510	13,850	NS	NS	NS	10,280	3,750	NS	NS	26,739
TOTAL OF 9 DISTRICTS		855	1,194	5,890	15,226	53,950	80,385	74,475	NS	40,945	79,350	13,770	3,130	3,350	248,565

### **Appendix D9**.–Page 2 of 2.

*Note*: NS = No Survey.

- There are a total of 208 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 (i.e., 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.
- The adjusted total is an escapement estimate based a geometric method used since the inception of the systematic survey program in the early 1960s. 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 has historically been used in this calculation and is from tagging studies completed by National Marine Fisheries Service on Olsen Creek in the early 1960s. Because observer bias does occur and because 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.



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Appendix D11.—Aerial survey escapement indices of sockeye salmon from selected systems, 2006.

	Stream				Week	Ending D	ate <sup>a</sup>					
System Name	Number	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16
Billy's Cr.	218	NS	2,000	NS	NS	50	150	NS	NS	75	10	NS
Cowpen Cr.	242	NS	NS	NS	300	NS	NS	NS	20	NS	NS	30
Miners River	244	NS	30	45	450	300	NS	NS	30	300	NS	40
Waterfall Cr	263	NS	NS	NS	NS	1	NS	NS	NS	NS	NS	NS
Siwash Cr	264	NS	NS	NS	NS	200	NS	NS	NS	NS	NS	NS
Red Cr.	300	70	50	NS	300	NS	50	NS	30	NS	NS	NS
Village Cr.	307	0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hobo Cr.	417	NS	NS	NS	NS	NS	NS	NS	NS	5	NS	10
Shrode Cr.	476	NS	40	50	75	NS	30	NS	50	NS	NS	350
Eshamy River	511	NS	40	200	NS	NS	1,000	NS	800	100	NS	NS
Jackpot Rvr	608	NS	NS	NS	NS	NS	300	NS	300	40	NS	NS
Hd/N Jackpot Bay	609	NS	NS	NS	7	NS	NS	NS	NS	NS	NS	NS
Brizgaloff Cr	623	NS	NS	NS	NS	NS	NS	NS	10	NS	NS	NS
Bainbridge	630	NS	75	NS	260	NS	350	NS	300	20	NS	NS
Total		70	2,235	295	1,392	551	1,880	0	1,540	540	10	430

*Note*: NS = No Survey

<sup>&</sup>lt;sup>a</sup> Counts contained in this table are obtained in conjunction with the regular pink and chum salmon aerial survey program. Many of these sockeye salmon systems are difficult to survey by air and thus the counts do not necessarily represent total live abundance at a particular time.

**Appendix D12.**—Temporally stratified age and sex composition of chum salmon harvested in the Prince William Sound commercial purse seine common property fishery, 2006.

		2003	2002	2001	2000	
		0.2	0.3	0.4	0.5	Total
Coghill District						
Stratum dates:	06/30 - 09/08					
Sampling date:	07/01 - 07/01					
Sample size:	390 <sup>a</sup>					
•	Sample size	24	54	121	0	199
Female	Percentage of sample	6.2	13.8	31.0	0.0	51.0
	Number in harvest	18,312	41,202	92,322	0	151,835
	Sample size	38	53	99	1	191
Male	Percentage of sample	9.7	13.6	25.4	0.3	49.0
	Number in harvest	28,994	40,439	75,536	763	145,732
	Sample size	62	107	220	1	390
Total	Percentage of sample	15.9	27.4	56.4	0.3	100.0
	Number in harvest	47,306	81,640	167,858	763	297,567
	Standard error	5,517	6,732	7,481	763	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Montague District		- ,-	- 7	., .		
Strata Combined:	05/29 - 09/17					
Sampling dates:	06/21 - 07/01					
Sample size:	792					
Sumpre size.	Sample size	53	317	65	1	436
Female	Percentage of sample	6.0	39.5	8.4	0.1	54.1
Temate	Number in harvest	26,740	176,211	37,614	416	240,981
	Sample size	61	252	41	2	356
Male	Percentage of sample	6.8	33.5	5.4	0.3	45.9
Maic	Number in harvest	30,360	149,189	24,106	1,126	204,781
	Sample size	114	569	106	3	792
Total	Percentage of sample	12.8	73.0	13.8	0.3	100.0
Total	Number in harvest	57,101	325,400	61,720	1,541	445,762
	Standard error	5,143	7,162	5,724	921	443,702
All Districts Combined		3,143	7,102	3,724	921	
Strata Combined:	05/29 - 07/21					
Sampling dates:	06/21 - 06/28					
Sample size:	792					
Female	Sample size	77	371	186	1	635
remate	Percentage of sample	6.1	29.2	17.5	0.1	52.8
	Number in harvest	45,052	217,412	129,936	416	392,816
Male		43,032 99		129,930	3	592,810 547
Male	Sample size		305		_	
	Percentage of sample	8.0 50.254	25.5	13.4	0.3	47.2
Total	Number in harvest	59,354	189,628	99,642	1,889	350,513
Total	Sample size	176	676	326	4	1,182
	Percentage of sample	14.0	54.8	30.9	0.3	100.0
	Number in harvest	104,406	407,040	229,578	2,304	743,329
	Standard error	7,542	9,829	9,420	1,196	

<sup>&</sup>lt;sup>a</sup> Sample size does not include samples collected from drift gillnet caught chum salmon.

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Appendix D13.—Summary of commercial purse seine salmon fishery periods, dates, duration, and emergency orders issued by district, 2006.

	stern (21)		thern 22)	`	ghill 23)	Southw (22		Monta (227			eastern 28)		akwik 29) <sup>a</sup>	Emergency
	Hours		Hours		Hours	Date	Hours	Dates	Hours		Hours		Hours	Orders
						5/29-7/23	1,248 a	5/29-7/23	1,248 a					2-F-E-004-06
												06/05	48	2-F-E-008-06
												06/08	48	2-F-E-011-06
												06/12	48	2-F-E-015-06
												06/15	48	2-F-E-020-06
												06/19	48	2-F-E-024-06
												06/22	48	2-F-E-032-06
												06/26	48	2-F-E-036-06
												06/29	48	2-F-E-042-06
				06/30	12 <sup>a</sup>									2-F-E-045-06
												07/03	48	2-F-E-047-06
07/04	12 <sup>a</sup>									07/04	12 <sup>a</sup>			2-F-E-050-06
07/06	12 a									07/06	12 <sup>a</sup>	07/06	48	2-F-E-054-06, 2-F-E-057-06
07/10	12 <sup>b</sup>	07/10	12 a							07/10	12 a	07/10	48	2-F-E-060-06, 2-F-E-063-06
07/11	12 °									07/11	12 <sup>a</sup>			2-F-E-064-06
07/13	$12^{d}$									07/13	12 <sup>a</sup>	07/13	48	2-F-E-066-06, 2-F-E-069-06
07/14	$12^{d}$									07/14	12 <sup>a</sup>			2-F-E-069-06
07/16	12 <sup>e</sup>			07/16	12 <sup>b</sup>					07/16	12 a			2-F-E-072-06, 2-F-E-074-06
07/17	12 <sup>e</sup>									07/17	12 <sup>a</sup>	07/17	48	2-F-E-071-06, 2-F-E-074-06
												07/20	48	2-F-E-079-06
07/21	$12^{\mathrm{f}}$			07/21	24 °					07/21	12 a			2-F-E-080-06, 2-F-E-082-06
				07/24	24 <sup>d</sup>									2-F-E-086-06
07/28	12 <sup>g</sup>			07/28	24 <sup>d</sup>									2-F-E-089-06, 2-F-E-095-06

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	stern 221)		thern		ghill 23)		western (26)		tague 27)		eastern (28)		nakwik (229)	Emergency
Date		Date	Hours		Hours	Date	Hours	Dates	Hours		Hours		Hours	Orders
07/31	12 <sup>g</sup>			07/31	36 <sup>d</sup>									2-F-E-096-06, 2-F-E-101-06
08/04	12 <sup>g</sup>			07/31	$24^{d}$									2-F-E-098-06, 2-F-E-104-06
08/07	12 h	08/07	12 b	08/07	12 e									2-F-E-107-06
08/11	12 i	08/11	12 b	08/11	12 e									2-F-E-110-06
08/14	12 <sup>g</sup>	08/14	12 b							08/14	12	b		2-F-E-116-06
		08/19	12 c,d	08/19	12 <sup>f</sup>	08/19	12 b							2-F-E-119-06, 2-F-E-125-06
		08/20	12 °	08/20	12 <sup>g</sup>	08/20	12 b,c							2-F-E-126-06
08/21	12 <sup>g</sup>	08/21	12 c,d	08/21	12 <sup>g</sup>	08/21	12 <sup>b</sup>							2-F-E-119-06, 2-F-E-125-06, 2-F-E-126-06
		08/22	12 °	08/22	12 <sup>g</sup>	08/22	12 b							2-F-E-126-06
		08/23	12 c,d	08/23	12 <sup>g</sup>	08/23	12 <sup>b</sup>							2-F-E-127-06
08/24	12 <sup>g</sup>	08/24	12 c,d	08/24	12 <sup>g</sup>	08/24	12 <sup>b</sup>							2-F-E-127-06, 2-F-E-128-06
		08/25	12 °	08/25	12 h	08/25	12 <sup>b</sup>							2-F-E-128-06
		08/26	12 °	08/26	12 h	08/26	12 b,d							2-F-E-128-06, 2-F-E-129-06
		08/27	12 °	08/27	12 h	08/27	12 b,d							2-F-E-130-06
08/28	12 <sup>g</sup>	08/28	12 °	08/28	12 h	08/28	12 b,d							2-F-E-130-06
		08/29	12 °	08/29	12 h	08/29	12 b,d							2-F-E-130-06
		08/30	12 °	08/30	12 h	08/30	12 b,d							2-F-E-130-06
08/31	12 <sup>g</sup>	08/31	12 c,d	08/31	12 h	08/31	12 b,d							2-F-E-133-06
		09/01	12 °	09/01	12 h	09/01	12 b,d							2-F-E-133-06
		09/02	12 °	09/02	12 h	09/02	12 b,d							2-F-E-133-06
		09/03	12 e	09/03	12 h	09/03	12 b,d							2-F-E-136-06
09/04	14 <sup>j</sup>	09/04	12 e	09/04	12 h	09/04	$12^{b,d}$							2-F-E-136-06
09/05	14 <sup>j</sup>	09/05	12 e	09/05	12 h	09/05	$12^{b,d}$							2-F-E-136-06
		09/06	12 e	09/06	12 h	09/06	12 b,d							2-F-E-136-06

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	stern 21)		thern 22)	,	ghill 23)		western (26)		tague 27)		neastern 228)		akwik 229)	Emergency
Date	Hours	Date	Hours	Dates	Hours	Date	Hours	Dates	Hours	Date	Hours	Date	Hours	Orders
09/07	14 <sup>j</sup>	09/07	12 e	09/07	12 <sup>h</sup>	09/07	12 b,d							2-F-E-143-06
09/08	14 <sup>j</sup>	09/08	12 <sup>e</sup>	09/08	12 <sup>h</sup>	09/08	12 b,d							2-F-E-141-06, 2-F-E-143-06
09/09	14 <sup>j</sup>	09/09	12 e			09/09	12 b,d							2-F-E-143-06
09/10	12 <sup>j</sup>	09/10	12 e			09/10	12 b,d							2-F-E-144-06
09/11	12 <sup>j</sup>	09/11	12 e			09/11	12 b,d							2-F-E-144-06
09/12	12 <sup>j</sup>	09/12	12 e			09/12	12 b,d							2-F-E-144-06
09/13	12 <sup>j</sup>	09/13	12 e			09/13	12 b,d							2-F-E-144-06
09/14	12 <sup>j</sup>													2-F-E-145-06
09/15	12 <sup>j</sup>													2-F-E-145-06
09/16	12 <sup>j</sup>													2-F-E-145-06

#### Eastern District

- <sup>a</sup> Waters of the Eastern District south of a line from Rocky Point to Point Freemantle and north of a line from Entrance Point to Potato Point were open. Waters east of a line from the west end of the ferry dock to the A buoy remained closed.
- b Waters of the Eastern District south of a line from Rocky Point to Point Freemantle were open.
- <sup>c</sup> Waters of the Eastern District north of a line from Entrance Point to Potato Point, west of 146° 30.37' W. longitude, and south of a line from Rocky Point to Point Freemantle, including waters of Galena Bay, were open.
- Waters of the Eastern District, excluding the waters of Port Valdez east of 146° 30.37' W. longitude and waters inside all yellow Salmon Harvest Task Force Markers, were open.
- Waters of the Eastern District, excluding waters north of a line from Entrance to Potato Point and waters inside all Salmon harvest Task Force Markers, were open.
- f Waters of the Eastern District, excluding waters north of a line from Potato Point to Tongue Point, south of an east-west line at Busby Light, and waters inside all yellow Salmon Harvest Task Force Markers, were open.
- g Waters of the Eastern District south of a line from Entrance Point to Potato Point, excluding waters inside all Salmon harvest Task Force Markers, were open.
- Waters of the Eastern District south of a line from Entrance Point to Potato Point, excluding waters inside Salmon harvest Task Force Markers in Galena, Jack, and Sawmill bays, were open.
- Waters of the Eastern District south of a line from Entrance Point to Potato Point, were open.
- j Waters of the Eastern District north of a line from Rocky Point to Point Freemantle were open. Waters of Port Valdez from the brown oil-spill container west of the hatchery around the yellow buoys to the brown oil-spill container to the east of the hatchery were closed. Regulatory closed waters in Port Valdez were not in effect. Waters inside all yellow Salmon Harvest Task Force Markers were closed.

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#### Northern District

- <sup>a</sup> Waters of the Northern District, excluding the Perry Island Subdistrict, were open.
- b Waters of the Northern District east of the longitude of Payday Point were open.
- <sup>c</sup> Waters of the Northern District east of the longitude of Point Pellew, excluding the CCH THA and SHA, were open.
- <sup>d</sup> Waters of the Perry Island Subdistrict within Hidden Bay, west of 148° 06.00 W. Longitude, were open.
- <sup>e</sup> Waters of the Northern District east of the longitude of Point Pellew were open.

#### **Coghill District**

- Waters of the Esther subdistrict, within one half mile of shore, excluding the WNH THA and SHA, and waters of the Granite Bay subdistrict, were open.
- <sup>b</sup> Waters of the Granite Bay Sub-district were open.
- Waters of the Coghill District within one nautical mile of the east side of Port Wells, including the Granite Bay subdistrict, were open.
- d Waters of the Coghill District within one nautical mile of the east side of Port Wells north of Esther Rock, including the Granite Bay subdistrict, were open.
- <sup>e</sup> Waters of the Coghill District within one nautical mile of the east side of Port Wells, excluding the Granite Bay subdistrict, were open.
- f Waters of the Esther Subdistrict within one half nautical mile of Esther Island, excluding the THA and SHA, were open.
- g Waters of the Esther Subdistrict within one half nautical mile of Esther Island, excluding the SHA, were open.
- h Waters of the Esther Subdistrict within one half nautical mile of Esther Island, including the THA and SHA to a line of buoys in front of the barrier seine, were open.

#### **Southwestern District**

- <sup>a</sup> Waters of the AFK Hatchery SHA were open. Anadromous stream closures and regulatory closed waters in the AFK Hatchery SHA were not in effect.
- <sup>b</sup> Waters of the Port San Juan Subdistrict, including the AFK Hatchery THA, were open.
- <sup>c</sup> Waters within Prince of Whales Passage south of a line from 60° 11.295'N Lat., 148° 02.403'W Long., to 60° 09.560'N Lat., 147° 58.619'W Long. and north of 60° 02.76 N. Lat., were open.
- d Waters of the AFK Hatchery SHA east of a line from 60° 03.244'N Lat., 148° 03.580'W Long. to 60° 02.754'N Lat., 148° 03.335'W Long., were open.

#### **Montague District**

Waters of the Port Chalmers Subdistrict were open. Anadromous stream closures and regulatory closed waters in the Port Chalmers Subdistrict were not in effect.

#### **Southeastern District**

- <sup>a</sup> Waters of the Southeastern District were open.
- b Waters in the Southeastern District, west of the longitude of Makarka Point (146° 17.32 west), were open.

#### **Unakwik District**

<sup>a</sup> Waters of the Unakwik District were open.

# **APPENDIX E**

Appendix E1.-Summary of salmon runs to Prince William Sound and Copper River hatcheries, 2006.

Sockeye salmon runs to Pr	rince William S	Sound hatcheries.	a						
	BY 2001	BY 2002	2006	Estim	ated	Estimated	Estimated		
	Release	Release	Forecast	Total	Run	CPF	Sales Harvest	Broodstock	Eggs
Hatchery			Run b	BY 2001 <sup>c</sup>	BY 2002 <sup>c</sup>	Contribution	Contribution d	Escapement e	Collected
Gulkana hatchery I	24,497,821	24,969,782	239,000	218,317	44,576	163,691	0	95,927	34,752,993
Gulkana hatchery II	1,404,849	1,275,033	21,000	8,612	1,435	103,071	0	1,265	1,453,097
Main Bay	6,320,515	7,863,403	514,000		1,035,876	669,280	350,742	15,854	11,534,979
Total Sockeye Salmon	32,223,185	34,108,218	774,000		1,308,816	832,971	350,742	113,046	47,741,069
Coho salmon runs to Prin	ce William Sou	nd hatcheries. <sup>a,f</sup>							
		2003 Fry	2006		Estimated	Estimated	Estimated		
		Release	Forecast		Total	CPF	Sales Harvest	Broodstock	Eggs
Hatchery or release site			Run b		Run	Contribution	Contribution d	Escapement e	Collected
Wally Noerenberg <sup>e</sup>		1,057,813	78,000		177,501	113,997	0	2,079	3,806,000
Solomon Gulch		1,969,386	196,837		294,009	275,382	0	18,627	2,293,658
<b>Total Coho Salmon</b>		3,027,199	274,837		471,510	389,379	0	20,706	6,099,658
Pink salmon runs to Princ	ce William Sour	nd hatcheries. <sup>a</sup>							
		2005 Fry	2006		Estimated	Estimated	Estimated		Eggs
		Release	Forecast		Total	CPF	Sales Harvest	Broodstock	Collected
Hatchery			Run b		Run	Contribution	Contribution d	Escapement e	(millions)
Solomon Gulch		222,218,569	11,577,587		9,176,489	4,840,097	3,855,271	481,121	230,220,481
Armin F. Koernig		131,197,783	5,889,000		5,230,563	2,391,723	2,379,170	459,670	195,049,572
Wally Noerenberg		84,060,920	4,457,000		3,763,621	1,459,484	2,304,137	321,679 <sup>g</sup>	91,771,186
Cannery Creek		126,575,805	5,230,000		2,915,519	1,319,036	1,164,563	431,920	151,880,566
Total Pink Salmon		564,053,077	27,153,587		21,086,192	10,010,340	9,703,141	1,372,711	668,921,805
Chum salmon runs to Prin	nce William So	und hatcheries. <sup>a</sup>							
		2005 Fry	2006		Estimated	Estimated	Estimated		Eggs
		Release	Forecast		Total	CPF	Sales Harvest	Broodstock	Collected
Hatchery or release site			Run b		Run	Contribution	Contribution d	Escapement e	(millions)
Armin F. Koernig		15,163,742	379,000		9,163	0	9,163	0	0
Wally Noerenberg		71,343,434	1,969,000		1,788,714	766,579	804,989	217,146	169,740,042
Port Chalmers		40,478,815	478,000		435,758	432,684	3,074		
Total Chum Salmon		126,985,991	2,826,000		2,233,635	1,199,263	817,226	217,146	169,740,042

<sup>&</sup>lt;sup>a</sup> Contribution estimates from PWSAC and VFDA hatcheries are based on analysis of otolith recoveries, historical data, and location of harvest as reported on fish tickets.

b The 2006 forecasts of hatchery runs were completed by Prince William Sound Aquaculture and Valdez Development Association, except the Gulkana Hatchery forecast (ADF&G).

<sup>&</sup>lt;sup>c</sup> Gulkana Hatchery I and II total run and marine survival estimates were completed by Prince William Sound Aquaculture Association.

d Does not include carcass sales because they are part of the broodstock.

<sup>&</sup>lt;sup>e</sup> Includes broodstock, overmature/green fish, holding mortalities, excess fish and fish processed for roe extraction. Also includes watershed spawners, and fish remaining in the bays after all other harvests were complete.

f Includes remote releases at Chenega, Cordova and Whittier.

Includes an estimated 65,000 pink salmon from an aerial survey estimate of pink salmon present in hatchery THA on September 7, 2006 when broodstock and roe harvest was completed.

Appendix E2.—Sales harvests of salmon by species from private nonprofit hatcheries as reported on fish tickets, 1977–2006.

		•	Harvest by Species <sup>a</sup>			
Year	Hatchery <sup>b</sup>	Sockeye	Coho	Pink	Chum	Total
1977	AFK	-		15545		15545
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 <sup>c</sup>	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 <sup>d</sup>	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 <sup>e</sup>	AFK, SG, WNH, CC, MB	86,911	38,945	8,291,205	1,066,683	9,483,744
1997	AFK, SG, WNH, CC, MB,GH	266,335	2,933	9,854,675	811,179	10,935,122
1998	AFK, SG, WNH, CC, MB,GH	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
2002	AFK, SG, WNH, CC, MB	93,722	1	10,787,752	2,580,926	13,462,402
2003 <sup>f</sup>	AFK, SG, WNH, CC, MB	366,770	0	12,426,375	1,540,227	14,333,372
2004	AFK, SG, WNH, CC, MB	279,902	0	11,825,224	528,676	12,633,802
_2005 <sup>g</sup>	AFK, SG, WNH, CC, MB	207,605	27,417	12,529,283	535,783	13,300,088
10-Year Average		144,084	11,320	10,619,173	1,023,392	11,797,970
2006 h, i	AFK, SG, WNH, CC, MB	348,276	17,198	9,727,499	824,558	10,917,531

<sup>2006</sup> h, i AFK, SG, WNH, CC, MB 348,276 17,198 9,727,499 824,558 10,917,531

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); WNH = 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)

<sup>&</sup>lt;sup>c</sup> 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.

<sup>&</sup>lt;sup>e</sup> Includes 269,848 pink salmon Peter Pan Seafoods bought from VFDA and then discarded after roe extraction. Also includes approximately 250,000 chum processed by PWSAC for meal production and roe extraction.

f Does not include 730,599 pink, 22,792 chum, and 19,782 coho salmon processed for roe extraction.

Does not include 1,246,992 pink, 98,695 chum, and 30,676 coho salmon processed for roe extraction.

Does not include 239,905 pink, 22,105 chum, and 5,090 coho salmon processed for roe extraction.

<sup>&</sup>lt;sup>1</sup> Includes 1.227 pink salmon incidentally harvested in the MBH cost recovery fishery.

**Appendix E3.**—Historical harvest contributions, thermally marked otolith releases, and total returns of pink salmon to Prince William Sound hatcheries, return years 1995–2006.

Solomo	n Gulch Hato	chery						
			Hatchery	Total	Hatchery	Hatchery	Total	Estimated
Brood	Return	Fry	Contribution to	Cost Recovery	Contribution	Contribution	Hatchery	Marine
Year	Year	Release	Broodstock Esc. a	Harvest	to CR Harvest	to the CCPF	Return	Survival
1995	1997	233,088,327	728,923	2,431,007	2,428,010	4,005,264	7,162,197	3.07%
1996	1998	188,862,094	295,438	3,428,348	3,076,945	1,226,679	4,599,062	2.44%
1997	1999	195,162,163	954,305	4,379,659	4,354,601	9,465,378	14,774,284	7.57%
1998	2000	213,906,642	520,934	4,033,635	3,983,473	7,635,581	12,139,988	5.68%
1999	2001	195,763,690	524,857	3,970,310	3,932,080	11,458,958	15,915,895	8.13%
2000	2002	203,897,201	420,062	4,430,173	4,368,519	360,850	5,149,431	2.53%
2001	2003	202,573,328	1,636,618	4,188,294	4,184,463	11,871,024	17,692,105	8.73%
2002	2004	206,397,607	300,362	3,782,011	3,597,708	7,262,379	11,160,448	5.41%
2003	2005	215,000,000	585,196	3,534,939	3,534,939	13,713,349	17,833,484	8.29%
2004	2006	222,218,569	481,121	3,855,271	3,762,010	4,840,097	9,083,228	4.09%
Armin 1	F. Koernig H	atchery						
1995	1997	108,636,976	0	3,206,683	3,139,053	3,815,265	6,954,318	6.40%
1996	1998	52,384,532	643,153	1,634,956	1,582,038	5,037,454	7,262,645	13.86%
1997	1999	105,974,235	1,352,746	2,814,760	2,994,037	5,108,346	9,455,129	8.92%
1998	2000	133,156,995	235,813	2,017,913	1,998,334	4,646,469	6,880,616	5.17%
1999	2001	142,537,692	368,706	2,929,441	2,803,175	1,668,025	4,839,906	3.40%
2000	2002	150,287,930	368,694	2,285,050	2,291,770	5,098,103	7,758,567	5.16%
2001	2003	155,982,828	1,135,571	1,436,990	1,436,990	4,494,486	7,067,047	4.53%
2002	2004	146,407,222	750,252	3,485,375	2,816,777	1,293,453	4,860,481	3.32%
2003	2005	174,200,000	793,048	2,898,305	2,898,305	6,429,875	10,121,228	5.81%
2004	2006	131,197,783	459,670	2,379,170	2,364,838	2,391,723	5,216,231	3.98%

# **Appendix E3.**–Page 2 of 2.

### Wally Noerenberg Hatchery

			Hatchery	Total	Hatchery	Hatchery	Total	Estimated
Brood	Return	Fry	Contribution to	Cost Recovery	Contribution	Contribution	Hatchery	Marine
Year	Year	Release	Broodstock Esc. <sup>a</sup>	Harvest	to CR Harvest	to the CCPF b	Return	Survival
1995	1997	176,431,919	409,455	2,280,868	2,321,255	3,464,254	6,194,964	3.51%
1996	1998	106,440,456	1,163,890	2,437,615	2,427,120	4,817,354	8,408,364	7.90%
1997	1999	103,675,208	886,277	3,860,431	3,861,891	4,828,682	9,576,850	9.24%
1998	2000	123,869,678	255,851	3,536,232	3,520,212	4,980,503	8,756,566	7.07%
1999	2001	116,069,339	325,003	4,937,169	4,949,180	1,906,503	7,180,686	6.19%
2000	2002	127,651,881	350,000	3,471,338	3,426,483	1,840,319	5,616,802	4.40%
2001	2003	106,229,524	982,982	4,400,958	4,400,958	12,422,082	17,806,022	16.76%
2002	2004	119,553,743	360,928	2,292,300	2,292,300	144,533	2,797,761	2.34%
2003	2005	110,000,000	1,043,736	3,619,170	3,619,170	4,515,479	9,178,385	8.34%
2004	2006	84,060,920	321,679	2,327,268	2,327,268	1,459,313	4,108,260	4.89%
Canner	y Creek Ha	tchery						
1995	1997	140,441,131	577,736	1,897,259	1,852,317	3,608,272	6,038,325	4.30%
1996	1998	136,838,852	904,945	1,324,307	1,305,144	4,869,014	7,079,103	5.17%
1997	1999	137,571,564	1,293,460	2,076,361	2,014,448	5,414,942	8,722,850	6.34%
1998	2000	131,195,588	280,811	1,538,039	1,575,341	4,688,206	6,544,358	4.99%
1999	2001	132,236,317	428,859	1,089,998	1,103,072	589,171	2,121,102	1.60%
2000	2002	139,226,716	345,082	601,191	616,354	627,065	1,588,501	1.14%
2001	2003	138,626,713	551,247	2,400,133	2,400,133	5,390,008	8,341,388	6.02%
2002	2004	135,584,680	540,129	2,265,538	2,265,538	135,021	2,940,688	2.17%
2003	2005	139,400,000	590,559	2,436,874	2,436,874	10,452,306	13,479,739	9.67%
2004	2006	126,575,805	431,920	1,164,563	1,155,733	1,319,036	2,906,689	2.30%

<sup>&</sup>lt;sup>a</sup> Broodstock escapements include all fish remaining after commercial harvests, i.e., fish used for brood, watershed spawners, and fish remaining in front of the hatchery.

<sup>&</sup>lt;sup>b</sup> Commercial common property fisheries(CCPF).

**Appendix E4.**—Historical harvest contributions, coded wire tag (CWT) and thermally marked otolith releases, and total returns of pink salmon to all hatcheries combined, 1977–2006.

			CWT/Otolith	Total	Hatchery Contributions <sup>a</sup>				Estimated	
Brood	Return	Fry	Applied to	<b>Cost Recovery</b>	Hatchery cost	Commercial Common	Other	Broodstock	Total	Marine
Year (BY)	Year	Release b	Fry Release c	Harvest	d Recovery Harvests	c Property Harvests <sup>1</sup>	<b>Harvests</b>	e Escapements a,	f Return	Survival
1975	1977	1,000,000	0	15,545	7,745	4,000	0	16,112	27,857	2.79%
1976	1978	11,010,577	0	114,188	114,188	0	0	40,432	154,620	1.40%
1977	1979	16,950,784	0	223,748	223,748	275,000	0	54,207	552,955	3.26%
1978	1980	25,600,739	0	346,728	346,728	1,092,048	0	145,061	1,583,837	6.19%
1979	1981	24,194,000	0	707,037	707,037	1,430,747	0	268,501	2,406,285	9.95%
1980	1982	91,076,000	0	1,354,732	1,354,732	4,303,900	0	239,945	5,898,577	6.48%
1981	1983	91,951,000	0	686,963	686,963	3,338,366	0	258,062	4,283,391	4.66%
1982	1984	115,107,533	0	415,393	415,393	3,313,423	0	341,259	4,070,075	3.54%
1983	1985	116,336,000	0	1,209,960	1,209,960	6,259,923	0	640,340	8,110,223	6.97%
1984	1986	191,306,265	0	905,464	905,464	5,662,315	0	466,471	7,034,250	3.68%
1985	1987	231,538,713	646,561	2,691,190	2,691,190	14,197,065	0	1,158,908	18,047,163	7.79%
1986	1988	218,830,647	568,688	1,632,701	1,632,701	8,748,000	0	824,302	11,205,003	5.12%
1987	1989	532,045,966	939,498	7,853,419	5,767,911	10,561,099	0	856,927	19,052,529 <sup>g</sup>	3.58%
1988	1990	507,688,297	1,074,099	8,732,658	6,691,160	24,379,475	0	749,910	33,315,579 <sup>g</sup>	6.56%
1989	1991	615,139,948	1,128,899	6,119,141	5,201,860	20,900,355	3,573,805	1,324,255	32,750,955 <sup>g</sup>	5.32%
1990	1992	603,519,636	1,091,403	3,049,394	2,626,248	4,345,805	30,290	789,880	8,579,332 <sup>g</sup>	1.42%
1991	1993	495,700,200	823,128	2,639,982	1,544,727	2,392,162	14,648	921,073	6,177,575 <sup>g</sup>	1.25%
1992	1994	567,320,470	950,976	10,308,169	7,613,582	21,173,273	56,396	1,422,306	35,100,601 <sup>g</sup>	6.19%
1993	1995	488,575,978	941,811	5,057,418	4,703,457	9,072,469	78,020	1,154,635	14,475,842 <sup>g</sup>	2.96%
1994		613,158,229	1,017,782	8,285,166	5,363,551	14,502,198	0	544,531	24,284,522 <sup>g</sup>	3.96%
1995	1997	651,675,427 <sup>h</sup>	1,079,354	9,854,675	9,780,451	14,893,055	226	1,974,521	26,648,253	4.09%
1996	1998	484,525,934 <sup>n</sup>	484,525,934	8,825,226	8,666,960	16,145,999	6,931	3,008,251	27,828,141	5.74%
1997	1999	542,356,070 <sup>h</sup>	542,356,934	13,130,211	12,988,616	24,838,848	237,318	4,529,055	42,593,837	7.85%
1998	2000	602,128,903 <sup>h</sup>	602,128,903	11,125,819	11,055,419	22,099,196	728	1,293,409	34,448,752	5.72%
1999	2001	586,607,038 <sup>h</sup>	586,607,038	12,914,314	12,765,960	15,625,341	1,204	1,647,425	30,039,930	5.12%
2000	2002	621,063,728 <sup>h</sup>	621,063,728	10,787,752	10,703,126	7,926,335	992	1,497,115	20,127,568	3.24%
2001	2003	603,412,393 <sup>h</sup>	603,412,393	12,426,990	12,422,544	34,177,600	606	4,306,418	50,907,168	8.44%
2002	2004	607,943,252 <sup>h</sup>	607,943,252	11,825,224	11,825,224	8,835,385	652	1,951,671	22,612,932	3.72%
2003	2005	638,600,000 <sup>h</sup>	638,600,000	12,529,283	12,529,283	35,111,009	272	5,013,716	52,654,280	8.25%
2004	2006	564,053,077 h	638,600,000	9,726,272	9,726,272	10,010,169	384	1.694.390	21,431,215	3.80%

Data from ADF&G contribution estimates. No otolith collections were made from broodstock escapements after 1999 because the 1997–1999 data indicated broodstock escapements were < 0.05 % wild stock fish. Otolith sampling has been a low priority in the hatchery cost recovery (CR) harvests since 1999 because sampling in the 1997–1999 CR harvests indicated few wild fish (< 2%). Contributions don't include harvest from the Bering and Copper River Districts.

b Data for BY 1985 and 1987–1995 provided by the ADF&G CWT project. Prince William Sound Aquaculture (PWSAC) provided data for all other years. Beginning in 1994, broodstock numbers include fish processed for roe and reported by PWSAC. The hatchery contribution to broodstock escapements includes all fish not harvested in CPF or sales harvests.

<sup>&</sup>lt;sup>c</sup> Data for brood years 1985–1995 provided by the ADF&G CWT project; succeeding years data from thermally marked otoliths. Sales numbers include inter-hatchery contributions.

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

Includes donated, discarded, and confiscated fish in addition to all fish harvested in the Southwestern District otolith test fishery.

f Broodstock escapements prior to 1997 may not include fish remaining in the bay and watershed spawners and therefore may underestimate the broodstock escapements.

Revised contribution based on individual hatchery CWT adjustment factors. The individual categories were not adjusted; only the total return and estimated marine survival.

<sup>&</sup>lt;sup>h</sup> All hatchery pink salmon fry released after brood year 1995 had thermal otolith marks.

Appendix E5.-Historical harvest contributions, thermally marked otolith releases, and total returns of coho salmon to Prince William Sound hatcheries, brood years 1988–2004.

Solomo	on Gulch Hatchery								
			Hatchery	Hatchery	Hatchery	Hatchery	Hatchery	Total	Estimated
Brood	Retu	rn Fry	Contribution	Contribution	Contribution	<b>Contribution to</b>	<b>Contribution to</b>	Hatchery	Marine
Year	Year	r Release	to the CCPF	to Subs/PU Harvest	to Sport Harvest	Broodstock Esc.	Cost Recovery.	b Return	Survival
1988	1991			0	10,000	1,461		54,794	6.79%
1989	1992	993,633	5,000	0	11,010	2,651	26,776	45,437	4.57%
1990	1993	1,226,044	102	0	500	1,658		4,603	0.38%
1991	1994			1,000	10,000			44,467	9.64%
1992	1995		78,006	1,000	25,000			141,643	15.48%
1993	1996		87,360	0	25,000	21,772		147,845	11.16%
1994	1997		47,500	0	25,000	13,605	9,818	95,923	5.11%
1995	1998		23,717	1,627	50,000	3,880	19,068	98,292	7.47%
1996	1999			0	50,000		12,679	132,452	7.58%
1997	2000			3,800	100,000			472,802	25.37%
1998	2001		147,000	3,854	135,000			313,227	19.27%
1999	2002		25,017	0	44,160		8,000	98,500	6.48%
2000	2003		63,132	0	118,800	17,379	4,087	203,398	11.16%
2001	2004		26,711	0	105,000	2,585	9,897	144,193	11.31%
2002	2005	1,442,274	129,966	0	66,000	2,102	30,686	228,754	15.86%
2003	2006		210,382	0	66,000	2,455	16,172	295,009	14.99%
2004	2007	1,511,592						0	0.00%
Wally	Noerenburg Hatchery								
1988	1991	2,397,419	71,947	0	3,610	6,469	13,990	96,016	4.00%
1989	1992		114,165	Ŏ	0			160,286	7.21%
1990	1993			0	100	4,857	1,532	46,147	2.52%
1991	1994		81,396	Ö	0			100,093	7.68%
Appen	dix E3. (page 2 of 2) 1995			0	0			44,796	3.02%
1993	1996	2,063,934	26,245	0	13,074	4,081	39,506	82,906	4.02%
1994	1997	275,406		0	8,315	5,674	0	19,615	7.12%
1995	1998		2,800	0	4,951	1,541	0	9,292	4.56%
1996	1999	407,715	338	0	4,100	2,533	0	6,971	1.71%
1997	2000	1,068,338		0	39,071	2,551	0	152,878	14.31%
1998	2001			0	6,800		0	12,565	3.34%
1999	2002		3,215	0	22,698		0	28,302	12.87%
2000	2003		9,624	Ö	13,067	1,314		24,005	4.94%
2001	2004			Ö	4,543	150		14,663	1.59%
2002	2005		53,257	Ö	22,673	11,450		87,399	8.83%
2003	2006		113,997	Ö	46,425	17,079		177,501	16.78%
2004	2007							0	0.00%

Broodstock escapements include all fish remaining after commercial harvests, i.e., fish used for brood, watershed spawners, predation behind the barrier seine, and fish remaining in front of the hatchery.

b Commercial common property fisheries(CCPF).

**Appendix E6.**—Sockeye salmon hatchery and wild stock contributions to the Copper River drift gillnet commercial common property fishery by period, 2006.

			Origin <sup>a</sup>					
		_	Gulkana	Main Bay	Hatchery	Wild		
Dates	Period	Hours	Nr. Percent	Nr. Percent	Total	Nr. Percent	Total	
05/16 - 05/16	1 b,c	12	907 3.4%	277 1.0%	1,184	25,426 95.5%	26,610	
05/19 - 05/19	2 b,c	12	2,748 3.4%	840 1.0%	3,587	77,009 95.5%	80,596	
05/22 - 05/22		12	3,644 3.4%	1,114 1.0%	4,758	102,139 95.5%	106,897	
06/01 - 06/01		12	6,791 3.4%	2,075 1.0%	8,866	190,327 95.5%	199,193	
06/03 - 06/03		12	1,870 3.4%	0 0.0%	1,870	52,975 96.6%	54,845	
06/05 - 06/06		24	1,961 3.4%	0 0.0%	1,961	55,573 96.6%	57,534	
06/08 - 06/09		36	2,129 3.4%	0 0.0%	2,129	60,336 96.6%	62,465	
06/12 - 06/13	8 <sup>b</sup>	36	2,380 3.4%	0 0.0%	2,380	67,427 96.6%	69,807	
06/15 - 06/17	9	36	2,277 3.4%	696 1.0%	2,973	63,829 95.5%	66,802	
06/19 - 06/20	10	36	4,638 6.7%	11,835 17.2%	16,473	52,318 76.1%	68,791	
06/22 - 06/24	. 11	48	13,364 10.3%	20,321 15.7%	33,685	95,498 73.9%	129,183	
06/26 - 06/27	12	36	8,391 10.0%	15,898 18.9%	24,289	59,617 71.1%	83,906	
06/29 - 07/01	13	48	15,097 23.2%	1,372 2.1%	16,470	48,723 74.7%	65,193	
07/03 - 07/05	14	48	11,707 21.7%	2,244 4.2%	13,951	39,902 74.1%	53,853	
07/06 - 07/08	15	48	11,574 18.5%	1,305 2.1%	12,879	49,756 79.4%	62,635	
07/10 - 07/12	16	48	17,111 26.9%	1,989 3.1%	19,100	44,552 70.0%	63,652	
07/13 - 07/15	17	48	9,566 21.9%	1,474 3.4%	11,040	32,691 74.8%	43,731	
07/17 - 07/19	18	48	7,577 19.4%	0 0.0%	7,577	31,573 80.6%	39,150	
07/20 - 07/22	19	48	4,349 16.8%	269 1.0%	4,618	21,205 82.1%	25,823	
07/24 - 07/26	20	48	1,804 17.6%	0 0.0%	1,804	8,456 82.4%	10,260	
07/27 - 07/29	21	48	6,781 26.0%	303 1.2%	7,084	18,956 72.8%	26,040	
07/31 - 08/02	22	48	7,818 27.1%	601 2.1%	8,420	20,448 70.8%	28,868	
08/03 - 08/05	23 <sup>d,e</sup>	48	1,729 27.1%	133 2.1%	1,862	4,523 70.8%	6,385	
08/07 - 08/09	24 <sup>d,e</sup>	48	7,452 27.1%	573 2.1%	8,026	19,491 70.8%	27,516	
08/10 - 08/12	25 <sup>d,e</sup>	48	4,858 27.1%	374 2.1%	5,232	12,707 70.8%	17,939	
08/14 - 08/15	26 d,e	24	3,209 27.1%	247 2.1%	3,456	8,393 70.8%	11,849	
08/21 - 08/22	27 d,e	36	1,317 27.1%	101 2.1%	1,419	3,445 70.8%	4,864	
08/28 - 08/29	28 <sup>d,e</sup>	24	332 27.1%	26 2.1%	358	868 70.8%	1,226	
08/31 - 09/01	29 d,e	24	179 27.1%	14 2.1%	193	469 70.8%	662	
09/04 - 09/05	30 <sup>d,e</sup>	24	101 27.1%	8 2.1%	109	264 70.8%	373	
09/07 - 09/08	31 <sup>d,e</sup>	24	18 27.1%	1 2.1%	20	48 70.8%	68	
09/11 - 09/12	$32^{d,e}$	36	3 27.1%	0 2.1%	3	8 70.8%	11	
09/14 - 09/16	33 <sup>d,e</sup>	48	4 27.1%	0 2.1%	4	9 70.8%	13	
09/18 - 09/20	34 <sup>d,e</sup>	48	3 27.1%	0 2.1%	3	7 70.8%	10	
09/21 - 09/23		60	0 0.0%	0 2.1%	0	4 97.9%	4	
09/25 - 10/01		156			0	0	0	
10/02 - 10/08		156			0	0	0	
10/09 - 10/15	38 <sup>f</sup>	156			0	0	0	
Total		_	163,691 10.9%	64,090 4.3%	227,781	1,268,973 84.8%	1,496,754	

<sup>&</sup>lt;sup>a</sup> Gulkana Hatchery contributions were based on recoveries of strontium chloride marked otoliths and Main Bay Hatchery contributions were based on recoveries of thermal marked otoliths.

b Proportions from period 9 were used to allocate Gulkana Hatchery contribution.

<sup>&</sup>lt;sup>c</sup> Proportions from period 4 were used to allocate Main Bay Hatchery contribution.

Proportions from period 22 were used to allocate Gulkana Hatchery contribution.

Proportions from period 22 were used to allocate Main Bay Hatchery contribution.

No sockeye salmon were harvested.

Appendix E7.—Gulkana sockeye salmon harvests and total contribution, 1977–2006.

	Hatcher	ry Contribution		Total		
		Subsistence/		BroodStock/	Hatchery	
Year	Commercial	Personal Use	Sport	Escapement	Run	
1977	183	12	1	122	318	
1978	720	74	5	1,300	2,099	
1979	900	393	19	3,425	4,737	
1980	350	589	40	4,250	5,229	
1981	3,600	478	40	4,650	8,768	
1982	3,600	322	10	5,740	9,673	
1983	6,600	1,167	28	6,502	14,296	
1984	5,318	450	19	14,650	20,437	
1985	31,955	2,121	164	20,680	54,920	
1986	30,404	2,667	161	20,975	54,208	
1987	47,347	3,071	196	28,200	78,814	
1988	92,552	9,351	487	30,125	132,516	
1989	175,643	13,734	772	47,075	237,224	
1990	64,917	7,203	274	19,100	91,494	
1991	102,009	9,449	466	40,659	152,583	
1992	87,120	11,455	405	32,396	131,376	
1993	149,844	14,812	547	97,249	262,452	
1994	94,656	9,157	359	69,750	173,923	
1995	147,844	15,289	705	65,640	229,478	
1996	314,916	16,144	1,045	145,903	478,008	
1997	266,724	8,857	1,084	129,017	405,682	
1998	524,985	31,824	986	119,130	676,925	
1999	945,287	42,281	979	130,735	1,119,282	
2000	366,372	34,113	1,090	73,115	474,690	
2001	196,326	35,699	720	80,485	313,230	
2002	335,451	28,305	684	60,254	424,694	
2003	138,056	19,513	627	44,961	203,156	
2004	59,540	27,117	570	6,695	93,922	
2005	95,897	28,031	738	91,058	215,724	
10-Year	224.255	<b>AF</b> 100	9.53	00 125	440.534	
Average 2006	<b>324,355</b> 163,691	<b>27,188</b> 26,905	<b>852</b> 645	<b>88,135</b> 96,552	<b>440,531</b> 287,793	

<sup>&</sup>lt;sup>a</sup> Commercial, subsistence, and personal use fishery contributions from coded wire tag (CWT) estimates.

b Commercial from Sr marks, Sub/Pu from historical CWT average, Sport from average proportion of previous estimates, broodstock from Gulkana Hatchery surveys.

<sup>&</sup>lt;sup>c</sup> Commercial and Sub/Pu from Sr marks, Sport from average proportion of previous estimates, broodstock from Gulkana Hatchery surveys.

**Appendix E8.**—Gulkana sockeye salmon fry releases, 1974–2006.

Year         Major Return Years         (Paxson Lake)         Lake         Lake         Total           1974         1978         1979         79,691         79,611         79,51,101         79,71         1981         1982         1982         1983         477,219         477,219         477,219         477,219         477,219         79,097         190,097         490,974         490,974         490,974         190,097         190,097         190,097         190,097         190,097         190,097         190,009         190,009         190,009         190,009         190,009         190,009         190,009         4,71,759         190,009         190,009         4,741,759         1,287,042         18,325,333         1987         1991         1992         9,905,907         14,	Release		Gulkana (I&II)	Summit	Crosswind							
1975	Year	Major Return Years	(Paxson Lake)	Lake	Lake	Total						
1976         1980         -         1981         627,080         627,080           1977         1981         -         1982         514,922         514,922           1978         1982         -         1983         477,219         477,219           1979         1983         -         1984         940,974         940,974         940,974           1980         1984         -         1985         1,105,397         1,105,397         1,105,397           1981         1985         -         1986         3,368,642         1,340,660         4,709,302           1982         1986         -         1987         5,985,270         1,860,491         7,845,761           1983         1987         -         1988         5,470,056         2,047,947         7,518,003           1984         1988         -         1989         6,162,450         4,312,628         10,475,078           1985         1990         -         2,261,785         4,741,759         1,400,35,44           1986         1990         -         1991         8,586,509         8,451,782         1,287,042         18,325,333           1987         1991         8,586,509         8,451,7	1974	1978 - 1979	79,691			79,691						
1977         1981         -         1982         514,922         514,922         514,922         514,922           1978         1983         -         1983         477,219         477,219         477,219           1979         1983         -         1984         940,974         940,974         940,974           1980         1984         -         1985         1,105,397         1,105,397         1,105,397           1981         1985         -         1986         3,368,642         1,340,660         4,709,302           1982         1986         -         1988         5,470,056         2,047,947         7,518,003           1984         1988         -         1989         6,162,450         4,312,628         10,475,078           1985         1989         -         1990         9,261,785         4,741,759         14,003,544           1986         1990         -         1991         8,586,509         8,451,782         1,287,042         18,325,333           1987         1991         8,586,509         8,451,782         1,287,042         18,325,333           1987         1991         1992         9,905,907         14,999,085         2,487,396         2	1975	1979 - 1980	785,110			785,110						
1978         1982         -         1983         477,219         477,219           1979         1983         -         1984         940,974         940,974           1980         1984         -         1985         1,105,397         1,105,397           1981         1985         -         1986         3,368,642         1,340,660         4,709,302           1982         1986         -         1987         5,985,270         1,860,491         7,845,761           1983         1987         -         1988         5,470,056         2,047,947         7,518,003           1984         1988         -         1990         9,261,785         4,741,759         14,003,544           1986         1990         -         1991         8,586,509         8,451,782         1,287,042         18,325,333           1987         1991         -         1992         9,905,907         14,999,085         2,487,396         21,118,564           1988         1992         -         1993         6,204,332         12,491,926         2,487,396         21,183,624           1989         1993         -         1993         10,105,23,819         12,026,642         3,130,373         25,2	1976	1980 - 1981	627,080			627,080						
1979         1983         -         1984         940,974         940,974         940,974         940,974           1980         1984         -         1985         1,105,397         1,105,397         1,105,397           1981         1985         -         1986         3,368,642         1,340,660         4,709,302           1982         1986         -         1987         5,985,270         1,860,491         7,845,761           1983         1987         -         1988         5,470,056         2,047,947         7,518,003           1984         1988         -         1989         6,162,450         4,312,628         10,475,078           1985         1989         -         1990         9,261,785         4,741,759         14,003,544           1986         1990         -         1991         8,586,509         8,451,782         1,287,042         18,325,333           1987         1991         -         1992         9,905,907         14,999,085         24,904,992           1988         1992         -         1993         6,204,332         12,491,926         2,487,396         21,183,654           1989         1993         -         1995         13,288,6	1977	1981 - 1982	514,922			514,922						
1980         1984         -         1985         1,105,397         1,105,397           1981         1985         -         1986         3,368,642         1,340,660         4,709,302           1982         1986         -         1987         5,985,270         1,860,491         7,845,761           1983         1987         -         1988         5,470,056         2,047,947         7,518,003           1984         1988         -         1990         9,261,785         4,741,759         10,475,078           1986         1990         -         1991         8,586,509         8,451,782         1,287,042         18,325,333           1987         1991         -         1992         9,905,907         14,999,085         24,904,992           1988         1992         -         1993         6,204,332         12,491,926         2,487,396         21,183,654           1989         1993         -         1994         10,105,238         12,026,642         3,130,373         25,262,253           1990         1994         -         1995         13,288,695         12,004,491         4,906,005         30,199,191           1991         1995         -         1996	1978	1982 - 1983	477,219			477,219						
1981         1986         - 1987         5,985,270         1,860,491         7,845,761           1983         1987         - 1988         5,470,056         2,047,947         7,518,003           1984         1988         - 1989         6,162,450         4,312,628         10,475,078           1985         1989         - 1990         9,261,785         4,741,759         14,003,544           1986         1990         - 1991         8,586,509         8,451,782         1,287,042         18,325,333           1987         1991         - 1992         9,905,907         14,999,085         24,904,992           1988         1992         - 1993         6,204,332         12,2491,926         2,487,396         21,183,654           1989         1993         - 1994         10,105,238         12,026,642         3,130,373         25,262,253           1990         1994         - 1995         13,288,695         12,004,491         4,906,005         30,199,191           1991         1995         - 1996         10,522,819         6,455,011         5,469,759         22,447,589           1992         1996         - 1997         10,553,621         7,048,536         5,420,351         23,022,508	1979	1983 - 1984	940,974			940,974						
1982         1986         -         1987         5,985,270         1,860,491         7,845,761           1983         1987         -         1988         5,470,056         2,047,947         7,518,003           1984         1988         -         1989         6,162,450         4,312,628         10,475,078           1985         1989         -         1990         9,261,785         4,741,759         14,003,544           1986         1990         -         1991         8,586,509         8,451,782         1,287,042         18,325,333           1987         1991         -         1992         9,905,907         14,999,085         24,904,992           1988         1992         -         1993         6,204,332         12,491,926         2,487,396         21,183,654           1989         1993         -         1994         10,105,238         12,004,642         3,130,373         25,262,253           1990         1994         -         1995         13,288,695         12,004,491         4,906,005         30,199,191           1991         1995         -         1996         10,522,819         6,455,011         5,469,759         22,447,589           1992         1	1980	1984 - 1985	1,105,397			1,105,397						
1983         1987         -         1988         5,470,056         2,047,947         7,518,003           1984         1988         -         1989         6,162,450         4,312,628         10,475,078           1985         1989         -         1990         9,261,785         4,741,759         14,003,544           1986         1990         -         1991         8,586,509         8,451,782         1,287,042         18,325,333           1987         1991         -         1992         9,905,907         14,999,085         24,904,992           1988         1992         -         1993         6,204,332         12,491,926         2,487,396         21,183,654           1989         1993         -         1994         10,105,238         12,026,642         3,130,373         25,262,253           1990         1994         -         1995         13,288,695         12,004,491         4,906,005         30,199,191           1991         1995         -         1996         10,522,819         6,455,011         5,469,759         22,447,589           1992         1996         -         1997         10,553,621         7,048,536         5,420,351         23,022,508	1981	1985 - 1986	3,368,642	1,340,660		4,709,302						
1984         1988         -         1989         6,162,450         4,312,628         10,475,078           1985         1989         -         1990         9,261,785         4,741,759         14,003,544           1986         1990         -         1991         8,586,509         8,451,782         1,287,042         18,325,333           1987         1991         -         1992         9,905,907         14,999,085         24,904,992           1988         1992         -         1993         6,204,332         12,491,926         2,487,396         21,183,654           1989         1993         -         1994         10,105,238         12,026,642         3,130,373         25,262,253           1990         1994         -         1995         13,288,695         12,004,491         4,906,005         30,199,191           1991         1995         -         1996         10,522,819         6,455,011         5,469,759         22,447,589           1992         1996         -         1997         10,553,621         7,048,536         5,420,351         23,022,508           1993         1997         -         1998         5,295,017         2,651,542         4,495,966         12,442,525 <td>1982</td> <td>1986 - 1987</td> <td>5,985,270</td> <td>1,860,491</td> <td></td> <td>7,845,761</td>	1982	1986 - 1987	5,985,270	1,860,491		7,845,761						
1985       1989       -       1990       9,261,785       4,741,759       14,003,544         1986       1990       -       1991       8,586,509       8,451,782       1,287,042       18,325,333         1987       1991       -       1992       9,905,907       14,999,085       24,904,992         1988       1992       -       1993       6,204,332       12,491,926       2,487,396       21,183,654         1989       1993       -       1994       10,105,238       12,026,642       3,130,373       25,262,253         1990       1994       -       1995       13,288,695       12,004,491       4,906,005       30,199,191         1991       1995       -       1996       10,522,819       6,455,011       5,469,759       22,447,589         1992       1996       -       1997       10,553,621       7,048,536       5,420,351       23,022,508         1993       1997       -       1998       5,295,017       2,651,542       4,495,966       12,442,525         1994       1998       -       1999       9,405,449       7,637,009       9,144,382       26,186,840         1995       1999       -       2000       10,317,116	1983	1987 - 1988	5,470,056	2,047,947		7,518,003						
1986         1990         -         1991         8,586,509         8,451,782         1,287,042         18,325,333           1987         1991         -         1992         9,905,907         14,999,085         24,904,992           1988         1992         -         1993         6,204,332         12,491,926         2,487,396         21,183,654           1989         1993         -         1994         10,105,238         12,026,642         3,130,373         25,262,253           1990         1994         -         1995         13,288,695         12,004,491         4,906,005         30,199,191           1991         1995         -         1996         10,522,819         6,455,011         5,469,759         22,447,589           1992         1996         -         1997         10,553,621         7,048,536         5,420,351         23,022,508           1993         1997         -         1998         5,295,017         2,651,542         4,495,966         12,442,525           1994         1998         -         1999         9,405,449         7,637,009         9,144,382         26,186,840           1995         1999         -         2000         10,317,116         7,418,311 <td>1984</td> <td>1988 - 1989</td> <td>6,162,450</td> <td>4,312,628</td> <td></td> <td>10,475,078</td>	1984	1988 - 1989	6,162,450	4,312,628		10,475,078						
1987         1991         -         1992         9,905,907         14,999,085         24,904,992           1988         1992         -         1993         6,204,332         12,491,926         2,487,396         21,183,654           1989         1993         -         1994         10,105,238         12,026,642         3,130,373         25,262,253           1990         1994         -         1995         13,288,695         12,004,491         4,906,005         30,199,191           1991         1995         -         1996         10,522,819         6,455,011         5,469,759         22,447,589           1992         1996         -         1997         10,553,621         7,048,536         5,420,351         23,022,508           1993         1997         -         1998         5,295,017         2,651,542         4,495,966         12,442,525           1994         1998         -         1999         9,405,449         7,637,009         9,144,382         26,186,840           1995         1999         -         2000         10,317,116         7,418,311         9,973,600         27,709,027           1996         2000         -         2001         13,900,000         8,400,148 </td <td>1985</td> <td>1989 - 1990</td> <td>9,261,785</td> <td>4,741,759</td> <td></td> <td>14,003,544</td>	1985	1989 - 1990	9,261,785	4,741,759		14,003,544						
1988         1992         -         1993         6,204,332         12,491,926         2,487,396         21,183,654           1989         1993         -         1994         10,105,238         12,026,642         3,130,373         25,262,253           1990         1994         -         1995         13,288,695         12,004,491         4,906,005         30,199,191           1991         1995         -         1996         10,522,819         6,455,011         5,469,759         22,447,589           1992         1996         -         1997         10,553,621         7,048,536         5,420,351         23,022,508           1993         1997         -         1998         5,295,017         2,651,542         4,495,966         12,442,525           1994         1998         -         1999         9,405,449         7,637,009         9,144,382         26,186,840           1995         1999         -         2000         10,317,116         7,418,311         9,973,600         27,709,027           1996         2000         -         2001         13,900,000         8,400,148         9,732,911         28,850,917           1997         2001         -         2002         11,589,845 </td <td>1986</td> <td>1990 - 1991</td> <td>8,586,509</td> <td>8,451,782</td> <td>1,287,042</td> <td>18,325,333</td>	1986	1990 - 1991	8,586,509	8,451,782	1,287,042	18,325,333						
1989       1993       -       1994       10,105,238       12,026,642       3,130,373       25,262,253         1990       1994       -       1995       13,288,695       12,004,491       4,906,005       30,199,191         1991       1995       -       1996       10,522,819       6,455,011       5,469,759       22,447,589         1992       1996       -       1997       10,553,621       7,048,536       5,420,351       23,022,508         1993       1997       -       1998       5,295,017       2,651,542       4,495,966       12,442,525         1994       1998       -       1999       9,405,449       7,637,009       9,144,382       26,186,840         1995       1999       -       2000       10,317,116       7,418,311       9,973,600       27,709,027         1996       2000       -       2001       13,900,000       8,400,148       9,732,911       28,850,917         1997       2001       -       2002       11,589,845       10,162,655       10,512,299       32,264,799         1998       2002       -       2003       12,286,366       8,987,213       10,516,107       31,789,686         1999       2003	1987	1991 - 1992	9,905,907	14,999,085		24,904,992						
1990       1994       -       1995       13,288,695       12,004,491       4,906,005       30,199,191         1991       1995       -       1996       10,522,819       6,455,011       5,469,759       22,447,589         1992       1996       -       1997       10,553,621       7,048,536       5,420,351       23,022,508         1993       1997       -       1998       5,295,017       2,651,542       4,495,966       12,442,525         1994       1998       -       1999       9,405,449       7,637,009       9,144,382       26,186,840         1995       1999       -       2000       10,317,116       7,418,311       9,973,600       27,709,027         1996       2000       -       2001       13,900,000       8,400,148       9,732,911       28,850,917         1997       2001       -       2002       11,589,845       10,162,655       10,512,299       32,264,799         1998       2002       -       2003       12,286,366       8,987,213       10,516,107       31,789,686         1999       2003       -       2004       10,198,541       9,191,217       9,984,392       29,374,150         2001       2005	1988	1992 - 1993	6,204,332	12,491,926	2,487,396	21,183,654						
1991       1995 - 1996       10,522,819       6,455,011       5,469,759       22,447,589         1992       1996 - 1997       10,553,621       7,048,536       5,420,351       23,022,508         1993       1997 - 1998       5,295,017       2,651,542       4,495,966       12,442,525         1994       1998 - 1999       9,405,449       7,637,009       9,144,382       26,186,840         1995       1999 - 2000       10,317,116       7,418,311       9,973,600       27,709,027         1996       2000 - 2001       13,900,000       8,400,148       9,732,911       28,850,917         1997       2001 - 2002       11,589,845       10,162,655       10,512,299       32,264,799         1998       2002 - 2003       12,286,366       8,987,213       10,516,107       31,789,686         1999       2003 - 2004       10,198,541       9,191,217       9,984,392       29,374,150         2000       2004 - 2005       10,705,795       3,300,504       8,331,080       22,337,379         2001       2005 - 2006       7,870,334       493,516       5,585,665       13,949,515         2002       2006 - 2007       11,922,685       5,805,231       8,174,754       25,902,670         2	1989	1993 - 1994	10,105,238	12,026,642	3,130,373	25,262,253						
1992       1996       - 1997       10,553,621       7,048,536       5,420,351       23,022,508         1993       1997       - 1998       5,295,017       2,651,542       4,495,966       12,442,525         1994       1998       - 1999       9,405,449       7,637,009       9,144,382       26,186,840         1995       1999       - 2000       10,317,116       7,418,311       9,973,600       27,709,027         1996       2000       - 2001       13,900,000       8,400,148       9,732,911       28,850,917         1997       2001       - 2002       11,589,845       10,162,655       10,512,299       32,264,799         1998       2002       - 2003       12,286,366       8,987,213       10,516,107       31,789,686         1999       2003       - 2004       10,198,541       9,191,217       9,984,392       29,374,150         2000       2004       - 2005       10,705,795       3,300,504       8,331,080       22,337,379         2001       2005       - 2006       7,870,334       493,516       5,585,665       13,949,515         2002       2006       - 2007       11,922,685       5,805,231       8,174,754       25,902,670         2004	1990	1994 - 1995	13,288,695	12,004,491	4,906,005	30,199,191						
1993       1997 - 1998       5,295,017       2,651,542       4,495,966       12,442,525         1994       1998 - 1999       9,405,449       7,637,009       9,144,382       26,186,840         1995       1999 - 2000       10,317,116       7,418,311       9,973,600       27,709,027         1996       2000 - 2001       13,900,000       8,400,148       9,732,911       28,850,917         1997       2001 - 2002       11,589,845       10,162,655       10,512,299       32,264,799         1998       2002 - 2003       12,286,366       8,987,213       10,516,107       31,789,686         1999       2003 - 2004       10,198,541       9,191,217       9,984,392       29,374,150         2000       2004 - 2005       10,705,795       3,300,504       8,331,080       22,337,379         2001       2005 - 2006       7,870,334       493,516       5,585,665       13,949,515         2002       2006 - 2007       11,922,685       5,805,231       8,174,754       25,902,670         2003       2007 - 2008       11,284,330       6,599,519       8,360,966       26,244,815         2004       2008 - 2009       12,408,512       6,574,962       8,359,115       27,342,589         2	1991	1995 - 1996	10,522,819	6,455,011	5,469,759	22,447,589						
1994       1998       -       1999       9,405,449       7,637,009       9,144,382       26,186,840         1995       1999       -       2000       10,317,116       7,418,311       9,973,600       27,709,027         1996       2000       -       2001       13,900,000       8,400,148       9,732,911       28,850,917         1997       2001       -       2002       11,589,845       10,162,655       10,512,299       32,264,799         1998       2002       -       2003       12,286,366       8,987,213       10,516,107       31,789,686         1999       2003       -       2004       10,198,541       9,191,217       9,984,392       29,374,150         2000       2004       -       2005       10,705,795       3,300,504       8,331,080       22,337,379         2001       2005       -       2006       7,870,334       493,516       5,585,665       13,949,515         2002       2006       -       2007       11,922,685       5,805,231       8,174,754       25,902,670         2003       2007       -       2008       11,284,330       6,599,519       8,360,966       26,244,815         2005       2009	1992	1996 - 1997	10,553,621	7,048,536	5,420,351	23,022,508						
1995       1999       - 2000       10,317,116       7,418,311       9,973,600       27,709,027         1996       2000       - 2001       13,900,000       8,400,148       9,732,911       28,850,917         1997       2001       - 2002       11,589,845       10,162,655       10,512,299       32,264,799         1998       2002       - 2003       12,286,366       8,987,213       10,516,107       31,789,686         1999       2003       - 2004       10,198,541       9,191,217       9,984,392       29,374,150         2000       2004       - 2005       10,705,795       3,300,504       8,331,080       22,337,379         2001       2005       - 2006       7,870,334       493,516       5,585,665       13,949,515         2002       2006       - 2007       11,922,685       5,805,231       8,174,754       25,902,670         2003       2007       - 2008       11,284,330       6,599,519       8,360,966       26,244,815         2004       2008       - 2009       12,408,512       6,574,962       8,359,115       27,342,589         2005       2009       - 2010       3,308,065       NA       3,703,295       7,011,360 <td <="" colspan="6" td=""><td>1993</td><td>1997 - 1998</td><td>5,295,017</td><td>2,651,542</td><td>4,495,966</td><td>12,442,525</td></td>	<td>1993</td> <td>1997 - 1998</td> <td>5,295,017</td> <td>2,651,542</td> <td>4,495,966</td> <td>12,442,525</td>						1993	1997 - 1998	5,295,017	2,651,542	4,495,966	12,442,525
1996       2000       -       2001       13,900,000       8,400,148       9,732,911       28,850,917         1997       2001       -       2002       11,589,845       10,162,655       10,512,299       32,264,799         1998       2002       -       2003       12,286,366       8,987,213       10,516,107       31,789,686         1999       2003       -       2004       10,198,541       9,191,217       9,984,392       29,374,150         2000       2004       -       2005       10,705,795       3,300,504       8,331,080       22,337,379         2001       2005       -       2006       7,870,334       493,516       5,585,665       13,949,515         2002       2006       -       2007       11,922,685       5,805,231       8,174,754       25,902,670         2003       2007       -       2008       11,284,330       6,599,519       8,360,966       26,244,815         2004       2008       -       2009       12,408,512       6,574,962       8,359,115       27,342,589         2005       2009       -       2010       3,308,065       NA       3,703,295       7,011,360         10-Year	1994	1998 - 1999	9,405,449	7,637,009	9,144,382	26,186,840						
1997       2001       -       2002       11,589,845       10,162,655       10,512,299       32,264,799         1998       2002       -       2003       12,286,366       8,987,213       10,516,107       31,789,686         1999       2003       -       2004       10,198,541       9,191,217       9,984,392       29,374,150         2000       2004       -       2005       10,705,795       3,300,504       8,331,080       22,337,379         2001       2005       -       2006       7,870,334       493,516       5,585,665       13,949,515         2002       2006       -       2007       11,922,685       5,805,231       8,174,754       25,902,670         2003       2007       -       2008       11,284,330       6,599,519       8,360,966       26,2444,815         2004       2008       -       2009       12,408,512       6,574,962       8,359,115       27,342,589         2005       2009       -       2010       3,308,065       NA       3,703,295       7,011,360         10-Year         Average       10,547,447       6,612,774       8,326,058       24,506,788	1995	1999 - 2000	10,317,116	7,418,311	9,973,600	27,709,027						
1998       2002       -       2003       12,286,366       8,987,213       10,516,107       31,789,686         1999       2003       -       2004       10,198,541       9,191,217       9,984,392       29,374,150         2000       2004       -       2005       10,705,795       3,300,504       8,331,080       22,337,379         2001       2005       -       2006       7,870,334       493,516       5,585,665       13,949,515         2002       2006       -       2007       11,922,685       5,805,231       8,174,754       25,902,670         2003       2007       -       2008       11,284,330       6,599,519       8,360,966       26,244,815         2004       2008       -       2009       12,408,512       6,574,962       8,359,115       27,342,589         2005       2009       -       2010       3,308,065       NA       3,703,295       7,011,360         10-Year         Average	1996	2000 - 2001	13,900,000	8,400,148	9,732,911	28,850,917						
1999       2003       -       2004       10,198,541       9,191,217       9,984,392       29,374,150         2000       2004       -       2005       10,705,795       3,300,504       8,331,080       22,337,379         2001       2005       -       2006       7,870,334       493,516       5,585,665       13,949,515         2002       2006       -       2007       11,922,685       5,805,231       8,174,754       25,902,670         2003       2007       -       2008       11,284,330       6,599,519       8,360,966       26,244,815         2004       2008       -       2009       12,408,512       6,574,962       8,359,115       27,342,589         2005       2009       -       2010       3,308,065       NA       3,703,295       7,011,360         10-Year         Average	1997	2001 - 2002	11,589,845	10,162,655	10,512,299	32,264,799						
2000       2004       -       2005       10,705,795       3,300,504       8,331,080       22,337,379         2001       2005       -       2006       7,870,334       493,516       5,585,665       13,949,515         2002       2006       -       2007       11,922,685       5,805,231       8,174,754       25,902,670         2003       2007       -       2008       11,284,330       6,599,519       8,360,966       26,244,815         2004       2008       -       2009       12,408,512       6,574,962       8,359,115       27,342,589         2005       2009       -       2010       3,308,065       NA       3,703,295       7,011,360         10-Year         Average         10,547,447       6,612,774       8,326,058       24,506,788	1998	2002 - 2003	12,286,366	8,987,213	10,516,107	31,789,686						
2001       2005       -       2006       7,870,334       493,516       5,585,665       13,949,515         2002       2006       -       2007       11,922,685       5,805,231       8,174,754       25,902,670         2003       2007       -       2008       11,284,330       6,599,519       8,360,966       26,244,815         2004       2008       -       2009       12,408,512       6,574,962       8,359,115       27,342,589         2005       2009       -       2010       3,308,065       NA       3,703,295       7,011,360         10-Year         Average       10,547,447       6,612,774       8,326,058       24,506,788	1999	2003 - 2004	10,198,541	9,191,217	9,984,392	29,374,150						
2002       2006       -       2007       11,922,685       5,805,231       8,174,754       25,902,670         2003       2007       -       2008       11,284,330       6,599,519       8,360,966       26,244,815         2004       2008       -       2009       12,408,512       6,574,962       8,359,115       27,342,589         2005       2009       -       2010       3,308,065       NA       3,703,295       7,011,360         10-Year         Average       10,547,447       6,612,774       8,326,058       24,506,788	2000	2004 - 2005	10,705,795	3,300,504	8,331,080	22,337,379						
2003       2007 - 2008       11,284,330       6,599,519       8,360,966       26,244,815         2004       2008 - 2009       12,408,512       6,574,962       8,359,115       27,342,589         2005       2009 - 2010       3,308,065       NA       3,703,295       7,011,360         10-Year         Average       10,547,447       6,612,774       8,326,058       24,506,788	2001	2005 - 2006	7,870,334	493,516	5,585,665	13,949,515						
2004       2008       -       2009       12,408,512       6,574,962       8,359,115       27,342,589         2005       2009       -       2010       3,308,065       NA       3,703,295       7,011,360         10-Year         Average       10,547,447       6,612,774       8,326,058       24,506,788	2002	2006 - 2007	11,922,685	5,805,231	8,174,754	25,902,670						
2005 2009 - 2010 3,308,065 NA 3,703,295 7,011,360  10-Year Average 10,547,447 6,612,774 8,326,058 24,506,788	2003	2007 - 2008	11,284,330	6,599,519	8,360,966	26,244,815						
10-Year Average 10,547,447 6,612,774 8,326,058 24,506,788	2004	2008 - 2009	12,408,512	6,574,962	8,359,115	27,342,589						
Average 10,547,447 6,612,774 8,326,058 24,506,788	2005	2009 - 2010	3,308,065	NA	3,703,295	7,011,360						
	10-Year											
2006 2010 - 2011 5,523,920 4,681,325 10,017,211 20,222,456	Average		10,547,447	6,612,774	8,326,058	24,506,788						
	2006	2010 - 2011	5,523,920	4,681,325	10,017,211	20,222,456						

Appendix E9.-Sockeye salmon hatchery and wild stock contributions to the Coghill District commercial common property fishery by period, 2006.

	•				Origi	in			
		_	Gulkana <sup>a</sup>	<u> Mair</u>	n Bay	Hatchery		Vild	
Dates	Period	Hours	Nr. Percent	Nr.	Percent	Total	Nr.	Percent	Total
06/05 - 06/07	1 b	48	0.0%	17	91.5%	17	2	8.5%	19
06/08 - 06/10	2 b	48	0.0%	83	91.5%	83	8	8.5%	91
06/12 - 06/14	3 b	48	0.0%	132	91.5%	132	12	8.5%	144
06/15 - 06/17	4 <sup>b</sup>	48	0.0%	478	91.5%	478	44	8.5%	522
06/19 - 06/21	5	48	0.0%	4,180	91.5%	4,180	389	8.5%	4,569
06/22 - 06/24	6	48	0.0%	2,587	70.0%	2,587	1,109	30.0%	3,696
06/26 - 06/28	7	48	0.0%	7,042	87.5%	7,042	1,006	12.5%	8,048
06/29 - 07/01	8	48	0.0%	22,465	100.0%	22,465	0	0.0%	22,465
07/03 - 07/05	9	48	0.0%	17,028	97.7%	17,028	405	2.3%	17,433
07/06 - 07/08	10	48	0.0%	6,427	95.5%	6,427	301	4.5%	6,728
07/10 - 07/12	11	48	0.0%	9,774	97.8%	9,774	222	2.2%	9,996
07/13 - 07/15	12	48	0.0%	14,985	82.4%	14,985	3,211	17.6%	18,196
07/16 - 07/16	13 °	12	0.0%	908	82.4%	908	194	17.6%	1,102
07/17 - 07/19	14	48	0.0%	5,428	83.5%	5,428	1,071	16.5%	6,499
07/21 - 07/22	15 <sup>d</sup>	24	0.0%	324	83.5%	324	64	16.5%	388
07/24 - 07/25	16 <sup>d</sup>	24	0.0%	174	83.5%	174	34	16.5%	208
07/28 - 07/29	17 <sup>d</sup>	24	0.0%	160	83.5%	160	31	16.5%	191
07/31 - 08/01	18 <sup>d</sup>	36	0.0%	1,214	83.5%	1,214	240	16.5%	1,454
08/04 - 08/05	19 <sup>d</sup>	24	0.0%	383	83.5%	383	76	16.5%	459
08/07 - 08/07	20 <sup>d</sup>	12	0.0%	20	83.5%	20	4	16.5%	24
08/11 - 08/11	21 <sup>d</sup>	12	0.0%	28	83.5%	28	6	16.5%	34
08/19 - 08/19	22 <sup>d</sup>	12	0.0%	9	83.5%	9	2	16.5%	11
08/20 - 08/20	23 <sup>d</sup>	12	0.0%	14	83.5%	14	3	16.5%	17
08/21 - 08/21	24 <sup>d</sup>	12	0.0%	12	83.5%	12	2	16.5%	14
08/22 - 08/22	25 <sup>e</sup>	12	0.0%	1	100.0%	1	0	0.0%	1
08/23 - 08/23	26 <sup>d</sup>	12	0.0%	13	83.5%	13	2	16.5%	15
08/24 - 08/24	27 e	12	0.0%	1	100.0%	1	0	0.0%	1
08/25 - 08/25	28 <sup>d</sup>	12	0.0%	3	83.5%	3	ő	16.5%	3
08/26 - 08/26	29 <sup>d</sup>	12	0.0%	6	83.5%	6	1	16.5%	7
08/27 - 08/27	30 f	12	0.070	o	03.370	0	0	10.570	Ó
08/28 - 08/28	31 <sup>f</sup>	12				ő	0		0
08/29 - 08/29	32 d	12	0.0%	11	83.5%	11	2	16.5%	13
08/30 - 08/30	33 <sup>d</sup>	12	0.0%	5	83.5%	5	1	16.5%	6
08/31 - 08/31	34 <sup>f</sup>	12	0.070	3	03.570	0	0	10.570	0
09/01 - 09/01	35 <sup>e</sup>	12	0.0%	3	100.0%	3	0	0.0%	3
09/01 - 09/01	36 <sup>d</sup>	12	0.0%	4	83.5%	4	1	16.5%	5
09/02 - 09/02	30 37 <sup>f</sup>	12	0.0%	4	03.370	0	0	10.570	0
09/03 - 09/03	37 38 <sup>f</sup>	12				0	0		0
09/04 - 09/04	39 <sup>d</sup>	12	0.0%	2	83.5%	2	0	16.5%	2
09/03 - 09/03	40 f	12	0.0%	2	63.5%	0	0	10.5%	$\overset{2}{0}$
	40 41 <sup>f</sup>					0			
09/07 - 09/07	41 42 <sup>e</sup>	12	0.00/	1	100.00/	-	0	0.00/	0
09/08 - 09/08	42 d 43 d	12	0.0%	1	100.0%	1	0	0.0%	1
09/09 - 09/10	43 <sup>d</sup>	36	0.0%	5	83.5%	5	1	16.5%	6
09/11 - 09/17	44 d	156	0.0%	5	83.5%	5	1	16.5%	6
09/18 - 09/24	45 <sup>d</sup>	156	0.0%	2	83.5%	2	0	16.5%	2
09/25 - 10/01	46 <sup>f</sup>	156				0	0		0
10/02 - 10/04	47 <sup>f</sup>	60				0	0		0
<u>10/04 - 10/08</u>	48 <sup>f</sup>	96	0 000	00.00:	04.707	0	0	0.22:	0
Total			0 0.0%	93,931	91.7%	93,931	8,448	8.3%	102,379

The Gulkana Hatchery contribution is assumed to be zero based on historical data. No samples were examined for strontium chloride marks.

Proportions from period 5 were used to allocate harvest.

Proportions from period 12 were used to allocate harvest.
 Proportions from period 14 were used to allocate harvest.

<sup>&</sup>lt;sup>e</sup> Allocated to hatchery stock.

No sockeye salmon were harvested.

**Appendix E10.**–Pink salmon hatchery and wild stock contributions to the Coghill District commercial common property fishery by period, 2006.

								Origin						
		3	Solom	on Gulch	Cannery	Creek	W. Noeren	berg	A.F. Ko	ernig	Hatchery	Wil	d	
Dates	Period	Hours	Nr.	Percent	Nr. I	Percent	Nr. P	ercent	Nr. P	ercent	Total	Nr. 1	Percent	Total
06/05 - 06/07	1 <sup>a</sup>	48									0	0		0
06/08 - 06/10	2 a	48									0	0		0
06/12 - 06/14	3 <sup>a</sup>	48									0	0		0
06/15 - 06/17	4 <sup>a</sup>	48									0	0		0
06/19 - 06/21	5 <sup>a</sup>	48									0	0		0
06/22 - 06/24	6 <sup>b</sup>	48	0	5.9	0	1.5	1	11.8	0	0.0	1	4	80.9	5
06/26 - 06/28	7 <sup>b</sup>	48	1	5.9	0	1.5	2	11.8	0	0.0	3	11	80.9	14
06/29 - 07/01	8 <sup>b</sup>	48	149	5.9	37	1.5	297	11.8	0	0.0	483	2,042	80.9	2,525
07/03 - 07/05	9 <sup>b</sup>	48	80	5.9	20	1.5	160	11.8	0	0.0	261	1,102	80.9	1,363
07/06 - 07/08	10 <sup>b</sup>	48	59	5.9	15	1.5	117	11.8	0	0.0	191	806	80.9	997
07/10 - 07/12	11 <sup>b</sup>	48	144	5.9	36	1.5	289	11.8	0	0.0	469	1,984	80.9	2,453
07/13 - 07/15	12 <sup>b</sup>	48	344	5.9	86	1.5	688	11.8	0	0.0	1,118	4,731	80.9	5,849
07/16 - 07/16	13	12	325	5.9	81	1.5	649	11.8	0	0.0	1,055	4,463	80.9	5,518
07/17 - 07/19	14	48	126	1.4	0	0.0	1,258	14.5	0	0.0	1,384	7,299	84.1	8,683
07/21 - 07/22	15 °	24	135	1.4	0	0.0	1,346	14.5	0	0.0	1,480	7,805	84.1	9,285
07/24 - 07/25	16 <sup>d</sup>	24	35	1.1	0	0.0	939	28.4	0	0.0	974	2,329	70.5	3,303
07/28 - 07/29	17	24	752	1.1	0	0.0	20,313	28.4	0	0.0	21,065	50,406	70.5	71,471
07/31 - 08/01	18	36	0	0.0	10,525	3.9	122,796	45.5	0	0.0	133,321	136,830	50.6	270,151
08/04 - 08/05	19 <sup>e</sup>	24	0	0.0	8,287	3.9	96,687	45.5	0	0.0	104,974	107,737	50.6	212,711
08/07 - 08/07	20	12	0	0.0	3,612	15.8	9,031	39.5	602	2.6	13,245	9,633	42.1	22,878
08/11 - 08/11	21 <sup>f</sup>	12	0	0.0	4,514	15.8	11,285	39.5	752	2.6	16,551	12,037	42.1	28,588
08/19 - 08/19	22 <sup>f</sup>	12	0	0.0	7,687	15.8	19,219	39.5	1,281	2.6	28,187	20,500	42.1	48,687
08/20 - 08/20	23 <sup>f</sup>	12	0	0.0	9,054	15.8	22,634	39.5	1,509	2.6	33,196	24,143	42.1	57,339
08/21 - 08/21	24 <sup>f</sup>	12	0	0.0	20,435	15.8	51,086	39.5	3,406	2.6	74,927	54,492	42.1	129,419
08/22 - 08/22	25 <sup>g</sup>	12	0	0.0	543	2.6	19,539	94.7	543	2.6	20,625	0	0.0	20,625
08/23 - 08/23	26 <sup>g</sup>	12	0	0.0	2,086	2.6	75,101	94.7	2,086	2.6	79,273	0	0.0	79,273
08/24 - 08/24	27 <sup>g</sup>	12	0	0.0	644	2.6	23,177	94.7	644	2.6	24,465	0	0.0	24,465
08/25 - 08/25	28 <sup>g</sup>	12	0	0.0	813	2.6	29,275	94.7	813	2.6	30,901	0	0.0	30,901

**Appendix E10.**–Page 2 of 2.

		_						Origin						
		_	Solomor	Gulch_	Cannery	Creek	W. Noere	nberg	A.F. Koe	ernig	Hatchery	Wil	d	
Dates	Period	Hours	Nr.	Percent	Nr. I	Percent	Nr.	Percent	Nr. I	Percent	Total	Nr.	Percent	Total
08/26 - 08/26	29	12	0	0.0	1,654	2.6	59,553	94.7	1,654	2.6	62,861	0	0.0	62,861
08/27 - 08/27	30	12	0	0.0	3,349	5.9	50,228	88.2	0	0.0	53,576	3,349	5.9	56,925
08/28 - 08/28	31	12	0	0.0	1,140	1.4	75,254	94.3	2,280	2.9	78,675	1,140	1.4	79,815
08/29 - 08/29	32	12	0	0.0	2,351	6.0	35,258	90.0	0	0.0	37,608	1,567	4.0	39,175
08/30 - 08/30	33 <sup>h</sup>	12	0	0.0	906	6.0	13,597	90.0	0	0.0	14,504	604	4.0	15,108
08/31 - 08/31	34 <sup>h</sup>	12	0	0.0	976	6.0	14,639	90.0	0	0.0	15,614	651	4.0	16,265
09/01 - 09/01	35 <sup>h</sup>	12	0	0.0	1,017	6.0	15,260	90.0	0	0.0	16,278	678	4.0	16,956
09/02 - 09/02	36 <sup>h</sup>	12	0	0.0	1,159	6.0	17,378	90.0	0	0.0	18,537	772	4.0	19,309
09/03 - 09/03	37 <sup>h</sup>	12	0	0.0	764	6.0	11,462	90.0	0	0.0	12,227	509	4.0	12,736
09/04 - 09/04	38 <sup>h</sup>	12	0	0.0	1,013	6.0	15,189	90.0	0	0.0	16,202	675	4.0	16,877
09/05 - 09/05	39 <sup>a</sup>	12									0	0		0
09/06 - 09/06	40 <sup>a</sup>	12									0	0		0
09/07 - 09/07	41 <sup>a</sup>	12									0	0		0
09/08 - 09/08	42 h	12	0	0.0	30	6.0	455	90.0	0	0.0	486	20	4.0	506
09/09 - 09/10	43 <sup>a</sup>	36									0	0		0
09/11 - 09/17	44 <sup>a</sup>	156									0	0		0
09/18 - 09/24	45 <sup>a</sup>	156									0	0		0
09/25 - 10/01	46 <sup>a</sup>	156									0	0		0
10/02 - 10/04	47 <sup>a</sup>	60									0	0		0
10/04 - 10/08	48 <sup>a</sup>	96									0	0		0
Total			2,149	0.2	82,835	6.0	814,161	59.3	15,571	1.1	914,716	458,320	33.4	1,373,036

No pink salmon were harvested.

Proportions from period 13 were used to allocate harvest.

<sup>&</sup>lt;sup>c</sup> Proportions from period 14 were used to allocate harvest.

Proportions from period 17 were used to allocate harvest.

Proportions from period 18 were used to allocate harvest.

Proportions from period 20 were used to allocate harvest.

g Proportions from period 29 were used to allocate harvest.

Proportions from period 32 were used to allocate harvest.

**Appendix E11.**—Chum salmon hatchery and wild stock contributions to the Coghill District commercial common property fishery by period, 2006.

						Origin				
			W. Noere	nberg	Port Chaln	ners	Hatchery	W	ild	
Dates	Period	Hours	Nr.	Percent	Nr.	Percent	Total	Nr.	Percent	Total
06/05 - 06/07	1 a	48	750	89.5	44	5.3	794	44	5.3	838
06/08 - 06/10	2	48	4,420	89.5	260	5.3	4,680	260	5.3	4,940
06/12 - 06/14	3	48	8,621	100.0	0	0.0	8,621	0	0.0	8,621
06/15 - 06/17	4	48	16,204	97.8	0	0.0	16,204	368	2.2	16,572
06/19 - 06/21	5	48	11,103	95.7	126	1.1	11,229	379	3.3	11,608
06/22 - 06/24	6	48	53,791	98.9	572	1.1	54,363	0	0.0	54,363
06/26 - 06/28	7	48	21,466	100.0	0	0.0	21,466	0	0.0	21,466
06/29 - 07/01	8	48	295,685	100.0	0	0.0	295,685	0	0.0	295,685
07/03 - 07/05	9	48	38,145	95.9	0	0.0	38,145	1,635	4.1	39,780
07/06 - 07/08	10	48	18,098	93.7	0	0.0	18,098	1,220	6.3	19,318
07/10 - 07/12	11	48	23,819	91.2	1,537	5.9	25,356	768	2.9	26,124
07/13 - 07/15	12	48	24,434	92.4	0	0.0	24,434	2,012	7.6	26,446
07/16 - 07/16	13	12	17,863	97.9	0	0.0	17,863	388	2.1	18,251
07/17 - 07/19	14	48	6,990	89.0	0	0.0	6,990	862	11.0	7,852
07/21 - 07/22	15	24	5,618	95.9	0	0.0	5,618	239	4.1	5,857
07/24 - 07/25	16 <sup>b</sup>	24	875	95.9	0	0.0	875	37	4.1	912
07/28 - 07/29	17 <sup>b</sup>	24	858	95.9	0	0.0	858	36	4.1	894
07/31 - 08/01	18 <sup>b</sup>	36	2,649	95.9	0	0.0	2,649	113	4.1	2,762
08/04 - 08/05	19 <sup>b</sup>	24	1,026	95.9	0	0.0	1,026	44	4.1	1,070
08/07 - 08/07	20 <sup>b</sup>	12	349	95.9	0	0.0	349	15	4.1	364
08/11 - 08/11	21 <sup>b</sup>	12	48	95.9	0	0.0	48	2	4.1	50
08/19 - 08/19	22 °	12					0	0		0
08/20 - 08/20	23 <sup>b</sup>	12	3	95.9	0	0.0	3	0	4.1	3
08/21 - 08/21	24 <sup>b</sup>	12	8	95.9	0	0.0	8	0	4.1	8
08/22 - 08/22	25 °	12					0	0		0
08/23 - 08/23	26 <sup>b</sup>	12	1	95.9	0	0.0	1	0	4.1	1
08/24 - 08/24	27 °	12					0	0		0
08/25 - 08/25	28 <sup>b</sup>	12	3	95.9	0	0.0	3	0	4.1	3

**Appendix E11.**–Page 2 of 2.

						Origin				
			W. Noerei	nberg	Port Ch	almers	Hatchery	Wi	ild	
Dates	Period	Hours	Nr.	Percent	Nr.	Percent	Total	Nr.	Percent	Total
08/26 - 08/26	29 <sup>b</sup>	12	2	100.0	0		2	0		2
08/27 - 08/27	30 °	12	0				0	0		0
08/28 - 08/28	31 <sup>b</sup>	12	8	100.0	0		8	0		8
08/29 - 08/29	32 °	12	0				0	0		0
08/30 - 08/30	33 °	12	0				0	0		0
08/31 - 08/31	34 <sup>c</sup>	12	0				0	0		0
09/01 - 09/01	35 °	12	0				0	0		0
09/02 - 09/02	36 <sup>c</sup>	12	0				0	0		0
09/03 - 09/03	37 °	12	0				0	0		0
09/04 - 09/04	38 <sup>c</sup>	12	0				0	0		0
09/05 - 09/05	39 <sup>b</sup>	12	1	100.0	0	0.0	1	0	0.0	1
09/06 - 09/06	40 <sup>c</sup>	12	0				0	0		0
09/07 - 09/07	41 <sup>c</sup>	12	0				0	0		0
09/08 - 09/08	42 °	12	0				0	0		0
09/09 - 09/10	43 <sup>b</sup>	36	1	100.0	0	0.0	1	0	0.0	1
09/11 - 09/17	44 <sup>c</sup>	156	0				0	0		0
09/18 - 09/24	45 <sup>c</sup>	156	0				0	0		0
09/25 - 10/01	46 <sup>c</sup>	156	0				0	0		0
10/02 - 10/04	47 <sup>c</sup>	60	0				0	0		0
10/04 - 10/08	48 <sup>c</sup>	96	0				0	0		0
Total			552,838	98.1	2,539	0.5	555,377	8,423	1.5	563,800

a Proportions from period 2 were used to allocate harvest.
b Proportions from period 15 were used to allocate harvest.
c No chum salmon were harvested.

Appendix E12.-Wally Norenberg Hatchery salmon cost recovery harvest by day, 2006.

	IIA 1712,		TOTOTIO		ici y sai		100000	y narvest b	y day, 20		
Catch <sup>a</sup>	т 11	Chinook	D 1	Sockeye	D 1	Coho	D 1	Pink	D 1	Chum	ъ .
Date Oc/04	Landings	Numbers		Numbers		Numbers		Numbers	Pounds	Numbers	Pounds
06/04	1	$\frac{1}{2}$ $\frac{0}{0}$	0	0	0	0		0	0	5,570	61,269
06/05	2	0	0	0	0	0		0	0	17,140 6,059	177,088 56,947
06/06	1	0	0	0	0	0		0	0	5,165	55,780
06/07	l	0	0	0	0	0		0	0	4,626	48,107
06/08	1	0	0	0	0	0		0	0	6,101	62,843
06/05	1	0	0	0	0	0		0	0	18,697	183,234
06/10	3		0	0	0	0		0	0	41,332	424,893
06/12	2		0	0	0	0		0	0	19,780	201,767
06/12	3		0	0	0	0		0	0	41,704	415,374
06/14	3		0	0	0	0		0	0	39,830	406,264
06/15	2		0	0	0	0		0	0	22,701	219,242
06/16	3		0	0	0	0		0	0	35,007	337,522
06/17	3	3 0	0	0	0	0	0	0	0	39,784	395,378
06/18	2	2 0	0	0	0	0	0	0	0	24,025	226,777
06/19	3		0	0	0	0		0	0	22,526	203,608
06/20	3	0	0	0	0	0	0	0	0	21,035	193,545
06/21	1	0	0	0	0	0		0	0	11,789	100,205
06/24	2		0	0	0	0		0	0	19,396	180,192
06/25	3		0	0	0	0		0	0	18,483	168,397
06/26	4		0	0	0	0		0	0	53,808	475,612
06/27	4		0	0	0	0		0	0	36,330	313,314
06/28	2		0	0	0	0		0	0	26,714	232,412
06/29	2		0	0	0	0		0	0	21,387	189,139
06/30	l	0	0	0	0	0		0	0	17,084	150,343
07/01	1		0	120	659	0		0	0	10,504	85,084
07/02 07/03	3		0	120	658	0		0	0	17,208	136,996
07/03		0	0	0	0	0		0	0	7,788 5,133	60,743 38,497
07/04	1	0	0	0	0	0		0	0	2,525	18,941
07/03	1	0	0	0	0	0		0	0	1,861	13,771
07/07	1	0	0	0	0	0		0	0	6,635	48,436
07/03	2		0	0	0	0		0	0	22,470	161,783
07/12	1		0	0	0	0		0	0	1,276	9,058
07/15	2		0	0	0	0		0	0	77,315	550,536
07/16	1	0	0	0	0	0		348	1,045	9,540	64,873
07/17	1		0	0	0	0		1,036	3,626	21,014	147,098
07/22	2		0	0	0	0		0	0	40,999	274,689
07/23	1	0	0	0	0	0	0	12,831	43,628	10,019	60,114
07/24	1	0	0	0	0	0		20,330	69,122	3,731	24,252
07/25	2		0	0	0	0		30,965	108,382	2,205	17,642
07/26	3		0	0	0	0		83,215	274,611	2,268	18,150
07/27	2		0	0	0	0		45,781	164,810	672	4,165
07/28	2		0	0	0	0		37,198	133,914	0	0
07/29	2		0	0	0	0		29,662	104,711	0	0
07/30	2		0	0	0	0		71,899	274,860	0	0
07/31	2		0	0	0	0		61,209	229,851	0	0
08/01	3		0	0	0	0		86,365	318,740	0	0
08/02	2		0	0	0	0		134,357	501,854	0	0
08/03	3		0	0	0	0		106,306	372,070 369,010	0	
08/04 08/05	3		0	0	0	0		103,637 81,611	284,579	0	0
08/05	3		0	0	0	0		122,825	451,744	0	0
08/07	2		0	0	0	0		84,545	329,724	0	0
08/07	2		0	0	0	0		99.072	356,659	0	
08/09	2		0	0	0	0		72,992	264,034	0	0
08/10	1	0	0	0	0	0		44,715	160,975	0	0
08/11	2		0	0	0	0		88,586	310,050	0	0
08/12	3		0	0	0	0		160,216	592,798	0	0
08/13	2		0	0	0	0		87,901	326,707	0	0
08/14	4		0	0	0	0		196,126	738,115	0	0
08/15	2		0	0	0	0		79,704	302,875	0	0
08/16	3		0	0	0	0		135,016	506,639	0	0
08/17	3		0	0	0	0		145,028	546,766	0	
08/18	2		0	0	0	0	0	103,792	398,812	0	0
Total	135	5 0	0	120	658	0	0	2,327,268	8,540,711	819,236	7,214,080
Average			0.00		5.48		0.00		3.67		8.81
a These number	ers do not inc	lude broodste	ock escaper	nents of $13\overline{4,3}$	307 pink a	nd 171,681 ch	um salmon,	and 122,372 pink	and 45,465 o	chum salmon a	assumed to be

These numbers do not include broodstock escapements of 134,307 pink and 171,681 chum salmon, and 122,372 pink and 45,465 chum salmon assumed to be harvested for roe. Roe harvest estimates include green females and all fish taken after egg take completion.

**Appendix E13.**–Daily salmon sales and sex ratios, sales summary, and broodstock summary at the Wally Noerenberg Hatchery, 2006.

	Pink Salmon			
Date	% Female	Pink	Chum	
06/04		0	5,570	
06/05		0	17,140	
06/06		0	6,059	
06/07		0	5,165	
06/08		0	4,626	
06/09		0	6,101	
06/10		0	18,697	
06/11		0	41,332	
06/12		0	19,780	
06/13		0	41,704	
06/14		0	39,830	
06/15		0	22,701	
06/16		0	35,007	
06/17		0	39,784	
06/18		0	24,025	
06/19		0	22,526	
06/20		0	21,035	
06/21		0	11,789	
06/24		0	19,396	
06/25		0	18,483	
06/26		0	53,808	
06/27		0	36,330	
06/28		0	26,714	
06/29		0	21,387	
06/30		0	17,084	
07/01		0	10,504	
07/02		0	17,208	
07/03		0	7,788	
07/04		0	5,133	
07/05		0	2,525	
07/07		0	1,861	
07/09		0	6,635	
07/11		0	22,470	
07/12		0	1,276	
07/15		0	77,315	
07/16		348	9,540	
07/17		1,036	21,014	
07/22		0	40,999	
07/23		12,831	10,019	
	10.80/	20,330		
07/24	10.8%		3,731	
07/25	7.5%	30,965	2,205	

**Appendix E13.**–Page 2 of 2.

	Pink Salmon		
Date	% Female	Pink	Chum
07/26	5.8%	83,215	2,268
07/27	13.0%	45,781	672
07/28	25.3%	37,198	0
07/29	18.8%	29,662	0
07/30	17.0%	71,899	0
07/31	21.6%	61,209	0
08/01	18.1%	86,365	0
08/02	18.2%	134,357	0
08/03	18.0%	106,306	0
08/04	30.4%	103,637	0
08/05	36.1%	81,611	0
08/06	48.8%	122,825	0
08/07	42.6%	84,545	0
08/08	34.7%	99,072	0
08/09	46.0%	72,992	0
08/10	38.6%	44,715	0
08/11	41.0%	88,586	0
08/12	47.6%	160,216	0
08/13	47.3%	87,901	0
08/14	46.0%	196,126	0
08/15	50.0%	79,704	0
08/16	46.3%	135,016	0
08/17	56.7%	145,028	0
08/18	47.4%	103,792	0
Totals		2,327,268	819,236
	Cost Recov	very Sales Summary	
Pounds Sold		8,540,711	7,214,080
Average Weights		3.67	8.81
	Broodstock Sumn	nary (Including Roe Sales)	
Fish spawned at hatchery		100,697	144,846
Excess		64,952	41,725
Mortalities		35,205	8,470
Roe Sales (# of Fish) <sup>a</sup>		55,825	22,105
Total broodstock		256,679	217,146
Estimated unharvested return		65,000 <sup>b</sup>	
		*	

Estimated return to hatchery

a Salmon (female only) cate Salmon (female only) categorized as "Roe processed/sold," as reported in PWSAC 2006.

321,679

217,146

Aerial survey estimate of pink salmon present in hatchery THA on September 7, 2006 when broodstock and roe harvest was completed.

**Appendix E14.**—Sockeye salmon hatchery and wild stock contributions to the Eshamy District commercial common property fishery by period, 2006.

-			Origin								
		•	Gu	lkana <sup>a</sup>	Main Bay		Hatchery	W	ild		
Dates	Period	Hours	Nr.	Percent	Nr.	Percent	Total	Nr.	Percent	Total	
06/12 - 06/13	1 <sup>b</sup>	24		0.0	368	94.0	368	23	6.0	391	
06/19 - 06/20	2	24		0.0	8,070	94.0	8,070	511	6.0	8,581	
06/26 - 06/27	3	24		0.0	96,256	100.0	96,256	0	0.0	96,256	
06/29 - 06/30	4	12		0.0	72,923	98.9	72,923	829	1.1	73,752	
07/03 - 07/03	5	12		0.0	42,420	100.0	42,420	0	0.0	42,420	
07/06 - 07/07	6	24		0.0	76,141	100.0	76,141	0	0.0	76,141	
07/10 - 07/11	7	24		0.0	62,193	96.7	62,193	2,145	3.3	64,338	
07/13 - 07/14	8	24		0.0	39,293	95.8	39,293	1,727	4.2	41,020	
07/17 - 07/18	9	24		0.0	26,931	92.6	26,931	2,167	7.4	29,098	
07/20 - 07/22	10	48		0.0	17,185	89.3	17,185	2,052	10.7	19,237	
07/24 - 07/26	11	48		0.0	8,559	80.0	8,559	2,140	20.0	10,699	
07/27 - 07/29	12 °	48		0.0	5,411	68.8	5,411	2,459	31.3	7,870	
07/31 - 08/02	13	48		0.0	4,824	68.8	4,824	2,193	31.3	7,017	
08/03 - 08/05	14 <sup>c</sup>	48		0.0	2,122	68.8	2,122	965	31.3	3,087	
08/07 - 08/09	15	48		0.0	8,012	91.4	8,012	754	8.6	8,766	
08/10 - 08/12	16 <sup>d</sup>	48		0.0	93	91.4	93	9	8.6	102	
08/14 - 08/16	17 <sup>d</sup>	48		0.0	808	91.4	808	76	8.6	884	
08/17 - 08/19	18 <sup>d</sup>	48		0.0	10,569	91.4	10,569	995	8.6	11,564	
08/21 - 08/23	19 <sup>d</sup>	48		0.0	3,734	91.4	3,734	351	8.6	4,085	
08/24 - 08/26	$20^{d}$	48		0.0	228	91.4	228	22	8.6	250	
08/28 - 08/30	$21^{d}$	48		0.0	302	91.4	302	28	8.6	330	
08/31 - 09/02	$22^{d}$	48		0.0	101	91.4	101	9	8.6	110	
09/04 - 09/06	23 <sup>e</sup>	48					0	0		0	
09/07 - 09/09	24 <sup>e</sup>	48					0	0		0	
09/11 - 09/13	25 <sup>e</sup>	48					0	0		0	
09/14 - 09/16	26 <sup>e</sup>	48					0	0		0	
Total			0	0.0	486,544	96.2	470,802	19,454	3.8	505,998	

<sup>&</sup>lt;sup>a</sup> The Gulkana Hatchery contribution is assumed to be zero based on historical data. No samples were examined for strontium chloride marks.

<sup>&</sup>lt;sup>b</sup> Proportions from period 2 were used to allocate harvest.

<sup>&</sup>lt;sup>c</sup> Proportions from period 13 were used to allocate harvest.

<sup>&</sup>lt;sup>d</sup> Proportions from period 15 were used to allocate harvest.

<sup>&</sup>lt;sup>e</sup> No sockeye salmon were harvested.

Appendix E15.—Pink salmon hatchery and wild stock contributions to the Eshamy District commercial common property fishery by period, 2006.

		<u>Origin</u>												
		_		on Gulch		ery Creek		renberg		oernig	Hatchery		ild	
Dates	Period	Hours	Nr.	Percent	Nr.	Percent	Nr.	Percent	Nr.		Total	Nr.		Total
06/12 - 06/13	1 a		0	0.0	0	0.0	0	0.0	0	0.0	0	1	100.0	1
06/19 - 06/20	2 b	24	0	1.2	0	0.0	0	3.5	0	0.0	0	4	95.3	4
06/26 - 06/27	3 b	24	4	1.2	0	0.0	12	3.5	0	0.0	17	340	95.3	357
06/29 - 06/30	4 <sup>b</sup>		8	1.2	0	0.0	25	3.5	0	0.0	33	686	95.3	719
07/03 - 07/03	5 <sup>b</sup>	12	20	1.2	0	0.0	60	3.5	0	0.0	80	1,640	95.3	1,720
07/06 - 07/07	6 <sup>b</sup>	24	50	1.2	0	0.0	150	3.5	0	0.0	201	4,113	95.3	4,314
07/10 - 07/11	7 <sup>b</sup>	24	52	1.2	0	0.0	156	3.5	0	0.0	208	4,266	95.3	4,474
07/13 - 07/14	8 <sup>b</sup>	24	47	1.2	0	0.0	141	3.5	0	0.0	188	3,861	95.3	4,049
07/17 - 07/18	9	24	121	1.2	0	0.0	364	3.5	0	0.0	485	9,942	95.3	10,427
07/20 - 07/22	10	48	168	1.3	168	1.3	1,179	8.8	337	2.5	1,853	11,621	86.3	13,474
07/24 - 07/26	11	48	138	1.8	0	0.0	2,068	26.3	552	7.0	2,758	5,101	64.9	7,859
07/27 - 07/29	12	48	0	0.0	0	0.0	1,327	12.7	1,327	12.7	2,653	7,812	74.6	10,465
07/31 - 08/02	13	48	0	0.0	0	0.0	1,959	18.2	3,917	36.4	5,876	4,897	45.5	10,773
08/03 - 08/05	14 °	48	0	0.0	0	0.0	1,285	18.2	2,570	36.4	3,855	3,213	45.5	7,068
08/07 - 08/09	15 °	48	0	0.0	0	0.0	630	18.2	1,259	36.4	1,889	1,574	45.5	3,463
08/10 - 08/12	16 <sup>d</sup>	48									0	0		0
08/14 - 08/16	17 °	48	0	0.0	0	0.0	1,232	18.2	2,465	36.4	3,697	3,081	45.5	6,778
08/17 - 08/19	18 <sup>c</sup>	48	0	0.0	0	0.0	1,985	18.2	3,969	36.4	5,954	4,962	45.5	10,916
08/21 - 08/23	19 <sup>c</sup>	48	0	0.0	0	0.0	1,937	18.2	3,874	36.4	5,811	4,842	45.5	10,653
08/24 - 08/26	20 °	48	0	0.0	0	0.0	506	18.2	1,012	36.4	1,518	1,265	45.5	2,783
08/28 - 08/30	21 °	48	0	0.0	0	0.0	58	18.2	117	36.4	175	146	45.5	321
08/31 - 09/02	22 <sup>d</sup>	48									0	0		0
09/04 - 09/06	$23^{d}$	48									0	0		0
09/07 - 09/09	$24^{d}$	48									0	0		0
09/11 - 09/13	25 <sup>d</sup>	48									0	0		0
09/14 - 09/16	26 <sup>d</sup>	48									0	0		0
Total			609	0.6	168	0.2	15,075	13.6	21,399	19.3	37,251	73,367	66.3	110,618

<sup>&</sup>lt;sup>a</sup> Allocated the harvest to wild stock.

b Proportions from period 9 were used to allocate harvest.
c Proportions from period 13 were used to allocate harvest.

d No pink salmon were harvested.

**Appendix E16.**—Daily salmon sales and sex ratios, sales summary, and broodstock summary at the Main Bay Hatchery, 2006.

Date	% Female	Sockeye
06/17	16.3%	5,065
06/21	29.3%	12,233
06/22	38.2%	10,413
06/24	37.5%	13,103
06/25	37.8%	7,659
06/26	38.6%	15,870
06/27	67.5%	9,463
06/28	58.9%	22,894
07/01	51.0%	20,663
07/02	63.9%	19,510
07/03	60.8%	9,706
07/04	50.5%	16,554
07/05	58.8%	12,276
07/06	58.5%	11,312
07/07	54.7%	7,605
07/08	71.1%	10,032
07/09	77.4%	12,501
07/12	71.5%	11,967
07/13	74.1%	15,393
07/14	75.3%	11,713
07/15	83.2%	19,797
07/16	71.1%	22,342
07/17	71.1%	9,694
07/18	85.1%	7,719
07/19	85.0%	5,595
07/20	73.3%	7,457
07/23	75.5%	6,895
07/26	79.9%	6,395
07/29	82.3%	3,288
08/03	76.6%	3,042
Totals		348,156
Cost	Recovery Sales Summary	
Pounds Sold		1,713,229
Average Weight		4.92
Main Ray	Sockeye Broodstock Summary	
Good	Bockeye Diodustock Summary	5,855
Green/bad/excess		5,134
System mortalities		4,865
Total broodstock		15,854
Estimated unharvested return		0
Estimated return to hatchery		15,854

**Appendix E17.**—Sockeye salmon hatchery and wild stock contributions to Main Bay Hatchery cost recovery by statistical week, 2006.

				Origin				
	Stat	G	ulkana <sup>a</sup>	Main	Bay	V		
Dates	Week	Nr.	Percent	Nr.	Percent	Nr.	Percent	Total
06/11 - 06/17	24	b 0	0.0	5,065	100.0	0	0.0	5,065
06/18 - 06/24	25	0	0.0	35,749	100.0	0	0.0	35,749
06/25 - 07/01	26	0	0.0	76,549	100.0	0	0.0	76,549
07/02 - 07/08	27	0	0.0	86,070	98.9	925	1.1	86,995
07/09 - 07/15	28	0	0.0	70,628	99.0	743	1.0	71,371
07/16 - 07/22	29	0	0.0	52,257	99.0	550	1.0	52,807
07/23 - 07/29	30	c 0	0.0	16,405	99.0	173	1.0	16,578
07/30 - 08/05	31	c 0	0.0	3,010	99.0	32	1.0	3,042
Total		0	0.0	345,733	99.3	2,423	0.7	348,156

<sup>&</sup>lt;sup>a</sup> Samples were not tested for presence of Gulkana Hatchery mark on Main Bay Hatchery cost recovery.

<sup>&</sup>lt;sup>b</sup> Proportions from statistical week 25 were used to allocate harvest.

<sup>&</sup>lt;sup>c</sup> Proportions from statistical week 29 were used to allocate harvest.

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Appendix E18.—Main Bay sockeye salmon harvests and total contribution, 1990–2006.

	Hatchery	Contributions				Total	
		Subsistence/		BroodStock/	Cost	Hatchery	
Year	Commercial	Personal Use <sup>a</sup>	Sport	Escapement	Recovery	Contribution	
1990	9,000	0	0	0	0	9,000	
1991	480,200	0	0	4,700	0	484,900	
1992	368,427	0	0	6,185	158,893	533,505	
1993	208,709	0	0	8,020	97,594	314,323	
1994	214,737	0	0	72,335	85,511	372,583	
1995	134,778	0	0	11,148	62,782	208,708	
1996	406,100	0	0	7,979	83,430	497,509	
1997	845,871	0	0	16,498	236,031	1,098,400	
1998	128,702	0	6,738	10,596	111,026	257,062	
1999	143,511	0	7,150	7,104	0	157,765	
2000	339,305	200	2,360	5,426	0	347,291	
2001	770,884	400	3,500	10,508	50,458	835,750	
2002	846,534	2,971	4,000	7,352	93,794	954,651	
2003	1,047,133	0	4,000	6,878	366,768	1,424,779	
2004	355,821	0	1,200	17,578	279,139	653,738	
2005	233,089	0	750	44,366	188,904	467,109	
10-Year Average	511,695	357	2,970	13,429	140,955	669,405	
2006	668,780	0	500	15,854	350,742	1,035,876	

<sup>&</sup>lt;sup>a</sup> Commercial proportion from otolith marks, Sport and Sub/Pu from average proportion of previous estimates.

**Appendix E19.**–Main Bay Hatchery sockeye salmon fry releases, 1986–2006.

Release Year	Return Year	Coghill Lake stock	Eshamy Lake stock	Eyak Lake stock	Total
1986	1990/91	330,025			330,025
1987	1991/92	3,923,829			3,923,829
1988	1992/93	2,616,498			2,616,498
1989	1993/94	1,960,774	1,843,176		3,803,950
1990	1994/95	1,546,929	2,475,390	47,609	4,069,928
1991	1995/96	3,288,689	966,750	63,822	4,319,261
1992	1996/97	3,289,824	691,633		3,981,457
1993	1997/98	4,049,763	1,546,011	90,348	5,686,122
1994	1998/99	4,194,174	114,475	82,514	4,391,163
1995	1999/00	239,023	845,190	131,503	1,215,716
1996	2000/01		2,485,000	181,000	2,666,000
1997	2001/02		4,165,786	3,094,460	7,260,246
1998	2002/03	8,284,644			8,284,644
1999	2003/04	7,496,206			7,496,206
2000	2004/05	7,974,334			7,974,334
2001	2005/06		6,320,515		6,320,515
2002	2006/07	7,863,403			7,863,403
2003	2007/08	8,836,154			8,836,154
2004	2008/09	680,307			680,307
2005	2009/10	10,868,642			10,868,642
2006	2010/11	10,103,239			10,103,239
10-Year Average	e				6,825,045

Appendix E20.-Pink salmon hatchery and wild stock contributions to the Eastern District commercial common property fishery by period, 2006.

			Origin											
		_	Solomon (	Gulch	Cannery		W. Noe	renberg	A.F.	Koernig	Hatchery	Wild		
Dates	Period	Hours	Nr.	Percent	Nr.		Nr.	Percent	Nr.	Percent	Total	Nr.		Total
07/04 - 07/04	1	12	1,206,779	97.9	0	0.0	0	0.0	0	0.0	1,206,779	25,952	2.1	1,232,731
07/06 - 07/06	2	12	1,278,010	100.0	0	0.0	0	0.0	0	0.0	1,278,010	0	0.0	1,278,010
07/10 - 07/10	3 a		171,167	100.0	0	0.0	0	0.0	0	0.0	171,167	0	0.0	171,167
07/11 - 07/11	4	12	590,759	81.3	0	0.0	0	0.0	0	0.0	590,759	136,329	18.8	727,088
07/13 - 07/13	5	12	600,608	89.7	0	0.0	0	0.0	0	0.0	600,608	69,035	10.3	669,643
07/14 - 07/14	6	12	337,553	90.2	0	0.0	0	0.0	0	0.0	337,553	36,602	9.8	374,155
07/16 - 07/16	7	12	164,727	57.5	0	0.0	0	0.0	0	0.0	164,727	121,898	42.5	286,625
07/17 - 07/17	8	12	180,608	89.7	0	0.0	0	0.0	0	0.0	180,608	20,760	10.3	201,368
07/21 - 07/21	9	12	60,570	65.6	0	0.0	0	0.0	0	0.0	60,570	31,775	34.4	92,345
07/28 - 07/28	10	12	26,645	14.6	13,323	7.3	0	0.0	0	0.0	39,968	142,741	78.1	182,709
07/31 - 07/31	11	12	34,865	20.0	1,835	1.1	0	0.0	0	0.0	36,700	137,625	78.9	174,325
08/04 - 08/04	12	12	2,480	2.2	9,922	8.7	1,240	1.1	0	0.0	13,643	100,458	88.0	114,101
08/07 - 08/07	13	12	7,132	10.6	2,377	3.5	0	0.0	0	0.0	9,510	57,849	85.9	67,359
08/11 - 08/11	14	12	4,290	5.3	858	1.1	0	0.0	0	0.0	5,148	76,368	93.7	81,516
08/14 - 08/14	15	12	3,241	6.1	0	0.0	0	0.0	0	0.0	3,241	50,238	93.9	53,479
08/21 - 08/21	16 <sup>b</sup>	12	0	0.0	144	10.5	0	0.0	0	0.0	144	1,224	89.5	1,368
08/24 - 08/24	17	12	0	0.0	353	10.5	0	0.0	0	0.0	353	2,998	89.5	3,351
08/28 - 08/28	18	12	31	3.4	184	20.7	31	3.4	0	0.0	245	643	72.4	888
08/31 - 08/31	19 <sup>c</sup>	12	19	3.4	113	20.7	19	3.4	0	0.0	150	394	72.4	544
09/05 - 09/05	20 °	14	3	3.4	21	20.7	3	3.4	0	0.0	28	72	72.4	100
09/06 - 09/06	21 <sup>d</sup>										0	0		0
09/07 - 09/07	22 °		1	3.4	4	20.7	1	3.4	0	0.0	5	13	72.4	18
09/08 - 09/08	23 <sup>d</sup>	14									0	0		0
09/09 - 09/09	24 <sup>d</sup>										0	0		0
09/10 - 09/10	25 <sup>d</sup>	14									0	0		0
09/11 - 09/11	26 <sup>d</sup>	14									0	0		0
09/12 - 09/12	27 <sup>d</sup>										0	0		0
09/13 - 09/16	28-31 <sup>d</sup>	86									0	0		0
Total			4,669,489	81.7	29,132	0.5	1,294	0.0	0	0.0	4,699,915	1,012,975	17.7	5,712,890

Proportions from period 2 were used to allocate harvest.

Proportions from period 17 were used to allocate harvest.

Proportions from period 18 were used to allocate harvest.

d No pink salmon were harvested.

**Appendix E21**.—Daily salmon sales, sales summary, and broodstock summary at the Solomon Gulch Hatchery, 2006.

Date	% Female	Pink	Coho
06/23		17,529	
06/24		49,866	
06/25		72,569	
06/26	9.0%	108,247	
06/27		141,762	
06/28		201,029	
06/29		205,475	
06/30	22.0%	287,871	
07/01	29.0%	274,322	
07/02		414,939	
07/03		449,316	
07/05		276,052	
07/06		3,788	
07/07		373,160	
07/08		272,940	
07/09		267,777	
07/10		293,234	
07/12		74,985	
07/15		8,235	
07/25		154	
07/31		2,468	
08/01		2,563	
08/02		2,212	
08/03		2,303	
08/04		2,428	
08/07		2,947	
08/08		2,556	
08/09		3,123	
08/09		3,107	
08/11		9,643	
08/14		4,445	
08/15		2,907	
08/25		8,224	
08/28			
08/29		5,421	
09/01		3,376 4,024	
			1 220
09/05		274	1,338
09/06			1,694
09/07			1,804
09/08			1,666
09/11			1,599
09/12			2,516
09/13			1,008
09/14			2,722
09/18			2,314
10/17		2 955 251	537
Totals		3,855,271	17,198
	Cost Recovery Sales Sun	nmary	
Total Pounds Sold		13,926,917	138,894
Arramana Waiaht		2.61	9.09

13,926,917 13 3.61

8.08

-continued-

Average Weight

**Appendix E21.**–Page 2 of 2.

Broodstock Summary (Including Roe S	Sales)	
Spawned at hatchery	191,164	1,360
System mortalities/Green/bad/excess	57,061	754
Roe Sales (# of Fish) <sup>a</sup>	62,175	5,090
Total broodstock	310,400	7,204
Estimated creek spawners	70,721	341
Estimated unharvested return	100,000	
Estimated return to hatchery	481,121	7,545

<sup>&</sup>lt;sup>a</sup> Salmon (male and female) categorized as "Roe processed/sold," as reported in VFDA 2006.

Appendix E22.—Chum salmon hatchery and wild stock contributions to the Montague District commercial common property fishery by period, 2006.

	Origin										
			W. Noe	renberg	Port Cha	almers	Hatchery	V	Vild		
Dates	Period	Hours	Nr.	Percent	Nr.	Percent	Total	Nr.	Percent	Total	
05/29 - 06/04	1 a	156	258	14.3	1,484	82.1	1,742	65	3.6	1,807	
06/05 - 06/11	2	156	2,308	14.3	13,273	82.1	15,582	577	3.6	16,159	
06/12 - 06/18	3	156	36,913	22.5	125,504	76.4	162,417	1,846	1.1	164,263	
06/19 - 06/25	4	156	0	0.0	98,912	100.0	98,912	0	0.0	98,912	
06/26 - 07/02	5	156	4,990	5.3	88,828	93.7	93,818	998	1.1	94,816	
07/03 - 07/09	6	156	1,241	2.8	40,937	93.0	42,177	1,861	4.2	44,038	
07/10 - 07/16	7	156	0	0.0	19,486	100.0	19,486	0	0.0	19,486	
07/17 - 07/23	8 b	156	0	0.0	6,281	100.0	6,281	0	0.0	6,281	
Total			45,710	10.3	394,705	88.5	440,416	5,347	1.2	445,762	

Proportions from period 2 were used to allocate harvest. Proportions from period 7 were used to allocate harvest.

Appendix E23.-Pink salmon hatchery and wild stock contributions to the Montague District commercial common property fishery by period, 2006.

		_						Origin						
			Solomoi	n Gulch	Canne	ery Creek	W. No	erenberg	A.F.	Koernig	Hatchery	V	Vild	
Dates	Period	Hours	Nr.	Percent	Nr.	Percent	Nr.	Percent	Nr.	Percent	Total	Nr.	Percent	Total
05/29 - 06/04	1 <sup>a</sup>	156									0	0		0
06/05 - 06/11	2 a	156									0	0		0
06/12 - 06/18	3 <sup>b</sup>	156	2	100.0	0	0.0	0	0.0	0	0.0	2	0	0.0	2
06/19 - 06/25	4 <sup>c</sup>	156	346	94.0	0	0.0	0	0.0	0	0.0	346	22	6.0	368
06/26 - 07/02	5	156	108,566	94.0	0	0.0	0	0.0	0	0.0	108,566	6,930	6.0	115,496
07/03 - 07/09	6 <sup>c</sup>	156	16,024	94.0	0	0.0	0	0.0	0	0.0	16,024	1,023	6.0	17,047
07/10 - 07/16	7 °	156	8,308	94.0	0	0.0	0	0.0	0	0.0	8,308	530	6.0	8,838
07/17 - 07/23	8 °	156	2,506	94.0	0	0.0	0	0.0	0	0.0	2,506	160	6.0	2,666
Total			135,752	94.0	0	0.0	0	0.0	0	0.0	135,752	8,665	6.0	144,417

a No pink salmon were harvested.
 b Allocated to Solomon Gulch Hatchery fish.
 c Proportions from period 5 were used to allocate harvest.

Appendix E24.—Pink salmon hatchery and wild stock contributions to the Northern District commercial common property fishery by period, 2006.

		_						Origin						
			Solomo		Cannery	Creek	W. Noere	nberg	<b>A.F.</b> ]	Koernig	Hatchery	Wil	ld	
Dates	Period	Hours	Nr.	Percent	Nr.	Percent	Nr.	Percent	Nr.	Percent	Total	Nr.	Percent	Total
07/10 - 07/10	1	12		8.6	0	0.0	0	0.0	0	0.0	2,347	25,040	91.4	27,387
08/07 - 08/07	2 ª	12	2,843	8.6	0	0.0	0	0.0	0	0.0	2,843	30,329	91.4	33,172
08/11 - 08/11	3 <sup>b</sup>	12	0	0.0	80,712	97.9	0	0.0	0	0.0	80,712	1,717	2.1	82,429
08/14 - 08/14	4	12	0	0.0	37,202	97.9	0	0.0	0	0.0	37,202	792	2.1	37,994
08/19 - 08/19	5	12	2,009	1.1	64,302	33.7	120,567	63.2	0	0.0	186,879	4,019	2.1	190,898
08/20 - 08/20	6	12	0	0.0	131,928	96.9	0	0.0	0	0.0	131,928	4,256	3.1	136,184
08/21 - 08/21	7	12	0	0.0	85,845	63.5	29,553	21.9	0	0.0	115,399	19,702	14.6	135,101
08/22 - 08/22	8	12	0	0.0	50,244	91.5	0	0.0	0	0.0	50,244	4,652	8.5	54,896
08/23 - 08/23	9 °	12	0	0.0	194,555	91.5	0	0.0	0	0.0	194,555	18,014	8.5	212,569
08/24 - 08/24	10 <sup>d</sup>	12	0	0.0	63,384	83.5	2,678	3.5	0	0.0	66,062	9,820	12.9	75,882
08/25 - 08/25	11	12	0	0.0	39,894	83.5	1,686	3.5	0	0.0	41,579	6,181	12.9	47,760
08/26 - 08/26	12 <sup>d</sup>	12	0	0.0	19,771	83.5	835	3.5	0	0.0	20,607	3,063	12.9	23,670
08/27 - 08/27	13	12	0	0.0	10,576	85.3	365	2.9	0	0.0	10,941	1,459	11.8	12,400
08/28 - 08/28	14 <sup>e</sup>	12	0	0.0	17,990	78.9	2,998	13.2	0	0.0	20,988	1,799	7.9	22,787
08/29 - 08/29	15	12	0	0.0	16,282	78.9	2,714	13.2	0	0.0	18,996	1,628	7.9	20,624
08/30 - 08/30	16 <sup>e</sup>	12	0	0.0	139,714	78.9	23,286	13.2	0	0.0	163,000	13,971	7.9	176,971
08/31 - 08/31	17 <sup>e</sup>	12	0	0.0	17,742	78.9	2,957	13.2	0	0.0	20,699	1,774	7.9	22,473
09/01 - 09/01	18 e	12	0	0.0	14,639	78.9	2,440	13.2	0	0.0	17,079	1,464	7.9	18,543
09/02 - 09/02	19 <sup>f</sup>	12									0	0		0
09/03 - 09/03	20 f	12									0	0		0
09/04 - 09/04	21 <sup>f</sup>	12									0	0		0
09/05 - 09/05	22 f	12									0	0		0
09/06 - 09/06	23 <sup>f</sup>	12									0	0		0
09/07 - 09/07	24 <sup>f</sup>	12									0	0		0
09/08 - 09/08	25 f	12									0	0		0
09/09 - 09/09	26 f	12									0	0		0
09/10 - 09/10	27 <sup>f</sup>	12									0	0		0
09/11 - 09/11	28 <sup>f</sup>	12									0	0		0
09/12 - 09/12	29 <sup>f</sup>	12									0	0		0
09/13 - 09/13	30 <sup>f</sup>	12									0	0		0
Total			7,200	0.5	984,781	73.9	190,079	14.3	0	0.0	1,182,060	149,680	11.2	1,331,740

Proportions from period 1 were used to allocate harvest.

Proportions from period 4 were used to allocate harvest.

Proportions from period 8 were used to allocate harvest.

Proportions from period 11 were used to allocate harvest.

Proportions from period 15 were used to allocate harvest.

f No pink salmon were harvested.

**Appendix E25**.—Daily salmon sales and sex ratios, sales summary, and broodstock summary at the Cannery Creek Hatchery, 2006.

Date	% Female	Pink
07/27	11.2%	10,260
07/30	15.3%	3,054
08/01	25.7%	45,972
08/02	21.6%	40,854
08/03	24.5%	119,583
08/04	30.9%	51,055
08/05	33.5%	46,090
08/06	26.4%	182,666
08/07	31.2%	100,285
08/08	31.6%	89,317
08/09	30.1%	49,234
08/10	36.3%	34,377
08/11	25.6%	10,771
08/12	40.7%	42,398
08/13	53.1%	82,082
08/14	46.7%	34,321
08/15	55.8%	27,923
08/16	45.2%	96,586
08/17	49.3%	39,334
08/18	52.6%	58,401
Totals		1,164,563
	Cost Recovery Sales Summary	
Pounds Sold		4,455,023
Average Weight		3.83
Broods	stock Summary (Including Roe Sales)	
Spawned at hatchery		169,818
Excess		103,410
Mortalities		95,838
Roe Sales (# of Fish) <sup>a</sup>		62,854
Total broodstock		431,920
Estimated unharvested return		
<b>Estimated return to hatchery</b>		431,920

<sup>&</sup>lt;sup>a</sup> Salmon (female only) categorized as " Roe processed/sold," as reported in PWSAC 2006.

Appendix E26.-Pink salmon hatchery and wild stock contributions to the Southeastern District commercial common property fishery by period, 2006.

								Origin						
		<u>.</u>	Solon	non Gulch	Cann	ery Creek	W. N	oerenberg	A.F.	Koernig	Hatchery	V	Vild	
Dates	Period	Hours	Nr.	Percent	Nr.	Percent	Nr.	Percent	Nr.	Percent	Total	Nr.	Percent	Total
07/04 - 07/04	1 <sup>a</sup>	12									0	0		0
07/06 - 07/06	2 a	12									0	0		0
07/10 - 07/10	3 <sup>b</sup>	12	1	2.1	0	0.0	0	0.0	0	0.0	1	29		30
07/11 - 07/11	4 <sup>a</sup>	12									0	0		0
07/13 - 07/13	5 <sup>b</sup>	12	10	2.1	0	0.0	0	0.0	0	0.0	10	473	97.9	483
07/14 - 07/14	6 <sup>b</sup>	12	13	2.1	0	0.0	0	0.0	0	0.0	13	591	97.9	604
07/16 - 07/16	7 <sup>a</sup>	12									0	0		0
07/17 - 07/17	8 a	12									0	0		0
07/21 - 07/21	9	12	419	2.1	0	0.0	0	0.0	0	0.0	419	19,673	97.9	20,092
08/14 - 08/14	10 <sup>b</sup>	12	12	2.1	0	0.0	0	0.0	0	0.0	12	584	97.9	596
Total	-		454	2.1	0	0.0	0	0.0	0	0.0	454	21,351	97.9	21,805

No pink salmon were harvested.
 Proportions from period 9 were used to allocate harvest.

**Appendix E27.**—Sockeye salmon hatchery and wild stock contributions to the Southwestern District commercial common property fishery by period, 2006.

		_				Origin				
		_	Gul	kana <sup>a</sup>	Main l		Hatchery _	V	Vild	
<u>Dates</u>	Period	Hours	Nr.	Percent	Nr.	Percent	Total	Nr.	Percent	Total
05/29 - 06/04	1 <sup>b</sup>	156					0	0		0
06/05 - 06/05	2 <sup>b</sup>	12					0	0		0
06/12 - 06/18	3 °	156	0	0.0	27	100.0	27	0	0.0	27
06/19 - 06/25	4	156	0	0.0	4,859	100.0	4,859	0	0.0	4,859
06/26 - 07/02	5 °	156	0	0.0	2,879	100.0	2,879	0	0.0	2,879
07/03 - 07/09	6	156	0	0.0	5,060	100.0	5,060	0	0.0	5,060
07/10 - 07/16	7 °	156	0	0.0	2,379	100.0	2,379	0	0.0	2,379
07/17 - 07/23	8 °	156	0	0.0	172	100.0	172	0	0.0	172
08/19 - 08/19	9 °	12	0	0.0	253	100.0	253	0	0.0	253
08/20 - 08/20	10 °	12	0	0.0	2,301	100.0	2,301	0	0.0	2,301
08/21 - 08/21	11 °	12	0	0.0	357	100.0	357	0	0.0	357
08/22 - 08/22	12 °	12	0	0.0	948	100.0	948	0	0.0	948
08/23 - 08/23	13 °	12	0	0.0	886	100.0	886	0	0.0	886
08/24 - 08/24	14 <sup>c</sup>	12	0	0.0	1,204	100.0	1,204	0	0.0	1,204
08/25 - 08/25	15 °	12	0	0.0	574	100.0	574	0	0.0	574
08/26 - 08/26	16 <sup>c</sup>	12	0	0.0	844	100.0	844	0	0.0	844
08/27 - 08/27	17 °	12	0	0.0	309	100.0	309	0	0.0	309
08/28 - 08/28	18 <sup>c</sup>	12	0	0.0	276	100.0	276	0	0.0	276
08/29 - 08/29	19 °	12	0	0.0	130	100.0	130	0	0.0	130
08/30 - 08/30	20 °	12	0	0.0	246	100.0	246	0	0.0	246
08/31 - 08/31	21 °	12	0	0.0	162	100.0	162	0	0.0	162
09/01 - 09/01	22 °	12	0	0.0	279	100.0	279	0	0.0	279
09/02 - 09/02	23 °	12	0	0.0	18	100.0	18	0	0.0	18
09/03 - 09/03	24 °	12	0	0.0	21	100.0	21	0	0.0	21
09/04 - 09/04	25 °	12	0	0.0	27	100.0	27	0	0.0	27
09/05 - 09/05	26 <sup>b</sup>	12								0
09/06 - 09/06	27 b	12								0
09/07 - 09/07	28 b	12								0
09/08 - 09/08	29 <sup>b</sup>	12								0
09/09 - 09/09	30 °	12	0	0.0	4	100.0	4	0	0.0	4
09/10 - 09/10	31 <sup>b</sup>	12								0
09/11 - 09/11	32 b	12								0
09/12 - 09/12	33 <sup>b</sup>	12								0
09/13 - 09/13	34 <sup>b</sup>	12								0
Total			0	0.0	24,215	100.0	24,215	0	0.0	24,215

<sup>&</sup>lt;sup>a</sup> The Gulkana Hatchery contribution is assumed to be zero based on historical data. No samples were examined for strontium chloride marks.

b No sockeye salmon were harvested.

<sup>&</sup>lt;sup>c</sup> Proportions from period 4 were used to allocate harvest.

Appendix E28.-Pink salmon hatchery and wild stock contributions to the Southwestern District commercial common property fishery by period, 2006.

	<u>Origin</u>													
		_	Solome	on Gulch	Cannery	Creek	W. Noer	enberg	A.F. Ko	ernig	Hatchery	Wi	ld	
Dates	Period	Hours	Nr.	Percent	Nr.	Percent	Nr.	Percent	Nr.	Percent	Total	Nr.	Percent	Total
05/29 - 06/04	1 a	156									0	0		0
06/05 - 06/05	2 a	12									0	0		0
06/12 - 06/18	3 a	156									0	0		0
06/19 - 06/25	4 <sup>b</sup>	156	0	0.0	6	4.3	7	5.3	111	83.0	124	10	7.4	134
06/26 - 07/02	5 b	156	0	0.0	88	4.3	110	5.3	1,723	83.0	1,922	155	7.4	2,077
07/03 - 07/09	6 b	156	0	0.0	115	4.3	143	5.3	2,233	83.0	2,491	200	7.4	2,691
07/10 - 07/16	7 b	156	0	0.0	95	4.3	119	5.3	1,850	83.0	2,063	166	7.4	2,229
07/17 - 07/23	8 b	156	0	0.0	120	4.3	150	5.3	2,340	83.0	2,610	210	7.4	2,820
08/19 - 08/19	9	12	0	0.0	11,397	4.3	14,246	5.3	222,235	83.0	247,878	19,944	7.4	267,822
08/20 - 08/20	10	12	0	0.0	24,532	4.3	55,196	9.6	429,303	74.5	509,031	67,462	11.7	576,493
08/21 - 08/21	11		2,494	1.1	17,461	7.4	59,865	25.3	147,167	62.1	226,987	9,977	4.2	236,964
08/22 - 08/22	12	12	- ,	1.0	21,488	7.3	30,697	10.4	224,091	76.0	279,346	15,349	5.2	294,695
08/23 - 08/23	13	12	0	0.0	26,574	9.4	47,243	16.7	174,210	61.5	248,028	35,433	12.5	283,460
08/24 - 08/24	14	12	0	0.0	20,409	6.5	54,423	17.2	200,686	63.4	275,518	40,817	12.9	316,335
08/25 - 08/25	15	12	0	0.0	20,553	12.5	27,405	16.7	106,192	64.6	154,150	10,277	6.3	164,427
08/26 - 08/26	16	12	0	0.0	25,147	8.4	47,151	15.8	204,322	68.4	276,620	22,004	7.4	298,624
08/27 - 08/27	17	12	0	0.0	10,801	6.3	30,603	17.9	120,611	70.5	162,014	9,001	5.3	171,015
08/28 - 08/28	18	12	0	0.0	7,791	4.2	23,372	12.6	148,026	80.0	179,189	5,843	3.2	185,032
08/29 - 08/29	19	12	1,212	1.0	2,425	2.1	10,911	9.4	99,410	85.4	113,958	2,425	2.1	116,383
08/30 - 08/30	20	12	0	0.0	6,781	9.6	7,535	10.6	55,004	77.7	69,320	1,507	2.1	70,827
08/31 - 08/31	21 °	12	0	0.0	8,338	9.6	9,265	10.6	67,631	77.7	85,234	1,853	2.1	87,087
09/01 - 09/01	22 °	12	0	0.0	7,833	9.6	8,703	10.6	63,532	77.7	80,067	1,741	2.1	81,808
09/02 - 09/02	23 °	12	0	0.0	4,063	9.6	4,514	10.6	32,953	77.7	41,530	903	2.1	42,433
09/03 - 09/03	24 <sup>c</sup>	12	0	0.0	3,382	9.6	3,758	10.6	27,433	77.7	34,573	752	2.1	35,325
09/04 - 09/04	25 °	12	0	0.0	2,613	9.6	2,903	10.6	21,192	77.7	26,707	581	2.1	27,288
09/05 - 09/05	26 a	12									0	0		0
09/06 - 09/06	27 a	12									0	0		0
09/07 - 09/07	28 <sup>a</sup>	12									0	0		0
09/08 - 09/08	29 a	12									0	0		0
09/09 - 09/09	30 °	12	0	0.0	294	9.6	326	10.6	2,383	77.7	3,003	65	2.1	3,068
09/10 - 09/10	31 <sup>a</sup>	12									0	0		0
09/11 - 09/11	32 <sup>a</sup>	12									0	0		0
09/12 - 09/12	33 <sup>a</sup>	12									0	0		0
09/13 - 09/13	34 <sup>a</sup>	12									0	0		0
Total			6,776	0.2	222,304	6.8	438,645	13.4	2,354,638	72.0	3,022,364	246,673	7.5	3,269,037

a No pink salmon were harvested.
 b Proportions from period 9 were used to allocate harvest.

<sup>&</sup>lt;sup>c</sup> Proportions from period 20 were used to allocate harvest.

**Appendix E29.**—Daily salmon sales and sex ratios, sales summary, and broodstock summary at the Armin F. Koernig Hatchery, 2006.

Date	% Female	Pink
07/24	9.5%	14,535
07/25	3.7%	13,577
07/26	8.2%	36,727
07/27	13.0%	14,223
07/28	10.1%	35,827
07/29	11.2%	40,718
07/30	12.6%	62,736
07/31	18.4%	43,256
08/01	20.7%	79,984
08/02	23.0%	35,868
08/03	23.4%	21,891
08/04	19.3%	18,144
08/05	24.0%	149,392
08/06	32.9%	78,809
08/07	32.0%	85,121
08/08	30.2%	73,451
08/09	35.5%	91,251
08/10	38.2%	81,392
08/11	48.5%	189,517
08/12	44.4%	130,738
08/13	47.2%	191,682
08/14	49.3%	113,776
08/15	48.6%	185,138
08/16	50.9%	181,024
08/17	51.5%	180,215
08/18	47.8%	243,755
Total		2,392,747
	Cost Recovery Sales Summary	
Pounds Sold	Cost 2000 (02 y Suite Summing)	8,928,150
Average Weight		3.75
	<b>Broodstock Summary (Including Roe Sales)</b>	
Fish spawned at hatchery		198,038
Excess		76,716
Mortalities		125,865
Roe Sales (# of Fish) <sup>a</sup>		59,051

Total broodstock

Estimated unharvested return Estimated return to hatchery

459,670

459,670

<sup>&</sup>lt;sup>a</sup> Salmon (male and female) categorized as "Roe processed/sold," as reported in VFDA 2006.

## **APPENDIX F**

**Appendix F1.**—Salmon harvest and effort in the Copper River District subsistence drift gillnet fishery, 1965–2006.

		Per	mits			Harvesta		
Year	Issued	Returned	Fished	Not fished <sup>b</sup>	Chinook	Sockeye	Coho	Total
1965	31	20	15	5	12	459	85	556
1966	45	31	21	10	47	175	0	222
1967	61	56	37	19	83	153	0	236
1968	17	15	7	8	11	36	0	47
1969	49	33	20	13	16	63	85	164
1970	32	27	24	3	66	179	0	245
1971	29	26	17	9	10	32	4	46
1972	104	80	75	5	149	569	53	771
1973	94	89	89	N/A	153	326	180	659
1974	9	5	3	2	5	4	2	11
1975	2	2	2	N/A	0	5	0	5
1976	27	14	14	N/A	1	10	0	11
1977	23	22	22	N/A	10	71	0	81
1978	34	28	9	19	37	18	12	67
1979	49	41	21	20	45	26	17	88
1980	39	35	18	17	19	27	17	63
1981	72	51	30	21	48	145	104	297
1982	108	90	48	42	60	634	106	800
1983	87	73	31	42	79	107	57	243
1984	118	104	57	47	68	324	135	527
1985	94	94	67	27	88	261	83	432
1986	88	85	57	28	86	348	47	481
1987	95	89	39	50	49	359	14	422
1988	114	97	57	40	59	226	42	327
1989	75	64	32	32	56	339	51	446
1990	88	76	40	39	60	469	82	611
1991	129	115	71	44	136	830	38	1,004
1992	126	114	67	47	142	785	42	969
1993	111	93	50	43	120	428	29	577
1994	101	97	60	37	164	474	67	705
1995	126	113	72	41	154	692	31	877
1996	176	158	101	57	276	969	47	1,292
1997	269	243	165	78	200	1,001	1,777	2,978
1998	245	231	144	87	295	850	680	1,825
1999	294	275	175	100	353	1,330	682	2,365
2000	416	400	293	107	689	4,360	44	5,093
2001	468	439	288	151	826	3,072	70	3,968
2002	355	331	199	132	549	3,067	28	3,644
2003	384	365	225	140	710	1,607	36	2,353
2004	511	482	321	161	1,106	1,822	46	2,974
2005	237	224	121	103	260	830	15	1,105
10-Year Averag	e 336	315	203	112	526	1,891	343	2,760
2006	421	399	300	121	779	4,355	1	5,135

a Reported harvest only.

<sup>&</sup>lt;sup>b</sup> As reported 'Not Fished' on returned permits.

Appendix F2.—Salmon harvest and effort in the Prince William Sound subsistence fishery, 1965–2006.

		Per	mits		Harvest <sup>a</sup>							
Year	Issued	Returned	Fished	Not fished <sup>b</sup>	Chinook	Sockeye	Coho	Pink	Chum	Unk.	Total	
1965	22	16			0	0		179	25	0	204	
1966	3	3			0	3	19	20	50	0	92	
1967	4	3			0	0	4	4	0	0	8	
1968	4	3			0	0	20	156	0	22	198	
1969	7	3			0	0	16	0	0	0	16	
1970	1	1			0	0	0	0	0	0	0	
1971	3	2			0	0	0	46	0	0	46	
1972	0	0			0	0	0	0	0	0	0	
1973	19	16			0	0	289	0	0	0	289	
1974	3	1			0	0	0	0	0	0	0	
1975	2	0			0	0	0	0	0	0	0	
1976	0	0			0	0	0	0	0	0	0	
1977	4	4			0	0	0	0	0	0	0	
1978	3	2			0	0	0	0	0	0	0	
1979	15	2			0	0	0	0	0	0	0	
1980	26	15			0	7	6	0	0	0	13	
1981	12	8			0	3	29	0	2	0	34	
1982	35	27			0	84	4	31	24	0	143	
1983	26	21			0	22	36	9	79	0	146	
1984	8	8			0	10	0	11	2	0	23	
1985	22	16			1	27	16	14	26	0	84	
1986	25	14			0	5	15	0	0	0	20	
1987	18	17			5	31	6	0	16	0	58	
1988	7	7			2	51	7	10	9	0	79	
1989	11	7			0	0	0	0	3	0	3	
1990	8	7			0	0	7	4	0	0	11	
1991	9	5	2	3	0	2	0	0	0	0	2	
1992	10	6	1	5	0	20	0	0	0	0	20	
1993	6	6	4	2	1	104	10	0	0	0	115	
1994	5	4	2	2	0	0	0	0	0	0	0	
1995	4	2	0	2	0	0	0	0	0	0	0	
1996	10	7	0	7	0	0	0	0	0	0	0	
1997	4	3	1	2	0	3	0	0	0	0	3	
1998	4	3	0	3	0	0	0	0	0	0	0	
1999	3	3	0	3	0	0	0	0	0	0	0	
2000	3	3	0	3	0	0	0	0	0	0	0	
2001	5	5	0	5	0	0	0	0	0	0	0	
2002	11	9	2	7	0	31	0	9	7	0	47	
2003	3	3	0	3	0	48	0	0	3	0	51	
2004	12	11	5	6	0	8	0	0	3	0	11	
2005	14	13	1	12	0	4	0	0	0	0	4	
10-Year Average	7	6		5 #		9	0	1	1	0	12	
2006	11	9	2	7	0	20	0	30	0	0	50	

<sup>&</sup>lt;sup>a</sup> Includes harvest from Prince William Sound Area, exclusive of the Copper River District and customary and traditional subsistence locations within PWS. Reported harvest only.

<sup>&</sup>lt;sup>b</sup> As reported 'Not Fished' on returned permits.

**Appendix F3.**—"Home Pack" salmon harvest by district, species, and gear type, in the Prince William Sound Management Area, 2006.

District	Permits	Landings	Gear Type	Chinook <sup>a</sup>	Sockeye	Coho	Pink	Chum
Copper River	264	526	Drift gillnet	779	1,539	137	3	3
Bering River	2	2	Drift gillnet	0	1	10	0	0
PWS <sup>b</sup>	4	5	Drift and set gillnet, purse seine	0	129	0	0	1
Total	270	533		779	1,669	147	3	4

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.

<sup>&</sup>lt;sup>b</sup> Coghill, Eshamy, and Southwestern Districts.

**Appendix F4.**—Salmon harvest and effort in the Tatitlek and Chenega subsistence fisheries, 1988–2006.

		Pe	rmits					Hai	rvest <sup>a</sup>			
Year	Issued	Returned	Fished	Not fished	d <sup>b</sup> Chin	ook	Sockeye	Coho	Pink	Chum	Unk.	Total
					Tatitlek							
1988	17	13	9	4		2	210	211	143	245	0	811
1989	14	10	7	3		1	107	653	33	43	0	837
1990	13	6	3	3		0	5	241	10	4	0	260
1991	17	10	7	3		0	107	984	320	28	0	1,439
1992	16	7	5	2		2	441	369	30	49	0	891
1993	18	11	7	4		2	512	305	144	74	180	1,217
1994	14	5	4	1		0	50	143	50	70	0	313
1995	15	3	0	3								
1996	6	3	1	2		0	0	38	0	0	0	38
1997	6	4	3	1		0	107	45	0	54	0	206
1998	11	4	3	1		0	2	321	4	28	0	355
1999	17	10	8	2		0	344	541	31	31	0	947
2000	12	3	3	0		0	140	468	40	40	0	688
2001	14	9	8	1		0	114	230	60	12	0	416
2002	19	6	5	1		0	375	136	28	36	0	575
2003	15 <sup>f</sup>	8	6	2		0	81	185	20	12	0	298
2004	18	12	9	3		2	322	315	46	28	0	713
2005	16	3	2	1		0	98	286	200	16	0	600
10-Year		_	_				4.50			•		40.4
Average	13	6	5		1	0	158	257	43	26	0	484
2006	12	2	1	1	~	0	3	18	35	25	0	81
1000	10				Chenega		<b>50</b>		251	20.4		
1988	10	6	5	1		1	50	8	251	294	0	604
1989	8	7	7	0		0	322	0	554	180	0	1,056
1990	7	4	2	2		1	36	5	20	2	0	64
1991	12	7	4	3		3	345	42	195	53	0	638
1992	14	6	6	0		1	526	23	313	99	0	962
1993	22	19	17	2		2	875	60	232	124	0	1,293
1994	16	10	8	2		5	192	77	402	161	0	837
1995	10	7	5	2		2	152	67	67	41	0	329
1996	7	6	4	2		0	135	9	125	46	0	315
1997	5	4	4	0		44	193	30	110	272	0	649
1998	4	3	3	0		13	114	20	65	119	0	331
1999	14	10	7	3		57	499	62	168	101	0	887
2000	12	8	6	2		24	39	229	211	143	0	646
2001	16	9	8	1		2	119	92	95	146	0	454
2002	10	5	4	1		10	142	123	83	60	0	418
2003	13	7	5	2		6	219	156	149	147	0	677
2004	8	5	4	1		3	535	44	56 124	84	0	722
2005 <b>10-Year</b>	13	8	6	2		10	516	84	124	174	0	908
Average	10	7	5		1	17	251	85	119	129	0	601
2006	11	6	4	2		0	159	1	28	111	0	299
1 Deported			<u> </u>				107					

<sup>&</sup>lt;sup>a</sup> Reported harvest only.

b As reported 'Not Fished' on returned permits.

**Appendix F5.**—Salmon harvest by species and numbers of permits by gear type for the Upper Copper River subsistence and personal use fisheries, 1981–2006.

		Number	Permits Is	sued	Repo	rted Harvest	a		Report	ed Harve	st by Target Speci	es
	Fishery		Fish			% Fish						
Year	or Subdistrict	Dip Net	Wheel	Total	% Dip Net	Wheel	Total	Chinook	Sockeye	Coho	Reported Total	<b>Estimated Total</b>
1981	Subsistence	3,555	523	4,078	52%	48%	55,796	1,913	53,008	849	55,770	68,654
1982	Subsistence	5,475	615	6,090	62%	38%	100,734	2,532	96,799	1,246	100,577	109,557
1983	Subsistence	6,911	630	7,541	67%	33%	108,228	5,421	100,995	1,690	108,106	118,599
1984	Subsistence	104	458	562	6%	94%	20,597	366	20,101	120	20,587	28,715
	Personal use	5,311	17	5,328	100%		47,306	1,641	44,977	669	47,287	50,734
	Total	5,415	475	5,890	70%	30%	67,903	2,007	65,078	789	67,874	79,449
1985	Subsistence	4,153	533	5,686	57%	43%	52,733	1,673	50,488	544	52,705	64,164
1986	Subsistence b	39	366	405	3%	97%	25,781	622	24,890	264	25,776	28,423
	Personal use	3,966	65	4,031	98%	2%	42,695	2,294	39,794	521	42,609	44,047
	Total	4,005	431	4,436	62%	38%	68,476	2,916	64,684	785	68,385	72,470
1987	Subsistence b	59	372	431	4%	96%	25,271	531	21,615	105	22,251	34,142
	Personal use	4,186	73	4,259	99%	1%	43,449	2,749	40,285	393	43,427	46,908
	Total	4,245	445	4,690	64%	36%	68,720	3,280	61,900	498	65,678	81,050
1988	Subsistence	70	339	409	9%	91%	21,481	693	20,391	260	21,344	30,755
	Personal use	4,205	46	4,251	97%	3%	41,721	2,724	38,514	456	41,694	45,855
	Total	4,275	385	4,660	68%	32%	63,202	3,417	58,905	716	63,038	76,610
1989	Subsistence	78	308	386	8%	92%	27,732	745	26,835	65	27,645	29,308
	Personal use	4,447	137	4,584	94%	6%	56,769	2,168	53,722	825	56,715	58,941
	Total	4,525	445	4,970	66%	34%	84,501	2,913	80,557	890	84,360	88,249
1990	Subsistence	95	311	406	9%	91%	30,663	610	29,947	87	30,644	32,524
	Personal use	5,631	58	5,689	99%	1%	68,277	2,611	64,054	1,457	68,122	70,812
	Total	5,726	369	6,095	71%	29%	98,940	3,221	94,001	1,544	98,766	103,336
1991	Subsistence	293	418	711	16%	84%	37,761	1,217	36,289	213	37,719	41,205
	Personal use	6,222	NA	6,222	100%		82,767	3,947	75,499	3,264	82,710	85,059
	Total	6,515	418	6,933	74%	26%	120,528	5,164	111,788	3,477	120,429	126,264
1992	Subsistence	151	504	655	10%	90%	44,448	1,368	42,689	330	44,387	47,095
	Personal use	6,387	NA	6,387	100%		89,840	3,337	84,981	1,487	89,805	91,683
	Total	6,538	504	7,042	70%	30%	134,288	4,705	127,670	1,817	134,192	138,778

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		Number	Permits Is	ssued	Repo	rted Harvest	a		Report	ed Harve	est by Target Speci	es
	Fishery		Fish			% Fish						
Year	or Subdistrict	Dip Net	Wheel	Total	% Dip Net	Wheel	Total	Chinook	Sockeye	Coho	Reported Total	<b>Estimated Total</b>
1993	Subsistence	14	759	773	1%	99%	50,044	1,308	48,582	70	49,960	54,854
	Personal use	7,914	NA	7,914	100%		93,747	2,729	89,629	1,358	93,716	97,767
	Total	7,928	759	8,687	65%	35%	143,791	4,037	138,211	1,428	143,676	152,621
1994	Subsistence	267	703	970	10%	90%	64,658	1,827	62,717	55	64,599	70,391
	Personal use	7,061	NA	7,061	100%		95,903	3,596	90,332	1,903	95,831	99,822
	Total	7,328	703	8,031	64%	36%	160,561	5,423	153,049	1,958	160,430	170,213
1995	Subsistence	191	665	856	7%	93%	51,517	1,762	48,903	821	51,486	55,323
	Personal use	6,760	NA	6,760	100%		85,997	4,568	76,670	4,726	85,964	88,617
	Total	6,951	667	7,616	65%	35%	137,514	6,330	125,573	5,547	137,450	143,940
1996	Subsistence	219	631	850	11%	89%	50,843	1,388	48,747	522	50,657	54,290
	Personal use	7,198	NA	7,198	100%		99,511	3,493	92,590	3,295	99,378	102,108
	Total	7,417	631	8,048	70%	30%	150,354	4,881	141,337	3,817	150,035	156,398
1997	Subsistence	286	847	1,133	10%	90%	80,961	2,439	78,188	177	80,804	85,744
	Personal use	9,086	NA	9,086	100%		151,842	5,359	146,311	157	151,827	154,349
	Total	9,372	847	10,219	69%	31%	232,803	7,798	224,499	334	232,631	240,093
1998	Subsistence	272	738	1,010	13%	87%	63,633	1,751	61,268	507	63,526	66,951
	Personal use	10,006	NA	10,006	100%		143,027	6,583	134,299	2,100	142,982	146,075
	Total	10,278	738	11,016	73%	27%	206,660	8,334	195,567	2,607	206,508	213,026
1999	Subsistence	336	766	1,104	12%	88%	76,391	3,058	72,901	292	76,251	82,119
	Personal use	9,943	NA	9,943	100%		145,853	5,758	137,945	2,117	145,820	149,779
	Total	10,279	766	11,047	70%	30%	222,244	8,816	210,846	2,409	222,071	231,898
2000	Glennallen Subdistrict	464	787	1,251	14%	86%	63,739	4,782	58,241	511	63,534	64,885
	Chitina Subdistrict <sup>c</sup>	8,151	NA	8,151	100%		110,095	3,037	103,329	3,540	109,906	114,681
	Total	8,615	787	9,402	69%	31%	173,834	7,819	161,570	4,051	173,440	179,566
2001	Glennallen Subdistrict	408	832	1,240	11%	89%	83,668	3,373	79,117	1,101	83,591	88,578
	Chitina Subdistrict <sup>c</sup>	9,462	NA	9,462	100%		126,866	2,803	121,304	2,385	126,492	138,425
	Total	9,870	832	10,702	64%	36%	210,534	6,176	200,421	3,486	210,083	227,003
2002	Glennallen Subdistrict	460	662	1,122	14%	86%	51,866	3,424	47,892	524	51,840	55,059
	Chitina Subdistrict c	6,805	NA	6,805	100%		79,472	1,745	75,747	1,712	79,204	90,241
	Total	7,265	662	7,927	66%	34%	131,338	5,169	123,639	2,236	131,044	145,300

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	Number Permits Issued		Repor	ted Harves	t <sup>a</sup>		Report	ed Harv	est by Target Species			
	Fishery		Fish			% Fish						Estimated
Year	or Subdistrict	Dip Net	Wheel	Total	% Dip Net	Wheel	Total	Chinook	Sockeye	Coho	Reported Total	Total
2003	Glennallen Subdistrict	399	613	1,012	14%	86%	47,054	2,585	47,719	487	50,791	50,892
	Chitina Subdistrict d	6,418	NA	6,418	100%	0%	84,686	1,870	80,134	2,409	84,413	84,686
	Total	6,817	613	7,430	67%	33%	131,740	4,455	127,853	2,896	135,204	135,578
2004	Glennallen Subdistrict	330	626	956	9%	91%	122,318	3,166	52,130	76	55,372	59,497
	Chitina Subdistrict d	8,153	NA	8,153	100%	0%	159,950	2,108	93,182	2,304	97,594	113,163
	Total	8,483	626	9,109			282,268	5,274	145,312	2,380	152,966	172,660
2005	Glennallen Subdistrict	363	598	961	10%	90%	86,593	2,080	60,966	97	63,143	66,615
	Chitina Subdistrict d	8,230	NA	8,230	100%	0%	125,721	1,773	106,797	1,562	110,132	123,925
	Total	8,593	598	9,191			212,314	3,853	167,763	1,659	173,275	190,540
1996-2005	Glennallen Subdistrict	354	710	1,064	12%	88%	72,707	2,805	60,717	429	63,951	67,463
10-yr	Chitina Subdistrict d	8,345	0	8,345	100%	0%	122,702	3,453	109,164	2,158	114,775	121,743
Average	Total	8,699	710	9,409			195,409	6,258	169,881	2,588	178,726	189,206
2006	Glennallen Subdistrict	338	646	984	12%	88%	60,775	2,770	57,710	212	60,692	61,148
	Chitina Subdistrict d	8,633	NA	8,633	100%	0%	129,103	2,663	123,261	2,715	128,639	125,966
	Total	8,971	646	9,617			189,878	5,433	180,971	2,927	189,331	187,114
									3,262,484		3,438,024	

Includes all reported species.
 Subsistence dip net catch estimated.
 State personal use in the Chitina Subdistrict was changed to subsistence in 2000.
 State subsistence in the Chitina Subdistrict was changed to personal use in 2003.

**Appendix F6.**—Salmon harvest and effort in the PWS and upper Copper River Federal subsistence harvests, 2002–2006.

		Pe	rmits		Reported Harvest <sup>a</sup>						
Year	Issued	Returned	Fished	Not fished <sup>b</sup>	Chinook	Sockeye	Coho	Total			
				Chitina S	Subdistrict						
2002	122	89	NA	NA	33	575	0	608			
2003	120	82	NA	NA	18	717	70	805			
2004	109	81	NA	NA	9	1,550	18	1,577			
2005	75	51	NA	NA	10	746	0	756			
2006	76	49	NA	NA	13	1,379	20	1,412			
				Glennallen	Subdistrict						
2002	201	162	NA	NA	564	7,950	81	8,595			
2003	221	182	NA	NA	554	13,616	152	14,322			
2004	262	205	NA	NA	634	17,609	152	18,395			
2005	249	140	NA	NA	265	14,446	70	14,781			
2006	254	171	NA	NA	430	16,711	28	17,169			
				PWS/Chugao	ch Subdistrict <sup>c</sup>						
2005	46	45	22	23	0	109 <sup>d</sup>	141 <sup>d</sup>	0			
2006	49	48	23	25	0	150	100	250			
				Total federal sul	bsistence harvests	<b>.</b>					
2002	323	251	NA	NA	597	8,525	81	9,203			
2003	341	264	NA	NA	572	14,333	222	15,127			
2004	371	286	NA	NA	643	19,159	170	19,972			
2005	370	236	NA	NA	275	15,192	70	15,537			
2006	379	268	NA	NA	443	18,240	148	18,831			

a Reported harvest only.

<sup>&</sup>lt;sup>b</sup> As reported 'Not Fished' on returned permits.

<sup>&</sup>lt;sup>c</sup> All harvests were from Copper River delta unless otherwise noted.

d Fifteen coho and six sockeye salmon harvested in PWS.

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Appendix F7.—Subsistence and personal use salmon harvest by species and gear type, Prince William Sound and Upper Copper River, 2006.

		Per	mits					На	arvest			
Area	Issued	Returned	Fished	Not fished <sup>a</sup>	Gear Type	Chinook b	Sockeye b	Coho b	Pink b	Chum b	Other <sup>c</sup>	Total
Prince William Sound	11	9	2	7	Drift gillnet	0	20	30	0	0	0	50
Copper River District	421	399	300	121	Drift gillnet	779	4,355	1	0	0	1	5,136
Upper Copper River	9,538	7,695			Dip net and fish wheel	5,433	180,971	2,927	0	0	547	189,878
Eastern/Northern Districts	12	3	1		Drift gillnet, purse seine, and dip net	0	3	18	35	25	0	81
Southwestern District	11	3	4		Drift gillnet, purse seine, and dip net	0	159	1	28	111	0	299
Batzulnetas	0	0	0	0	Dip net, fish wheel, spear	0	0	0	0	0	0	0
Federal subsistence harvests (Chitina, Glennallen, PWS/C	379 (hugach)		NA	NA	Dip net, spear, fish wheel	443	18,240	148	0	0	0	18,831
Total	10,372	8,377	307	132		6,655	203,748	3,125	63	136	548	214,275

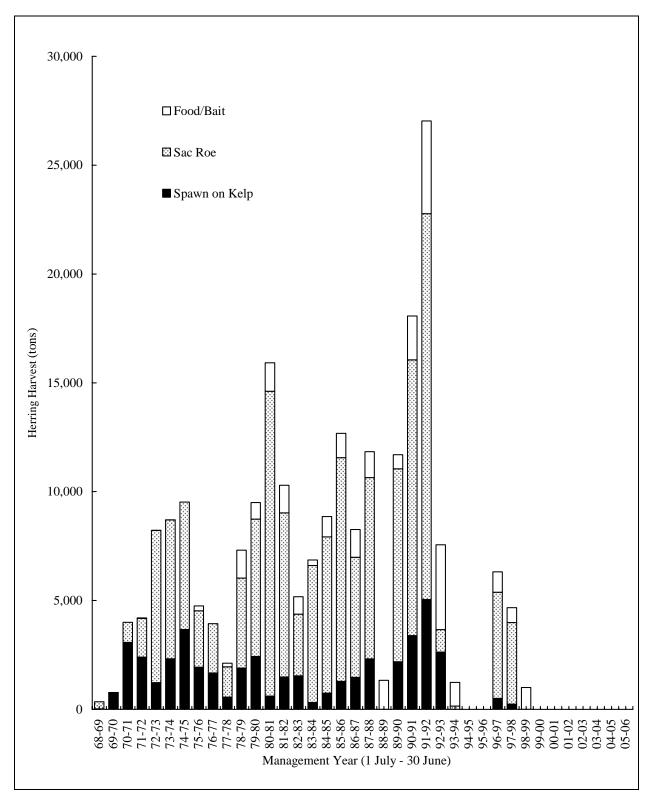
As reported 'Not Fished' on returned permits.

Reported harvest only.

<sup>&</sup>lt;sup>c</sup> Includes steelhead, whitefish, flounder, and Dolly Varden.

# **APPENDIX G**

**Appendix G1.**–Prince William Sound commercial Pacific herring harvest by management year and fishery, 1968–2006.



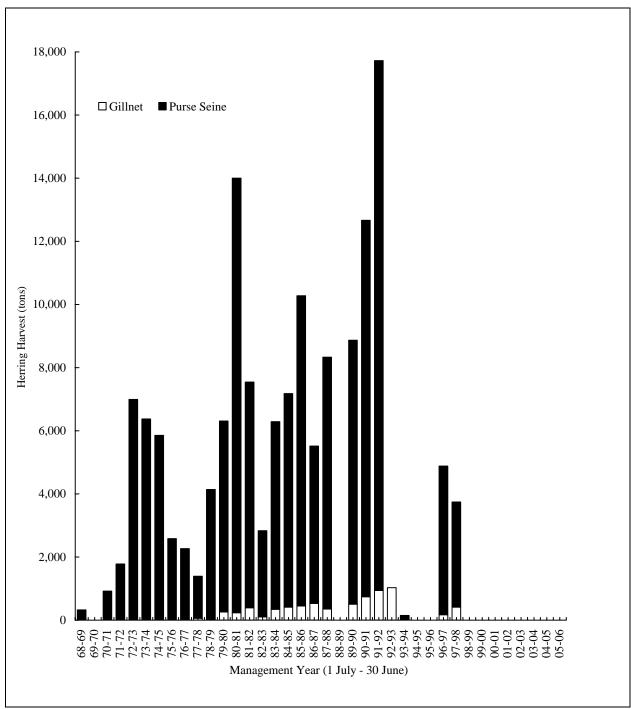
Appendix G2.—Pacific herring sac roe purse seine and drift gillnet fishery effort, anticipated harvest, and actual harvest, 1969–2006.

-				se Seine Fish	ery					Drift	Gillnet Fis	hery			Total
Calendar	Opening		Effort	Guideline	Harvest		Estimated	Opening			Guideline			Estimated	Harvest
Year	Dates	Hours	` '	Harvest a	(tons)	(tons/Boat Hr)	Roe %	Dates	Hours	(Boats)	Harvest a	(tons)	(tons/Boat Hr)	Roe %	(tons)
1969	03/01 - 06/30		5		325.4										325.4
1970	03/01 - 06/30														
1971	03/01 - 06/30		12		919.2										919.2
1972	03/01 - 06/30		18		1,777.2										1,777.2
1973	04/23 - 05/09		31		6,991.9										6,991.9
1974	04/10 - 04/17		72		6,371.0			04/10 - 04/17		3		3.8			6,374.8
1975	04/15 - 04/22	14.0	76		5,853.8	5.50			14.0						5,853.8
1976	05/08 & 06/01	13.0	66		2,584.2	3.01			13.0						2,584.2
1977	04/09 - 04/10	38.0	58		2,265.6	1.03		04/09 - 04/10	38.0	1		1.6	0.04		2,267.1
1978	04/17 - 04/21 <sup>b</sup>	106.0	75	5,000	1,329.5	0.17		04/17 - 04/21	106.0	38		61.7	0.02		1,391.2
1979	04/07 - 04/19	215.5	89	5,000	4,138.0	0.22		CLOSED °							4,138.0
1980	04/01 - 04/09	162.0	76	5,000	6,042.2	0.49		04/17 - 05/05		16		264.4			6,306.7
1981	04/01 - 04/09	60.0	106	5,000	13,768.2	2.16		04/16 - 04/18	53.0	18		234.5	0.25		14,002.8
1982	04-23	2.0	95	5,000	7,148.3	37.62	10-14%	04/24 - 04/26	54.0	18		393.9	0.41	12-15%	7,542.2
1983	04-13	1.0	103 <sup>d</sup>	5,000	2,728.5	26.49	11.0%	04/21 - 04/22	24.0	22		105.4	0.20	11.0%	2,833.9
1984	04-14	3.0	105 <sup>e</sup>	5,000	5,946.1	18.88	10-11%	04/18 - 04/22	59.0	23	250	342.7	0.25	8-14%	6,288.8
1985	04/28 - 04/29	4.0	103 <sup>f</sup>	5,000	6,764.1	16.42	10-12%	04/29 - 05/01	34.0	21	250	413.3	0.58	10-12%	7,177.4
1986	04-17	3.0	106	5-7,000	9,828.1	30.91	11.0%	04/24 - 04/28	90.0	24	3-400	448.6	0.21	11.4%	10,276.7
1987	04/08 - 04/09	1.5	96	3-5,000	4,982.2	34.60	10.0%	04/10 - 04/11	24.0	24	2-300	533.3	0.93	9.5%	5,515.5
1988	04/21 - 04/22	2.0	105	4-5,000	7,977.3	37.99	10.5%	04-23	5.5	24	275	353.0	2.67	10.0%	8,330.3
1989	Season Closed g			6,400							375				0
1990	04/12	0.3	96	6,038	8,362.1	290.35	10.0%	04/13	4.0	24	353	505.4	5.26	10.6%	8,867.5
1991	04/09, 04/10, & 04/19	1.3	104	11,233	11,923.0 h	85.32	10.5%	04/18	10.5	24	657	742.0	2.94	11.06%	12,665.1
1992	04/13, 04/17, & 04/21	2.0	104	14,100	16,784.2 i	80.69	10.0%	04/23 - 04/24	11.0	24	825	940.6	3.56	10.8%	17,724.8
1993	No Harvest			15,586				04/15, 04/17-04/19	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
1996	Season Closed j			0							0				0
1997	04/13,04/15	1.8	71	2,965	4,703.5	36.80	9.75%	04/09	2.5	22	175	175.7	3.19	8.00%	4,879.2
1998	04/06	0.5	46	3,367	3,329.7	144.77	9.6%	04/11, 04/12	6.5			415.1		11.0%	3,744.8
1999	Season Closed j			3,447							202				0
2000	Season Closed j			0							0				0
2001	Season Closed j			0							0				0
2002	Season Closed j			0							0				0
2002	Season Closed j			0							0				0
2004	Season Closed j			0							0				0
2005	Season Closed j			0							0				0
2006	Season Closed j			0							0				0

## **Appendix G2**.–Page 2 of 2.

- Guideline harvest based on preseason harvest projection beginning in 1986.
- An additional opening on 6/14 for 6 hours resulted in no harvest. Drift gillnet fishery closed by Board of Fisheries action.
- Of 103 permit holders participating, 72 actually made deliveries.
- e Of 105 permit holders participating, 101 actually made deliveries.
- Of 103 permit holders participating, 62 made deliveries at Montague Island and 90 made deliveries in the north-shore area.
- All herring commercial fisheries in PWS were closed during spring 1989 because of the potential for contamination from the T/V Exxon Valdez oil spill.
- Total for 1991 includes a 92.2 ton test fishing set made by ADF&G for aerial survey calibration.
- Total for 1992 includes a 192.5 ton test fishing harvest made by ADF&G for aerial survey calibration.
- Season closed because the herring biomass was forecast to be less than the 22,000 ton spawning biomass threshold.
- Harvest for 1994 consisted of a single test fishing harvest made by ADF&G for aerial survey calibration.

**Appendix G3.**–Prince William Sound commercial Pacific herring sac roe purse seine and gillnet harvest by management year, 1968–2006.



Appendix G4.—Pacific herring spawn-on-kelp harvest produced in pounds, 1979–2006.

		<u>U 1</u>	Effort			Guideline	Blades	s per	Spay	n-on-Kelp Harve	st	Herring
Calendar	Fishery	CFEC	Permits	Producing 1	Permits <sup>a</sup>	Harvest	Permit I		Span	(tons)		Utilized b
Year	Dates c	Permits d	Committed e	Closed f	Open <sup>g</sup>	(tons)	Closed f	Open <sup>g</sup>	Ribbon	Macrocystis	Total	(tons)
1979		2	0									
1980	04-14	14	4	2 7		8			0.9	0.4	1.3	16.6
1981	04-14	18	18			16			8.6	1.1	9.7	120.7
1982	04/29 - 05/10	25	20	18		26			25.1	0.5	25.5	319.2
1983	04/30 - 05/04	47	38	26		26			17.7	10.1	27.7	346.7
1984	04/24 - 05/08	65	45	37		26			6.4	18.8	25.2	315.1
1985	04/25 - 05/07	81	59	50		40			12.1	28.1	40.2	502.1
1986	04/21 - 04/28	104	82	81		60			0	72.2	72.2	903.0
1987	04/10 - 04/21	111	111	108		85 85			0	61.2	61.2	765.1
1988	04/12 - 04/23	122	122	119		85			0	123.2	123.2	1,540.5
1989	Season Closed h											
1990	04/11 - 04/26	128	128	122		118			0	98.8	98.8	1,235.3
1991	04/07 - 04/20	126	126	119		220			0	202.4	202.4	2,530.5
1992	04/07 - 04/24	127	127	127		276			0	242.2	242.2	3,027.7
1993	04/10 - 04/22	128	124	52		305	1950		0	106.4	106.4	1,330.5
1994	Season Closed <sup>1</sup>											
1995	Season Closed <sup>1</sup>											
1996	Season Closed <sup>1</sup>											
1997	04/10 - 05/06	128	116	7	84	725	410	640	0	34.3	34.3	290.5
1998	J Iv	128	36	13	20	823	425	660	0	10.7	10.7	104.3
1999	к :	128	27	7	2	843	435	680	0	6.2	6.2	48.8
2000	Season Closed 1											
2001	Season Closed <sup>1</sup>											
2002	Season Closed <sup>1</sup>											
2003	Season Closed <sup>1</sup>											
2004	Season Closed <sup>1</sup>											
2005	Season Closed <sup>1</sup>											
2006	Season Closed 1											

- a Number of permits successful in producing product. Because of group cooperation, production is often reported for some individuals whose pounds did not produce product.
- b The equivalent harvest of herring due to stress mortality and the removal of reproductive capacity from the population based on the assumption that 12.5 tons of herring are used to produce each ton of spawn-on-kelp product.
- <sup>c</sup> Dates that the fishery was opened to purse seines for the capture and placement of herring into pounds.
- d Prior to 1994, Commissioner'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 could operate pounds in open or closed configuration, but were required to state intended configuration prior to season.
- <sup>e</sup> 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.
- 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.
- <sup>g</sup> 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 herring commercial fisheries in Prince William Sound were closed spring 1989 because of the potential for contamination from the T/V Exxon Valdez oil spill.
- Season closed because the herring biomass was forecast to be less than the 22,000 ton spawning biomass threshold.
- <sup>j</sup> 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 12/31/1998.
- Opening dates for each area were: Montague Island 04/01, St. Matthews Bay 04/20. All areas closed by emergency order on 04/25/1999.

Appendix G5.–Natural spawning pacific herring spawn-on-kelp harvests, 1969–2006.

				Guideline			Harvest by	Kelp Species	and Groun	nds Price (\$/1	b)		Spawn-on	-Kelp	Herring
Calendar	Fishery		Effort	Harvest		bbon		ieve		icus		ther	Harv		Utilized a
Year	Dates	Hours	(Nr. of Divers)	(tons)	Percent	Price	Percent	Price	Percent	Price	Percent	Price	lbs.	tons	tons
			(= := : = = = : : = = )	(10110)											
1969	05/18 - 05/31		3										5,424	2.7	21.7
1970	04/19 - 06/06		34										190,374	95.2	761.5
1971	04/18 - 05/15		159										769,481	384.7	3,077.9
1972	04/30 - 05/20		397										600,453	300.2	2,401.8
1973	04/23 - 05/26		176										306,358	153.2	1,225.4
1974	04/22 - 05/04		143			Mostly Ribbon	n - Some S	ieve and Hair	\$0.60	-0.75			580,588	290.3	2,322.4
1975	04/25 - 05/10		328			-							916,919	458.5	3,667.7
1976	04/21- ?		279										485,043	242.5	1,940.2
1977	04/27 - 12/31		104										417,000	208.5	1,668.0
1978	04/20 - 04/30		66	165	23%		50%				27% в		141,268	70.6	565.1
1979	04/25 - 05/03		97	200									474,242	237.1	1,897.0
1980	04/23 - 04/30	10	458	200	60%	\$1.25	40%	\$0.85					603,880	301.9	2,415.5
1981	04-25	12	196	200	38%	\$1.25	60%	\$0.85			2% в	\$0.60	122,532	61.3	490.1
1982	05/05 - 05/08	73		187	83%	\$1.42	11%	\$0.95			6% <sup>b</sup>	\$0.74	291,430	145.7	1,165.7
1983	04/27	12		187	51%	\$2.00-2.45	35%	\$1.50-1.70			14% <sup>c</sup>		298,362	149.2	1,193.4
1984	Season Closed d		225 °	187											
1985	05/06 & 05/08	20		169		\$1.25	49%	\$0.50					60,832	30.4	243.3
1986	04/30 - 05/03	86		142	97%	\$1.75		\$0.80			b	\$0.80	95,205	47.6	380.8
1987	04/15 - 04/17	44		103	90%	\$1.70		\$0.85			b	\$0.80	176,485	88.2	705.9
1988	04/29 & 04/30	12	159	103		\$1.50	24%	\$0.75-1.00			12% <sup>b</sup>	\$0.75-1.00	194,762	97.4	779.0
1989	Season Closed f			110											
1990	04/21 - 04/22	16		104		\$0.99	6%	\$0.52			57% b	\$0.88	237,575	118.8	950.3
1991	05/11 - 05/17	95	48	195						\$0.75-0.85			215,147	107.6	860.8
1992	04/24 - 04/30	101	217	243	21%	\$0.70			76%	\$0.40	3%		504,663	252.3	2,018.7
1993	04/19 - 04/24	114	83	268					100%	\$0.55			325,181	162.6	1,300.7
1994	Season Closed g			110											
1995	Season Closed g														
1996	Season Closed g														
1997	04/25 & 04/26	26.4	45	56.4					100%				52,800	26.4	211.2
1998	04/22 - 04/27	62	35	464		\$0.80			84%	\$0.50			34,695	17.3	138.8
1999	Season Closed g			475											
2000	Season Closed g														
2001	Season Closed g														
2002	Season Closed g														
2004	Season Closed g														
2006	Season Closed g														

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 eight consists of eggs.

b Hair kelp.

<sup>&</sup>lt;sup>c</sup> Mostly Macrocystis. Some hair kelp.

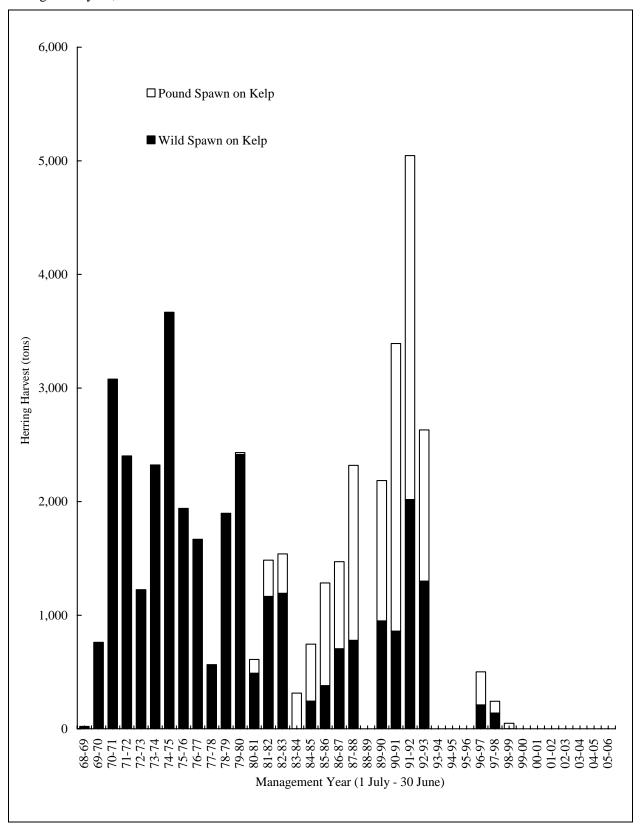
d Season remained closed due to lack of suitable spawn.

e Permits issued

All herring commercial fisheries in Prince William Sound were closed spring 1989 because of the potential for contamination of catches from the T/V Exxon Valdez oil spill.

g Season remained closed due to low herring abundance.

**Appendix G6.**—Prince William Sound commercial spawn-on-kelp Pacific herring usage by management year, 1968–2006.



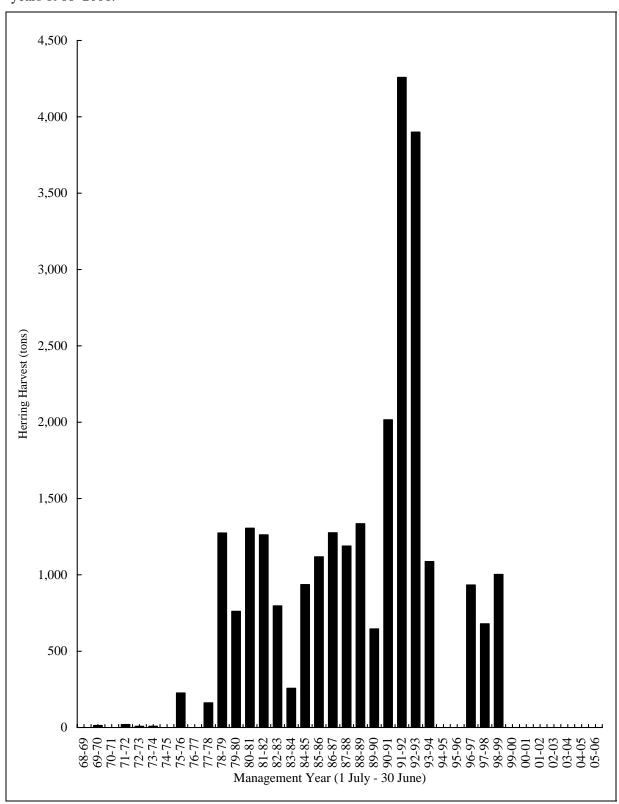
Appendix G7.—Prince William Sound commercial Pacific herring food/bait fishery effort and harvests, management years 1969–2006.

Harvest	Fishin	α		Purse	Saina	Pair 7	rawl	Mid-Wa	iter Trawl	Otto	r Trawl	Total
Management	Dates	<u>5</u>	Guideline	Effort	Harvest	Effort	Harvest	Effort	Harvest	Effort	Harvest	Harvest
Year	Opened	Closed	Harvest	(Boats)	(tons)	(Boats)	(tons)	(Boats)	(tons)	(Boats)	(tons)	(tons)
1969-1970	10/01/69	06/30/70 a	Trai vest	(Douts)	14.0	(Botts)	(tolis)	(Boats)	(tons)	(Bouts)	(tolis)	14.0
1970-1971	10/01/70	06/30/71 <sup>a</sup>			14.0							0
1971-1972	10/01/71	06/30/72 <sup>a</sup>		_	20.0							20.0
1972-1973	10/01/71	05/09/73 <sup>a</sup>		_	9.0							9.0
1973-1974	08/27/73	04/17/74 a	b	_	8.5							8.5
1974-1975	07/15/74	03/10/75	b		0.0							0
1975-1976	06/01/75	06/25/75 °	b	4	226.7							226.7
1976-1977	02/01/77	03/09/77	b									0
1977-1978	10/01/77	02/28/78	b	_	17.0	_	145.3					162.3
1978-1979	10/16/78	? d	b	_	195.4	7	988.7	-	9.4	_	81.0	0 1,274.4
1979-1980	09/16/79	02/28/80 e	1,400	_	510.8	4	145.1	-	103.2	-	2.0	
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 <sup>f</sup>	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 <sup>g</sup>	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 <sup>h</sup>	17	3,900.3							3,900.3
1993-1994	10/07/93	10/10/93	978 <sup>i</sup>	8	1,087.0							1,087.0
1994-1995	Season C	losed <sup>j</sup>										0
1995-1996	Season Cl	losed <sup>j</sup>										0
1996-1997	11/01/96	11/03/96	825	6	933.9							933.9
1997-1998 <sup>k</sup>	11/1/97, 02/19/98 -	02/28/98	945	12	679.7							679.7
1998-1999	11/02/98,	11/04/98, 11/06/98	967	$11^{-1}$	1,003.3	-	-					1,003.3
1999-2000	Season Cl	losed <sup>j</sup>										0
2000-2001	Season Cl	losed <sup>j</sup>										0
2001-2002	Season C											0
2002-2003	Season Cl	losed <sup>j</sup>										0
2003-2004	Season Cl											0
2004-2005	Season Cl											0
2005-2006	Season C	losed <sup>j</sup>										0

# **Appendix G7.**–Page 2 of 2.

- <sup>a</sup> 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.
- <sup>c</sup> 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 that occur after spring sac roe fisheries.
- <sup>d</sup> Fishery closed from 1 January to 6 January 1979.
- <sup>e</sup> Fishery closed from 1 January to 15 February 1980.
- Fishing season opened by regulation on September 1, 1987 in the District. The north-shore and east-shore 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 1987–1988 season on November 12, 1987.
- <sup>g</sup> Fishery open from September 21 until November 24. The Montague Island area was open from September 24 until November 24.
- 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.
- <sup>i</sup> Preseason guideline harvest level based on preliminary aerial survey biomass estimate of 40,000 tons.
- <sup>j</sup> Season closed because the herring biomass was forecast to be less than the 22,000 ton spawning biomass threshold.
- k Season reopened in spring 1998 based on final age structured assessment modeling. Of the total harvest, 578.1 tons were taken in November 1997 and 101.6 tons were taken in February 1998.
- <sup>1</sup> Includes sale from ADF&G test fishing near Knowles Head, 31 October 1998.

**Appendix G8.**–Prince William Sound commercial food/bait Pacific herring harvest, management years 1968–2006.



**Appendix G9.**—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, 1978–2006.

			Sac R	loe F	isheries				Spawn on K	elp	Fisheries		Fo	od-and-l	Bait Fishery	
		Purse	Seine		Drift	Gillnet	V	Vild Spav	vn on Kelp		Pou	nds		Mixe	d Gear	
Calendar	I	Price	Total	P	rice	Total	F	Price	Total	I	Price	Total	P	rice	Total	TOTAL
Year	pe	er ton	Value	pe	er ton	Value	p	er lb	Value	р	er lb <sup>a</sup>	Value	pe	r ton	Value	VALUE
1978	\$	720 \$					\$	1.25 \$	175,000				\$	380 \$	489,820 \$	1,621,700
1979	\$	1,260 \$					\$	1.74 \$	821,280				\$	300 \$	196,800 \$	6,231,960
1980	\$	320 \$					\$	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	\$		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 HA	RVEST	\$	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						SEAS	ON (	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 HA	RVEST	\$	400 \$	411,960	\$	0.55 \$	178,860	\$	10.00 \$	2,000,000	\$	200 \$	217,400 \$	2,808,220
1994						SEASO	)N(	CLOSED							SEASON CI	LOSED
1995						SEASO	)N(	CLOSED							SEASON CI	LOSED
1996						SEASO	)N(	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						SEA	SON	N CLOSE	D	\$	8.00 \$	99,000			SEASON CI	LOSED
2000						SEAS	ON (	CLOSED							SEASON CI	LOSED
2001						SEAS	NC	CLOSED							SEASON CI	LOSED
2002						SEAS	ON (	CLOSED							SEASON CI	LOSED
2004					SEASON CL										SEASON CI	LOSED
2005					SEASON CLOSED										SEASON CI	LOSED
2006						SEASO	)N(	CLOSED							SEASON CI	LOSED

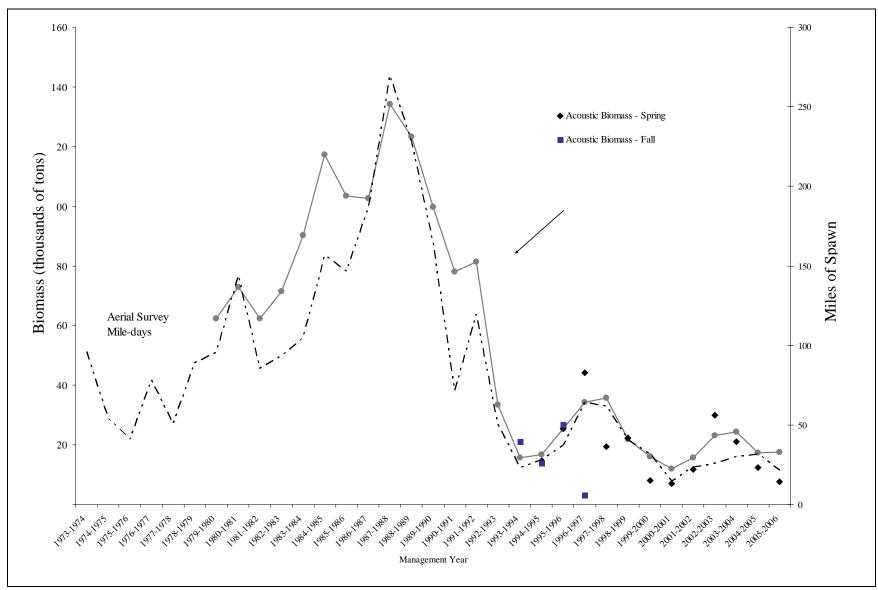
<sup>&</sup>lt;sup>a</sup> The price per pound for spawn on kelp in pounds is based on the final product weight, not harvest weight.

Appendix G10.—Annual Pacific herring biomass indices for harvest management years 1973–2006.

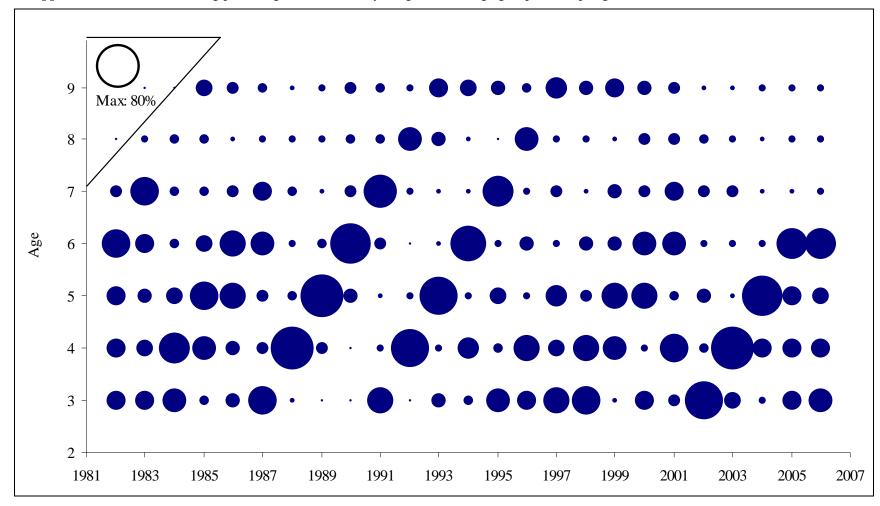
	Total Spring	A	erial Survey E	Estimates		Unexploitated Esc. Biomass	Pre-Fishery Run Biomass	Obse Peak Acous		
	Use and	Peak	Maximum		Mile	Age	Age	Estin	nates	
Harvest	Harvest	Biomass	Possible	Miles	Days	Structured	Structured			Prior Year
Management	Mortality <sup>a</sup>	Estimate b	Observed	of	of	Analysis <sup>f</sup>	Analysis <sup>f</sup>	Fall	Spring	Forecast
Year	(tons)	(tons)	Biomass c	Spawn <sup>d</sup>	Spawn e	(tons)	(tons)	(tons)	(tons)	(tons)
1973-1974	6,375	41,080	107,290	38.5	96.0					
1974-1975	5,854			34.2	54.0					
1975-1976	2,584	7,330	25,247	32.8	41.2					
1976-1977	2,267	16,830	17,460	39.3	78.2					
1977-1978	1,391	13,410	36,540	28.7	50.8					
1978-1979	4,138	42,100	107,390	54.5	89.0					
1979-1980	6,323	62,110	122,050	50.5	95.5	57,071	62,370			
1980-1981	14,124	77,810	161,690	85.4	144.0	59,470	72,934			
1981-1982	7,861	68,790	97,620	49.0	85.5	54,866	62,428			
1982-1983	3,181	41,850	107,710	67.4	93.5	g 68,577	71,379			
1983-1984	6,604	58,870	158,760	60.1	104.8	84,167	90,151			
1984-1985	7,679	20,830	60,954	101.2	156.7	110,098	117,340			
1985-1986	11,180	15,180	54,820	72.4	146.8	92,728	103,428			
1986-1987	6,281	26,530	52,192	65.3	186.8	97,117	102,519			
1987-1988	9,871	34,270	67,175	166.3	269.8	124,924	134,237			43,992
1988-1989	h	56,915	186,708	98.4	228.1	123,271	123,271			54,899
1989-1990	10,103	57,900	145,013	94.1	164.4	89,481	99,679			51,692
1990-1991	15,196	42,765	141,375	58.0	71.5	63,725	77,970			96,666
1991-1992	20,752	53,835	130,569	74.7	119.8	62,424	81,410			121,342
1992-1993	2,360	20,725	109,865	20.4	50.3	31,900	33,480			134,133
1993-1994	151	19,640	154,008	14.6	23.1	15,701	15,701	20,998		29,787
1994-1995	0	7,113	20,868	20.4	28.2	16,812	16,812	13,840	14,639	19,009
1995-1996	0	10,691	37,771	27.2	37.3	25,353	25,353	26,776	25,346	24,332
1996-1997	5,170	10,858	57,114	42.7	64.3	29,705	34,271	3,086	44,082	37,599
1997-1998	3,849	13,817	50,124	38.7	62.0	32,036	35,793	ŕ	19,456	38,640
1998-1999	49	6,366	10,872	25.4	40.7	21,834	21,889		22,397	39,557
1999-2000	0	1,610	2,889	19.5	31.7	16,010	16,010		8,024	23,987
2000-2001	0	587	1,075	16.0	14.8	11,980	11,980		7,035	NA
2001-2002	0	646	1,433	21.5	23.6	15,612	15,612		11,791	NA
2002-2003	0	5,600	8,951	25.2	26.1	23,195	23,195		29,864	NA
2003-2004	0	12,305	17,650	29.7	30.4	24,389	24,389		21,046	NA
2004-2005	0	4,773	5,230	29.9	31.7	17,419	17,419		12,480 i	21,064
2005-2006	0	400	609	19.9	21.7	17,544	17,544		7,551 <sup>i</sup>	17,554

## **Appendix G10**.—Page 2 of 2.

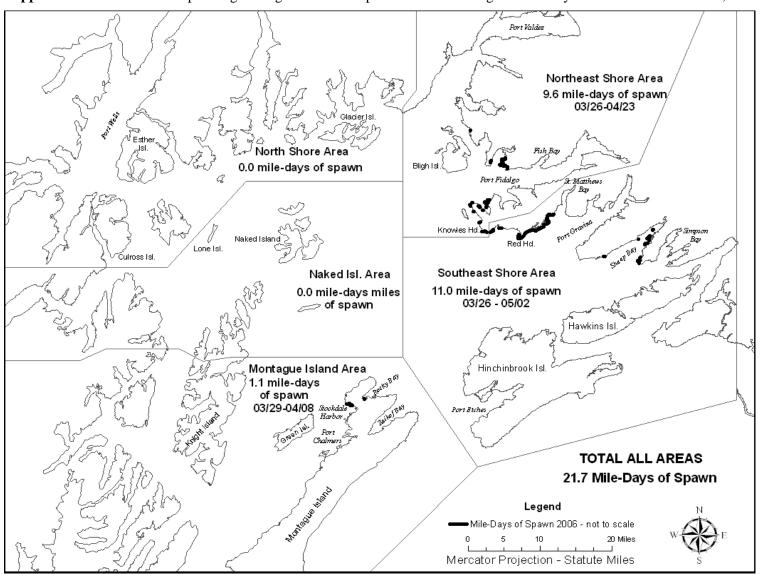
- <sup>a</sup> Represents the common property seine and gillnet sac roe harvest, and equivalent use of herring in closed pound SOK fisheries.
- b Largest single day aerial estimate of herring biomass in short tons.
- <sup>c</sup> The sum of all daily aerial biomass estimates for a given year.
- d Total linear miles of spawn.
- <sup>e</sup> The sum of the daily observed linear miles of herring spawn is computer generated and derived from hand-annotated paper maps.
- f Unexploited escapement and run biomass estimates from age structured analysis, September 2005. The 2006 numbers are projections from the 2005 run of the model.
- <sup>g</sup> Partial estimate of spawning biomass from feasibility study.
- h All herring commercial fisheries in PWS were closed spring 1989 because of the potential for the contamination of catches from the T/V Exxon Valdez oil spill.
- The acoustics estimates for 2005 and 2006 are from ADF&G surveys only. Estimates from the Prince William Sound Science Center surveys were not available. Additionally, these estimates are not adjusted for maturity or subsequent harvest.



Appendix G12.—Pacific herring percentage contribution by weight of each age group to the spring run biomass, 1982–2006.



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# **APPENDIX H**



# ALASKA DEPARTMENT OF FISH & GAME DIVISION OF COMMERCIAL FISHERIES

Prince William Sound Management Area P.O. Box 669 Cordova, AK 99574 907-424-3212/FAX 424-3235

COMMERCIAL SALMON FISHERIES MANAGEMENT OUTLOOK - 2006

April 17, 2006

#### **General Information**

This outlook is provided to assist the commercial salmon industry in planning for the 2006 season in the Prince William Sound Management Area. Preseason forecasts are the basis for the information provided. Area E forecasts can be found on ADF&G's web site:

http://www.cf.adfg.state.ak.us/region2/finfish/salmon/pws/pwsfor06.php

PWSAC hatchery forecasts can be found on the PWSAC web site:

http://www.pwsac.com/2006fcast.htm

Inseason modifications to harvest projections, season opening dates, and strategies for weekly fishing periods will likely occur as the fisheries develop. Hatchery Annual Management Plans (AMP) are used to provide guidelines to the department when managing fisheries to achieve cost recovery and broodstock objectives. Valdez Fisheries Development Association (VFDA) and Prince William Sound Aquaculture Corporation's (PWSAC) AMPs will undergo Regional Planning Team (RPT) review on April 18, and will be submitted for the Commissioner's signature.

The forecast commercial common property fishery (CCPF) harvests by species are summarized in Table 1. The department continues to forecast wild fish runs, but the department no longer forecasts all hatchery runs. Hatchery run projections are provided by either PWSAC or VFDA. Run projections for species and districts without formal forecasts are based on average historical production. These projections will provide the basis for early inseason management for all districts. Harvest projections for enhanced runs may change depending upon the success of hatchery cost recovery harvests.

Management of Prince William Sound (PWS) commercial salmon fisheries occurs through the Cordova area office. All emergency order announcements of fishery openings and closures are broadcast on VHF FM-07 and SSB 2509. As was done last year, fishery announcements from the Cordova ADF&G office will routinely occur at 2:00 pm and will normally provide between 17 and 24 hours advanced notice. Emergency order announcement information is also transmitted by FAX to all registered processors, local radio stations, and news media in Cordova and Valdez. The status of fishery openings and harvest levels also can be obtained at (907) 424-7535, a 24-hour telephone recording in Cordova. In Anchorage, recorded updates may also be obtained Monday through Friday at 267-2843. Daily announcements are also compiled and may be found by following links on the ADF&G Web site at:

http://www.cf.adfg.state.ak.us/region2/pwshome.php

The first announcement will be released at 2:00 pm Saturday, April 29 concerning the Copper River District.

#### **Appendix H1.**–Page 3 of 10.

Using PWSAC's assumptions for the number of returning hatchery pink salmon, the price per pound, and average adult weight, they will be required to harvest 53% of Armin F. Koernig (AFK), 52% of Cannery Creek Hatchery (CCH), and 49% of Wally Noerenberg Hatchery (WNH) returning pink salmon for a total of 52% of PWSAC pink salmon. The total hatchery harvest goal for pink salmon including cost recovery and brood stock is 7.98 million fish. The total pink salmon revenue goal is \$4,330,801. PWSAC plans to use 66% of the total chum salmon returning to WNH for cost recovery and broodstock. The total hatchery harvest goal for chum salmon is 1.29 million comprised of 1.08 million fish for cost recovery and 223,000 fish for broodstock. The total chum salmon revenue goal is \$3,199,560. PWSAC will use 40% of the total sockeye salmon returning to Main Bay Hatchery (MBH) for cost recovery and broodstock. The total hatchery harvest goal for sockeye salmon is 203,930 comprised of 196,000 fish for cost recovery and 7,930 fish for broodstock. The total sockeye salmon revenue goal is \$1,076,051.

The VFDA 2006 AMP identifies a revenue goal of \$2.73 million. Based on VFDA's 11.6 million pink salmon forecast for the Solomon Gulch Hatchery (SGH) and a sales price estimated at \$0.18/pound, VFDA will require approximately 4.6 million pink salmon with an average weight of 3.3 lbs. to meet their 2006 revenue goal. A minimum of 323,000 additional pink salmon will be needed for broodstock. VFDA's corporate cost recovery and broodstock needs are approximately 35% of the VFDA forecast for SGH pink salmon.

#### Copper River District

The 2006 commercial common property harvest projections for the Copper River District are 1,007,402 sockeye, 294,169 coho, and 46,812 Chinook salmon. The 2006 inriver goal past the Miles Lake sonar is 637,000 to 837,000 salmon. During the 2003 Board of Fisheries (BOF) meeting the board adopted a Sustainable Escapement Goal (SEG) for the Copper River that recognizes the historical escapements that provided a sustainable fishery. The Copper River SEG is 300,000 – 500,000 natural sockeye salmon. Over the long-term, the department's goal is to maintain the long-term average of 361,000 sockeye salmon in the spawning escapement.

The components of the inriver goal are as follows:

Spawning escapement	300,000 to 500,000 sockeye
Other salmon	17,500 salmon
Subsistence/P.U. harvest	178,500 salmon
Sport fishery	15,000 salmon
Gulkana broodstock	20,000 sockeye
Gulkana Hatchery surplus	106,000 sockeye
Total	637,000 to 837,000 salmon

#### **Appendix H1**.–Page 4 of 10.

The initial management strategy will be based on anticipated weekly sockeye and Chinook salmon harvests for the entire Copper River District and an assessment of river conditions, fishing effort, harvest location, performance of the lower river sonar, and consistency of harvest. When river conditions allow the deployment of the Miles Lake sonar, the attainment of desired inriver escapements for the upper Copper River become the main factor in deciding management strategy. Two evenly spaced commercial fishing periods per week will be the preferred management approach; however, the fishing schedule may be adjusted inseason as situations dictate. By mid-June, aerial estimates of sockeye salmon escapement trends on the Copper River Delta are also considered when scheduling periods.

During the 2003 BOF meeting, the board modified 5 AAC 24.361 Copper River District Chinook Salmon Fishery Management Plan by eliminating the language in the plan that calls for a 5% reduction in harvest potential. At this meeting the BOF also modified the Copper River District Chinook Salmon Fishery Management Plan to direct the department to achieve a Chinook salmon spawning escapement goal of 24,000 or greater. During the 2005 BOF meeting the board amended the Copper River King Salmon Management Plan to limit fishing in most waters inside of the barrier islands to one fishing period per week during statistical weeks 20 and 21. The closed area is defined in 5 AAC 24.350(1)(B) and extends from the Steamboat anchorage, to the west side of Big Softuk Channel at Coffee Creek. Scheduled fishing periods will continue if environmental conditions favor upriver salmon migration and Miles Lake sonar is meeting anticipated daily and cumulative counts. While a schedule of two periods per week is the recommended management approach, this schedule could be adjusted to provide for escapement needs. The department will consider using shorter periods, additional inside closures, or period closures to achieve the required Chinook and sockeye salmon escapements.

The maximum mesh size in the Copper River District is 6 inches until July 15 when larger mesh gear will be allowed. Whenever possible, the first period each week will begin Monday at 7:00 am. Depending upon fishing effort, harvest, and escapement trends on the Delta and at Miles Lake sonar station, a decision regarding a possible second fishing period for the week will be made by Wednesday at 2:00 pm. Depending upon the duration and surplus, fishing periods will begin at either 7:00 am or 7:00 pm. If there is an exceptionally strong run to the Copper River, the department may desire greater flexibility in deciding when weekly periods should begin.

As a reminder, Chinook salmon that are harvested for home use by commercial permit holders in the Copper and Bering River Districts must be reported on a fish ticket at the time of landing (5 AAC 24.356). Fish tickets have a "not sold/personal use" block to report these Chinook salmon.

Beginning in early August when coho salmon harvest become predominant by number, the Copper and Bering River Districts will be managed for coho salmon. Initially fishing periods will begin at 7:00 am. The management strategy for coho salmon will be a single 24-hour period per week; adjustments to period lengths will be based on inseason assessments of run strength. Given satisfactory indications from coho salmon escapement and harvest data, the department will initially consider lengthening the 24-hour weekly period to a 36-hour period. Continued positive trends in escapement would result in a second weekly fishing period being added. Weekly anticipated harvest and escapement data will be compared to the actual harvest and escapement data to determine the frequency and duration of commercial openings.

#### **Appendix H1**.–Page 5 of 10.

Individuals planning to participate in subsistence fishing activities in the Copper River District are required to obtain a subsistence permit through the Cordova ADF&G office. Permits will be available during normal business hours Monday through Friday from 8:00 am until noon and from 1:00 pm to 5:00 pm. ADF&G staff will not be available to issue permits after hours, on state holidays, or on weekends.

#### **Bering River District**

The Bering River District is expected to open for the 2006 season in early June. The 10-year average harvest from the Bering River District is 18,536 sockeye salmon. Openings have traditionally been managed concurrently with the Copper River District, and this management strategy will continue. The department will only consider an independent opening of the Bering River District if wild stock escapement goals are assured and the Copper River District's escapement is not. Beginning in early August, the Bering River District will be managed for coho salmon and management strategies will be similar to those used for the Copper River District. The season's projected harvest is 48,167 coho salmon based on the recent ten-year harvest average.

#### **Eshamy District**

PWSAC's forecast of the onsite run to Main Bay Hatchery (MBH) is 514,500 sockeye salmon composed of 506,000 Coghill stock fish and 8,500 Eshamy stock fish. In 2006 PWSAC plans to use 7,930 enhanced Coghill sockeye salmon for broodstock and harvest 40.3% or 196,000 of the returning sockeye salmon for cost recovery. Approximately 302,000 Coghill stock sockeye salmon returning to MBH are expected to be available for common property harvest. Management of the enhanced Coghill stock in the Crafton Island subdistrict will begin in mid to late June and will be based upon PWSAC's progress towards revenue goals.

The 2000-2004 Commercial Operators Annual Report (COAR) exvessel value calculated the set gillnet fleet harvest at greater than 5% of the previous five-year average exvessel value of the total common property fishery for enhanced salmon. Because the 5% allocation was exceeded, the set gillnet fleet will be restricted to no more than 36-hours of fishing time per week after July 10 in accordance with 5 AAC 24.370(f). The management strategy during this period will be to provide two openings per week with set gillnet opening 24-hrs on Monday at 8 am and 12-hrs on Thursday at 8 am.

The wild stock sockeye salmon run to Eshamy Lake is forecast at 45,000 fish, 30,000 of which will be needed to meet the mid-point of the biological escapement goal range. The Eshamy River weir is funded for 2006. Beginning in mid-July, the Eshamy District, including waters south of Falls Bay, will open during scheduled periods if the escapement past the weir is close to the anticipated number. If escapement is below the anticipated curve, area and/or time restrictions will probably be imposed to improve wild stock escapement. In mid to late July, fishing time and area in the Crafton Island Subdistrict will be linked to the escapement of wild pink and sockeye salmon in the Eshamy District, and the strength of wild pink and chum salmon stocks returning to the Northwestern and Coghill Districts. When waters of the Crafton Island Subdistrict are closed for the protection of pink and sockeye salmon escapement, there will be concurrent closures of the eastern shore of Chenega Island to purse seine gear to further minimize the interception of wild stocks.

#### **Coghill District**

The 2006 wild stock sockeye salmon run to Coghill Lake is forecast at 54,128 fish. Meeting the Coghill Lake mid-point sustainable escapement goal of 30,000 sockeye salmon will leave approximately 29,128 fish for the common property harvest. The early run of chum salmon to WNH is forecast by PWSAC to be 1.97 million fish. PWSAC requires 1.29 million chum salmon for cost recovery and broodstock leaving 670 thousand, or 33% of the returning chum salmon for the CPF.

The 2000-2004 Commercial Operators Annual Report (COAR) exvessel value calculated the seine fleet harvest at less than 45% of the commercial value. Because the 45% allocation was not met, the seine fleet will be allowed exclusive access to the Esther Subdistrict from June 1 to July 21 in accordance with 5 AAC 24.370(h)(2). In 2005 the BOF defined the Granite Bay Subdistrict as all waters within 1 mile of the shore of Esther Island, north of the Esther Subdistrict. The board further specified that in years when the seine fleet has exclusive access to the Esther subdistrict from June 1 to July 21, the Granite Bay Subdistrict will remain closed to the common property fishery, unless deterioration of enhanced fish quality in that area necessitates an opening. In this case, the Granite Bay Subdistrict will be open to both gear groups on an alternating schedule to harvest only these fish.

The BOF supported the use of a reduced Esther Subdistrict boundary if the Coghill Lake sockeye salmon escapement goal is not being met. During escapement shortfalls, the department has confined fishing to within one nautical mile off the southern portion of Esther Island. The one nautical mile boundary may be implemented by emergency order for the conservation of Coghill Lake sockeye salmon and Port Wells wild stock chum and pink salmon. If escapement to Coghill Lake is less than anticipated, the department may elect to further confine the seine fleet to the WNH Terminal Harvest Area (THA). If sockeye salmon escapement is within the anticipated range and sockeye salmon harvest rates in the Coghill District indicate a strong return, the Port Wells area will be regularly opened to 61° N. Latitude. As the season progresses and if Coghill weir escapement counts are on track, the area will be expanded to the markers near Coghill Lagoon.

WNH coho salmon are present in the fishery from early August through mid-September. The 2006 run is expected to provide 57,500 harvestable coho salmon for the common property fisheries. Although some fish are intercepted in the southern areas of Prince William Sound, most of the coho salmon run will be harvested by the drift gillnet fleet in the Esther Subdistrict.

#### **Unakwik District**

The 2006 wild stock sockeye salmon commercial harvest in Unakwik Inlet is forecast at 7,902 fish. Both drift gillnets and purse seines are legal gear during all periods in the Unakwik District. The district encompasses only those waters above the reef in Unakwik Inlet. During the sockeye salmon run to Miners and Cowpen Lakes, the management strategy will be to provide two periods per week. This schedule is expected to begin in early June, and run concurrently with openings in the Coghill District. Commercial harvest information will be evaluated inseason and adjustments to fishing schedules will be made if necessary.

#### Purse Seine Districts

The 2006 pink salmon forecast for PWS is 31.5 million fish. This estimate includes 4.7 million wild stock fish, 11.6 million VFDA fish, and 15.3 million PWSAC hatchery fish. The basis for the hatchery forecast is the release of approximately 600 million pink salmon fry in 2004. Approximately 7.9 million pink salmon (53%) of the projected 15.3 million pink salmon returning to the PWSAC hatcheries will be needed for cost recovery and broodstock. The remaining 7.6 million PWSAC fish will be available for commercial common property harvest.

Approximately 4.6 million pink salmon (40%) of the projected 11.6 million pink salmon returning to the VFDA hatchery will be needed for cost recovery and broodstock. The remaining 7.0 million VFDA fish will be available for commercial common property harvest. The price that VFDA and PWSAC receive for their sales harvest fish will influence the actual common property harvest of enhanced stocks. A total of 2.6 million wild stock pink salmon are projected to be available for harvest leaving 2.0 million fish in the escapement.

The 2006 chum salmon forecast total return in Prince William Sound is 3.5 million fish. The majority (84%) is anticipated to be the result of PWSAC hatchery production. PWSAC forecasts a run of 1.97 million chum salmon to WNH. PWSAC intends to harvest 1.3 million chum salmon (66% of the total return) for cost recovery and broodstock. The remaining 670 thousand chum salmon are anticipated to be available for the purse seine CPF. PWSAC also forecasts a 480,000 enhanced chum salmon run to Port Chalmers and 380,000 fish run to AFK. All Port Chalmers chum salmon are for harvest in the purse seine CPF. Based on the department's wild chum salmon forecast of 531,000 fish, there is a potential common property harvest of 330,000 wild chum salmon.

The purse seine season will begin Monday, May 29 with a directed fishery targeting the enhanced chum salmon run to Port Chalmers and AFK. Fishing periods will be from 8:00 am Monday to 8:00 pm Sunday. Anadromous stream closures within Port Chalmers and AFK will be suspended during May and June to facilitate the harvest of the enhanced run. The Port Chalmers and AFK chum salmon fishery will close in mid-July.

The general waters of the eight purse seine districts will be managed based on the strength of wild stocks. Hatchery subdistricts will be managed based on the strength of both wild and enhanced stocks. Escapement trends of 208 index spawning streams for pink and chum salmon, as compared to average historical performance, will determine the duration of openings in these districts. Aerial surveys of the index streams occur on a weekly basis, weather permitting. The summer of 2004 was very dry resulting in low stream flows during spawning season throughout the sound. This may result in reduced wild stock runs that could limit openings outside of hatchery THAs.

The AFK, CCH, and WNH pink salmon return will be managed collectively to achieve PWSAC's cost recovery and broodstock goals through openings and closures of nearby sub-districts or hatchery management areas. Managing the enhanced pink salmon run in aggregate may result in site-specific CPF contribution rates being above or below the approximate target of a 47% CPF pink salmon harvest. PWSAC will work closely with local ADF&G management biologists to achieve the seine fisheries revenue goal as rapidly as possible to allow for an orderly and consistent CPF.

#### **Appendix H1**.–Page 8 of 10.

Evaluation of the late pink salmon run occurs daily as the department tracks hatchery sales harvests, broodstock collections, commercial fishery harvests, hatchery sex ratios, otolith mark contribution estimates, and wild stock escapement data. To further assess the run strength and timing of late enhanced pink salmon entry into PWS, a Southwestern District test fishery, using the R/V *Solstice*, will be conducted beginning in late July. Otolith collections from daily test sets made at key migration corridors will provide information on the stock composition that will be used to determine the time and area for commercial fishing. These otoliths will provide early run entry information and allow for informed management decisions in setting the time and area in the Southwestern District. PWSAC forecasts a pink salmon return of 5.9 million to the AFK Hatchery and intends to collect 53% of the total AFK return for cost recovery and broodstock in late July. Until the daily run entry is sufficient to sustain sizable sales harvest, the department may open the AFK Hatchery THA and SHA to a common property harvest to keep pink salmon quality high.

In the Eastern District, early pink salmon openings south of Valdez Arm will be based upon the strength of wild stock escapements in the area. It is anticipated that CPF periods in the Eastern District for wild stock harvest will occur at least once each week in July. Adjustments to this schedule will be based on wild stock escapement to district streams. Openings in the Southeastern District will be based on the strength of the wild stock runs in that district and openings will occur concurrently with other purse seine districts. Openings in Valdez Port and Arm designed to target VFDA pink salmon will be based on the strength of the enhanced run and VFDA's progress towards achieving their pink salmon revenue goal.

Valdez Port, Narrows, and Arm will be managed for VFDA's cost recovery and broodstock needs.. In the remainder of the Eastern District, the management strategy will be to open the entire district concurrent with openings targeting the VFDA pink salmon run. If the VFDA run is weak and Eastern District wild stocks are meeting weekly escapement goals, openings south of Valdez Arm will occur as frequently as escapements allow. Jack Bay may be closed inside a line from Tongue Point to Entrance Point or at the Salmon Harvest Task Force (SHTF) markers to protect early timed wild stocks. If the Galena Bay or Sawmill Bay wild stocks experience shortfalls during the VFDA return, additional area closures may result. The Port of Valdez will be closed to CPF north of a line from Tongue Point to Potato Point beginning on August 26. The Valdez Narrows Subdistrict will open on September 5 to target surplus SGH produced coho salmon.

The department has used yellow SHTF markers to close terminal wild stock areas for escapement. In previous years, processors effectively directed their fleets to fish in areas where they would maintain acceptably high quality harvests. These yellow SHTF markers remain in place and processors may again direct their fleets to maintain a high quality harvest using these markers. If escapement shortfalls require additional area closures to achieve escapement goals, these markers may be employed as an intermediate step before area wide closures are used.

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# Appendix H1.—Page 9 of 10.

**Table 1.** ADF&G commercial common property harvest projections for the 2006 salmon fishery in the Prince William Sound and Copper/Bering River areas.

## PINK SALMON - HARVEST ESTIMATE (Millions)

Natural Stocks	2.66
Hatchery Stocks <sup>a</sup>	
Solomon Gulch	7.00
Armin F. Koernig	2.79
Wally Noerenberg	2.26
Cannery Creek	2.54
Natural & Hatchery	17.25

# **CHUM SALMON** - HARVEST ESTIMATE (Thousands)

Natural Stocks	330
Hatchery Stocks	
Wally Noerenberg	670
Armin F. Koernig	380
Port Chalmers (RR)	480
Natural & Hatchery	1,860

# **COHO SALMON** - HARVEST ESTIMATE (Thousands)

Natural Stocks (PWS)	No Forecast
Copper River	294
Bering River	48
Hatchery Stocks	
Solomon Gulch	150
Wally Noerenberg <sup>b</sup>	58
Natural & Hatchery	550

#### **SOCKEYE SALMON** - HARVEST ESTIMATE (Thousands)

Copper plus Bering River	1,026
Coghill Lake	29
Eshamy Lake	15
Hatchery Stocks	
Main Bay	302
Natural & Hatchery	1,372

#### **CHINOOK SALMON** - HARVEST ESTIMATE (Thousands)

Natural Stock
Copper River 47

<sup>&</sup>lt;sup>a</sup> Potential hatchery contributions to the common property harvest are based on the forecast of total hatchery runs minus preseason estimates of corporate escapement that will be required by hatchery operators. The forecast used 40% of the total return in estimating the percentage of forecasted runs that will be needed for corporate escapement. The actual corporate escapement will depend upon the percentage of total return needed for cost recovery.

b WNH on site, Cordova and Whittier releases.