Fishery Management Report No. 13-11

2011 Prince William Sound Area Finfish Management Report

by

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Alaska Department of Fish and Game **Divisions of Sport Fish and Commercial Fisheries**

Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	e
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	E
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

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2011 PRINCE WILLIAM SOUND AREA FINFISH MANAGEMENT REPORT

by

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ABSTRACT

The 2011 Prince William Sound (PWS) management area (coastal waters and inland drainages entering the north central Gulf of Alaska between Cape Suckling and Cape Fairfield) commercial salmon harvest was 39.25 million fish. The harvest was comprised of 33.40 million pink *Oncorhynchus gorbuscha*, 3.54 million sockeye *O. nerka*, 1.91 million chum *O. keta*, 371,000 coho *O. kisutch*, and 20,500 Chinook salmon *O. tshawytscha*. Approximately 32.30 million fish were common property harvest and 6.96 million fish were sold for hatchery cost recovery. Homepack, salmon obtained by educational permits, and donated fish accounted for less than one percent. 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, including hatchery sales was $106.10 million. During the 2011 season, 513 drift gillnet, 29 set gillnet, and 183 purse seine permit holders fished. Drift gillnet exvessel harvest value was an estimated $50.23 million, setting average permit earnings at $97,900; set gillnet exvessel harvest value was an estimated $3.18 million, setting average permit earnings at $110,000; purse seine exvessel harvest value was an estimated $37.73 million, setting average permit earnings at $206,000. Revenue generated for hatchery operations was approximately $14.95 million. The PWS management area personal use and subsistence fisheries harvested a total of 217,000 fish. For these fisheries, approximately 10,700 subsistence and personal use permits were issued to Alaska residents. Sport fish permit holders landed an estimated 134,000 salmon in the PWS management area. The commercial Pacific herring *Clupea pallasii* fishery in the PWS management area was closed in 2011 for the twelfth consecutive year because the spawning biomass has not shown a stable interannual trend in available surplus and did not provide a large enough harvestable surplus of herring to allocate fish among herring fisheries.

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, king salmon, *Oncorhynchus tshawytscha*, coho salmon, *Oncorhynchus kisutch*, Pacific herring, *Clupea pallasii,* Area Management Report, AMR.

PRINCE WILLIAM SOUND MANAGEMENT AREA COMMERCIAL SALMON AND HERRING FISHERIES

OVERVIEW OF MANAGEMENT AREA

The Prince William Sound (PWS) management area, also known as Area E, encompasses all coastal waters and inland drainages entering the north central Gulf of Alaska between Cape Suckling and Cape Fairfield (Figure 1). In addition to Prince William Sound, the management area includes the Bering and Copper rivers and has a total adjacent land area of approximately 38,000 square miles.

The salmon management area is divided into 11 districts that correspond to the local geography and distribution of the 5 species of salmon harvested by the commercial fishery (Figure 2). The management objective for all districts is the achievement of spawning escapement goals for the major salmon species and stock groupings while allowing for the orderly harvest of all fish surplus to spawning requirements. In addition, 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.

There are 6 hatcheries that contribute to the area's fisheries, 5 of which are operated by the regional aquaculture association, Prince William Sound Aquaculture Corporation (PWSAC). Gulkana Hatchery (GH) in Paxson augments production of sockeye salmon *Oncorhynchus nerka* to the Copper River. Cannery Creek Hatchery (CCH), located on the north shore of the sound, and Armin F. Koernig Hatchery (AFK) in the southwestern sound produce pink salmon *O.*

gorbuscha, Wally Noerenberg Hatchery (WNH) in the northwestern sound produces pink, chum *O. keta*, and coho *O. kisutch* salmon and Main Bay Hatchery (MBH) in the western sound produces sockeye salmon. Valdez Fisheries Development Association (VFDA) operates Solomon Gulch Hatchery (SGH) in Port Valdez and produces pink and coho salmon.

Gear for the salmon fishery includes purse seine, drift gillnet, and set gillnet. Drift gillnet permits are the most numerous and are allowed in the Bering River, Copper River, Coghill, Unakwik, and Eshamy districts. From 2009 to 2011, drift gillnet gear was permitted to harvest hatchery chum salmon in the Port Chalmers Subdistrict of the Montague District as stipulated in the *Prince William Sound Management and Allocation Plan* (5 AAC 24.370). Set gillnet gear is allowed only in the Eshamy District. Purse seine gear is allowed 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 the 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). Fishermen's meetings are held every spring to discuss management strategy for the upcoming fishing season.

When Pacific herring *Clupea pallasii* spawning biomass allows for a commercial fishery, an annual harvest level is determined for each of the 5 commercial fisheries: purse seine sac roe, gillnet sac roe, spawn-on-kelp not in pounds, and spawn-on-kelp in pounds fisheries occurring in the spring, and herring food/bait fishery occurring in the fall. The guideline harvest level established by the *Prince William Sound Herring Management Plan*, 5 AAC 27.365, is intended to provide for an optimum sustained yield and an equitable allocation for all user groups in PWS. The management objective for PWS herring is to target fisheries on a high quality portion of the biomass while maintaining a threshold spawning biomass.

OVERVIEW OF AREAWIDE SALMON AND HERRING FISHERIES

The 2011 Prince William Sound management area commercial salmon harvest was 39.25 million fish. The harvest was composed of 33.40 million pink, 3.54 million sockeye, 1.91 million chum, 371,000 coho, and 20,500 Chinook salmon *O. tshawytscha* (Table 1; Figure 3). Hatchery runs of coho, pink, and chum salmon were below forecast, but the sockeye salmon harvest was above forecast (Appendix E1). Only sockeye salmon harvest was above the 10-year (2001–2010) commercial harvest average (Table 2). Approximately 82.3% of the commercial harvest, 32.30 million fish, was attributed to the common property fishery (CPF) and 6.96 million fish were attributed to the hatchery cost recovery fishery. Homepack harvest accounted for less than one percent of Area E harvest (Table 1). The 2011 preliminary exvessel value estimates by gear group from the CPF, both wild and enhanced salmon, are $37.73 million (41.4%) for purse seine, $50.23 million (55.1%) for drift gillnet, and $3.18 million (3.5%) for set gillnet (Table 3; Figure 4). The average price per pound paid to fishermen was above the 10-year (2001–2010) average (Table 4). The harvest value for the drift gillnet gear group was the highest on record, and the set gillnet gear group had the second highest harvest value on record. The purse seine gear group harvest value was the fourth highest in the last 10 years and above the 10-year average (Table 5).

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 the 5-year average enhanced exvessel value for the purse seine gear group exceeding their limit of 55%, drift gillnet permit holders were permitted to harvest hatchery chum salmon in the Port Chalmers Subdistrict of the Montague District.

No commercial fisheries for herring occurred in 2011 even though the spawning biomass was above the regulatory threshold of 22,000 tons. The spawning biomass projection of 22,700 tons did not provide a large enough harvestable surplus to allocate fish among all 5 herring fisheries. The interannual trend in available surplus will also need to be assessed for population stability prior to reopening the fisheries.

SALMON SEASON SUMMARY BY DISTRICT

COPPER RIVER DISTRICT

The Copper River District includes all waters of the Gulf of Alaska between Hook Point and Point Martin (Figure 1). The seaward boundary of the Copper River District is a line 3 miles due south of a line from the southernmost tip of Pinnacle Rock on Kayak Island to the tip of Hook Point on Hinchinbrook Island. The inshore boundary line is from Government Rock to a point 500 yards seaward of the junction of Mountain Slough, Center Slough, and Eyak River, then east within a line bounded by markers located approximately 2 miles seaward of the grass banks and in Boswell Bay. The inshore boundary line has remained in effect since the 1964 earthquake when the delta area rose approximately 2 meters. Before the earthquake, the inshore boundary was within 500 yards of the grass banks. After the earthquake, the inshore boundary was moved seaward to protect rivers and sloughs from gillnets closing off the entire channel during low water sets. With the loss of fishing area inside the islands, many fishermen moved outside the islands. This move outside the barrier islands lessened some of the congestion in the inside waters.

Average 10-year commercial harvest from the Copper River District for the years 2001–2010 was 29,900 Chinook, 1.14 million sockeye, and 291,000 coho salmon. The 25-year average for the years from 1986 to 2010 is 38,000 Chinook, 1.24 million sockeye, and 281,000 coho salmon (Appendix A4). The 2011 harvest was 18,500 Chinook, 2.05 million sockeye, and 128,000 coho salmon (Table 1).

ADF&G, with direction from the BOF, has managed 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, 5 AAC 24.361, *Copper River King Salmon 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 (Table 6). At the December 2005 BOF meeting, the *Copper River King Salmon Management Plan* was further amended to limit the number of commercial openings inside of the barrier islands in statistical weeks 20 and 21 to no more than 1 per week to increase escapement.

Management tools, such as inriver sonar, aerial survey observations, Chinook salmon mark–recapture estimates, and harvest data provide ADF&G fishery managers with indices of abundance used to regulate Copper River fisheries. ADF&G relies on the inriver passage index provided by the sonar at Miles Lake to manage the commercial fishery and provide for upriver escapement and fishery allocations. Additionally, upper river aerial escapement observations,

thermal and strontium marked otolith data, and weir and tower data have provided supporting information on the relative success of ADF&G in meeting provisions of the *Copper River District Salmon Management Plan*. From 2001 to 2010 the combined reported upriver subsistence and personal use harvest (federal and state) has ranged from 140,000 sockeye salmon (in 2008) to 226,000 (in 2010), with a 10-year average of 182,000 salmon (Appendix A1). A general increasing trend in subsistence harvest is reflected annually through additions to the inriver goal. Achieving escapement goals and satisfying management plan provisions remain the primary management objectives of ADF&G.

The Copper River District commercial fishing season has historically opened in mid-May. Commercial fishing periods, as described in regulation, that ran from Monday morning to Friday evening were standard management practice prior to 1968after which periods were established inseason by emergency order (EO). In general, fishing time has steadily been reduced over the years in response to increased efficiency of the commercial fleet, and reallocations by BOF. Two commercial fishing periods per week has been the recent schedule with the duration of each fishing period dependent upon trends in escapement, harvest, and environmental conditions.

In 2003, the BOF adopted a range of 300,000–500,000 wild sockeye salmon as the sustainable escapement goal (SEG) (5 AAC 24.360(a)) for the upper Copper River (Table 6). Prior to this, the sockeye salmon SEG was 300,000 fish (adopted in 1972 and placed into regulation in 1980) (Fried 1994).

The components of the 2011 inriver goal were as follows:

Spawning escapement	300,000 to 500,000 sockeye salmon
Other salmon	17,500 salmon
Subsistence harvest	72,407 salmon
Personal Use harvest	112,950 salmon
Sport fishery	15,000 salmon
Gulkana Hatchery broodstock	20,000 sockeye
Gulkana Hatchery surplus	84,524 sockeye
Total	622,380 to 822,380 salmon

Of the 7 categories contained within the inriver goal, the most significant increases over time have been in hatchery surplus, subsistence, and personal use categories. In the early 1980s, the Miles Lake sonar minimum inriver goal stood at 350,000 salmon. Since that time, the minimum inriver goal has been set as high as 768,000, primarily in response to large forecasts of enhanced sockeye salmon and increasing subsistence and personal use harvests. The number of subsistence and personal use salmon within the inriver goal are calculated annually using the average subsistence and personal use harvest from the previous 5 years. The daily inriver goal is the anticipated number of salmon counted daily at the Miles Lake sonar to meet the overall inriver goal. For 6 of the 7 components in the above table, the daily inriver goal is calculated using both wild and enhanced salmon run timing. The subsistence harvest component however is calculated using only wild stock run timing. This is required by AS 16.05.940(33) which states: "subsistence uses" means “the noncommercial, customary and traditional uses of *wild*, renewable resources...” The number of hatchery surplus sockeye salmon within the inriver goal is

determined annually using the GH 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. Surplus hatchery sockeye salmon do not fulfill any wild salmon escapement needs, nor are they linked to any upriver subsistence or sport allocations; however, a significant percentage of the hatchery surplus is harvested during July and August in these upriver fisheries.

Preseason Outlook and Harvest Strategy

The 2011 commercial harvest forecast for the Copper River District was 9,210 Chinook, 1.18 million sockeye, and 293,000 coho salmon (Appendix A10). The enhanced sockeye salmon run to GH was forecast by ADF&G to be 320,000 fish (Appendix E1). PWSAC requires approximately 20,000 fish for broodstock leaving the remaining hatchery sockeye salmon available for commercial, subsistence, personal use, and sport harvests. The 2011 inriver goal for salmon passing Miles Lake was 622,380 to 822,380 fish. This number equated to a sonar goal of 597,287 to 789,340 salmon by July 28 the season ending date for sonar counting at Miles Lake in 2011 (Appendix A7).

The current fishing schedule for the Copper River District is 2 evenly spaced fishing periods per week, with periods generally occurring on Mondays and Thursdays with duration of periods announced by emergency order. It was agreed upon at the SHTF meeting in 2007 that the second gillnet fishing period in each week would begin Thursday morning rather than Thursday evening as had been the standard for over 15 years prior to that year. This change was requested by the majority of the permit holders who indicated a preference for starting the openings in the mornings. Most processors also supported this change as it provided additional time to process and ship fresh product to the weekend markets.

During years when Miles Lake sonar is not operational prior to the first opening, early season management of the Copper River District is based on actual harvest versus anticipated harvest. In addition, environmental conditions, fishing effort, and harvest consistency throughout the period are also 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 indices 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 fish (Table 6).

Typically, coho salmon management begins in the second week of August. The historical precedent is to provide an initial single 24-hour opening per week. If harvest or aerial survey numbers warrant, the duration of this fishing period may be increased to 36, 48 or 60 hours, or a second fishing period may be added during the week. Aerial escapement indices for the early portion of the coho salmon run likely underestimate salmon abundance due to other species of salmon remaining in tributaries, making accurate species identification problematic. Additionally, stormy fall weather makes weekly survey flights difficult. The SEG for the Copper River Delta is 32,000 to 67,000 coho salmon (Table 6).

Sockeye and Chinook Salmon Fishery Season Summary

The total 2011 Copper River sockeye salmon run was 3.11 million fish with 2.05 million (66.0%) commercially harvested, 205,000 (6.6%) harvested by upriver subsistence and personal use fishermen, and an estimated 7,730 (0.3%) by upriver sport fishermen. Commercial permit holders retained 9,000 sockeye salmon for "homepack" (0.3%). Sport fishermen on the Copper River Delta harvested an estimated 838 (<0.1%) sockeye salmon. Reported educational permit and subsistence harvest in the Copper River District totaled 1,800 (<0.1%). The upriver and delta wild sockeye salmon escapement was 775,000 (24.9%) fish, and 59,600 (1.9%) fish returned to the GH sites (Appendix A1). Overall, 2.00 million (64.7%) of the sockeye salmon entering the Copper River District originated from upriver wild stock systems, 513,000 (16.6%) from Copper River Delta wild stock systems, and 581,000 (18.8%) came from the GH (Appendix A2).

The 2011 total Chinook salmon run was 53,900 fish with 18,500 (34.5%) commercially harvested, 218 (0.4%) harvested through educational and subsistence permits in the Copper River District, and 1,280 (2.4%) retained by commercial permit holders as "homepack". A total of 4,140 (1.4%) were harvested by upriver personal use and subsistence users, an estimated 1,750 (3.3%) were harvested by sport fishermen, and the remaining 28,000 (52.3%) represent spawning escapement (Appendix A3). This spawning escapement is above the SEG lower bound of 24,000 for Copper River Chinook salmon as defined by the BOF in 5 AAC 24.361(a). The entire Chinook salmon run is assumed to have originated from wild upriver stocks.

The Copper River commercial sockeye salmon harvest of 2.05 million was 73.7% above the projected 1.18 million and 80.2% above the previous 10-year average of 1.14 million sockeye salmon. The commercial harvest of 18,500 Chinook salmon was 61.9% of the previous 10-year average of 30,000 fish (Appendix A4). A total of 485 drift gillnet permits were active in the Copper River District in 2011 out of 532 total permits, with peak participation occurring in the fourth fishing period of the season, May 26–27, when 455 permit holders reported deliveries (Appendix A5).

The final Miles Lake sonar count on July 28 was 914,231 salmon, which was above the escapement goal range of 597,287 to 789,340 salmon for that date (Appendices A7 through A9). River height was above the 29-year average from late May to early June (Appendix A11). The final escapement index count for the Copper River Delta systems was 76,507 sockeye salmon; within the SEG range of 55,000–130,000 fish (Table 6) and on par with the recent 10-year average (Appendices A12 and A13). Two aerial surveys of upper Copper River index streams were conducted and peak counts for these surveys are in Appendix A13.

Based on strontium chloride (Sr) otolith mark analysis, 488,000 GH sockeye salmon were harvested in the Copper River commercial fishery in 2011, accounting for 23.8% of the total sockeye salmon commercial harvest (Appendix E6). This is more than three times the previous 10-year contribution average of 137,000 hatchery sockeye salmon (Appendix E7). The majority were 5-year-old fish from the 2007 GH release of 22.0 million fry. (Appendix E8). Additionally, there were an estimated 5,840 MBH sockeye salmon harvested commercially in the Copper River District (Appendix E6).

The Miles Lake north bank sonar became operational on May 10 and the south bank became operational on May 16. The first observed salmon were enumerated on May 16 with the south bank passing 198 fish and the north bank passing 54 fish. Both banks began 24-hour monitoring on May 20 (Appendices A7 and A8).

Due to a poor Chinook salmon forecast, inside waters as described in 5 AAC 24.350(1)(B) were closed for the first 5 fishing periods, 3 fishing periods beyond the regulatory requirement in 5 AAC 24.361(b). Actual Chinook salmon harvest was at or above inseason harvest projections for the first 5 periods and cumulative harvest tracked ahead of the previous 3 years for this time period, prompting the department to open the inside waters based on the likelihood of a larger than anticipated Chinook salmon run.

The first Copper River District commercial fishing period on Monday, May 16 was for 12 hours with 421 commercial drift gillnet permits fishing. The harvest from this period was 102,000 sockeye and 1,720 Chinook salmon. The anticipated harvest was 40,800 sockeye and 1,640 Chinook salmon (Appendices A5 and A10). Sockeye salmon harvest was more than double the anticipated harvest, giving an early indication of the large run to come. Processors reported paying approximately $6.00 per pound for Chinook and $4.00 per pound for sockeye salmon. The second 12-hour period occurred on Thursday, May 19 with 353 permit holders reporting deliveries, 67 fewer permits than the previous period. Harvest from this period was 115,000 sockeye and 1,050 Chinook salmon and remained at or above the anticipated harvest of 52,700 sockeye and 1,050 Chinook salmon (Appendices A5 and A10). High winds and rough seas during this period were significant contributing factors to reduced harvest and participation. The third 12-hour period occurred on Monday, May 23. Harvest from this period was 235,000 sockeye and 2,660 Chinook salmon with 439 permit holders reporting deliveries. Anticipated harvest for this period was 99,700 sockeye and 1,470 Chinook salmon. Sockeye salmon harvest was more than double the anticipated and cumulative harvest and Chinook salmon harvest was near anticipated and cumulative harvest for that date (Appendices A5 and A10). Chinook salmon was slightly below and sockeye salmon was more than double the recent 5-year average cumulative harvest (2006–2010). The sockeye salmon harvest for this period ranked fourth largest historically.

In addition to stormy conditions, the largest series of spring tides (greater than 14 feet) in May occurred during the first week of the commercial fishing season. Larger tidal cycles typically are a contributing factor to salmon movement and passage, frequently correlating to above expected commercial harvests and counts at the Miles Lake sonar station. Sonar passage during statistical week 21 (May 15–21) was variable with 8,798 salmon counted compared to an inriver goal of 16,748 for the week. Sockeye salmon escapement appeared to be 2–3 days late as evidenced by sonar counts lagging behind anticipated counts by 2–3 days (Appendices A7 and A8).

Harvest from the fourth period that started on Thursday, May 26 was 169,000 sockeye and 3,410 Chinook salmon with 455 permit holders reporting deliveries. This harvest was double the anticipated sockeye harvest and nearly four times the anticipated Chinook salmon harvest of 900. This fishing period was the first 36-hour period of the season (Appendices A5 and A10). Sonar counts during the first half of this week neared the cumulative minimum inriver goal on Tuesday, May 24 and by the end of the week (May 28) cumulative sonar passage was two times the cumulative minimum inriver goal (Appendices A7 and A8).

Even with a regular fishing schedule, Miles Lake sonar passage averaged 35,225 fish per day from May 24 to 29 and resulted in a cumulative passage of 211,350 fish, almost a third of the minimum inriver goal (Appendices A7 and A8). In contrast to, but with similar results, the Copper River salmon run was compressed and late in 2010 and resulted in an extended fishery closure. These consecutive closures contributed to the passage of 168,000 salmon in a week (Botz and Somerville 2011). The pattern of sonar counts waning in the early portion of the

season, then rapidly escalating as hundreds of thousands of salmon entered the district and river following a closure of the commercial fishery, has occurred frequently in the past and is difficult to predict with limited early season run entry information. A regular fishing schedule helps to alleviate some of these large swings in escapement, but as the 2011 Copper River salmon run illustrated, even with a regular schedule of openings and expanded fishing time after the third fishing period, episodes of high escapement will likely occur with large salmon runs.

Harvest from the 36-hour period on Monday, May 30 was 134,000 sockeye and 2,230 Chinook salmon with 335 permit holders making deliveries. Anticipated harvest was 97,600 sockeye and 1,090 Chinook salmon. Harvest from the Thursday, June 2 period (36-hours) was 84,700 sockeye and 1,480 Chinook with 278 permit holders making deliveries. Anticipated harvest was 88,100 sockeye and 806 Chinook salmon (Appendices A5 and A10). Salmon passage at the Miles Lake sonar was greater than the daily inriver goal through May 29 and averaged about 1,000 fish less than the daily inriver goal for the remainder of statistical week 23 (May 29–June 4). This decrease in salmon passage occurred while the cumulative inriver passage count reached an early season peak of 118,621 fish over the minimum inriver goal (Appendices A7 and A8).

Daily sonar passage during the remainder of June (June 5–30) was erratic with daily sonar counts both above and below the daily inriver goal. The actual sonar count averaged a daily deficit of 1,160 fish over this time period, but by the end of the month, the actual cumulative salmon passage was still 81,700 fish ahead of the minimum anticipated inriver goal (Appendices A7 and A8). Periods of 36-hours began on Monday, June 6 and Thursday, June 9 with sockeye salmon harvest averaging 75,200 fish and Chinook salmon harvest averaging 1,450 fish, representing declines from the previous week's sockeye and Chinook salmon harvest averages of 109,000 and 1,860 fish, respectively. Participation in the fishery declined by 139 permits from May 30 through June 10 (Appendices A5 and A10). This reduction in fishing effort was likely the result of permit holders choosing to focus on robust runs of hatchery sockeye salmon to MBH in Prince William Sound. From June 13 to June 24 participation in the fishery was relatively stable, with a range of 147–188 permits and an average of 171 permits per period. Both sockeye and Chinook salmon showed harvest trends similar to those anticipated during this time period. Harvest averaged 51,800 sockeye and 627 Chinook salmon per fishing period, whereas anticipated harvest averages were 48,800 sockeye and 239 Chinook salmon. Sockeye salmon harvest was relatively stable with 3 out of 4 fishing periods between 50,000 and 60,000 fish harvested, while Chinook salmon harvest declined steadily from 978 fish harvested during the June 13 fishing period to 221 fish harvested during the June 23 fishing period (Appendices A5 and A10). In the first port sample on June 13, GH enhanced sockeye salmon represented 8.2% of the overall sockeye salmon harvest. By the June 23 fishing period, the GH sockeye salmon component had grown to 34.4% of the harvest (Appendix E6).

Supported by increasing numbers of GH sockeye salmon and based on higher than anticipated Copper River Delta sockeye salmon escapement indices, the duration of the Monday, June 27 and Thursday, June 30 fishing periods remained 36 hours (Appendix A5 and A12). This decision was supported by historical run timing of the wild and enhanced stocks and by increasing numbers of strontium marked GH fish harvested in the commercial fishery. Participation and harvest in these fishing periods increased from the previous week with 186 permit holders reporting 154,000 sockeye and 251 Chinook salmon harvested in the Monday period and 247 permit holders reporting 136,000 sockeye and 118 Chinook salmon harvested in the Thursday period. GH sockeye salmon were close to peak abundance in the fishery during these fishing

periods, representing 43.6% and 59.1% of the harvest, respectively (Appendix E6). With sonar passage stable and increasing overlap with Copper River Delta sockeye salmon stocks, a 36-hour fishing period schedule was maintained despite indications that GH sockeye salmon could likely withstand higher exploitation in the commercial fishery. Fishing time and area was primarily driven by inseason indices of available wild stock surplus and secondarily by abundance of GH sockeye salmon. The GH sockeye salmon fishery peaked during the following fishing period, July 4–5, with 217 permit holders harvesting 208,000 sockeye salmon. This harvest was nearly four times the anticipated harvest (55,700 fish), and more than double the previous peak midseason harvest of 96,000 sockeye salmon in 2002 (Appendices A5 and A10; Gray et al. 2003).

Miles Lake Sonar exhibited an increasing passage trend beginning on Wednesday, July 6 when 15,589 salmon passed the sonar compared to an inriver goal for that day of 6,152 (Appendix A7). Copper River Delta sockeye salmon escapement continued ahead of anticipated inseason escapement targets allowing for a regular fishing schedule (Appendix A12). A 36-hour commercial period was scheduled to begin on Thursday, July 7. Harvest from this period was 87,500 sockeye and 26 Chinook salmon with 241 permit holders reporting deliveries. The schedule of two 36-hour periods per week continued until the start of coho salmon management on August 15. Fleet participation declined from mid-July through early August, from 241 permits on July 11 to 13 permits on August 5. Sockeye salmon harvest declined from 69,000 fish on July 11 to fewer than 4,000 fish per period after the August 1 fishing period (Appendix A5). Low fleet participation in the fishery in late July and early August was largely the result of a combination of low harvest and high fuel prices.

Large daily sonar counts continued from July 6 through July 24 remaining between 11,000 and 25,000 fish per day with a total of 318,741 salmon counted during this period. This compares to a minimum inriver goal of 110,254 salmon for this period. Daily sonar passage at Miles Lake for the remainder of July was consistently above the minimum. The cumulative sonar count on July 28 was 914,231 salmon, nearly 125,000 fish above the maximum inriver passage objective of 789,340 (Appendices A7 and A8). The final escapement index value for Copper River Delta sockeye salmon stocks based on aerial surveys was 76,507, and was within the SEG range of 55,000 to 130,000 fish. Since 2001, this value has ranged from a low of 58,406 in 2005 to a high of 98,896 in 2006 with a previous 10-year average index value of 75,439 (Appendices A12 and A13).

The overall commercial harvest of 2.05 million sockeye salmon from the Copper River District was the third highest commercial harvest in the history of the fishery. The overall commercial harvest of Chinook salmon was the eighth lowest since 1969 (Appendix A4).

Fishing effort in 2011 peaked during the fourth period that began on May 26 when 455 permit holders harvested 169,000 sockeye and 3,410 Chinook salmon during the 36-hour opening. Peak Chinook salmon harvest also occurred during this fishing period. Peak sockeye salmon harvest occurred during the Monday, May 23 fishing period when 235,000 fish were harvested by 439 permit holders (Appendix A5).

Typically, 5-year-old sockeye salmon make up 70–85% of the Copper River run and 5-year-old Chinook salmon make up 50–80% of the run. The majority of the sockeye salmon harvested commercially, 78.4%, were 5-year-old fish from brood year 2006, with 4-year-old fish and 6-year-old fish making up 18.5% and 3.1%, respectively. Over half of the sockeye salmon

harvested, 52.7%, were males. (Appendix A15). The majority of the Chinook salmon harvested commercially, 75.7%, were also 5-year-old fish from brood year 2006, with 4-year-old and 6-year-old fish making up 15.7% and 8.5%, respectively. Less than 0.1% of the run was 7-year-old fish from brood year 2004. More than half of the Chinook salmon harvested, 54.0%, were males (Appendix A16).

Coho Salmon Fishery Season Summary

The 2011 total run was estimated to be 221,000 coho salmon. A total of 128,000 (57.5%) coho salmon were harvested and sold commercially; 543 were reported retained as "homepack"; 34 were harvested from the Copper River District in the subsistence gillnet fishery; 1,700 were harvested by personal use dipnetters in the Chitina Subdistrict; 372 were harvested in the Glennallen Subdistrict dip net and fish wheel subsistence fisheries; an estimated 14,300 (6.4%) were harvested by sport fisherman on the Copper River Delta near Cordova; and an estimated 69 fish were harvested by upriver sport fisherman. Finally, 814 coho salmon were harvested in federally managed subsistence fisheries (Appendices A18, F5, and F6). The Copper River Delta spawning escapement index was 76,290 coho salmon (Appendix A18). The aerial survey index for this season was 38,525 fish and was within the SEG index range of 32,000 to 67,000 (Table 6; Appendix A19). The 2011 index value is at least 30,000 fish below the 2002 to 2006 index values, and is comparable to index values from 2001, 2009, and 2010 when delta coho salmon runs were depressed (Appendix A20). The 2011 total run size for coho salmon in the Copper River is unknown because the number of coho salmon migrating upriver was not assessed.

The coho salmon commercial harvest of 128,000 was 30.5% below the projected harvest of 303,000 fish (Appendix A10). As is typical in this fishery, estimation of coho salmon escapement was hampered by frequent storms and high silt levels in major index streams. Rough seas and inclement weather likely had a negative impact on harvest levels of coho salmon.

The transition to coho salmon management typically takes place in early August. During years where aerial survey indices are below weekly SEG targets, commercial fishing opportunity is reduced to one period per week or less. In 2011 aerial survey indices were below anticipated ranges early in the season.

The coho salmon season officially began at 7:00 a.m. on Monday, August 15 during statistical week 34 with a single 24-hour period (Appendix A6). An aerial survey flown on August 11 produced a count of 965 coho salmon in index streams, which was below the SEG range for statistical week 33 of 2,025–4,240 fish (Appendix A19). Harvest from the Monday, August 15 fishing period was 14,400 coho salmon with 111 permit holders reporting deliveries. The second period on August 22 resulted in 16,000 coho salmon delivered by 209 permit holders. Given the decrease in harvest and catch per unit effort, one fishing period per week continued with a third 24-hour fishing period on Monday, August 29. During this period 24,100 coho salmon were harvested by 189 permit holders (Appendix A5). An aerial survey flown under poor observational conditions on Monday, August 29 documented 12,457 coho salmon in index streams (Appendix A19). This was below the average SEG anticipated for this date. Consequently, a single 24-hour period was allowed in statistical week 37 on Monday, September 5. Harvest from this period was 875 coho salmon with 9 permit holders reporting deliveries. Severe weather curtailed fishing effort during this period. An additional fishing period was announced for Thursday, September 8 due to the limited fishing effort and harvest in the Monday

fishing period. Harvest from this fifth coho salmon period was 19,100 fish with 89 permit holders reporting deliveries (Appendix A5).

An aerial survey was flown on Sunday, September 11 under excellent observational conditions with an index of 26,340 (Appendix A19). Counts in the neighboring Bering River District also increased from 3,715, which was below the range in the previous week, to 18,840, which was within the SEG range of 8,803–22,345 coho salmon (Appendix A22). Consequently, 2 fishing periods per week were allowed in the Copper River and Bering River districts starting Monday, September 12. The 24-hour periods on Monday, September 12 and Thursday, September 15, resulted in a harvest of 26,700 coho salmon. Participation increased to 132 permit holders in the Monday fishing period, but declined to 70 permit holders in the Thursday fishing period. Stormy conditions persisted in the Cordova area for the next several weeks likely having a negative impact on harvest and participation for the remainder of the season. Harvest from the following week, September 18–24, was 760 coho salmon with 2 permit holders reporting deliveries from the first period and 10 from the second. There were 1,180 coho salmon delivered during the next week, September 25–October 1, with 7 permit holders reporting deliveries from the first period and 5 from the second. There were no further deliveries in the remaining 3 fishing periods of the season (Appendices A5 and A6). An aerial survey flown on October 9 documented levels of coho salmon in index streams above the SEG range for statistical week 42 (Appendix A19).

Peak fishing effort for the coho salmon season was during the 24-hour period that occurred on Monday, August 22 when 209 permit holders delivered 16,000 coho salmon. Peak harvest occurred during the next 24-hour period on Monday, August 29 when 189 permit holders harvested 24,100 coho salmon. The total harvest of 128,000 coho salmon for the 2011 season was below the harvest projection of 294,000 fish (Appendices A5 and A10). The majority of the coho salmon harvested commercially, 56.3%, were 3-year-olds from brood year 2008, with 4-year-old and 5-year-old fish making up 43.2% and 0.5%, respectively. An estimated 69.4% of the coho salmon harvested were males (Appendix A17).

BERING RIVER DISTRICT

Preseason Outlook and Harvest Strategy

Historically this district has opened in early June to sockeye salmon harvest and is managed concurrently with the Copper River District. Given that the minimum sockeye salmon SEG of 20,000 (as measured by aerial survey) had not been met since 2005, ADF&G announced at the preseason fishermen's meeting that it would not open this district until escapement levels were within the anticipated weekly SEG.

Sockeye Salmon Season Summary

The first aerial survey of the Bering River District was flown on June 9 with a second flight flown on June 16. Peak counts from these surveys were 3,300 and 6,500 sockeye salmon, respectively. The first survey was below the SEG range (4,985–7,586 sockeye salmon) for the statistical week ending June 12, while the second survey during the statistical week ending June 19 showed an increasing trend and was above the lower end of the range (6,207–9,446 sockeye salmon) (Appendix A22). Weekly surveys were below or slightly above the lower end of the weekly SEG targets through the middle of July. As a result of this pattern of hovering at or below the weekly SEG targets, combined with sockeye salmon escapement that has fallen below SEG goals since 2005, ADF&G elected to keep the Bering River District closed to commercial

harvest through the middle of July. Starting with a survey flown of July 21, weekly escapement indices consistently exceeded the lower SEG targets for the remainder of the sockeye salmon run. During the July 21 survey 17,159 sockeye salmon were counted. This was within the SEG range of 14,415–21,936 for the statistical week ending July 24 (Appendix A22). Considering the results of this survey, the timing of the Bering Lake sockeye salmon run, and limited potential commercial fishing effort, the Bering River District was opened for the season on July 25 concurrent with the Copper River District for the remainder of the season. No commercial harvest was reported in the Bering River District until the coho salmon season was initiated (Appendix A23).

Coho Salmon Season Summary

Weather conditions allowed for sporadic aerial surveys of coho salmon index streams in the Bering River District. For the fifth year in a row, the Bering River District coho salmon run was late, but final escapement was within the SEG range for the district (Appendix A25). Commercial harvest was the third lowest in the last 10 years, and less than half of the recent 10-year average (Appendix A21).

In 2011 the first opening of the Bering River District coho salmon fishery was on August 15 during statistical week 34 and was for 24 hours with no fish reported as harvested (Appendix A24). Prior to this an aerial survey flown on August 11 documented numbers of returning coho salmon that were well below runs in recent years (Appendix A25). The low coho salmon abundance apparent in this survey triggered a one period a week management strategy that has historically been shown to allow for coho salmon escapement while maintaining limited fishing effort. There were 2 additional 24-hour openings in the 2 remaining weeks of August, occurring on August 22 and 29, during which commercial fishing effort went from 2 boats to 22 boats, coinciding with the historical trend of increasing fishing effort into late August and early September. Harvest from the August 22 fishing period was confidential and harvest from the August 29 fishing period was 3,710 coho salmon (Appendix A23).

An aerial survey flown on August 29 documented 3,715 coho salmon in Bering River and Controller Bay index streams. This compares to an SEG range of 8,732–22,165 coho salmon (Appendix A25). Consequently, a single 24-hour period was allowed in statistical week 37 on September 5. Harvest from this period was confidential. Severe weather curtailed fishing effort during this period. An additional fishing period was announced for Thursday, September 8 due to the limited fishing effort and harvest in the Monday fishing period. Harvest from this fifth coho salmon period was 5,870 fish with 15 permit holders reporting deliveries (Appendix A23). An aerial survey flown on September 11 counted 18,840 coho salmon, which is within the weekly SEG target range (8,803–22,345) for statistical week 38 (September 11–17) (Appendix A25). Harvest from the two 24-hour periods in this statistical week was 9,850 coho salmon with 29 permits reporting deliveries. There was no harvest from the 24-hour period that started on September 19. There were 6 additional commercial fishing periods held over the next 4 weeks with no deliveries reported (Appendix A23). The final aerial survey of the season was flown on October 9 and 12,550 coho salmon were counted which was within the weekly SEG target of 5,156–13,089 fish for statistical week 42 (October 3–9) (Appendix A25). The Bering River District closed for the 2011 season on October 11 (Appendix A23).

Peak fishing effort and harvest was during statistical week 38 (September 11–17) when 29 boats harvested 9,850 coho salmon (Appendix A24). The total harvest of 20,000 coho salmon was

below the previous 10-year harvest average of 54,200 fish (Appendix A21). The coho salmon escapement goal was achieved with a peak escapement index of 18,890 fish. This was below the previous 10-year average of 30,946 and within the SEG range of 13,000 to 33,000 fish for the Bering River District (Table 6; Appendices A20 and A25).

COGHILL DISTRICT

The Coghill District is located in northwestern PWS and is approximately 45 miles in length from north to south. This district was created to manage harvests of pink, chum, and sockeye salmon returning to Port Wells and the Esther Island area. The majority of commercial fisheries in the Coghill District target wild sockeye salmon and hatchery salmon from the Wally Noerenberg Hatchery (WNH). The hatchery is located on Lake Bay at the southern end of Esther Island and was built by PWSAC in 1985. WNH annually produces adult runs of chum (~3 million), pink (~9.5 million), and coho (~250,000) salmon.

The Coghill District is open for the harvest of chum, sockeye, pink, and coho salmon to drift gillnet permit holders and opens to purse seine permit holders beginning on July 21. The district closes to purse seine fishing when the majority of harvestable surplus is no longer pink salmon. The exception to this is described in the *Prince William Sound Management and Salmon Enhancement Allocation Plan* (5 AAC 24.370 (h)) as follows: Purse seine permit holders may operate in the Esther Subdistrict when the previous 5-year exvessel value of their harvest of common property enhanced stocks is 45% or less of the overall drift gillnet and purse seine harvests combined. During these seasons, the drift gillnet fleet will not have access to the Esther Subdistrict until July 21.

Preseason Outlook and Harvest Strategy

The 2011 forecast of sockeye salmon returning to Coghill Lake was 170,000 fish. Meeting the midpoint of the SEG range of 20,000–40,000 sockeye salmon (Table 6) would leave 140,000 fish for the common property fishery (Table 7). Enhanced chum salmon runs to WNH were forecast to be 2.61 million fish. PWSAC's projection for cost recovery and broodstock requirements was approximately 588,000 fish, leaving 2.02 million chum salmon for the common property fishery (CPF). The projected run of pink salmon to the WNH facility was 9.50 million fish. Of those, PWSAC's projection for cost recovery and broodstock requirements was approximately 1.79 million fish, leaving 7.71 million pink salmon available to the CPF. An estimated run of 250,000 coho salmon were projected for WNH. A total of 2,700 were anticipated to be harvested for broodstock with the remaining 247,000 fish available to the CPF (PWSAC 2011a).

The 5-year rolling average allocation calculation used to guide 2011 fisheries management was 59% purse seine, 41% drift gillnet, and 4% set gillnet. As a result, the drift gillnet fleet had exclusive access to the Port Chalmers Subdistrict from June 1 to July 30 in 2011, and the set gillnet fleet was not limited to 36 hours per week after July 10, 2011.

PWSAC, in consultation with ADF&G, elected to initiate pink and chum salmon cost recovery harvest before allowing CPF openings in hatchery subdistricts and terminal areas. CPF openings in hatchery subdistricts and terminal areas during cost recovery were anticipated to occur every other day depending on run entry and cost recovery progress.

Season Summary

Early-season management of the Coghill District is largely based on Coghill Lake wild sockeye salmon escapement. The Coghill Lake weir was operated from June 7 to July 22. During that time, sockeye salmon escapement was 102,359 fish, more than double the upper SEG bound of 40,000 fish (Table 6 and Appendices B1–B3). The abundant escapement allowed for extended fishing periods during much of the season.

The total CPF purse seine and drift gillnet combined sockeye salmon harvest for the Coghill District was 199,000 (99.6% drift gillnet) fish; the total CPF harvests for chum, pink, and coho salmon were 1.09 million (100.0% drift gillnet), 2.40 million (30.1% drift gillnet), and 96,000 (82.7% drift gillnet), respectively (Table 1 and Appendices B4 and B5). In 2011 PWSAC reported a WNH chum salmon purse seine cost recovery harvest of 254,000 fish, a raceway cost recovery harvest of 67,700 fish and broodstock carcass sales of 148,000 fish. PWSAC also reported a pink salmon purse seine cost recovery harvest of 1.94 million fish, a raceway cost recovery harvest of 171,000 fish, and broodstock carcass sales of 235,000 fish. As part of chum salmon brood collection, 148,000 chum salmon were used to seed the hatchery, 17,000 fish were not viable or unspawned, 11,500 fish were holding mortalities. PWSAC estimated that 7,000 fish were not harvested and remained within waters of the special harvest area (SHA). As part of pink salmon brood collection, 235,000 pink salmon were used to seed the hatchery, 123,000 fish were unviable or unspawned, 7,280 fish were holding mortalities, and PWSAC estimated that 10,000 fish were not harvested and remained within waters of the SHA. PWSAC also reported harvesting 700 coho salmon for raceway cost recovery and 7,400 fish as part of broodstock collection (Appendix E12).

Contribution estimates show that wild sockeye, chum, and pink salmon harvest was 26.9%, 2.5%, and 8.0% of the respective district harvest totals for each species (Appendices E9–E11). There were approximately 146,000 MBH sockeye harvested in the Coghill District commercial fishery, accounting for 73.1% of the 199,000 total sockeye salmon harvested (Appendix E9). Of the 1.09 million chum salmon harvested in this district by the CPF, approximately 930,000 (97.5%) were released at WNH, AFK, and the Port Chalmers remote release site in the Montague District (Appendix E11). Although these chum salmon had thermal marks that were intended to be specific to each release site, fish with a single mark were released at all 3 sites in 2007. Of the 2.40 million pink salmon harvested in this district by the CPF, 1.87 million (78.1%) were released at WNH, 299,000 (12.5%) were released at CCH, and 27,100 (1.1%) were released at AFK (Appendix E10).

The total Coghill District commercial drift gillnet harvest was 198,000 sockeye, 1.09 million chum, 722,000 pink, and 79,400 coho salmon, with 357 permit holders reporting deliveries (Table 1 and Appendices B4, B6, and B8).

The Coghill District drift gillnet fishery began on May 23. A general schedule of 2 openings, 36 to 80 hours in duration, per week was established. These coincided with openings in the Copper River and Eshamy districts. Beginning June 16, the western boundary used for the Coghill District was a line from Point Pigot to Point Pakenham, with the purpose of limiting harvest of wild chum salmon returning to the western side of Port Wells (Appendix B4).

The WNH chum salmon run appeared strong in early June, but ended well below forecast. Chum salmon cost recovery at WNH began on June 4, and to accommodate timely cost recovery harvest, there was initially no commercial gillnet fishing within the Esther Subdistrict or WNH

terminal harvest area (THA) and SHA. Initially, cost recovery fishing was heavily influenced by a strong return of age-5 chum salmon and by June 7, was 58.9% complete (Appendix E12). CPF participation and harvest in general Coghill District waters remained steady and peaked during statistical week 24 with a harvest of 286,000 chum salmon (Appendix B6). On June 11, the Esther Subdistrict was opened to commercial fishing for 12 hours, with future fishing opportunities dependent on cost recovery progress (Appendix B4). By June 13, PWSAC had completed 98% of its chum salmon cost recovery, but with indications of low age-4 chum salmon abundance, continued to recommend limited fishing time in the Esther Subdistrict (Appendix E12). Beginning June 21, broodstock concerns at WNH prompted closure of Esther Subdistrict. The age-4 component of the run remained below anticipated levels for that date. Four fishing periods occurred in the Esther Subdistrict in June, for a total of 60 hours of drift gillnet fishing time (Appendix B4).

Typically, the drift gillnet fleet targets WNH chum salmon in the early season and broadens its focus in late June to include MBH and Coghill Lake sockeye salmon. In 2011, a decrease in Coghill District participation could be attributed to the weak WNH age-4 chum salmon return and strong sockeye salmon runs to other districts, including the Eshamy and Copper River districts. Fishing time and area was extended within general Coghill District waters (outside of hatchery subdistricts and terminal areas) to allow the fleet to focus effort on Coghill Lake sockeye salmon. Beginning June 27, fishing time was increased in northern Port Wells and on July 2, Coghill River anadromous stream closures were suspended to provide more directed fishing opportunity on Coghill Lake sockeye salmon (Appendix B4). Despite this additional fishing time and area between June 27 and July 21, fishing effort remained low, with a harvest of 34,100 wild sockeye salmon out of a district total harvest of 99,900 for this time period (Appendix E9).

Fish passage at Coghill River weir was consistently greater than anticipated throughout the 2011 season. Historically, Coghill Lake sockeye salmon have shown a compressed run-timing curve that peaks on July 4; however, in 2011, there was an extended period of time, June 26–July 19, when daily passage exceeded 3,000 fish (Appendices B1 and B2). Otolith contribution estimates indicate that approximately 53,600 wild and 146,000 enhanced sockeye salmon were harvested in the Coghill District in 2011 (Appendix E9).

By regulation, on July 21, purse seine permit holders began fishing Coghill District. Harvests of sockeye and chum salmon diminished rapidly after statistical week 30, with pink salmon harvest increasing (Appendices B6 and B7).

Coho salmon landings increased in mid-August and remained steady until mid-September when the fishery began to slow, with the last reported harvest from the period on September 21. On September 6, the harvest of pink salmon (1,310) fell below the harvest of coho salmon (3,110) (Appendix B4). Consequently, on September 8, Coghill District was closed to purse seine harvest for the remainder of the season. The peak drift gillnet harvest of coho salmon in Coghill District occurred during statistical week 36, with 20,800 fish landed (Appendix B6). The Coghill District closed to commercial fishing on October 2 (Appendix B4).

Peak drift gillnet fishing effort occurred during the 60-hour period on June 9 when 298 permit holders harvested 3,580 sockeye and 183,000 chum salmon. Peak chum salmon harvest also occurred during this fishing period. Peak sockeye salmon harvest occurred during the 60-hour period on June 23–25 when 48,000 fish were landed by 150 permit holders (Appendix B4).

Overall, 198,000 sockeye salmon were harvested by 357 drift gillnet permit holders during the 2011 season. This is above the previous drift gillnet 10-year harvest average of 130,000 sockeye salmon (Appendix B8). The 2011 harvest of 1.09 million chum salmon by drift gillnet permit holders was slightly above the previous 10-year average of 1.08 million chum salmon. The 2011 harvest of 79,400 coho salmon by the drift gillnet fleet was above the previous 10-year average harvest of 37,100 fish (Appendix B8).

UNAKWIK DISTRICT

Preseason Outlook and Harvest Strategy

The Unakwik District, in the northern portion of Unakwik Inlet, is the smallest district in the PWS management area. Both drift gillnet and purse seine gears are allowed during all fishing periods. CCH, a pink salmon hatchery, borders the southern boundary of the district. This district was established for management of runs of sockeye salmon to Cowpen and Miners lakes. Escapement enumeration is by aerial survey; however, water is quite turbid in Miners Lake. Harvest opportunity in this district was significantly reduced from that in recent years due to a lack of reliable sockeye salmon escapement information.

Season Summary

The total 2011 Unakwik District harvest was 1,390 sockeye and 30 chum salmon (Appendix B11). No purse seine harvest was reported in the district during the 2011 season. The 2011 sockeye salmon harvest was below the previous 10-year average of 6,300 (Appendix B12). Peak sockeye salmon harvest occurred during the fishing period that started on June 23 (36-hours) with a harvest of 845 fish (Appendix B11). Participation in this fishery is directly related to fishing success elsewhere in PWS. Robust salmon runs to WNH, MBH, and the Copper River likely contributed to the low fishing effort in Unakwik District. The Unakwik District opened for the 2011 fishing season on June 13 and followed a schedule of 2 evenly-spaced periods per week, concurrent with other districts in PWS, until the district was closed for the season on July 22.

PORT CHALMERS SUBDISTRICT

Preseason Outlook and Harvest Strategy

The Port Chalmers Subdistrict is located in the northern end of the Montague District. Since 1994, PWSAC has remote-released chum salmon at this location. PWSAC forecast a run of 624,000 chum salmon to this subdistrict in 2011 (Appendix E1).

At the 2005 BOF meeting, the *Prince William Sound Management and Allocation Plan (*5 AAC 24.370*)* was amended to address imbalances in allocation and states that, when the drift gillnet gear group harvest value of (PWSAC) enhanced salmon is 45% or less, then in the year following the current calculations, the drift gillnet gear group shall have exclusive access to the Port Chalmers Subdistrict to harvest enhanced salmon runs from June 1 through July 30, during fishing periods established by emergency order (EO).

Based on the allocation plan, the drift gillnet gear group had exclusive access to Port Chalmers from June 1 through July 30, 2011. Deep gillnets greater than 60 meshes in depth were permitted by EO in this subdistrict to maximize harvest efficiency of hatchery-produced chum salmon and minimize the possibility of these fish straying.

Season Summary

The total Port Chalmers Subdistrict harvest was 103,000 chum salmon, with 44 drift gillnet permit holders reporting deliveries (Appendices B13 and B14). The 2011 chum salmon harvest was below the 5-year average of 667,000 fish (Appendix B15). This small run may have been related to the difficulty PWSAC had in establishing net pens and transporting fish to Port Chalmers during the harsh winter of 2007. A total of 54,200 chum salmon (52.3%) were marked as having been released at Port Chalmers, and 45,600 (44%) were marked as WNH releases. The high contribution of WNH release marks is, in part, due to mixed marks in past releases. The remaining 3,880 (4%) were wild chum salmon (Appendix E21). Port Chalmers Subdistrict was open 7 days per week, with short breaks to facilitate reporting. This schedule was maintained for the duration of the drift gillnet fishery in Port Chalmers Subdistrict. The Port Chalmers Subdistrict was opened on Monday, May 23 for a 60-hour period followed by an 84-hour period on Thursday. This 2 period per week schedule was maintained for 10 weeks, which is the duration of the drift gillnet fishery in the Port Chalmers Subdistrict. Harvest and effort peaked during the June 16–19 period with 13,200 chum salmon harvested by 21 permit holders. To minimize the harvest of wild pink salmon, harvest, effort, and otolith contributions were monitored closely starting in early July. In this way ADF&G could focus effort closer to Port Chalmers in the event that the harvest of non-target species (pink and sockeye salmon) increased substantially. A total of 4,440 pink salmon were harvested during this drift gillnet fishery with a single period (July 7–10) peak of 2,060 fish (Appendix B13). The total pink salmon harvest was less than a tenth of the 2009 harvest and less than a third of the 2010 harvest (Appendix B15). This low level of pink salmon harvest did not necessitate a reduction in fishing area in 2011.

ESHAMY DISTRICT

The Eshamy District is located in western PWS and is 15 miles in length. Both drift and set gillnet gears are allowed to fish in this district during all periods, except as described in 5 AAC 24.370(f). This is the only district in PWS where set gillnet gear is allowed to operate. This district was created to manage the gillnet harvest of sockeye salmon runs to Eshamy Lake. The Main Bay Subdistrict of the Eshamy District was created when MBH was built in 1981 by ADF&G. This subdistrict was established to allow permit holders to harvest enhanced sockeye salmon while minimizing the harvest of wild sockeye returning to Eshamy Lake. Eshamy Lake has a history of erratic runs, with the district remaining closed for 11 of the 22 years from 1961 to 1983 due to poor escapements. ADF&G has maintained a weir on the Eshamy River for over 50 years. From 1990 to present, the Main Bay Subdistrict has, at times, been the only area open in Eshamy District, due to weak wild sockeye salmon runs to Eshamy Lake.

Eshamy District is open to the 533 drift gillnet and 29 set gillnet permits in Area E. Set gillnet permit holders may operate up to 150 fathoms of gear. Up to 3 set gillnets may be operated at one time by a permit holder, provided that a single set gillnet does not exceed 100 fathoms in aggregate length in the Eshamy general district and the Main Bay Subdistrict east of the MBH THA. In the MBH THA and Alternating Gear Zone (AGZ), no single set gillnet may exceed 50 fathoms. The seaward end of set gillnets must be marked with a red keg, buoy, or cluster of floats (5 AAC 39.280(b)). Set gillnet permit holders may hold an unlimited number of sites in the Eshamy District, with each site registered with the Alaska Department of Natural Resources. Each of these sites may be outfitted with buoys, anchors, and running lines that are in place throughout the season, with the exception of the AGZ in front of MBH (5 AAC 24.367(d)(2)),

where all nets, anchors, and associated equipment are required to be removed from the fishing grounds at the end of the fishing day for this gear type.

Set gillnets may not be operated within 100 fathoms of any part of another set gillnet, except in the MBH THA, where this distance is 50 fathoms, and in the AGZ, where set gillnets may be operated without regard to the proximity of other set gillnets.

Drift gillnets may not be operated in the Eshamy general district within 60 fathoms of a set gillnet, except in the zone outside of the offshore end of a set gillnet where the minimum distance is not specified. In the Main Bay Subdistrict, drift gillnets may not be operated within 25 fathoms of a set gillnet, except in the zone outside of the offshore end of the set gillnet where the minimum distance is not specified. The AGZ is only open to either set gillnet or drift gillnet gear during any one fishing period.

Fishing time in the Eshamy District is generally assigned equally to both gear types within a given fishing period with two exceptions.

- In the AGZ, which is located immediately offshore of the hatchery at the terminus of Main Bay, gear types are alternated between periods, with only one gear type having access to this area at a time.
- During years in which the set gillnet gear group catches 5% or more of the previous 5-year average exvessel value of the total common property fishery for enhanced salmon, then beginning on July 10, the set gillnet gear group will be limited to no more than 36 hours of fishing time per week.

Preseason Outlook and Harvest Strategy

The 2011 preseason forecast of the sockeye salmon run to Eshamy Lake was 35,000 fish. Allowing for the midpoint biological escapement goal (BEG) of 20,500 would leave approximately 15,000 fish for the CPF (Table 7). PWSAC projected the total run of enhanced sockeye salmon to MBH to be 935,000 fish (Appendix E1). The entire projected run was stock of Coghill Lake origin, of which 9,000 fish were required for broodstock and the remaining 926,000 fish would be available for harvest in the common property fisheries (PWSAC 2011a). The run timing of Coghill Lake sockeye salmon stock to MBH was expected to be from mid-June to late July with the peak anticipated on July 4. PWSAC typically installs the barrier seine in mid-June to begin broodstock collection.

At the preseason fishermen's meeting in late spring it was announced that the first gillnet opening in the Crafton Island Subdistrict would occur in late May. Additionally, fishing periods starting on Thursday would continue to begin in the mornings, rather than the evenings as had been the standard prior to 2007. Similar to previous years, fishing period duration and open area would be reduced, as an alternative to omitting fishing periods.

According to the *Prince William Sound Management and Salmon Enhancement Allocation Plan* (5 AAC 24.370), the set gillnet gear group allocation is 4%, with a fishing time restriction imposed if they exceed 5% of the 5-year average value of PWSAC enhanced salmon stocks. The 2006–2010 5-year average value percentages for each gear type are 41% drift gillnet, 59% purse seine, and 4% set gillnet. Therefore, fishing time for the set gillnet group was not limited to 36 hours per week beginning July 10.

Season Summary

The total Eshamy District CPF was 1.21 million sockeye, 121,000 chum, 96,400 pink, and 6,770 coho salmon (Table 1 and Appendix C8). Of the 1.21 million sockeye salmon commercially harvested in the Eshamy District, 1.10 million (90.9%) were Main Bay Hatchery sockeye salmon (Appendix E13). The drift gillnet fleet (346 permit holders) accounted for 901,000 sockeye salmon and the set gillnet fleet (29 permit holders) harvested the remaining 311,000 (Table 1 and Appendix C8). PWSAC did not conduct cost recovery on MBH sockeye salmon and had a broodstock harvest of 12,800 fish (Appendix E16).

Sockeye salmon began arriving at the MBH in late May and a schedule of 2 extended fishing periods per week was initiated beginning May 23. The entire Eshamy District was initially opened to commercial fishing to allow the fleet to focus on a strong run to MBH while run timing overlap with Eshamy River wild sockeye salmon was minimal. On Thursday, June 9, the southwestern boundary of the Eshamy District was modified to include waters within 1 nautical mile of the mainland shore along a line from the markers west of Granite Point (60° 24.94' N, 147° 57.97' W) to Junction Island (60° 23.49' N, 147° 59.52' W). This modified district boundary was intended to improve enforceability of the boundary line and to better match historical precedent in the fishery. On July 7, upon completion of the MBH broodstock harvest, the AGZ was opened to commercial fishing. In 2011, the set gillnet gear group fished the first period in the AGZ. Although set gillnet participation remained steady for much of the season, drift gillnet participation fluctuated as permit holders moved among the Coghill, Montague, and Copper River districts (Appendices C4 and C5).

The Eshamy River weir operated from July 10 to August 28. Passage of Eshamy River sockeye salmon was extremely slow throughout July, with a cumulative total of only 194 fish passed on July 31 versus a minimum anticipated count of 3,063. From early to mid-August, sockeye salmon escapement at the weir improved with an average of 608 fish per day between August 1 and 15. Peak sockeye salmon escapement occurred from August 19 to 20 when 9,376 fish passed the weir, representing 39% of the sockeye salmon escapement in 2011. Total escapement on August 28 was 24,129 sockeye salmon, exceeding the BEG midpoint (Appendix C1). The 2011 sockeye salmon escapement was below the 10-year average of 28,976 fish. In addition, 2,879 pink, 35 chum, and 23 coho salmon were passed through Eshamy River weir (Appendix C3).

The peak Eshamy District sockeye salmon harvest of 413,000 fish occurred during statistical week 27; peak chum salmon harvest of 32,300 occurred during statistical week 26; and peak pink salmon harvest of 19,900 occurred during statistical week 30 (Appendices C6 and C7). During late May and the first 2 weeks of June, the sockeye and chum salmon wild stock harvest proportions remained low, averaging 8.1% and 2.8% wild, respectively. Although wild sockeye salmon harvest proportions remained stable for the remainder of June, wild chum salmon harvest proportions increased more than five fold and averaged 15.4% (Appendices E13 and E15). Pink salmon harvest steadily increased during this same time period. The pink salmon harvest in the Eshamy District is normally predominately wild stocks and most fish are assumed to be returning to streams outside of the district. The majority of wild chum salmon are also assumed to be returning to streams outside of the district. Considering the increases in wild chum salmon harvest and overall pink salmon harvest, fishing time was reduced in early July to allow larger time windows for these fish to move through the district. As sockeye and chum salmon harvests decreased from July 4 to August 23, pink salmon harvest remained somewhat steady, with an average of 6,620 fish harvested per period (14 periods total) (Appendices C4 and C5). For the

entire month of July the wild pink salmon proportion in the Eshamy District was 83.3% or greater (Appendix E14). Fishing area included the southern portion of the district until July 14 when the fleet was moved north to Loomis Creek in an effort to limit Eshamy River and Gumboot Lake wild sockeye salmon harvest. Additionally, in response to low escapement at Eshamy River weir, the district was closed to commercial fishing during statistical week 33 (Appendices C4 and C5). Much needed rainfall to the area promoted fish passage beginning on August 3 when 1,178 sockeye salmon passed the weir. By August 10, cumulative sockeye salmon passage at the weir (4,970) was within the projected escapement goal range (4,868–10,484) (Appendix C1). The fishery reopened in Eshamy Bay on August 15 to target Eshamy River wild sockeye and wild pink salmon (Appendices C4 and C5). On August 19, over 6,000 fish were passed at the weir and, to provide opportunity on surplus sockeye salmon, Eshamy Lagoon was opened to set and drift gillnet fishing for a 14-hour period on August 21 (Appendix C1). Harvest during this Eshamy Lagoon opening was 1,860 sockeye salmon (Appendices C4 and C5).

Overall 901,000 sockeye, 96,000 chum, and 78,800 pink salmon were harvested by 346 drift gillnet permit holders during the 2011 season. The previous 10-year average of 492,000 sockeye salmon is lower than this year's harvest, and the previous 10-year averages of 136,000 chum and 114,000 pink salmon are higher than this year's harvests. A total of 29 set gillnet permit holders harvested 313,000 sockeye, 25,400 chum, and 17,600 pink salmon. This sockeye salmon harvest total is higher than the previous 10-year average of 175,000 sockeye salmon, but the chum and pink salmon harvest totals are lower than the previous 10-year averages of 27,000 chum and 47,500 pink salmon (Appendix C8).

Preliminary contribution estimates show that wild sockeye comprised 9.1% of the 1.21 million district harvest, wild chum comprised 13.6% of the 121,000 district harvest, and wild pink salmon comprised 75.5% of the 96,400 pink salmon harvested in Eshamy District (Appendices E13–E15). Enhanced chum salmon harvested in the Eshamy District were released at either WNH, AFK, or the Port Chalmers remote release site. Although fish released at each of these sites are required to have a unique thermal mark on their otoliths, PWSAC failed to do this in 2007 when multiple marks were released from each release site.

GENERAL PURSE SEINE DISTRICTS

Preseason Outlook and Harvest Strategy

The general purse seine districts include the Eastern, Northern, Unakwik, Coghill, Northwestern, Southwestern, Montague, and Southeastern districts. The *Prince William Sound Management and Salmon Enhancement Allocation Plan* (5 AAC 24.370(e)(2)(A)) closes the Southwestern District to purse seine gear prior to July 18. This plan also closes the Coghill District to purse seine gear prior to July 21, unless superseded by the following management plans:

> The *Wally Noerenberg Hatchery Management Plan* (5 AAC 24.368(f)) allows early harvest of the harvestable surplus of chum salmon to prevent deterioration of fish quality.
>
> The *Prince William Sound Management and Salmon Enhancement Allocation Plan* (5 AAC 24.370(h)(2)), which allows the purse seine fleet to fish in the Coghill District prior to July 21 if the purse seine harvest value of enhanced salmon is 45% or less of the previous 5-year average exvessel value of the common property enhanced salmon stocks harvested.

Beginning July 21, both purse seine and drift gillnet gear are allowed in the Coghill District. Purse seine gear is allowed in the Coghill District while the harvestable surplus by number is predominantly pink salmon. Fishing periods in all districts are established by EO.

ADF&G forecasts wild fish runs, whereas hatchery run projections are provided by PWSAC and VFDA. Run projections for species and districts without formal forecasts were based on average historical production. The 2011 PWS Area forecast CPF harvests by species, including both hatchery and wild fish, were 14,000 Chinook, 2.47 million sockeye, 789,000 coho, 35.25 million pink, and 3.13 million chum salmon (Table 7; PWSAC 2011a; VFDA 2011). Run projections are the basis for early inseason management of all districts.

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 enhanced stocks. Escapement of pink and chum salmon is monitored throughout the season by weekly aerial surveys of 215 index streams. The escapement index is based on 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 interpolate 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. Currently, the residence time or stream life is assigned to each index stream based on measured stream life values from streams with similar environmental characteristics (Bue et al. 1998). Aerial survey pink and chum salmon escapement trends, compared to average historical performance, determine the area and duration of fishing periods within districts. Escapement indices may underestimate wild escapement due to frequent weather delays and varied observational conditions throughout the season.

Inseason modifications to harvest projections, season opening dates, and strategies for weekly fishing periods occur as fisheries develop and wild salmon escapement needs are met. ADF&G uses time and area to assist with prosecuting an orderly fishery while protecting wild salmon from overharvest. When wild salmon escapements are weak, hatchery subdistrict and terminal area openings are utilized to target enhanced stocks. Further, ADF&G may use SHTF markers to close wild stock terminal areas when escapements are lower than expected or as an intermediate step before initiating areawide closures.

Hatchery *Annual Management Plans* (AMPs) from VFDA and PWSAC provide guidelines to ADF&G for managing enhanced stock fisheries to achieve cost recovery and broodstock objectives. The AMPs underwent ADF&G and Regional Planning Team (RPT) review on April 20, 2011, and were later signed by the commissioner of ADF&G. The RPT also reviewed 3 Permit Alteration Requests (PARs) for PWSAC's PWS hatchery facilities, which were based on a recent review of potential hatchery rearing capacity. PWSAC determined that their existing facilities could support an additional 103 million pink salmon green eggs. Each of these PARs were addressed at 2010 RPT meetings and were brought back to the RPT by PWSAC for consideration in 2011 (ADF&G 2011). The RPT voted 3 in support and 3 in opposition on each PAR. The PARs and the RPT's tie vote position statement were forwarded to the commissioner of ADF&G for a final decision. The commissioner's office approved the pink salmon production increase at CCH, whereas the remaining 2 pink salmon production increases at AFK and WNH

hatcheries were denied (David Bedford, Deputy Commissioner, ADF&G, Juneau, personal communication).

Chum Salmon

The 2011 forecast for the chum salmon run to PWS was 3.92 million fish. Based on the department's wild chum salmon forecast of 400,000 fish and escapement goal of 200,000, there was a potential CPF harvest of 200,000 wild chum salmon (Table 7; PWSAC 2011a). The majority of the run was anticipated to be from PWSAC hatchery production. PWSAC forecast a run of 2.61 million chum salmon to WNH of which 588,000 would be needed for cost recovery and broodstock, with the remaining 2.02 million fish available for CPF harvest. PWSAC also forecast enhanced chum salmon runs of 624,000 fish to the Port Chalmers remote release site and 280,000 fish to AFK. All Port Chalmers chum salmon were intended for harvest by the drift gillnet fleet and AFK chum salmon were intended for harvest by the purse seine fleet (PWSAC 2011a).

Pink Salmon

The 2011 pink salmon run forecast for PWS was 46.85 million fish. This estimate included 5.55 million wild stock pink salmon, 15.50 million VFDA pink salmon, and 25.80 million PWSAC pink salmon (VFDA 2011; PWSAC 2011a). The hatchery forecast was based on the release of approximately 647 million pink salmon fry in 2010 (Appendix E3).

PWSAC's 2011 pink salmon corporate escapement goal was based on broodstock needs of approximately 949,000 fish and a revenue goal of $5.96 million. PWSAC estimated that approximately 4.84 million pink salmon (18.8%) of the projected 25.80 million pink salmon returning to PWSAC hatcheries would be required for cost recovery and broodstock, with the remaining 20.96 million PWSAC fish available for CPF harvest (PWSAC 2011a). The 2011 VFDA pink salmon sales harvest revenue goal was $3.49 million as outlined in the VFDA FY-2012 Income and Expense Statement in the 2011 SGH AMP. VFDA estimated that approximately 4.76 million pink salmon (30.7%) of the projected 15.50 million pink salmon returning to SGH would be required for cost recovery and broodstock, with the remaining 10.75 million VFDA fish available for CPF (Table 7; VFDA 2011). After an escapement of 2.00 million wild pink salmon, 3.55 million wild pink salmon were projected for CPF harvest (Tables 6 and 7).

Coho Salmon

PWSAC forecast a run of 269,300 enhanced coho salmon to their release sites in 2011, including 250,000 fish to WNH and 19,300 fish to remote release sites. Approximately 2,700 fish were required for broodstock at WNH, leaving 267,000 fish for CPF harvest. Considering the disparity between the WNH pink and coho salmon run sizes and substantial run overlap, the harvestable surplus of coho salmon was not likely to surpass pink salmon during the normal extent of purse seine fishing effort in the Coghill District. However, when the majority of harvestable surplus shifts to coho salmon the drift gillnet fleet has exclusive access to the Coghill District (PWSAC 2011a).

The 2011 run of coho salmon to SGH was forecast to be 189,000 fish with 1,000 salmon needed for broodstock. Port Valdez was anticipated to be closed to CPF purse seine fishing inside of a line from Entrance Point to Potato Point beginning on August 15. Purse seine fishing in Port Valdez was expected to resume the day after Labor Day, September 6, to target surplus SGH coho salmon (VFDA 2011).

Chum Salmon Season Summary

Out of the total PWS CPF harvest of 1.91 million chum salmon, the purse seine fleet harvested108,000 fish in 2011 (Table 1). In 2011, PWSAC reported a harvest of approximately 478,000 chum salmon for cost recovery and broodstock (PWSAC 2011b).

Aerial surveys to assess wild chum salmon escapements in the Eastern and Northern districts began in mid-June. Surveys were conducted in other PWS districts starting in early July. Wild chum salmon escapement indices lagged behind anticipated levels early in the 2011 season, with escapement indices ultimately exceeding anticipated levels in all but the Coghill and Northwestern districts by the end of the season. High pink salmon densities observed during aerial surveys made counting chum salmon difficult. After postseason adjustment of chum salmon escapement indices for comparison with individual district SEGs, the Eastern, Northern, Coghill, Northwestern, and Southeastern districts escapement indices exceeded their SEG lower bounds. The 2011 PWS wild stock chum salmon escapement index of 368,000 fish in districts with SEGs (375,000 across all districts) was more than 4 times the PWS SEG lower bound of 91,000 fish; this difference was largely driven by Eastern and Southeastern districts escapement indices that were 4–11 times their SEG lower bound (Appendix D4).

Wild stock pink and chum salmon escapement indices in 2011 supported openings outside of hatchery subdistricts during late July, August, and early September. However, purse seine fishing effort was focused on relatively large hatchery pink salmon runs for much of the season, thereby minimizing the effort on wild chum salmon during most openings outside hatchery subdistricts.

Pink Salmon Season Summary

The 2011 commercial harvest of 33.38 million pink salmon in PWS was the twelfth highest since 1971 (Appendix D2). According to otolith contribution estimates, VFDA and PWSAC contributed 33.9% and 30.3%, respectively, to the overall PWS pink salmon commercial common property harvest in 2011 (Appendices D2 and E3). Pink salmon harvest by gear type was 26.11 million by purse seine, 17,600 by set gillnet, 830,000 by drift gillnet, and 6.44 million for hatchery cost recovery and broodstock (Table 1). VFDA cost recovery and broodstock harvest of 2.42 million fish was approximately 17.8% of the total pink salmon run of 13.61 million fish to SGH in 2011 (Appendices E3 and E20). PWSAC cost recovery and broodstock harvest of 4.18 million fish was approximately 29.2% of the total pink salmon run of 14.27 million fish to PWSAC hatcheries in 2011 (Appendices E3, E12, E24, and E27). Fishery participation increased from 174 commercial purse seine permit holders reporting harvest in 2010 to 183 in 2011 (Table 1; Botz et al. 2012).

Aerial surveys in PWS started in mid-June and were flown into late September to ensure that the broad range in pink and chum salmon run timing was represented in the escapement index. Favorable weather conditions in 2011 allowed for frequent and timely aerial surveys to monitor wild pink and chum salmon escapements throughout PWS. Wild pink salmon escapement indices were above minimum anticipated escapement levels by mid-July in the Eastern District, with a similar trend following soon thereafter elsewhere in PWS. The 2011 PWS wild stock pink salmon escapement index of 3.92 million fish was well above the odd-year SEG midpoint of 2.00 million fish and was the second highest odd-year escapement since 1965 (Appendices D4 and D5).

Eastern District Summary

The 2011 VFDA SGH pink salmon forecast was 15.50 million fish, based on a 6.95% marine survival applied to the 2010 release of 223.08 million fry. VFDA anticipated utilizing 346,000 pink salmon for broodstock and 4.41 million pink salmon for cost recovery, leaving 10.75 million pink salmon for CPF harvest (VFDA 2011).

ADF&G first observed pink and chum salmon returning to streams in the Eastern District in late June. Eastern District wild pink and chum salmon escapement indices were below anticipated levels through June and early July, but moved above anticipated levels by the middle of July. The Eastern District pink salmon escapement index was 983,000 fish, more than 200,000 fish above the district's odd-year escapement target upper bound of 780,000 fish. The Eastern District chum salmon escapement index of 197,000 fish was almost 4 times the district's SEG lower bound of 50,000 fish (Appendix D4).

VFDA pink salmon cost recovery harvests were conducted throughout Port Valdez in 2011. The CPF in Port Valdez and a portion of Valdez Arm opened on July 3 with approximately 60% of cost recovery completed (Appendices E19 and E20). VFDA recommended opening hatchery subdistricts to the CPF on this date based on an observed build-up of hatchery pink salmon in Port Valdez. The 14-hour CPF on July 3 resulted in a harvest of 2.74 million pink salmon. From July 3 to 7, CPF periods alternated with VFDA cost recovery on an every other day basis, with an average daily harvest of 2.12 million pink salmon for these 3 fishing periods. When the department announced a CPF in Port Valdez to take place on July 9 and 10, it was done with the assumption that cost recovery fishing would be completed on July 8. The July 9 and 10 CPFs took place as announced, resulting in a total harvest of 1.60 million pink salmon during these 2 periods. The Eastern District CPF in Port Valdez was closed on July 11 allowing for the successful completion of VFDA's cost recovery fishing operations. Waters of Port Valdez were open to daily 14-hour fishing periods from July 12–14, followed by a series of staggered 14-hour openings from July 14–19 to aid SGH broodstock collection. Based on broodstock collection remaining below VFDA's anticipated numbers, the final 2011 CPF targeting VFDA enhanced pink salmon in Port Valdez took place on July 29 (Appendix E19).

Wild pink salmon escapement indices supported expanded fishing area in general district waters of the Eastern District beginning on July 17. Initial Eastern District CPF periods outside of Port Valdez were scheduled concurrently with openings in Port Valdez, and in portions of the Southeastern and Northern districts to provide a broad distribution of opportunity for the harvest of surplus wild pink and chum salmon, and to spread out the fleet. On July 21 and 26, purse seine CPF periods took place in Eastern District waters and in the Southeastern District, attracting most of the 70 and 91 permits actively fishing in PWS during these 2 periods (Appendices D1 and D12). A total of 444,000 pink salmon were harvested in the Eastern District during these 2 fishing periods, 96.1% of which were wild fish (Appendix E19). Waters of the Eastern District south of Point Freemantle were opened to commercial fishing on August 1 concurrent with purse seine CPF periods in the Northern, Coghill, Northwestern and Southeastern districts (Appendix D12). A total of 381,000 pink salmon were harvested in the Eastern District during the August 1 fishing period, 94.8% of which were wild fish. For the month of July, 12.34 million pink salmon were harvested in the Eastern District, 9.44% of which were wild fish (Appendix E19).

Eastern District CPF periods outside of Port Valdez after July 29 were scheduled concurrent with general district openings elsewhere in PWS, with fishing opportunity being provided in the

Eastern District on an every-other-day basis from August 4 until August 23. Fishing frequency was reduced slightly from August 24 until September 1 as targeted fishing effort switched from hatchery to wild fish, after which daily fishing opportunity in Eastern District waters was provided for the remainder of the season (Appendix E19).

Port Valdez and a portion of Valdez Arm were opened for a series of CPF periods targeting surplus SGH coho salmon starting on September 6, 2011. VFDA expressed concern that allowing the fleet into Port Valdez near SGH could jeopardize coho salmon broodstock collection. Accordingly, the department provided a closed area buffer around SGH to protect coho broodstock. A total of 38,000 coho salmon were subsequently harvested by VFDA at SGH, with another 2,510 fish utilized for broodstock (Appendix E20). There was no commercial purse seine fishing effort in the Eastern District beyond September 14, and the district closed to commercial fishing on October 2 (Appendix E19).

There were a total of 39 Eastern District CPF fishing periods in 2011, with 180 purse seine permit holders reporting deliveries (Appendix D12; Table 1). The Eastern District harvest of 13.3 million pink salmon was composed of 83.9% VFDA fish and 15.7% wild fish (Appendices D3 and E19). The 2011 PWS total run estimate of 13.61 million VFDA-produced pink salmon was 12.2% below VFDA's preseason forecast of 15.50 million fish (Appendix E1; Table 6). VFDA cost recovery harvest otolith contribution estimates indicate that 94.5% of the overall cost recovery harvest was comprised of SGH fish (Appendix E3). Additionally, otolith contribution estimates indicate that VFDA pink salmon were harvested in the CPF outside of the Eastern District, including 66,500 in the Southwestern District, 34,400 in the Northern District, 14,400 in the Montague District, 7,480 in the Coghill District, and 2,330 in the Eshamy District (Appendices E10, E14, E22, E23 and E26). The 2011 Eastern District CPF harvest by species was 13.31 million pink, 29,300 chum, 8,100 sockeye, 32,200 coho, and 33 Chinook salmon (Table 1).

Northern District Summary

Northern District wild pink and chum salmon escapement indices were above anticipated levels by the third week of July. The Northern District's pink and chum salmon escapement targets were met in 2011. The Northern District pink salmon escapement index of 163,000 fish was 53,000 fish above the escapement target's lower bound and approximately 10,000 fish below the escapement target's midpoint. The Northern District chum salmon escapement index of 52,500 fish was 2.63 times the district's SEG lower bound of 20,000 fish (Appendix D4).

The 2011 PWS CPF harvest of 3.88 million CCH enhanced pink salmon was 31.6% below the PWSAC preseason forecast of 5.67 million CPF fish (Appendix E1; PWSAC 2011a). Weak run entry of CCH enhanced pink salmon limited fishing effort in Unakwik Inlet hatchery subdistricts and terminal areas in 2011. Conversely, strong wild pink and chum salmon escapement indices allowed for a liberal management approach outside of Northern District hatchery subdistricts, resulting in the consistent use of large area general district openings on a frequent basis. To maintain escapement in wild stock terminal areas given this liberal management strategy, SHTF closed water areas were employed for the entirety of the 2011 season in the Northern District. The management strategy in the Northern District in 2011 provided opportunity for mixed stock and directed wild stock fishing, with the bulk of fishing effort being directed away from waters closest to CCH. This strategy allowed for an efficient and timely harvest of hatchery fish,

provided adequate return of pink salmon to CCH for broodstock needs, and provided consistent harvest opportunity on wild stock salmon migrating to district streams.

PWSAC's anticipated cost recovery pink salmon harvest at CCH in 2011 was 1.07 million fish (PWSAC 2011a). With the approval of a pink salmon production increase from 152 million to 187 million green eggs, broodstock requirements increased from 290,000 fish in 2010 to 357,000 fish in 2011 (Botz et al. 2012; PWSAC 2011a). The CCH SHA was expanded for cost recovery harvest, upon PWSAC's request, from July 24 to August 14 to expedite cost recovery and allow for a timely CPF during early run entry. However, due to weak pink salmon run entry to CCH, along with higher and more consistent cost recovery harvest at WNH and AFK, PWSAC cost recovery fishing effort shifted to WNH and AFK and no purse seine cost recovery harvest occurred at CCH in 2011 (PWSAC 2011a; Botz and Sheridan 2011). PWSAC's 2011 broodstock harvest of approximately 283,000 fish at CCH was 20.7% below the revised broodstock goal of 357,000 fish (Appendix E3). An additional 324,000 pink salmon were harvested at CCH for cost recovery in 2011, including those harvested via the CCH fishway and during roe recovery operations (Appendix E24). The pink salmon egg-take goal of 187 million eggs was met at CCH in 2011.

The 2011 Northern District commercial fishing season started with two 14-hour CPF periods on August 1 and 4 scheduled concurrently with Eastern, Coghill, Northwestern, and Southeastern district openings to provide fishing opportunity on surplus wild pink and chum salmon. Hatchery subdistricts in the Northern and Southwestern districts were opened to the CPF at PWSAC's recommendation on August 6, at which time approximately 72% of PWSAC's aggregate cost recovery goal had been completed (Appendix D12). From August 6 to 8, CPF periods alternated with PWSAC cost recovery on an every other day basis, after which a 2 day cessation of fishing was implemented to allow for the build-up of pink salmon in the hatchery SHAs. A third hatchery subdistrict CPF period occurred in the Northern District on August 11, and PWSAC completed their cost recovery operations on August 12. The pink salmon harvest during the first 5 CPF periods in the Northern District was 1.15 million fish or 41.5% of the district's total 2011 CPF pink salmon harvest (Appendix E23). CPF fishing periods continued from August 13 to 25 on an every other day fishing schedule. Daily 12-hour fishing periods were scheduled in Northern District hatchery subdistricts starting on August 25, with general district waters following suit on September 1. There was no commercial purse seine fishing effort in the Northern District beyond September 1, and the district closed to fishing on September 20 (Appendix D12).

The 2011 Northern District CPF harvest by species was comprised of 2.78 million pink, 2,350 chum, 3,010 sockeye, 12,600 coho, and 7 Chinook salmon (Table 1). The Northern District 2011 pink salmon harvest was composed of 67.0% CCH fish, 18.1% wild fish, 12.8% WNH fish, 1.20% SGH fish, and 0.80% AFK fish (Appendix E23). The Northern District was open for 33 CPF periods in 2011with a total of 138 purse seine permits reporting harvest (Appendix D12; Table 1). This fishery had a maximum single period harvest of 461,000 pink salmon on August 6 (Appendix E23). Otolith contribution estimates indicate that CCH pink salmon were harvested in the CPF outside of the Northern District, including 1.59 million in the Southwestern District, 299,000 in the Coghill District, 83,600 in the Montague District, and 17,000 in the Eastern District (Appendices E10, E19, E22, and E26).

Coghill District Summary

Coghill District wild pink and chum salmon escapement indices moved above anticipated levels starting in late July and early August, respectively. The Coghill District pink salmon escapement index of 257,000 fish was within the district's odd-year escapement target range, and was 57,000 fish above the escapement midpoint of 200,000 fish (Appendix D4). The Coghill District escapement index of 16,400 chum salmon was double the district's SEG lower bound of 8,000 fish (Appendix D4).

PWSAC's 2011 forecast for pink salmon returning to WNH was 9.50 million fish. PWSAC's 2011 corporate pink salmon escapement requirements for WNH included a broodstock goal of 283,000 fish, and a cost recovery goal of 1.43 million fish. The preseason forecast for CPF harvest of WNH pink salmon was 7.78 million fish (PWSAC 2011a).

By regulation, management for pink salmon returning to WNH began on July 21 in 2011. The management strategy in the Coghill District initially focused effort on surplus sockeye and pink salmon in the vicinity of the Coghill River. This was accomplished by limiting fishing effort to waters north of Point Pakenham for CPF periods from July 21 through August 11. PWSAC recommended against CPF openers in Coghill District hatchery subdistricts until August 13 due to weak pink salmon run entry and slow cost recovery fishing progress at WNH.

Pink salmon purse seine cost recovery harvest was conducted on a daily basis at WNH from July 26 through August 5, and on August 7, 9, and 12. PWSAC's 2011 cost recovery fishing operations were completed on August 12. The traditional purse seine cost recovery harvest of 1.94 million pink salmon at WNH was 1.36 times PWSAC's preseason goal of 1.43 million fish (Appendix E12; PWSAC 2011a). This was due to weaker than anticipated pink salmon returns to CCH and AFK, thereby leading to a greater proportion of PWSAC pink salmon cost recovery harvests occurring at WNH (Botz and Sheridan 2011). PWSAC's 2011 broodstock harvest of approximately 242,000 fish at WNH was 14.5% below the broodstock goal of 283,000 fish. An additional 171,000 pink salmon were harvested at WNH for cost recovery in 2011, including those harvested via the WNH fishway and during roe recovery operations (Appendix E12). The pink salmon egg-take goal of 148 million eggs was met at WNH in 2011.

PWSAC recommended a CPF period in the Coghill District hatchery subdistricts on August 13, after which a schedule of every other day fishing was implemented for hatchery subdistricts and general district waters from August 15 until August 25 (Appendix D12). Participation decreased during this time frame from a peak of 37 purse seine permits reporting harvest on August 21, to a total of 20 permits reporting harvest on August 25. The purse seine pink salmon harvest in the Coghill District from August 13 through August 25 was 1.41 million fish or 84.3% of the district's total 2011 purse seine pink salmon harvest (Appendix B5). Daily 12-hour fishing periods were scheduled starting on August 25 in the Coghill District, with the district closing to commercial purse seine fishing on September 7 (Appendix D12).

The WNH enhanced pink salmon run of 6.71 million fish was 70.6% of PWSAC's preseason projections (Appendix E1; PWSAC 2011a). There were 27 Coghill District purse seine CPF periods with a total of 72 commercial purse seine permit holders reporting harvest in 2011. Peak Coghill District purse seine pink salmon harvest in 2011 occurred on August 21, with 348,000 pink salmon harvested by 37 permit holders (Appendix B5). The 2011 Coghill District purse seine CPF harvest by species was 1.67 million pink, 166 chum, 843 sockeye, 16,600 coho, and 4 Chinook salmon (Table 1). Otolith contribution estimates indicate that WNH pink salmon were

harvested in the CPF outside of the Coghill District, including 1.92 million in the Southwestern District, 356,000 in the Northern District, 74,500 in the Montague District, 21,200 in the Eastern District, and 20,700 in the Eshamy District (Appendices E14, E19, E22, E23 and E26).

Northwestern District Summary

Northwestern District wild pink and chum salmon escapement indices were above anticipated levels starting in late July and early August, respectively. The Northwestern District pink salmon escapement index of 147,000 fish was slightly higher than the district's odd-year escapement target range's upper bound of 145,000 fish. The Northwestern District escapement index of 11,400 chum salmon was over double the district's SEG lower bound of 5,000 fish (Appendix D4).

The Northwestern District was open to the commercial CPF for 22 periods with 40 commercial purse seine permits reporting harvest in 2011 (Appendix D12; Table 1). The 2011 Northwestern District purse seine CPF harvest by species was 252,000 pink, 1,080 chum, 1,680 sockeye, and 387 coho salmon (Table 1). The 2011 Northwestern District pink salmon harvest was the largest in the district since 1990 (Appendix D3). Competing enhanced stock fisheries with higher potential yield in the Northern, Coghill, and Southwestern districts, attract fishing effort away from the Northwestern District.

Southwestern District Summary

Southwestern District wild pink and chum salmon escapement indices were above anticipated levels by the second week of August. The Southwestern District pink salmon escapement index was 232,000 fish, approximately 7,000 fish above the district's odd-year escapement target upper bound of 225,000 fish. The Southwestern District chum salmon escapement index was 801 fish, but there is not a chum salmon escapement goal for this district (Appendix D4).

Fishing to target remote-release chum salmon at the AFK THA and SHA started on May 26, with a weekly schedule of 60- and 84-hour purse seine fishing periods until July 20 (Appendix D12). PWSAC did not harvest any enhanced chum salmon at AFK for cost recovery in 2011, instead conducting chum salmon cost recovery at WNH. The ADF&G PWS harvest estimate of 57,600 fish for AFK enhanced chum salmon was 20.6% of PWSAC's preseason forecast harvest of 280,000 fish (Appendix E1).

Sockeye salmon made up a large component of the harvest during early season fishing in the Southwestern District. There were 21,400 sockeye salmon harvested in the AFK chum salmon fishery in May, June, and July. Otolith contribution estimates indicate that 12.8% of the sockeye salmon harvested during this time frame were wild fish while the remaining fish were produced at MBH (Appendix E25).

Pink salmon purse seine cost recovery harvest was conducted on a daily basis at AFK from July 26 through August 5, and on August 7, 9, and 12. The purse seine Southwestern District CPF targeting PWSAC enhanced pink salmon began on August 6 in the Elrington Subdistrict, resulting in the harvest of 886,000 pink salmon, 31.3% of which were wild fish. General district CPF periods in the Southwestern District on August 8 and 11 resulted in the harvest of an additional 1.36 million pink salmon, including 404,000 wild fish (Appendix E26). PWSAC's 2011 cost recovery fishing operations were completed on August 12. The traditional purse seine cost recovery harvest of 832,000 pink salmon at AFK was 40.1% below PWSAC's preseason goal of 1.39 million fish (Appendix E27; PWSAC 2011a). This was due to weaker than

anticipated pink salmon returns to AFK, thereby leading to a greater proportion of PWSAC pink salmon cost recovery harvests occurring at WNH. PWSAC's 2011 broodstock harvest of approximately 211,000 fish at AFK was 31.7% below the preseason goal of 309,000 fish. An additional 170,000 pink salmon were harvested at AFK for cost recovery in 2011, including those harvested via the AFK fishway and during roe recovery operations (Appendix E27). The pink salmon egg-take goal of 162 million eggs was met at AFK in 2011.

Southwestern District pink salmon harvest management in 2011 was based on aerial survey escapement data, test fishing, harvest rates, and terminal area run entry. Test fishing conducted by the R/V *Solstice* in late July and early August provided pink salmon harvest rate, stock composition, and sex ratio data. Fishing time and area was initially limited in the hatchery subdistricts and general district waters to ensure that migration corridors through Montague, Latouche, Elrington, Prince of Wales, Bainbridge, and Knight Island passages remained open for wild stock salmon bound for northern systems (e.g., Eshamy Lake sockeye and southern, northern, and western PWS wild chum and pink salmon). However, area and time were extended once wild stock pink, chum, and sockeye salmon escapements were above anticipated levels for most northern systems.

PWSAC recommended a CPF fishing period in Southwestern District hatchery subdistricts on August 13, after which a schedule of every other day fishing was implemented for hatchery subdistricts and general district waters from August 15 until August 25 (Appendix D12). The entire Southwestern District, excluding the AFK SHA, was opened to commercial fishing on August 15, resulting in the district's largest single-day harvest total of 1.26 million pink salmon, 14.7% of which were wild fish. The total pink salmon harvest in the Southwestern District from August 13 through 25 was approximately 3.98 million fish or 58.5% of the district's total 2011 pink salmon harvest (Appendix E26). Daily 12-hour fishing periods were scheduled starting on August 25 in the Southwestern District, with fishing being excluded from the AFK SHA and THA until September 4 to provide sanctuary for hatchery broodstock. On September 4, PWSAC recommended a CPF to include some portions of the AFK SHA, and recommended clean-up fisheries in the entirety of the AFK SHA for daily 12-hour fishing periods from September 5 through September 7 (Appendix D12). A total harvest of 27,700 pink salmon was reported for the Southwestern District on September 7 and 8, after which no harvest was reported for the district (Appendix E26). The Southwestern District was closed to fishing for the 2011 season on September 20 (Appendix D12).

The 2011 AFK enhanced pink salmon run of 3.09 million fish was 33.6% of PWSAC's preseason projection of 9.20 million fish (Appendix E1). The 2011 Southwestern District CPF harvest by species was composed of 6.81 million pink, 62,600 chum, 47,500 sockeye, 27,700 coho, and 44 Chinook salmon (Table 1). The Southwestern District 2011 pink salmon harvest was composed of approximately 28.2% WNH fish, 25.3% AFK fish, 23.4% CCH fish, 22.2% wild fish, and 1.0% SGH fish (Appendix E26). The Southwestern District was open for 16 CPF periods targeting AFK enhanced chum salmon and 27 CPF periods targeting late run pink salmon with a total of 157 purse seine permits reporting harvest in 2011 (Appendix D12; Table 1). Otolith contribution estimates indicate that AFK pink salmon were harvested in the CPF outside of the Southwestern District, including 73,300 in the Montague District, 27,100 in the Coghill District, 22,700 in the Northern District, 21,600 in the Eastern District, and 619 in the Eshamy District (Appendices E10, E14, E19, E22 and E23).

Montague District Summary

Montague District wild pink salmon escapement indices were above anticipated levels by the second week of August. The Montague District pink salmon escapement index was 599,000 fish, approximately 254,000 fish above the district's odd-year escapement target upper bound of 345,000 fish and 2.40 times the escapement midpoint of 250,000 fish. The Montague District chum salmon escapement index was 5,500 fish, but there is not a chum salmon escapement goal for this district (Appendix D4).

The Montague District was open to the commercial purse seine CPF for 20 periods with 56 commercial purse seine permits reporting harvest in 2011 (Appendix D12; Table 1). The 2011 Montague District purse seine CPF harvest by species was 780,000 pink, 575 chum, 647 sockeye, 1,430 coho, and 3 Chinook salmon (Table 1). The 2011 Montague District pink salmon harvest was composed of approximately 68.7% wild fish, 10.7% CCH fish, 9.50% WNH fish, 9.30% AFK fish, and 1.80% SGH fish (Appendix E22). The 2011 Montague District pink salmon harvest was the seventh largest in the district since 1975, and 1.78 times the recent 10-year average harvest of 441,000 fish (Appendix D3). Competing enhanced stock fisheries with higher potential yield in the Northern, Coghill, and Southwestern districts, attract fishing effort away from the Montague District.

Southeastern District Summary

Southeastern District wild pink and chum salmon escapement indices were above anticipated levels starting in the second and third week of July, respectively. The Southeastern District pink salmon escapement index was 1.54 million fish, approximately 805,000 fish above the district's odd-year escapement target upper bound of 735,000 fish and 2.88 times the escapement midpoint of 535,000 fish. The Southeastern District chum salmon escapement index of 91,200 fish was 11.4 times the district's SEG lower bound of 8,000 fish and 2.74 times the 1976–2011 mean index of 33,300 fish (Appendix D4).

Wild pink and chum salmon escapement indices supported the commencement of commercial fishing periods in the Southeastern District beginning on July 17. Initial Southeastern District CPF periods were scheduled concurrently with openings in Port Valdez, and in portions of Eastern and Northern district waters to provide a broad distribution of opportunity for the harvest of surplus wild pink and chum salmon, and to spread out the fleet. On July 21 and 26, purse seine CPF periods took place in Eastern District waters and in the Southeastern District, attracting most of the 70 and 91 permits actively fishing in PWS during these 2 periods (Appendices D1 and D12). Waters of the Southeastern District were again opened to commercial fishing on August 1 concurrent with purse seine CPFs in the Eastern, Northern, Coghill, and Northwestern districts (Appendix D12).

Southeastern District CPF periods beyond the beginning of August were scheduled concurrent with general district openings elsewhere in PWS, with fishing opportunity provided every other day between August 4 and August 23. Fishing frequency was reduced slightly from August 24 through September 1 as targeted fishing effort switched from hatchery to wild fish, after which daily fishing opportunity in general district waters was provided for the remainder of the season. The 2011 commercial purse seine fishing season came to a close in the Southeastern District on September 20 (Appendix D12).

The Southeastern District was open to the commercial purse seine CPF for 28 periods with 73 commercial purse seine permits reporting harvest in 2011 (Appendix D12; Table 1). The 2011 Southeastern District purse seine CPF harvest by species was 505,000 pink, 11,800 chum, 2,400 sockeye, 1,330 coho, and 59 Chinook salmon (Table 1). The 2011 Southeastern District pink salmon harvest was the seventh largest in the district since 1986, and 1.26 times the recent 10-year average harvest of 400,000 fish (Appendix D3).

PRINCE WILLIAM SOUND AND COPPER RIVER SUBSISTENCE FISHERIES

The PWS Subsistence Management Area includes all waters of Alaska between the longitude of Cape Fairfield and the longitude of Cape Suckling. State of Alaska 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); therein, herring spawn-on-kelp may be taken above water from March 15 through June 15 or harvested using dive gear only during fishing periods open for the wild herring spawn-on-kelp commercial fishery. Lingcod *Ophiodon elongatus* may be taken for subsistence purposes only from July 1 through December 31. Additionally, herring *Clupea pallasii*, smelt, rockfish *Sebastes* spp., and other groundfish may also be harvested for subsistence purposes in the PWS Area.

Prior to achieving statehood in 1959, Alaska's subsistence fisheries were not monitored by the territorial government. The Copper River District commercial fishery was opened in early May and participants were allowed to operate 150 fathoms of 8.5 inch mesh king salmon gear in addition to the legal limit of 150 fathoms of red salmon gear (Pirtle and Fridgen 1967). These regulations, in conjunction with no monitoring, likely lead to the depletion of upriver stocks utilized by interior residents. Under state jurisdiction, the opening date for the Copper River District commercial and subsistence seasons was moved to mid-May and commercial gear was restricted to 150 fathoms per permit holder to increase early run escapement to interior residents. Beginning in 1960, subsistence users were required to have a license and a permit, and were required to report harvests at the end of the season (Pirtle and Noerenberg 1960). In addition, until 1987 commercial permit holders were not permitted to hold subsistence fishing permits during the commercial salmon net fishing season in Area E. Also, seasonal subsistence bag limits were tied to both household size and income. From 1960 to 1977 fish wheel permit holders from households with incomes above $4,000 were entitled to the same number of fish as dip net subsistence users: 20 salmon for a 1 person household and 40 salmon for households with 2 or more people. Fish wheel permit holders from households with incomes less than $4,000 were entitled to the standard dip net amount plus an additional 200 salmon for a household of 1 person and up to 500 salmon for a household of 2 or more people. The 1966 Area Management Biologist Ralph Pirtle noted that while the number of fish wheel subsistence permits remained constant from 1960 to 1966, the number of dip net permits had increased from 32 in 1960 to 1,132 in 1965. He further stated that,

> "Subsistence fishing in Alaska is allowed, usually by authority of a permit, as a means for low income families to supplement their diet. Unfortunately, a complete control of the fishery has not been maintained which has allowed abuse of the subsistence fishery by persons actually seeking recreation and sport rather than actual need of the resource for livelihood" (Pirtle and Fridgen 1967).

After 1977, in response to increased participation related to the trans-Alaska oil pipeline boom, basic allocation for both gear types was reduced to 15 or 30 salmon for households with incomes

greater than $5,000. In addition, after 1977 the maximum household income necessary to receive the 200 or 500 fish additional allocation was increased to $6,000. Beginning in 1981, fish wheel limits were increased to 30 salmon for 1 person, 60 salmon for a household of 2, and 10 salmon for each additional household member. The income limit for the 200 or 500 additional allocation of salmon was also increased to $12,000.

In February 1984, the BOF determined salmon stocks of the Chitina and Glennallen Subdistricts do not support customary and traditional uses. Accordingly, the BOF amended its *Copper River Subsistence Salmon Fisheries Management Plan* (5 AAC 01.647) to include provisions for subsistence salmon fishing only in the Glennallen Subdistrict. While the Chitina Subdistrict was closed to subsistence fishing, a personal use fishery was authorized. Participation in the Glennallen Subdistrict subsistence salmon fishery was limited to residents of the Copper River basin and certain upper Tanana communities. In addition, the $12,000 income restriction granting eligibility for the additional 200 or 500 salmon allocation was removed, with permits for these additional salmon available by request to Alaska residents regardless of income.

In 1985, following an Alaska Supreme Court decision, regulations governing subsistence fishing in the Copper River reverted back to those prior to 1984. This change eliminated the distinction between the personal use and subsistence fisheries with both fisheries operating under subsistence regulations. In addition, the restriction limiting participation in subsistence fisheries to only rural residents was removed. However, the income restriction prohibiting persons of higher incomes from receiving the additional 200 or 500 salmon was not reinstated.

In 1986, following the passage of a new state subsistence statute that included a rural preference, the regulations in effect in 1984 were reinstated, closing the Chitina Subdistrict subsistence fishery and reopening a personal use fishery instead. In 1988, the Batzulnetas fishery was established in response to a lawsuit. This lawsuit allowed the residents of Batzulnetas to fish at the traditional village site. This lawsuit coupled with the McDowell decision challenging rural preference, forced the federal government to assume management of subsistence fishing in navigable waters. In 1990, following the Alaska Supreme Court decision in the McDowell case in late 1989, the subsistence fishery in the Glennallen Subdistrict was again open to all Alaska residents. In December 1996, the BOF rejected (by a vote of 0–6) Proposal 50 to make a positive customary and traditional use finding for the Chitina Subdistrict fishery that would reopen the Chitina Subdistrict to subsistence fishing. In December 1999, the BOF adopted (by a vote of 4–2) Proposal 44 to make a positive customary and traditional finding for the Chitina Subdistrict salmon fishery. The BOF then adopted regulations changing the status of the Chitina Subdistrict dip net fishery from personal use to subsistence.

In 2003, the BOF 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 2 subsistence fisheries north of Miles Lake: the Glennallen Subdistrict fishery and the Batzulnetas subsistence fishery. Both fisheries use fish wheel and dip nets. During the December 2005 meeting, the BOF 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 in response to increased harvest.

Lower Copper River and Prince William Sound

Prior to 1987, commercial permit holders were not permitted to hold subsistence fishing permits during the commercial salmon net fishing season in Area E. During this time period, 5 AAC 01.020 *Subsistence fishing by commercial fishermen* stated that, "Commercial fishermen may retain fish for their personal use from their lawfully taken commercial catch." In 1993 this was repealed with the following regulation adopted, 5 AAC 01.021 *Retention of fish taken in commercial fisheries*. This stated that, "People who commercial fish may retain fish for their own use from their lawfully taken commercial catch." This was repealed in 2004 with 5 AAC 39.010. *Retention of fish taken in a commercial fishery* adopted. This stated that, "A person engaged in a commercial fishery may retain finfish from lawfully taken commercial catch for that person's own use, including for the use as bait in a commercial fishery. Finfish retained under this section may not be sold or bartered." Moving this regulation from the Subsistence chapter to Chapter 39 allowed retained fish to be used as bait. In addition it eliminated conflict with 5 AAC 01.010(b) that specified that only Alaska residents may take finfish for subsistence purposes. Currently, commercial permit holders may retain fish from their commercial harvest for their own personal use and in addition (since 1987) may also participate in subsistence fisheries in the PWS area.

Subsistence fishing is allowed 7 days per week in the Copper River District from May 15 until 2 days before the opening of the commercial fishery. Boundary lines for Copper River District subsistence fishing are the same as the commercial drift gillnet fishery. Once the commercial season has commenced, subsistence fishing is allowed only during commercial fishing periods or by emergency order. Regulation stipulates that 2 days following the closure of the Copper River District to commercial salmon fishing for the season, 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 2011, 273 subsistence permits were issued for the Copper River District, of which 10 (3.7 %) were not returned. Of the 263 permits that were returned, 150 permit holders reported not fishing. A harvest of 212 Chinook, 1,780 sockeye, and 34 coho salmon were reported from the 123 permits that reported fishing (Appendix F1). In addition 4 subsistence permits were issued for the PWS general subsistence district. One permit holder reported not fishing and the other 3 permits reported a harvest of 29 Chinook, 40 sockeye, 1 coho, 5 pink, and 10 chum salmon. (Appendix F2). Overall 303 Alaskan residences in 20 communities received permits for the PWS saltwater subsistence fisheries (see below for details of the Tatitlek and Chenega subsistence fisheries) with a total harvest of 3,870 fish (Appendix F8).

During the 2011 commercial fishing season in the Copper River District, 9,070 sockeye, 1,280 Chinook and 543 coho salmon were reported as retained for their own personal use by 336 commercial permit holders (Appendices A1, A3, A18, and F7). In PWS, 78 commercial permit holders reported retaining 1,010 sockeye, 64 Chinook, and 599 coho salmon as "homepack" from their commercial harvests. Overall in Area E, 370 permit holders from 20 Alaska communities and the lower 49 states reported retaining 12,800 salmon for "homepack" from their commercial catches (Appendices F7 and F8).

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 dip net, rod and reel, and

spear. In 2011, a total of 69 federal permits were issued; 55 permits were returned, with 35 sockeye and 581 coho salmon reported as harvested.

Tatitlek and Chenega Area Subsistence Fisheries

Two subsistence areas were established in 1988 to provide opportunities for customary and traditional use of salmon by residents of the 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 the Valdez Nonsubsistence Area described in 5 AAC 99.015(a)(5) and encompasses portions of the Northern and Eastern districts (5 AAC 01.648(b)). Initially, only residents of Chenega and Tatitlek were 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, invalidating 5 AAC 01.648(a)(7) and (b)(7) which stipulate that permits may only be issued in these villages.

Permit holders are allowed to fish in these areas from May 15, 7 days per week, until 2 days before the initial commercial fishing period in the associated commercial fishing districts. Once the commercial fishing season is established, area and time within the 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 the associated commercial fishing district, subsistence fisheries are open 7 days per week until October 31.

In 2011, 17 permits were issued for the Chenega subsistence area, of which 11 permits were returned. Of those returned permits, 8 reported fishing and 3 reported not fishing, with a total harvest of 134 sockeye, 26 coho, 50 pink and 60 chum salmon. In the Tatitlek area, 10 permits were issued of which 4 were returned. Of those returned permits, all reported fishing, with a total harvest of 922 sockeye and 536 coho and 22 chum salmon (Appendix F3).

UPPER COPPER RIVER

Glennallen Subdistrict Subsistence Fishery

The Glennallen Subdistrict is that portion of the mainstem 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. Participants must be Alaska residents and are allowed one 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, cannot 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 2011, a total of 617 dip net permits and 689 fish wheel permits were issued to subsistence users in the Glennallen Subdistrict. Of these, 151 (12.6%) were not returned. A combined total of 2,200 Chinook and 54,000 sockeye salmon were reported harvested in the Glennallen Subdistrict. Comparatively, the previous 10-year average was 2,600 Chinook and 53,700 sockeye salmon for this subdistrict. Total effort has remained somewhat constant over the last 10 years, with an average number of 666 fish wheel permits and 440 dip net permits issued per

season (Appendix F4). Historically, sockeye salmon dominate the harvest, representing approximately 94.8% of the reported harvest, followed by Chinook and coho salmon (Appendices A1, A3, A18 and F4).

In 2002, the federal government began issuing permits allowing subsistence harvests on federal lands in the Glennallen Subdistrict. Legal types of fishing gear are dip net, fish wheel, rod and reel, and spear. In 2011, a total of 280 federal permits were issued for the Glennallen Subdistrict. Of these, 240 permits were returned (Appendix F6). A total 13,800 sockeye, 698 Chinook, and 176 coho salmon were reported harvested (Appendices A1, A3 and A18).

Batzulnetas Subsistence Fishery

In 1988, 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 when fishing periods are limited to one 48-hour period per week; beginning in July, fishing time is increased to one 84-hour periods each 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. There were 8 permits 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 in 1996. Between 1993 and 2002 the average harvest was 250 sockeye salmon. From 1999 to 2002 only one permit was issued each year with a harvest of 60 sockeye salmon in 1999, 0 sockeye salmon in 2000, 60 sockeye salmon in 2001, and 210 sockeye salmon in 2002. In 2004 one permit was issued with a reported harvest of 180 salmon. Beginning in 2005, the National Park Service (NPS) in the Wrangell-St. Elias National Park and Preserve began enforcing NPS regulations that only allow subsistence salmon harvest by rural community residents. The enforcement of these regulations prohibited the subsistence fishing by rural residents in that portion of the Copper River upstream of Indian River. This includes 15 river miles of the Glennallen Subdistrict and the entire Batzulnetas fishery. As a result of the rural preference, no state subsistence fishing permits were issued after 2004. A single federal permit was issued in 2005 and 2007 with only one sockeye salmon reported harvested in 2007. There were 3 permits issued in 2011 with 9 sockeye salmon reported harvested (Appendices A1 and F5).

Chitina Subdistrict Personal Use Fishery

The Chitina Subdistrict is the portion of the mainstem Copper River from the downstream edge of the McCarthy Road Bridge to a marker 200 yards above Haley Creek. Regulations for the Chitina Subdistrict personal use fishery remain similar to the Glennallen 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 one Chinook salmon per household. The BOF determined that retaining the bag limit of one Chinook salmon provided for a reasonable opportunity to harvest Chinook salmon, and would

also maintain Chinook salmon harvests at historical levels. Annual bag limits would continue to be 15 salmon for a household of 1, and 30 salmon for a household of 2 or more individuals. Based upon recent harvests, the BOF 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 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 may be issued to close the fishery, effective June 1, and an emergency order to reopen the season shall be issued on or before June 11 depending on the strength and timing of the sockeye salmon run. Additionally, inseason adjustments to the fishery, as necessitated by fluctuations in salmon escapement, are made by emergency order. In 2011, there were 10 EOs issued to make adjustments to the dip net fishery. The first period started on Saturday, June 4 and the last period closed on Wednesday, August 31. The fishery is then open by regulation from September 1 to 30. A combination of commercial Chinook salmon harvest being below the 10-year average, and Gulkana River counting tower cumulative passage and Native Village of Eyak's Baird Canyon fishwheel capture rates being below anticipated, resulted in the closure of the fishery to the retention of Chinook salmon beginning on Monday, June 27. Reported harvest for the Chitina Subdistrict personal use fishery in 2011 was 924 Chinook, 114,000 sockeye, and 1,510 coho salmon. The previous 10-year average reported harvests are 1,700 Chinook, 95,200 sockeye, and 1,890 coho salmon (Appendices A1, A3 and A18). There were 9,217 permits issued for the Chitina Personal Use fishery in 2011. Of these, 1,651 (17.9%) were not returned. The number of permits issued was above the 10-year average of 8,300 permits issued (Appendix F4).

In 2002, the federal government began issuing permits allowing subsistence harvests on federal lands in the Chitina Subdistrict. Federal subsistence users are allowed to use either a dip net or fish wheel in the Chitina Subdistrict. In 2011, a total of 84 federal permits were issued, of which 68 were returned (Appendix F6). The reported harvest was 1,690 sockeye, 13 Chinook and 8 coho salmon were reported harvested (Appendices A1, A3 and A18).

PRINCE WILLIAM SOUND AND COPPER RIVER SALMON ENHANCEMENT

Fisheries enhancement and rehabilitation in Alaska began in earnest in the early 1970s by the Fisheries Research and Enhancement Division (FRED) to help build and stabilize fisheries production. In 1974, the Alaska legislature passed the Private Non-Profit Hatchery Act, allowing private-sector non-profit businesses to assist with salmon enhancement and rehabilitation. In December 1974, the Prince William Sound Aquaculture Corporation (PWSAC) was created and began hatchery operations at Armin F. Koernig Hatchery on Evans Island in 1975, producing pink and chum salmon. In 1978, Valdez Fisheries Development Association (VFDA) began producing pink, chum, and coho salmon at the Crooked Creek Scientific/Educational facility in Port Valdez. Hatcheries in the Prince William Sound Management Area are currently run by 2 non-profit corporations; PWSAC operates Armin F. Koernig (AFK), Main Bay (MBH), Wally Noerenberg (WNH), Cannery Creek (CCH), and Gulkana (GH) hatcheries, and VFDA operates the Solomon Gulch Hatchery (SGH). 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 largest producer of salmon in Alaska, with a permitted capacity of 719.2 million eggs. PWSAC is also the largest producer of pink and sockeye salmon in Alaska, with a permitted capacity of 497.0 million pink and 49.15 million sockeye salmon eggs. The pink salmon production is more than double the permitted capacity of the next largest producer, VFDA, which has a permitted capacity of 230.0 million pink salmon eggs. PWSAC is the third largest producer of chum salmon in Alaska with a permitted capacity of 165.0 million eggs. In addition to the aforementioned species, PWSAC has a permitted coho salmon capacity of 4.0 million eggs and VFDA has a capacity of 2.0 million eggs. Further, 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 WNH. Current permitted salmon egg capacities, in millions of eggs, for the 7 largest aquaculture associations (and all others combined) in Alaska are listed below (Vercessi 2012):

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	125.00	48.66	183.82
Douglas Island Pink and Chum (DIPAC)	1.25	125.00	1.65	50.00	33.50	211.40
Kodiak Region Aquaculture Assn. (KRAA)	0.45	28.00	2.80	215.00	20.60	266.85
Northern Southeast Regional Aquaculture Assn. (NSRAA)	9.00	175.80	11.64	0.30	2.00	198.74
Prince William Sound Aquaculture Corp. (PWSAC)	4.00	165.00	4.00	497.00	49.15	719.15
Southern Southeast Regional Aquaculture Assn. (SSRAA)	3.50	172.00	14.50	0.00	2.70	192.70
Valdez Fisheries Development Assn. (VFDA)	0.30	0.00	2.00	230.00	0.00	232.30
all others	2.90	105.00	11.13	218.00	6.35	343.38
Statewide egg capacity totals (millions)	25.40	770.80	53.88	1,335.30	162.96	2,348.34

In 2011, PWSAC and VFDA contributed 80.4% of the total Area E salmon harvest of 39.6 million fish. PWSAC and VFDA produced approximately 26.8 million (80.3%) of the 33.4 million pink salmon harvested and 254,000 (53.5%) coho salmon of the 475,000 harvested overall in Area E. In addition, PWSAC produced 1.65 million (86.3%) of the 1.92 million chum salmon harvested as well as 1.80 million (47.8%) sockeye salmon of the 3.76 million harvested overall in Area E (Appendix E1).

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 water, of which 1,100–1,600 l/s are required for hatchery operations. Gulkana II was constructed in 1987 to increase sockeye production and begin production of Chinook salmon. Chinook

salmon reared at this facility were released in limited quantities at Monsoon Lake and in the Gulkana River from 1987 to 1991. The combined facilities have released between 180,000 and 32.26 million fry annually since 1974 (Appendix E8). Annual total GH produced sockeye salmon runs since 1997 have ranged from 86,000 to 1.10 million fish (Appendix E7).

In 2011, the overall run of sockeye salmon produced by the Gulkana hatcheries totaled 581,000 fish (Appendix E7). This was higher than the PWSAC total return forecast of 368,000 fish and ADF&G's forecast return of 320,000 fish (PWSAC 2011a; Appendix E1). A total of 59,600 sockeye salmon were reported collected for broodstock or escaped into the watershed. Of these fish, 18,500 were harvested for broodstock and an estimated 41,000 sockeye salmon returned to the hatcheries (including remote release locations) and were not harvested (Appendix E7). Hatchery surplus at Crosswind Lake can be problematic because there is almost no natural spawning habitat in this lake, and prior to the beginning of stocking in 1984 only extremely low levels of sockeye salmon were present. To resolve this issue, the weir in the SHA at Crosswind Lake enumerates fish and prevents fish surplus to escapement needs from migrating into the lake, and fish excess to broodstock needs are destroyed.

Harvest from the Chitina Subdistrict Personal Use and the Glennallen Subdistrict subsistence fisheries was 33,100 Gulkana produced sockeye salmon. In addition, an estimated 299 were harvested by sport fisherman in the Copper and Gulkana rivers. The Copper River District commercial gillnet fleet harvested 84.0% of the total hatchery run, or 488,000 sockeye salmon (Appendix E7).

Wally Noerenberg Hatchery

The Wally Noerenberg Hatchery is located on state park lands in Lake Bay on the southern end of Esther Island in PWS. The hatchery was completed in 1985 and produced 5 species of salmon until 1987 when sockeye salmon production was moved to MBH. Chinook salmon production was discontinued in 1997 to increase coho salmon production. Water for hatchery operations is supplied by Esther Lake, a 200 hectare lake with a volume of 2.5 million cubic meters, via deep and shallow intakes. These 2 water sources allow manipulation of water temperature with limited need for mechanical heating or cooling, and are capable of producing approximately 22,000 l/s, of which 5,500–11,000 l/s are required for hatchery operations. In addition to releases at WNH, there are 2 chum salmon remote release sites, Port Chalmers located on Montague Island, and Sawmill Bay adjacent to AFK.

In 2011, the total run of chum salmon, released as fry from WNH as well as both remote release sites, was 1.82 million fish. The run was less than the PWSAC forecast run of 3.55 million chum salmon. (Appendix E1). Errors in the thermal marking program have created uncertainty in the size of the chum salmon run to each release site. Chum salmon returning to all release locations originated from brood years 2005 to 2008 releases. PWSAC reported cumulative survival rates for these brood years of 2.10%, 6.04%, 0.20%, and 0.03%, respectively (PWSAC 2011a). A total of 322,000 chum salmon, excluding viable broodstock, were harvested for hatchery cost recovery at WNH. A total of 148,000 fish were viable broodstock and all of these carcasses were sold as part of a 'full utilization' strategy. An additional 11,500 fish represent holding mortalities and 7,000 fish were left unharvested in the hatchery terminal area (Appendix E12). The CPF harvested 1.33 million or 73.2% of the total WNH chum salmon run including remote releases at AFK and Port Chalmers (Appendix E1).

The total run of pink salmon produced by WNH was 6.71 million fish and above the preseason forecast of 9.50 million pink salmon (Appendix E1). These fish originated from the BY2009 release and had a survival rate of 4.92% (Appendix E3). A total of 2.11 million pink salmon were harvested for hatchery cost recovery at WNH (Appendices E1 and E12). A total of 235,000 fish were viable broodstock and all of these carcasses were sold as part of a 'full utilization' strategy. An additional 7,280 fish represent holding mortalities and 10,000 fish were left unharvested in the hatchery terminal area (Appendix E12). The commercial fleet harvested 4.34 million WNH pink salmon, which was 64.9% of the total pink salmon run to this facility (Appendices E1 and E3).

The total run of coho salmon produced by the WNH was approximately 129,000 fish. The overall run was lower than the preseason forecast of 250,000 coho salmon (Appendix E1). The majority of these fish originated from the brood year 2008 release and had a survival rate of 3.71%. The commercial fleet harvested 96,000 coho salmon from the Coghill District of which all but 717 are thought to be of hatchery origin (Appendix E5). PWSAC sold 680 fish as part of raceway cost recovery harvest and collected 2,370 coho salmon for broodstock of which 1,950 were viable and needed for a total of 4.00 million green eggs. An additional 5,000 fish were left unharvested in the hatchery terminal area (Appendix E12).

Main Bay Hatchery

The Main Bay Hatchery is situated in the Eshamy District, approximately 20 miles west of the northern end of Knight Island. MBH was built on U.S. Forest Service land in 1981 by FRED as a chum salmon production facility. In 1987, returning adult chum salmon were collected for broodstock to increase chum salmon production at WNH while sockeye salmon fry were transferred from WNH to MBH to be raised to smolts, making MBH the first sockeye salmon smolt production facility in the state. Although owned by ADF&G, PWSAC has operated MBH under contract since 1991. At one time, MBH produced sockeye salmon from 6 distinct populations including early run Eyak Lake, midrun Coghill Lake, and late run Eshamy Lake sockeye salmon. To streamline operations, minimize run over and limit contamination concerns, focus turned to rearing Coghill Lake sockeye salmon in 1998. 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 566 l/s, of which 85–566 l/s are required for hatchery operations. MBH has released between 330,000 and 10.9 million sockeye salmon annually since 1988 (Appendix E18).

In 2011, the total run of sockeye salmon produced by the Main Bay Hatchery was 1.29 million fish, exceeding the forecast run of 935,000 sockeye salmon (Appendix E1). A total of 12,800 sockeye salmon were collected for broodstock purposes, of which 6,530 represent viable broodstock, and carcasses were not sold (Appendix E16). The commercial fleet harvested approximately 1.27 million fish or 98.7% of the total sockeye salmon run (Appendix E17).

Solomon Gulch Hatchery

The Solomon Gulch Hatchery is located near Valdez, 2 miles from the southern terminus of the Alaska pipeline. The hatchery is owned and operated by VFDA. Hatchery operations began in the fall of 1982 when the incubation room was completed and the first pink and coho salmon eggs were transferred in December. In 1983 the adult delivery system and rearing building were completed and the first return of pink salmon arrived at the hatchery. From 1982 to 1995, chum salmon were released from SGH with annual runs ranging from 450 to 442,000 fish and average

annual runs of 66,000 fish. From 1996 through the present, SGH has produced pink and coho salmon. Between 2002 and 2011, annual runs have ranged from 1.22 million to 23.85 million with an average of 13.35 million for pink salmon, and 65,300 to 290,000 with an average of 157,000 for coho salmon (Appendices E3 and E5). 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.

In 2011, the overall run of pink salmon produced by SGH was 13.6 million fish, which was below the preseason forecast of 15.5 million fish (Appendix E1). These fish originated from the brood year 2009 release, and had a survival rate of approximately 6.10% (Appendix E3). Approximately 2.00 million pink salmon were harvested for hatchery cost recovery (Appendices E1 and E20). Approximately 222,000 were utilized as broodstock and carcasses were sold as part of the 'full utilization' strategy. An additional 6,860 fish represent holding mortalities and 77,600 fish were left unharvested in the hatchery terminal area (Appendix E20). The commercial fleet harvested 11.3 million fish or 83.1% of the pink salmon run to this facility (Appendix E3).

The overall run of coho salmon produced by SGH was 125,000 fish. The overall run was below the preseason forecast of 191,000 coho salmon (Appendix E1). These fish originated from the brood year 2008 release and had a survival rate of 6.51%. The commercial CPF fleet harvested 28,400 SGH coho salmon, or 22.80% of the total coho salmon run to this facility, and an estimated 50,400 fish were harvested by sport users (Appendix E5). A total of 2,510 fish represent viable broodstock and all of these carcasses were sold as part of a 'full utilization' strategy. An additional 100 fish represent holding mortalities and 2,000 fish were left unharvested in the vicinity of the hatchery (Appendix E20).

Cannery Creek Hatchery

The Cannery Creek Hatchery is located in Unakwik Inlet, approximately halfway between Valdez and Whittier. The hatchery, constructed in 1978, is owned by ADF&G and has been operated by PWSAC under contract since 1988. The facility was originally constructed as a pink and chum salmon hatchery, but the chum program was discontinued in 1989 due to extremely cold lake water from January through March. Water for hatchery operations is supplied by Cannery Lake which has a surface area of 53 hectares and produces 504 l/s of which 47–504 l/s are required for hatchery operations.

In 2011, the overall run of pink salmon produced by CCH was 4.49 million fish, which was below the preseason projection of 7.10 million fish (Appendix E1). These fish originated from the brood year 2009 release, and had a survival rate of approximately 3.23% (Appendix E3). A total of 324,000 pink salmon were harvested for CCH cost recovery (Appendices E1 and E24). A total of 276,000 fish represent viable broodstock and all of these carcasses were sold as part of a 'full utilization' strategy. An additional 7,400 fish represent holding mortalities and 7,500 fish were left unharvested in the hatchery terminal area (Appendix E24). The CPF harvested 3.88 million or 86.3% of the total pink salmon run to this facility (Appendix E1).

Armin F. Koernig Hatchery

The Armin F. Koernig Hatchery is located on Evans Island in southwestern PWS, 2 miles southwest of Chenega village. Converted from an existing cannery in 1974, AFK was operated by ADF&G for a short time before ownership and operations were taken over by PWSAC in

1976. In 1975, PWSAC collected adult pink salmon and conducted egg take in Ewan Bay about 25 air miles from the hatchery. Once water-hardened, the salmon eggs were flown in buckets to a temporary hatchery incubation room over the course of 8 days. Construction delays hindered the completion of the hatchery so chum salmon production was not started in 1975 and the pink eggs were seeded into Larson Creek to ensure their survival. AFK became a fully operational hatchery in 1977 with pink salmon broodstock collected from Larson Creek. Additional pink and chum salmon eggs were collected in Galena Bay to round out production. Chum salmon production was discontinued in 1986 but was resumed in 1996 for 2 years. AFK was rebuilt in 1991 and 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. AFK hatchery currently produces pink salmon, and chum salmon from WNH are remotely released from this facility.

In 2011, the overall run of pink salmon produced at AFK hatchery was 3.09 million fish, which was below the anticipated run of 9.20 million pink salmon. These fish originated from the brood year 2009 release and had a survival rate of 2.07% (Appendix E3). A total of 988,000 pink salmon were harvested for hatchery cost recovery (Appendix E1). A total of 211,000 fish represent viable broodstock and all of these carcasses were sold as part of a 'full utilization' strategy. An additional 804 fish represent holding mortalities and 10,000 fish were left unharvested in the hatchery terminal area (Appendix E27). The CPF harvested 1.88 million or 60.9% of the total pink salmon run to this facility (Appendix E1).

2011 PRINCE WILLIAM SOUND HERRING FISHERIES

Preseason Outlook and Harvest Strategy

The Prince William Sound 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 purse 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 herring population size and age structure.

For management purposes, PWS herring are treated as a single stock that spawns from late March to late May. At the 1994 BOF meeting 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 projected spawning biomass is below this level. The 22,000 ton threshold is 25% of the potential spawning biomass from an unfished stock (for methods, see Funk and Rowell 1995). The higher threshold established manageable harvest levels while reducing the risk of overfishing and driving the population to low abundance. 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 harvests with a peak in the early 1990s followed by a precipitous decline and a fishery closure since 1999 (Appendices G2 and G3).

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 fishermen's 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 April 24, 2003). The 2003 BOF meeting established a regulation requiring a Commercial Fisheries Entry Commission (CFEC) permit holder intending to operate a pound register with the Cordova ADF&G office by March 15 of that year. An additional regulation change restricted the number of kelp blades annually based on the number of permit holders registered.

The PWS herring purse seine fishery is composed 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 PWS. 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. There are 128 herring pound permits in PWS. 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 G6). The wild spawn-on-kelp fishery, utilizing native PWS kelp, occurs after a major spawning event on marketable species of kelp. Wild kelp is harvested by divers or by hand picking depending on the type of kelp available and market demand. Once instituted, pound fisheries dominated harvests of wild spawn on kelp (Appendix G7). The food/bait fishery season may run from October 1 through January 31; however, industry concerns about product quality have resulted in delays of season opening until November. Purse seine size is not restricted for the food/bait fishery and trawling or gillnetting may also occur.

Season Summary

Based on herring stock assessment information, all Pacific herring fisheries between 1 July 2010 and 30 June 2011were closed. The projected spawning biomass for spring 2011 was just above the regulatory minimum spawning biomass of 22,000 tons.

Age Structured Assessment modeling was used to estimate the 2011 spawning biomass of PWS Pacific herring. The spawning biomass forecast for 2011 is 22,704 tons (Appendix G12). The forecast is slightly above the regulatory threshold of 22,000 tons; however, because a majority of the biomass is projected to be fish just recruiting to the spawning population (age-3 and -4 fish), and because a very small harvest would reduce the biomass to below the regulatory threshold, all herring fisheries between 1 July 2010 and 30 June 2011 were closed.

Hydroacoustic, net sampling, and aerial surveys were conducted in 2011 to assess herring biomass, disease incidence, age composition, and growth. In March and April 2011, acoustic surveys were conducted with the ADF&G vessel R/V *Solstice* and the M/V *Auklet*, contracted by

the Prince William Sound Science Center. The R/V *Solstice* conducted broad-scale surveys in eastern PWS up to Tatitlek Narrows. Detailed acoustics data were collected on major concentrations in Port Gravina, between St. Matthews Bay and Red Head, and in Port Fidalgo.

Age composition samples in Eastern PWS were predominately age 4 to age 7 (greater than 90% in most samples) (Appendix G14). Spawning fish samples contained slightly more age-6 and age-7 fish than samples collected prior to spawning. The department collected additional age, sex, and size data along with disease assessment data in eastern PWS during spring 2011.

Herring disease assessment has been included as part of the annual age, sex, and size assessment ADF&G has completed each spring since 1993 (Marty et al. 2010). Disease sampling in 2002 documented a viral hemorrhagic septicemia virus (VHSV) prevalence of 14% (Marty et al. 2010). Although this did not appear to seriously impact the adult population, it may have increased mortality of juvenile herring. Also, the prevalence of *Ichthyophonus hoferi* increased significantly between 2002 (15%) and 2005 (50.6%) (Marty et al. 2010). Disease sampling in early April and November 2011 involved collecting tissues for examination by the ADF&G Fish Pathology Laboratory in Juneau. VHSV was not documented in samples (n= 180 in early April; n = 60 in late November) collected in 2011 (Ted Meyers, Fisheries Scientist, ADF&G, Juneau, Report of Laboratory Examination). The incidence of *I. hoferi* in April ranged from 11.7% in St. Matthews Bay to 46.7% in Port Gravina near Hells Hole; incidence of *I. hoferi* in November 2011 from 2 purse seine collections in Port Gravina were 13.3% (subadult fish) and 63.3% (adult fish) (Ted Meyers, Fisheries Scientist, ADF&G, Juneau, Report of Laboratory Examination). Sampling between 1994 and 2005 documented that VHSV will cause higher mortality in young herring; however, *I. hoferi* prevalence increases with age and will cause higher mortality in older fish (Marty et al. 2003). If this trend continues, an increase in disease mortality may occur in older age classes from *I. hoferi.*

A total of 26.2 mile-days of spawn were observed in spring 2011. This was less mile-days of spawn observed in any year in which commercial fishing occurred since 1973. Seventeen mile-days were assessed as dissipating or drift of milt. Most spawning events were in northeastern (15.5 mile-days) and southeastern (10.2 mile-days) PWS. Only 0.4 mile-days of spawn were observed on Montague Island in 2011 (Appendix G15).

2011–2012 Herring Season Outlook

Given the PWS herring spawning population, current size and age structure, a commercial harvest is not anticipated in 2012. Consecutive years of low recruitment will further delay the recovery of the herring population to a size capable of supporting a sustainable commercial harvest. ADF&G will continue to monitor the PWS herring biomass to assess growth and recruitment. An ongoing disease study will continue to examine the incidence of VHSV and *I. hoferi* in the PWS herring population.

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Melanie O'Rourke	FWT III	Otolith Recovery Crew Leader
Ron Andersen	FWT II	Otolith Recovery – Cordova
Katherine Evans	FWT II	Otolith Recovery – Whittier/Cordova
Russell McCollister	FWT II	Otolith Recovery – Cordova
Gerald Navarro	FWT II	Otolith Recovery – Cordova
Malia Vansant	FWT II	Otolith Recovery – Cordova
Allen Cox	FWT II	Otolith Recovery – Valdez
Sean Gore	FWT II	Otolith Recovery – Seward
Rebecca Brewer	FWT II	Hatchery Straying Project – Cordova
James Canfield	FWT II	Hatchery Straying Project – Cordova
Corinna Cook	FWT II	Coghill Lake Weir
Ricky Haas	FWT II	Coghill Lake Weir
Galen Vansant	FWT II	Coghill Lake Weir deployment
Kirsti Jurica	FWT II	Eshamy Lake Weir
Andrew Marsh	FWT II	Eshamy Lake Weir
Don Malherek	FWT III	Miles Lake Sonar Crew Leader
Elliot Johnson	FWT II	Miles Lake Sonar Technician
Shane Shepherd	FWT II	Miles Lake Sonar Technician

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TABLES AND FIGURES

Table 1.–Prince William Sound Management Area commercial salmon harvest by gear type and district, 2011.

District	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Eastern	180	33	8,097	32,234	13,308,509	29,251	13,378,124
Northern	138	7	3,012	12,626	2,782,874	2,351	2,800,870
Coghill	72	4	843	16,565	1,674,736	166	1,692,314
Northwestern	40	0	1,684	387	252,337	1,083	255,491
Southwestern	157	44	47,488	27,695	6,807,127	62,616	6,944,970
Montague	56	3	647	1,426	780,168	575	782,819
Southeastern	73	59	2,400	1,325	504,828	11,797	520,409
Unakwik	0	0	0	0	0	0	0
Purse seine total	183	150	64,171	92,258	26,110,579	107,839	26,374,997
Bering River	33	1	6	19,956	8	0	19,971
Copper River	485	18,500	2,052,432	127,511	24,050	13,231	2,235,724
Coghill	357	220	198,374	79,419	722,248	1,092,766	2,093,027
Eshamy	346	129	901,279	6,159	78,762	95,991	1,082,320
Montague	44	79	1,613	618	4,435	103,102	109,847
Unakwik	4	0	1,390	0	1	30	1,421
Drift gillnet total	513	18,929	3,155,094	233,663	829,504	1,305,120	5,542,310
Eshamy	29	37	312,659	612	17,629	25,350	356,287
Set gillnet total	29	37	312,659	612	17,629	25,350	356,287
Solomon Gulch	1	0	0	43,119	2,336,359	8,115	2,387,593
Cannery Creek	1	0	0	0	600,009	0	600,009
Wally Noerenberg	1	0	0	678	2,311,843	467,766	2,780,287
Main Bay	1	0	0	0	0	0	0
Armin F. Koernig	1	0	0	0	1,188,722	0	1,188,722
Hatchery total [a]		0	0	43,797	6,436,933	475,881	6,956,611
Test fishery	1	0	0	0	766	0	766
Home pack	370	1,346	10,081	1,152	82	184	12,845
Confiscated fish	2	0	2	0	8,697	151	8,850
Donated fish	0	0	0	0	0	0	0
Misc. total		1,346	10,083	1,152	9,545	335	22,461
Prince William Sound total		20,462	3,542,007	371,482	33,404,190	1,914,525	39,252,666

[a] Hatchery sales for hatchery operating costs.

Table 2.–Total commercial salmon harvest by species from all gear types, Prince William Sound Area, 2001–2011.

Year	Gear [a]	Chinook		Sockeye		Coho		Pink		Chum	
2001	DGN	39,866	(98.6%)	1,918,836	(84.9%)	267,798	(54.8%)	685,686	(1.9%)	1,166,598	(37.7%)
2001	SGN	25	(0.1%)	176,060	(7.8%)	1,006	(0.2%)	127,737	(0.4%)	7,057	(0.2%)
2001	PS	554	(1.4%)	123,004	(5.4%)	198,334	(40.6%)	21,517,861	(61.1%)	988,409	(31.9%)
2001	Hatchery	0	(0.0%)	43,073	(1.9%)	21,781	(4.5%)	12,914,314	(36.6%)	936,028	(30.2%)
	Total	40,445		2,260,973		488,919		35,245,598		3,098,092	
2002	DGN	39,384	(99.3%)	1,907,520	(84.3%)	617,075	(94.9%)	132,499	(0.7%)	1,797,115	(28.2%)
2002	SGN	30	(0.1%)	241,660	(10.7%)	525	(0.1%)	64,421	(0.3%)	22,987	(0.4%)
2002	PS	260	(0.7%)	18,837	(0.8%)	32,730	(5.0%)	7,966,259	(42.0%)	1,972,459	(30.9%)
2002	Hatchery	1	(0.0%)	93,722	(4.1%)	1	(0.0%)	10,787,752	(56.9%)	2,580,926	(40.5%)
	Total	39,675		2,261,739		650,331		18,950,931		6,373,487	
2003	DGN	48,056	(99.8%)	1,946,105	(71.4%)	434,634	(83.3%)	118,951	(0.2%)	753,883	(19.8%)
2003	SGN	0	(0.0%)	215,733	(7.9%)	663	(0.1%)	28,537	(0.1%)	6,265	(0.2%)
2003	PS	120	(0.2%)	197,407	(7.2%)	66,838	(12.8%)	38,661,721	(74.4%)	1,481,727	(38.9%)
2003	Hatchery	0	(0.0%)	366,770	(13.5%)	19,782	(3.8%)	13,156,974	(25.3%)	1,563,019	(41.1%)
	Total	48,176		2,726,015		521,917		51,966,183		3,804,894	
2004	DGN	38,432	(99.6%)	1,500,223	(79.3%)	575,122	(92.8%)	81,090	(0.3%)	581,762	(29.1%)
2004	SGN	11	(0.0%)	91,412	(4.8%)	825	(0.1%)	51,655	(0.2%)	10,381	(0.5%)
2004	PS	156	(0.4%)	17,530	(0.9%)	33,990	(5.5%)	11,573,514	(49.2%)	881,129	(44.0%)
2004	Hatchery	0	(0.0%)	282,632	(14.9%)	9,974	(1.6%)	11,825,224	(50.3%)	528,676	(26.4%)
	Total	38,599		1,891,797		619,911		23,531,483		2,001,948	
2005	DGN	35,024	(99.4%)	1,606,130	(80.8%)	360,574	(67.8%)	228,463	(0.4%)	888,847	(42.3%)
2005	SGN	0	(0.0%)	109,532	(5.5%)	882	(0.2%)	126,135	(0.2%)	3,452	(0.2%)
2005	PS	224	(0.6%)	63,482	(3.2%)	142,672	(26.8%)	47,017,421	(78.4%)	568,847	(27.1%)
2005	Hatchery	0	(0.0%)	207,605	(10.4%)	27,417	(5.2%)	12,572,614	(21.0%)	638,320	(30.4%)
	Total	35,248		1,986,749		531,545		59,944,633		2,099,466	
2006	DGN	30,603	(99.2%)	2,012,665	(79.8%)	477,430	(62.5%)	145,348	(0.7%)	314,487	(14.4%)
2006	SGN	9	(0.0%)	124,087	(4.9%)	352	(0.0%)	20,863	(0.1%)	9,883	(0.5%)
2006	PS	227	(0.7%)	37,745	(1.5%)	268,574	(35.2%)	11,828,266	(54.5%)	1,032,627	(47.3%)
2006	Hatchery	0	(0.0%)	348,276	(13.8%)	17,198	(2.3%)	9,727,499	(44.8%)	824,558	(37.8%)
	Total	30,839		2,522,773		763,554		21,721,976		2,181,555	

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Table 2.–Page 2 of 2.

Year	Gear [a]	Chinook		Sockeye		Coho		Pink		Chum	
2007	DGN	39,300	(98.2%)	2,645,002	(81.9%)	190,025	(57.8%)	188,950	(0.3%)	1,100,667	(30.8%)
2007	SGN	18	(0.0%)	196,537	(6.1%)	365	(0.1%)	13,796	(0.0%)	24,651	(0.7%)
2007	PS	713	(1.8%)	66,004	(2.0%)	108,593	(33.0%)	51,270,207	(80.8%)	1,353,892	(37.8%)
2007	Hatchery	0	(0.0%)	321,330	(10.0%)	29,644	(9.0%)	11,995,924	(18.9%)	1,099,730	(30.7%)
	Total	40,031		3,228,873		328,627		63,468,877		3,578,940	
2008	DGN	11,643	(98.8%)	1,061,224	(81.7%)	325,249	(59.1%)	960,113	(2.3%)	2,561,113	(50.5%)
2008	SGN	18	(0.2%)	162,403	(12.5%)	151	(0.0%)	20,455	(0.0%)	53,627	(1.1%)
2008	PS	127	(1.1%)	74,912	(5.8%)	202,003	(36.7%)	33,727,052	(79.6%)	1,820,049	(35.9%)
2008	Hatchery	0	(0.0%)	0	(0.0%)	22,623	(4.1%)	7,639,384	(18.0%)	641,332	(12.6%)
	Total	11,788		1,298,539		550,026		42,347,004		5,076,121	
2009	DGN	9,801	(97.7%)	1,555,669	(81.4%)	275,636	(91.9%)	400,524	(2.2%)	2,292,015	(71.2%)
2009	SGN	47	(0.5%)	152,642	(8.0%)	49	(0.0%)	4,251	(0.0%)	50,748	(1.6%)
2009	PS	28	(0.3%)	70,473	(3.7%)	6,739	(2.2%)	10,765,944	(58.7%)	269,470	(8.4%)
2009	Hatchery	0	(0.0%)	133,873	(7.0%)	17,424	(5.8%)	7,411,111	(40.4%)	608,541	(18.9%)
	Total	10,036		1,912,305		299,848		18,355,212		3,219,320	
2010	DGN	10,131	(99.6%)	1,691,735	(83.1%)	298,140	(89.4%)	3,488,016	(4.9%)	3,301,015	(76.4%)
2010	SGN	17	(0.2%)	282,467	(13.9%)	69	(0.0%)	16,766	(0.0%)	80,516	(1.9%)
2010	PS	22	(0.2%)	62,759	(3.1%)	8,338	(2.5%)	62,257,799	(87.3%)	186,537	(4.3%)
2010	Hatchery	0	(0.0%)	0	(0.0%)	27,074	(8.1%)	5,546,994	(7.8%)	754,805	(17.5%)
	Total	10,170		2,036,961		333,621		71,309,575		4,322,873	
	DGN	30,224	(99.1%)	1,784,511	(80.6%)	382,168	(75.1%)	642,964	(1.6%)	1,475,750	(41.3%)
10-year	SGN	18	(0.1%)	175,253	(7.9%)	489	(0.1%)	47,462	(0.1%)	26,957	(0.8%)
avg.	PS	243	(0.8%)	73,215	(3.3%)	106,881	(21.0%)	29,658,604	(72.9%)	1,055,515	(29.5%)
	Hatchery	0	(0.0%)	179,728	(8.1%)	19,292	(3.8%)	10,357,779	(25.4%)	1,017,594	(28.5%)
	Total	30,485		2,212,708		508,830		40,706,809		3,575,815	
2011	DGN	18,929	(99.0%)	3,155,094	(89.3%)	233,663	(63.1%)	829,504	(2.5%)	1,305,120	(68.2%)
2011	SGN	37	(0.2%)	312,659	(8.9%)	612	(0.2%)	17,629	(0.1%)	25,350	(1.3%)
2011	PS	150	(0.8%)	64,171	(1.8%)	92,258	(24.9%)	26,110,579	(78.2%)	107,839	(5.6%)
2011	Hatchery	0	(0.0%)	0	(0.0%)	43,797	(11.8%)	6,436,933	(19.3%)	475,881	(24.9%)
	Total	19,116		3,531,924		370,330		33,394,645		1,914,190	

Note: Harvest numbers are fish ticket data from Zephyr database query.

[a] DGN = Drift gillnet, SGN = set gillnet, and PS = purse seine gear.

Table 3.–Mean price and estimated exvessel value of the total commercial salmon harvest by gear type, Prince William Sound, 2011.

Purse Seine						
	Species	Number	Pounds [a]	Average weight	Price [a]	Value
	Chinook	150	2,188	14.59	$2.80	$6,120
	Sockeye	64,171	390,684	6.09	$1.43	$560,497
	Coho	92,258	609,889	6.61	$1.04	$633,076
	Pink	26,110,579	79,386,801	3.04	$0.45	$35,834,331
	Chum	107,839	799,592	7.41	$0.86	$691,520
		26,374,997	81,189,154			$37,725,543
Drift Gillnet						
	Species	Number	Pounds [a]	Average weight	Price	Value
	Chinook	18,929	384,494	20.31	$5.59	$2,148,066
	Sockeye	3,155,094	19,292,220	6.11	$1.88	$36,356,087
	Coho	233,663	1,710,333	7.32	$1.19	$2,031,963
	Pink	829,504	2,595,389	3.13	$0.40	$1,025,474
	Chum	1,305,120	9,663,856	7.40	$0.90	$8,669,206
		5,542,310	33,646,292			$50,230,797
Set Gillnet [b]						
	Species	Number	Pounds [a]	Average weight	Price	Value
	Chinook	37	653	17.65	$2.81	$1,832
	Sockeye	312,659	1,950,062	6.24	$1.53	$2,993,318
	Coho	612	3,979	6.50	$0.58	$2,297
	Pink	17,629	60,987	3.46	$0.36	$21,931
	Chum	25,350	186,996	7.38	$0.88	$163,884
		356,287	2,202,677			$3,183,261
Hatchery Sales [c]						
	Species	Number	Pounds [a]	Average weight	Price	Value
	Chinook	0	0	0.00	$0.00	$0
	Sockeye	0	0	0.00	$0.00	$0
	Coho	43,797	294,963	6.73	$0.95	$280,215
	Pink	6,436,933	17,857,717	2.77	$0.66	$11,867,472
	Chum	475,881	3,531,405	7.42	$0.79	$2,802,681
		6,956,611	21,684,085			$14,950,368

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Table 3.–Page 2 of 2.

Confiscated

Species	Number	Pounds [a]	Average weight	Price	Value
Chinook	0	0	0.00	$0.00	$0
Sockeye	2	10	5.00	$1.56	$16
Coho	0	0	0.00	$0.00	$0
Pink	8,697	25,222	2.90	$0.45	$11,123
Chum	151	1,298	8.60	$0.90	$1,169
	8,850	26,530			$12,308

Gear type	Value of catch	No. of permits	Average earnings
Purse seine	$37,725,543	183	$206,151
Drift gillnet	$50,230,797	513	$97,916
Set gillnet	$3,183,261	29	$109,768
Subtotal Value of CPF catch	$91,139,601		
Hatchery	$14,950,368		
Confiscated	$12,308		
GRAND TOTAL	$106,102,277		

[a] Mean prices are based COAR 2011. Pounds of fish was based on fish ticket reporting and does not represent pounds reported in COAR.

[b] Sockeye salmon price is based on the received price to the hatchery operator.

[c] Number and pounds from fish ticket data.

Table 4.–Average price paid to permit holders for salmon, Prince William Sound, 1988–2011.

	Chinook salmon		Sockeye salmon			Coho salmon			Pink salmon			Chum salmon		
	Gillnet		Gillnet			Gillnet			Gillnet			Gillnet		
Year	Copper and Bering	PWS	Copper and Bering	PWS	Purse seine	Copper and Bering	PWS	Purse seine	Copper and Bering	PWS	Purse seine	Copper and Bering	PWS	Purse seine
1988	$2.23	$2.43	$3.20	$2.74	$2.68	$2.35	$1.19	$1.85	NA	$0.60	$0.79	NA	$0.92	$0.72
1989	$2.25	$0.00	$2.30	$0.00	$2.68	$0.60	$0.00	$1.58	NA	$0.00	$0.48	NA	$0.00	$0.43
1990	$2.24	$1.45	$2.13	$1.59	$1.50	$0.97	$0.69	$0.50	NA	$0.30	$0.30	NA	$0.70	$0.70
1991	$1.65	$1.00	$1.28	$1.28	$1.00	$0.65	$0.44	$0.45	NA	$0.12	$0.12	NA	$0.40	$0.40
1992	$2.50	$1.55	$2.50	$1.55	$1.55	$0.90	$0.90	$0.90	NA	$0.18	$0.18	NA	$0.55	$0.55
1993	$1.82	$0.97	$1.32	$0.87	$0.83	$0.80	$0.66	$0.54	NA	$0.17	$0.16	NA	$0.71	$0.36
1994	$1.43	$0.84	$1.27	$1.16	$0.89	$0.74	$0.67	$0.54	NA	$0.11	$0.16	NA	$0.32	$0.24
1995	$2.19	$0.79	$1.67	$1.07	$0.86	$0.52	$0.37	$0.39	NA	$0.18	$0.18	NA	$0.39	$0.28
1996	$1.96	$0.68	$1.38	$0.85	$0.73	$0.53	$0.24	$0.36	NA	$0.04	$0.07	NA	$0.14	$0.13
1997	$2.00	$1.00	$0.88	$0.85	$0.85	$0.30	$0.25	$0.30	NA	$0.07	$0.12	NA	$0.25	$0.30
1998	$2.07	$1.25	$1.49	$1.11	$1.01	$0.46	$0.41	$0.31	NA	$0.14	$0.12	NA	$0.21	$0.27
1999	$3.44	$0.50	$1.84	$0.89	$0.98	$0.58	$0.23	$0.49	NA	$0.06	$0.10	NA	$0.15	$0.27
2000	$4.02	$4.04	$1.72	$1.38	$0.90	$0.57	$0.56	$0.42	NA	$0.11	$0.15	NA	$0.26	$0.28
2001	$3.30	$1.94	$1.35	$0.77	$0.74	$0.32	$0.20	$0.26	NA	$0.05	$0.13	NA	$0.38	$0.37
2002	$3.34	$1.26	$1.29	$1.14	$0.57	$0.35	$0.09	$0.25	NA	$0.05	$0.09	NA	$0.15	$0.15
2003	$3.48	$0.00	$1.16	$0.80	$0.71	$0.48	$0.48	$0.42	NA	$0.06	$0.07	NA	$0.17	$0.17
2004	$4.69	$1.38	$1.81	$0.85	$0.55	$0.69	$0.28	$0.42	NA	$0.04	$0.10	NA	$0.23	$0.18
2005	$4.70	$0.00	$1.79	$0.92	$0.54	$0.83	$0.69	$0.10	NA	$0.05	$0.08	NA	$0.28	$0.18
2006	$5.03	$1.20	$1.83	$1.15	$1.05	$0.92	$0.67	$0.60	NA	$0.11	$0.16	NA	$0.37	$0.33
2007	$4.50	$2.70	$1.81	$1.04	$0.82	$0.90	$0.30	$0.59	NA	$0.11	$0.17	NA	$0.33	$0.37
2008	$5.96	$1.04	$3.12	$1.24	$1.17	$1.23	$1.24	$1.12	$0.27	$0.33	$0.34	$0.21	$0.55	$0.57
2009	$5.29	$2.06	$2.09	$1.42	$1.32	$1.30	$1.13	$0.42	$0.22	$0.27	$0.24	$0.28	$0.52	$0.53
2010	$5.50	$2.13	$2.58	$1.72	$1.79	$1.27	$0.58	$0.70	$0.29	$0.34	$0.35	$0.36	$0.80	$0.78
10-year average	$4.58	$1.37	$1.88	$1.11	$0.93	$0.83	$0.57	$0.49	$0.26	$0.14	$0.17	$0.28	$0.38	$0.36
2011 [a]	$5.66	$3.97	$2.08	$1.56	$1.43	$1.24	$1.09	$1.04	$0.31	$0.40	$0.45	$0.38	$0.90	$0.86

Note: These prices are based on weighted average prices given voluntarily by processors and hatchery operators and do not represent prices reported in the Commercial Operators Annual Report. These prices are estimates and do not reflect postseason adjustments and bonuses. Caution should be used when estimating values from these prices.

[a] Values are from COAR 2011.

Table 5.–Estimated exvessel value of the total commercial salmon harvest by gear type with previous 10-year average, Prince William Sound, 2001–2011.

Purse Seine Species	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Previous 10-year avg.	2011
Chinook	5,435	1,353	924	1,270	1,787	4,940	9,330	2,487	985	634	2,915	6,120
Sockeye	539,388	58,142	847,966	46,573	207,022	219,984	338,262	540,113	584,595	705,231	408,728	560,497
Coho	398,532	69,207	226,619	121,688	103,312	1,426,736	546,805	2,056,932	22,522	48,476	502,083	633,076
Pink	9,584,465	2,425,505	10,716,380	4,293,551	13,104,242	6,688,126	28,839,799	39,059,344	7,890,237	78,063,374	20,066,502	35,834,331
Chum	2,863,466	2,423,525	1,717,083	1,228,965	773,620	3,007,947	3,499,189	8,002,952	1,123,335	1,019,498	2,565,958	691,520
	$13,391,287	$4,977,731	$13,508,972	$5,692,047	$14,189,982	$11,347,734	$33,233,386	$49,661,828	$9,621,674	$79,837,212	$17,291,627	$37,725,543
Drift Gillnet Species												
Chinook	2,791,619	2,691,215	3,810,019	4,050,947	3,575,253	3,145,401	3,886,795	1,511,402	956,053	1,025,380	2,744,408	2,148,066
Sockeye	14,158,076	14,964,894	13,791,971	13,436,808	15,849,204	19,375,916	26,169,047	11,533,354	17,386,798	18,486,735	16,515,280	36,356,087
Coho	790,544	2,027,738	1,762,604	3,561,659	2,374,703	3,972,107	1,391,204	3,937,198	3,197,336	3,523,008	2,653,810	2,031,963
Pink	144,896	23,889	27,904	12,134	84,308	54,070	82,356	1,195,812	363,373	3,446,356	543,510	1,025,474
Chum	3,371,206	2,206,854	821,818	976,553	1,965,383	845,703	2,542,327	10,853,908	9,227,837	11,973,968	4,478,556	8,669,206
	$21,256,342	$21,914,590	$20,214,316	$22,038,101	$23,848,851	$27,393,197	$34,071,729	$29,031,674	$31,131,396	$38,455,447	$25,655,577	$50,230,797
Set Gillnet Species												
Chinook	787	765	0	189	0	143	1,267	533	1,302	756	574	1,832
Sockeye	844,123	1,701,077	1,070,058	454,709	608,528	822,232	1,318,799	1,238,739	1,451,897	3,103,081	1,261,324	2,993,318
Coho	1,686	388	1,611	1,635	4,737	1,869	873	1,414	241	250	1,470	2,297
Pink	22,048	10,848	6,324	7,439	23,542	8,325	5,416	20,966	3,419	20,573	12,890	21,931
Chum	20,045	27,638	6,742	17,261	6,880	29,925	53,380	231,785	197,332	450,989	104,198	163,884
	$888,689	$1,740,716	$1,084,735	$481,233	$643,687	$862,493	$1,379,735	$1,493,437	$1,654,191	$3,575,649	$1,136,546	$3,183,261
Hatchery Sales Species												
Chinook	0	15	0	0	0	0	0	0	0	0	2	0
Sockeye	174,418	418,114	1,769,179	997,020	2,383,400	2,173,808	1,790,819	0	1,088,363	0	1,079,512	0
Coho	9,459	1	0	35,733	0	102,792	161,995	67,879	145,267	44,808	56,793	280,215
Pink	6,430,468	4,989,921	6,068,403	5,718,678	7,288,894	7,300,390	6,809,392	7,574,535	5,208,870	8,911,203	6,630,075	11,867,472
Chum	3,070,274	3,794,069	1,643,243	779,268	1,704,693	2,893,174	2,105,903	2,465,426	1,816,012	2,894,835	2,316,690	2,802,681
	$9,684,619	$9,202,119	$9,480,825	$7,530,699	$11,376,987	$12,470,164	$10,868,110	$10,107,840	$8,258,512	$11,850,846	$9,886,653	$14,950,368

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Table 5.–Page 2 of 2.

Other Gear Species	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Previous 10-year avg.	2011 [a]
Chinook	0	200	26	493	81	0	0	0	0	0	80	0
Sockeye	509	1,324	195	614	289	0	0	0	0	0	293	16
Coho	468	0	0	0	0	0	0	0	0	0	47	0
Pink	382	0	2,812	0	0	0	0	0	0	0	319	11,123
Chum	4,206	5	0	0	0	0	0	0	0	0	421	1,169
	$5,565	$1,529	$3,033	$1,107	$370	$0	$0	$0	$0	$0	$1,289	$12,308
Average Earnings												
Purse seine	$88,101	$41,481	$127,443	$54,210	$137,767	$102,232	$299,400	$352,212	$62,478	$458,835	$172,416	$206,151
Drift gillnet	$39,731	$41,039	$39,327	$42,219	$46,807	$55,452	$67,335	$57,262	$60,922	$74,095	$52,419	$97,916
Set gillnet	$27,772	$62,168	$38,741	$17,823	$23,840	$33,173	$53,067	$59,737	$61,266	$123,298	$50,089	$109,768
Number of Permits Fished												
Purse seine	152	120	106	105	103	111	111	141	154	174	128	183
Drift gillnet	535	534	514	522	508	494	506	507	511	519	515	513
Set gillnet	32	28	28	27	27	26	26	25	27	29	28	29

[a] Confiscated fish.

Table 6.–Spawning escapement goals for Area E salmon stocks, 2011.

Species/stock	Goal Lower	Goal Upper	Long-term average target [a]	Type [b]	Year implemented [c]	Evaluation method
Chinook salmon						
Copper River	24,000	and up	27,000	SEG [d]	2003	Mark–recapture
Coho salmon						
Bering River	13,000	– 33,000		SEG	2003	Aerial surveys
Copper River Delta	32,000	– 67,000		SEG	2003	Aerial surveys
Sockeye salmon						
Bering River	20,000	– 35,000		SEG	2003	Aerial surveys
Upper Copper River [e]	300,000	– 500,000	361,000	SEG	2003	Didson sonar
Copper River Delta [f]	55,000	– 130,000	84,500	SEG	2003	Aerial surveys
Coghill Lake	20,000	– 40,000		SEG	2003	Weir
Eshamy Lake	13,000	– 28,000		BEG	2009	Weir
Pink Salmon						
Even–year Broodline (all districts combined) [g, h]						
	1,250,000	– 2,750,000		SEG	2003	Aerial surveys
Odd–year Broodline (all districts combined) [g, h]						
	1,250,000	– 2,750,000		SEG	2003	Aerial surveys
Chum salmon [i]						
Eastern District	50,000	and up	103,100	SEG [d]	2006	Aerial surveys
Northern District	20,000	and up	40,100	SEG [d]	2006	Aerial surveys
Coghill District	8,000	and up	18,750	SEG [d]	2006	Aerial surveys
Northwestern District	5,000	and up	13,000	SEG [d]	2006	Aerial surveys
Southeastern District	8,000	and up	25,000	SEG [d]	2006	Aerial surveys

[a] These goals are to be managed for escapements that on average match the historical average escapement listed.

[b] The goal types for Area E stocks include biological escapement goal (BEG) and sustainable escapement goal (SEG). These are defined in 5 AAC 39.222 *Policy for the management of sustainable salmon fisheries*.

[c] The goals are generally adopted the year before they are implemented.

[d] These goals are lower bound SEG goals (5 AAC 39.222).

[e] The upper Copper River is managed for an inriver goal evaluated by the Miles Lake sonar. Upriver harvests and hatchery contributions are subtracted to estimate the spawning escapement.

[f] The Copper River Delta sockeye salmon goal is managed for escapements that, on average, match the long-term escapement index of 84,500 fish.

[g] The Prince William Sound pink salmon goals are split into district specific targets using the historical averages by broodline.

[h] The pink and chum salmon escapements are indexed by the area under the curve (AUC) of weekly aerial surveys adjusted for stream life.

[i] There are no chum salmon goals for Unakwik, Eshamy, Southwestern, or Montague districts, but streams are surveyed.

Table 7.–Preseason harvest projections for the 2011 common property salmon fishery by district and species, Prince William Sound area.

		Chinook		Sockeye		Coho[c]		Pink		Chum	
District/facility[a]	Forecast type[b]	Point estimate	Range	Point estimate	Range	Point estimate	Range	Point estimate	Range	Point estimate	Range
Copper River[d]	CPF harvest	14	0–41	1,160	510–1,180	293	39–548				
Bering River[e]	CPF harvest			17	0–52	51	0–120				
Coghill[f]	CPF harvest			140	110–170						
Eshamy[f]	CPF harvest			15	0–40						
Unakwik[g]	CPF harvest			7	3–10						
General districts	CPF harvest							3,550	900–6,200	200	190–210
Total wild stock		14	0–41	1,339	522–1,194	344	39–561	3,550	900–6,200	200	190–210
SGH	CPF harvest					178		10,745			
AFK	CPF harvest							7,503		280	
WNH[h]	CPF harvest					267		7,783		2,648	
CCH	CPF harvest							5,672			
MBH[i]	CPF harvest			928							
GH	CPF harvest			200	90-310						
Total hatchery				1,128		445		31,703		2,928	
Total hatchery and wild		14		2,467		789		35,253		3,128	

Note: All values are in thousands. Prince William Sound Area hatchery facility abbreviations include SGH (Solomon Gulch Hatchery), AFK (Armin F. Koernig Hatchery), WNH (Wally Noerenberg Hatchery), CCH (Cannery Creek Hatchery), MBH (Main Bay Hatchery), and GH (Gulkana Hatchery).

[a] 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 (ADF&G) provides common property fishery (CPF) harvest forecasts for all wild stocks and Gulkana hatchery sockeye salmon. Hatchery operators provide CPF forecasts for PWS hatchery returns and Gulkana hatchery sockeye salmon. Harvest projections do not include salmon harvested by hatcheries for cost recovery.

[c] ADF&G provides commercial common property (CCPF) harvest forecasts for Copper River and Bering River coho salmon.

[d] 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).

[e] Bering River coho and sockeye salmon harvest estimates are based on 10-year mean annual harvest.

[f] 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.

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

[h] Wally Noerenberg Hatchery chum and coho salmon harvest estimates include all on-site and remote release runs of chum and coho salmon.

[i] Main Bay Hatchery sockeye salmon harvest estimate includes all on-site and remote release runs of sockeye salmon.

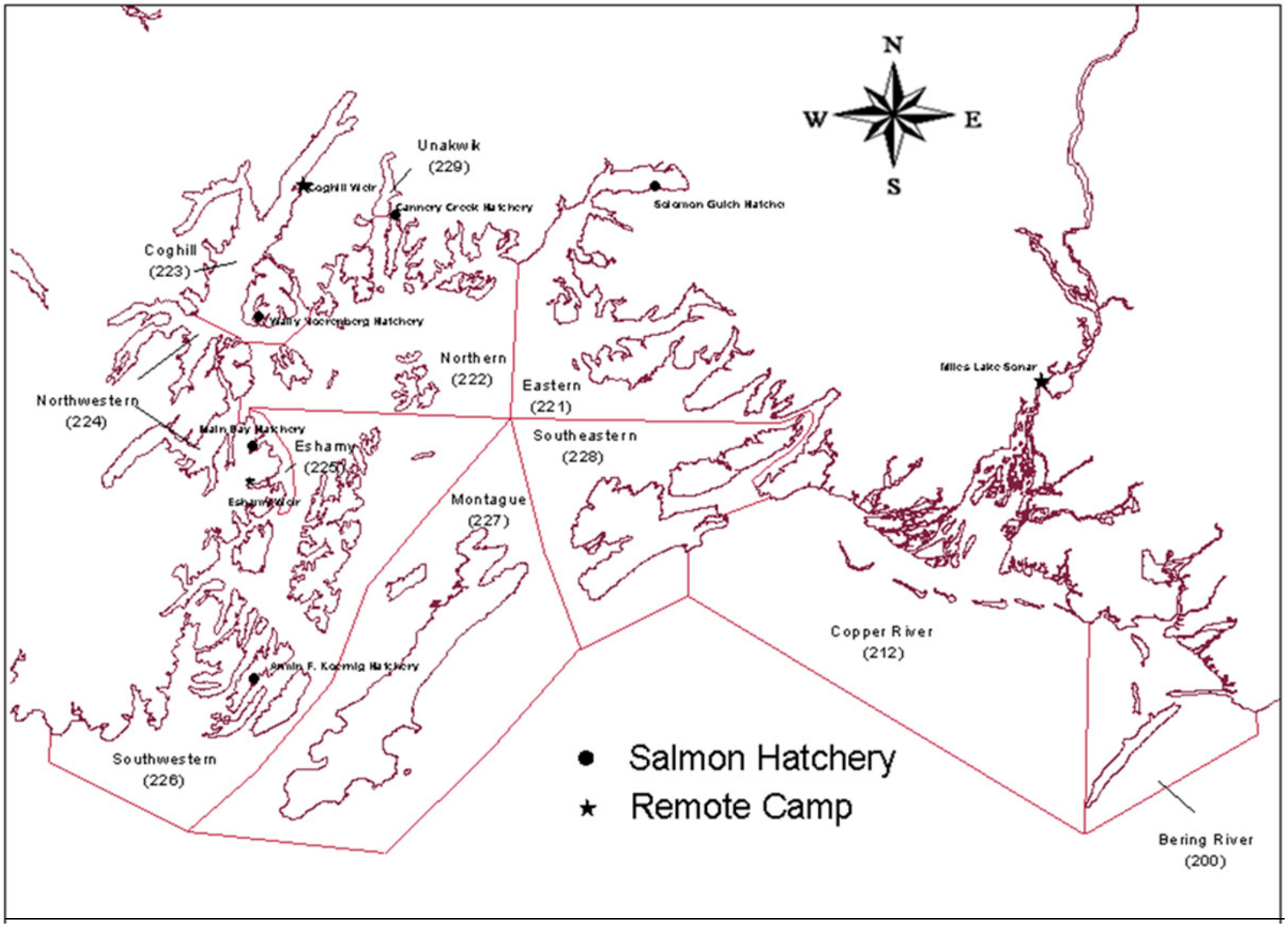

Figure 1.–Prince William Sound Management Area showing commercial fishing districts, salmon hatcheries, weir locations, and Miles Lake sonar camp.

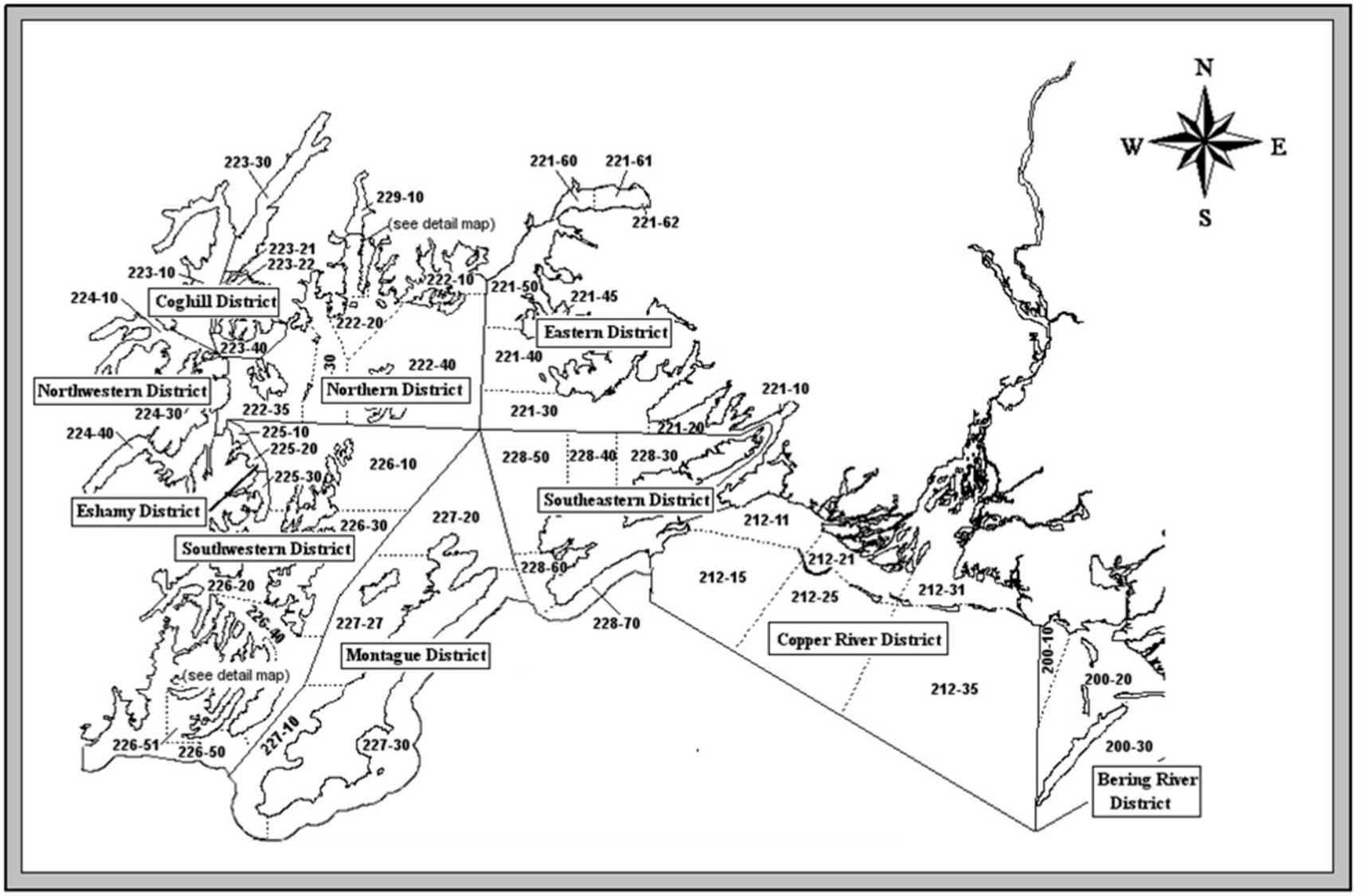

Figure 2.–Prince William Sound Management Area showing commercial fishing districts and statistical reporting areas.

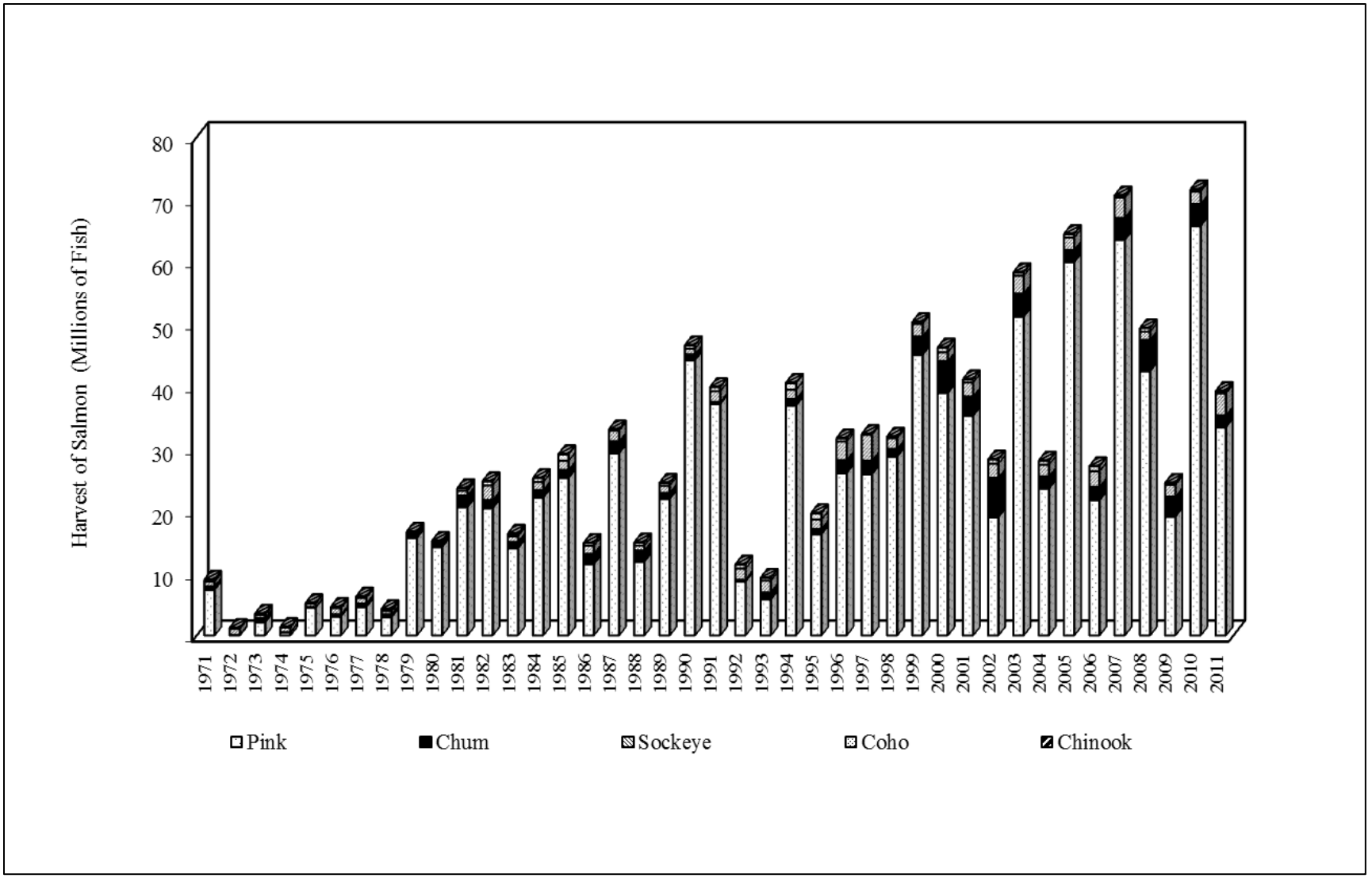

Figure 3.–Commercial salmon harvests in Prince William Sound, 1971–2011.

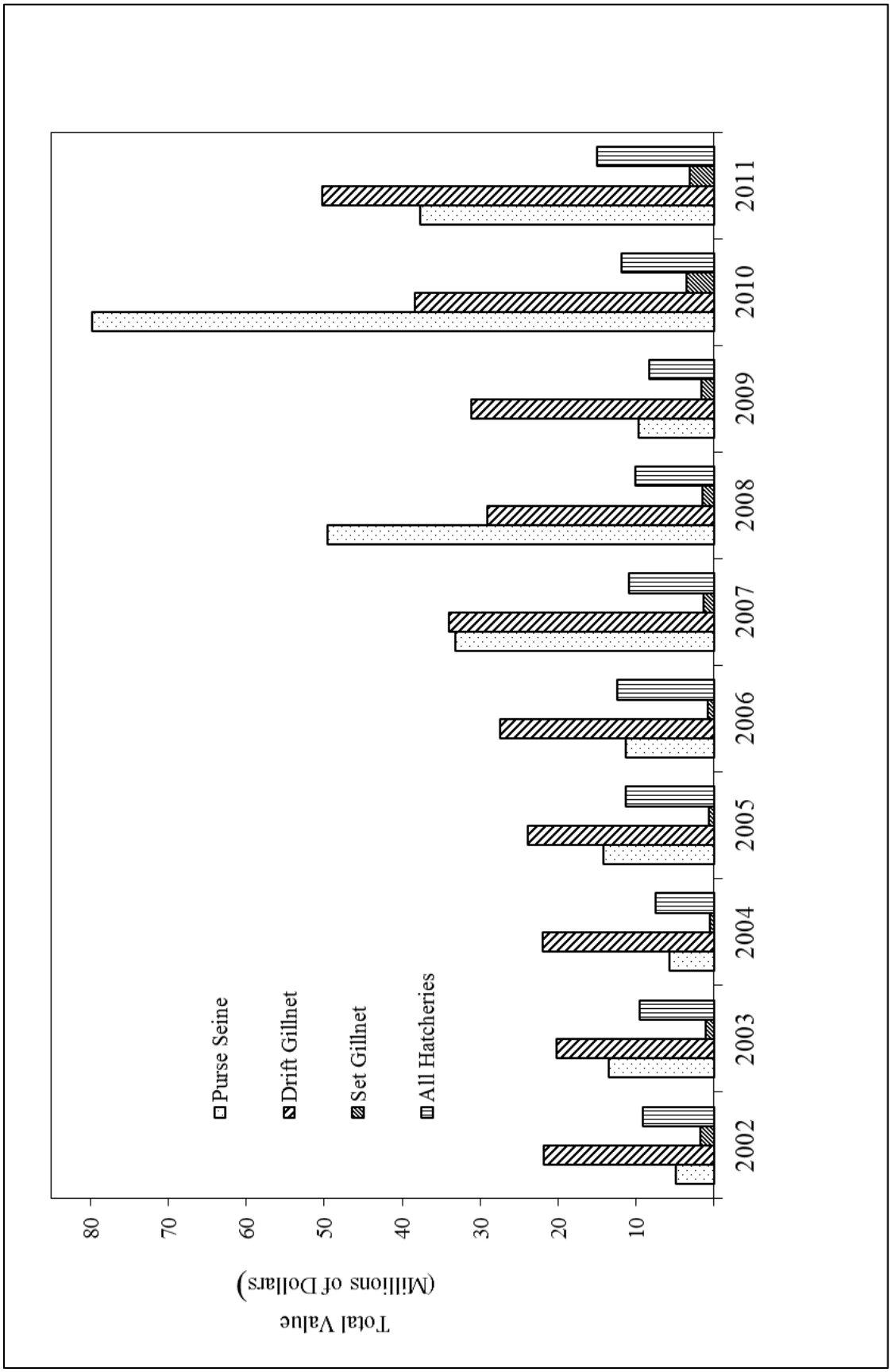

Figure 4.–Exvessel value of the commercial salmon harvest by gear type, 2002–2011.

APPENDIX A

Appendix A1.–Total estimated sockeye salmon runs to the Copper River by end user or destination with previous 10-year average, 2001–2011.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	10-year Average	2011
Commercial harvest[a]	1,323,577	1,248,503	1,188,052	1,048,004	1,331,664	1,496,754	1,901,773	320,815	896,621	636,214	1,139,198	2,052,432
Commercial, homepack[a]	2,113	1,138	4,077	525	1,785	1,539	2,023	2,172	6,528	7,064	2,896	9,070
Commercial, donated[a]	0	128	35	74	83	114	180	80	47	0	74	0
Educational drift gillnet permit[a]	0	151	0	0	42	16	62	29	8	61	37	23
Subsistence (Cordova, drift gillnet)[b]	3,072	3,067	1,607	1,822	830	4,355	6,148	3,969	1,764	1,980	2,861	1,783
Federal Subsistence (PWS/Chugach Nat'l Forest, dip net, spear, rod and reel)[b]	0	0	0	0	109	150	36	32	46	36	41	35
Subsistence (Batzulnetas, dip net, fish wheel or spear)[b]	62	208	164	182	0	0	1	1	0	106	72	9
Subsistence (Glennallen Subdistrict, dip net, fish wheel or spear)[c]	83,787	50,850	47,007	55,510	64,213	57,710	65,714	43,157	46,849	70,719	58,552	59,622
Federal Subsistence (Glennallen subdistrict, dip net, fish wheel or spear)[d]	0	7,950	13,616	17,704	21,926	18,348	17,642	14,475	14,033	14,134	13,983	15,753
Personal Use Reported (Chitina Subdistrict, dip net)[c]	132,108	85,968	80,796	107,312	120,013	123,261	125,126	81,359	90,035	138,487	108,447	128,052
Federal Subsistence (Chitina subdistrict, dip net)[d]	-	575	717	1,215	2,450	1,549	1,028	959	882	2,324	1,300	1,933
Upriver sport harvest[e]	8,169	7,761	7,108	6,464	8,135	14,297	23,028	11,431	13,415	14,743	11,455	7,727
Delta sport harvest[e]	298	798	631	952	656	113	1,704	1,225	1,014	1,342	873	838
Upriver spawning escapement[f]	509,519	581,469	471,090	448,075	528,816	600,378	624,437	491,516	477,327	524,692	525,732	621,545
Delta spawning escapement[g]	142,130	151,470	146,300	138,770	116,812	197,792	176,570	135,900	138,584	167,810	151,214	153,014
Hatchery broodstock/Excess[h]	75,620	62,361	45,024	6,618	92,455	97,192	28,648	44,865	43,409	157,980	65,417	59,589
Total estimated sockeye salmon run size	2,280,455	2,202,397	2,006,224	1,833,227	2,289,989	2,613,568	2,974,120	1,151,985	1,730,562	1,737,692	2,082,022	3,111,425

[a] Numbers are from fish ticket data. Homepack numbers for sockeye salmon are voluntarily reported, but are legally required.
[b] Data are reported harvest from returned state and federal subsistence permits.
[c] Data are expanded harvest from returned state and federal subsistence permits.
[d] Data are reported harvest, 2002–2004, and expanded harvest, 2005–2011, from returned state and federal subsistence permits.
[e] Upriver and Copper River Delta sport harvest data are from statewide sport fish harvest surveys.
[f] Beginning in 1999 sockeye salmon spawning escapement is based on the total number of fish past the Miles Lake sonar minus the Chinook salmon inriver midpoint abundance estimate, upriver subsistence, personal use, sport, hatchery broodstock and onsite hatchery surplus. Prior to 1999, upriver spawning escapement was based on the Miles Lake sonar passage (sockeye salmon only) minus upriver subsistence, personal use, sport, hatchery broodstock, and onsite hatchery surplus. The number of sockeye salmon past the Miles Lake sonar was determined by multiplying the total number of fish past the sonar by the percentage of sockeye salmon in the total upriver subsistence and personal use fisheries.
[g] Delta spawning escapement estimated by doubling the peak aerial survey index.
[h] Hatchery broodstock and onsite excess are from the PWSAC 2011b.

Appendix A2.–Total estimated sockeye salmon runs to the Copper River by end user or destination with previous 10-year average.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	10-year Average	2011
Upriver wild contribution[a]	1,576,634	1,372,063	1,380,383	1,354,173	1,753,627	1,773,532	2,264,576	852,496	1,260,759	992,075	1,458,032	2,004,105
Delta wild contribution[b]	380,346	393,448	413,253	371,485	306,563	531,312	564,547	202,811	324,799	289,313	377,788	512,515
Gulkana contributions[c]	308,001	426,665	202,845	93,438	216,583	287,906	132,625	85,916	136,402	434,608	232,499	580,917
Total estimated sockeye salmon run size	2,264,981	2,192,176	1,996,481	1,819,097	2,276,773	2,592,750	2,961,747	1,141,223	1,721,959	1,715,995	2,068,318	3,097,537

[a] Beginning in 1999, the upriver wild sockeye contribution is estimated as the sum of the total number of sockeye salmon past the Miles Lake Sonar (total number of fish past the Miles Lake sonar minus the Chinook salmon inriver abundance estimate) and sockeye salmon captured in the Copper River commercial and subsistence harvests minus Gulkana Hatchery contributions to the Copper River (CR) commercial and subsistence fisheries, CR Delta wild stock, and CR Delta sport harvests. Prior to 1999, upriver wild sockeye salmon contribution was estimated as the sum of the total number of sockeye salmon past the Miles Lake sonar (total number of fish past the Miles Lake sonar multiplied by the percent of sockeye salmon harvested in upriver subsistence fisheries) and sockeye salmon captured in the CR commercial and subsistence harvests minus Gulkana Hatchery contributions to the CR commercial and subsistence fisheries, delta wild stock, and delta sport harvests.

[b] Delta wild sockeye salmon contribution is estimated as the total CR district harvest multiplied by proportion CR Delta sockeye salmon (delta escapement divided by the total number of sockeye salmon passed the Miles Lake sonar plus CR Delta escapement) then adding CR Delta escapement and CR Delta sport harvest.

[c] Gulkana Hatchery sockeye salmon contributions from 1995 to 2003 are based on CWT recovery; contributions from 2004 to 2011 are based on strontium marks from commercial, personal use, subsistence samples applied to reported harvest, and the historical average of mainstem and upper Copper River sport harvest times Gulkana Hatchery percent in personal use and subsistence fisheries. Gulkana Hatchery personal use and subsistence contribution estimates were calculated with reported harvest.

Appendix A3.–Total estimated sockeye salmon runs to the Copper River by end user or destination with previous 10-year average, 2001–2011.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	10-year Average	2011
Commercial harvest[a]	1,323,577	1,248,503	1,188,052	1,048,004	1,331,664	1,496,754	1,901,773	320,815	896,621	636,214	1,139,198	2,052,432
Commercial, homepack[a]	2,113	1,138	4,077	525	1,785	1,539	2,023	2,172	6,528	7,064	2,896	9,070
Commercial, donated[a]	0	128	35	74	83	114	180	80	47	0	74	0
Educational drift gillnet permit[a]	0	151	0	0	42	16	62	29	8	61	37	23
Subsistence (Cordova, drift gillnet)[b]	3,072	3,067	1,607	1,822	830	4,355	6,148	3,969	1,764	1,980	2,861	1,783
Federal Subsistence (PWS/Chugach Nat'l Forest, dip net, spear, rod and reel)[b]	0	0	0	0	109	150	36	32	46	36	41	35
Subsistence (Batzulnetas, dip net, fish wheel or spear)[b]	62	208	164	182	0	0	1	1	0	106	72	9
Subsistence (Glennallen Subdistrict, dip net, fish wheel or spear)[c]	83,787	50,850	47,007	55,510	64,213	57,710	65,714	43,157	46,849	70,719	58,552	59,622
Federal Subsistence (Glennallen subdistrict, dip net, fish wheel or spear)[d]	0	7,950	13,616	17,704	21,926	18,348	17,642	14,475	14,033	14,134	13,983	15,753
Personal Use Reported (Chitina Subdistrict, dip net)[c]	132,108	85,968	80,796	107,312	120,013	123,261	125,126	81,359	90,035	138,487	108,447	128,052
Federal Subsistence (Chitina subdistrict, dip net)[d]	-	575	717	1,215	2,450	1,549	1,028	959	882	2,324	1,300	1,933
Upriver sport harvest[e]	8,169	7,761	7,108	6,464	8,135	14,297	23,028	11,431	13,415	14,743	11,455	7,727
Delta sport harvest[e]	298	798	631	952	656	113	1,704	1,225	1,014	1,342	873	838
Upriver spawning escapement[f]	509,519	581,469	471,090	448,075	528,816	600,378	624,437	491,516	477,327	524,692	525,732	621,545
Delta spawning escapement[g]	142,130	151,470	146,300	138,770	116,812	197,792	176,570	135,900	138,584	167,810	151,214	153,014
Hatchery broodstock/Excess[h]	75,620	62,361	45,024	6,618	92,455	97,192	28,648	44,865	43,409	157,980	65,417	59,589
Total estimated sockeye salmon run size	2,280,455	2,202,397	2,006,224	1,833,227	2,289,989	2,613,568	2,974,120	1,151,985	1,730,562	1,737,692	2,082,022	3,111,425

[a] Numbers are from fish ticket data.

[b] Data are reported harvest from returned state and federal subsistence permits.

[c] Data are expanded harvest from returned state and federal subsistence permits.

[d] Data are reported harvest, 2002–2004, and expanded harvest, 2005–2011, from returned state and federal subsistence permits.

[e] Upriver Chinook salmon sport harvest only; there is no Copper River Delta Chinook salmon sport harvest. The sport harvest numbers are generated from the statewide sport fish harvest survey.

[f] Upriver Chinook salmon spawning escapement is estimated using the inriver abundance estimate and subtracting subsistence, personal use, and sport Chinook salmon harvests. Beginning in 1999, inriver abundance estimates were calculated using mark–recapture studies; prior to 1999 inriver abundance estimates were calculated using aerial and foot surveys.

Appendix A4.–Total commercial salmon harvest by species in the Copper River District, 1960–2011.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1960	14,052	593,824	118,395	375	314	726,960
1961	7,621	528,223	133,987	1,639	106	671,576
1962	14,792	677,626	174,628	1,880	513	869,439
1963	10,871	375,925	202,621	1,487	85	590,989
1964	12,751	699,548	242,666	548	62	955,575
1965	15,390	818,277	70,786	803	331	905,587
1966	11,422	1,005,615	116,147	717	115	1,134,016
1967	9,853	679,503	160,532	573	218	850,679
1968	9,743	573,270	230,867	4,343	473	818,696
1969	14,040	696,836	77,405	847	244	789,372
1970	19,375	1,115,695	161,892	645	687	1,298,294
1971	16,486	616,801	208,915	1,762	5,287	849,251
1972	22,250	727,144	103,021	2,304	717	855,436
1973	19,947	332,816	132,164	8,964	10,173	504,064
1974	18,980	607,766	46,625	9,839	664	683,874
1975	19,644	335,384	53,805	236	807	409,876
1976	31,479	865,195	111,900	3,392	178	1,012,144
1977	21,722	602,737	131,356	23,185	335	779,335
1978	29,062	249,872	220,338	3,512	2,233	505,017
1979	17,678	80,528	194,885	1,295	107	294,493
1980	8,454	18,908	225,299	3,966	198	256,825
1981	20,178	477,662	310,154	23,952	1,799	833,745
1982	47,362	1,177,632	454,763	7,154	1,177	1,688,088
1983	50,022	626,735	234,243	7,345	2,217	920,562
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
2006	30,278	1,496,754	318,285	30,844	17,203	1,893,364
2007	39,095	1,901,773	117,182	80,715	9,657	2,148,422
2008	11,437	320,815	202,621	1,437	1,279	1,705,827
2009	9,457	896,621	207,776	16,759	8,629	1,139,242
2010	9,645	636,214	210,621	21,149	15,694	893,323
10-Year Average	29,871	1,139,198	290,699	21,706	10,389	1,491,863
25-Year Average	38,003	1,240,705	281,112	15,281	13,544	1,635,375
2011	18,500	2,052,432	127,511	24,050	13,231	2,235,724

Appendix A5.–Copper River District commercial drift gillnet salmon harvest by period, 2011.

Period [a]	Date	Emergency Order Issued	Hours	Permits Fished	Landings	Chinook		Sockeye		Coho		Pink		Chum	
						Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
01[b]	5/16	2-F-E-001-11	12	420	542	1,722	34,465	102,226	622,638	0	0	0	0	6,417	42,037
02[b]	5/19	2-F-E-002-11	12	353	409	1,046	20,646	114,774	699,557	1	12	0	0	2,827	18,210
03[b]	5/23	2-F-E-003-11	12	439	711	2,660	51,907	234,532	1,427,822	34	216	0	0	2,246	15,096
04[b]	05/26-05/27	2-F-E-004-11	36	455	1,045	3,408	62,264	168,984	1,030,118	48	291	0	0	517	3,575
05[b]	05/30-05/31	2-F-E-005-11	36	335	757	2,229	45,141	133,642	814,035	1	7	1	3	38	256
6	06/02-06/03	2-F-E-010-11	36	278	587	1,482	30,466	84,747	513,582	4	25	0	0	83	566
7	06/06-06/07	2-F-E-014-11	36	240	525	1,459	31,957	85,515	517,277	3	21	0	0	5	35
8	06/09-06/10	2-F-E-018-11	36	196	439	1,442	30,823	64,884	389,629	5	30	0	0	14	99
9	06/13-06/14	2-F-E-021-11	24	172	329	978	21,470	52,587	314,417	13	103	0	0	16	104
10	06/16-06/17	2-F-E-024-11	24	188	305	872	20,669	36,146	218,845	266	1,865	0	0	28	187
11	06/20-06/21	2-F-E-026-11	24	147	275	437	10,348	57,825	354,564	674	4,399	3	12	47	381
12	06/23-06/24	2-F-E-028-11	24	178	324	221	5,247	60,741	372,487	1,578	11,059	18	74	140	970
13	06/27-06/28	2-F-E-030-11	36	186	542	251	6,010	154,011	939,931	1,367	9,109	286	1,029	96	623
14	06/30-07/01	2-F-E-032-11	36	247	625	118	2,742	135,678	823,688	1,198	8,193	351	1,277	96	640
15	07/04-07/05	2-F-E-036-11	36	217	628	72	1,773	207,771	1,268,731	335	2,367	98	452	47	312
16	07/07-07/08	2-F-E-039-11	36	241	502	26	597	87,486	535,860	1,018	7,092	635	2,486	39	277
17	07/11-07/12	2-F-E-040-11	36	241	451	17	495	68,993	424,064	1,075	7,711	2,371	9,243	96	749
18	07/14-07/15	2-F-E-044-11	36	213	388	18	361	68,114	420,324	1,100	7,846	3,290	12,578	159	1,143
19	07/18-07/19	2-F-E-046-11	36	197	398	15	305	62,007	379,758	1,267	8,275	2,269	8,795	71	491
20	07/21-07/22	2-F-E-047-11	36	168	265	8	105	33,856	203,927	945	6,087	4,793	18,563	74	527
21	07/25-07/26	2-F-E-049-11	36	96	114	11	136	17,525	93,951	1,425	9,616	2,907	11,459	31	210
22	07/28-07/29	2-F-E-054-11	36	65	81	0	0	10,702	64,067	923	6,784	1,116	3,681	37	179
23	08/01-08/02	2-F-E-056-11	36	25	25	0	0	1,222	7,295	69	566	92	336	0	0
24	08/04-8/05	2-F-E-063-11	36	13	13	1	13	830	4,971	203	1,381	278	1,053	0	0
25	08/08-08/09	2-F-E-064-11	36	30	30	1	10	3,855	23,278	4,007	28,630	2,291	5,850	7	45
26	08/11-08/12	2-F-E-069-11	36	54	58	3	36	2,405	14,203	6,696	44,920	2,662	7,311	7	42
27	08/15-08/16	2-F-E-072-11	24	111	125	0	0	761	4,631	14,417	105,444	485	1,669	85	525
28	08/22-08/23	2-F-E-075-11	24	209	241	3	22	254	1,558	16,017	126,531	76	298	8	52
29	08/29-08/30	2-F-E-095-11	24	189	267	0	0	55	357	24,143	188,819	17	68	0	0
30	09/05/09/06	2-F-E-099-11	24	9	9	0	0	0	0	875	6,794	0	0	0	0
31	09/08-09/09	2-F-E-101-11	24	89	142	0	0	12	66	19,124	156,687	11	33	0	0
32	09/12-09/13	2-F-E-105-11	24	132	178	0	0	4	22	17,891	153,554	0	0	0	0
33	09/15-09/16	2-F-E-106-11	24	70	85	0	0	288	2,301	8,850	72,467	0	0	0	0
34	09/19-09/20	2-F-E-106-11	24	2	2	0	0	0	0	213	1,823	0	0	0	0
35	9/22-9/23	2-F-E-114-11	24	10	10	0	0	0	0	547	4,418	0	0	0	0
36	9/26-/927	2-F-E-114-11	24	7	7	0	0	0	0	811	6,519	0	0	0	0
37	9/29-9/30	2-F-E-114-11	24	5	5	0	0	0	0	368	2,960	0	0	0	0
38	10/3-10/4	2-F-E-117-11	24	0	0	0	0	0	0	0	0	0	0	0	0
39	10/6-10/7	2-F-E-117-11	24	0	0	0	0	0	0	0	0	0	0	0	0
40	10/10-10/11	2-F-E-117-11	24	0	0	0	0	0	0	0	0	0	0	0	0
Total			1,080	485	11,439	18,500	378,008	2,052,432	12,487,954	127,511	992,621	24,050	86,270	13,231	87,331
Average Weights							20.43		6.08		7.78		3.59		6.60

[a] Unless otherwise noted, all waters available to commercial salmon fishing were open in the Copper River District.

[b] Waters of the inside closure area described in 5 AAC 24.350(1)(B) were closed.

Appendix A6.–Copper River District commercial drift gillnet salmon harvest by statistical week, 2011.

			Permits		Chinook		Sockeye		Coho		Pink		Chum	
Week	Dates	Hours	Fished	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
21	05/15 - 05/21	24	773	951	2,768	55,111	217,000	1,322,195	1	12	0	0	9,244	60,247
22	05/22 - 05/28	48	894	1,756	6,068	114,171	403,516	2,457,940	82	507	0	0	2,763	18,671
23	05/29 - 06/04	72	613	1,344	3,711	75,607	218,389	1,327,617	5	32	1	3	121	822
24	06/05 - 06/11	72	436	964	2,901	62,780	150,399	906,906	8	51	0	0	19	134
25	06/12 - 06/18	48	360	634	1,850	42,139	88,733	533,262	279	1,968	0	0	44	291
26	06/19 - 06/25	48	325	599	658	15,595	118,566	727,051	2,252	15,458	21	86	187	1,351
27	06/26 - 07/02	72	433	1,167	369	8,752	289,689	1,763,619	2,565	17,302	637	2,306	192	1,263
28	07/03 - 07/09	72	458	1,130	98	2,370	295,257	1,804,591	1,353	9,459	733	2,938	86	589
29	07/10 - 07/16	72	454	839	35	856	137,107	844,388	2,175	15,557	5,661	21,821	255	1,892
30	07/17- 07/23	72	365	663	23	410	95,863	583,685	2,212	14,362	7,062	27,358	145	1,018
31	07/24 - 07/30	72	161	195	11	136	28,227	158,018	2,348	16,400	4,023	15,140	68	389
32	07/31 - 08/06	72	38	38	1	13	2,052	12,266	272	1,947	370	1,389	0	0
33	08/07 - 08/13	72	84	88	4	46	6,260	37,481	10,703	73,550	4,953	13,161	14	87
34	08/14- 08/20	24	111	125	0	0	761	4,631	14,417	105,444	485	1,669	85	525
35	08/21 - 08/27	24	209	241	3	22	254	1,558	16,017	126,531	76	298	8	52
36	08/28- 09/03	24	189	267	0	0	55	357	24,143	188,819	17	68	0	0
37	09/04 - 09/10	48	98	151	0	0	12	66	19,999	163,481	11	33	0	0
38	09/11 - 09/17	48	202	263	0	0	292	2,323	26,741	226,021	0	0	0	0
39	09/18 - 09/24	48	12	12	0	0	0	0	760	6,241	0	0	0	0
40	09/25 - 10/01	48	12	12	0	0	0	0	1,179	9,479	0	0	0	0
41	10/02 - 10/08	48	0	0	0	0	0	0	0	0	0	0	0	0
42	10/09 - 10/15	24	0	0	0	0	0	0	0	0	0	0	0	0
Total		1,152	485	11,439	18,500	378,008	2,052,432	12,487,954	127,511	992,621	24,050	86,270	13,231	87,331
Average Weights						20.43		6.08		7.78		3.59		6.60

Appendix A7.–Daily salmon counts at Miles Lake sonar, 2011.

		Daily sonar counts						Minimum Inriver Passage Objective		Maximum Inriver Passage Objective	
Date	Water Level	North Bank	South Bank	Daily	Cumulative	0600 Count	Projected Daily	Daily	Cumulative	Daily	Cumulative
5/13	39.25	0	NA	0	0		0	NA	NA	NA	NA
5/14	39.25	0	NA	0	0		0	NA	NA	NA	NA
5/15	39.16	0	NA	0	0		0	0	NA	0	NA
5/16	39.13	54	198	252	252		0	402	402	532	532
5/17	39.13	618	348	966	1,218		0	638	1,040	843	1,374
5/18	39.18	636	804	1,440	2,658		0	1,915	2,955	2,530	3,905
5/19	39.27	1,166	480	1,646	4,304		0	3,363	6,318	4,444	8,349
5/20	39.43	745	1,215	1,960	6,264		0	4,901	11,219	6,477	14,826
5/21	39.51	1,202	1,332	2,534	8,798	518	2,072	5,529	16,748	7,307	22,134
5/22	39.69	1,845	1,902	3,747	12,545	537	2,148	8,510	25,258	11,246	33,380
5/23	39.90	5,922	3,744	9,666	22,211	1,806	7,224	9,712	34,970	12,835	46,214
5/24	40.20	9,840	14,136	23,976	46,187	3,348	13,392	10,719	45,689	14,165	60,380
5/25	40.33	14,214	21,882	36,096	82,283	8,412	33,648	12,234	57,923	16,168	76,548
5/26	40.46	25,728	15,882	41,610	123,893	10,848	43,392	15,098	73,022	19,953	96,501
5/27	40.66	19,443	21,540	40,983	164,876	9,705	38,820	14,291	87,312	18,886	115,387
5/28	40.86	21,576	19,668	41,244	206,120	8,778	35,112	15,198	102,510	20,085	135,472
5/29	41.70	16,971	10,470	27,441	233,561	8,064	32,256	15,253	117,764	20,158	155,630
5/30	41.43	7,554	3,960	11,514	245,075	2,892	11,568	16,651	134,414	22,004	177,634
5/31	41.66	6,258	8,952	15,210	260,285	2,934	11,736	14,601	149,016	19,296	196,931
6/1	41.96	6,204	16,050	22,254	282,539	4,440	17,760	16,753	165,769	22,140	219,071
6/2	42.06	2,892	14,106	16,998	299,537	4,944	19,776	15,147	180,916	20,018	239,088
6/3	42.11	2,012	9,042	11,054	310,591	2,640	10,560	15,012	195,928	19,838	258,927
6/4	42.20	2,058	8,868	10,926	321,517	2,364	9,456	13,842	209,769	18,293	277,219
6/5	42.21	1,569	6,774	8,343	329,860	2,682	10,728	15,047	224,816	19,885	297,105
6/6	42.05	1,362	5,262	6,624	336,484	1,416	5,664	12,782	237,598	16,892	313,996
6/7	41.86	2,232	9,774	12,006	348,490	2,208	8,832	14,022	251,620	18,530	332,527
6/8	41.80	2,352	12,660	15,012	363,502	3,996	15,984	14,689	266,308	19,412	351,938
6/9	41.59	3,144	6,828	9,972	373,474	2,712	10,848	12,650	278,959	16,718	368,656
6/10	41.54	2,062	4,740	6,802	380,276	1,850	7,400	11,337	290,296	14,983	383,639
6/11	41.48	1,921	5,748	7,669	387,945	1,609	6,436	10,351	300,647	13,680	397,319
6/12	41.43	1,657	3,672	5,329	393,274	1,855	7,420	9,154	309,802	12,098	409,417
6/13	41.41	1,152	3,378	4,530	397,804	1,020	4,080	7,984	317,786	10,552	419,968
6/14	41.40	1,523	5,490	7,013	404,817	1,369	5,476	7,797	325,583	10,304	430,272
6/15	41.39	3,889	5,100	8,989	413,806	1,831	7,324	8,252	333,835	10,905	441,177
6/16	41.47	2,385	4,056	6,441	420,247	1,760	7,040	8,054	341,889	10,644	451,821
6/17	41.38	2,682	3,234	5,916	426,163	1,363	5,452	7,977	349,866	10,542	462,364
6/18	41.31	2,517	3,738	6,255	432,418	1,833	7,332	7,730	357,596	10,215	472,579
6/19	41.64	1,302	3,006	4,308	440,786	676	2,704	7,598	373,179	10,041	493,172

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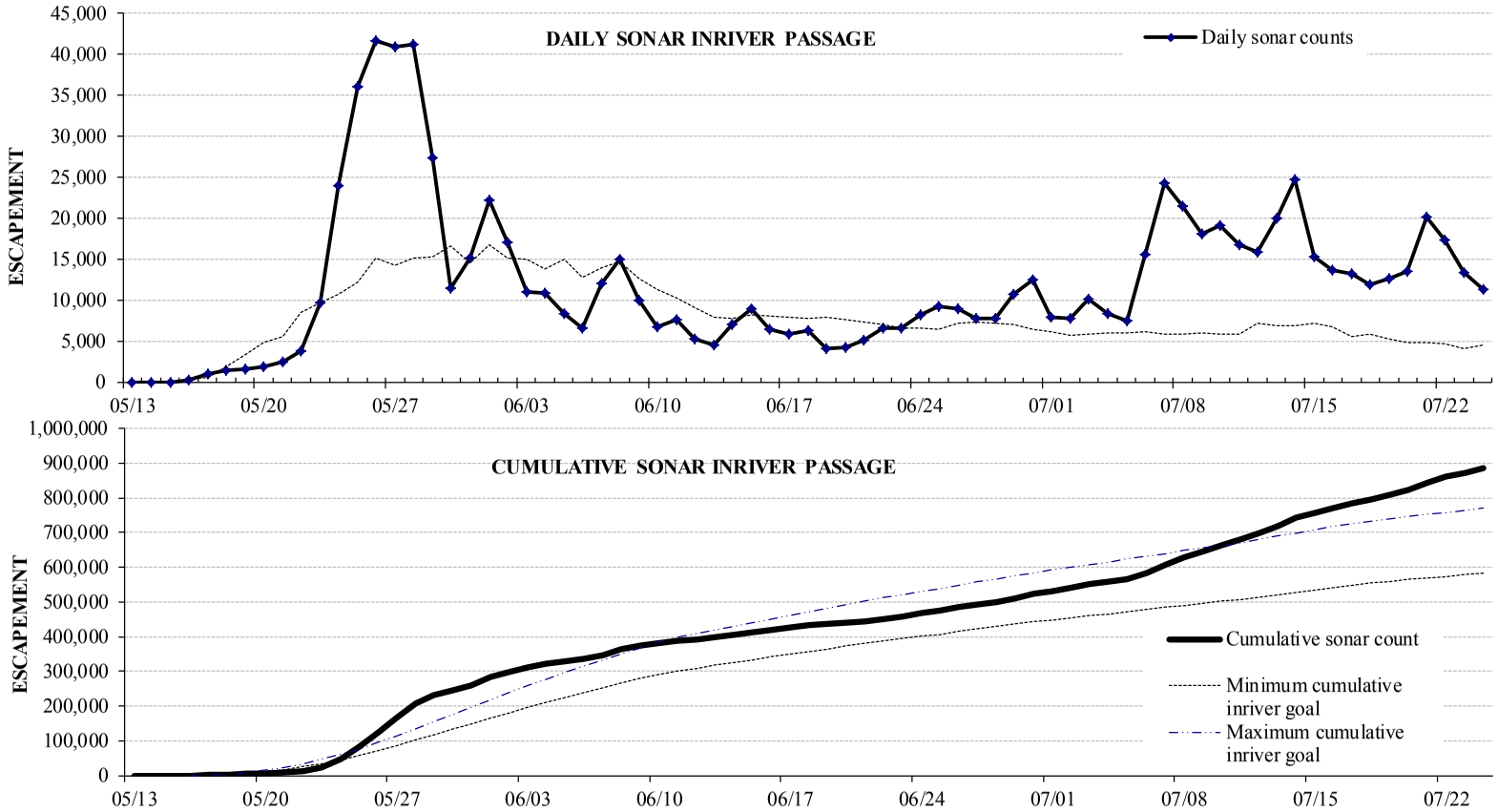
Appendix A7.–Page 2 of 2.

Date	Water Level	Daily sonar counts: North Bank	South Bank	Daily	Cumulative	0600 Count	Projected Daily	Minimum Inriver Passage Objective: Daily	Minimum Inriver Passage Objective: Cumulative	Maximum Inriver Passage Objective: Daily	Maximum Inriver Passage Objective: Cumulative
6/20	41.93	1,375	3,726	5,101	445,887	914	3,656	7,399	380,578	9,778	502,950
6/21	42.48	787	5,808	6,595	452,482	1,326	5,304	7,095	387,673	9,377	512,327
6/22	41.97	1,033	5,622	6,655	459,137	1,845	7,380	6,632	394,305	8,765	521,092
6/23	42.07	947	7,242	8,189	467,326	1,411	5,644	6,585	400,891	8,703	529,795
6/24	42.10	2,077	7,194	9,271	476,597	1,861	7,444	6,509	407,400	8,602	538,397
6/25	42.18	1,588	7,326	8,914	485,511	2,508	10,032	7,262	414,663	9,598	547,995
6/26	42.35	1,613	6,150	7,763	493,274	1,764	7,056	7,307	421,970	9,657	557,651
6/27	42.47	1,591	6,209	7,800	501,074	1,794	7,176	7,164	429,134	9,468	567,119
6/28	42.51	1,691	9,072	10,763	511,837	1,542	6,168	7,037	436,171	9,300	576,419
6/29	42.48	2,306	10,260	12,566	524,403	3,673	14,692	6,498	442,669	8,587	585,006
6/30	42.37	1,412	6,576	7,988	532,391	2,119	8,476	6,176	448,845	8,161	593,168
7/1	42.24	2,586	5,202	7,788	540,179	1,182	4,728	5,728	454,572	7,570	600,737
7/2	42.11	3,527	6,637	10,164	550,343	2,204	8,816	5,841	460,414	7,720	608,457
7/3	42.04	2,279	6,168	8,447	558,790	2,755	11,020	5,951	466,365	7,865	616,322
7/4	42.03	2,302	5,193	7,495	566,285	1,787	7,148	6,080	472,446	8,036	624,357
7/5	42.05	3,979	11,610	15,589	581,874	3,758	15,032	6,152	478,597	8,130	632,487
7/6	42.24	5,875	18,390	24,265	606,139	5,372	21,488	5,820	484,417	7,691	640,178
7/7	42.43	5,831	15,606	21,437	627,576	6,412	25,648	5,925	490,342	7,830	648,009
7/8	42.35	3,948	14,112	18,060	645,636	4,752	19,008	6,025	496,367	7,962	655,971
7/9	42.46	5,265	13,860	19,125	664,761	4,563	18,252	5,927	502,294	7,833	663,804
7/10	42.53	3,756	13,092	16,848	681,609	5,370	21,480	5,839	508,134	7,717	671,521
7/11	42.59	3,729	12,198	15,927	697,536	3,937	15,748	7,180	515,313	9,488	681,009
7/12	42.66	5,729	14,322	20,051	717,587	4,575	18,300	6,871	522,184	9,080	690,089
7/13	42.82	3,822	20,917	24,739	742,326	7,615	30,460	6,916	529,100	9,140	699,229
7/14	43.04	2,409	12,936	15,345	757,671	3,204	12,816	7,200	536,300	9,515	708,744
7/15	43.28	2,336	11,340	13,676	771,347	3,280	13,120	6,780	543,080	8,960	717,704
7/16	43.32	3,791	9,495	13,286	784,633	2,875	11,500	5,581	548,661	7,375	725,079
7/17	43.33	2,315	9,660	11,975	796,608	2,047	8,188	5,889	554,550	7,783	732,862
7/18	43.16	3,226	9,372	12,598	809,206	2,821	11,284	5,241	559,791	6,926	739,788
7/19	43.09	3,269	10,278	13,547	822,753	2,888	11,552	4,859	564,650	6,422	746,210
7/20	42.93	3,078	17,106	20,184	842,937	5,205	20,820	4,850	569,500	6,410	752,619
7/21	42.89	4,577	12,804	17,381	860,318	4,776	19,104	4,657	574,158	6,155	758,774
7/22	42.93	5,576	7,794	13,370	873,688	3,055	12,220	4,060	578,217	5,365	764,139
7/23	43.09	3,356	7,982	11,338	885,026	2,747	10,988	4,483	582,700	5,924	770,063
7/24	43.25	1,409	3,486	4,895	889,921	1,533	6,132	4,173	586,873	5,515	775,578
7/25	43.14	1,176	3,534	4,710	894,631	1,536	6,144	3,712	590,585	4,906	780,484
7/27	42.87	2,124	6,666	8,790	903,421	2,266	9,064	3,483	594,068	4,602	785,086
7/28	42.70	1,936	8,874	10,810	914,231	1,394	5,576	3,219	597,287	4,254	789,340

Note: Anticipated counts are not available prior to 15 May because the sonar has only been deployed three times prior to 15 May (2003, 2004, 2005).

Appendix A8.–Minimum and maximum inriver sonar goal versus actual daily and cumulative salmon passage, Miles Lake Sonar, 2011.



Appendix A9.–Inriver salmon passage at the Miles Lake sonar, 1978–2011.

Year	Total	Rank
1978	107,011	34
1979	248,709	33
1980	283,856	32
1981	535,263	26
1982	467,306	29
1983	545,724	24
1984	536,806	25
1985	436,313	31
1986	457,421	30
1987	480,917	28
1988	488,398	27
1989	607,797	18
1990	581,859	22
1991	579,435	23
1992	601,952	19
1993	833,387	11
1994	715,577	14
1995	599,265	20
1996	906,239	6
1997	1,148,079	1
1998	866,957	7
1999	850,951	9
2000	587,497	21
2001	833,569	10
2002	819,794	12
2003	700,543	16
2004	669,514	17
2005	855,125	8
2006	959,706	2
2007	919,600	4
2008	718,344	13
2009	709,748	15
2010	923,811	3
10-Year Average	810,975	
2011	914,231	5

Appendix A10.–Anticipated and actual semi-weekly harvest of sockeye, Chinook, and coho salmon in the Copper River District drift gillnet fishery, 2011.

Semi-Weekly Date		Fishing Time (Hours)	Anticipated Sockeye salmon Harvest [a]	Actual Sockeye salmon Harvest	Anticipated Chinook salmon Harvest[b]	Actual Chinook salmon Harvest	Anticipated Coho salmon Harvest [c]	Actual Coho salmon Harvest
5/18	Wed	12	40,804	102,226	1,641	1,722	0	0
5/21	Sat	12	52,669	114,774	1,046	1,046	1	1
5/25	Wed	12	99,740	234,532	1,469	2,660	4	34
5/28	Sat	36	82,278	168,984	857	3,408	11	48
6/01	Wed	36	97,636	133,642	1,087	2,229	13	1
6/04	Sat	36	88,087	84,747	806	1,482	7	4
6/08	Wed	36	84,064	85,515	768	1,459	7	3
6/11	Sat	36	41,262	64,884	385	1,442	21	5
6/15	Wed	24	57,813	52,587	450	978	30	13
6/18	Sat	24	39,725	36,146	213	872	41	266
6/22	Wed	24	51,686	57,825	187	437	103	674
6/25	Sat	24	45,852	60,741	104	221	171	1,578
6/29	Wed	36	52,637	154,011	75	251	215	1,367
7/02	Sat	36	36,212	135,678	36	118	170	1,198
7/06	Wed	36	55,687	207,771	34	72	303	335
7/09	Sat	36	44,317	87,486	16	26	278	1,018
7/13	Wed	36	56,640	68,993	12	17	575	1,075
7/16	Sat	36	38,197	68,114	8	18	744	1,100
7/20	Wed	36	37,963	62,007	6	15	1,203	1,267
7/23	Sat	36	22,041	33,856	3	8	799	945
7/27	Wed	36	17,430	17,525	2	11	1,228	1,425
7/30	Sat	36	11,796	10,702	1	0	1,457	923
8/03	Wed	36	10,143	1,222	1	0	2,628	69
8/06	Sat	36	5,509	830	1	1	3,501	203
8/10	Wed	36	5,616	3,855	0	1	8,882	4,007
8/13	Sat	36	2,722	2,405	1	3	7,457	6,696

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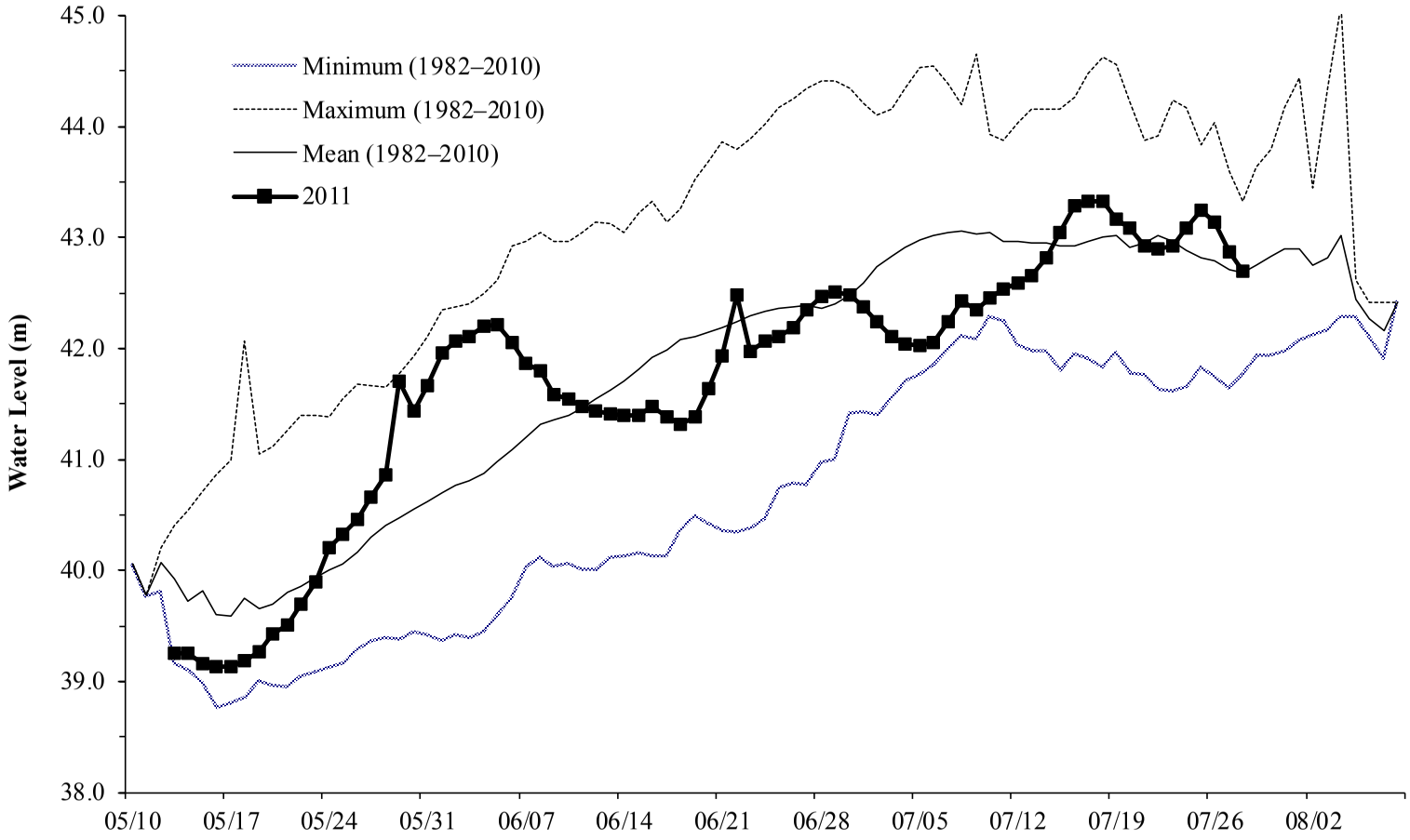
Semi-Weekly Date		Fishing Time (Hours)	Anticipated Sockeye salmon Harvest [a]	Actual Sockeye salmon Harvest	Anticipated Chinook salmon Harvest[b]	Actual Chinook salmon Harvest	Anticipated Coho salmon Harvest [c]	Actual Coho salmon Harvest
8/17	Wed	24	2,156	761	1	0	19,286	14,417
8/20	Sat	0	740	0	0	0	15,287	0
8/24	Wed	24	1,063	254	0	3	33,124	16,017
8/27	Sat	0	232	0	0	0	22,933	0
8/31	Wed	24	367	55	0	0	37,888	24,143
9/03	Sat	0	148	0	0	0	26,283	0
9/07	Wed	24	134	0	0	0	37,219	875
9/10	Sat	24	24	12	0	0	19,770	19,124
9/14	Wed	24	25	4	0	0	23,843	17,891
9/17	Sat	24	7	288	0	0	10,570	8,850
9/21	Wed	24	0	0	0	0	8,971	213
9/24	Sat	24	0	0	0	0	4,295	547
9/28	Wed	24	0	0	0	0	2,805	811
10/01	Sat	24	0	0	0	0	680	368
10/05	Wed	24	0	0	0	0	414	0
10/08	Sat	24	0	0	0	0	242	0
10/12	Wed	24	0	0	0	0	41	0
10/15	Sat	0	0	0	0	0	1	0
Total		1,152	1,183,419	2,052,432	9,211	18,500	293,500	127,511

[a] Sockeye salmon anticipated harvest is based on the midpoint preseason forecast (1,183,419) and the 1998–2007 harvest timing.

[b] Chinook salmon anticipated harvest is based on the preseason harvest forecast (9,211) and the 1998–2007 harvest timing. This harvest forecast is the total run forecast minus the lower escapement goal threshold times the mean commercial exploitation rate. Therefore, the Chinook salmon harvest should be considered a maximum harvest because the escapement goal is a lower threshold.

[c] Coho salmon anticipated harvest is based on the midpoint preseason harvest forecast (293,500) and the 1973–2009 harvest timing.

Appendix A11.–Water stage height at the Million Dollar Bridge, 2011.



Appendix A12.–Aerial escapement indices by statistical week and location for sockeye salmon returning to the Copper River Delta, 2011.

System [a]	Weekly Escapement Indices (Statistical Week Ending Date Listed)[b]												Site[c]	System[d]	Anticipated, (by drainage)		
	6/12	6/19	6/26	7/3	7/10	7/17	7/24	7/31	8/14	9/4	9/11	10/9					
Eyak River																	
Eyak River	725	655	3,500	1,800	7,500	900	5,550	400	0	50	NS	0	3,550	29,615	9,972	to	23,571
West Shore Beaches	0	30	830	820	150	750	2,625	2,300	1,250	405	100	0	1,235				
East Shore Beaches	3,500	4,800	5,400	3,410	80	3,000	100	1,370	1,850	3,230	2,700	50	8,630				
Middle Arm Beaches [e]	200	600	3,300	3,600	500	2,500	1,500	2,916	6,200	4,500	2,600	1,000	7,800				
North Shore Beaches	0	15	4,500	2,000	1,000	1,500	12,000	250	400	100	0	0	4,500				
Hatchery Creek Delta	0	75	1,300	700	200	500	0	400	600	200	0	0	1,300				
Hatchery Creek	0	0	200	1,150	75	1,400	100	1,200	400	550	200	0	200				
Power Creek Delta	0	0	1,800	775	150	200	0	200	500	30	0	0	1,800				
Power Creek	0	0	600	1,920	2,000	3,700	2,600	2,100	150	400	200	0	600				
Ibeck Creek																	
Ibeck Creek	0	NS	20	0	NS	50	235	475	300	510	0	0	475	475			
Alaganik Slough																	
Alaganik Slough	10	0	1,700	3,300	2,100	4,320	3,275	350	0	52	0	0	350	5,860	8,359	to	19,758
McKinley Lake	0	NS	NS	NS	150	0	450	3,600	2,350	470	700	0	3,600				
Salmon Creek West Fork	0	0	20	0	0	50	250	1,750	1,200	1,100	1,500	0	1,750				
Salmon Creek East Fork	0	0	0	0	0	50	0	160	150	150	0	0	160				
26/27 Mile Creek																	
26/27 Mile Creek	15	0	275	870	0	200	500	410	820	750	150	0	870	870	2,182	to	5,157
39 Mile Creek																	
39 Mile Creek	5	NS	20	40	NS	165	150	320	NS	1,500	200	25	1,500	1,500	5,772	to	13,642
Goat Mountain																	
Goat Mountain Creek	0	NS	0	0	0	0	10	30	NS	50	0	0	50	50	549	to	1,298
Pleasant Creek																	
Pleasant Creek	150	200	5,150	7,600	4,800	2,440	1,350	980	100	0	0	0	7,600	7,600	1,075	to	2,542
Martin River																	
Martin River - Lower	25	50	875	150	80	800	10	15	10	0	0	0	800	800			
Ragged Point River	0	0	0	30	0	2,700	1,460	1,150	1,900	100	0	0	2,700	2,700			
Ragged Point Lake Outlet	0	0	0	0	0	0	20	50	50	200	50	0	0				
Ragged Point Lake	NS	NS	0	0	0	0	100	220	200	1,500	2,000	100	0				
Martin River - Upper [e]	76	410	500	1,650	600	1,500	550	350	50	50	0	0	1,500	1,500			
Martin Lake Outlet	15	10	0	200	20	0	0	150	0	0	0	0	200	9,650	17,598	to	41,596
Martin Lake	0	0	8,100	8,400	7,725	2,300	2,550	350	270	50	120	0	7,850				
Martin Lake Feeders	0	0	200	1,600	900	6,100	3,410	3,175	1,400	600	0	0	1,600				
Pothole River	NS	NS	NS	NS	25	360	210	120	50	100	0	0	100	550			
Pothole Lake	NS	NS	NS	NS	25	0	155	0	400	450	400	200	450				
Little Martin River	0	0	0	45	0	200	260	10	20	50	0	0	200	3,700			
Little Martin Lake	0	0	0	300	0	3,500	2,250	2,950	1,000	2,100	420	0	3,500				

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System [a]	Weekly Escapement Indices (Statistical Week Ending Date Listed)[b] 6/12	6/19	6/26	7/3	7/10	7/17	7/24	7/31	8/14	9/4	9/11	10/9	Site[c]	System[d]	Anticipated, (by drainage)		
Tokun																	
Tokun Springs	0	15	10	2	0	30	600	405	220	30	20	0	2	9,637	5,352	to	12,649
Tokun River	67	400	400	535	0	700	525	1,100	620	100	250	0	535				
Tokun Lake Outlet	2,300	1,500	2,000	1,500	0	200	0	200	150	100	0	0	1,500				
Tokun Lake	0	600	3,800	7,600	30	1,000	1,350	2,550	4,250	6,200	5,400	2,000	7,600				
Martin River Slough																	
Martin River Slough	30	20	2,000	1,800	300	550	640	1,600	880	60	0	0	2,000	2,000	4,141	to	9,787
Total	7,118	9,380	46,500	51,797	28,410	41,665	44,785	33,606	27,740	25,737	17,010	3,375	76,507	76,507			
Lower SEG	7,270	14,273	17,627	28,229	30,055	31,424	32,059	32,568	26,465	17,446	12,467	2,611					55,000
Average SEG, (avg. antic. esc.)	11,157	21,902	27,050	43,318	46,121	48,222	49,196	49,977	40,611	26,772	19,131	4,006					84,400
Upper SEG	17,184	33,736	41,665	66,722	71,040	74,276	75,775	76,979	62,553	41,236	29,467	6,170					130,000

[a] The system represents the majority of known sockeye salmon spawning locations within the Copper River Delta.

[b] The surveys provide information about the relative strength of escapement among years and within a year, time to spawning sites and relative escapement strength among sites. The indices are not intended to provide an actual estimate of escapement but have served that purpose in the absence of any other escapement estimating method.

[c] Where the survey site is a terminal spawning area, the peak count is used. However, if the site is a schooling area for migratory fish bound for sites further upstream, the count which minimizes possible duplicate of counts across dates is selected.

[d] The sum of the indices by site within a system.

[e] Site typically has a protracted run timing or two temporally segregated spawning populations at one location. Aerial counts from more than one day may be used in the escapement index if the surveyor indicates these counts represented different fish.

Appendix A13.–Copper River and Bering River area sockeye salmon escapement indices, 2001–2011.

Stream/Lake [a,b]	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	10-yr Average	2011
Eyak Lake	7,400	13,375	12,900	14,300	9,130	26,290	28,640	9,290	11,980	25,000	15,831	25,715
Hatchery Creek	950	1,700	0	500	290	2,700	980	560	680	870	923	1,500
Power Creek	2,450	1,600	850	1,500	566	2,320	1,030	220	260	1,853	1,265	2,400
Ibek Creek	1,500	0	475	2,300	500	620	142	41	100	10	569	475
McKinley Lake	2,080	4,200	3,200	4,500	360	4,306	3,740	3,510	3,520	2,980	3,240	3,950
Salmon Creek	9,650	4,900	1,800	7,400	7,260	4,660	2,630	820	500	1,370	4,099	1,910
26/27 Mile Creek	4,000	850	475	1,125	3,000	3,200	700	8	0	0	1,336	870
39 Mile Creek	9,000	10,000	7,800	2,600	2,900	2,700	2,710	2,950	160	620	4,144	1,500
Goat Mountain	5	70	0	700	1,250	1,450	363	100	30	140	411	50
Pleasant Creek	8,100	2,425	6,850	3,525	50	6,600	4,860	4,920	2,610	3,460	4,340	7,600
Martin River	200	700	3,425	2,275	800	1,570	9,270	6,440	2,610	2,992	3,028	2,300
Ragged Pt. River/Lake	2,900	3,375	4,750	1,975	500	3,050	3,870	3,430	610	1,010	2,547	2,700
Martin Lake	7,100	10,600	18,900	17,300	23,300	23,300	4,200	8,970	19,071	19,660	15,240	9,650
Pothole Lake	1,910	8,400	1,500	1,350	1,200	5,600	2,430	5,800	2,540	4,440	3,517	550
L. Martin Lake	825	2,540	2,175	1,610	1,500	600	450	1,060	421	680	1,186	3,700
Tokun Lake/River	5,695	6,500	3,600	3,775	1,800	4,280	16,920	18,321	22,680	15,480	9,905	9,637
Martin River Slough	7,300	4,500	4,450	2,650	4,000	5,650	5,350	900	1,520	2,270	3,859	2,000
Copper River Delta Total	71,065	75,735	73,150	69,385	58,406	98,896	88,285	67,340	69,292	82,835	75,439	76,507
Upper Copper River [c]	509,519	581,469	471,090	448,075	528,816	600,378	624,437	491,516	477,327	524,692	525,732	621,545
Copper River District Total	580,584	657,204	544,240	517,460	587,222	699,274	712,722	558,856	546,619	607,527	601,171	698,052
Bering River/Lake	7,750	19,540	32,075	22,550	19,890	9,310	8,550	17,545	11,250	3,280	15,174	15,060
Shepherd Creek	60	60	205	195	1,220	60	0	180	91	46	212	4,800
Stillwater Creek	320	350	375	500	0	140	450	111	190	81	252	175
Kushtaka Lake	293	265	185	15	230	61	40	100	90	140	142	530
Katalla River	400	4,500	17,000	1,875	9,550	5,100	12,130	260	1,850	820	5,349	7,965
Bering River Area Total	8,823	24,715	49,840	25,135	30,890	14,671	21,170	18,196	13,471	4,367	21,128	28,530
Copper/Bering River Total	589,407	681,919	594,080	542,595	618,112	713,945	733,892	577,052	560,090	611,894	622,299	726,582

[a] This table is based on peak aerial survey indices and sonar counts for the majority of known sockeye salmon spawning areas in the Copper and Bering River deltas. These indices are not intended to provide a true estimate of total escapement but rather a comparable index, based upon the best data available, across years.

[b] The stream/lake represents the combined survey sites corresponding to the "system" designations presented elsewhere in this report.

[c] Upriver escapement index from Miles Lake sonar counts minus Chinook salmon inriver abundance estimate, upriver harvests, and hatchery escapement and broodstock.

Appendix A14.–Aerial survey indices of sockeye salmon escapement to the upper Copper River drainage, 1997–2011.

Location	Yearly Survey Indices [a]															Anticipated
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Indices [b]
Mentasta Lake	–	6,100	715	1,200	13,000	5,400	4,800	6,000	7,090	7,790	8,507	3,379	3,320	2,870	27,000	3,277
Fish Creek–Mentasta	–	1,400	450	800	3,500	900	–	–	3,330	3,700	323	1,440	680	400	91	963
Bad Crossing 1 & 2	–	7,800	195	19	2,000	157	90	30	5,120	620	1,683	520	1,691	1,390	742	2,604
Suslota Lake	–	1,060	0	3,000	2,500	1,500	2,750	1,975	1,230	1,300	30	86	320	6	350	1,416
Tanada Lake	–	–	350	3,200	200	950	0	3,950	683	30	563	986	1,290	NS	800	3,849
Dickey Lake	–	350	11	0	1	0	0	10	55	185	71	37	20	3	59	115
Keg Creek	420	160	125	0	1	30	38	0	7	190	0	1	423	0	0	725
Swede Lake	–	770	270	135	500	150	325	225	7	2,570	731	343	109	320	137	531
Mahlo Creek	11,800	12,300	325	1,000	400	5,000	6,850	500	1,950	5,000	14,512	10,261	11,735	4,570	292	2,648
Mendeltna Creek	400	–	120	2,800	800	1,875	1,200	50	318	700	473	727	1,945	1,550	760	2,470
St. Anne Creek	4,800	4,100	1,300	1,100	300	3,500	3,750	970	1,692	6,560	11,970	14,000	8,123	2,420	1,751	4,888
Tonsina Lake	–	–	–	–	–	–	–	0	–	20	20	3	0	–	0	1,080
Long Lake	–	–	–	–	–	–	–	–	–	1,400	505	382	14	10	290	1,577
Tana River	–	–	–	–	–	–	250	–	–	1,392	312	434	19	100	40	1,345
Salmon Creek (Bremner)	–	–	0	500	1,500	1,400	300	–	217	790	750	3,500	530	340	276	825
Fish Lake	–	4,900	1,880	5,000	5,000	125	1,300	0	281	7,250	1,066	158	0	89	1,008	6,418
Mud Creek.– Summit Lake	–	700	820	140	450	2,800	3,900	40		1,800	2,705	11,410	0	2,759	211	7,445
Paxson Inlet–Mud Creek	–	15,200	5,700	2,200	7,000	4,800	2,800	2,200	363	2,470	9,317	4,665	2,720	2,301	1,520	6,560
Mud Creek and Lake	–	–	20	30	300	30	75	5	145	310	2	10	0	20	2	172
Paxson Lake Outlet	–	200	1,800	1,000	200	140	–	5	155	270	324	596	0	560	1,700	2,661
Totals	17,420	55,040	14,081	22,124	37,652	28,757	28,428	15,960	22,643	44,347	53,864	52,938	32,939	19,708	37,029	51,569

[a] Escapement numbers are based on peak aerial survey indices and weir counts from the majority of known spawning areas in the upper Copper River drainage. The indices are not intended to provide true estimates of escapement for these stocks, but rather a comparable index, based on the best data available, across years. Missing counts are generally a result of bad weather, high water or other factors that prevented surveys for a given year.

[b] Calculated using the 1983–1992 average.

Appendix A15.–Estimated age and sex composition of sockeye salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2011.

Strata Combined:	05/16 - 10/11	Brood Year and Age Class						
Sampling dates:	05/16 - 07/13	2007		2006		2005		
Sample size:	4,694	0.3	1.2	1.3	2.2	1.4	2.3	Total
Female	Percentage of sample	1.6	6.0	31.8	0.3	0.1	1.4	41.2
	Number in harvest	32,699	122,314	652,923	6,605	1,824	28,127	844,492
Male	Percentage of sample	2.2	8.1	40.6	0.5	0.1	1.3	52.7
	Number in harvest	44,601	165,359	833,571	9,752	1,305	26,772	1,081,360
Total	Percentage of sample	4.2	14.3	77.4	0.9	0.2	3.0	100.0
	Number in harvest	85,733	293,641	1,588,559	19,369	3,441	60,935	2,051,679
	Standard error	6,299	11,947	13,955	2,777	1,357	4,894	

Appendix A16.–Estimated age and sex composition of Chinook salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2011.

Strata Combined:	05/16 - 10/11	Brood Year and Age Class							
Sampling dates:	05/16 - 06/10	2007		2006		2005		2004	
Sample size:	1,760	1.2	2.1	1.3	2.2	1.4	2.3	2.4	Total
Female	Percentage of sample	7.1	0.0	35.2	0.2	3.1	0.2	0.0	45.9
	Number in harvest	1,322	0	6,520	40	571	41	0	8,493
Male	Percentage of sample	8.4	0.1	39.8	0.4	4.8	0.4	0.1	54.0
	Number in harvest	1,560	21	7,360	81	881	76	16	9,995
Total	Percentage of sample	15.6	0.1	75.1	0.7	7.9	0.6	0.1	100.0
	Number in harvest	2,882	21	13,885	121	1,457	117	16	18,499
	Standard error	183	15	214	38	129	40	11	

Appendix A17.–Estimated age and sex composition of coho salmon harvested in the Copper River District commercial common property drift gillnet fishery, 2011.

Strata Combined:	05/19 - 08/23	Brood Year and Age Class			
Sampling dates:	08/23 - 08/23	2008	2007	2006	
Sample size:	412	1.1	2.1	3.1	Total
Female	Percentage of sample	15.8	12.1	0.2	28.2
	Number in harvest	7,708	5,929	119	13,756
Male	Percentage of sample	39.1	30.1	0.2	69.4
	Number in harvest	19,092	14,704	119	33,915
Total	Percentage of sample	56.3	43.2	0.5	100.0
	Number in harvest	27,511	21,108	237	48,856
	Standard error	1,195	1,194	167	

Appendix A18.–Total estimated coho salmon run to the Copper River by end user or destination with previous 10-year average, 2001–2011.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	10-year Average	2011
Commercial harvest[a]	251,473	504,223	363,489	467,859	263,465	318,285	117,182	202,621	207,776	210,621	290,699	127,511
Commercial, homepack[a]	24	187	0	2	119	137	340	423	767	1,026	303	543
Commercial, donated[a]	5,141	0	0	0	0	0	0	154	0	0	530	0
Educational drift gillnet permit[a]	0	0	0	0	0	0	0	0	0	0	0	0
Subsistence (Cordova, drift gillnet)[b]	70	28	36	46	15	1	15	53	22	27	31	34
Federal Subsistence (PWS/Chugach Nat'l Forest, dip net, spear, rod and reel)[b]	0	0	0	0	141	100	68	119	185	68	68	581
Subsistence (Batzulnetas, fish wheel, dip net or spear)[b]	0	NA	NA	0	0	0	0	0	0	0	0	0
Subsistence (Glennallen Subdistrict, dip net or fish wheel)[c]	1,144	530	467	577	154	212	238	493	228	293	434	372
Federal Subsistence (Glennallen subdistrict, dip net or fish wheel)[d]	NA	81	152	152	187	28	57	229	55	81	114	223
Personal Use (Chitina Subdistrict, dip net)[c]	2,720	1,934	2,533	2,860	1,869	2,715	1,742	2,711	1,712	2,013	2,281	1,702
Federal Subsistence (Chitna subdistrict, dip net)[d]	0	0	70	18	0	20	41	100	11	30	29	10
Delta sport harvest[e]	12,052	6,525	14,166	14,512	9,727	5,477	6,749	7,706	14,384	15,752	10,705	14,283
Upriver sport harvest[e]	92	384	277	131	72	54	0	57	36	114	122	69
Upriver spawning escapement[f]	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown
Delta spawning escapement[g]	80,662	174,830	144,110	199,010	199,364	178,140	102,430	153,784	82,588	82,154	139,707	76,290
Total estimated coho salmon run size	353,378	688,722	525,300	685,167	475,113	505,169	228,862	368,450	307,764	312,179	445,010	221,618

[a] Numbers are from fish ticket data.

[b] Data are reported harvest from returned state and federal subsistence permits.

[c] Data are expanded harvest from returned state and federal subsistence permits.

[d] Data are reported harvest, 2002–2004, and expanded harvest, 2005–2011, from returned state and federal subsistence permits.

[e] Upper Copper River and Copper River Delta sport harvest data are from statewide sport fish harvest surveys.

[f] Numbers of upriver coho salmon spawners are unavailable.

[g] The Copper River Delta spawning index is calculated by doubling the final peak aerial survey index.

Appendix A19.–Aerial escapement indices by statistical week and location for the coho salmon run to the Copper River Delta, 2011.

		Weekly Escapement Indices (Statistical Week Ending Date Listed)[b]															
Drainage	System[a]	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25	10/2	10/9	10/16	10/23	Site[c]	System[d]	Anticipated (by drainage)
Eyak River	Eyak River			100			100	NS				90			90	5,160	6,916
	East Shore Beaches			10			30	50				150			150		
	West Shore Beaches			75			10	50				200			200		
	Middle Arm Beaches			20			200	2,300				200			200		
	North Shore Beaches			50			0	0				0			0		
	Hatchery Creek Delta			0			50	100				1,350			1,350		
	Hatchery Creek			10			50	100				650			650		
	Power Creek Delta			0			10	50				1,700			1,700		
	Power Creek			0			40	50				820			820		
Ibeck Creek	Ibeck Creek			190			2,370	7,750				14,200			14,200	14,200	6,227
Scott River	Scott Lake			0			20	100				50			50	350	
	Scott River			0			0	0				300			300		
	Elsner Lake [e]			0			15	150				30			30		
Alaganik Slough	Alaganik Slough			20			400	200				100			100	2,005	4,020
	18/20 Mile Creek			10			45	270				210			210		
	McKinley Lake			0			15	200				75			75		
	Salmon Creek West Fork			0			400	700				100			100		
	Salmon Creek East Fork			0			60	600				1,520			1,520		
26/27 Mile Creek	26/27 Mile Creek			0			110	430				1,150			1,150	1,150	829
39 Mile Creek	39 Mile Creek			NS			2,800	1,450				2,000			2,800	2,800	3,831
Goat Mountain Cr.	Goat Mountain Creek			NS			100	210				200			210	210	1,181
Pleasant Creek	Pleasant Creek			0			120	245				125			245	245	

-continued-

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Drainage	System[a]	Weekly Escapement Indices (Statistical Week Ending Date Listed)[b] 7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25	10/2	10/9	10/16	10/23	Site[c]	System[d]	Anticipated (by drainage)
Martin River	Martin River - Lower			0			40	250				50			50	50	
	Ragged Point River			200			35	470				500			500	1,100	849
	Ragged Point Lake Outlet			10			10	100				200			200		
	Ragged Point Lake			0			0	400				400			400		
	Martin River - Upper			0			2,210	2,200				2,050			2,050	2,050	6,522
	Martin Lake Outlet			0			100	50				50			50	450	1,936
	Martin Lake			0			400	30				175			175		
	Martin Lake Feeders			0			210	940				225			225		
	Pothole River			0			250	150				950			950	1,400	1,370
	Pothole Lake			0			50	50				450			450		
	Little Martin River			0			1,375	4,570				4,400			4,400	4,500	5,413
	Little Martin Lake			0			200	150				100			100		
	Tokun Springs			120			25	500				20			500	1,350	1,376
	Tokun River			100			175	200				100			200		
	Tokun Lake Outlet			0			50	50				0			50		
	Tokun Lake			0			50	600				500			600		
Martin River Slough	Martin River Slough			50			332	625				1,475			1,475	1,475	9,531
Copper River Aerial Survey Daily Total		0	0	965	0	0	12,457	26,340	0	0	0	36,865	0	0	38,525	38,495	
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 anticipated escapement)		135	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		181	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

[a] The system represents the majority of known coho salmon spawning locations in the Copper River Delta.

[b] The surveys provide information about the relative strength of escapement among years and within a year, time to spawning sites and relative escapement strength among sites. The indices are not intended to provide an actual estimate of escapement but have served that purpose in the absence of any other escapement estimating method.

[c] 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 index counts by site within the index systems.

[e] This stream is not included in the estimated delta wide escapement; it is a non-index stream.

Appendix A20.–Copper River Delta and Bering River coho salmon escapement indices, 2001–2011.

Stream/Lake [a,b]	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	10-yr Average	2011
Eyak Lake	7,800	17,425	10,050	12,700	2,812	1,940	5,810	17,030	950	13,360	8,988	640
Hatchery Creek	450	1,400	0	1,450	0	160	710	370	2,320	640	750	2,000
Power Creek	480	2,000	1,500	500	40	360	800	1,140	990	350	816	2,520
Ibeck Creek	14,000	23,900	26,000	32,000	34,900	36,300	13,200	10,265	9,963	3,381	20,391	14,200
Scott & Elsner River [c]	600	2,400	125	475	1,400	200	1,520	3,281	1,170	700	1,187	380
18/20 Mile	420	1,450	205	1,560	610	740	550	161	150	144	599	310
McKinley Lake	800	2,200	0	275	140	1,400	280	300	450	630	648	75
Salmon Creek	200	1,100	725	6,100	2,250	200	150	700	1,540	730	1,370	1,620
26/27 Mile	400	240	275	850	820	60	480	10	100	0	324	1,150
39 Mile	1,800	4,500	1,250	3,120	9,900	4,400	3,300	5,460	1,570	1,340	3,664	2,800
Goat Mountain	330	160	125	450	4,500	3,100	1,400	920	1,220	331	1,254	210
Pleasant Creek	210	0	2,000	3,950	3,790	7,030	500	2,800	680	1,700	2,266	245
Martin River	3,755	13,325	10,200	11,600	1,050	9,100	8,830	9,323	1,651	5,560	7,439	2,100
Ragged Point River/Lake	440	3,400	375	575	650	360	260	302	590	690	764	1,100
Martin Lake	311	1,850	6,300	4,475	24,100	2,900	4,775	2,770	1,360	3,511	5,235	450
Pothole Lake	390	3,400	4,000	500	140	120	870	3,661	2,750	2,000	1,783	1,400
Little Martin Lake	3,010	500	1,000	7,900	2,100	7,500	2,700	8,760	2,810	460	3,674	4,500
Tokun River/Lake	1,600	540	550	1,750	2,030	700	830	3,020	850	1,370	1,324	1,350
Martin River Slough	4,100	10,025	7,500	9,750	9,850	12,700	5,770	7,780	10,180	4,180	8,184	1,475
Copper River Delta Total	41,096	89,815	72,180	99,980	101,082	89,270	52,735	78,053	41,294	41,077	70,658	38,495
Katalla River	2,900	5,000	10,000	6,500	12,100	8,900	5,510	3,340	1,590	4,190	6,003	1,430
Bering River/Lake	21,040	15,375	13,750	10,125	15,040	13,052	4,910	8,491	6,320	9,820	11,792	5,520
Dick Creek	760	1,700	2,050	2,750	362	1,660	530	1,410	1,210	1,070	1,350	2,050
Shepherd Creek	300	675	700	1,125	100	60	130	370	10	1,090	456	20
Nichawak River	1,300	1,420	900	1,475	6,900	3,200	11,900	10,120	4,690	901	4,281	6,800
Gandil River	900	330	900	2,000	4,450	640	2,650	840	1,610	1,200	1,552	820
Controller Bay	2,807	9,700	4,175	6,210	5,590	5,680	7,332	4,251	6,330	3,040	5,512	2,250
Bering River Area Total	30,007	34,200	32,475	30,185	44,542	33,192	32,962	28,822	21,760	21,311	30,946	18,890
Copper/Bering Total	71,103	124,015	104,655	130,165	145,624	122,462	85,697	106,875	63,054	62,388	101,604	57,385

[a] This table is based on peak aerial survey index counts from the majority of known coho salmon spawning areas in the Copper and Bering river deltas. These indices are not intended to provide a true estimate of total escapement but a comparable index, based upon the best data available, across years.

[b] The stream/lake in this table represents combined survey sites corresponding to the "system" designations for the current year survey results presented elsewhere in this report.

[c] Not an index stream.

Appendix A21.–Total commercial salmon harvest by species in the Bering River district, 1974–2011.

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 [a]	0	0	108,872	0	0	108,872
1981	200	55,585	82,626	9,882	8,307	156,600
1982	254	129,667	144,752	47	333	275,053
1983	610	179,273	117,669	851	4,615	303,018
1984 [b]	330	91,784	214,632	309	20,408	327,463
1985 [b]	215	26,561	419,276	214	9,642	455,908
1986 [c]	128	19,038	115,809	15	243	135,233
1987 [c]	34	16,926	15,864	54	7	32,885
1988 [c]	19	7,152	86,539	23	181	93,914
1989 [c]	30	9,225	26,952	7	2	36,216
1990 [c]	14	8,332	42,952	2	1	51,301
1991 [c]	28	19,181	110,951	4	195	130,359
1992 [c]	21	19,721	125,616	4	1	145,363
1993 [c]	130	33,951	115,833	82	22	150,018
1994 [c]	121	27,926	259,003	34	63	287,147
1995 [c]	44	21,585	282,045	26	229	303,929
1996 [c]	111	37,712	93,763	0	30	131,616
1997 [c]	23	9,651	97	2	0	9,773
1998 [c]	70	8,439	12,284	5	2	20,800
1999 [c]	42	13,697	9,852	204	96	23,891
2000 [c]	5	1,279	56,329	0	0	57,613
2001 [c]	76	5,450	2,715	0	0	8,241
2002 [c]	14	235	108,522	0	0	108,771
2003 [c]	151	18,266	59,481	33	0	77,931
2004 [c]	87	13,165	95,595	2	21	108,870
2005 [c]	277	77,464	43,030	9,327	14	130,112
2006 [c]	238	36,867	56,713	54	39	93,911
2007 [c]	88	16,470	9,305	6	1	25,870
2008 [c]	42	1,175	40,380	8	1	65,601
2009 [c]	15	4,157	45,522	1	5	49,700
2010 [c]	0	51	80,560	2	0	80,613
10-Year Average	99	17,330	54,182	943	8	72,563
2011	1	6	19,956	8	0	19,971

[a] In 1980 fishing was prohibited before August 11.

[b] A new Kayak Island Subdistrict management plan that allowed earlier opening date (10 June) and set a closure of the subdistrict on 10 July or when a total of 93,000 sockeye salmon were harvested.

[c] The Alaska Board of Fisheries closed the Kayak Island Subdistrict due to interceptions of non-local stocks.

Appendix A22.–Aerial escapement indices by statistical week and location for sockeye salmon returning to the Bering River District, 2011.

Drainage	System[a]	Weekly Escapement Indices (Statistical Week Ending Date Listed)[b] 6/12	6/19	6/26	7/3	7/10	7/17	7/24	7/31	8/14	9/4	9/11	10/9	Site[c]	System[d]	Anticipated (by drainage)
Bering River	Bering River	3,200	6,000	2,700	400	0	300	225	0	75	0	0	0	300	15,060	21,903
	Bering Lake	100	500	6,100	7,000	1,206	2,750	915	2,500	1,050	500	0	0	2,750		
	Dick Creek	0	0	0	3,870	4,235	12,010	11,219	9,320	3,940	900	300	0	12,010		
	Shepherd Creek Lagoon	0	NS	500	600	0	0	3,300	0	0	0	NS	NS	3,300	4,800	4,375
	Shepherd Creek	0	NS	100	0	0	1,000	1,500	1,100	600	0	NS	NS	1,500		
	Carbon Creek	NS	NS	NS	0	0	50	0	100	50	50	NS	NS	0		
	Clear Creek	NS	NS	NS	0	0	0	0	175	130	20	NS	NS	175	175	1,197
	Kushtaka Lake	NS	NS	NS	0	0	0	0	10	185	130	NS	NS	130		
	Shockum Creek	NS	NS	NS	100	0	0	0	0	200	400	NS	NS	400	530	1,226
Katalla River	Katalla River[e]	0	0	20	400	60	1,700	7,965	4,000	900	350	50	0	7,965	7,965	
Bering River District Weekly Index		3,300	6,500	9,400	11,970	5,441	16,110	17,159	13,205	6,230	2,350	300	0	20,565	20,565	
Lower SEG		4,985	6,207	9,341	16,889	16,946	16,872	14,415	12,893	3,705	876	1,130	0			20,000
Average SEG, (average anticipated esc.)		6,221	7,746	11,656	21,075	21,145	21,054	17,988	16,089	4,623	1,093	1,410	0			28,701
Upper SEG		7,586	9,446	14,214	25,701	25,787	25,675	21,936	19,620	5,638	1,332	1,719	0			35,000

[a] The survey systems represent the majority of known sockeye salmon spawning locations in the Bering River drainage.

[b] 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 but have served that purpose in the absence of any other escapement estimating method. "NS" signifies that no survey was flown.

[c] 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 index count which minimizes duplicate counts across dates is selected.

[d] The sum of the index counts by site within a system.

[e] This stream is not included in the indexed escapement for the Bering River drainage, it is a non-index stream.

Appendix A23.–Bering River District commercial drift gillnet salmon harvest by period, 2011.

		Emergency order				Chinook		Sockeye		Coho		Pink		Chum	
Period	Date	Issued	Hours	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
01	07/25-07/26	2-F-E-049-11	36	0	0	0	0	0	0	0	0	0	0	0	0
02	07/28-07/29	2-F-E-054-11	36	0	0	0	0	0	0	0	0	0	0	0	0
03	08/01-08/02	2-F-E-056-11	36	0	0	0	0	0	0	0	0	0	0	0	0
04	08/04-8/05	2-F-E-063-11	36	0	0	0	0	0	0	0	0	0	0	0	0
05	08/08-08/09	2-F-E-064-11	36	0	0	0	0	0	0	0	0	0	0	0	0
06	08/11-08/12	2-F-E-069-11	36	0	0	0	0	0	0	0	0	0	0	0	0
07	08/15-08/16	2-F-E-072-11	24	0	0	0	0	0	0	0	0	0	0	0	0
08	08/22-08/23	2-F-E-075-11	24	2	3	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
09	08/29-08/30	2-F-E-095-11	24	22	39	1	24	4	26	3,709	29,390	7	20	0	0
10	09/05/09/06	2-F-E-099-11	24	1	1	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
11	09/08-09/09	2-F-E-101-11	24	15	33	0	0	0	0	5,867	46,484	1	3	0	0
12	09/12-09/13	2-F-E-105-11	24	22	38	0	0	0	0	8,312	62,746	0	0	0	0
13	09/15-09/16	2-F-E-106-11	24	7	7	0	0	0	0	1,534	13,224	0	0	0	0
14	09/19-09/20	2-F-E-106-11	24	0	0	0	0	0	0	0	0	0	0	0	0
15	09/22-09/23	2-F-E-114-11	24	0	0	0	0	0	0	0	0	0	0	0	0
16	09/26-09/27	2-F-E-114-11	24	0	0	0	0	0	0	0	0	0	0	0	0
17	09/29-09/30	2-F-E-114-11	24	0	0	0	0	0	0	0	0	0	0	0	0
18	10/03-10/04	2-F-E-117-11	24	0	0	0	0	0	0	0	0	0	0	0	0
19	10/06-10/07	2-F-E-117-11	24	0	0	0	0	0	0	0	0	0	0	0	0
20	10/10-10/11	2-F-E-117-11	24	0	0	0	0	0	0	0	0	0	0	0	0
Total			552	33	121	1	24	6	38	19,956	155,993	8	23	0	0
Average Weight							24.00		6.33		7.82		2.88		0.00

[a] Confidential data, less than 3 permit holders delivering.

Appendix A24.–Bering River District commercial drift gillnet salmon harvest by statistical week, 2011.

			Permits		Chinook		Sockeye		Coho		Pink		Chum	
Week	Dates	Hours	Fished	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
31	07/24 - 07/30	72	0	0	0	0	0	0	0	0	0	0	0	0
32	07/31 - 08/06	72	0	0	0	0	0	0	0	0	0	0	0	0
33	08/07 - 08/13	72	0	0	0	0	0	0	0	0	0	0	0	0
34	08/14- 08/20	24	0	0	0	0	0	0	0	0	0	0	0	0
35	08/21 - 08/27	24	2	3	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
36	08/28- 09/03	24	22	39	1	24	4	26	3,709	29,390	7	20	0	0
37	09/04 - 09/10	48	16	34	0	0	0	0	6,022	47,667	1	3	0	0
38	09/11 - 09/17	48	29	45	0	0	0	0	9,846	75,970	0	0	0	0
39	09/18 - 09/24	48	0	0	0	0	0	0	0	0	0	0	0	0
40	09/25 - 10/01	48	0	0	0	0	0	0	0	0	0	0	0	0
41	10/02 - 10/08	48	0	0	0	0	0	0	0	0	0	0	0	0
42	10/09 - 10/15	24	0	0	0	0	0	0	0	0	0	0	0	0
Total		552	33	121	1	24	6	38	19,956	155,993	8	23	0	0
Average Weights						24.00		6.33		7.82		2.88		NA

[a] Confidential data, less than 3 permit holders delivering.

Appendix A25.–Aerial escapement indices by statistical week and location for coho salmon returning to the Bering River District, 2011.

		Weekly Escapement Indices (Statistical Week Ending Date Listed)[b]															
Drainage	System[a]	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25	10/2	10/9	10/16	10/23	Site[c]	System[d]	Anticipated, (by drainage)
Bering River	Bering River[e]			495			440	1,470				0			1,470	7,570	7,720
	Bering Lake			0			165	4,050				2,200			4,050		
	Dick Creek			20			540	2,050				1,450			2,050		
	Shepherd Creek - Lagoon			0			0	NS				NS			0	20	
	Shepherd Creek			0			20	NS				NS			20		
	Carbon Creek [f]			0			0	NS				NS			0		
Katalla River	Katalla River			30			465	1,430				150			1,430	1,430	4,993
Lower Bering River	Gandil River			NS			100	820				400			820	7,620	2,910
	Nichawak River			NS			1,875	6,800				6,100			6,800		
Controller Bay	Campbell River			NS			0	50				50			50	2,250	7,378
	Edwardes River			NS			50	1,500				1,600			1,600		
	Okalee River			NS			50	670				600			600		
	Other Clear Streams [f]			NS			10	NS				NS			NS		
Bering River District Weekly Index		0	0	545	0	0	3,715	18,840				12,550			18,890	18,890	
Lower SEG		4	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)		7	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		11	1,102	1,236	6,431	10,158	22,165	22,345	17,691	12,797	10,659	13,089	2,645	4,294			33,000

[a] The survey system represent the majority of known coho salmon spawning locations in the Bering River drainage.

[b] 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 but have served that purpose in the absence of any other escapement estimating method. "NS" signifies that no survey was flown.

[c] 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 index count which minimizes duplicate counts across dates is selected.

[d] The sum of the index counts by site within a system

[e] Counts include coho salmon observed in the Don Miller Hill tributaries.

[f] This stream is not included in the indexed escapement delta wide, it is a non-index stream.

APPENDIX B

Appendix B1.–Anticipated daily and cumulative salmon escapement versus actual escapement through the Coghill River weir, 2011.

	Sockeye salmon						Pink salmon		
	Actual		Projected Lower [a]		Projected Upper [a]		Actual		
Date	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Comments
06/07	0	0	0	0	0	0	0	0	Weir is fish tight, no fish below yet
06/08	0	0	1	1	1	1	0	0	
06/09	7	7	0	1	0	1	0	0	
06/10	3	10	2	3	4	6	0	0	
06/11	34	44	7	10	14	20	0	0	
06/12	77	121	13	23	26	46	0	0	
06/13	144	265	28	51	55	101	0	0	
06/14	211	476	31	82	63	164	0	0	39 jacks
06/15	130	606	19	101	38	202	0	0	
06/16	232	838	62	163	124	326	0	0	7 Jacks (total 68)
06/17	254	1,092	85	248	170	495	0	0	
06/18	1,253	2,345	87	334	173	669	0	0	
06/19	314	2,659	115	450	231	899	0	0	
06/20	1,120	3,779	132	582	265	1,164	0	0	
06/21	807	4,586	217	799	435	1,598	0	0	
06/22	524	5,110	221	1,021	443	2,041	0	0	
06/23	82	5,192	189	1,210	379	2,420	0	0	Holding fish for first AWL sample (otoliths taken)
06/24	200	5,392	241	1,451	483	2,903	0	0	Holding fish for first AWL sample (otoliths taken)
06/25	2,228	7,620	365	1,816	729	3,632	0	0	Holding fish for first AWL sample (otoliths taken)
06/26	3,020	10,640	334	2,150	669	4,301	0	0	
06/27	878	11,518	409	2,559	817	5,118	0	0	Holding fish for 2nd AWL sample
06/28	199	11,717	523	3,082	1,046	6,165	3	3	6 jacks & 3 pinks -Holding fish for 2nd AWL sample
06/29	2,246	13,963	466	3,549	933	7,098	0	3	Holding fish for 2nd AWL sample
06/30	8,474	22,437	705	4,254	1,410	8,508	0	3	
07/01	3,502	25,939	825	5,079	1,649	10,157	0	3	Surveyed river to mouth - no large schools visible.
07/02	3,132	29,071	585	5,664	1,170	11,327	0	3	19 jacks (total= 701)
07/03	1,231	30,302	676	6,340	1,352	12,679	3	6	3 pink
07/04	2,492	32,794	1,462	7,802	2,924	15,604	57	63	57 Pink
07/05	6,821	39,615	1,021	8,823	2,041	17,645	21	84	103 jacks
07/06	4,214	43,829	540	9,363	1,081	18,726	16	100	20 jacks
07/07	5,110	48,939	505	9,868	1,011	19,737	7	107	43 jacks
07/08	3,211	52,150	598	10,466	1,196	20,933	55	162	37 jacks
07/09	7,744	59,894	642	11,108	1,283	22,216	508	670	

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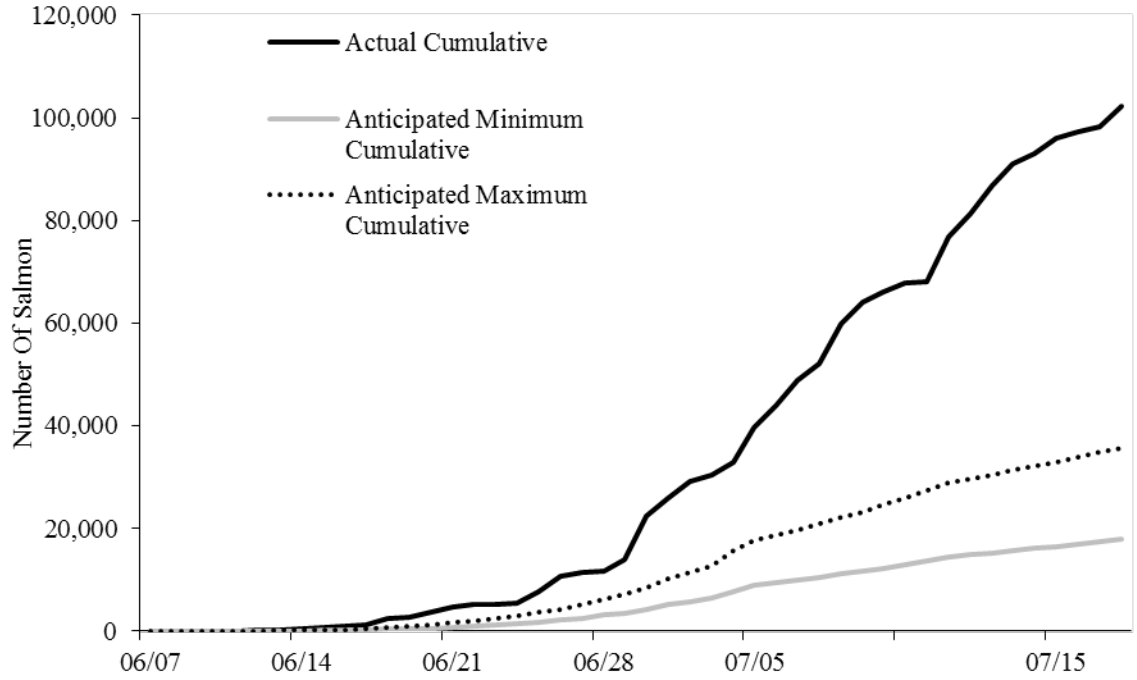
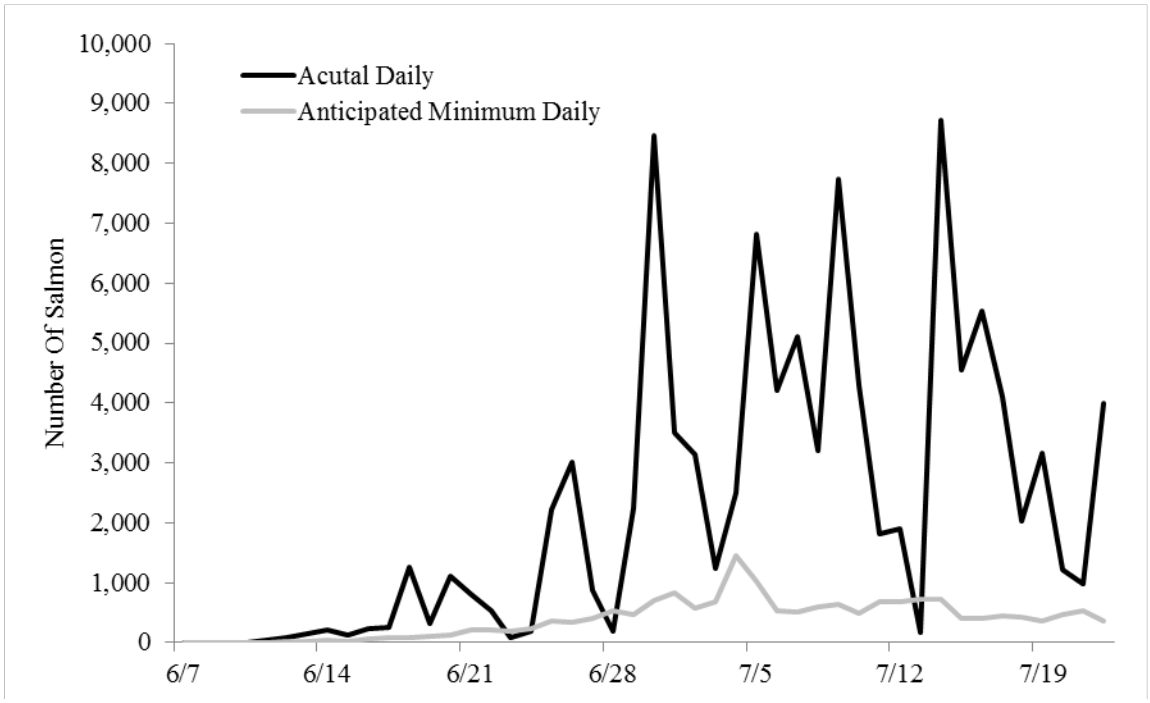
	Sockeye salmon						Pink salmon		
	Actual		Projected Lower [a]		Projected Upper [a]		Actual		
Date	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Comments
07/10	4,293	64,187	482	11,590	964	23,179	365	1,035	43 jacks
07/11	1,813	66,000	691	12,281	1,382	24,561	320	1,355	Holding fish for 4th AWL sample
07/12	1,902	67,902	675	12,956	1,350	25,911	1,639	2,994	Holding fish for 4th AWL sample, 33 jacks & 1 chum
07/13	175	68,077	733	13,689	1,466	27,377	61	3,055	
07/14	8,722	76,799	718	14,407	1,436	28,813	4,481	7,536	
07/15	4,555	81,354	407	14,814	814	29,628	1,579	9,115	42 jacks
07/16	5,527	86,881	412	15,226	824	30,451	3,700	12,815	
07/17	4,095	90,976	452	15,678	904	31,355	2,864	15,679	27 jacks, 2 chum
07/18	2,026	93,002	435	16,112	869	32,224	2,172	17,851	20 jacks, 5 chum
07/19	3,156	96,158	358	16,470	716	32,940	2,599	20,450	27 chum
07/20	1,218	97,376	471	16,941	941	33,881	3,372	23,822	49 chum
07/21	983	98,359	542	17,482	1,083	34,965	7,250	31,072	9 jacks, 77 chum
07/22	4,000	102,359 [b]	363	17,845	726	35,691	-	31,072	Weir pulled.

[a] The projected lower and upper daily escapements are calculated using the lower bound (20,000) and upper bound (40,000) of the sustainable escapement goal apportioned to day with the historical run timing proportions.

[b] An estimated 4,000 sockeye salmon were viewed below the weir on July 22.

Appendix B2.–Anticipated cumulative and daily sockeye salmon escapement versus actual escapement through the Coghill weir, 2011.





Appendix B3.–Salmon escapement by species in the Coghill District, 1971–2011.

Year	Sockeye[a]	Pink[b]	Chum[b]
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	53,908	31,398
1977	31,562	320,680	79,957
1978	42,284	67,084	15,966
1979	48,281	125,544	7,823
1980	142,253	148,066	20,919
1981	156,112	140,436	2,389
1982	180,314	309,202	21,586
1983	38,783	284,164	55,127
1984	63,622	365,226	13,500
1985	163,311	238,728	14,514
1986	71,095	109,798	16,300
1987	187,263	67,761	22,472
1988	72,052	42,985	42,536
1989	37,751	48,802	22,434
1990	8,949	45,558	20,494
1991	9,752	84,790	7,055
1992	29,642	23,122	7,583
1993	9,232	41,666	7,404
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
2006	23,479	145,511	15,900
2007	70,001	197,405	14,052
2008	29,298	145,177	39,660
2009	23,186	125,907	5,208
2010	24,312	355,108	51,589
10-Year Average	37,347	211,278	18,393
2011	102,359	257,020	16,368

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

[b] Pink and chum salmon escapements indexed for streams by aerial survey. Historical data revised in 1990.

Appendix B4.–Coghill District commercial property drift gillnet salmon harvest by period, 2011.

Period		Dates	Emergency Order Issued	Permits Hours	Fished	Landings	Chinook Number	Chinook Pounds	Sockeye Number	Sockeye Pounds	Coho Number	Coho Pounds	Pink Number	Pink Pounds	Chum Number	Chum Pounds
1	a	5/23-5/25	2-F-E-006-11	60	42	156	11	123	23	153	0	0	0	0	45,227	349,390
2	b	5/26-5/27	2-F-E-007-11	36	34	97	5	85	7	49	0	0	0	0	24,363	193,837
3	b	5/29-5/31	2-F-E-008-11	60	117	432	21	375	656	4,504	0	0	0	0	80,317	594,348
4	b	6/2-6/4	2-F-E-011-11	60	167	699	26	457	1,050	6,777	0	0	0	0	138,073	1,011,183
5	b	6/6-6/7	2-F-E-013-11	36	212	641	23	216	1,380	8,778	0	0	0	0	103,393	767,081
6	c	6/9-6/11	2-F-E-017-11	60	298	1,179	9	130	3,579	23,200	0	0	0	0	182,646	1,369,744
7	d	6/13-6/14	2-F-E-020-11	36	231	564	6	81	4,600	29,883	1	10	1	2	75,793	567,112
8	e	6/16-6/18	2-F-E-023-11	60	211	834	22	345	16,751	108,377	1	8	0	0	143,232	1,060,323
9	e	6/20-6/21	2-F-E-025-11	36	189	518	9	146	20,670	130,709	2	16	0	0	92,005	681,103
10	f	6/23-6/25	2-F-E-027-11	60	150	542	10	136	48,042	298,321	2	12	4	17	59,237	430,136
11	g	6/27-6/28	2-F-E-029-11	60	110	334	8	163	31,267	189,249	8	67	34	129	42,645	301,061
12	h	6/30-7/3	2-F-E-031-11	84	69	193	0	0	17,862	111,708	297	2,526	791	3,443	23,551	170,769
13	g	7/4-7/6	2-F-E-035-11	60	64	162	3	71	14,387	85,330	127	815	1,088	4,070	36,953	253,766
14	h	7/7-7/10	2-F-E-037-11	84	70	155	44	817	16,294	101,738	954	6,589	5,460	19,639	18,950	129,193
15	g	7/11-7/13	2-F-E-038-11	60	27	65	3	66	6,398	38,500	979	6,899	4,521	15,962	5,340	38,986
16	i	7/14-7/17	2-F-E-043-11	84	44	93	9	89	5,761	34,278	1,700	11,701	7,171	25,163	5,641	37,946
17	j	7/18-7/20	2-F-E-048-11	60	66	156	6	105	7,645	45,961	2,043	14,183	16,009	53,970	14,625	104,425
18	k	7/21	2-F-E-051-11	14	0	0	0	0	0	0	0	0	0	0	0	0
19	k	7/25	2-F-E-052-11	14	1	1	0	0	4	25	7	40	66	198	6	40
20	k	7/29	2-F-E-053-11	14	1	1	0	0	7	48	5	38	26	92	5	38
21	k	8/1	2-F-E-065-11	14	0	0	0	0	0	0	0	0	0	0	0	0
22	k	8/4	2-F-E-066-11	14	0	0	0	0	0	0	0	0	0	0	0	0
23	k	8/8	2-F-E-067-11	14	10	11	0	0	21	127	116	936	579	1,740	117	853
24	l	8/11	2-F-E-070-11	14	89	160	1	5	303	1,867	529	3,825	77,102	229,674	187	1,270
25	m	8/13	2-F-E-071-11	14	116	203	1	8	414	2,488	627	4,121	135,556	413,742	214	1,425
26	n	8/15	2-F-E-073-11	14	104	182	0	0	298	1,746	675	4,587	121,302	364,576	101	670
27	o	8/17	2-F-E-074-11	14	102	161	0	0	382	2,239	1,089	7,082	92,917	285,695	115	783
28	o	8/19	2-F-E-076-11	14	45	65	3	22	139	839	576	3,686	34,086	92,634	29	197
29	n	8/21	2-F-E-077-11	14	36	61	0	0	68	426	978	6,201	49,435	139,704	25	177
30	o	8/23	2-F-E-086-11	14	50	68	0	0	75	448	1,219	7,849	26,389	82,772	43	301
31	m	8/25	2-F-E-087-11	12	49	60	0	0	40	245	2,025	13,218	24,029	82,836	12	89
32	o	8/26	2-F-E-087-11	12	52	60	0	0	59	368	2,266	13,334	20,205	57,993	25	185
33	m	8/27	2-F-E-087-11	12	33	35	0	0	16	93	913	5,704	9,298	26,700	13	80

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Period		Date	Emergency Order Issued	Permits Hours	Fished	Landings	Chinook Number	Chinook Pounds	Sockeye Number	Sockeye Pounds	Coho Number	Coho Pounds	Pink Number	Pink Pounds	Chum Number	Chum Pounds
34	m	8/28	2-F-E-093-11	12	26	31	0	0	42	253	1,689	10,060	12,208	38,751	25	134
35	o	8/29	2-F-E-093-11	12	35	51	0	0	22	128	2,656	15,623	16,818	59,187	2	13
36	m	8/30	2-F-E-093-11	12	46	59	0	0	12	76	1,968	11,375	13,111	44,427	3	17
37	m	8/31	2-F-E-093-11	12	39	44	0	0	54	287	2,930	16,228	8,806	26,644	1	6
38	n	9/1	2-F-E-094-11	12	54	77	0	0	12	65	5,202	28,813	20,719	64,923	1	7
39	o	9/2	2-F-E-094-11	12	40	42	0	0	12	72	3,076	20,485	8,909	33,185	0	0
40	o	9/3	2-F-E-094-11	12	41	44	0	0	3	16	3,229	21,009	5,243	19,785	0	0
41	o	9/4	2-F-E-100-11	12	28	30	0	0	3	21	2,458	15,488	3,174	11,555	1	11
42	n	9/5	2-F-E-100-11	12	29	33	0	0	2	14	3,214	20,560	4,081	14,276	0	0
43	n	9/6	2-F-E-100-11	12	23	23	0	0	9	43	3,109	21,677	1,313	4,718	0	0
44	n	9/7	2-F-E-100-11	12	23	23	0	0	0	0	2,733	18,160	622	1,651	0	0
45	n	9/8	2-F-E-102-11	12	42	50	0	0	4	25	3,699	23,861	481	1,920	1	7
46	n	9/9	2-F-E-102-11	12	38	38	0	0	1	7	2,418	16,090	488	1,806	0	0
47	p	9/10-9/14	2-F-E-103-11	108	36	91	0	0	2	13	7687	52972	206	718	0	0
48	p	9/15-9/20	2-F-E-104-11	132	18	74	0	0	0	0	13962	97873	0	0	0	0
49	n	9/21-9/25	2-F-E-113-11	108	14	21	0	0	0	0	2250	11186	0	0	0	0
50	n	9/26-10/2	2-F-E-113-11	156	0	0	0	0	0	0	0	0	0	0	0	0
Total				1,874	357	8,619	220	3,440	198,376	1,229,494	79,419	514,907	722,248	2,224,297	1,092,917	8,066,706
Average Weights								15.64		6.20		6.48		3.08		7.38

[a] Waters of the Coghill District excluding the WNH SHA and THA, the Esther Subdistrict, and Port Wells north of Esther Island Passage were open.

[b] Waters of the Coghill District excluding the WNH SHA and THA and the Esther Subdistrict were open.

[c] Waters of the Coghill District excluding the WNH SHA and THA and the Esther Subdistrict were open for 60 hours. During this period, the Esther Subdistrict excluding the WNH SHA and THA was open for 12 hours.

[d] Waters of the Coghill District excluding the WNH SHA and THA and the Esther Subdistrict were open. During this period, the Esther Subdistrict excluding the WNH SHA and THA was open for 24 hours.

[e] Waters of the Coghill District excluding waters west of a line from Point Pigot to Point Pakenham, the WNH SHA and THA, and the Esther Subdistrict were open. The Esther Subdistrict excluding the WNH SHA and THA was open for 12 hours.

[f] Waters of the Coghill District excluding waters west of a line from Point Pigot to Point Pakenham, the WNH SHA and THA, and the Esther Subdistrict were open.

[g] The Coghill District excluding waters west of a line from Point Pigot to Point Pakenham, the WNH SHA and THA, and the Esther Subdistrict was open for 36 hours. Waters of Port Wells north of Esther Passage excluding west of Point Pigot to Point Pakenham were open an additional 24 hours.

[h] The Coghill District excluding waters west of a line from Point Pigot to Point Pakenham, the WNH SHA and THA, and the Esther Subdistrict was open for 48 hours. Waters of Port Wells north of Esther Passage excluding waters west of a line from Point Pigot to Point Pakenham were open an additional 36 hours.

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[i] The Coghill District excluding waters west of a line from Point Pigot to Point Pakenham, the WNH SHA and THA, and the Esther Subdistrict was open for 36 hours. Waters of Port Wells north of Esther Passage excluding waters west of a line from Point Pigot to Point Pakenham were open an additional 48 hours.

[j] The Coghill District excluding waters west of a line from Point Pigot to Point Pakenham, the WNH SHA and THA, and the Esther Subdistrict was open for 36 hours. Waters of Port Wells north of Esther Passage excluding waters west of a line from Point Pigot to Point Pakenham, and the WNH THA and SHA south of 60° 47.82' N. latitude, were open an additional 24 hours.

[k] Waters of the Coghill District north of a latitude line at Point Pakenham were open.

[l] Waters of the Coghill District north of a latitude line at Point Pakenham excluding waters inside of the SHTF markers were open.

[m] Waters of the Esther Subdistrict including the WNH THA and excluding WNH SHA were open.

[n] Waters of the Coghill District excluding waters west of a line from Point Pigot to Point Pakenham and the WNH SHA inside a line of buoys in front of the barrier seine were open.

[o] Waters of the Coghill District excluding waters west of a line from Point Pigot to Point Pakenham and the WNH SHA were open.

[p] Waters of the Coghill District excluding west of Point Pigot to Point Pakenham and the Esther Subdistrict and the WNH SHA north of 60° 47.82' N. latitude were open.

Appendix B5.–Coghill District commercial common property purse seine salmon harvest by period, 2011.

Period	Date	Emergency Order Issued	Hours	Permits Fished	Landings	Chinook Number	Chinook Pounds	Sockeye Number	Sockeye Pounds	Coho Number	Coho Pounds	Pink Number	Pink Pounds	Chum Number	Chum Pounds
18 [a]	7/21	2-F-E-051-11	14	2	2	0	0	282	1,957	5	37	6,958	21,041	43	301
19 [a]	7/25	2-F-E-052-11	14	1	1	1	21	0	0	0	0	48	146	2	11
20 [a]	7/28	2-F-E-053-11	14	0	0	0	0	0	0	0	0	0	0	0	0
21 [a]	8/1	2-F-E-065-11	14	0	0	0	0	0	0	0	0	0	0	0	0
22 [a]	8/4	2-F-E-066-11	14	2	2	0	0	94	417	7	56	20,921	62,763	60	420
23 [a]	8/8	2-F-E-067-11	14	0	0	0	0	0	0	0	0	0	0	0	0
24 [b]	8/11	2-F-E-070-11	14	0	0	0	0	0	0	0	0	0	0	0	0
25 [c]	8/13	2-F-E-071-11	14	31	39	0	0	54	373	1	8	327,440	961,885	4	29
26 [d]	8/15	2-F-E-073-11	14	34	38	1	8	116	728	92	538	311,510	931,231	22	166
27 [e]	8/16	2-F-E-074-11	14	17	20	0	0	26	162	55	372	116,726	359,006	0	0
28 [e]	8/19	2-F-E-076-11	14	33	36	2	12	198	1,415	325	2,077	160,067	495,511	16	123
29 [d]	8/21	2-F-E-077-11	14	37	51	0	0	40	309	1,178	7,126	348,281	1070,492	13	82
30 [e]	8/23	2-F-E-086-11	14	28	31	0	0	18	119	759	4,715	89,187	257,338	6	48
31 [c]	8/25	2-F-E-087-11	12	20	23	0	0	13	67	2,348	12,874	57,863	177,087	0	0
32 [e]	8/26	2-F-E-087-11	12	22	25	0	0	0	0	1,706	10,208	45,272	144,611	0	0
33 [c]	8/27	2-F-E-087-11	12	17	18	0	0	0	0	1,031	5,707	19,485	64,730	0	0
34 [c]	8/28	2-F-E-093-11	12	15	19	0	0	0	0	2,220	12,548	53,783	171,195	0	0
35 [e]	8/29	2-F-E-093-11	12	12	17	0	0	2	14	2,330	13,587	46,168	152,003	0	0
36 [c]	8/30	2-F-E-093-11	12	12	16	0	0	0	0	645	3,644	24,929	78,991	0	0
37 [c]	8/31	2-F-E-093-11	12	0	0	0	0	0	0	0	0	0	0	0	0
38 [d]	9/1	2-F-E-094-11	12	11	13	0	0	0	0	3,119	16,274	39,868	119,836	0	0
39 [e]	9/2	2-F-E-094-11	12	0	0	0	0	0	0	0	0	0	0	0	0
40 [e]	9/3	2-F-E-094-11	12	2	2	0	0	0	0	332	2,001	4,893	17,767	0	0
41 [e]	9/4	2-F-E-100-11	12	2	2	0	0	0	0	412	2,568	1,337	5,391	0	0
42 [d]	9/5	2-F-E-100-11	12	0	0	0	0	0	0	0	0	0	0	0	0

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Period	Date	Emergency Order Issued	Hours	Permits Fished	Permits Landings	Chinook Number	Chinook Pounds	Sockeye Number	Sockeye Pounds	Coho Number	Coho Pounds	Pink Number	Pink Pounds	Chum Number	Chum Pounds
43 [d]	9/6	2-F-E-100-11	12	0	0	0	0	0	0	0	0	0	0	0	0
44 [d]	9/7	2-F-E-100-11	12	0	0	0	0	0	0	0	0	0	0	0	0
45 [d]	9/8	2-F-E-102-11	12	0	0	0	0	0	0	0	0	0	0	0	0
46 [d]	9/9	2-F-E-102-11	12	0	0	0	0	0	0	0	0	0	0	0	0
47 [f]	9/10-9/14	2-F-E-103-11	108	0	0	0	0	0	0	0	0	0	0	0	0
48 [f]	9/15-9/20	2-F-E-104-11	132	0	0	0	0	0	0	0	0	0	0	0	0
49 [d]	9/21-9/25	2-F-E-113-11	108	0	0	0	0	0	0	0	0	0	0	0	0
50 [d]	9/26-10/2	2-F-E-113-11	156	0	0	0	0	0	0	0	0	0	0	0	0
Total			314	72	355	4	41	843	5,561	16,565	94,340	1,673,399	5,085,633	166	1,180
Average Weights							10.25		6.60		5.70		3.04		7.11

[a] Waters of the Coghill District north of a latitude line at Point Pakenham were open.

[b] Waters of the Coghill District north of a latitude line at Point Pakenham excluding waters inside of the SHTF markers were open.

[c] Waters of the Esther Subdistrict including the WNH THA and excluding WNH SHA were open.

[d] Waters of the Coghill District excluding waters west of a line from Point Pigot to Point Pakenham and the WNH SHA inside a line of buoys in front of the barrier seine were open.

[e] Waters of the Coghill District excluding waters west of a line from Point Pigot to Point Pakenham and the WNH SHA were open.

[f] Waters of the Coghill District excluding west of Point Pigot to Point Pakenham and the Esther Subdistrict and the WNH SHA north of 60° 47.82’ N latitude were open.

Appendix B6.–Coghill District commercial common property drift gillnet salmon harvest by statistical week, 2011.

			Permits		Chinook		Sockeye		Coho		Pink		Chum	
Week	Dates	Hours	Fished	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
22	05/22 - 05/28	96	44	253	16	208	30	202	0	0	0	0	69,590	543,227
23	05/29 - 06/04	120	182	1,131	47	832	1,706	11,281	0	0	0	0	218,390	1,605,531
24	06/05 - 06/11	96	302	1,820	32	346	4,959	31,978	0	0	0	0	286,039	2,136,825
25	06/12 - 06/18	96	272	1,398	28	426	21,351	138,260	2	18	1	2	219,025	1,627,435
26	06/19 - 06/25	96	219	1,060	19	282	68,712	429,030	4	28	4	17	151,242	1,111,239
27	06/26 - 07/02	124	122	513	8	163	47,693	291,982	305	2,593	792	3,466	64,891	462,711
28	07/03 - 07/09	144	83	313	41	854	30,805	188,124	971	6,671	5,381	19,534	56,086	384,237
29	07/10 - 07/16	144	58	173	18	189	13,311	79,737	2,703	18,733	12,615	44,435	12,010	84,114
30	07/17 - 07/23	94	67	159	6	105	7,805	46,921	2,129	14,783	16,286	54,941	14,718	105,084
31	07/24 - 07/30	28	2	2	0	0	11	73	12	78	92	290	11	78
32	07/31-08/06	28	0	0	0	0	0	0	0	0	0	0	0	0
33	08/07 - 08/13	42	125	374	2	13	738	4,482	1,272	8,882	213,237	645,156	518	3,548
34	08/14 - 08/20	42	125	408	3	22	819	4,824	2,340	15,355	248,305	742,905	245	1,650
35	08/21 - 08/27	64	76	284	0	0	258	1,580	7,401	46,306	129,356	390,005	118	832
36	08/28 - 09/03	84	80	348	0	0	157	897	20,750	123,593	85,814	286,902	32	177
37	09/04 - 09/10	88	66	219	0	0	20	117	18,558	121,979	10,310	36,427	2	18
38	09/11 - 09/17	156	25	110	0	0	1	6	15,470	107,870	55	217	0	0
39	09/18 - 09/24	156	16	54	0	0	0	0	7,502	48,018	0	0	0	0
40	09/25 - 10/01	156	0	0	0	0	0	0	0	0	0	0	0	0
41	10/02 - 10/08	20	0	0	0	0	0	0	0	0	0	0	0	0
Total		1,874	428	8,619	220	3,440	198,376	1,229,494	79,419	514,907	722,248	2,224,297	1,092,917	8,066,706
Average Weights						15.64		6.20		6.48		3.08		7.38

Appendix B7.–Coghill District commercial common property purse seine salmon harvest by statistical week, 2011.

			Permits		Chinook		Sockeye		Coho		Pink		Chum	
Week	Dates	Hours	Fished	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
30	07/17 - 07/23	94	2	2	0	0	282	1,957	5	37	6,958	21,041	43	301
31	07/24 - 07/30	28	1	1	1	21	0	0	0	0	48	146	2	11
32	07/31-08/06	28	2	2	0	0	94	417	7	56	20,921	62,763	60	420
33	08/07 - 08/13	42	31	39	0	0	54	373	1	8	327,440	961,885	4	29
34	08/14 - 08/20	42	49	94	3	20	340	2,305	472	2,987	588,303	1,785,748	38	289
35	08/21 - 08/27	64	43	148	0	0	71	495	7,022	40,630	560,088	1,714,258	19	130
36	08/28 - 09/03	84	20	67	0	0	2	14	8,646	48,054	169,641	539,792	0	0
37	09/04 - 09/10	88	2	2	0	0	0	0	412	2,568	1,337	5,391	0	0
38	09/11 - 09/17	156	0	0	0	0	0	0	0	0	0	0	0	0
39	09/18 - 09/24	156	0	0	0	0	0	0	0	0	0	0	0	0
40	09/25 - 10/01	156	0	0	0	0	0	0	0	0	0	0	0	0
41	10/02 - 10/08	20	0	0	0	0	0	0	0	0	0	0	0	0
Total		470	72	355	4	41	843	5,561	16,565	94,340	1,674,736	5,091,024	166	1,180
Average Weights						0		6.60		5.70		3.04		7.11

Appendix B8.–Commercial common property harvest by species in the Coghill District, 1984–2011.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
	Drift Gillnet					
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
2006	71	96,435	97,002	24,659	266,233	484,400
2007	89	173,430	60,982	65,407	858,179	1,158,087
2008	103	177,974	80,527	854,465	2,308,231	3,421,300
2009	174	103,415	19,168	276,925	1,323,728	1,723,410
2010	206	87,465	5,498	3,333,106	2,512,005	5,938,280
10-Year Average	135	130,147	37,129	185,914	1,077,958	1,431,284
2011	220	198,376	79,419	722,248	1,092,917	2,093,180

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Year	Chinook	Sockeye	Coho	Pink	Chum	Total
	Purse 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
2006	9	5,944	16,995	1,348,377	297,576	1,668,901
2007	9	12,472	24,602	2,334,590	318,626	2,690,299
2008	14	551	36,831	6,585,095	9,358	6,631,849
2009	3	1,337	1,758	1,028,789	12,926	1,044,813
2010	0	16,431	11,738	3,119,798	285,108	3,433,075
10-Year Average	7	17,925	9,488	3,102,963	316,638	3,447,021
2011	4	843	16,565	1,674,736	166	1,692,314

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Year	Chinook	Sockeye	Coho	Pink	Chum	Total
	Combined Purse Seine and Drift Gillnet					
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
2006	80	102,379	113,997	1,373,036	563,809	2,153,301
2007	98	185,902	85,584	2,399,997	1,176,804	3,848,385
2008	117	178,525	117,358	7,439,560	2,317,589	10,053,149
2009	177	104,752	20,926	1,305,714	1,336,654	2,768,223
2010	206	88,244	5,932	14,252,561	2,515,212	16,862,155
10-Year Average	148	142,090	42,548	4,385,246	1,506,657	6,076,690
2011	224	199,219	95,984	2,396,984	1,093,083	3,785,494

Appendix B9.–Estimated age and sex composition of sockeye salmon harvested in the Coghill District commercial common property drift gillnet and purse seine fisheries, 2011.

Stratum dates:	05/23 - 10/09	Brood Year and Age Class [a]					
Sampling date:	06/25 - 07/06	2007		2006		2005	
Sample size: [b]	765	1.2	2.1	1.3	2.2	2.3	Total [c]
Female	Percentage of sample	27.2	0.4	12.0	0.1	1	41.0
	Number in harvest	54,212	806	23,968	240	2,461	81,687
Male	Percentage of sample	42.7	0.1	14.6	0.2	1	58.9
	Number in harvest	85,112	240	29,094	480	2,332	117,259
Total	Percentage of sample	70.1	0.5	26.6	0.4	2	100.0
	Number in harvest	139,565	1,046	53,062	720	4,794	199,186
	Standard error	3,308	524	3,197	415	1,120	

[a] Fish with resorbed scales have been removed (n = 61).

[b] All samples taken from the drift gillnet fishery.

[c] Total includes 843 fish harvested in the purse seine fishery.

Appendix B10.–Estimated age and sex composition of the sockeye salmon escapement through the weir on the outlet stream of Coghill Lake, 2011.

Strata Combined:	06/09 - 07/21		Brood Year and Age Class [a]						
Sampling dates:	06/23 - 07/14	2008	2007		2006		2005	
Sample size:	1,711	1.1	1.2	2.1	1.3	2.2	2.3	Total
Female	Percentage of sample	0.0	11.4	0.0	11.8	0.4	2.3	25.9
	Number in escapement	0	11,699	0	12,094	366	2,309	26,469
Male	Percentage of sample	0.0	61.2	0.7	9.8	0.2	2.2	74.1
	Number in escapement	40	62,693	716	10,026	186	2,228	75,890
Total	Percentage of sample	0.0	72.7	0.7	21.6	0.5	4.4	100.0
	Number in escapement	40	74,392	716	22,121	552	4,538	102,359
	Standard error	40	1,215	249	1,108	213	588	

[a] Fish with resorbed scales have been removed; Strata 1 had 20, 2 - 38, 3 - 42, 4 -65.

Appendix B11.–Commercial common property salmon harvest by period in the Unakwik District drift gillnet and purse seine fisheries, 2011.

Period	Date [a]	Emergency Orders Issued	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
						Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Drift Gillnet															
01	6/13-6/14	2-F-E-022-11	36	1	1	0	0	154	1,001	0	0	0	0	5	39
02	6/16-6/17	2-F-E-023-11	36	2	2	0	0	391	2,601	0	0	0	0	7	52
03	6/20-6/21	2-F-E-025-11	36	0	0	0	0	0	0	0	0	0	0	0	0
04	6/23-6/24	2-F-E-027-11	36	2	2	0	0	845	5,073	0	0	1	4	18	126
05	6/27-6/28	2-F-E-029-11	36	0	0	0	0	0	0	0	0	0	0	0	0
06	6/30-7/1	2-F-E-031-11	36	0	0	0	0	0	0	0	0	0	0	0	0
07	7/4-7/5	2-F-E-035-11	36	0	0	0	0	0	0	0	0	0	0	0	0
08	7/7-7/8	2-F-E-037-11	24	0	0	0	0	0	0	0	0	0	0	0	0
09	7/8-7/9	2-F-E-038-11	24	0	0	0	0	0	0	0	0	0	0	0	0
10	7/14-7/15	2-F-E-043-11	24	0	0	0	0	0	0	0	0	0	0	0	0
11	7/18-7/19	2-F-E-048-11	24	0	0	0	0	0	0	0	0	0	0	0	0
12	7/21-7/22	2-F-E-051-11	24	0	0	0	0	0	0	0	0	0	0	0	0
Total			372	4	5	0	0	1,390	8,675	0	0	1	4	30	217
Average Weight							0.00		6.24		0.00		4.00		7.23
Purse Seine															
01	6/13-6/14	2-F-E-022-11	36	0	0	0	0	0	0	0	0	0	0	0	0
02	6/16-6/17	2-F-E-023-11	36	0	0	0	0	0	0	0	0	0	0	0	0
03	6/20-6/21	2-F-E-025-11	36	0	0	0	0	0	0	0	0	0	0	0	0
04	6/23-6/24	2-F-E-027-11	36	0	0	0	0	0	0	0	0	0	0	0	0
05	6/27-6/28	2-F-E-029-11	36	0	0	0	0	0	0	0	0	0	0	0	0
06	6/30-7/1	2-F-E-031-11	36	0	0	0	0	0	0	0	0	0	0	0	0
07	7/4-7/5	2-F-E-035-11	36	0	0	0	0	0	0	0	0	0	0	0	0
08	7/7-7/8	2-F-E-037-11	24	0	0	0	0	0	0	0	0	0	0	0	0
09	7/8-7/9	2-F-E-038-11	24	0	0	0	0	0	0	0	0	0	0	0	0
10	7/14-7/15	2-F-E-043-11	24	0	0	0	0	0	0	0	0	0	0	0	0
11	7/18-7/19	2-F-E-048-11	24	0	0	0	0	0	0	0	0	0	0	0	0
12	7/21-7/22	2-F-E-051-11	24	0	0	0	0	0	0	0	0	0	0	0	0
Total			372	0	0	0	0	0	0	0	0	0	0	0	0
Average Weight							0.0		0.00		0.0		0.0		0.00

[a] All waters designated for commercial salmon fishing in the Unakwik District were open for all periods.

Appendix B12.–Commercial common property salmon harvest by species in the Unakwik District.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
			Drift Gillnet			
1983	3	13,215	0	1,515	1,426	16,159
1984	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
2006	1	698	1	36	171	907
2007	1	15,146	0	0	222	15,369
2008	0	389	0	878	58	1,325
2009	1	1,975	0	0	374	2,350
2010	0	15	0	0	0	15
10-Year Average	2	6,297	5	246	266	6,816
2011	0	1,390	0	1	30	1,421

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Year	Chinook	Sockeye	Coho	Pink	Chum	Total
			Purse Seine			
1983	0	6	0	3,344	716	4,066
1984	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	0	0	0	0	0	0
1990	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	0	0	0	0	0	0
1996	0	0	0	0	0	0
1997	0	0	0	0	0	0
1998	0	0	0	0	0	0
1999	1	386	0	0	2	389
2000	0	0	0	20,485	0	20,485
2001	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	0	0	0	0	0	0
2005	0	80	0	81,858	0	81,938
2006	0	0	0	0	0	0
2007	0	547	0	0	4	551
2008	0	0	0	0	0	0
2009	0	1,153	0	0	10	1,163
2010	1	31	0	34	26	92
10-Year Average	0	397	2	8,429	18	8,846
2011	0	0	0	0	0	0

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Year	Chinook	Sockeye	Coho	Pink	Chum	Total
			Combined 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	0	58,125	25,364	92,760
1989	31	21,412	27	41,820	404	63,694
1990	3	247	127	9,986	23	10,386
1991	13	5,301	11	133,367	197	138,889
1992	3	2,266	13	17,236	213	19,731
1993	5	14,770	4	6,571	1,045	22,395
1994	0	774	0	389,201	73	390,048
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	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	14	133	884	12,005
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
2006	1	698	1	36	171	907
2007	1	15,693	0	0	226	15,920
2008	0	389	0	878	58	1,325
2009	1	3,128	0	0	384	3,513
2010	1	46	0	34	26	107
10-Year Average	3	6,694	5	8,674	284	15,660
2011	0	1,390	0	1	30	1,421

Appendix B13.–Port Chalmers Subdistrict commercial common property drift gillnet harvest of salmon by period, 2011.

Period		Date	Emergency Orders Issued	Hours	Permits	Landings	Chinook Number	Chinook Pounds	Sockeye Number	Sockeye Pounds	Coho Number	Coho Pounds	Pink Number	Pink Pounds	Chum Number	Chum Pounds
1	[a]	5/23-5/25	2-F-E-006-11	60	1	1	0	0	0	0	0	0	0	0	6	44
2	[a]	5/26-5/29	2-F-E-007-11	84	1	3	0	0	0	0	0	0	0	0	558	4,531
3	[a]	5/29-5/30	2-F-E-008-11	60	1	1	0	0	0	0	0	0	0	0	9	64
4	[a]	6/2-6/5	2-F-E-011-11	84	3	3	0	0	0	0	0	0	0	0	481	3,437
5	[a]	6/6-6/8	2-F-E-013-11	60	8	21	1	26	1	7	0	0	0	0	2,114	15,245
6	[a]	6/9-6/12	2-F-E-017-11	84	15	48	6	128	14	83	0	0	2	6	4,923	41,891
7	[a]	6/13-6/15	2-F-E-020-11	60	20	77	12	149	56	331	0	0	0	0	8,132	67,366
8	[a]	6/16-6/19	2-F-E-023-11	84	21	98	14	145	668	4,911	2	18	17	72	13,175	106,440
9	[a]	6/20-6/22	2-F-E-025-11	60	18	75	19	198	114	734	0	0	0	0	9,169	71,607
10	[a]	6/23-6/26	2-F-E-027-11	84	20	88	11	116	62	389	1	8	6	21	10,395	80,791
11	[a]	6/27-6/29	2-F-E-029-11	60	12	44	1	15	28	161	2	14	2	6	10,485	83,341
12	[a]	6/30-7/3	2-F-E-031-11	84	15	85	1	15	36	211	47	335	69	206	16,519	132,618
13	[a]	7/4-7/6	2-F-E-035-11	60	15	69	2	39	243	1,349	195	1,273	320	875	12,060	96,953
14	[a]	7/7-7/10	2-F-E-037-11	84	13	81	9	271	311	1,603	234	1,524	2,062	5,572	9,830	72,133
15	[a]	7/11-7/13	2-F-E-038-11	60	12	49	2	21	76	428	134	929	747	1,971	4,862	32,463
16	[a]	7/14-7/17	2-F-E-043-11	84	1	1	0	0	1	7	3	24	15	60	361	2,891
17	[a]	7/18-7/20	2-F-E-048-11	60	0	0	0	0	0	0	0	0	0	0	0	0
18	[a]	7/21-7/24	2-F-E-051-11	84	0	0	0	0	0	0	0	0	0	0	0	0
19	[ab]	7/25-7/27	2-F-E-052-11	60	0	0	0	0	0	0	0	0	0	0	0	0
20	[ab]	7/28-7/30	2-F-E-053-11	84	1	1	1	15	3	19	0	0	1,195	3,587	23	165
Total				1,440	44	745	79	1,138	1,613	10,233	618	4,125	4,435	12,376	103,102	811,980
Average Weight								14.41		6.34		6.67		2.79		7.88

[a] Waters of the Port Chalmers Subdistrict were open. The Pt. Chalmers Subdistrict consists of waters on the west side of Montague Island that are east of a line connecting the following points: 60°20.00' N., 147°26.59' W., 60°14.75' N., 147°35.35' W., 60°02.50' N., 147°44.41' W.

[b] Regulatory closed waters and anadromous stream closures within the Port Chalmers Subdistrict were in effect for this period.

Appendix B14.–Port Chalmers Subdistrict drift gillnet commercial common property harvest of salmon by statistical week, 2011.

Week		Dates	Hours	Permits Fished	Permits Landings	Chinook Number	Chinook Pounds	Sockeye Number	Sockeye Pounds	Coho Number	Coho Pounds	Pink Number	Pink Pounds	Chum Number	Chum Pounds
22	[a]	05/22 - 05/28	124	2	2	0	0	0	0	0	0	0	0	225	1,669
23	[a]	05/29 - 06/04	144	4	5	0	0	0	0	0	0	0	0	383	3,281
24	[a]	06/05 - 06/11	144	17	57	6	128	15	90	0	0	2	6	5,773	45,676
25	[a]	06/12 - 06/18	144	26	163	21	245	331	2,255	2	18	16	69	18,770	154,938
26	[a]	06/19 - 06/25	144	24	167	36	389	560	4,056	0	0	5	17	21,343	166,161
27	[a]	06/26 - 07/02	144	19	126	1	15	62	357	30	218	56	170	24,718	195,599
28	[a]	07/03 - 07/09	144	16	151	6	136	518	2,759	362	2,382	2,066	5,678	24,388	194,385
29	[a]	07/10 - 07/16	144	14	73	8	210	124	697	224	1,507	1,095	2,849	7,479	50,106
30	[a]	07/17 - 07/23	144	0	0	0	0	0	0	0	0	0	0	0	0
31	[ab]	07/24 - 07/30	144	1	1	1	15	3	19	0	0	1,195	3,587	23	165
Total			1,420	44	745	79	1,138	1,613	10,233	618	4,125	4,435	12,376	103,102	811,980
Average Weights							14.41		6.34		6.67		2.79		7.88

[a] Waters of the Port Chalmers Subdistrict were open. The Pt. Chalmers Subdistrict consists of waters on the west side of Montague Island that are east of a line connecting the following points: 60°20.00' N., 147°26.59' W., 60°14.75' N., 147°35.35' W., 60°02.50' N., 147°44.41' W.

[b] Regulatory closed waters and anadromous stream closures within the Port Chalmers Subdistrict were in effect for this period.

Appendix B15.–Total commercial common property harvest by species in the Port Chalmers Subdistrict, 2006–2011.

Year	Number of permits fished	Gear Type	Numbers of fish					
			Chinook	Sockeye	Coho	Pink	Chum	Total
2006	51	purse seine	185	1,808	28	144,417	445,762	592,200
2007	57	purse seine	671	5,507	40	492,435	740,554	1,239,207
2008	81	purse seine	88	10,225	23	216,013	1,233,909	1,460,258
2009	207	drift gillnet	87	10,208	2,318	67,978	672,918	753,509
2010	113	drift gillnet	188	5,512	76	15,794	243,456	265,026
5-Year Average	102		244	6,652	497	187,327	667,320	862,040
2011	44	drift gillnet	79	1,613	618	4,435	103,102	109,847

APPENDIX C

Appendix C1.–Anticipated daily and cumulative salmon escapement versus actual escapement past the Eshamy River weir, 2011.

	Sockeye salmon						Pink salmon[a]		Chum salmon	
			Apportioned BEG (13,000 to 28,000) [b]							
	Actual		Projected minimum		Projected maximum		Actual		Actual	
Date	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
7/1	ND	ND	75	75	162	162	ND	ND	ND	ND
7/2	ND	ND	73	148	158	320	ND	ND	ND	ND
7/3	ND	ND	16	165	35	355	ND	ND	ND	ND
7/4	ND	ND	0	165	0	355	ND	ND	ND	ND
7/5	ND	ND	16	181	35	390	ND	ND	ND	ND
7/6	ND	ND	38	219	83	472	ND	ND	ND	ND
7/7	ND	ND	31	251	68	540	ND	ND	ND	ND
7/8	ND	ND	53	304	114	655	ND	ND	ND	ND
7/9	ND	ND	39	343	84	739	ND	ND	ND	ND
7/10	0	0	50	393	108	847	0	0	0	0
7/11	1	1	64	457	137	984	0	0	0	0
7/12	0	1	50	506	107	1,091	0	0	1	1
7/13	1	2	54	561	117	1,208	0	0	0	1
7/14	0	2	67	627	143	1,351	0	0	11	12
7/15	0	2	66	693	143	1,494	0	0	0	12
7/16	46	48	95	788	204	1,697	0	0	13	25
7/17	19	67	80	868	171	1,869	0	0	3	28
7/18	0	67	69	937	149	2,017	0	0	0	28
7/19	0	67	67	1,003	144	2,161	0	0	0	28
7/20	2	69	57	1,060	123	2,284	0	0	0	28
7/21	32	101	105	1,165	225	2,510	0	0	0	28
7/22	0	101	102	1,267	219	2,729	0	0	0	28
7/23	12	113	104	1,371	223	2,952	3	3	0	28
7/24	2	115	152	1,522	327	3,279	0	3	0	28
7/25	0	115	185	1,707	398	3,677	0	3	0	28
7/26	23	138	212	1,919	456	4,133	0	3	0	28
7/27	0	138	184	2,102	395	4,528	0	3	0	28
7/28	0	138	155	2,258	334	4,862	0	3	0	28
7/29	48	186	112	2,370	242	5,105	3	6	3	31
7/30	6	192	242	2,612	521	5,626	0	6	0	31
7/31	0	192	144	2,757	311	5,937	0	6	0	31
8/1	2	194	66	2,822	142	6,079	1	7	0	31
8/2	172	366	151	2,973	325	6,404	5	12	0	31
8/3	1,178	1,544	144	3,117	310	6,714	20	32	0	31
8/4	688	2,232	194	3,311	417	7,131	14	46	0	31
8/5	0	2,232	165	3,476	356	7,487	0	46	0	31
8/6	441	2,673	202	3,678	435	7,922	1	47	0	31
8/7	481	3,154	237	3,915	511	8,432	2	49	0	31
8/8	41	3,195	289	4,204	623	9,055	0	49	0	31
8/9	863	4,058	300	4,504	646	9,701	1	50	0	31
8/10	912	4,970	364	4,868	784	10,484	16	66	0	31
8/11	981	5,951	296	5,164	638	11,122	24	90	0	31
8/12	1,213	7,164	347	5,511	748	11,870	64	154	0	31
8/13	1,180	8,344	347	5,858	747	12,618	130	284	3	34
8/14	56	8,400	440	6,299	948	13,566	31	315	0	34
8/15	905	9,305	391	6,690	843	14,409	337	652	0	34
8/16	1,006	10,311	431	7,121	929	15,337	236	888	1	35
8/17	870	11,181	362	7,482	779	16,116	153	1,041	0	35
8/18	155	11,336	441	7,923	950	17,066	81	1,122	0	35
8/19	6,356	17,692	329	8,253	709	17,775	990	2,112	0	35

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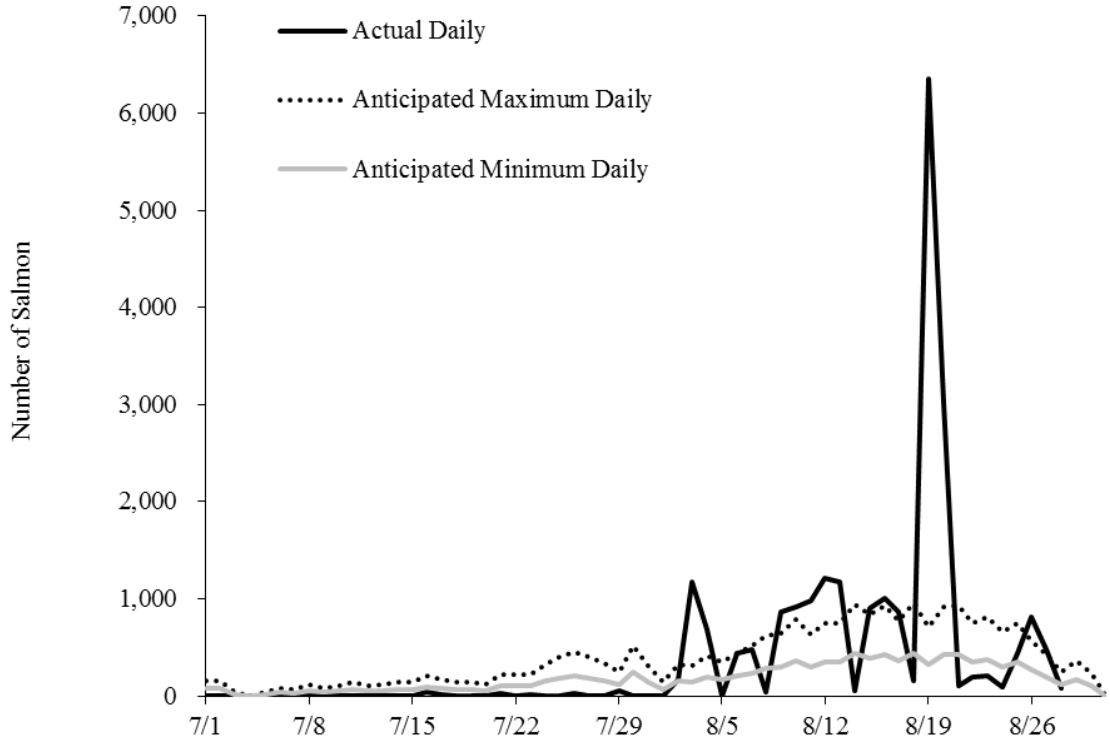
	Sockeye salmon						Pink salmon[a]		Chum salmon	
			Apportioned BEG (13,000 to 28,000) [b]							
	Actual		Projected minimum		Projected maximum		Actual		Actual	
Date	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
8/20	3,020	20,712	427	8,680	920	18,695	418	2,530	0	35
8/21	105	20,817	432	9,112	930	19,626	43	2,573	0	35
8/22	199	21,016	349	9,461	752	20,377	39	2,612	0	35
8/23	212	21,228	380	9,841	819	21,197	44	2,656	0	35
8/24	98	21,326	304	10,145	655	21,852	41	2,697	0	35
8/25	437	21,763	350	10,496	754	22,606	38	2,735	0	35
8/26	809	22,572	267	10,762	574	23,180	89	2,824	0	35
8/27	484	23,056	196	10,958	421	23,601	47	2,871	0	35
8/28	73	24,129 [b]	115	11,073	248	23,849	8	2,879	0	35
8/29	ND	ND	167	11,240	360	24,209	ND	ND	ND	ND
8/30	ND	ND	109	11,349	235	24,444	ND	ND	ND	ND
8/31	ND	ND	7	11,356	15	24,459	ND	ND	ND	ND

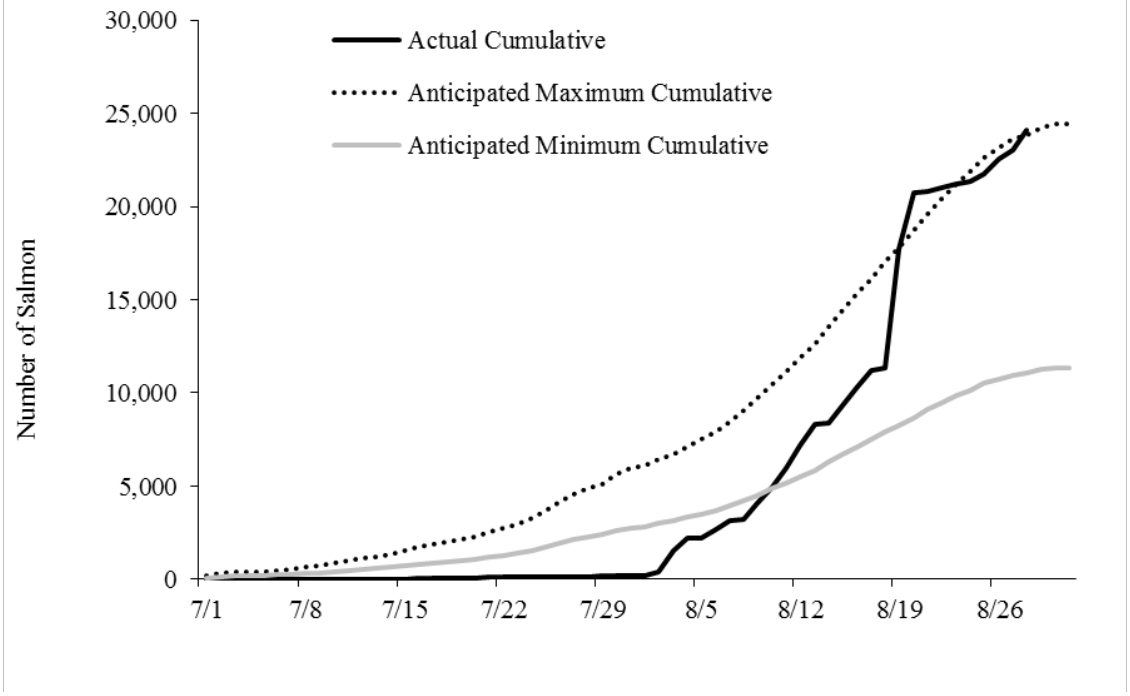
[a] The weir is designed to prohibit passage of sockeye salmon until counted. Smaller pink salmon may pass through the weir uncounted.

[b] Biological escapement goal (BEG) is defined in 5 ACC 39.222 *Policy for the management of sustainable salmon fisheries.*

[c] An estimated 1,000 sockeye salmon were observed below the weir on August 29 and are included in the season cumulative escapement.

Appendix C2.–Anticipated daily and cumulative sockeye salmon escapement versus actual escapement past the Eshamy River weir, 2011.





Appendix C3.–Salmon escapement by species past the Eshamy River weir, 1967–2011.

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	[a]	0	954	97	3,179	0	4,230
1972	[b]	0	28,683	0	0	0	28,683
1973		0	10,202	205	1,698	0	12,105
1974	[b]	0	633	0	0	0	633
1975	[b]	0	1,724	0	0	0	1,724
1976	[b]	0	19,367	0	0	0	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	[c]	0	0	0	0	0	
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	[c]	0	0	0	0	0	
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	NA	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
2006		0	41,823	201	3,585	608	46,217
2007		0	16,646	831	29,409	243	46,673
2008		0	18,494	27	2,060	20	20,601
2009		1	24,025	147	3,849	416	28,438
2010		0	16,291	114	2,268	84	18,757
10-Year Average		0	28,976	191	8,202	348	37,717
2011		0	24,129	0	2,879	35	27,043

Note: NA means count is not available. For the breakdown of jacks versus adult sockeye salmon see specific year's daily escapement enumeration table.

[a] 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.

[c] The Eshamy River weir was not in operation.

Appendix C4.–Commercial common property drift gillnet harvest of salmon by period in the Eshamy District 2011.

Period		Date	Emergency Orders	Hours	Permits	Landings	Chinook Number	Chinook Pounds	Sockeye Number	Sockeye Pounds	Coho Number	Coho Pounds	Pink Number	Pink Pounds	Chum Number	Chum Pounds
1	a	5/23 - 5/25	2-F-E-006-11	60	1	1	0	0	0	0	0	0	0	0	19	130
2	a	5/26 - 5/29	2-F-E-007-11	84	0	0	0	0	0	0	0	0	0	0	0	0
3	a	5/30 - 6/1	2-F-E-008-11	60	5	9	0	0	82	531	0	0	0	0	544	3,927
4	a	6/2 - 6/5	2-F-E-011-11	84	5	17	1	9	218	1,450	0	0	0	0	838	5,967
5	a	6/6 - 6/8	2-F-E-013-11	60	25	56	1	18	1,559	9,827	0	0	0	0	5,288	38,590
6	b	6/9 - 6/12	2-F-E-017-11	84	59	126	9	192	5,698	36,445	0	0	0	0	5,473	42,555
7	b	6/13 - 6/15	2-F-E-020-11	60	160	377	32	477	24,747	159,926	0	0	0	0	10,323	76,299
8	b	6/16 - 6/19	2-F-E-023-11	84	150	605	19	310	62,496	404,503	3	23	7	25	15,950	121,351
9	b	6/20 - 6/22	2-F-E-025-11	60	250	791	16	211	89,450	579,955	16	108	15	51	12,583	94,198
10	b	6/23 - 6/26	2-F-E-027-11	84	257	1,078	20	222	153,023	951,887	31	218	57	203	13,316	98,500
11	b	6/27 - 6/29	2-F-E-029-11	60	230	864	2	15	127,792	772,671	132	969	321	1,209	9,212	62,329
12	b	6/30 - 7/2	2-F-E-031-11	60	192	772	3	27	148,778	914,247	317	2,106	1,866	6,663	8,682	61,452
13	b	7/4 - 7/5	2-F-E-035-11	36	165	480	3	78	86,941	534,325	649	4,497	4,142	15,761	4,185	28,618
14	c	7/7 - 7/9	2-F-E-037-11	48	121	407	7	94	57,844	346,523	937	6,486	5,270	19,197	4,347	30,071
15	d	7/11 - 7/12	2-F-E-038-11	36	120	318	5	73	73,961	440,547	1,070	6,925	5,704	20,519	2,064	14,029
16	c	7/14 - 7/15	2-F-E-043-11	36	98	229	1	8	18,815	112,523	980	7,013	8,934	31,690	1,785	11,992
17	d	7/18 - 7/19	2-F-E-048-11	36	72	174	5	79	26,455	147,038	998	6,946	10,098	34,328	802	5,279
18	e	7/21 - 7/22	2-F-E-051-11	36	36	76	1	8	4,423	26,432	351	2,383	4,777	16,583	262	1,509
19	f	7/25 - 7/26	2-F-E-052-11	36	30	70	1	42	8,916	53,321	238	1,828	5,055	16,371	135	931
20	e	7/28 - 7/29	2-F-E-053-11	36	25	47	1	7	2,906	17,823	110	750	6,361	20,716	95	615
21	g	8/1 - 8/2	2-F-E-065-11	36	8	17	0	0	2,028	14,110	42	289	2,267	6,784	23	159
22	h	8/15	2-F-E-071-11	14	22	41	0	0	1,418	8,947	81	595	9,104	30,897	27	165
23	h	8/17	2-F-E-074-11	14	13	21	0	0	1,180	7,123	19	141	5,688	21,795	11	76

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Period		Date	Emergency Orders	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
							Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
24	h	8/19	2-F-E-076-11	14	9	11	0	0	603	3,628	22	155	2,368	8,251	7	49
25	hi	8/21	2-F-E-077-11	14	18	26	2	14	1,224	7,734	46	324	3,874	12,523	9	64
26	h	8/23	2-F-E-086-11	14	12	17	0	0	537	3,105	78	609	2,406	7,362	10	60
27	h	8/25	2-F-E-087-11	12	3	3	0	0	83	559	22	167	164	492	1	5
28	h	8/28	2-F-E-093-11	12	1	1	0	0	27	162	2	13	0	0	0	0
29	h	8/29	2-F-E-093-11	12	0	0	0	0	0	0	0	0	0	0	0	0
30	h	8/30	2-F-E-093-11	12	0	0	0	0	0	0	0	0	0	0	0	0
31	h	8/31	2-F-E-093-11	12	1	1	0	0	47	282	7	56	146	585	0	0
32	h	9/1	2-F-E-094-11	12	1	1	0	0	28	212	8	56	138	415	0	0
33	h	9/2	2-F-E-094-11	12	0	0	0	0	0	0	0	0	0	0	0	0
34	h	9/3	2-F-E-094-11	12	0	0	0	0	0	0	0	0	0	0	0	0
35	h	9/4 - 9/7	2-F-E-100-11	84	0	0	0	0	0	0	0	0	0	0	0	0
36	h	9/8	2-F-E-102-11	36	0	0	0	0	0	0	0	0	0	0	0	0
37	h	9/9 - 9/14	2-F-E-103-11	120	0	0	0	0	0	0	0	0	0	0	0	0
38	h	9/15 - 9/20	2-F-E-104-11	132	0	0	0	0	0	0	0	0	0	0	0	0
39	h	9/21 - 9/25	2-F-E-113-11	108	0	0	0	0	0	0	0	0	0	0	0	0
40	h	9/26 - 10/2	2-F-E-113-11	156	0	0	0	0	0	0	0	0	0	0	0	0
Total				1,978	346	6,636	129	1,884	901,279	5,555,836	6,159	42,657	78,762	272,419	95,991	698,920
Average Weight								14.60		6.16		6.93		3.46		7.28

[a] Waters of the Eshamy District excluding the AGZ were open.

[b] Waters of the Eshamy District excluding the AGZ were open. The southwestern boundary of the district was waters within one nautical mile of the mainland shore along a line from the markers west of Granite Point (60° 24.94’ N, 147° 57.97’ W) to Junction Island (60° 23.49’ N, 147° 59.52’ W).

[c] Waters of the Eshamy District excluding the AGZ were open. The AGZ up to a line of buoys in front of the barrier seine was open to set gillnet fishing only during this fishing period. The southwestern boundary of the district was waters within one nautical mile of the mainland shore along a line from the markers west of Granite Point (60° 24.94’ N, 147° 57.97’ W) to Junction Island (60° 23.49’ N, 147° 59.52’ W).

[d] Waters of the Eshamy District excluding the AGZ were open. The AGZ up to a line of buoys in front of the barrier seine was open to drift gillnet fishing only during this fishing period. The southwestern boundary of the district was waters within one nautical mile of the mainland shore along a line from the markers west of Granite Point (60° 24.94’ N, 147° 57.97’ W) to Junction Island (60° 23.49’ N, 147° 59.52’ W). The AGZ was defined as waters south of a line from a yellow sign on the shore at 60° 31.34’ N, 148° 05.49’ W, to a yellow sign on the opposite shore at 60° 31.44’ N, 148° 05.71’ W.

[e] Waters of the Main Bay Subdistrict excluding the AGZ were open. The AGZ was open to set gillnet fishing only.

[f] Waters of the Main Bay Subdistrict excluding the AGZ were open. The AGZ was open to drift gillnet fishing only.

[g] Waters of the Main Bay Hatchery THA and SHA, excluding the AGZ, were open. Waters of the AGZ were open to drift gillnet fishing only.

[h] Waters within Eshamy Bay, west of a line from 147° 57.78' W long, 60° 27.93' N lat to 147° 58.56' W long, 60° 28.84' N lat were open.

[i] Waters of Eshamy Lagoon were open.

Appendix C5.–Commercial common property set gillnet harvest of salmon by period in the Eshamy District, 2011.

Period		Date	Emergency Orders	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
							Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1	[a]	5/23 - 5/25	2-F-E-006-11	60	5	10	0	0	2	12	0	0	0	0	394	2,777
2	[a]	5/26 - 5/29	2-F-E-007-11	84	8	40	6	120	338	2,464	0	0	0	0	684	4,987
3	[a]	5/30 - 6/1	2-F-E-008-11	60	12	37	1	29	757	4,638	0	0	0	0	680	4,864
4	[a]	6/2 - 6/5	2-F-E-011-11	84	14	73	3	53	1,771	11,988	0	0	0	0	2,009	15,110
5	[a]	6/6 - 6/8	2-F-E-013-11	60	18	74	3	73	2,978	19,270	0	0	0	0	2,574	19,305
6	[b]	6/9 - 6/12	2-F-E-017-11	84	20	134	3	65	9,535	61,217	0	0	0	0	3,637	27,826
7	[b]	6/13 - 6/15	2-F-E-020-11	60	24	136	5	59	10,702	68,709	0	0	0	0	1,922	14,728
8	[b]	6/16 - 6/19	2-F-E-023-11	84	24	247	3	51	26,886	174,538	0	0	0	0	3,534	26,231
9	[b]	6/20 - 6/22	2-F-E-025-11	60	28	218	2	31	29,046	188,338	1	8	2	10	1,834	13,452
10	[b]	6/23 - 6/26	2-F-E-027-11	84	28	292	0	0	43,668	276,730	0	0	24	90	1,738	12,656
11	[b]	6/27 - 6/29	2-F-E-029-11	60	28	221	0	0	34,853	213,424	4	28	114	444	1,481	10,578
12	[b]	6/30 - 7/2	2-F-E-031-11	60	28	245	2	30	47,733	298,000	41	226	701	2,520	1,920	13,886
13	[b]	7/4 - 7/5	2-F-E-035-11	36	27	154	1	12	28,065	173,264	34	229	1,184	4,680	767	5,460
14	[c]	7/7 - 7/9	2-F-E-037-11	48	26	176	2	52	31,203	187,656	46	321	1,577	5,770	1,025	7,232
15	[d]	7/11 - 7/12	2-F-E-038-11	36	27	129	1	11	14,619	89,814	124	852	1,953	7,447	583	4,132
16	[c]	7/14 - 7/15	2-F-E-043-11	36	20	95	0	0	13,333	78,604	29	203	1,624	5,898	216	1,455
17	[d]	7/18 - 7/19	2-F-E-048-11	36	17	70	5	67	6,304	36,962	248	1,498	4,426	14,336	220	1,455
18	[e]	7/21 - 7/22	2-F-E-051-11	36	15	48	0	0	4,902	27,503	32	223	639	2,226	37	227
19	[f]	7/25 - 7/26	2-F-E-052-11	36	5	15	0	0	1,605	9,582	19	141	608	2,081	42	282
20	[e]	7/28 - 7/29	2-F-E-053-11	36	7	26	0	0	2,487	15,577	10	72	786	2,573	29	186
21	[g]	8/1 - 8/2	2-F-E-065-11	36	3	8	0	0	583	4,040	7	49	1,076	3,061	22	154
22	[h]	8/15	2-F-E-071-11	14	0	0	0	0	0	0	0	0	0	0	0	0
23	[h]	8/17	2-F-E-074-11	14	1	2	0	0	111	667	5	35	468	1,625	0	0

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Period		Date	Emergency Orders	Hours	Permits	Landings	Chinook Number	Chinook Pounds	Sockeye Number	Sockeye Pounds	Coho Number	Coho Pounds	Pink Number	Pink Pounds	Chum Number	Chum Pounds
24	h	8/19	2-F-E-076-11	14	1	2	0	0	366	2,191	1	7	1,647	5,550	2	14
25	hi	8/21	2-F-E-077-11	14	1	1	0	0	632	3,790	0	0	396	1,188	0	0
26	h	8/23	2-F-E-086-11	14	2	2	0	0	69	415	1	7	243	738	0	0
27	h	8/25	2-F-E-087-11	12	0	0	0	0	0	0	0	0	0	0	0	0
28	h	8/28	2-F-E-093-11	12	0	0	0	0	0	0	0	0	0	0	0	0
29	h	8/29	2-F-E-093-11	12	0	0	0	0	0	0	0	0	0	0	0	0
30	h	8/30	2-F-E-093-11	12	0	0	0	0	0	0	0	0	0	0	0	0
31	h	8/31	2-F-E-093-11	12	1	1	0	0	55	332	10	80	106	529	0	0
32	h	9/1	2-F-E-094-11	12	1	1	0	0	56	337	0	0	55	221	0	0
33	h	9/2	2-F-E-094-11	12	0	0	0	0	0	0	0	0	0	0	0	0
34	h	9/3	2-F-E-094-11	12	0	0	0	0	0	0	0	0	0	0	0	0
35	h	9/4 - 9/7	2-F-E-100-11	84	0	0	0	0	0	0	0	0	0	0	0	0
36	h	9/8	2-F-E-102-11	36	0	0	0	0	0	0	0	0	0	0	0	0
37	h	9/9 - 9/14	2-F-E-103-11	120	0	0	0	0	0	0	0	0	0	0	0	0
38	h	9/15 - 9/20	2-F-E-104-11	132	0	0	0	0	0	0	0	0	0	0	0	0
39	h	9/21 - 9/25	2-F-E-113-11	108	0	0	0	0	0	0	0	0	0	0	0	0
40	h	9/26 - 10/2	2-F-E-113-11	156	0	0	0	0	0	0	0	0	0	0	0	0
Total				1,978	29	2,457	37	653	312,659	1,950,062	612	3,979	17,629	60,987	25,350	186,996
Average Weight								17.65		6.24		6.50		3.46		7.38

a Waters of the Eshamy District excluding the AGZ were open.

b Waters of the Eshamy District excluding the AGZ were open. The southwestern boundary of the district was waters within one nautical mile of the mainland shore along a line from the markers west of Granite Point (60° 24.94’ N, 147° 57.97’ W) to Junction Island (60° 23.49’ N, 147° 59.52’ W).

c Waters of the Eshamy District excluding the AGZ were open. The AGZ up to a line of buoys in front of the barrier seine was open to set gillnet fishing only during this fishing period. The southwestern boundary of the district was waters within one nautical mile of the mainland shore along a line from the markers west of Granite Point (60° 24.94’ N, 147° 57.97’ W) to Junction Island (60° 23.49’ N, 147° 59.52’ W).

d Waters of the Eshamy District excluding the AGZ were open. The AGZ up to a line of buoys in front of the barrier seine was open to drift gillnet fishing only during this fishing period. The southwestern boundary of the district was waters within one nautical mile of the mainland shore along a line from the markers west of Granite Point (60° 24.94’ N, 147° 57.97’ W) to Junction Island (60° 23.49’ N, 147° 59.52’ W). The AGZ was defined as waters south of a line from a yellow sign on the shore at 60° 31.34’ N, 148° 05.49’ W, to a yellow sign on the opposite shore at 60° 31.44’ N, 148° 05.71’ W.

e Waters of the Main Bay Subdistrict excluding the AGZ were open. The AGZ was open to set gillnet fishing only.

f Waters of the Main Bay Subdistrict excluding the AGZ were open. The AGZ was open to drift gillnet fishing only.

g Waters of the Main Bay Hatchery THA and SHA, excluding the AGZ, were open. Waters of the AGZ were open to drift gillnet fishing only.

h Waters within Eshamy Bay, west of a line from 147° 57.78' W. , 60° 27.93' N to 147° 58.56' W, 60° 28.84' N were open.

i Waters of Eshamy Lagoon were open.

Appendix C6.–Eshamy District commercial common property drift gillnet salmon harvest by statistical week, 2011.

			Permits		Chinook		Sockeye		Coho		Pink		Chum	
Week	Dates	Hours	Fished	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
22	05/22 - 05/28	124	1	1	0	0	0	0	0	0	0	0	19	130
23	05/29 - 06/04	144	7	21	1	9	216	1,464	0	0	0	0	1,121	8,004
24	06/05 - 06/11	144	45	128	9	190	4,735	29,677	0	0	0	0	9,484	70,980
25	06/12 - 06/18	144	200	820	49	746	61,490	401,148	2	17	4	14	22,470	169,398
26	06/19 - 06/25	144	294	1,787	32	425	225,597	1,437,421	36	245	52	194	28,041	210,210
27	06/26 - 07/02	140	295	1,939	12	111	321,805	1,961,732	461	3,162	2,210	7,943	21,093	146,576
28	07/03 - 07/09	84	178	887	10	172	144,785	880,848	1,586	10,983	9,412	34,958	8,532	58,689
29	07/10 - 07/16	72	134	547	6	81	92,776	553,070	2,050	13,938	14,638	52,209	3,849	26,021
30	07/17 - 07/23	72	81	250	6	87	30,878	173,470	1,349	9,329	14,875	50,911	1,064	6,788
31	07/24 - 07/30	72	38	117	2	49	11,822	71,144	348	2,578	11,416	37,087	230	1,546
32	07/31-08/06	36	8	17	0	0	2,028	14,110	42	289	2,267	6,784	23	159
33	08/07 - 08/13	0	0	0	0	0	0	0	0	0	0	0	0	0
34	08/14 - 08/20	42	26	73	0	0	3,201	19,698	122	891	17,160	60,943	45	290
35	08/21 - 08/27	40	20	46	2	14	1,844	11,398	146	1,100	6,444	20,377	20	129
36	08/28 - 09/03	84	2	3	0	0	102	656	17	125	284	1,000	0	0
37	09/04 - 09/10	148	0	0	0	0	0	0	0	0	0	0	0	0
38	09/11 - 09/17	156	0	0	0	0	0	0	0	0	0	0	0	0
39	09/18 - 09/24	156	0	0	0	0	0	0	0	0	0	0	0	0
40	09/25 - 10/01	156	0	0	0	0	0	0	0	0	0	0	0	0
41	10/02 - 10/08	20	0	0	0	0	0	0	0	0	0	0	0	0
Total		1,978	346	6,636	129	1,884	901,279	5,555,836	6,159	42,657	78,762	272,419	95,991	698,920
Average Weights						14.60		6.16		6.93		3.46		7.28

Appendix C7.–Eshamy District commercial common property set gillnet salmon harvest by statistical week, 2011.

			Permits		Chinook		Sockeye		Coho		Pink		Chum	
Week	Dates	Hours	Fished	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
22	05/22 - 05/28	124	8	38	2	49	210	1,602	0	0	0	0	968	6,979
23	05/29 - 06/04	144	13	102	8	153	2,075	13,649	0	0	0	0	2,293	16,997
24	06/05 - 06/11	144	21	190	6	138	10,411	66,858	0	0	0	0	6,112	46,281
25	06/12 - 06/18	144	26	352	7	92	31,699	206,060	0	0	0	0	5,040	37,933
26	06/19 - 06/25	144	28	513	3	49	72,485	464,020	1	8	10	47	4,220	31,018
27	06/26 - 07/02	140	28	532	2	30	91,389	567,139	45	254	831	3,017	3,774	27,192
28	07/03 - 07/09	84	28	330	3	64	59,268	360,920	80	550	2,761	10,450	1,792	12,692
29	07/10 - 07/16	72	27	224	1	11	27,952	168,418	153	1,055	3,577	13,345	799	5,587
30	07/17 - 07/23	72	17	118	5	67	11,206	64,465	280	1,721	5,065	16,562	257	1,682
31	07/24 - 07/30	72	8	41	0	0	4,092	25,159	29	213	1,394	4,654	71	468
32	07/31-08/06	36	3	8	0	0	583	4,040	7	49	1,076	3,061	22	154
33	08/07 - 08/13	0	0	0	0	0	0	0	0	0	0	0	0	0
34	08/14 - 08/20	42	1	4	0	0	477	2,858	6	42	2,115	7,175	2	14
35	08/21 - 08/27	40	2	3	0	0	701	4,205	1	7	639	1,926	0	0
36	08/28 - 09/03	84	1	2	0	0	111	669	10	80	161	750	0	0
37	09/04 - 09/10	148	0	0	0	0	0	0	0	0	0	0	0	0
38	09/11 - 09/17	156	0	0	0	0	0	0	0	0	0	0	0	0
39	09/18 - 09/24	156	0	0	0	0	0	0	0	0	0	0	0	0
40	09/25 - 10/01	156	0	0	0	0	0	0	0	0	0	0	0	0
41	10/02 - 10/08	20	0	0	0	0	0	0	0	0	0	0	0	0
Total		1,978	29	2,457	37	653	312,659	1,950,062	612	3,979	17,629	60,987	25,350	186,996
Average Weights						17.65		6.24		6.50		3.46		7.38

Appendix C8.–Commercial common property harvest in the Eshamy District, 1980–2011.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
			Drift Gillnet			
1980	0	684	25	3,225	130	4,064
1981	0	0	0	0	0	0
1982	0	0	0	0	0	0
1983	1	924	8	162,541	3,427	166,901
1984	7	23,490	282	247,326	15,451	286,556
1985	1	667	0	24,899	1,021	26,588
1986	0	4	1	938	65	1,008
1987	2	642	3	3,225	7,060	10,932
1988	94	50,868	794	348,873	206,060	606,689
1989 [a]	0	0	0	0	0	0
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
2006	15	381,911	5,429	89,755	30,841	507,951
2007	27	538,183	2,556	42,822	81,410	664,998
2008	48	560,869	1,930	103,325	251,493	917,665
2009	67	539,293	1,695	77,539	286,361	904,955
2010	91	940,640	1,367	117,249	521,032	1,580,379
10-Year Average	78	492,036	3,180	114,854	135,952	746,099
2011	129	901,279	6,159	78,762	95,991	1,082,320

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Year	Chinook	Sockeye	Coho	Pink	Chum	Total
			Set Gillnet			
1980	0	2,000	38	2,371	134	4,543
1981	0	0	0	0	0	0
1982	0	0	0	0	0	0
1983	1	1,328	10	167,942	4,463	173,744
1984	5	23,226	98	278,176	3,000	304,505
1985	1	3,439	74	33,284	1,295	38,093
1986	9	1,043	86	42,123	5,764	49,025
1987	31	5,387	336	86,677	45,099	137,530
1988	100	18,321	283	180,456	93,577	292,737
1989 [a]	0	0	0	0	0	0
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
2006	9	124,087	352	20,863	9,883	155,194
2007	18	196,537	365	13,796	24,651	235,367
2008	18	162,403	151	20,455	53,627	236,654
2009	47	152,642	49	4,251	50,748	207,737
2010	17	282,329	69	16,764	80,469	379,648
10-Year Average	18	175,240	489	47,461	26,952	250,159
2011	37	312,659	612	17,629	25,350	356,287

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Year	Chinook	Sockeye	Coho	Pink	Chum	Total
			Combined Gear			
1980	0	2,684	63	5,596	264	8,607
1981	0	0	0	0	0	0
1982	0	0	0	0	0	0
1983	2	2,252	18	330,483	7,890	340,645
1984	12	46,716	380	525,502	18,451	591,061
1985	2	4,106	74	58,183	2,316	64,681
1986	9	1,047	87	43,061	5,829	50,033
1987	33	6,029	339	89,902	52,159	148,462
1988	194	69,189	1,077	529,329	299,637	899,426
1989 [a]	0	0	0	0	0	0
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
2006	24	505,998	5,781	110,618	40,724	663,145
2007	45	734,720	2,921	56,618	106,061	900,365
2008	66	723,272	2,081	123,780	305,120	1,154,319
2009	114	691,935	1,744	81,790	337,109	1,112,692
2010	108	1,222,969	1,436	134,013	601,501	1,960,027
10-Year Average	95	667,276	3,669	162,315	162,904	996,258
2011	166	1,213,938	6,771	96,391	121,341	1,438,607

[a] Fishing was closed because of oil contamination on the beaches.

Appendix C9.–Estimated age and sex composition of sockeye salmon harvested in the Eshamy District commercial common property gillnet fishery, 2011.

Strata Combined:	05/23 - 07/15	Brood Year and Age Class[a]			
Sampling dates:	06/16 - 07/13	2008	2007	2006	
Sample size:	1,398	1.1	1.2	1.3	Total
Female	Percentage of sample	0.0	22.7	20.4	43
	Number in harvest	0	250,973	226,360	477,333
Male	Percentage of sample	0.1	36.4	20.0	57
	Number in harvest	1,083	403,098	221,714	625,894
Total	Percentage of sample	0.1	59.4	40.6	100
	Number in harvest	1,083	657,390	449,156	1,107,628
	Standard error	764	16,398	16,395	

[a] Fish with resorbed scales have been removed; strata 1 had 3, 3–39, 4–189.

Appendix C10.–Estimated age and sex composition of the sockeye salmon escapement through the Eshamy River weir, 2011.

Strata Combined:	07/10 - 08/28	Brood Year and Age Class [a]						
Sampling dates:	08/06 - 08/23	2008	2007		2006		2005	
Sample size:	1,098	1.1	1.2	2.1	1.3	2.2	2.3	Total
Female	Percentage of sample	0.1	19.2	0.2	0.9	29.1	0.3	50
	Number in escapement	24	4,622	48	219	7,014	72	11,999
Male	Percentage of sample	0.4	20.0	1.0	1.7	27.0	0.2	50
	Number in escapement	108	4,819	234	416	6,505	48	12,130
Total	Percentage of sample	0.5	39.1	1.2	2.6	56.0	0.5	100
	Number in escapement	132	9,441	282	635	13,519	120	24,129
	Standard error	54	351	79	117	355	54	

APPENDIX D

Appendix D1.–Prince William Sound commercial common property purse seine harvest by day, 2011.

			Chinook		Sockeye		Coho		Pink		Chum	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
05/26	3	3	0	0	0	0	0	0	0	0	566	4,526
05/30	4	5	3	69	10	66	0	0	0	0	783	6,313
06/03	4	4	0	0	1	5	0	0	0	0	366	2,616
06/06	7	7	0	0	4	24	0	0	0	0	1,531	10,729
06/07	3	3	0	0	12	77	0	0	0	0	608	4,666
06/08	4	6	1	26	24	159	0	0	0	0	1,162	9,140
06/09	11	13	2	38	172	1,228	0	0	1	3	4,703	36,392
06/10 [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]
06/11	13	14	1	32	72	462	0	0	0	0	3,328	23,979
06/12	13	13	1	18	92	597	0	0	4	12	2,336	20,730
06/13	16	16	1	52	35	246	0	0	0	0	1,841	13,015
06/14	5	8	1	28	48	324	0	0	0	0	1,257	9,167
06/15	5	5	0	0	49	298	0	0	0	0	384	2,716
06/16	12	13	2	42	238	1,608	0	0	0	0	2,879	20,549
06/17	6	6	0	0	94	588	0	0	6	14	986	7,368
06/18	7	7	1	21	195	1,208	0	0	8	16	1,483	10,346
06/19	14	15	0	0	390	2,466	0	0	24	99	2,707	19,682
06/20	15	23	2	36	1,073	6,947	0	0	193	678	6,320	45,708
06/21	4	5	0	0	93	558	0	0	2	12	862	5,943
06/22	7	7	0	0	250	1,760	0	0	13	69	911	7,310
06/23	13	14	2	42	1,188	7,434	0	0	254	721	3,125	23,370
06/24	20	20	2	56	963	5,810	1	7	66	217	3,688	26,827
06/25	11	11	0	0	519	3,378	0	0	110	258	737	5,591
06/26	18	19	1	7	2,574	16,088	5	40	325	1,103	2,658	19,334
06/27	7	7	3	40	1,950	12,173	9	58	284	849	747	5,237
06/28	23	24	1	20	4,507	28,231	6	55	866	2,848	2,503	19,138
06/29	4	4	0	0	1,201	7,212	0	0	299	1,050	683	5,233
06/30	6	7	0	0	751	4,628	2	20	65	160	754	5,499
07/01	7	7	2	30	1,292	7,761	2	14	634	2,188	2,160	15,831
07/03	146	254	0	0	239	1,489	31	207	2,744,323	8,513,499	2,132	15,689
07/05	105	165	1	5	35	216	10	81	1,759,737	5,315,855	305	2,290
07/07	169	243	0	0	830	5,254	5	29	1,850,877	5,625,455	3,559	26,749
07/08 [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]
07/09	161	175	1	10	127	845	7	42	774,511	2,432,637	648	5,099
07/10	165	172	2	47	770	4,915	211	1,601	819,884	2,495,884	1,961	12,615
07/11 [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]
07/12	154	160	0	0	388	2,443	112	749	801,757	2,398,414	1,389	9,519
07/13	134	134	0	0	51	315	20	149	537,718	1,603,046	89	626
07/14	150	156	10	127	769	4,967	50	332	666,757	2,005,095	666	4,983

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Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
07/15 [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]
07/17	156	157	6	125	285	1,809	203	1,525	742,110	2,239,245	1,241	9,458
07/18	3	3	0	0	1,069	6,346	0	0	6,987	23,489	471	3,331
07/19	130	131	1	9	111	678	155	981	568,988	1,695,175	170	1,200
07/20	4	5	3	75	693	4,011	95	722	6,542	22,900	247	1,843
07/21	70	74	24	490	1,534	8,979	514	3,233	328,000	1,013,116	10,180	74,591
07/25 [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]
07/26	91	92	39	144	1,825	10,878	1,120	8,448	384,631	1,164,067	6,037	48,130
07/29	156	160	5	91	1,396	8,248	734	5,318	687,903	2,102,692	3351	24,532
08/01	139	143	0	0	2,364	14,541	829	5,775	531,764	1,624,691	5,636	41,997
08/04	147	149	2	38	2,135	13,020	1,565	7,579	646,906	1,943,413	5,173	37,988
08/06	161	178	2	35	5,432	30,720	6,450	23,129	1,409,117	4,271,763	2,114	14,772
08/08	162	169	2	15	3,128	18,400	5,663	35,755	1,024,396	3,135,364	1,173	8,543
08/11	168	182	8	147	2,047	12,147	1,678	10,895	1,377,175	4,159,607	993	7,260
08/13	174	196	3	52	2,178	12,787	1,626	11,679	1,455,587	4,390,131	686	4,890
08/15	171	211	3	52	5,336	32,313	2,942	18,788	1,884,305	5,693,787	736	5,434
08/17	171	185	0	0	3,304	19,963	2,774	20,990	1,409,789	4,284,571	552	3,882
08/19	152	157	3	45	1,179	7,311	4,439	25,760	747,753	2,249,657	825	6,312
08/21	157	176	6	59	2,998	18,618	6,532	41,073	1,146,044	3,505,083	902	6,436
08/23	133	140	0	0	2,538	14,421	4,276	27,930	627,657	1,876,009	1,167	7,874
08/25	92	96	0	0	404	2,471	4,519	29,270	262,110	782,321	49	342
08/26	84	93	0	0	628	3,743	4,970	31,664	344,196	1,108,228	140	909
08/27	45	46	0	0	354	2,107	2,336	15,468	83,571	255,979	13	91
08/28	38	42	0	0	249	1,516	2,541	14,772	131,970	388,969	6	43
08/29	34	39	0	0	325	2,216	3,258	18,798	138,208	432,497	15	115
08/30	20	25	0	0	120	765	821	4,933	72,715	211,563	0	0
08/31	5	6	0	0	73	413	51	368	12,977	34,020	0	0
09/01	19	21	0	0	319	2,470	3,291	17,642	74,749	220,507	7	56
09/02 [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]
09/03	3	3	0	0	0	0	332	2,001	6,528	22,540	0	0
09/04	3	3	0	0	0	0	412	2,568	2,246	8,029	0	0
09/06	25	26	1	21	0	0	18,057	148,306	8	27	698	6,207
09/07	17	17	0	0	0	0	4,426	35,547	21,518	85,851	197	1,509
09/08	7	7	0	0	0	0	1,664	14,133	6,447	16,135	106	960
09/09 [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]
09/10 [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]
09/12 [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]	_ [a]
09/14	4	4	0	0	0	0	2,270	11,612	8	34	6	23
Total	183	4,692	150	2,188	64,171	390,684	92,258	609,889	26,110,579	79,386,801	107,839	799,592
Average Weight				14.59		6.09		6.61		3.04		7.41

[a] Confidential.

Appendix D2.–Area E commercial salmon harvest by species, excluding Copper River and Bering River districts, 1971–2011.

Year [a]	Chinook	Sockeye	Coho	Pink	Chum	Total
1971	3,551	88,368	30,551	7,310,964	574,265	8,007,699
1972 [b]	547	197,526	1,634	54,783	45,370	299,860
1973	2,405	124,802	1,399	2,056,878	729,839	2,915,323
1974 [b]	1,590	129,366	801	448,773	88,544	669,074
1975	2,519	189,613	6,142	4,452,805	100,479	4,751,558
1976	1,044	112,809	6,171	3,018,991	370,478	3,509,493
1977	648	310,358	843	4,513,082	572,610	5,397,541
1978	1,042	222,083	1,495	2,913,721	485,147	3,623,488
1979	2,015	150,040	6,843	15,607,620	326,414	16,092,932
1980	189	189,816	2,952	14,157,057	482,016	14,832,030
1981	404	251,222	4,383	20,524,470	1,878,716	22,659,195
1982	255	1,055,099	24,362	20,396,222	1,335,368	22,811,306
1983	1,048	92,111	10,496	14,038,796	1,041,309	15,183,760
1984	489	311,955	12,420	22,086,806	1,201,842	23,613,512
1985	1,104	493,278	19,753	25,056,663	1,280,093	26,850,891
1986	1,330	488,715	12,277	11,407,271	1,683,049	13,592,642
1987	874	540,109	47,751	29,198,507	1,904,494	31,691,735
1988	1,037	183,572	75,709	11,817,323	1,832,114	13,909,755
1989	1,113	140,090	203,574	21,860,582	995,962	23,201,321
1990	447	58,497	234,525	44,163,479	959,838	45,416,786
1991	445	507,815	145,311	37,134,311	331,906	38,119,788
1992	1,475	780,932	202,311	8,635,448	328,568	9,948,734
1993	2,148	418,948	48,310	5,761,436	1,173,341	7,404,183
1994	1,376	334,183	121,518	36,874,188	1,039,095	38,370,360
1995	1,364	230,057	140,314	16,045,396	702,216	17,119,347
1996	700	606,525	172,448	26,036,570	2,077,996	28,894,239
1997	1,186	1,197,776	64,360	25,828,078	2,224,725	29,316,125
1998	2,013	365,591	74,105	28,664,281	1,266,887	30,372,877
1999	1,055	339,037	81,841	44,993,247	2,963,838	48,379,018
2000	1,133	548,790	353,013	38,875,724	5,158,397	44,937,057
2001	861	932,070	239,947	35,237,137	3,097,005	39,507,020
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
2007	873	1,310,694	202,153	63,383,923	3,569,283	68,466,926
2008	962	979,077	307,837	42,352,208	5,074,804	48,714,888
2009	404	1,011,990	46,580	18,565,070	3,212,148	22,836,192
2010	576	1,401,815	42,500	71,288,429	4,307,249	77,040,569
2011	679	1,480,499	223,462	33,379,352	1,901,131	36,985,123
10 year average	791	1,111,895	163,440	40,494,850	3,435,625	45,206,601

[a] 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.

[b] General purse seine season closed.

Appendix D3.–Prince William Sound commercial common property pink salmon harvest for all gear types, by district, 1975–2011.

Year	Eastern [a]	Northern [a]	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total
1975	712,328	171,657	303,597	420,891	0	1,673,887	118,467	875,456	4,276,283
1976	1,380,943	384,267	217,696	207,190	0	589,458	0	82,366	2,861,920
1977	1,673,044	147,964	230,215	208,727	0	930,469	77,104	824,374	4,091,897
1978	1,516,076	933,013	13,059	0	0	0	0	216,696	2,678,844
1979	4,500,032	115,886	38,560	59,423	0	5,111,073	1,347,413	4,160,925	15,333,312
1980	3,140,134	1,271,177	134,876	306,109	0	7,507,776	950	1,271,389	13,632,411
1981	4,797,583	1,194,621	34,155	46,874	0	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	0	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	0	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	0	1,776	9,650,406
1989	3,151,096	6,464,090	3,925,487	181,565	0 [b]	0 [b]	0 [b]	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	0	64,591	17,849,425	0	0	26,893,425
1992	489,228	1,142,061	363,887	0	543,115	3,039,775	0	0	5,578,066
1993	0	413,308	493,747	0	130,542	2,475,798	0	0	3,513,395
1994	11,554,320	7,171,038	3,597,094	0	565,669	3,408,093	0	0	26,296,214
1995	4,235,638	3,656,119	1,078,693	0	88,830	1,707,745	18,239	11,418	10,796,682
1996	6,059,063	5,039,988	1,543,869	0	35,691	5,046,919	0	0	17,725,530
1997 [c]	4,534,365	3,162,822	2,030,586	0	222,934	5,929,544	65,107	28,040	15,973,398
1998 [c]	2,231,061	5,035,736	3,228,761	0	134,984	8,425,853	430,525	350,081	19,837,001
1999	12,305,629	4,981,085	3,542,130	0	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	0	495,325	3,072,848	807,010	534,538	22,321,897
2002	355,964	594,245	1,277,637	0	186,786	5,710,938	32,857	1,075	8,159,502
2003	14,945,744	5,909,643	11,439,915	0	90,102	5,789,419	60,287	514,452	38,749,562
2004	9,512,987	45,355	43,690	0	107,487	1,628,219	102,352	260,992	11,701,082
2005	20,516,356	10,175,784	3,318,875	0	236,634	11,376,513	844,658	770,570	47,239,390

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Year	Eastern [a]	Northern [a]	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total
2006	5,712,890	1,331,740	1,373,036	0	110,618	3,269,037	144,417	21,805	11,963,543
2007	22,059,138	6,221,016	2,399,997	0	56,618	17,907,847	878,371	1,869,245	51,392,232
2008	11,008,956	8,589,490	10,053,149	0	1,154,319	8,134,915	1,460,258	0	40,401,087
2009	95,071	2,064,871	1,305,714	0	81,790	7,481,863	87,952	36,698	11,153,959
2010	18,798,887	18,459,350	16,016,511	0	134,734	17,843,669	15,985	19,293	71,288,429
2011	13,308,509	2,782,875	2,397,044	252,337	96,399	6,807,127	784,603	504,828	26,933,722
10 year average	11,631,450	5,617,437	4,962,557	25,234	225,549	8,594,955	441,174	399,896	31,898,251

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.

[a] Eastern and Northern District totals exclude discarded salmon.

[b] The Eshamy, Southwestern, and Montague districts were closed in 1989 due to the Exxon Valdez oil spill.

[c] Eastern and Northern district totals exclude discarded salmon.

Appendix D4.–Aerial escapement indices for pink and chum salmon by district, Prince William Sound, 2011.

Pink Salmon

District	Escapement midpoint	Odd-year escapement goal range	1977–2011 mean index	Observed escapement index [a]	Deviation from midpoint
Eastern	567,500	355,000 – 780,000	567,620	982,837	73.2%
Northern/Unakwik	172,500	110,000 – 235,000	172,129	162,994	-5.5%
Coghill	200,000	125,000 – 275,000	180,710	257,020	28.5%
Northwestern	105,000	65,000 – 145,000	115,174	147,128	40.1%
Eshamy	7,500	5,000 – 10,000	7,373	4,368	-41.8%
Southwestern	162,500	100,000 – 225,000	166,687	232,302	43.0%
Montague	250,000	155,000 – 345,000	288,147	598,918	139.6%
Southeastern	535,000	335,000 – 735,000	628,048	1,537,438	187.4%
Total	2,000,000		2,125,888	3,923,005	96.2%

Chum Salmon

District	Escapement range [b]		1976–2011 mean index	Observed escapement index [a]	Deviation from lower range
Eastern	50,000	and up	108,611	196,933	293.9%
Northern/Unakwik	20,000	and up	39,560	52,474	162.4%
Coghill	8,000	and up	19,758	16,368	104.6%
Northwestern	5,000	and up	14,851	11,447	128.9%
Eshamy [c]	None		83	0	NA
Southwestern [c]	None		3,281	801	NA
Montague [c]	None		5,344	5,499	NA
Southeastern	8,000	and up	33,313	91,218	1040.2%
Total [d]	91,000	and up	216,093	368,440	304.9%

[a] Based on weekly aerial survey counts of 215 index spawning streams in Prince William Sound. This does not represent the total spawning escapement but rather a comparable annual index.

[b] Escapement goal changed to a lower bound sustainable escapement goal (SEG) with no upper bound after the 2005 escapement goal review.

[c] Escapement goal removed in 2003 after review.

[d] Totals exclude districts without escapement goals (Eshamy, Southwestern, and Montague districts).

Appendix D5.–Prince William Sound pink salmon escapement indices by district, 1965–2011.

Year	Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total
					Escapement indices				
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
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
2007	374,723	156,063	197,405	68,667	9,461	116,130	142,769	443,914	1,509,133
2008	193,844	141,396	145,177	141,787	579	70,291	56,999	112,347	862,419
2009	454,960	119,747	125,907	127,261	9,790	239,357	263,770	488,831	1,829,623
2010	490,952	287,570	335,108	211,709	9,585	126,489	144,821	404,862	2,011,096
2011	982,837	162,994	257,020	147,128	4,368	232,302	598,918	1,537,438	3,923,005
					Even-year Average (1966–2010)				
	433,440	172,670	123,096	107,366	4,773	116,351	89,215	251,166	1,298,077
					Odd-year Average (1965–2011)				
	484,868	156,924	185,162	97,820	5,966	135,820	221,195	470,990	1,836,744

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

Appendix D6.–Weekly aerial survey indices of pink salmon escapement by statistical area, Prince William Sound, 2011.

Survey location	Statistical area	Week ending dates [a] 06/25	07/02	07/09	07/16	07/23	07/30	08/06	08/13	08/20	08/27	09/03	09/10	09/17	09/24	10/01	Escapement index [b]
Orca Inlet	221-10		0	3,000	500	14,500	2,500		2,500	4,200		950	0		0	0	27,023
Simpson & Sheep Bay	221-20	0	0	5		55,000	64,000		186,300	60,500			221,520			300	392,646
Port Gravina	221-30	0	1,005	500		91,500	98,500		47,950	129,350			52,400			20	308,342
Port Fidalgo	221-40	0	0	30		27,600	43,000		23,285	33,650			33,200			0	138,924
Valdez Arm	221-50	0	0	750		34,800	18,500		15,775	50,100			22,000			0	115,903
Port Valdez	221-61																0
Eastern District		0	1,005	4,285	500	223,400	226,500		275,810	277,800		950	329,120		0	320	982,837
Columbia & Long Bay	222-10		0	250		0	3,000		4,050	6,050			375			0	10,938
Wells Bay & Unakwik Inlet	222-20		0	15	0	26,500	36,500		100,755	44,750		10,630	1,335			0	111,371
Eaglek Bay	222-30				0	0	14,000		32,050	15,550		3,115					40,684
Northern District			0	265	0	26,500	53,500		136,855	66,350		13,745	1,710			0	162,994
West Side Port Wells	223-10				0	400	20,000		39,000	28,500		4,110					48,356
Esther Passage	223-20				0	0	0		2,500	0		2,425					3,328
College Fiord	223-30				4,000	20,000	40,000		20,000	100,000		200,035					205,336
Coghill District					4,000	20,400	60,000		61,500	128,500		206,570					257,020
Passage Canal & Cochrane	224-10				0	80	36,000		42,000	21,750		4,800					67,382
Culross Passage	224-30				0	0	5,000		1,000	14,500		35,425					37,332
Port Nellie Juan	224-40				0	0	22,500		12,900	24,000		7,100					42,413
Northwestern District				0	80	63,500		55,900	60,250	47,325							147,128
Main Bay	225-20				0	0	0		0	0		250					252
Eshamy Bay	225-30				0	50	500		500	2,000		3,100					4,116
Eshamy District					0	50	500		500	2,000		3,350					4,368
Herring Bay	226-10				0	0	0					75					50
Chenega Is. & Dangerous Pass.	226-20							37,800	45,250	113,500		42,280			10		169,493
East Knight Is.	226-30							10,500	1,000	5,000		4,750			0		25,437
Bainbridge & Latouche	226-40							4,500	2,050	3,500		8,280			20		24,443
Port Bainbridge	226-50							3,000	3,000	10,000		1,500			100		12,880
Southwestern District					0	0	0	55,800	51,300	132,000		56,885			130		232,302
Montague Strait	227-10					0		259,000	164,500	52,900		168,275			3,205		167,782
Green Is.	227-20					0		55,000	53,500	21,080		95,400			330		431,136

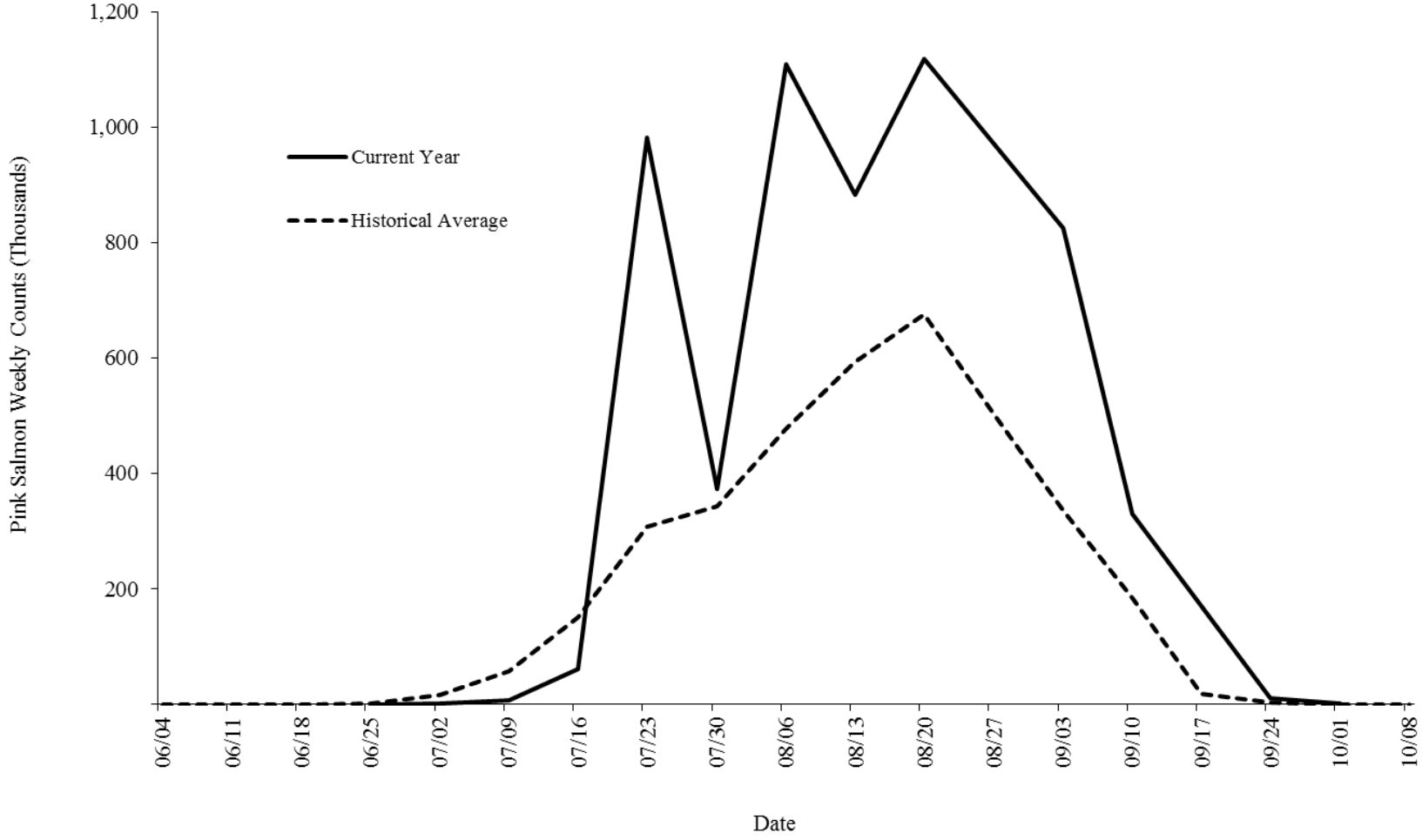
-continued-

Survey location	Statistical area	Week ending dates [a] 06/25	07/02	07/09	07/16	07/23	07/30	08/06	08/13	08/20	08/27	09/03	09/10	09/17	09/24	10/01	Escapement index [b]
Montague District						0		314,000	218,000	73,980		263,675			3,535		598,918
Orca Is. & East Hawkins	228-10				0	0	0		600	2,500		400			0		4,118
Hawkins Cutoff	228-20			2,500	53,020	401,100				97,600		20,450			0		425,898
North Hawkins & Canoe Pass.	228-30			0	4,000	22,000	32,000		75,000	58,500		16,950			120		148,720
Double Bay	228-40		0		0	73,000		175,000		67,700		42,300			0		265,599
Johnstone Point	228-50		0		200	38,000		170,000		58,875		51,000			610		223,465
Port Etches	228-60		0		0	114,000		338,000		102,440		148,500			6,820		469,638
Southeastern District			0	2,500	57,220	648,100	32,000	683,000	75,600	387,615		279,600			7,550		1,537,438
Upper Unakwik Inlet	229-10		0		0	0	0		4,000	3,250		1,000					4,414
Unakwik District			0		0	0	0		4,000	3,250		1,000					4,414
Total of 9 Districts		0	1,005	7,050	61,800	981,950	372,500	1,108,700	883,815	1,118,820	0	825,775	330,830	0	11,215	320	3,927,419

[a] There are 215 streams in the PWS aerial survey program. All streams are flown at least once every 10 days as run timing dictates. During the peak of the run, streams may be flown more frequently for timely escapement data. When more than one survey per week was flown the weekly observation is the average of the 2 counts if observing conditions during both were good, or the maximum of the 2 counts if conditions during the minimum count were poor.

[b] The escapement index is based on 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, escapement indices 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, Prince William Sound, 2011. Historical data includes all odd-year data for 1977–2011.



Appendix D8.–Prince William Sound total chum salmon harvests and escapement indices, including hatchery sales harvests and broodstock, 1965–2011.

	Chum salmon escapements [a]									Hatchery		Common property	Total
Year	Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total	Sales	Brood	harvest [b]	run [c]
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
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

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Year	Chum salmon escapements [a] Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total	Hatchery Sales	Hatchery Brood	Common property harvest [b]	Total run [c]
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
2007	123,814	49,740	14,052	10,778	69	4,095	16,648	60,464	279,660	1,099,730	173,452	2,479,210	4,032,052
2008	74,740	38,798	39,660	28,051	0	3,090	5,085	21,614	211,038	472,905	148,747	4,235,043	5,067,733
2009	84,636	18,578	5,208	14,146	69	9,917	17,733	86,528	236,815	465,427	156,835	2,612,300	3,471,377
2010	91,514	38,382	51,589	30,074	62	10,523	13,010	85,138	320,291	754,805	183,926	3,567,286	4,826,308
2011	196,933	52,474	16,368	11,447	0	801	5,499	91,218	374,740	463,836	183,765	1,438,293	2,460,634
Avg.	98,967	38,258	19,631	13,102	67	2,970	5,616	27,814	206,426	517,097	139,114	1,252,145	1,894,752

[a] Coghill and Northwestern district escapement numbers correspond to current district boundaries. The Northern District total 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. Does not account for wild stock escapement into nonindex streams.

Appendix D9.–Weekly aerial survey indices of chum salmon escapement by statistical area, Prince William Sound, 2011.

Survey location	Statistical area	Week ending dates [a] 06/25	07/02	07/09	07/16	07/23	07/30	08/06	08/13	08/20	08/27	09/03	09/10	09/17	09/24	10/01	Escapement index [b]
Orca Inlet	221-10		0	2,000	0	10,000	0		0	0		0	0		0	0	13,045
Simpson & Sheep Bay	221-20	35	0	0		20,500	16,450		15,505	3,000			30,040			500	63,333
Port Gravina	221-30	30	1,300	5,200		64,500	33,000		9,250	14,500			700			200	67,570
Port Fidalgo	221-40	0	5	110		20,900	19,000		3,700	3,000			3,300			800	32,321
Valdez Arm	221-50	0	0	140		16,500	13,500		0	4,250			400			0	20,665
Port Valdez	221-61	0		0		0			0							0	0
Eastern District		65	1,305	7,450	0	132,400	81,950		28,455	24,750		0	34,440		0	1,500	196,933
Columbia & Long Bay	222-10		0	1,030		4,400	3,000		0	0			0			0	4,010
Wells Bay & Unakwik Inlet	222-20		0	1,000	0	50,000	25,000		12,250	1,000		300	100			0	43,638
Eaglek Bay	222-30				0	0	0		6,750	0		45					4,826
Northern District			0	2,030	0	54,400	28,000		19,000	1,000		345	100			0	52,474
West Side Port Wells	223-10				200	0	4,300		14,000	750		105					11,840
Esther Passage	223-20				0	0	0		0	0		20					12
College Fiord	223-30				0	0	0		4,000	0		3,000					4,516
Coghill District					200	0	4,300		18,000	750		3,125					16,368
Passage Canal & Cochrane	224-10				0	0	6,000		5,200	500		105					8,374
Culross Passage	224-30				0	0	0		0	0		105					69
Port Nellie Juan	224-40				0	0	2,000		1,050	1,000		80					3,005
Northwestern District					0	0	8,000		6,250	1,500		290					11,447
Main Bay	225-20				0	0	0		0	0		0					0
Eshamy Bay	225-30				0	0	0		0	0		0					0
Eshamy District					0	0	0		0	0		0					0
Herring Bay	226-10				0	0	0					0					0
Chenega Is. & Dangerous Pass.	226-20							500	500	0		0			60		575
East Knight Is.	226-30							0	0	0		0			0		0
Bainbridge & Latouche	226-40							0	0	0		0			0		0
Port Bainbridge	226-50							200	200	0		0			0		226
Southwestern District					0	0	0	700	700	0		0			60		801
Montague Strait	227-10					0		3,500	750	1,700		0			100		1,665
Green Is.	227-20					0		1,500	250	260		0			0		3,835

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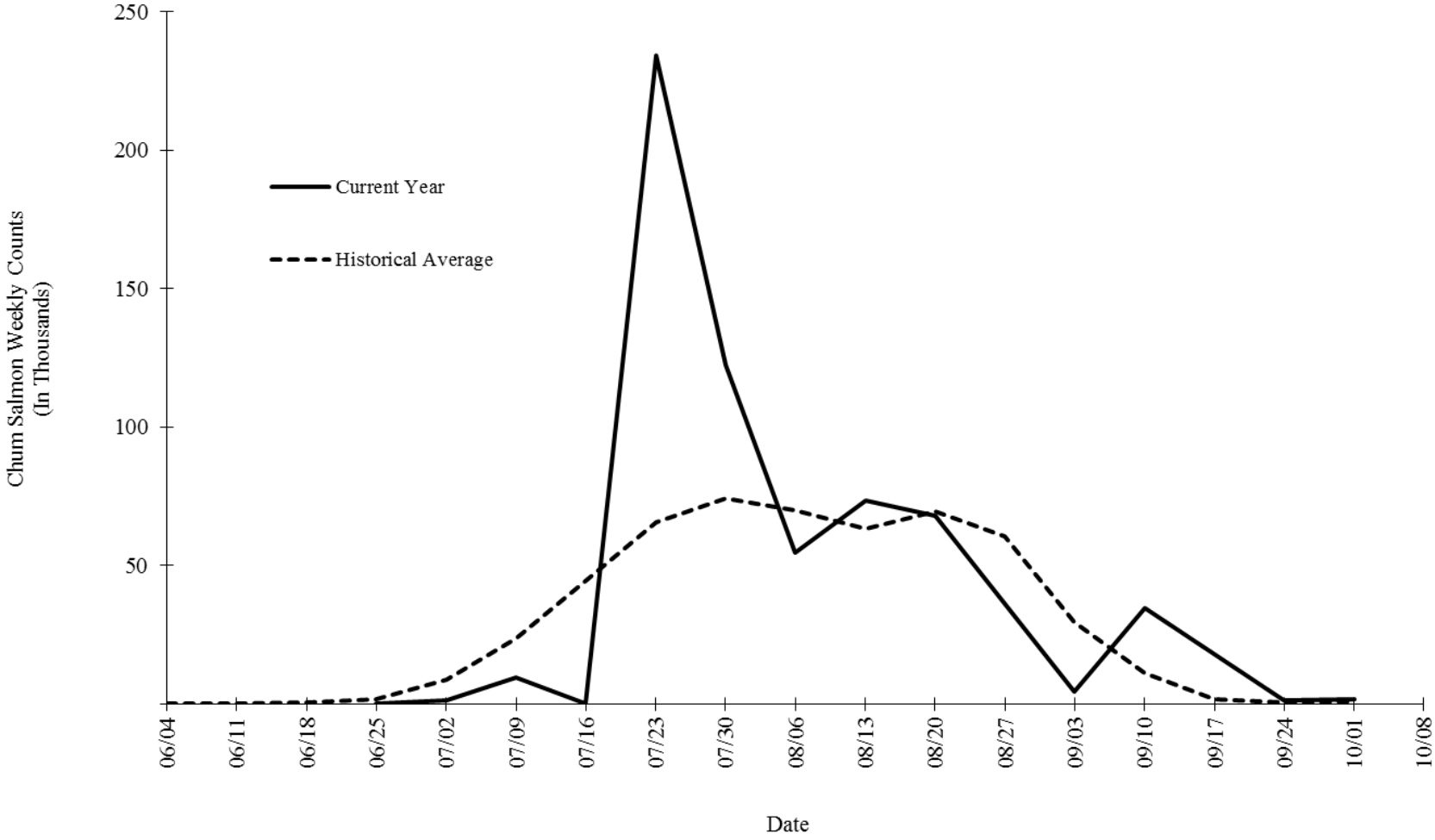
Survey location	Statistical area	Week ending dates [a] 06/25	07/02	07/09	07/16	07/23	07/30	08/06	08/13	08/20	08/27	09/03	09/10	09/17	09/24	10/01	Escapement index [b]
Montague District						0		5,000	1,000	1,960		0			100		5,499
Orca Is. & East Hawkins	228-10				0	0	0		0	0		0			0		0
Hawkins Cutoff	228-20			0	0	2,000				0		635			15		2,402
North Hawkins & Canoe Pass.	228-30			0	0	0	0		0	0		180			0		193
Double Bay	228-40		0		0	4,000		5,000		6,250		0			0		10,513
Johnstone Point	228-50		0		0	9,500		8,000		4,550		0			30		14,050
Port Etches	228-60		50		0	32,000		36,000		27,300		0			1,110		64,061
Southeastern District			50	0	0	47,500	0	49,000	0	38,100		815			1,155		91,218
Upper Unakwik Inlet	229-10		0		0	0	0		0	0		0					0
Unakwik District			0		0	0	0		0	0		0					0
Total of 9 Districts		65	1,355	9,480	200	234,300	122,250	54,700	73,405	68,060		4,574	34,540		1,315	1,500	374,741

[a] There are 215 streams in the PWS aerial survey program. All streams are flown at least once every 10 days as run timing dictates. During the peak of the run, streams may be flown more frequently for timely escapement data. When more than one survey per week was flown the weekly observation is the average of the 2 counts if observing conditions during both were good, or the maximum of the 2 counts if conditions during the minimum count were poor.

[b] The escapement index is based on 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, escapement indices in this table may be used for interannual comparisons, but should not be interpreted as the true escapement.

Appendix D10.–Current year and historical weekly chum salmon escapement performance of index spawning streams, Prince William Sound, 2011.



Appendix D11.–Aerial survey escapement indices of sockeye salmon from selected systems, Prince William Sound, 2011.

System name	Stream number	Week ending dates											
		07/09	07/16	07/23	07/30	08/06	08/13	08/20	08/27	09/03	09/10	09/17	09/24
Billy's Creek	218	75		1,000				250			1		
Wells River	234										3		
Coghill River	322		15,000		6,000								
Red Creek	300												
Park Creek	458						50						
Cochrane Creek	461												
Shrode Creek	476				200			750					
Eshamy River	511												
Gumboot Creek	507												
Bainbridge Creek	630					500	250						
Brizgaloff Creek	623												
Jackpot Creek	608						75	3,000					25
Jackson Creek	613												1
Shelter Bay	662												
Cowpen Creek	242												
Miners River	244		250		1,000		500	750					
Total		75	15,250	1,000	7,200	500	875	4,750			4		26

Note: Counts are obtained in conjunction with the pink and chum salmon aerial survey program. Many of these sockeye salmon systems are difficult to survey by air, thus counts may not represent total live abundance at a particular time.

Appendix D12.–Summary of Prince William Sound commercial purse seine salmon fishery period dates, duration, and dates of news releases issued by district, 2011.

Eastern (221)		Northern (222)		Coghill (223)		Northwestern (224)		Southwestern (226)		Montague (227)		Southeastern (228)		Unakwik (229)[a]		NR [a]
Dates	Hours	Dates	Hours	Dates	Hours	Dates	Hours	Dates	Hours	Dates	Hours	Dates	Hours	Dates	Hours	dates
								05/26–05/29	84							05/25
								05/30–06/01	60							05/28
								06/02–06/05	84							06/01
								06/06–06/08	60							06/04
								06/09–06/12	84							06/08
								06/13–06/15	60					06/13–06/14	36	06/11
								06/16–06/19	84					06/16–06/17	36	06/15
								06/20–06/22	60					06/20–06/21	36	06/18
								06/23–06/26	84					06/23–06/24	36	06/23
								06/27–06/29	60					06/27–06/28	36	06/25
								06/30–07/03	84					06/30–07/01	24	06/29
07/03	14															06/30, 07/02
								07/04–07/06	60					07/04–07/05	24	07/02
07/05	14															07/04
07/07	14							07/07–07/10	84					07/07–07/08	24	07/06
07/09	14															07/08
07/10	14															07/08
								07/11–07/13	60					07/11–07/12	24	07/08
07/12	14															07/11
07/13	14															07/12
07/14	14							07/14–07/17	84					07/14–07/15	24	07/13
07/17	14											07/17	14			07/16
								07/18–07/20	60					07/18–07/19	24	07/16
07/19	14															07/18
07/21	14			07/21	14							07/21	14	07/21–07/22	24	07/20
				07/25	14											07/23
07/26	14											07/26	14			07/25
07/29	14			07/29	14							07/29	14			07/27, 07/28
08/01	14	08/01	14	08/01	14	08/01	14					08/01	14			07/30
08/04	14	08/04	14	08/04	14	08/04	14					08/04	14			08/03
08/06	14	08/06	14			08/06	14	08/06	14			08/06	14			08/05
08/08	14	08/08	14	08/08	14	08/08	14	08/08	14	08/08	14	08/08	14			08/06, 08/07
08/11	14	08/11	14	08/11	14	08/11	14	08/11	14	08/11	14	08/11	14			08/10

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Eastern (221)		Northern (222)		Coghill (223)		Northwestern (224)		Southwestern (226)		Montague (227)		Southeastern (228)		Unakwik (229)		NR [a]
Dates	Hours	Dates	Hours	Dates	Hours	Dates	Hours	Dates	Hours	Dates	Hours	Dates	Hours	Dates	Hours	dates
08/13	14	08/13	14	08/13	14			08/13	14	08/13	14	08/13	14			08/12
08/15	14	08/15	14	08/15	14	08/15	14	08/15	14	08/15	14	08/15	14			08/14
08/17	14	08/17	14	08/17	14	08/17	14	08/17	14	08/17	14	08/17	14			08/16
08/19	14	08/19	14	08/19	14	08/19	14	08/19	14			08/19	14			08/18
08/21	14	08/21	14	08/21	14	08/21	14	08/21	14	08/21	14	08/21	14			08/20
08/23	14	08/23	14	08/23	14	08/23	14	08/23	14	08/23	14	08/23	14			08/22
		08/25	12	08/25	12			08/25	12							08/23
08/26	12	08/26	12	08/26	12	08/26	12	08/26	12	08/26	12	08/26	12			08/23
		08/27	12	08/27	12			08/27	12							08/23
		08/28	12	08/28	12			08/28	12							08/27
08/29	12	08/29	12	08/29	12	08/29	12	08/29	12	08/29	12	08/29	12			08/27
		08/30	12	08/30	12			08/30	12							08/27
		08/31	12	08/31	12			08/31	12							08/27
09/01	12	09/01	12	09/01	12	09/01	12	09/01	12	09/01	12	09/01	12			08/31
09/02	12	09/02	12	09/02	12	09/02	12	09/02	12	09/02	12	09/02	12			08/31
09/03	12	09/03	12	09/03	12	09/03	12	09/03	12	09/03	12	09/03	12			08/31
09/04	12	09/04	12	09/04	12	09/04	12	09/04	12	09/04	12	09/04	12			09/03
09/05	12	09/05	12	09/05	12	09/05	12	09/05	12	09/05	12	09/05	12			09/03
09/06	12	09/06	12	09/06	12	09/06	12	09/06	12	09/06	12	09/06	12			09/03
09/07	12	09/07	12	09/07	12	09/07	12	09/07	12	09/07	12	09/07	12			09/03, 09/07
09/08	12	09/08	12			09/08	12	09/08	12	09/08	12	09/08	12			09/06
09/09	12	09/09	12			09/09	12	09/09	12	09/09	12	09/09	12			09/06
09/10–09/14	108	09/10	16			09/10–09/14	108	09/10–09/14	108	09/10–09/14	108	09/10–09/14	108			09/09
		09/11	16													09/09
		09/12	16													09/09
		09/13	16													09/09
		09/14	16													09/09
09/15–09/20	132	09/15-09/20	132			09/15–09/20	132	09/15–09/20	132	09/15–09/20	132	09/15–09/20	132			09/14
09/21–09/25	108															09/20
09/26–10/02	156															09/30

Source: Additional information relevant to each fishing period, including area opened to fishing, may be found on the applicable news release (NR) available through ADF&G's Commercial Fishing News Release System at http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main

Note: Required parameters for searching the ADF&G Commercial Fishing News Release System include: Effective Year = 2011; Species Group = Salmon; Management Area = Prince William Sound.

[a] Queries made through the ADF&G Commercial Fishing News Release System will provide results sorted by Publication Date, with the corresponding date listed in Appendix D12 under the column heading "NR date".

APPENDIX E

Appendix E1.–Summary of salmon runs to Prince William Sound and Copper River hatcheries, 2011.

Sockeye salmon [a]

Hatchery	BY 2006 Release	BY 2007 Release	2011 Forecast Run [b]	Estimated CPF Contribution	Estimated Sales Harvest Contribution [c]	Broodstock & Unharvested Contribution [d]	Estimated Total Run [e]	Eggs Collected
Gulkana hatchery I	20,860,000	20,640,000	308,684	521,328	0	59,589	580,917	37,700,000
Gulkana hatchery II	1,140,000	1,340,000	11,740		0			1,750,000
Main Bay	8,637,000	9,087,000	935,000	1,278,370	0 [f]	12,810	1,291,180	13,700,000
Total Sockeye Salmon	30,637,000	31,067,000	1,255,424	1,799,698	0	72,399	1,872,097	53,150,000

Coho salmon [a,g]

Hatchery or release site	BY 2008 Release	2011 Forecast Run [b]	Estimated CPF Contribution	Estimated Sales Harvest Contribution [c]	Broodstock & Unharvested Contribution [d]	Estimated Total Run [g]	Eggs Collected
Solomon Gulch	1,915,058	189,124	79,169	38,285	7,145	124,599	2,027,796
Wally Noerenberg	3,490,000	250,000	121,340	678	7,374	129,392	4,000,000
Total Coho Salmon	5,405,058	439,124	200,509	38,963	14,519	253,991	6,027,796

Pink salmon [a]

Hatchery	BY 2009 Release	2011 Forecast Run [b]	Estimated CPF Contribution	Estimated Sales Harvest Contribution [c]	Broodstock & Unharvested Contribution [d]	Estimated Total Run	Eggs Collected
Solomon Gulch	223,083,753	15,504,321	11,303,046	1,997,515	306,629	13,607,190	236,143,480
Armin F. Koernig	149,000,000	9,200,000	1,880,860	987,631	221,476	3,089,967	164,000,000
Wally Noerenberg	136,000,000	9,500,000	4,341,738	2,114,370	252,308	6,708,416	148,000,000
Cannery Creek	139,000,000	7,100,000	3,876,205	324,403	290,508	4,491,116	189,000,000
Total Pink Salmon	647,083,753	41,304,321	21,401,849	5,423,919	1,070,921	27,896,689	737,143,480

Chum salmon [a]

Hatchery or release site	BY 2005 Release	BY 2006 Release	BY 2007 Release	BY 2008 Release	2011 Forecast Run [b]	Estimated CPF Contribution	Estimated Sales Harvest Contribution [c]	Broodstock & Unharvested Contribution [d]	Estimated Total Run	Eggs Collected
Sawmill Bay	15,797,568	–	32,100,000	15,100,000	280,000	38,622	18,932	0	57,554	0
Wally Noerenberg	90,403,140	48,200,000	76,900,000	71,900,000	2,612,000	798,216	229,993	166,741	1,194,950	186,000,000
Port Chalmers	39,815,183	–	38,900,000	38,100,000	624,000	69,345	24,341	0	93,686	0
Mixed[h]	–	80,900,000	–	–	–	425,379	48,682	–	474,061	–
Total Chum Salmon	146,015,891	129,100,000	147,900,000	125,100,000	3,516,000	1,331,562	321,947	166,741	1,820,250	186,000,000

Total-All Salmon						24,733,618	5,784,829	1,324,580	31,843,027	982,321,276

-continued-

[a] 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] Gulkana Hatchery run forecasts were completed by ADF&G; all other hatchery run forecasts were completed by Prince William Sound Aquaculture and Valdez Fisheries Development Association.

[c] Includes whole fish purse seine and raceway harvest, but does not include carcass sales from viable broodstock.

[d] Includes viable broodstock, holding mortalities, watershed spawners, and fish remaining in the bay after all harvests were complete.

[e] Does not include donated, discarded, and confiscated salmon.

[f] Includes Solf Lake marked sockeye salmon.

[g] Includes remote releases at Chenega, Cordova, and Whittier.

[h] The brood year 2006 thermal mark 1,2,3H fed chum salmon fry were released in multiple locations as follows: 23.5 million fry at Walley Noerenberg Hatchery, 15.5 million fry at Sawmill Bay remote release site, and 40.1 million fry at Port Chalmers remote release site.

Appendix E2.–Sales harvests of salmon by species from private not-for-profit hatcheries in Prince William Sound as reported on fish tickets, 1977–2011.

Year	Hatchery [a]	Sockeye Sales[b]	Sockeye Brood Sales[c]	Coho Sales[b]	Coho Brood Sales[c]	Pink Sales[b]	Pink Brood Sales[c]	Chum Sales[b]	Chum Brood Sales[c]	Total
1977	AFK					15,545				15,545
1978	AFK					114,188				114,188
1979	AFK					223,748				223,748
1980	AFK, N					346,728		6		346,734
1981	AFK					707,037		118		707,155
1982	AFK					1,354,732				1,354,732
1983	AFK					616,963				616,963
1984	AFK, SGH					415,393		4,886		420,279
1985	AFK, SGH					1,209,960		3,840		1,213,800
1986	AFK, SGH			2,156		905,464		20,683		928,303
1987 [d]	AFK, SGH, E, CCH			7,015		2,691,190		2,549		2,700,754
1988	AFK, SGH, E			6,110		1,632,701		42,694		1,681,505
1989 [e]	AFK, SGH, WNH, CCH, MBH			52,307		7,812,373		131,362		7,996,042
1990	AFK, SGH, WNH, CCH			14,199		8,732,658		24,554		8,771,411
1991	AFK, SGH, WNH, CCH			52,625		5,955,561		13,471		6,021,657
1992	AFK, SGH, WNH, CCH, MBH	163,086		73,530		3,049,394		57,392		3,343,402
1993	AFK, SGH, WNH, CCH, MBH	113,738		3,259		2,212,403		475,148		2,804,548
1994	AFK, SGH, WNH, CCH, MBH	79,541		22,454		10,521,439		380,365		11,003,799
1995	AFK, SGH, WNH, CCH, MBH	63,326		13,248		5,100,819		231,539		5,408,932
1996 [f]	AFK, SGH, WNH, CCH, MBH	86,911		38,945		8,291,205		1,066,683		9,483,744
1997	AFK, SGH, WNH, CCH, MBH,GH	266,335		2,933		9,854,675		811,179		10,935,122
1998	AFK, SGH, WNH, CCH, MBH,GH	148,288		20,199		8,825,226		519,215		9,512,928
1999	AFK, SGH, WNH, CCH, GH	28,769		0		13,130,211		777,180		13,936,168
2000	AFK, SGH, WNH, CCH, MBH	218		1		11,125,819		1,729,876		12,855,914
2001	AFK, SGH, WNH, CCH, MBH	43,073		21,781		12,914,314		936,028		13,915,196
2002	AFK, SGH, WNH, CCH, MBH	93,722		1		10,787,752		2,580,926		13,462,402
2003	AFK, SGH, WNH, CCH, MBH	366,770		0	19,782	12,426,375	730,599	1,540,227	22,792	15,083,753
2004	AFK, SGH, WNH, CCH, MBH	279,902		0		11,825,224		528,676		12,633,802
2005	AFK, SGH, WNH, CCH, MBH	207,605		27,417	60,676	12,529,283	1,246,992	535,783	98,695	14,607,756

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Year	Hatchery [a]	Sockeye Sales[b]	Sockeye Brood Sales[c]	Coho Sales[b]	Coho Brood Sales[c]	Pink Sales[b]	Pink Brood Sales[c]	Chum Sales[b]	Chum Brood Sales[c]	Total
2006 [g]	AFK, SGH, WNH, CCH, MBH	348,156		17,198	5,090	9,727,499	239,905	824,558	22,105	10,917,531
2007	AFK, SGH, WNH, CCH, MBH	321,330	0	11,954	17,690	11,990,924	912,585	1,099,730	173,452	14,354,213
2008	AFK, SGH, WNH, CCH	0	0	267	22,356	6,563,243	1,076,140	478,690	162,643	8,303,339
2009	AFK, SGH, WNH, CCH, MBH	133,873	0	17,424	0	6,760,475	1,107,515	608,541	143,114	8,770,942
2010	AFK, SGH, WNH, CCH, MBH	0	0	43,878	754	4,739,891	725,805	594,044	155,912	6,260,284
10-Year Average		179,443	0	13,992	18,050	10,026,498	862,792	972,720	111,245	11,830,922
2011	AFK, SGH, WNH, CCH, MBH	0	0	41,497	2,511	5,403,677	943,487	330,064	148,255	6,869,491

[a] Hatcheries abbreviations are as follows:

N = NERKA Inc.

SGH = Solomon Gulch Hatchery (VFDA)

AFK = Armin F. Koernig (PWSAC) (formerly Port San Juan Hatchery)

CCH = Cannery Creek (PWSAC) (formerly operated by ADF&G)

E = Esther Hatchery (PWSAC) (renamed WNH in 1989)

WNH = Wally Noerenberg Hatchery (PWSAC) (formerly Esther Hatchery)

MBH = Main Bay (PWSAC) (formerly operated by ADF&G)

GH = Gulkana Hatchery (Crosswind Lake Weir) (formerly operated by ADF&G)

[b] Salmon harvested to generate revenues to offset operating costs. Does not include broodstock sales.

[c] Includes all reported broodstock sales (carcasses from eggtakes and roe extraction).

[d] PWSAC administered a sales harvest at the state owned Cannery Creek hatchery. The majority of coho salmon sold were carcasses and surplus brood fish from the Solomon Gulch hatchery.

[e] PWSAC administered a sales harvest at the state owned Main Bay Hatchery to harvest surplus chum salmon from the closure of the common property fishery.

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

[g] 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, 1998–2011.

Brood Year	Return Year	Fry Release	Hatchery Contribution to Broodstock Esc. [a]	Total Sales Harvest	Hatchery Contribution to Sales Harvest	Hatchery Contribution to the CCPF [b]	Total Hatchery Return	Estimated Marine Survival
Solomon Gulch Hatchery								
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%
2005	2007	216,921,213	294,054	3,967,798	3,967,798	19,586,090	23,847,942	10.99%
2006	2008	220,408,302	283,434	4,267,840	4,226,915	10,946,866	15,457,215	7.01%
2007	2009	199,639,850	478,100	742,660	714,431	29,942	1,222,473	0.61%
2008	2010	226,202,628	225,834	2,163,386	2,087,212	16,084,863	18,397,909	8.13%
2009	2011	223,083,753	306,629	2,113,247	1,997,515	11,302,997	13,607,141	6.10%
2010	2012	222,603,439						
Armin F. Koernig Hatchery								
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%
2005	2007	159,616,613	265,216	3,040,328	3,045,323	12,449,638	15,760,177	9.87%
2006	2008	179,000,000	193,982	893,600	708,534	5,209,753	6,112,269	3.41%
2007	2009	144,000,000	252,120	4,007,244	4,000,465	6,290,036	10,542,621	7.32%
2008	2010	145,000,000	188,604	704,355	699,931	12,880,255	13,768,790	9.50%
2009	2011	149,000,000	221,476	1,002,464	987,631	1,880,604	3,089,711	2.07%
2010	2012	148,000,000						

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Brood Year	Return Year	Fry Release	Hatchery Contribution to Broodstock Esc. [a]	Total Sales Harvest	Hatchery Contribution to Sales Harvest	Hatchery Contribution to the CCPF [b]	Total Hatchery Return	Estimated Marine Survival
Wally Noerenberg Hatchery								
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%
2005	2007	84,795,328	236,438	3,472,456	3,456,332	3,831,328	7,524,098	8.87%
2006	2008	77,200,000	202,568	1,265,683	1,068,239	7,429,854	8,700,661	11.27%
2007	2009	136,000,000	242,345	1,343,506	1,316,027	1,664,792	3,223,164	2.37%
2008	2010	128,000,000	204,202	1,573,523	1,573,523	15,540,309	17,318,034	13.53%
2009	2011	136,000,000	252,308	2,114,370	2,094,128	4,341,563	6,687,999	4.92%
2010	2012	136,000,000						
Cannery Creek Hatchery								
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%
2005	2007	138,157,160	348,619	1,443,191	1,443,191	5,638,233	7,430,043	5.38%
2006	2008	141,000,000	206,926	1,270,289	1,056,676	9,749,992	11,013,594	7.81%
2007	2009	131,000,000	340,864	667,071	644,852	2,275,948	3,261,664	2.49%
2008	2010	141,000,000	429,115	374,801	379,225	18,971,438	19,779,778	14.03%
2009	2011	139,000,000	290,508	324,403	324,403	3,876,149	4,491,060	3.23%
2010	2012	135,000,000						

[a] Includes broodstock (for egg take and roe extraction), ground fish, fish given away, holding mortalities, watershed spawners, and fish remaining in the bay after all harvests were complete.

[b] Commercial common property fisheries.

Appendix E4.–Historical harvest contributions, coded wire tag (CWT) and thermally marked otolith releases, and total returns of pink salmon to all hatcheries combined, 1977–2011.

Brood Year	Return Year	Fry Release [b]	CWT/Otolith Applied to Fry Release [c] [d]	Hatchery Contributions[a] Hatchery Cost Recovery Harvest [d]	Commercial Common Property Harvest	Other Harvests [e]	Broodstock Escapement [f]	Total Return	Estimated Marine Survival
1975	1977	1,000,000	0	7,745	4,000	0	16,112	27,857	2.79%
1976	1978	11,010,577	0	114,188	0	0	40,432	154,620	1.40%
1977	1979	16,950,784	0	223,748	275,000	0	54,207	552,955	3.26%
1978	1980	25,600,739	0	346,728	1,092,048	0	145,061	1,583,837	6.19%
1979	1981	24,194,000	0	707,037	1,430,747	0	268,501	2,406,285	9.95%
1980	1982	91,076,000	0	1,354,732	4,303,900	0	239,945	5,898,577	6.48%
1981	1983	91,951,000	0	686,963	3,338,366	0	258,062	4,283,391	4.66%
1982	1984	115,107,533	0	415,393	3,313,423	0	341,259	4,070,075	3.54%
1983	1985	116,336,000	0	1,209,960	6,259,923	0	640,340	8,110,223	6.97%
1984	1986	191,306,265	0	905,464	5,662,315	0	466,471	7,034,250	3.68%
1985	1987	231,538,713	646,561	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	8,748,000	0	824,302	11,205,003	5.12%
1987	1989	532,045,966	939,498	5,767,911	10,561,099	0	856,927	19,052,529 [g]	3.58%
1988	1990	507,688,297	1,074,099	6,691,160	24,379,475	0	749,910	33,315,579 [g]	6.56%
1989	1991	615,139,948	1,128,899	5,201,860	20,900,355	3,573,805	1,324,255	32,750,955 [g]	5.32%
1990	1992	603,519,636	1,091,403	2,626,248	4,345,805	30,290	789,880	8,579,332 [g]	1.42%
1991	1993	495,700,200	823,128	1,544,727	2,392,162	14,648	921,073	6,177,575 [g]	1.25%
1992	1994	567,320,470	950,976	7,613,582	21,173,273	56,396	1,422,306	35,100,601 [g]	6.19%
1993	1995	488,575,978	941,811	4,703,457	9,072,469	78,020	1,154,635	14,475,842 [g]	2.96%
1994	1996	613,158,229	1,017,782	5,363,551	14,502,198	0	544,531	24,284,522 [g]	3.96%
1995	1997	651,675,427	1,079,354	9,780,451	14,893,055	226	1,974,521	26,648,253	4.09%
1996	1998	484,525,934	484,525,934	8,666,960	16,145,999	6,931	3,008,251	27,828,141	5.74%
1997	1999	542,356,070	542,356,934	12,988,616	24,838,848	237,318	4,529,055	42,593,837	7.85%
1998	2000	602,128,903	602,128,903	11,055,419	22,099,196	728	1,293,409	34,448,752	5.72%
1999	2001	586,607,038	586,607,038	12,765,960	15,625,341	1,204	1,647,425	30,039,930	5.12%
2000	2002	621,063,728	621,063,728	10,703,126	7,926,335	992	1,497,115	20,127,568	3.24%
2001	2003	603,412,393	603,412,393	12,422,544	34,177,600	606	4,306,418	50,907,168	8.44%
2002	2004	607,943,252	607,943,252	11,825,224	8,835,385	652	1,951,671	22,612,932	3.72%
2003	2005	638,600,000	638,600,000	12,529,283	35,111,009	272	5,013,716	52,654,280	8.25%
2004	2006	564,053,077	564,053,077	9,726,272	10,010,169	384	1,694,390	21,431,215	3.80%
2005	2007	599,490,314	599,490,314	11,888,945	41,505,289	653	1,144,327	54,539,214	9.10%
2006	2008	617,608,302	617,608,302	7,060,364 [h]	33,336,465	715	886,910 [i]	41,284,454	6.68%
2007	2009	610,639,859	610,639,859	6,675,775 [h]	10,260,718	1,295	1,313,429 [i]	18,251,217	2.99%
2008	2010	640,202,628	640,202,628	4,739,891 [h]	65,725,418	1,152	1,047,755 [i]	71,514,216	11.17%
2009	2011	641,603,439	641,603,439	5,403,677 [h]	21,401,314	767	1,070,921 [i]	27,876,679	4.34%

-continued-

[a] 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 do not include harvest from the Bering and Copper River Districts.

[b] Data for brood years 1985 and 1987–1995 provided by the ADF&G CWT project; Prince William Sound Aquaculture (PWSAC) provided data for all other years.

[c] Brood years 1985–1995 pink salmon were part of the ADF&G CWT project; after 1995, all hatchery pink salmon were thermally marked.

[d] Data for brood years 1985–1995 are from the ADF&G CWT project; after 1995, data obtained from otolith analysis.

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

[f] Beginning in 1994, broodstock numbers include fish processed for roe. Broodstock escapements prior to 1997 may not include fish remaining in the bay and watershed spawners and may underestimate broodstock escapement.

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

[h] Hatchery cost recovery is the whole fish purse seine and raceway effort and does not include carcass sales from viable broodstock.

[i] Broodstock escapement includes broodstock sales (carcasses from eggtake), holding mortalities, watershed spawners, and fish remaining in the bay after all harvests were complete.

Appendix E5.–Historical harvest contributions, thermally marked otolith releases, and total returns of coho salmon to Prince William Sound hatcheries, brood years 1988–2011.

Solomon Gulch Hatchery

Brood Year	Return Year	Fry Release	Hatchery Contribution to the CCPF [a]	Hatchery Contribution to Subs/PU Harvest [b]	Hatchery Contribution to Sport Harvest [c]	Hatchery Contribution to Broodstock Esc. [d]	Hatchery Contribution to Cost Recovery. [e]	Total Hatchery Return	Estimated Marine Survival
1988	1991	807,153	4,157	24	10,536	1,461	39,176	55,354	6.86%
1989	1992	993,633	5,000	23	17,789	2,651	26,776	52,239	5.26%
1990	1993	1,226,044	102	20	12,979	1,658	2,343	17,102	1.39%
1991	1994	461,388	0	17	19,012	11,376	22,091	52,496	11.38%
1992	1995	915,087	78,006	15	37,474	16,045	21,592	153,132	16.73%
1993	1996	1,325,316	87,360	6	43,467	21,772	13,713	166,318	12.55%
1994	1997	1,875,823	47,500	7	36,520	13,605	9,818	107,450	5.73%
1995	1998	1,315,183	23,717	15	37,126	3,880	19,068	83,806	6.37%
1996	1999	1,748,486	67,232	28	36,310	2,541	12,679	118,790	6.79%
1997	2000	1,863,528	342,490	20	68,014	1,625	24,887	437,036	23.45%
1998	2001	1,625,599	147,000	17	60,201	1,778	25,595	234,591	14.43%
1999	2002	1,519,328	25,017	0	29,945	21,323	8,000	84,285	5.55%
2000	2003	1,821,889	63,132	17	78,405	17,379	4,087	163,020	8.95%
2001	2004	1,275,145	26,711	31	58,489	2,585	9,897	97,713	7.66%
2002	2005	1,442,274	129,966	19	67,291	2,102	30,686	230,064	15.95%
2003	2006	1,968,366	210,382	12	61,169	2,455	16,172	290,190	14.74%
2004	2007	1,511,592	58,299	14	74,853	3,564	17,748	154,478	10.22%
2005	2008	1,973,604	154,383	2	58,689	3,101	22,356	238,531	12.09%
2006	2009	1,828,100	914	14	43,042	3,955	17,424	65,349	3.57%
2007	2010	1,525,927	2,918	58	70,877	2,847	43,722	120,422	7.89%
2008	2011	1,915,058	28,412	369	50,388	7,145	38,285	124,599	6.51%

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Wally Noerenberg Hatchery

Brood Year	Return Year	Fry Release	Hatchery Contribution to the CCPF [a]	Hatchery Contribution to Subs/PU Harvest [b]	Hatchery Contribution to Sport Harvest [c]	Hatchery Contribution to Broodstock Esc. [d]	Hatchery Contribution to Cost Recovery. [e]	Total Hatchery Return	Estimated Marine Survival
1988	1991	2,397,419	71,947	20	4,708	6,469	13,990	97,134	4.05%
1989	1992	2,223,282	114,165	22	1,411	0	46,121	161,719	7.27%
1990	1993	1,831,198	39,658	45	1,608	4,857	1,532	47,700	2.60%
1991	1994	1,303,077	81,396	28	3,061	5,439	13,258	103,183	7.92%
1992	1995	1,483,936	34,680	13	1,690	4,964	5,152	46,498	3.13%
1993	1996	2,063,934	26,245	14	3,851	4,081	39,506	73,697	3.57%
1994	1997	275,406	5,626	20	2,084	5,674	0	13,404	4.87%
1995	1998	203,651	2,800	34	3,327	1,541	0	7,702	3.78%
1996	1999	407,715	338	38	2,658	2,533	0	5,567	1.37%
1997	2000	1,068,338	111,256	24	7,963	2,551	0	121,794	11.40%
1998	2001	375,670	2,488	60	11,815	3,277	0	17,640	4.70%
1999	2002	219,967	3,215	0	18,898	2,389	0	24,502	11.14%
2000	2003	485,834	9,624	37	17,459	1,314	0	28,433	5.85%
2001	2004	920,858	9,333	26	14,899	150	637	25,045	2.72%
2002	2005	989,383	53,257	144	28,220	11,450	19	93,089	9.41%
2003	2006	1,057,922	113,997	43	16,531	17,079	0	147,650	13.96%
2004	2007	1,052,897	84,867	22	27,216	2,129	11,975	126,209	11.99%
2005	2008	1,850,000	116,641	42	13,665	2,609	267	133,224	7.20%
2006	2009	1,930,000	20,209	50	13,157	2,064	0	35,480	1.84%
2007	2010	226,000	5,215	30	20,563	1,399	0	27,207	12.04%
2008	2011	3,490,000	95,267	282	25,791	7,374	678	129,392	3.71%

[a] Commercial common property fishery (CCPF).

[b] Subsistence and personal use fisheries.

[c] No hatchery contribution sampling occurs in the sport fishery. These estimates apply a fixed proportion of Solomon Gulch Hatchery or Wally Noerenberg Hatchery production to sport harvest by reporting area.

[d] 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.

[e] Hatchery cost recovery is the whole fish purse seine and raceway effort and does not include carcass sales from viable broodstock.

Appendix E6.–Sockeye salmon hatchery and wild stock contributions to the Copper River drift gillnet commercial common property fishery by period, 2011.

Dates	Period	Hours	Origin: Gulkana Number	Gulkana Percent	Main Bay Number	Main Bay Percent	Hatchery Total	Wild Number	Wild Percent	Total
05/16 - 05/16	01 [a]	12	0	0.0%	0	0.0%	0	101,933	100.0%	101,933
05/19 - 05/19	02 [a]	12	0	0.0%	0	0.0%	0	114,774	100.0%	114,774
05/23 - 05/23	03 [a]	12	0	0.0%	0	0.0%	0	234,532	100.0%	234,532
05/26 - 05/27	04 [a]	36	0	0.0%	0	0.0%	0	168,984	100.0%	168,984
05/30 - 05/31	05 [a]	36	0	0.0%	0	0.0%	0	133,565	100.0%	133,565
06/02 - 06/03	06 [a]	36	0	0.0%	0	0.0%	0	84,747	100.0%	84,747
06/06 - 06/07	07 [a]	36	0	0.0%	0	0.0%	0	85,515	100.0%	85,515
06/09 - 06/10	08 [a]	36	0	0.0%	0	0.0%	0	64,884	100.0%	64,884
06/13 - 06/14	09 [a]	24	4,286	8.2%	0	0.0%	4,286	48,301	91.9%	52,587
06/16 - 06/17	10 [b]	24	6,679	18.5%	0	0.0%	6,679	29,467	81.5%	36,146
06/20 - 06/21	11	24	19,275	33.3%	602	1.0%	19,877	37,948	65.6%	57,825
06/23 - 06/24	12	24	20,900	34.4%	1,959	3.2%	22,860	37,881	62.4%	60,741
06/27 - 06/28	13	36	67,175	43.6%	3,277	2.1%	70,452	83,559	54.3%	154,011
06/30 - 07/01	14	36	80,240	59.1%	0	0.0%	80,240	55,438	40.9%	135,678
07/04 - 07/05	15	36	149,106	71.8%	0	0.0%	149,106	58,665	28.2%	207,771
07/07 - 07/08	16	36	43,743	50.0%	0	0.0%	43,743	43,743	50.0%	87,486
07/11 - 07/12	17	36	36,506	53.1%	0	0.0%	36,506	32,212	46.9%	68,718
07/14 - 07/15	18	36	29,192	42.9%	0	0.0%	29,192	38,922	57.1%	68,114
07/18 - 07/19	19	36	19,343	31.3%	0	0.0%	19,343	42,556	68.8%	61,899
07/21 - 07/22	20	36	6,701	19.8%	0	0.0%	6,701	27,155	80.2%	33,856
07/25 - 07/26	21	36	3,729	21.3%	0	0.0%	3,729	13,796	78.7%	17,525
07/28 - 07/29	22 [c]	36	861	8.0%	0	0.0%	861	9,841	92.0%	10,702
08/01 - 08/02	23 [c]	36	0	0.0%	0	0.0%	0	1,222	100.0%	1,222
08/04 - 08/05	24 [d]	36	0	0.0%	0	0.0%	0	830	100.0%	830
08/08 - 08/09	25 [d]	36	0	0.0%	0	0.0%	0	3,855	100.0%	3,855
08/11 - 08/12	26 [d]	36	0	0.0%	0	0.0%	0	2,405	100.0%	2,405
08/15 - 08/16	27 [d]	24	0	0.0%	0	0.0%	0	761	100.0%	761
08/22 - 08/23	28 [d]	24	0	0.0%	0	0.0%	0	254	100.0%	254
08/29 - 08/30	29 [d]	24	0	0.0%	0	0.0%	0	55	100.0%	55
09/05 - 09/06	30 [d]	24	0	0.0%	0	0.0%	0	0	100.0%	0
09/08 - 09/09	31 [d]	24	0	0.0%	0	0.0%	0	12	100.0%	12
09/12 - 09/13	32 [d]	24	0	0.0%	0	0.0%	0	4	100.0%	4
09/15 - 09/16	33 [d]	24	0	0.0%	0	0.0%	0	288	100.0%	288
09/19 - 09/20	34 [d]	24	0	0.0%	0	0.0%	0	0	100.0%	0
09/22 - 09/23	35 [d]	24	0	0.0%	0	0.0	0	0	1.0	0
09/26 - 09/27	36 [d]	24	0	0.0%	0	0.0	0	0	1.0	0
09/29 - 09/30	37 [d]	24	0	0.0%	0	0.0	0	0	1.0	0
Total			487,736	23.8%	5,839	0.3%	493,574	1,558,105	75.9%	2,051,679

[a] No samples collected by ADF&G; percentages based on linear interpolation of Gulkana Hatchery from periods 10–15.

[b] Sample included one specimen that was determined to be marked by a non-PWS hatchery.

[c] No samples collected by ADF&G; percentages based on linear interpolation of Gulkana Hatchery from periods 15–21.

[d] No samples collected by ADF&G; entire harvest attributed to wild stocks.

Appendix E7.–Gulkana Hatchery sockeye salmon harvests and total contribution, 1977–2011.

	Hatchery Contributions				Total
Year	Commercial[a]	Subsistence/ Personal Use[b]	Sport[c]	Broodstock/ Escapement[d]	Hatchery Run
1977	183	12	0	122	318
1978	720	74	1	1,300	2,095
1979	900	393	6	3,425	4,724
1980	350	589	22	4,250	5,211
1981	3,600	478	9	4,650	8,736
1982	3,600	322	4	5,740	9,666
1983	6,600	1,167	14	8,396	16,177
1984	5,318	450	9	4,846	10,623
1985	31,955	2,121	73	24,021	58,170
1986	30,404	2,667	113	25,408	58,592
1987	47,347	3,071	182	25,505	76,105
1988	92,552	9,351	260	94,563	196,726
1989	175,643	13,734	532	120,872	310,781
1990	64,917	7,203	209	55,431	127,760
1991	102,009	9,449	220	63,400	175,078
1992	87,120	11,455	257	84,000	182,832
1993	149,844	14,812	370	17,600	182,625
1994	94,656	9,157	158	40,736	144,707
1995	147,844	15,289	342	45,733	209,208
1996	314,916	16,144	849	151,762	483,671
1997	266,724	8,857	189	92,745	368,515
1998	524,985	31,824	1,038	106,954	664,801
1999	945,287	42,281	868	109,663	1,098,099
2000	366,372	34,113	1,006	75,385	476,876
2001	196,326	35,699	356	75,620	308,001
2002	335,451	28,305	548	62,361	426,665
2003	138,056	19,513	253	45,024	202,845
2004	59,540	27,117	163	6,618	93,438
2005	95,897	28,031	200	92,455	216,583
2006	163,691	26,860	163	97,192	287,906
2007	94,232	9,656	89	28,648	132,625
2008	21,669	19,175	207	44,865	85,916
2009	59,948	29,355	335	43,409	133,047
2010	207,915	68,180	533	157,980	434,608
10-Year Average	137,272	29,189	285	65,417	232,163
2011	487,916	33,113	299	59,589	580,917

[a] Commercial contributions are from strontium marks (2004-current), coded wire tags (1995–2003), and fry to adult survival, age composition at return, and exploitation rate (1977–1994).

[b] Subsistence and personal use contributions are from strontium marks (2004-current), coded wire tags (1995–2003), and fry to adult survival, age composition at return, and exploitation rate (1977–1994).

[c] Sport fishery contributions are the sum of sport harvest from Copper River mainstem and Gulkana River multiplied by Gulkana Hatchery contribution percentage to the Glennallen subsistence and Chitina personal use fisheries for that year.

[d] Broodstock and escapement contributions are based on survey of release sites and hatchery reporting.

Appendix E8.–Gulkana Hatchery salmon fry releases, 1974–2011.

	Chinook salmon			Sockeye salmon					
Release Year	Monsoon Lake	Gulkana River (E. Fork)	Total Chinook salmon released	Gulkana I&II (Paxson Lake)	Summit Lake	Crosswind Lake	Harding Lake	Ten Mile Lake	Total sockeye salmon released
1974				79,691				99,620	179,311
1975				785,110				101,446	886,556
1976				626,007				101,600	727,607
1977				516,326				112,248	628,574
1978				479,864				104,058	583,922
1979				940,666				99,589	1,040,255
1980				1,105,397	1,340,660				2,446,057
1981				3,388,682	1,860,491				5,249,173
1982				5,985,270	2,047,947				8,033,217
1983				5,470,056	4,312,628				9,782,684
1984				6,079,838	4,739,293				10,819,131
1985				10,130,942	9,296,882	1,419,095			20,846,919
1986				8,586,509	14,999,085				23,585,594
1987				9,905,907	12,491,826				22,397,733
1988		1,388	1,388	6,389,963	12,026,642	2,487,396	503,375		21,407,376
1989	15,977		15,977	10,870,655	12,004,491	3,130,373	515,046		26,520,565
1990				14,127,313	6,445,011	4,906,005	505,305		25,983,634
1991	26,209		26,209	11,288,721	6,109,833	5,469,759			22,868,313
1992	30,488	34,842	65,330	11,640,000	7,049,000	8,420,000			27,109,000
1993				5,866,230	2,661,549	5,627,346			14,155,125
1994				11,008,964	7,637,009	9,144,382			27,790,355
1995				12,345,894	7,418,311	9,973,600			29,737,805
1996				12,241,896	8,400,148	9,732,911			30,374,955
1997				12,286,366	8,987,213	10,516,107			31,789,686
1998				11,589,845	10,162,655	10,512,299			32,264,799
1999				11,551,836	9,191,217	9,984,392			30,727,445
2000				10,705,795	3,300,504	8,331,080			22,337,379
2001				7,870,334	493,516	5,585,665			13,949,515
2002				11,922,685	5,805,231	8,174,754			25,902,670
2003				11,284,330	6,599,519	8,360,966			26,244,815
2004				12,408,512	6,574,962	8,359,115			27,342,589
2005				3,308,065	0	3,703,295			7,011,360
2006				5,523,920	4,681,325	10,017,211			20,222,456
2007				6,000,000	6,000,000	10,000,000			22,000,000
2008				6,000,000	6,000,000	9,980,000			21,980,000
2009				6,000,000	6,000,000	10,000,000			22,000,000
2010				6,010,000	6,000,000	10,000,000			22,010,000
10-Year Average				7,632,785	4,815,455	8,418,101			20,866,341
2011				6,000,000	5,980,000	10,000,000			21,980,000

Appendix E9.–Sockeye salmon hatchery and wild stock contributions to the Coghill District commercial common property fishery by period, 2011.

Dates			Period	Hours		Origin									
						Gulkana[a]		Main Bay		Solf Lake		Hatchery	Wild		
						Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
05/23	-	05/25	01	60	[b]	ND	ND	7	30.0%	0	0.0%	7	16	70.0%	23
05/26	-	05/27	02	36	[b]	ND	ND	2	30.0%	0	0.0%	2	5	70.0%	7
05/29	-	05/31	03	60	[b]	ND	ND	197	30.0%	0	0.0%	197	459	70.0%	656
06/02	-	06/04	04	60	[c]	ND	ND	314	30.0%	0	0.0%	314	732	70.0%	1,046
06/06	-	06/07	05	36		ND	ND	1,041	75.4%	0	0.0%	1,041	339	24.6%	1,380
06/09	-	06/11	06	60		ND	ND	2,572	71.9%	0	0.0%	2,572	1,007	28.1%	3,579
06/13	-	06/14	07	36		ND	ND	3,409	74.1%	0	0.0%	3,409	1,191	25.9%	4,600
06/16	-	06/18	08	60		ND	ND	12,158	72.6%	0	0.0%	12,158	4,593	27.4%	16,751
06/20	-	06/21	09	36		ND	ND	17,119	83.0%	0	0.0%	17,119	3,518	17.0%	20,637
06/23	-	06/25	10	60		ND	ND	43,038	89.6%	0	0.0%	43,038	5,004	10.4%	48,042
06/27	-	06/29	11	60		ND	ND	25,612	81.9%	0	0.0%	25,612	5,655	18.1%	31,267
06/30	-	07/03	12	84		ND	ND	13,397	75.0%	0	0.0%	13,397	4,466	25.0%	17,862
07/04	-	07/06	13	60		ND	ND	7,761	53.9%	0	0.0%	7,761	6,626	46.1%	14,387
07/07	-	07/10	14	84		ND	ND	7,718	47.4%	0	0.0%	7,718	8,576	52.6%	16,294
07/11	-	07/13	15	60		ND	ND	3,861	60.3%	0	0.0%	3,861	2,537	39.7%	6,398
07/14	-	07/17	16	84		ND	ND	2,819	48.9%	0	0.0%	2,819	2,942	51.1%	5,761
07/18	-	07/20	17	60		ND	ND	4,426	57.9%	0	0.0%	4,426	3,219	42.1%	7,645
07/21	-	07/21	18	14	[d]	ND	ND	163	57.9%	0	0.0%	163	119	42.1%	282
07/25	-	07/25	19	14	[d]	ND	ND	2	57.9%	0	0.0%	2	2	42.1%	4
07/29	-	07/29	20	14	[d]	ND	ND	4	57.9%	0	0.0%	4	3	42.1%	7
08/01	-	08/01	21	14		ND	ND	0	0.0%	0	0.0%	0	0	0.0%	0
08/04	-	08/04	22	14	[e]	ND	ND	0	0.0%	10	10.5%	10	94	100.0%	94
08/08	-	08/08	23	14	[e]	ND	ND	0	0.0%	0	0.0%	0	21	100.0%	21
08/11	-	08/11	24	14	[e]	ND	ND	0	0.0%	0	0.0%	0	303	100.0%	303
08/13	-	08/13	25	14	[e]	ND	ND	0	0.0%	0	0.0%	0	468	100.0%	468
08/15	-	08/15	26	14	[e]	ND	ND	0	0.0%	0	0.0%	0	414	100.0%	414
08/17	-	08/17	27	14	[e]	ND	ND	0	0.0%	0	0.0%	0	408	100.0%	408
08/19	-	08/19	28	14	[c]	ND	ND	0	0.0%	0	0.0%	0	337	100.0%	337
08/21	-	08/21	29	14	[c]	ND	ND	0	0.0%	0	0.0%	0	108	100.0%	108
08/23	-	08/23	30	14	[c]	ND	ND	0	0.0%	0	0.0%	0	93	100.0%	93
08/25	-	08/25	31	12	[e]	ND	ND	0	0.0%	0	0.0%	0	53	100.0%	53

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Dates	Period	Hours		Origin: Gulkana[a] No.	Gulkana[a] Percent	Main Bay No.	Main Bay Percent	Solf Lake No.	Solf Lake Percent	Hatchery Total	Wild No.	Wild Percent	Total
08/26 - 08/26	32	12	[e]	ND	ND	0	0.0%	0	0.0%	0	59	100.0%	59
08/27 - 08/27	33	12	[e]	ND	ND	0	0.0%	0	0.0%	0	16	100.0%	16
08/28 - 08/28	34	12	[e]	ND	ND	0	0.0%	0	0.0%	0	42	100.0%	42
08/29 - 08/29	35	12	[e]	ND	ND	0	0.0%	0	0.0%	0	24	100.0%	24
08/30 - 08/30	36	12	[e]	ND	ND	0	0.0%	0	0.0%	0	12	100.0%	12
08/31 - 08/31	37	12	[e]	ND	ND	0	0.0%	0	0.0%	0	54	100.0%	54
09/01 - 09/01	38	12	[e]	ND	ND	0	0.0%	0	0.0%	0	12	100.0%	12
09/02 - 09/02	39	12	[e]	ND	ND	0	0.0%	0	0.0%	0	12	100.0%	12
09/03 - 09/03	40	12	[e]	ND	ND	0	0.0%	0	0.0%	0	3	100.0%	3
09/04 - 09/04	41	12	[e]	ND	ND	0	0.0%	0	0.0%	0	3	100.0%	3
09/05 - 09/05	42	12	[e]	ND	ND	0	0.0%	0	0.0%	0	2	100.0%	2
09/06 - 09/06	43	12	[e]	ND	ND	0	0.0%	0	0.0%	0	9	100.0%	9
09/07 - 09/07	44	12	[e]	ND	ND	0	0.0%	0	0.0%	0	0	0.0%	0
09/08 - 09/08	45	12	[e]	ND	ND	0	0.0%	0	0.0%	0	4	100.0%	4
09/09 - 09/09	46	12	[e]	ND	ND	0	0.0%	0	0.0%	0	1	100.0%	1
09/10 - 09/14	47	108	[e]	ND	ND	0	0.0%	0	0.0%	0	2	100.0%	2
09/15 - 09/20	48	132		ND	ND	0	0.0%	0	0.0%	0	0	0.0%	0
Total				0	0.0%	145,621	73.1%	10	0.0%	145,631	53,561	26.9%	199,182

ND = No data

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

[b] No samples collected by ADF&G; percentages based on period 5 results.

[c] Small sample size; fewer than 20 specimens analyzed.

[d] No samples collected by ADF&G; percentages based on period 17 results.

[e] No samples collected by ADF&G; entire harvest attributed to wild stocks.

Appendix E10.–Pink salmon hatchery and wild stock contributions to the Coghill District commercial common property fishery by period, 2011.

Dates	Period	Hours	Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		A.F. Koernig		Hatchery	Wild		
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
05/23 - 05/25	01	60	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
05/26 - 05/27	02	36 [a]	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
05/29 - 05/31	03	60	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/02 - 06/04	04	60	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/06 - 06/07	05	36	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/09 - 06/11	06	60 [a]	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/13 - 06/14	07	36 [a]	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	1	100.0%	1
06/16 - 06/18	08	60	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/20 - 06/21	09	36	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/23 - 06/25	10	60 [a]	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	4	100.0%	4
06/27 - 06/29	11	60 [a]	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	34	100.0%	34
06/30 - 07/03	12	84 [a]	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	791	100.0%	791
07/04 - 07/06	13	60 [b]	167	0.2	0	0.0%	0	0.0%	0	0.0%	167	921	84.6%	1,088
07/07 - 07/10	14	84 [b]	840	0.2	0	0.0%	0	0.0%	0	0.0%	840	4,620	84.6%	5,460
07/11 - 07/13	15	60	696	0.2	0	0.0%	0	0.0%	0	0.0%	696	3,825	84.6%	4,521
07/14 - 07/17	16	84	0	0.0	0	0.0%	448	6.3%	0	0.0%	448	6,723	93.8%	7,171
07/18 - 07/20	17	60 [b]	2,463	0.2	0	0.0%	0	0.0%	0	0.0%	2,463	13,546	84.6%	16,009
07/21 - 07/21	18	14 [c]	0	0.0	0	0.0%	348	5.0%	0	0.0%	348	6,610	95.0%	6,958
07/25 - 07/25	19	14	0	0.0	0	0.0%	6	5.0%	0	0.0%	6	108	95.0%	114
07/29 - 07/29	20	14 [c]	0	0.0	0	0.0%	1	5.0%	0	0.0%	1	25	95.0%	26
08/01 - 08/01	21	14 [d]	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
08/04 - 08/04	22	14 [d]	0	0.0	1,902	9.1%	6,990	33.4%	0	0.0%	8,891	12,030	57.5%	20,921
08/08 - 08/08	23	14 [e]	0	0.0	105	18.2%	358	61.8%	0	0.0%	463	116	20.0%	579
08/11 - 08/11	24	14	0	0.0	14,019	18.2%	47,663	61.8%	0	0.0%	61,682	15,420	20.0%	77,102
08/13 - 08/13	25	14	0	0.0	77,166	16.7%	356,893	77.1%	4,823	1.0%	438,882	24,114	5.2%	462,996
08/15 - 08/15	26	14	0	0.0	22,542	5.2%	378,711	87.5%	0	0.0%	401,253	31,559	7.3%	432,812
08/17 - 08/17	27	14	0	0.0	15,612	7.4%	187,341	89.4%	0	0.0%	202,952	6,691	3.2%	209,643
08/19 - 08/19	28	14	0	0.0	18,202	9.4%	155,727	80.2%	10,112	5.2%	184,041	10,112	5.2%	194,153
08/21 - 08/21	29	14	3,314	0.0	36,457	9.2%	334,744	84.2%	6,629	1.7%	381,145	16,572	4.2%	397,716
08/23 - 08/23	30	14	0	0.0	23,115	20.0%	83,945	72.6%	0	0.0%	107,060	8,516	7.4%	115,576
08/25 - 08/25	31	12 [f]	0	0.0	27,865	34.0%	47,820	58.4%	532	0.6%	76,216	5,676	6.9%	81,892
08/26 - 08/26	32	12	0	0.0	31,463	48.1%	28,912	44.2%	850	1.3%	61,225	4,252	6.5%	65,477

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Dates	Period	Hours	Origin: Solomon Gulch Number	Solomon Gulch Percent	Cannery Creek Number	Cannery Creek Percent	Wally Noerenberg Number	Wally Noerenberg Percent	A.F. Koernig Number	A.F. Koernig Percent	Hatchery Total	Wild Number	Wild Percent	Total
08/27 - 08/27	33	12	0	0.0	2,056	7.1%	24,671	85.7%	0	0.0%	26,727	2,056	7.1%	28,783
08/28 - 08/28	34	12	0	0.0	16,498	25.0%	41,244	62.5%	4,124	6.3%	61,867	4,124	6.3%	65,991
08/29 - 08/29	35	12	0	0.0	3,817	6.1%	55,351	87.9%	0	0.0%	59,169	3,817	6.1%	62,986
08/30 - 08/30	36	12 [g]	0	0.0	2,305	6.1%	33,429	87.9%	0	0.0%	35,735	2,305	6.1%	38,040
08/31 - 08/31	37	12 [g]	0	0.0	534	6.1%	7,739	87.9%	0	0.0%	8,272	534	6.1%	8,806
09/01 - 09/01	38	12 [g]	0	0.0	3,672	6.1%	53,243	87.9%	0	0.0%	56,915	3,672	6.1%	60,587
09/02 - 09/02	39	12 [g]	0	0.0	540	6.1%	7,829	87.9%	0	0.0%	8,369	540	6.1%	8,909
09/03 - 09/03	40	12 [g]	0	0.0	614	6.1%	8,907	87.9%	0	0.0%	9,522	614	6.1%	10,136
09/04 - 09/04	41	12 [g]	0	0.0	273	6.1%	3,964	87.9%	0	0.0%	4,238	273	6.1%	4,511
09/05 - 09/05	42	12 [g]	0	0.0	247	6.1%	3,586	87.9%	0	0.0%	3,834	247	6.1%	4,081
09/06 - 09/06	43	12 [g]	0	0.0	80	6.1%	1,154	87.9%	0	0.0%	1,233	80	6.1%	1,313
09/07 - 09/07	44	12 [g]	0	0.0	38	6.1%	547	87.9%	0	0.0%	584	38	6.1%	622
09/08 - 09/08	45	12 [g]	0	0.0	29	6.1%	423	87.9%	0	0.0%	452	29	6.1%	481
09/09 - 09/09	46	12 [g]	0	0.0	30	6.1%	429	87.9%	0	0.0%	458	30	6.1%	488
09/10 - 09/14	47	108 [g]	0	0.0	12	6.1%	181	87.9%	0	0.0%	194	12	6.1%	206
09/15 - 09/20	48	132 [g]	0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
Totals			7,480		299,193	12.5%	1,872,603	78.1%	27,070	1.1%	2,206,346	190,638	8.0%	2,396,984

[a] No samples collected by ADF&G; entire harvest attributed to wild stocks.

[b] No samples collected by ADF&G; percentages based on period 15 results.

[c] No samples collected by ADF&G; percentages based on period 19 results.

[d] No samples collected by ADF&G; percentages based on average of period 19 and period 24 results.

[e] No samples collected by ADF&G; percentages based on period 24 results.

[f] No samples collected by ADF&G; percentages based on average of period 30 and period 32 results.

[g] No samples collected by ADF&G; percentages based on period 35 results.

Appendix E11.–Chum salmon hatchery and wild stock contributions to the Coghill District commercial common property harvest, 2011.

Dates	Period	Hours		Wally Noerenberg		Port Chalmers		Hatchery	Wild		
				Number	Percent	Number	Percent	Total	Number	Percent	Total
05/23 - 05/25	01	60	[a]	19,727	43.6%	25,500	56.4%	45,227	0	0.0%	45,227
05/26 - 05/27	02	36		10,626	43.6%	13,737	56.4%	24,363	0	0.0%	24,363
05/29 - 05/31	03	60	[a]	35,032	43.6%	45,285	56.4%	80,317	0	0.0%	80,317
06/02 - 06/04	04	60		70,364	51.0%	65,054	47.1%	127	2,655	1.9%	138,073
06/06 - 06/07	05	36		54,476	52.7%	48,917	47.3%	103,393	0	0.0%	103,393
06/09 - 06/11	06	60		85,349	46.7%	93,883	51.4%	179,188	3,414	1.9%	182,646
06/13 - 06/14	07	36		37,107	49.0%	37,897	50.0%	75,003	790	1.0%	75,793
06/16 - 06/18	08	60	[b]	74,663	52.1%	65,521	45.7%	140,185	3,047	2.1%	143,232
06/20 - 06/21	09	36		43,127	46.9%	41,211	44.8%	84,057	7,667	8.3%	92,005
06/23 - 06/25	10	60		30,574	51.6%	26,752	45.2%	57,326	1,911	3.2%	59,237
06/27 - 06/29	11	60		26,934	63.2%	15,262	35.8%	42,196	449	1.1%	42,645
06/30 - 07/03	12	84	[b]	11,404	48.4%	10,660	45.3%	22,064	1,487	6.3%	23,551
07/04 - 07/06	13	60	[c]	20,625	55.8%	15,898	43.0%	36,523	430	1.2%	36,953
07/07 - 07/10	14	84	[b]	9,148	48.3%	8,930	47.1%	18,079	871	4.6%	18,950
07/11 - 07/13	15	60	[d]	2,789	52.2%	1,990	37.3%	4,778	562	10.5%	5,340
07/14 - 07/17	16	84		3,168	56.2%	1,545	27.4%	4,714	927	16.4%	5,641
07/18 - 07/20	17	60		8,246	56.4%	4,201	28.7%	12,447	2,178	14.9%	14,625
07/21 - 07/21	18	14	[e]	24	56.4%	12	28.7%	37	6	14.9%	43
07/25 - 07/25	19	14	[e]	5	56.4%	2	28.7%	7	1	14.9%	8
07/29 - 07/29	20	14	[e]	3	56.4%	1	28.7%	4	1	14.9%	5
08/01 - 08/01	21	14	[f]	0	0.0%	0	0.0%	0	0	0.0%	0
08/04 - 08/04	22	14	[f]	0	0.0%	0	0.0%	0	60	100.0%	60
08/08 - 08/08	23	14	[f]	0	0.0%	0	0.0%	0	117	100.0%	117
08/11 - 08/11	24	14	[f]	0	0.0%	0	0.0%	0	187	100.0%	187
08/13 - 08/13	25	14	[f]	0	0.0%	0	0.0%	0	218	100.0%	218
08/15 - 08/15	26	14	[f]	0	0.0%	0	0.0%	0	123	100.0%	123
08/17 - 08/17	27	14	[f]	0	0.0%	0	0.0%	0	115	100.0%	115
08/19 - 08/19	28	14	[f]	0	0.0%	0	0.0%	0	45	100.0%	45
08/21 - 08/21	29	14	[f]	0	0.0%	0	0.0%	0	38	100.0%	38
08/23 - 08/23	30	14	[f]	0	0.0%	0	0.0%	0	49	100.0%	49
08/25 - 08/25	31	12	[f]	0	0.0%	0	0.0%	0	12	100.0%	12
08/26 - 08/26	32	12	[f]	0	0.0%	0	0.0%	0	25	100.0%	25

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Appendix E11.–Page 2 of 2.

Dates	Period	Hours	Wally Noerenberg Number	Wally Noerenberg Percent	Port Chalmers Number	Port Chalmers Percent	Hatchery Total	Wild Number	Wild Percent	Total
08/27 - 08/27	33	12 [f]	0	0.0%	0	0.0%	0	13	100.0%	13
08/28 - 08/28	34	12 [f]	0	0.0%	0	0.0%	0	25	100.0%	25
08/29 - 08/29	35	12 [f]	0	0.0%	0	0.0%	0	2	100.0%	2
08/30 - 08/30	36	12 [f]	0	0.0%	0	0.0%	0	3	100.0%	3
08/31 - 08/31	37	12 [f]	0	0.0%	0	0.0%	0	1	100.0%	1
09/01 - 09/01	38	12 [f]	0	0.0%	0	0.0%	0	1	100.0%	1
09/02 - 09/02	39	12 [f]	0	0.0%	0	0.0%	0	0	0.0%	0
09/03 - 09/03	40	12 [f]	0	0.0%	0	0.0%	0	0	0.0%	0
09/04 - 09/04	41	12 [f]	0	0.0%	0	0.0%	0	1	100.0%	1
09/05 - 09/05	42	12 [f]	0	0.0%	0	0.0%	0	0	0.0%	0
09/06 - 09/06	43	12 [f]	0	0.0%	0	0.0%	0	0	0.0%	0
09/07 - 09/07	44	12 [f]	0	0.0%	0	0.0%	0	0	0.0%	0
09/08 - 09/08	45	12 [f]	0	0.0%	0	0.0%	0	1	100.0%	1
09/09 - 09/09	46	12 [f]	0	0.0%	0	0.0%	0	0	0.0%	0
09/10 - 09/14	47	108 [f]	0	0.0%	0	0.0%	0	0	0.0%	0
09/15 - 09/20	48	132 [f]	0	0.0%	0	0.0%	0	0	0.0%	0
Total			543,390	49.7%	522,260	47.8%	930,034	27,433	2.5%	1,093,083

[a] No samples collected by ADF&G; percentages based on period 2 results.

[b] Period 8, 12, and 14 samples each contained one specimen identified as having a TMID (thermal mark ID) from a hatchery outside of PWS.

[c] Sample also included one specimen identified as having a WNH04A TMID, which extrapolates to 430 chum salmon in period 13 and 77 chum salmon in period 16.

[d] ADF&G did not collect samples; percentages are based on an average of period 14 and 16 results which includes an estimated 37 specimens with WNH04A TMID.

[e] ADF&G did not collect samples; percentages based on period 17 results.

[f] ADF&G did not collect samples; entire harvest attributed to wild origins.

Appendix E12.–Daily salmon sales and sex ratios, sales summary, and broodstock summary at the Wally Noerenberg Hatchery, 2011.

Date	Pink Salmon					Chum Salmon					Coho Salmon	
	% Female	Sales Harvest[a]	Sales Harvest cumulative	Brood Stock[b]	Brood Stock cumulative	% Female	Sales Harvest[a]	Sales Harvest cumulative	Brood Stock[b]	Brood Stock cumulative	Sales Harvest	Sales Harvest cumulative
06/04	-----	0	0	0	0	28.8%	76,096	76,096	0	0	0	0
06/05	-----	0	0	0	0	30.0%	31,741	107,837	0	0	0	0
06/06	-----	0	0	0	0	35.5%	9,868	117,705	0	0	0	0
06/07	-----	0	0	0	0	40.1%	31,976	149,681	0	0	0	0
06/08	-----	0	0	0	0	35.1%	46,816	196,497	0	0	0	0
06/09	-----	0	0	0	0	36.9%	29,583	226,080	0	0	0	0
06/10	-----	0	0	0	0	32.8%	9,716	235,796	0	0	0	0
06/11	-----	0	0	0	0	35.0%	14,502	250,298	0	0	0	0
06/12	-----	0	0	0	0	57.0%	2,781	253,079	0	0	0	0
06/13	-----	0	0	0	0	48.0%	1,149	254,228	0	0	0	0
06/14	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/15	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/16	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/17	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/18	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/19	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/20	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/21	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/22	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/23	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/24	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/25	-----	0	0	0	0	-----	0	254,228	0	0	0	0
06/26	-----	0	0	0	0	-----	2,938	257,166	0	0	0	0
06/27	-----	0	0	0	0	-----	0	257,166	2,438	2,438	0	0
06/28	-----	0	0	0	0	-----	1,170	258,336	8,351	10,789	0	0
06/29	-----	0	0	0	0	-----	1,117	259,453	8,421	19,210	0	0
06/30	-----	0	0	0	0	-----	841	260,294	10,190	29,400	0	0
07/01	-----	0	0	0	0	-----	673	260,967	12,841	42,241	0	0
07/02	-----	0	0	0	0	-----	1,263	262,230	11,848	54,089	0	0
07/03	-----	0	0	0	0	-----	858	263,088	10,816	64,905	0	0
07/04	-----	0	0	0	0	-----	605	263,693	7,081	71,986	0	0
07/05	-----	0	0	0	0	-----	781	264,474	6,691	78,677	0	0
07/06	-----	0	0	0	0	-----	461	264,935	7,001	85,678	0	0
07/07	-----	0	0	0	0	-----	0	264,935	1,250	86,928	0	0

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Date	Pink Salmon					Chum Salmon					Coho Salmon	
	% Female	Sales Harvest[a]	Sales Harvest cumulative	Brood Stock[b]	Brood Stock cumulative	% Female	Sales Harvest[a]	Sales Harvest cumulative	Brood Stock[b]	Brood Stock cumulative	Sales Harvest	Sales Harvest cumulative
07/08	-----	0	0	0	0	-----	719	265,654	10,827	97,755	0	0
07/09	-----	0	0	0	0	-----	395	266,049	10,938	108,693	0	0
07/10	-----	0	0	0	0	-----	0	266,049	113	108,806	0	0
07/11	-----	0	0	0	0	-----	834	266,883	12,153	120,959	0	0
07/12	-----	0	0	0	0	-----	882	267,765	11,383	132,342	0	0
07/13	-----	0	0	0	0	-----	455	268,220	5,152	137,494	0	0
07/14	-----	0	0	0	0	-----	544	268,764	6,764	144,258	0	0
07/15	-----	0	0	0	0	-----	350	269,114	7,352	151,610	0	0
07/16	-----	0	0	0	0	-----	262	269,376	3,421	155,031	0	0
07/17	-----	0	0	0	0	-----	9,877	279,253	3,760	158,791	0	0
07/18	-----	0	0	0	0	-----	31,502	310,755	582	159,373	0	0
07/19	-----	0	0	0	0	-----	11,194	321,949	368	159,741	0	0
07/20	-----	0	0	0	0	-----	0	321,949	0	159,741	0	0
07/21	-----	0	0	0	0	-----	0	321,949	0	159,741	0	0
07/22	-----	0	0	0	0	-----	0	321,949	0	159,741	0	0
07/23	-----	0	0	0	0	-----	0	321,949	0	159,741	0	0
07/24	-----	0	0	0	0	-----	0	321,949	0	159,741	0	0
07/25	-----	74,504	74,504	0	0	-----	0	321,949	0	159,741	0	0
07/26	-----	59,315	133,819	0	0	-----	0	321,949	0	159,741	0	0
07/27	-----	91,926	225,745	0	0	-----	0	321,949	0	159,741	0	0
07/28	-----	109,076	334,821	0	0	-----	0	321,949	0	159,741	0	0
07/29	-----	94,471	429,292	0	0	-----	0	321,949	0	159,741	0	0
07/30	-----	183,098	612,390	0	0	-----	0	321,949	0	159,741	0	0
07/31	-----	129,492	741,882	0	0	-----	0	321,949	0	159,741	0	0
08/01	-----	73,690	815,572	0	0	-----	0	321,949	0	159,741	0	0
08/02	-----	66,054	881,626	0	0	-----	0	321,949	0	159,741	0	0
08/03	-----	213,513	1,095,139	0	0	-----	0	321,949	0	159,741	0	0
08/04	-----	270,951	1,366,090	0	0	-----	0	321,949	0	159,741	0	0
08/05	-----	174,328	1,540,418	0	0	-----	0	321,949	0	159,741	0	0
08/06	-----	0	1,540,418	0	0	-----	0	321,949	0	159,741	0	0
08/07	-----	234,105	1,774,523	0	0	-----	0	321,949	0	159,741	0	0
08/08	-----	0	1,774,523	0	0	-----	0	321,949	0	159,741	0	0
08/09	-----	70,454	1,844,977	0	0	-----	0	321,949	0	159,741	0	0
08/10	-----	0	1,844,977	0	0	-----	0	321,949	0	159,741	0	0
08/11	-----	0	1,844,977	0	0	-----	0	321,949	0	159,741	0	0

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Date	Pink Salmon					Chum Salmon					Coho Salmon	
	% Female	Sales Harvest[a]	Sales Harvest cumulative	Brood Stock[b]	Brood Stock cumulative	% Female	Sales Harvest[a]	Sales Harvest cumulative	Brood Stock[b]	Brood Stock cumulative	Sales Harvest	Sales Harvest cumulative
08/12	-----	98,299	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/13	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/14	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/15	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/16	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/17	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/18	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/19	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/20	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/21	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/22	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/23	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/24	-----	0	1,943,276	0	0	-----	0	321,949	0	159,741	0	0
08/25	-----	8,764	1,952,040	17,436	17,436	-----	0	321,949	0	159,741	0	0
08/26	-----	15,326	1,967,366	18,101	35,537	-----	0	321,949	0	159,741	0	0
08/27	-----	5,377	1,972,743	15,389	50,926	-----	0	321,949	0	159,741	0	0
08/28	-----	8,899	1,981,642	15,083	66,009	-----	0	321,949	0	159,741	0	0
08/29	-----	11,996	1,993,638	15,247	81,256	-----	0	321,949	0	159,741	0	0
08/30	-----	12,949	2,006,587	22,934	104,190	-----	0	321,949	0	159,741	0	0
08/31	-----	69,056	2,075,643	14,557	118,747	-----	0	321,949	0	159,741	0	0
09/01	-----	7,140	2,082,783	25,753	144,500	-----	0	321,949	0	159,741	0	0
09/02	-----	0	2,082,783	23,900	168,400	-----	0	321,949	0	159,741	0	0
09/03	-----	0	2,082,783	14,653	183,053	-----	0	321,949	0	159,741	0	0
09/04	-----	10,750	2,093,533	22,279	205,332	-----	0	321,949	0	159,741	0	0
09/05	-----	2,235	2,095,768	22,138	227,470	-----	0	321,949	0	159,741	0	0
09/06	-----	3,372	2,099,140	14,654	242,124	-----	0	321,949	0	159,741	0	0
09/07	-----	15,230	2,114,370	184	242,308	-----	0	321,949	0	159,741	678	678

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Hatchery escapement summary[c]	Pink salmon	Chum Salmon	Coho Salmon
Purse seine whole fish harvest	1,943,276	254,228	0
Raceway harvest[d]	47,603	50,697	678
Viable broodstock (spawned, eggs in incubators)	235,026	148,255	1,946
Unviable broodstock (green/over-ripe/bad)	17,105	8,786	33
Unspawned fish (e.g.,excess males/females)	106,386	8,238	49
Holding mortalities (raceway, pen mortalities)	7,282	11,486	346
Estimated unharvested return[e]	10,000	7,000	5,000
Estimated total run to hatchery site	2,366,678	488,690	8,052

Sales Summary	Pink Salmon	Chum Salmon	Coho Salmon
Purse seine whole fish sales	1,943,276	254,228	0
Raceway sales[f]	171,094	67,721	678
Carcass sales[g]	235,026	148,255	0
Total sales	2,349,396	470,204	678

[a] Whole fish from purse seine and raceway sales.

[b] Broodstock daily harvest numbers include viable broodstock and holding mortalities.

[c] Determined by fish tickets and PWSAC egg-take log, and annual report.

[d] Raceway harvest includes whole fish as well as roe extraction not conducted as eggtake.

[e] Fish remaining in saltwater and freshwater after all hatchery harvest is complete.

[f] Sum of raceway harvest, unviable broodstock and unspawned fish.

[g] Represents the sale of "viable broodstock" carcasses.

Appendix E13.–Sockeye salmon hatchery and wild stock contributions to the Eshamy District commercial common property fishery by period, 2011.

Dates	Period		Hours	Main Bay		Solf Lake		Gulkana[a]		Hatchery	Wild		
				Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
05/23 - 05/25	01	[b]	60	2	91.2%	0	0.0%	ND	ND	2	0	8.8%	2
05/26 - 05/29	02	[b]	84	308	91.2%	0	0.0%	ND	ND	308	30	8.8%	338
05/30 - 06/01	03	[b]	60	765	91.2%	0	0.0%	ND	ND	765	74	8.8%	839
06/02 - 06/05	04	[c]	84	1,847	92.9%	0	0.0%	ND	ND	1,847	142	7.1%	1,989
06/06 - 06/08	05	[b]	60	4,137	91.2%	0	0.0%	ND	ND	4,137	400	8.8%	4,537
06/09 - 06/12	06		84	13,889	91.2%	0	0.0%	ND	ND	13,889	1344	8.8%	15,233
06/13 - 06/15	07		60	33,543	94.6%	0	0.0%	ND	ND	33,543	1906	5.4%	35,449
06/16 - 06/19	08		84	82,726	92.6%	0	0.0%	ND	ND	82,726	6,656	7.4%	89,382
06/20 - 06/22	09		60	108,303	91.4%	0	0.0%	ND	ND	108,303	10193	8.6%	118,496
06/23 - 06/26	10		84	192,834	98.0%	0	0.0%	ND	ND	192,834	3,857	2.0%	196,691
06/27 - 06/29	11		60	151,802	93.3%	0	0.0%	ND	ND	151,802	10843	6.7%	162,645
06/30 - 07/02	12		60	183,113	93.2%	0	0.0%	ND	ND	183,113	13,398	6.8%	196,511
07/04 - 07/05	13		36	95,838	83.3%	0	0.0%	ND	ND	95,838	19,168	16.7%	115,006
07/07 - 07/09	14		48	74,027	83.1%	0	0.0%	ND	ND	74,027	15,020	16.9%	89,047
07/11 - 07/12	15		36	83,868	94.7%	0	0.0%	ND	ND	83,868	4,712	5.3%	88,580
07/14 - 07/15	16		36	25,380	78.9%	0	0.0%	ND	ND	25,380	6768	21.1%	32,148
07/18 - 07/19	17		36	27,045	82.6%	0	0.0%	ND	ND	27,045	5,714	17.4%	32,759
07/21 - 07/22	18		36	7,067	75.8%	0	0.0%	ND	ND	7,067	2258	24.2%	9,325
07/25 - 07/26	19		36	9,377	89.1%	0	0.0%	ND	ND	9,377	1,144	10.9%	10,521
07/28 - 07/29	20		36	4,964	92.0%	0	0.0%	ND	ND	4,964	429	8.0%	5,393
08/01 - 08/02	21		36	2,527	96.8%	0	0.0%	ND	ND	2,527	84	3.2%	2,611
08/15 - 08/15	22	[d]	14	0	0.0%	0	0.0%	ND	ND	0	1,418	100.0%	1,418
08/17 - 08/17	23	[d]	14	0	0.0%	0	0.0%	ND	ND	0	1,291	100.0%	1,291
08/19 - 08/19	24	[d]	14	0	0.0%	0	0.0%	ND	ND	0	969	100.0%	969
08/21 - 08/21	25	[d]	14	0	0.0%	0	0.0%	ND	ND	0	1,856	100.0%	1,856
08/23 - 08/23	26	[d]	14	0	0.0%	0	0.0%	ND	ND	0	606	100.0%	606
08/25 - 08/25	27	[d]	12	0	0.0%	0	0.0%	ND	ND	0	83	100.0%	83
08/28 - 08/28	28	[d]	12	0	0.0%	0	0.0%	ND	ND	0	27	100.0%	27
08/29 - 08/29	29		12	0	0.0%	0	0.0%	ND	ND	0	0	0.0%	0
08/30 - 08/30	30		12	0	0.0%	0	0.0%	ND	ND	0	0	0.0%	0
08/31 - 08/31	31	[d]	12	0	0.0%	0	0.0%	ND	ND	0	102	100.0%	102

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Dates			Period		Hours	Main Bay		Solf Lake		Gulkana[a]		Hatchery	Wild		
						Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
09/01	-	09/01	32	[d]	12	0	0.0%	0	0.0%	ND	ND	0	84	100.0%	84
09/02	-	09/02	33		12	0	0.0%	0	0.0%	ND	ND	0	0	0.0%	0
09/03	-	09/03	34		12	0	0.0%	0	0.0%	ND	ND	0	0	0.0%	0
09/04	-	09/07	35		84	0	0.0%	0	0.0%	ND	ND	0	0	0.0%	0
09/08	-	09/14	36	[d]	156	0	0.0%	0	0.0%	ND	ND	0	0	0.0%	0
09/15	-	09/20	37		132	0	0.0%	0	0.0%	ND	ND	0	0	0.0%	0
Total						1,103,363	90.9%	0	0.0%	0	0.0%	1,103,363	110,575	9.1%	1,213,938

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

[b] No samples collected by ADF&G; percentages based on period 6 results.

[c] Small sample size; fewer than 20 specimens analyzed.

[d] No samples collected by ADF&G; entire harvest attributed to wild origin based on timing and location of fishing (Eshamy Bay).

Appendix E14.–Pink salmon hatchery and wild stock contributions to the Eshamy District commercial common property fishery by period, 2011.

Dates	Period	Hours	Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		A.F. Koernig		Hatchery	Wild		
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
05/23 - 05/25	01 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
05/26 - 05/29	02 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
05/30 - 06/01	03 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/02 - 06/05	04 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/06 - 06/08	05 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/09 - 06/12	06 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/13 - 06/15	07 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/16 - 06/19	08 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	7	0.0%	7
06/20 - 06/22	09 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	17	100.0%	17
06/23 - 06/26	10 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	81	100.0%	81
06/27 - 06/29	11 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	435	100.0%	435
06/30 - 07/02	12 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	2,567	100.0%	2,567
07/04 - 07/05	13 [a]	36	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	5,326	100.0%	5,326
07/07 - 07/09	14 [a]	48	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	6,847	100.0%	6,847
07/11 - 07/12	15 [b]	36	766	10.0%	0	0.0%	0	0.0%	0	0.0%	766	6,891	100.0%	7,657
07/14 - 07/15	16 [c]	36	619	5.9%	0	0.0%	819	7.8%	182	1.7%	2,184	8,938	90.0%	10,558
07/18 - 07/19	17 [c]	36	851	5.9%	0	0.0%	1,127	7.8%	250	1.7%	3,005	12,295	84.7%	14,524
07/21 - 07/22	18	36	93	1.7%	0	0.0%	840	15.5%	187	3.4%	1,121	4,295	84.7%	5,416
07/25 - 07/26	19	36	0	0.0%	0	0.0%	944	16.7%	0	0.0%	944	4,719	79.3%	5,663
07/28 - 07/29	20	36	0	0.0%	0	0.0%	1,869	26.2%	0	0.0%	1,869	5,278	83.3%	7,147
08/01 - 08/02	21	36	0	0.0%	0	0.0%	1,672	50.0%	0	0.0%	1,672	1,672	73.8%	3,343
08/15 - 08/15	22 [d]	14	0	0.0%	0	0.0%	4,552	50.0%	0	0.0%	4,552	4,552	50.0%	9,104
08/17 - 08/17	23 [d]	14	0	0.0%	0	0.0%	3,078	50.0%	0	0.0%	3,078	3,078	50.0%	6,156
08/19 - 08/19	24 [d]	14	0	0.0%	0	0.0%	2,008	50.0%	0	0.0%	2,008	2,008	50.0%	4,015
08/21 - 08/21	25 [d]	14	0	0.0%	0	0.0%	2,135	50.0%	0	0.0%	2,135	2,135	50.0%	4,270
08/23 - 08/23	26 [d]	14	0	0.0%	0	0.0%	1,325	50.0%	0	0.0%	1,325	1,325	50.0%	2,649
08/25 - 08/25	27 [d]	12	0	0.0%	0	0.0%	82	50.0%	0	0.0%	82	82	50.0%	164
08/28 - 08/28	28 [d]	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	50.0%	0
08/29 - 08/29	29 [d]	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
08/30 - 08/30	30 [d]	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
08/31 - 08/31	31 [d]	12	0	0.0%	0	0.0%	126	50.0%	0	0.0%	126	126	0.0%	252

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Dates		Period	Hours	Origin											
				Solomon Gulch		Cannery Creek		Wally Noerenberg		A.F. Koernig		Hatchery	Wild		
				Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
09/01	- 09/01	32 [d]	12	0	0.0%	0	0.0%	97	50.0%	0	0.0%	97	97	50.0%	193
09/02	- 09/02	33 [d]	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	50.0%	0
09/03	- 09/03	34 [d]	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/04	- 09/07	35 [d]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/08	- 09/14	36 [d]	156	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/15	- 09/20	37 [d]	132	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
Total				2,329	2.4%	0	0.0%	20,672	21.4%	619	0.6%	24,962	72,770	75.5%	96,391

[a] No samples collected by ADF&G; entire harvest attributed to wild stocks.

[b] Small sample size; fewer than 20 specimens available.

[c] No samples collected by ADF&G; percentages based on period 18 results.

[d] No samples collected by ADF&G; percentages based on period 21 results.

Appendix E15.–Chum salmon hatchery and wild stock contributions to the Eshamy District commercial common property fishery by period, 2011.

Dates	Period		Hours	Hatchery Marks[a]							
				Port Chalmers		Wally Noerenberg		Hatchery	Wild		
				Number	Percent	Number	Percent	Total	Number	Percent	Total
05/23 - 05/25	01	[b]	60	83	20.0%	330	80.0%	413	0	0.0%	413
05/26 - 05/29	02	[b]	84	137	20.0%	547	80.0%	684	0	0.0%	684
05/30 - 06/01	03	[b]	60	245	20.0%	979	80.0%	1,224	0	0.0%	1,224
06/02 - 06/05	04		84	569	20.0%	2,278	80.0%	2,847	0	0.0%	2,847
06/06 - 06/08	05	[c]	60	1,785	22.7%	5,953	75.7%	7,737	125	1.6%	7,862
06/09 - 06/12	06		84	2,314	25.4%	6,507	71.4%	8,821	289	3.2%	9,110
06/13 - 06/15	07		60	3,659	29.9%	7,178	58.6%	10,838	1,407	11.5%	12,245
06/16 - 06/19	08		84	3,653	18.8%	14,613	75.0%	18,266	1,218	6.3%	19,484
06/20 - 06/22	09		60	4,141	28.7%	7,822	54.3%	11,963	2,454	17.0%	14,417
06/23 - 06/26	10	[d]	84	3,169	21.1%	9,032	60.0%	12,202	2,852	18.9%	15,054
06/27 - 06/29	11		60	2,673	25.0%	5,928	55.4%	8,601	2,092	19.6%	10,693
06/30 - 07/02	12		60	3,357	31.7%	6,185	58.3%	9,542	1,060	10.0%	10,602
07/04 - 07/05	13	[e]	36	1,857	37.5%	1,238	25.0%	3,095	1,857	37.5%	4,952
07/07 - 07/09	14		48	1,995	37.1%	2,763	51.4%	4,758	614	11.4%	5,372
07/11 - 07/12	15	[e]	36	662	25.0%	1,158	43.8%	1,820	827	31.3%	2,647
07/14 - 07/15	16		36	65	3.2%	1,291	64.5%	1,356	645	32.3%	2,001
07/18 - 07/19	17		36	132	12.9%	264	25.8%	396	626	61.3%	1,022
07/21 - 07/22	18	[f]	36	39	12.9%	77	25.8%	116	183	61.3%	299
07/25 - 07/26	19	[f]	36	23	12.9%	46	25.8%	69	108	61.3%	177
07/28 - 07/29	20	[f]	36	16	12.9%	32	25.8%	48	76	61.3%	124
08/01 - 08/02	21	[g]	36	0	0.0%	0	0.0%	0	45	100.0%	45
08/15 - 08/15	22	[g]	14	0	0.0%	0	0.0%	0	27	100.0%	27
08/17 - 08/17	23	[g]	14	0	0.0%	0	0.0%	0	11	100.0%	11
08/19 - 08/19	24	[g]	14	0	0.0%	0	0.0%	0	9	100.0%	9
08/21 - 08/21	25	[g]	14	0	0.0%	0	0.0%	0	9	100.0%	9
08/23 - 08/23	26	[g]	14	0	0.0%	0	0.0%	0	10	100.0%	10
08/25 - 08/25	27	[g]	12	0	0.0%	0	0.0%	0	1	100.0%	1
08/28 - 08/28	28	[g]	12	0	0.0%	0	0.0%	0	0	0.0%	0
08/29 - 08/29	29	[g]	12	0	0.0%	0	0.0%	0	0	0.0%	0
08/30 - 08/30	30	[g]	0	0	0.0%	0	0.0%	0	0	0.0%	0
08/31 - 08/31	31	[g]	12	0	0.0%	0	0.0%	0	0	0.0%	0

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Dates	Period	Hours	Hatchery Marks[a]				Hatchery Total	Wild		Total
			Port Chalmers		Wally Noerenberg					
			Number	Percent	Number	Percent		Number	Percent	
09/01 - 09/01	32 [g]	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/02 - 09/02	33 [g]	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/03 - 09/03	34 [g]	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/04 - 09/07	35 [g]	84	0	0.0%	0	0.0%	0	0	0.0%	0
09/08 - 09/14	36 [g]	156	0	0.0%	0	0.0%	0	0	0.0%	0
09/15 - 09/20	37 [g]	132	0	0.0%	0	0.0%	0	0	0.0%	0
Total			30,573	25.2%	74,220	61.2%	104,793	16,548	13.6%	121,341

[a] One BY2006 chum salmon mark was released at all three locations: WNH, Pt. Chalmers and AFK; therefore these represent the intended origin.

[b] No samples collected by ADF&G; percentages based on period 4 results.

[c] No samples collected by ADF&G; percentages based on average of period 4 and period 6 results.

[d] One specimen was determined to have a TMID of WNH04A; this extrapolates to a total of 159 fish.

[e] Small sample size; fewer than 20 specimens included.

[f] ADF&G did not collect samples; percentages are based on period 17 results.

[g] No samples collected; entire harvest attributed to wild origins.

Appendix E16.–Daily salmon sales and sex ratios, sales summary, and broodstock summary at the Main Bay Hatchery, 2011.

	Sockeye Salmon				
Date	% Female	Sales Harvest[a]	Sales Harvest cumulative	Brood Stock[b]	Brood Stock cumulative
06/28	-----	0	0	50	50
06/29	-----	0	0	87	137
06/30	-----	0	0	74	211
07/01	-----	0	0	158	369
07/02	-----	0	0	189	558
07/03	-----	0	0	235	793
07/04	-----	0	0	273	1,066
07/05	-----	0	0	660	1,726
07/06	-----	0	0	1,020	2,746
07/07	-----	0	0	916	3,662
07/08	-----	0	0	216	3,878
07/09	-----	0	0	0	3,878
07/10	-----	0	0	0	3,878
07/11	-----	0	0	0	3,878
07/12	-----	0	0	0	3,878
07/13	-----	0	0	0	3,878
07/14	-----	0	0	0	3,878
07/15	-----	0	0	0	3,878
07/16	-----	0	0	0	3,878
07/17	-----	0	0	3	3,881
07/18	-----	0	0	0	3,881
07/19	-----	0	0	0	3,881
07/20	-----	0	0	13	3,894
07/21	-----	0	0	0	3,894
07/22	-----	0	0	0	3,894
07/23	-----	0	0	0	3,894
07/24	-----	0	0	5	3,899
07/25	-----	0	0	5	3,904
07/26	-----	0	0	0	3,904
07/27	-----	0	0	7	3,911
07/28	-----	0	0	0	3,911
07/29	-----	0	0	0	3,911
07/30	-----	0	0	33	3,944
07/31	-----	0	0	0	3,944
08/01	-----	0	0	12	3,956
08/02	-----	0	0	0	3,956
08/03	-----	0	0	0	3,956
08/04	-----	0	0	206	4,162
08/05	-----	0	0	62	4,224
08/06	-----	0	0	440	4,664
08/07	-----	0	0	34	4,698
08/08	-----	0	0	397	5,095
08/09	-----	0	0	17	5,112

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Date	Sockeye Salmon % Female	Sales Harvest[a]	Sales Harvest cumulative	Brood Stock[b]	Brood Stock cumulative
08/10	-----	0	0	598	5,710
08/11	-----	0	0	28	5,738
08/12	-----	0	0	979	6,717
08/13	-----	0	0	24	6,741
08/14	-----	0	0	986	7,727
08/15	-----	0	0	21	7,748
08/16	-----	0	0	978	8,726
08/17	-----	0	0	54	8,780
08/18	-----	0	0	771	9,551
08/19	-----	0	0	24	9,575
08/20	-----	0	0	787	10,362
08/21	-----	0	0	28	10,390
08/22	-----	0	0	788	11,178
08/23	-----	0	0	0	11,178
08/24	-----	0	0	1,348	12,526
08/25	-----	0	0	0	12,526
08/26	-----	0	0	0	12,526
08/27	-----	0	0	0	12,526
08/28	-----	0	0	0	12,526
08/29	-----	0	0	0	12,526
08/30	-----	0	0	0	12,526
08/31	-----	0	0	0	12,526
09/01	-----	0	0	284	12,810

Hatchery escapement summary[c]	Sockeye salmon
Purse seine whole fish harvest	0
Raceway harvest[d]	0
Viable broodstock (spawned, eggs in incubators)	6,528
Unviable broodstock (green/over-ripe/bad)	228
Unspawned fish (e.g., excess males/females)	5,610
Holding mortalities (raceway, pen mortalities)	444
Estimated unharvested return[e]	0
Estimated total run to hatchery site	12,810

Sales Summary	
Purse seine whole fish sales	0
Raceway sales[f]	0
Carcass sales[g]	0
Total sales	0

[a] Whole fish from purse seine and raceway sales.

[b] Broodstock daily harvest numbers include viable broodstock and holding mortalities.

[c] Determined by fish tickets and PWSAC egg-take log, and annual report.

[d] Raceway harvest includes whole fish as well as roe extraction not conducted as eggtake.

[e] Fish remaining in saltwater and fresh water after all hatchery harvest is complete.

[f] Sum of raceway harvest, unviable broodstock and unspawned fish.

[g] Represents the sale of "viable broodstock" carcasses.

Appendix E17.–Main Bay sockeye salmon harvests and total contribution, 1990–2011.

	Hatchery Contributions[a]					Total
Year	Commercial	Subsistence/ Personal Use	Sport	Broodstock/ Escapement	Cost Recovery	Hatchery Contribution
1990	9,000	8	0	0	0	9,008
1991	480,200	260	0	4,700	0	485,160
1992	368,427	395	0	6,185	158,893	533,900
1993	208,709	656	0	8,020	97,594	314,979
1994	214,737	181	0	72,335	85,511	372,764
1995	134,778	114	0	11,148	62,782	208,822
1996	406,100	120	935	7,979	83,430	498,564
1997	845,871	147	1,031	16,498	236,031	1,099,578
1998	128,702	133	1,746	10,596	111,026	252,203
1999	143,511	187	2,207	7,104	0	153,008
2000	339,305	75	1,835	5,426	0	346,641
2001	770,884	170	2,861	10,508	50,458	834,881
2002	846,534	17	3,566	7,352	93,794	951,263
2003	1,047,133	229	4,731	6,878	366,768	1,425,739
2004	355,821	506	4,160	17,578	279,139	657,205
2005	233,089	531	2,884	44,366	188,904	469,774
2006	668,780	203	2,568	15,854	350,742	1,038,147
2007	819,244	290	6,290	20,285	321,330	1,167,439
2008	835,241	344	3,482	15,659	0	854,727
2009	756,130	244	5,473	10,815	131,553	903,971
2010	1,347,644	1,013	2,980	18,196	0	1,366,340
10-Year Average	768,050	355	3,900	16,749	178,269	966,948
2011	1,274,096	983	3,291	12,810	0	1,291,180

[a] Commercial harvest estimates are from otolith marks. Sport and subsistence/personal use estimates are derived from commercial harvest proportions. Broodstock/escapement and hatchery cost recovery are assumed to be 100% MBH origin.

Appendix E18.–Main Bay hatchery salmon fry releases, 1983–2011.

		Sockeye salmon				Pink salmon	Chum salmon
Release Year	Primary Return Years	Coghill Lake stock	Eshamy Lake stock	Eyak Lake stock	Total Released [a]	Total Released	Total Released
1983						25,751,531	8,644,179
1984						41,945,403	7,490,291
1985						29,286,498	11,033,065
1986	1987, 1988					32,728,663	5,258,175
1987	1988, 1989					2,660,000	76,646,750
1988	1989, 1990	330,025			330,025		
1989	1991, 1990	3,925,357			3,925,357	10,200,000	
1990	1992, 1993	2,616,498			2,616,498		
1991	1993, 1994	1,960,774	1,843,176		3,803,950		
1992	1994, 1995	1,546,929	2,475,390	47,609	4,069,928		
1993	1995, 1996	3,288,689	966,750	63,822	4,319,261		
1994	1996, 1997	3,289,824	691,633		3,981,457		
1995	1997, 1998	4,049,763	1,546,011	90,348	5,686,122		
1996	1998, 1999	4,194,174	114,475	82,514	4,391,163		
1997	1999, 2000	239,023	845,190	131,503	1,215,716		
1998	2000, 2001		2,485,000	181,000	2,666,000		
1999	2001, 2002		4,165,786	2,913,460	7,079,246		
2000	2002, 2003	8,401,117			8,401,117		
2001	2003, 2004	7,612,350			7,612,350		
2002	2004, 2005	7,858,190			7,858,190		
2003	2005, 2006	6,576,535			6,576,535		
2004	2006, 2007	9,057,829			9,057,829		
2005	2007, 2008	10,868,642			10,868,642		
2006	2008, 2009	9,516,461			9,516,461		
2007	2009, 2010	9,393,000			9,393,000		
2008	2010, 2011	9,384,000			9,384,000		
2009	2011, 2012	9,419,000			9,419,000		
2010	2012, 2013	8,160,000			8,160,000		
10-Year Average		8,784,601			8,784,601		
2011	2013, 2014	8,680,000			8,680,000		

[a] Totals do not include releases at other locations, such as Coghill, Davis, Eshamy, Esther Pass, Eyak, Marsha, Pass, and Solf lakes; and Esther Pass.

Appendix E19.–Pink salmon hatchery and wild stock contributions to the Eastern District commercial common property fishery by period, 2011.

Dates	Period	Hours	Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		A.F. Koernig		Hatchery	Wild		
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
07/03 - 07/03	01	14	2,715,301	99.0%	0	0.0%	0	0.0%	0	0.0%	2,715,301	28,582	1.0%	2,743,883
07/05 - 07/05	02	14	1,741,406	99.0%	0	0.0%	0	0.0%	0	0.0%	1,741,406	18,331	1.0%	1,759,737
07/07 - 07/07	03	14	1,809,090	97.9%	0	0.0%	0	0.0%	0	0.0%	1,809,090	38,491	2.1%	1,847,581
07/09 - 07/09	04	14	724,884	92.6%	0	0.0%	0	0.0%	8,332	1.1%	733,216	49,992	6.4%	783,208
07/10 - 07/10	05	14	742,380	90.6%	0	0.0%	0	0.0%	0	0.0%	742,380	76,798	9.4%	819,178
07/12 - 07/12	06	14	768,350	95.8%	0	0.0%	0	0.0%	0	0.0%	768,350	33,407	4.2%	801,757
07/13 - 07/13	07	14	486,776	90.5%	0	0.0%	0	0.0%	0	0.0%	486,776	50,942	9.5%	537,718
07/14 - 07/14	08	14	657,880	99.0%	0	0.0%	0	0.0%	0	0.0%	657,880	6,925	1.0%	664,805
07/17 - 07/17	09 [a]	14	666,669	90.4%	0	0.0%	0	0.0%	0	0.0%	666,669	70,588	9.6%	737,257
07/19 - 07/19	10	14	539,353	94.8%	0	0.0%	0	0.0%	0	0.0%	539,353	29,635	5.2%	568,988
07/21 - 07/21	11	14	2,389	2.1%	0	0.0%	1,194	1.0%	0	0.0%	3,583	111,080	96.9%	114,663
07/26 - 07/26	12	14	10,281	3.1%	0	0.0%	3,427	1.0%	0	0.0%	13,707	315,269	95.8%	328,976
07/29 - 07/29	13	14	282,770	44.8%	6,576	1.0%	6,576	1.0%	0	0.0%	295,922	335,378	53.1%	631,300
08/01 - 08/01	14	14	11,916	3.1%	0	0.0%	0	0.0%	7,944	2.1%	19,860	361,453	94.8%	381,313
08/04 - 08/04	15	14	8,292	4.3%	0	0.0%	4,146	2.1%	2,073	1.1%	14,511	180,356	92.6%	194,867
08/06 - 08/06	16 [b]	14	932	4.1%	0	0.0%	240	1.1%	572	2.5%	1,744	20,831	92.3%	22,575
08/08 - 08/08	17	14	670	4.0%	0	0.0%	0	0.0%	670	4.0%	1,340	15,411	92.0%	16,751
08/11 - 08/11	18	14	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	27,347	100.0%	27,347
08/13 - 08/13	19	14	0	0.0%	440	1.2%	881	2.4%	0	0.0%	1,321	35,680	96.4%	37,001
08/15 - 08/15	20	14	0	0.0%	597	1.2%	1,791	3.6%	0	0.0%	2,387	47,748	95.2%	50,135
08/17 - 08/17	21 [a]	14	0	0.0%	894	1.1%	894	1.1%	894	1.1%	2,683	75,114	96.6%	77,797
08/19 - 08/19	22 [a]	14	0	0.0%	3,997	5.0%	0	0.0%	0	0.0%	3,997	75,935	95.0%	79,932
08/21 - 08/21	23	14	0	0.0%	4,458	9.5%	1,114	2.4%	1,114	2.4%	6,687	40,121	85.7%	46,808
08/23 - 08/23	24	14	0	0.0%	0	0.0%	887	2.4%	0	0.0%	887	35,462	97.6%	36,349
08/26 - 08/26	25 [c]	12	84	2.5%	0	0.0%	41	1.2%	0	0.0%	125	3,236	96.3%	3,361
08/29 - 08/29	26	12	193	5.0%	0	0.0%	0	0.0%	0	0.0%	193	3,663	95.0%	3,856
09/01 - 09/01	27 [d]	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/02 - 09/02	28 [d]	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/03 - 09/03	29 [d]	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/04 - 09/04	30 [d]	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/05 - 09/05	31 [d]	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/06 - 09/06	32 [d]	12	0	5.0%	0	0.0%	0	0.0%	0	0.0%	0	8	95.0%	8
09/07 - 09/07	33 [d]	12	2	5.0%	0	0.0%	0	0.0%	0	0.0%	2	32	95.0%	34
09/08 - 09/08	34 [d]	12	0	5.0%	0	0.0%	0	0.0%	0	0.0%	0	7	95.0%	7

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Dates			Period	Hours	Origin										
					Solomon Gulch		Cannery Creek		Wally Noerenberg		A.F. Koernig		Hatchery	Wild		
					Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
09/09	-	09/09	35 [d]	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/10	-	09/14	36 [d]	108	1	5.0%	0	0.0%	0	0.0%	0	0.0%	1	13	95.0%	14
09/15	-	09/20	37 [d]	132	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/21	-	09/25	38 [d]	108	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/26	-	10/02	39 [d]	156	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
Total					11,169,619	83.9%	16,962	0.1%	21,191	0.2%	21,599	0.2%	11,229,372	2,087,834	15.7%	13,317,206

[a] Small sample size; fewer than 20 specimens analyzed.

[b] No samples collected by ADF&G; percentages based on average of period 15 and period 17 results.

[c] No samples collected by ADF&G; percentages based on period 26 results.

[d] No samples collected by ADF&G; percentages based on average of period 24 and period 26 results.

Appendix E20.–Daily salmon sales and sex ratios, sales summary, and broodstock summary at the Solomon Gulch Hatchery, 2011.

Date	% Female	Sales Harvest[a]	Sales Harvest cumulative	Brood Stock[b]	Brood Stock cumulative	Sales Harvest	Sales Harvest cumulative
06/26	6.0%	27,903	27,903	0	0	0	0
06/27	--	40,935	68,838	0	0	0	0
06/28	8.0%	98,759	167,597	0	0	0	0
06/29	12.0%	187,892	355,489	0	0	0	0
06/30	--	262,168	617,657	0	0	0	0
07/01	--	266,686	884,343	0	0	0	0
07/02	--	195,195	1,079,538	0	0	0	0
07/04	--	134,757	1,214,295	0	0	0	0
07/06	--	288,422	1,502,717	0	0	0	0
07/08	--	40,485	1,543,202	0	0	0	0
07/11	--	191,641	1,734,843	0	0	0	0
07/26		2,371	1,737,214	1,519	1,519	0	0
07/27			1,737,214	0	1,519	0	0
07/28			1,737,214	0	1,519	0	0
07/29		3,738	1,740,952	4,023	5,542	0	0
07/30			1,740,952	0	5,542	0	0
07/31	--	92,017	1,832,969	0	5,542	0	0
08/01		9,636	1,842,605	12,880	18,422	0	0
08/02		6,837	1,849,442	13,860	32,282	0	0
08/03		7,744	1,857,186	15,956	48,238	0	0
08/04		6,056	1,863,242	15,881	64,119	0	0
08/05		8,030	1,871,272	17,824	81,943	0	0
08/06		4,465	1,875,737	9,369	91,312	0	0
08/08		6,368	1,882,105	12,228	103,540	0	0
08/09		8,065	1,890,170	17,940	121,480	0	0
08/10		9,729	1,899,899	18,597	140,077	0	0
08/11		5,264	1,905,163	12,789	152,866	0	0
08/12		6,791	1,911,954	17,364	170,230	0	0
08/15		10,965	1,922,919	11,647	181,877	0	0
08/16		33,824	1,956,743	11,871	193,748	0	0
08/17		10,893	1,967,636	12,820	206,568	0	0
08/18		10,301	1,977,937	12,863	219,431	0	0
08/19		11,084	1,989,021	9,612	229,043	0	0
08/22		21,854	2,010,875	0	229,043	0	0
08/23		19,445	2,030,320	0	229,043	0	0
08/24		17,789	2,048,109	0	229,043	0	0
08/25		15,826	2,063,935	0	229,043	0	0
08/26		19,432	2,083,367	0	229,043	0	0
08/29		14,148	2,097,515	0	229,043	456	456
08/30		11,305	2,108,820	0	229,043	1,151	1,607
08/31		3,963	2,112,783	0	229,043	1,400	3,007

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Date	Pink Salmon % Female	Pink Salmon Sales Harvest[a]	Pink Salmon Sales Harvest cumulative	Pink Salmon Brood Stock[b]	Pink Salmon Brood Stock cumulative	Coho Salmon Sales Harvest	Coho Salmon Sales Harvest cumulative
09/02		464	2,113,247	0	229,043	2,017	5,024
09/06		0	2,113,247	0	229,043	2,277	7,301
09/07		0	2,113,247	0	229,043	2,435	9,736
09/08		0	2,113,247	0	229,043	2,407	12,143
09/09		0	2,113,247	0	229,043	2,402	14,545
09/12		0	2,113,247	0	229,043	2,434	16,979
09/13		0	2,113,247	0	229,043	2,314	19,293
09/14		0	2,113,247	0	229,043	1,813	21,106
09/15		0	2,113,247	0	229,043	1,744	22,850
09/16		0	2,113,247	0	229,043	2,294	25,144
09/19		0	2,113,247	0	229,043	1,973	27,117
09/20		0	2,113,247	0	229,043	1,222	28,339
09/21		0	2,113,247	0	229,043	1,264	29,603
09/22		0	2,113,247	0	229,043	1,272	30,875
09/23		0	2,113,247	0	229,043	1,077	31,952
09/26		0	2,113,247	0	229,043	1,230	33,182
09/27		0	2,113,247	0	229,043	1,269	34,451
09/28		0	2,113,247	0	229,043	1,247	35,698
09/29		0	2,113,247	0	229,043	1,215	36,913
10/18		0	2,113,247	0	229,043	4,733	41,646
10/20		0	2,113,247	0	229,043	1,043	42,689
10/24		0	2,113,247	0	229,043	329	43,018

Hatchery escapement summary[c]	Pink salmon	Coho Salmon
Purse seine whole fish harvest	1,826,860	0
Raceway harvest[d]	193,051	38,285
Viable broodstock (spawned, eggs in incubators)	222,183	2,511
Unviable broodstock (green/over-ripe/bad)	18,766	312
Unspawned fish (excess males and females)	74,570	2,222
Holding mortalities (raceway, pen mortalities)	6,860	100
Estimated unharvested return[e]	77,586	2,000
Estimated total run to hatchery site	2,419,876	45,430

Sales Summary	Pink salmon	Coho Salmon
Purse seine whole fish sales	1,826,860	0
Raceway whole fish sales	286,387	40,819
Carcass sales[f]	222,183	2,511
Total sales	2,335,430	43,330

[a] Whole fish from purse seine and raceway harvest.

[b] Broodstock daily harvest numbers include viable broodstock and holding mortalities.

[c] Determined by fish tickets and VFDA egg-take log, and annual report.

[d] Raceway harvest includes whole fish as well as roe/milt extraction not conducted as eggtake.

[e] Fish remaining in saltwater and freshwater after all hatchery harvest is complete.

[f] Represents the sale of "viable broodstock" carcasses.

Appendix E21.–Chum salmon hatchery and wild stock contributions to the Montague District commercial common property fishery by period, 2011.

Dates	Period	Hours	Origin							
			Port Chalmers		Wally Noerenberg		Hatchery	Wild		
			Number	Percent	Number	Percent	Total	Number	Percent	Total
05/23 - 05/25	01 [a]	60	1	16.7%	5	83.3%	6	0	0.0%	6
05/26 - 05/29	02 [a]	84	93	16.7%	465	83.3%	558	0	0.0%	558
05/30 - 06/01	03 [a]	60	2	16.7%	8	83.3%	9	0	0.0%	9
06/02 - 06/05	04 [a]	84	80	16.7%	401	83.3%	481	0	0.0%	481
06/06 - 06/08	05	60	352	16.7%	1,762	83.3%	2,114	0	0.0%	2,114
06/09 - 06/12	06	84	1,783	36.2%	3,101	63.0%	4,884	39	0.8%	4,923
06/13 - 06/15	07	60	4,676	57.5%	3,456	42.5%	8,132	0	0.0%	8,132
06/16 - 06/19	08	84	6,337	48.1%	6,838	51.9%	13,175	0	0.0%	13,175
06/20 - 06/22	09	60	4,773	52.1%	4,396	47.9%	9,169	0	0.0%	9,169
06/23 - 06/26	10	84	6,333	60.9%	4,062	39.1%	10,395	0	0.0%	10,395
06/27 - 06/29	11	60	6,320	60.3%	4,022	38.4%	10,341	144	1.4%	10,485
06/30 - 07/03	12 [b]	84	9,957	60.3%	6,336	38.4%	16,293	226	1.4%	16,519
07/04 - 07/06	13 [c]	60	6,449	53.5%	4,725	39.2%	11,173	887	7.4%	12,060
07/07 - 07/10	14 [d]	84	4,587	46.7%	3,932	40.0%	8,519	1,311	13.3%	9,830
07/11 - 07/13	15	60	2,269	46.7%	1,945	40.0%	4,214	648	13.3%	4,862
07/14 - 07/17	16 [d]	84	168	46.7%	144	40.0%	313	48	13.3%	361
07/18 - 07/20	17 [d]	60	0	46.7%	0	40.0%	0	0	13.3%	0
07/21 - 07/24	18 [d]	84	0	46.7%	0	40.0%	0	0	13.3%	0
07/25 - 07/27	19 [d]	60	0	46.7%	0	40.0%	0	0	13.3%	0
07/28 - 07/30	20 [d]	60	11	46.7%	9	40.0%	20	3	13.3%	23
08/08 - 08/08	21 [e]	14	0	0.0%	0	0.0%	0	57	100.0%	57
08/11 - 08/11	20 [e]	14	0	0.0%	0	0.0%	0	394	100.0%	394
08/13 - 08/13	21 [e]	14	0	0.0%	0	0.0%	0	120	100.0%	120
08/15 - 08/15	21 [e]	14	0	0.0%	0	0.0%	0	0	100.0%	0
08/17 - 08/17	22 [e]	14	0	0.0%	0	0.0%	0	4	100.0%	4
08/21 - 08/21	22	14	0	0.0%	0	0.0%	0	0	0.0%	0
08/23 - 08/23	23	14	0	0.0%	0	0.0%	0	0	0.0%	0
08/26 - 08/26	22	12	0	0.0%	0	0.0%	0	0	0.0%	0
08/29 - 08/29	23	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/01 - 09/01	24	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/02 - 09/02	25	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/03 - 09/03	23	12	0	0.0%	0	0.0%	0	0	0.0%	0

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Dates	Period	Hours	Origin							
			Port Chalmers		Wally Noerenberg		Hatchery	Wild		
			Number	Percent	Number	Percent	Total	Number	Percent	Total
09/04 - 09/04	24	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/05 - 09/05	26	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/06 - 09/06	27	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/07 - 09/07	24	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/08 - 09/08	25	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/09 - 09/09	28	12	0	0.0%	0	0.0%	0	0	0.0%	0
09/10 - 09/14	29	108	0	0.0%	0	0.0%	0	0	0.0%	0
09/15 - 09/20	25	132	0	0.0%	0	0.0%	0	0	0.0%	0
Total			54,190	52.3%	45,606	44.0%	99,797	3,880	3.7%	103,677

[a] No samples collected by ADF&G; percentages based on period 5 results.

[b] No samples collected by ADF&G; percentages based on period 11 results.

[c] No samples collected by ADF&G; percentages based on average of period 11 and period 15 results.

[d] No samples collected by ADF&G; percentages based on period 15 results.

[e] No samples collected; entire harvest attributed to wild origins.

Appendix E22.–Pink salmon hatchery and wild stock contributions to the Montague District commercial common property fishery by period, 2011.

Dates	Period	Hours	Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		A.F. Koernig		Hatchery	Wild		
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
05/23 - 05/25	1	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
05/26 - 05/29	2	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
05/30 - 06/01	3	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/02 - 06/05	4	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/06 - 06/08	5	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/09 - 06/12	6 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	2	100.0%	2
06/13 - 06/15	7	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/16 - 06/19	8 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	17	100.0%	17
06/20 - 06/22	9	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/23 - 06/26	10 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	6	100.0%	6
06/27 - 06/29	11 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	2	100.0%	2
06/30 - 07/03	12 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	69	100.0%	69
07/04 - 07/06	13 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	320	100.0%	320
07/07 - 07/10	14 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	2,062	100.0%	2,062
07/11 - 07/13	15 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	747	100.0%	747
07/14 - 07/17	16 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	15	100.0%	15
07/18 - 07/20	17	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
07/21 - 07/24	18	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
07/25 - 07/27	19	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
07/28 - 07/30	20 [b]	60	25	2.1%	162	13.5%	149	12.5%	100	8.3%	436	759	63.5%	1,195
08/08 - 08/08	21 [b]	14	1,735	2.1%	11,274	13.5%	10,407	12.5%	6,938	8.3%	30,354	52,902	63.5%	83,256
08/11 - 08/11	22	14	8,676	2.1%	56,392	13.5%	52,054	12.5%	34,703	8.3%	151,825	264,610	63.5%	416,435
08/13 - 08/13	23	14	2,919	1.4%	11,678	5.6%	8,758	4.2%	23,355	11.3%	46,710	160,566	77.5%	207,276
08/15 - 08/15	24 [c]	14	434	1.4%	1,737	5.6%	1,303	4.2%	3,474	11.3%	6,948	23,882	77.5%	30,830
08/17 - 08/17	25 [c]	14	597	1.4%	2,387	5.6%	1,790	4.2%	4,774	11.3%	9,548	32,823	77.5%	42,371
08/21 - 08/21	26	14	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
08/23 - 08/23	27	14	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
08/26 - 08/26	28	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
08/29 - 08/29	29	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/01 - 09/01	30	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/02 - 09/02	31	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/03 - 09/03	32	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0

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Dates		Period	Hours	Origin											
				Solomon Gulch		Cannery Creek		Wally Noerenberg		A.F. Koernig		Hatchery	Wild		
				Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
09/04	- 09/04	33	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/05	- 09/05	35	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/06	- 09/06	36	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/07	- 09/07	37	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/08	- 09/08	38	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/09	- 09/09	39	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/10	- 09/14	40	108	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/15	- 09/20	41	132	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
Total				14,386	1.8%	83,630	10.7%	74,462	9.5%	73,344	9.3%	0 245,821	538,782	68.7%	784,603

[a] No samples collected by ADF&G; entire harvest attributed to wild stocks.

[b] No samples collected by ADF&G; percentages based on period 22 results.

[c] No samples collected by ADF&G; percentages based on period 23 results.

Appendix E23.–Pink salmon hatchery and wild stock contributions to the Northern District commercial common property fishery by period, 2011.

			Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		A.F. Koernig		Hatchery	Wild		
Dates	Period	Hours	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
08/01 - 08/01	01 [a]	14	658	8.3%	2,057	26.0%	329	4.2%	0	0.0%	3,044	4,854	61.5%	7,898
08/04 - 08/04	02	14	18,155	8.3%	56,735	26.0%	9,078	4.2%	0	0.0%	83,968	133,895	61.5%	217,863
08/06 - 08/06	03	14	9,611	2.1%	206,636	44.8%	129,748	28.1%	4,805	1.0%	350,800	110,526	24.0%	461,326
08/08 - 08/08	04	14	0	0.0%	142,680	60.4%	59,040	25.0%	2,460	1.0%	204,180	31,980	13.5%	236,160
08/11 - 08/11	05	14	0	0.0%	155,268	67.1%	33,877	14.6%	11,292	4.9%	200,436	31,054	13.4%	231,490
08/13 - 08/13	06	14	0	0.0%	293,337	74.0%	37,184	9.4%	4,132	1.0%	334,652	61,973	15.6%	396,625
08/15 - 08/15	07	14	2,255	1.0%	169,098	78.1%	22,546	10.4%	0	0.0%	193,899	22,546	10.4%	216,445
08/17 - 08/17	08	14	3,679	1.1%	286,954	83.0%	22,073	6.4%	0	0.0%	312,706	33,110	9.6%	345,816
08/19 - 08/19	09	14	0	0.0%	220,501	84.4%	10,889	4.2%	0	0.0%	231,389	29,945	11.5%	261,334
08/21 - 08/21	10	14	0	0.0%	197,679	85.4%	2,411	1.0%	0	0.0%	200,090	31,339	13.5%	231,429
08/23 - 08/23	11	14	0	0.0%	50,648	87.5%	0	0.0%	0	0.0%	50,648	7,235	12.5%	57,883
08/25 - 08/25	12 [b]	12	0	0.0%	5,353	62.3%	2,414	28.1%	0	0.0%	7,766	827	9.6%	8,593
08/26 - 08/26	13	12	0	0.0%	13,712	37.1%	20,776	56.2%	0	0.0%	34,488	2,493	6.7%	36,981
08/27 - 08/27	14 [c]	12	0	0.0%	5,257	66.6%	2,295	29.1%	0	0.0%	7,552	344	4.4%	7,896
08/28 - 08/28	15 [c]	12	0	0.0%	6,035	66.6%	2,635	29.1%	0	0.0%	8,671	394	4.4%	9,065
08/29 - 08/29	16	12	0	0.0%	34,140	96.1%	697	2.0%	0	0.0%	34,836	697	2.0%	35,533
08/30 - 08/30	17 [d]	12	0	0.0%	17,407	96.1%	355	2.0%	0	0.0%	17,762	355	2.0%	18,117
08/31 - 08/31	18 [d]	12	0	0.0%	0	96.1%	0	2.0%	0	0.0%	0	0	2.0%	0
09/01 - 09/01	19 [d]	12	0	0.0%	2,325	96.1%	47	2.0%	0	0.0%	2,373	47	2.0%	2,420
09/02 - 09/02	20 [d]	12	0	0.0%	0	96.1%	0	2.0%	0	0.0%	0	0	0.0%	0
09/03 - 09/03	21	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/04 - 09/04	22	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/05 - 09/05	23	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/06 - 09/06	24	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/07 - 09/07	25	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/08 - 09/08	26	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/09 - 09/09	27	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/10 - 09/10	28	16	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/11 - 09/11	29	16	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0

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			Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		A.F. Koernig		Hatchery	Wild		
Dates	Period	Hours	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
09/12 - 09/12	30	16	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/13 - 09/13	31	16	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/14 - 09/14	32	16	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
09/15 - 09/20	33	132	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
Totals			34,358	1.2%	1,865,819	67.0%	356,394	12.8%	22,689	0.8%	2,279,260	503,614	18.1%	2,782,874

[a] No samples collected by ADF&G; percentages based on period 2 results.

[b] No samples collected by ADF&G; percentages based on average of period 11 and period 13 results.

[c] No samples collected by ADF&G; percentages based on average of period 13 and period 16 results.

[d] No samples collected by ADF&G; percentages based on period 16 results.

Appendix E24.–Daily salmon sales, sex ratios, sales summary, and broodstock summary at the Cannery Creek Hatchery, 2011.

	Pink Salmon				
Date	% Female	Sales Harvest[a]	Sales Harvest cumulative	Brood Stock[b]	Brood Stock cumulative
08/25	-	19,548	19,548	4,507	4,507
08/26	-	24,054	43,602	8,543	13,050
08/27	-	20,889	64,491	10,506	23,556
08/28	-	20,242	84,733	9,414	32,970
08/29	-	18,751	103,484	11,910	44,880
08/30	-	17,441	120,925	14,949	59,829
08/31	-	19,313	140,238	13,334	73,163
09/01	-	12,950	153,188	18,299	91,462
09/02	-	11,401	164,589	17,109	108,571
09/03	-	10,868	175,457	17,664	126,235
09/04	-	13,346	188,803	18,649	144,884
09/05	-	12,181	200,984	21,576	166,460
09/06	-	10,473	211,457	19,009	185,469
09/07	-	5,496	216,953	8,688	194,157
09/08	-	17,277	234,230	14,871	209,028
09/09	-	13,400	247,630	16,295	225,323
09/10	-	9,179	256,809	19,254	244,577
09/11	-	19,714	276,523	10,399	254,976
09/12	-	17,767	294,290	13,012	267,988
09/13	-	13,082	307,372	14,676	282,664
09/14	-	17,031	324,403	344	283,008

Hatchery escapement summary[c]	Pink salmon
Purse seine whole fish harvest	0
Raceway harvest[d]	17,031
Viable broodstock (spawned, eggs in incubators)	275,606
Unviable broodstock (green/over-ripe/bad)	32,284
Unspawned fish (e.g., excess males/females)	275,088
Holding mortalities (raceway, pen mortalities)	7,402
Estimated unharvested return[e]	7,500
Estimated total run to hatchery site	614,911

Sales Summary	Pink salmon
Purse seine whole fish sales	0
Raceway sales[f]	324,403
Carcass sales[g]	275,606
Total sales	600,009

[a] Whole fish from purse seine and raceway sales.

[b] Broodstock daily harvest numbers include viable broodstock and holding mortalities.

[c] Determined by fish tickets and PWSAC egg-take log, and annual report.

[d] Raceway harvest includes whole fish as well as roe extraction not conducted as eggtake.

[e] Fish remaining in saltwater and freshwater after all hatchery harvest is complete.

[f] Sum of raceway harvest, unviable broodstock and unspawned fish.

[g] Represents the sale of "viable broodstock" carcasses.

Appendix E25.–Sockeye salmon hatchery and wild stock contributions to the Southwestern District commercial common property fishery by period, 2011.

Dates	Period		Hours	Origin									
				Gulkana		Main Bay		Solf Lake		Hatchery	Wild		
				Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
05/26 - 05/29	1		84	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
05/30 - 06/01	2	[a]	60	0	0.0%	10	100.0%	0	0.0%	10	0	0.0%	10
06/02 - 06/05	3	[a]	84	0	0.0%	1	100.0%	0	0.0%	1	0	0.0%	1
06/06 - 06/08	4	[a]	60	0	0.0%	40	100.0%	0	0.0%	40	0	0.0%	40
06/09 - 06/12	5		84	0	0.0%	343	100.0%	0	0.0%	343	0	0.0%	343
06/13 - 06/15	6		60	0	0.0%	121	91.7%	0	0.0%	121	11	8.3%	132
06/16 - 06/19	7		84	0	0.0%	888	96.9%	0	0.0%	888	29	3.1%	917
06/20 - 06/22	8		60	0	0.0%	1,218	86.0%	0	0.0%	1,218	198	14.0%	1,416
06/23 - 06/26	9		84	0	0.0%	4,276	81.7%	0	0.0%	4,276	960	18.3%	5,236
06/27 - 06/29	10		60	0	0.0%	7,102	92.6%	0	0.0%	7,102	564	7.4%	7,666
06/30 - 07/03	11	[b]	84	0	0.0%	1,682	82.4%	0	0.0%	1,682	361	17.6%	2,043
07/04 - 07/06	12	[c]	60	0	0.0%	0	92.6%	0	0.0%	0	0	7.4%	0
07/07 - 07/10	13	[c]	84	0	0.0%	114	92.6%	0	0.0%	114	9	7.4%	123
07/11 - 07/13	14	[c]	60	0	0.0%	0	92.6%	0	0.0%	0	0	7.4%	0
07/14 - 07/17	15	[b]	84	0	0.0%	1,671	95.0%	0	0.0%	1,671	88	5.0%	1,759
07/18 - 07/20	16	[b]	60	0	0.0%	1,211	69.4%	0	0.0%	1,211	533	30.6%	1,744
08/06 - 08/06	17		14	0	0.0%	227	5.2%	0	0.0%	227	4,148	94.8%	4,375
08/08 - 08/08	18	[d]	14	0	0.0%	108	4.2%	0	0.0%	108	2,467	95.8%	2,575
08/11 - 08/11	19		14	0	0.0%	38	3.2%	0	0.0%	38	1,153	96.8%	1,191
08/13 - 08/13	20	[e]	14	0	0.0%	40	2.3%	0	0.0%	40	1,668	97.7%	1,708
08/15 - 08/15	21		14	0	0.0%	72	1.4%	0	0.0%	72	4,909	98.6%	4,981
08/17 - 08/17	22		14	0	0.0%	0	0.0%	0	0.0%	0	2,894	100.0%	2,894
08/19 - 08/19	23		14	0	0.0%	0	0.0%	0	0.0%	0	518	100.0%	518
08/21 - 08/21	24	[b]	14	0	0.0%	0	0.0%	0	0.0%	0	2,906	100.0%	2,906
08/23 - 08/23	25	[b]	14	0	0.0%	80	3.3%	0	0.0%	80	2,369	96.7%	2,449
08/25 - 08/25	26		12	0	0.0%	0	0.0%	0	0.0%	0	390	100.0%	390
08/26 - 08/26	27	[b]	12	0	0.0%	0	0.0%	0	0.0%	0	615	100.0%	615
08/27 - 08/27	28	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	354	100.0%	354
08/28 - 08/28	29	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	249	100.0%	249
08/29 - 08/29	30	[b]	12	0	0.0%	0	0.0%	0	0.0%	0	323	100.0%	323
08/30 - 08/30	31	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	120	100.0%	120

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Dates			Period		Hours	Origin: Gulkana Number	Gulkana Percent	Main Bay Number	Main Bay Percent	Solf Lake Number	Solf Lake Percent	Hatchery Total	Wild Number	Wild Percent	Total
08/31	-	08/31	32	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	73	100.0%	73
09/01	-	09/01	33	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	319	100.0%	319
09/02	-	09/02	34	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
09/03	-	09/03	35	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
09/04	-	09/04	36	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
09/05	-	09/05	34	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
09/05	-	09/05	37	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
09/06	-	09/06	38	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
09/07	-	09/07	39	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
09/08	-	09/08	40	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
09/09	-	09/09	41	[f]	12	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
09/10	-	09/14	42	[f]	108	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
09/15	-	09/20	43	[f]	132	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
Total						0	0.0%	19,245	40.5%	0	0.0%	19,245	28,225	59.5%	47,470

[a] No samples collected by ADF&G; percentages based on period 5 results.

[b] Small sample size; fewer than 20 specimens analyzed.

[c] No samples collected by ADF&G; percentages based on period 10 results.

[d] No samples collected by ADF&G; percentages based on average of period 17 and period 19 results.

[e] No samples collected by ADF&G; percentages based on average of period 19 and period 21 results.

[f] No samples collected by ADF&G; entire harvest attributed to wild stocks.

Appendix E26.–Pink salmon hatchery and wild stock contributions to the Southwestern District commercial common property fishery by period, 2011.

Dates	Period	Hours	Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		A.F. Koernig		Hatchery	Wild		
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
05/26 - 05/29	01	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
05/30 - 06/01	02	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/02 - 06/05	03	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/06 - 06/08	04	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%	0
06/09 - 06/12	05 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	5	100.0%	5
06/13 - 06/15	06 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	100.0%	0
06/16 - 06/19	07 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	38	100.0%	38
06/20 - 06/22	08 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	208	100.0%	208
06/23 - 06/26	09 [a]	84	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	755	100.0%	755
06/27 - 06/29	10 [a]	60	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	1,449	100.0%	1,449
06/30 - 07/03	11 [b]	84	0	0.0%	0	0.0%	0	0.0%	835	73.3%	835	304	26.7%	1,139
07/04 - 07/06	12 [b]	60	0	0.0%	0	0.0%	0	0.0%	0	73.3%	0	0	26.7%	0
07/07 - 07/10	13 [b]	84	0	0.0%	0	0.0%	0	0.0%	3,668	73.3%	3,668	1,334	26.7%	5,002
07/11 - 07/13	14 [b]	60	0	0.0%	0	0.0%	0	0.0%	0	73.3%	0	0	26.7%	0
07/14 - 07/17	15	84	0	0.0%	0	0.0%	0	0.0%	2,765	73.3%	2,765	1,006	26.7%	3,771
07/18 - 07/20	16 [c]	60	282	2.1%	1,268	9.4%	1,339	9.9%	6,722	49.7%	9,611	3,918	29.0%	13,529
08/06 - 08/06	17	14	36,899	4.2%	166,048	18.8%	175,272	19.8%	230,622	26.0%	608,841	276,746	31.3%	885,587
08/08 - 08/08	18	14	13,956	2.1%	153,514	22.9%	244,227	36.5%	41,867	6.3%	453,564	216,315	32.3%	669,879
08/11 - 08/11	19	14	7,234	1.0%	253,178	36.5%	144,673	20.8%	101,271	14.6%	506,355	188,075	27.1%	694,430
08/13 - 08/13	20	14	0	0.0%	96,434	19.8%	121,811	25.0%	157,340	32.3%	375,585	111,660	22.9%	487,245
08/15 - 08/15	21	14	0	0.0%	265,888	21.1%	465,305	36.8%	345,655	27.4%	1,076,848	186,122	14.7%	1,262,970
08/17 - 08/17	22	14	0	0.0%	163,693	19.8%	327,385	39.6%	224,001	27.1%	715,079	112,000	13.5%	827,079
08/19 - 08/19	23	14	0	0.0%	64,172	26.0%	48,771	19.8%	82,140	33.3%	195,083	51,338	20.8%	246,420
08/21 - 08/21	24	14	5,412	1.0%	129,882	25.0%	102,823	19.8%	162,352	31.3%	400,468	119,058	22.9%	519,526
08/23 - 08/23	25	14	0	0.0%	115,687	26.0%	124,942	28.1%	134,197	30.2%	374,826	69,412	15.6%	444,238
08/25 - 08/25	26	12	2,038	1.0%	44,837	22.9%	46,875	24.0%	55,028	28.1%	148,779	46,875	24.0%	195,654
08/26 - 08/26	27	12	0	0.0%	67,339	26.0%	48,484	18.8%	67,339	26.0%	183,162	75,420	29.2%	258,582
08/27 - 08/27	28	12	0	0.0%	10,085	17.9%	11,526	20.5%	28,095	50.0%	49,707	6,483	11.5%	56,190
08/28 - 08/28	29	12	720	1.0%	11,520	16.7%	18,001	26.0%	25,201	36.5%	55,442	13,680	19.8%	69,122
08/29 - 08/29	30	12	0	0.0%	14,808	28.1%	14,260	27.1%	14,808	28.1%	43,876	8,775	16.7%	52,651
08/30 - 08/30	31	12	0	0.0%	8,307	28.0%	6,527	22.0%	10,087	34.0%	24,922	4,747	16.0%	29,669
08/31 - 08/31	32 [d]	12	0	0.0%	3,634	28.0%	2,855	22.0%	4,412	34.0%	10,901	2,076	16.0%	12,977

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Dates		Period	Hours	Origin: Solomon Gulch Number	Solomon Gulch Percent	Cannery Creek Number	Cannery Creek Percent	Wally Noerenberg Number	Wally Noerenberg Percent	A.F. Koernig Number	A.F. Koernig Percent	Hatchery Total	Wild Number	Wild Percent	Total
09/01	- 09/01	33 [d]	12	0	0.0%	9,089	28.0%	7,141	22.0%	11,037	34.0%	27,267	5,194	16.0%	32,461
09/02	- 09/02	34 [d]	12	0	0.0%	1,703	28.0%	1,338	22.0%	2,068	34.0%	5,110	973	16.0%	6,083
09/03	- 09/03	35 [d]	12	0	0.0%	458	28.0%	360	22.0%	556	34.0%	1,373	262	16.0%	1,635
09/04	- 09/04	36 [d]	12	0	0.0%	255	28.0%	200	22.0%	309	34.0%	764	145	16.0%	909
09/05	- 09/05	37 [d]	12	0	0.0%	0	28.0%	0	22.0%	0	34.0%	0	0	16.0%	0
09/06	- 09/06	38 [d]	12	0	0.0%	0	28.0%	0	22.0%	0	34.0%	0	0	16.0%	0
09/07	- 09/07	39 [d]	12	0	0.0%	5,953	28.0%	4,678	22.0%	7,229	34.0%	17,860	3,402	16.0%	21,262
09/08	- 09/08	40 [d]	12	0	0.0%	1,803	28.0%	1,417	22.0%	2,190	34.0%	5,410	1,030	16.0%	6,440
09/09	- 09/09	41 [d]	12	0	0.0%	0	28.0%	0	22.0%	0	34.0%	0	0	16.0%	0
09/10	- 09/14	42 [d]	108	0	0.0%	0	28.0%	0	22.0%	0	34.0%	0	0	16.0%	0
09/15	- 09/20	43 [d]	132	0	0.0%	0	28.0%	0	22.0%	0	34.0%	0	0	16.0%	0
Total				66,541	1.0%	1,589,555	23.4%	1,920,210	28.2%	1,721,794	25.3%	5,298,099	1,508,806	22.2%	6,806,905

[a] No samples collected by ADF&G; entire harvest attributed to wild origins.

[b] No samples collected by ADF&G; percentages based on period 15 results.

[c] No samples collected by ADF&G; percentages based on average of period 15 and period 17 results.

[d] No samples collected by ADF&G; percentages based on period 31 results.

Appendix E27.–Daily salmon sales, sex ratios, sales summary, and broodstock summary at the Armin F. Koerning Hatchery, 2011.

	Pink Salmon				
Date	% Female	Sales Harvest[a]	Sales Harvest cumulative	Brood Stock[b]	Brood Stock cumulative
07/26	8.0%	26,645	26,645	0	0
07/27	8.2%	11,009	37,654	0	0
07/28	10.5%	29,383	67,037	0	0
07/29	7.7%	49,354	116,391	0	0
07/30	13.8%	47,553	163,944	0	0
07/31	15.7%	50,334	214,278	0	0
08/01	16.4%	68,793	283,071	0	0
08/02	25.0%	22,318	305,389	0	0
08/03	20.7%	49,580	354,969	0	0
08/04	25.3%	110,430	465,399	0	0
08/05	26.4%	100,820	566,219	0	0
08/07	33.7%	125,441	691,660	0	0
08/09	37.7%	105,811	797,471	0	0
08/12	45.0%	34,760	832,231	0	0
08/24		7,799	840,030	11,998	11,998
08/25		4,025	844,055	17,718	29,716
08/26		7,642	851,697	14,711	44,427
08/27		11,514	863,211	16,597	61,024
08/28		6,118	869,329	13,368	74,392
08/29		0	869,329	86	74,478
08/30		4,366	873,695	23,691	98,169
08/31		2,340	876,035	19,424	117,593
09/01		10,541	886,576	23,075	140,668
09/02		0	886,576	24,442	165,110
09/03		15,466	902,042	20,998	186,108
09/04		5,620	907,662	25,318	211,426
09/05		36,412	944,074	36	211,462
09/06		30,085	974,159	14	211,476
09/12		28,305	1,002,464	0	211,476

Hatchery escapement summary[c]	Pink salmon
Purse seine whole fish harvest	832,231
Raceway harvest[d]	90,911
Viable broodstock (spawned, eggs in incubators)	210,672
Unviable broodstock (green/over-ripe/bad)	16,709
Unspawned fish (e.g., excess males/females)	62,613
Holding mortalities (raceway, pen mortalities)	804
Estimated unharvested return[e]	10,000
Estimated total run to hatchery site	1,223,940

Sales Summary	Pink salmon
Purse seine whole fish sales	832,231
Raceway sales[f]	170,233
Carcass sales[g]	210,672
Total sales	1,213,136

[a] Whole fish from purse seine and raceway sales.

[b] Broodstock daily harvest numbers include viable broodstock and holding mortalities.

[c] Determined by fish tickets and PWSAC egg-take log, and annual report.

[d] Raceway harvest includes whole fish as well as roe extraction not conducted as eggtake.

[e] Fish remaining in saltwater and freshwater after all hatchery harvest is complete.

[f] Sum of raceway harvest, unviable broodstock and unspawned fish.

[g] Represents the sale of "viable broodstock" carcasses.