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**Prince William Sound Area Salmon Fisheries, 2008;  
a Report to the Alaska Board of Fisheries**

by

**Jeremy Botz**

and

**Glenn Hollowell**

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November 2008

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



## Symbols and Abbreviations

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

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A REPORT TO THE ALASKA BOARD OF FISHERIES**

by  
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and  
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Division of Sport Fish, Research and Technical Services  
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## ABSTRACT

The 2008 Prince William Sound Area commercial salmon harvest of 49.4 million fish is above the 10-year harvest average for this area. The harvest was made up of 42.4 million pink (*Oncorhynchus gorbuscha*), 1.3 million sockeye (*O. nerka*), 5.1 million chum (*O. keta*), 549,076 coho (*O. kisutch*), and 12,437 Chinook salmon (*O. tshawytscha*). Approximately 17% (8.4 million fish) of the harvest was sold for hatchery cost recovery. The remaining 83% (41.0 million fish) were harvested in the common property fishery. During the 2008 season, 507 drift gillnet permit holders, 25 set gillnet permit holders, and 141 purse seine permit holders reported deliveries.

Key words: Prince William Sound, salmon, sockeye salmon, *Oncorhynchus nerka*, Chinook salmon, *O. tshawytscha*, pink salmon, *O. gorbuscha*, chum salmon, *O. keta*, coho, *O. kisutch*, harvest, drift gillnet, set gillnet, purse seine, common property fishery, hatchery cost recovery.

## INTRODUCTION

### PRINCE WILLIAM SOUND SALMON FISHERIES

#### Management Area

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

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. The management objective for all districts is the achievement of escapement goals for the major species while allowing for the orderly harvest of all fish surplus to spawning requirements. In addition, ADF&G follows regulatory plans to manage fisheries and assist private non-profit (PNP) hatcheries in achieving cost recovery and broodstock objectives.

Six hatcheries contribute to the area's fisheries. Five are operated by the regional aquaculture association, Prince William Sound Aquaculture Corporation (PWSAC). Gulkana Hatchery in Paxson augments the production of sockeye salmon *Oncorhynchus nerka* to the Copper River. Cannery Creek Hatchery (CCH) located on the north shore of the sound, and A.F. Koernig (AFK) Hatchery in the southwestern sound produce pink salmon *O. gorbuscha*, Wally H. Noerenberg (WHN) Hatchery in the northwestern sound produces pink, chum *O. keta*, and coho 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 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. 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 ADF&G, representatives from area processing companies, gear groups and aquaculture associations sit on an advisory body known as the PWS Salmon Harvest Task Force (SHTF).

## **Salmon Season Summary**

The 2008 Prince William Sound Area commercial salmon harvest of 49.4 million fish is above the previous 10-year harvest average of 44.7 million (Table 1–2; Figure 2). Harvest was comprised of 42.4 million pink, 1.3 million sockeye, 5.1 million chum, 549,076 coho, and 12,437 Chinook salmon *O. tshawytscha*. Approximately 17% (8.4 million fish) of the harvest was sold for hatchery cost recovery. The majority, 82% (41.0 million fish), were harvested in the common property fishery. The educational permit, personal use, and donated fish categories accounted for <1% (10,000 fish) of the harvest. The preliminary estimated value of the combined 2008 commercial salmon harvest is \$90.3 million, including hatchery sales. During the 2008 season, 507 drift gillnet permit holders fished, 25 set gillnet permit holders fished, and 141 purse seine permit holders fished (Tables 3–6 and Figure 3).

There are 2 proposals currently before the Alaska Board of Fisheries that concern allocation in the general PWS area. These are,

- #70—seeks to have PWSAC make proportional adjustments in cost recovery to correct exvessel value allocation percentages instead of allowing the drift gillnet fleet exclusive access to the Port Chalmers remote chum salmon run.
- #81—seeks to reduce hatchery production of chum salmon in PWS to 24% of the year 2000 production.

There is 1 proposal currently before the Alaska Board of Fisheries that concerns drift gillnet in the general PWS area. This proposal is,

- #122—seeks to specify marking requirements for commercial drift gillnet buoys

## **COGHILL DISTRICT**

Coghill District is located in northwestern PWS and is approximately 45 miles in length. This district was created to define the harvests of pink, chum and sockeye salmon returning to Port Wells and the Esther Island area. Wally Noerenberg Hatchery located on Lake Bay at the southern end of Esther Island was built by PWSAC in 1985. WNH produces chum, pink and coho salmon.

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 and ending when the 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)) and 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 2008 preseason forecast of sockeye salmon returning to Coghill Lake was 120,020 fish. Allowing for the midpoint Sustainable Escapement Goal (SEG) of 30,000 sockeye salmon would leave 90,000 fish for the commercial common property fishery (CPF; Table 6). Enhanced chum salmon returns to Wally Noerenberg Hatchery (WNH) were forecast to be nearly 2.3 million fish (Table 6). PWSAC's projection for cost recovery and broodstock requirements was



approximately 640,000 fish, leaving 1.63 million chum salmon for the CPF. The projected return of pink salmon to the WNH facility was 3.7 million fish (Table 6). Of those, the PWSAC projection for cost recovery and broodstock requirements was approximately 605,000 for cost recovery and 264,000 for broodstock, leaving approximately 2.8 million pink salmon available to the CPF. An estimated 128,000 coho salmon were projected to return to WNH with 2,700 needed for broodstock by the hatchery and the remainder available to the CPF (Table 6).

The Commercial Operators Annual Report (COAR) exvessel value calculation from 2002–2006 showed the seine fleet harvested 47.6% and the drift gillnet fleet harvested 52.4% of the commercial value of all enhanced CPF salmon. Because both gear groups harvested more than 45%, during the previous 5-year period, no allocative remedies were triggered in 2008.

PWSAC, in consultation with ADF&G elected to harvest 30% of the pink and chum salmon cost recovery before allowing CPF openings in the various hatchery subdistricts. ADF&G retained the option of opening the CPF in the event that cost recovery did not keep pace with run entry to minimize loss of fish quality.

### **Season Summary**

Coghill weir was fully deployed and fish tight on June 8. The weir was maintained until July 24 when it was dismantled. Sockeye salmon escapement was 29,296 through July 23, and above the minimum SEG of 20,000 fish.

Total CPF sockeye salmon harvest for Coghill District was 179,011 fish; the total CPF harvests for chum, pink, and coho salmon was 2.3 million, 7.4 million, and 117,190, respectively. PWSAC reported a chum salmon hatchery harvest (cost recovery and broodstock) of 653,000 fish, as well as a pink salmon hatchery harvest (cost recovery and broodstock) of 1.31 million fish. In addition, PWSAC reported a hatchery harvest (cost recovery and broodstock) of 3,000 coho salmon.

The commercial drift gillnet fishery began in the Coghill District on June 2. A general schedule of 2 openings, 36 to 72 hours in length, per week was established. These coincided with openings in the Copper River and Bering River districts and matched the duration of openings in the Eshamy District. This schedule was maintained until July 21 with the start of pink salmon. Typically the drift gillnet fleet targets returning WNH chum salmon in the early season and broadens their focus in late-June to include MBH sockeye salmon and wild sockeye salmon returning to Coghill Lake. Participation in the Coghill District fishery in 2008 was significantly higher than in recent years as the result of poor sockeye salmon runs to the Copper River. In addition processors were paying drift gillnet permit holders an average of approximately \$ 0.55 per pound for chum salmon. This is significantly more than the \$ 0.32 per pound paid in 2007 for this species.

Early season harvests of chum salmon returning to the WNH were robust with over a half million landed in the first 2 weeks of the season by 308 permit holders. Chum salmon harvest remained robust through the first week of July as shown in Table 7.

Fish passage at Coghill Lake weir, while lackluster, was steady with run timing appearing to be 4–7 days later than expected. This observation was supported by roe technicians at processing facilities who reported that gonads in sockeye salmon from Coghill District were less mature than expected. This was also the case in 2008 for sockeye salmon harvested from other districts in the PWS and Copper River area. Historically, Coghill Lake sockeye salmon have shown an

unusually steep run timing curve that peaks on July 4. On Saturday July 5, a total of 14,804 sockeye salmon had been counted at Coghill weir which was above the minimum cumulative SEG for that date of 10,420 fish. Because of this, ADF&G allowed deep gillnet gear to be used in the Coghill district beginning Monday, July 7. Passage remained steady for the remainder of July with a final count on July 23 of 29,296 sockeye salmon. This was above the minimum SEG for the Coghill River of 20,000 fish.

By regulation, on July 21 purse seine permit holders began fishing Coghill District during commercial openings. Harvests of sockeye and chum salmon diminished rapidly after statistical week 29 with pink salmon harvests increasing. Drift gillnet participation in the pink salmon directed fishery was stronger than in recent years as a result of the \$ 0.37 per pound price paid by some buyers. This is more than triple last year's price for gillnet caught pink salmon of \$ 0.11 per pound. This increased pressure on pink salmon stocks resulted in additional restrictions of the drift gillnet and purse seine fleets in order to assure adequate escapement of the smaller even-year wild pink salmon return.

Coho salmon landings increased in early August and peaked during the September 2 period with over 9,000 fish landed. On September 3 the harvest of pink salmon (3,542) fell below the harvest of coho salmon (5,966). Consequently, in accordance with 5AAC 24.370(e)(5)(B), on September 4 the Coghill District was closed to purse seine harvest. Coho salmon harvest declined shortly thereafter with the district closing for the 2008 season on October 11.

Preliminary contribution estimates show that wild sockeye comprised 28.5% of the sockeye salmon harvested from this district. Wild chum comprised 3.5% of the chum salmon harvested and wild pink salmon comprised 7.5% of the pink salmon harvested in Coghill District.

There are 8 proposals currently before the board that deal with issues specific to Coghill District. These are,

- #58—seeks to correct an error in regulation describing the southwest boundary of Coghill District.
- #59—seeks to redefine the western boundary of Granite Bay Subdistrict from a boundary that is 1 mile off shore, to one that is based on latitude and longitude coordinates.
- #71, #72, #73, #74—seek to allow purse seine gear in a portion of the Coghill District from June 1 to July 21.
- #76—seeks to allow alternating periods of equal time for purse seine and drift gillnet permit holders after July 21 in Coghill District.
- #77—seeks to establish an ending date in regulation that would close Coghill District to purse seine gear.

## **UNAKWIK DISTRICT**

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

Unakwik District is located in northern Prince William Sound and is the smallest district in this management area. Both drift gillnet and purse seine gears are allowed during all fishing periods. This district was established for the management of relatively small runs of sockeye salmon to Cowpen and Miners lakes. Escapement enumeration is by aerial survey; however, water clarity is

marginal, thus escapement indices are considered imprecise at best. A major pink salmon hatchery, Cannery Creek Hatchery, borders the southern boundary of the district.

### **Season Summary**

Total 2008 Unakwik District harvest was 389 sockeye, 58 chum, and 878 pink salmon. There were 5 drift gillnet permit holders that reported harvests from this district and no reported landings by purse seine permit holders during the 2008 season. Overall sockeye salmon harvest in 2008 was below the previous 10-year average of 8,810 fish. This was likely related to the robust numbers of enhanced hatchery sockeye and chum salmon in other PWS districts that reduced effort in this district. Unakwik District opened on June 16 for a 48-hour period, and followed a schedule of 2 evenly spaced periods per week, concurrent with that of other districts in PWS, until the district was closed for the season on August 3. Peak harvest occurred during period 13 (July 28–30), with 270 sockeye and 623 pink salmon landed by 2 permit holders. Unakwik District closed for the 2008 season on August 3.

There are currently no proposals before the board dealing explicitly with Unakwik District fisheries.

### **ESHAMY DISTRICT**

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

Eshamy District is open to the 530 drift gillnet and the 32 set gillnet permit holders in Area E. Currently in Eshamy District, set gillnet permit holders may operate up to 150 fathoms of set gillnet. 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 length in the Eshamy general district and the Main Bay Hatchery subdistrict east of the Terminal Harvest Area (THA). In the THA and 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 Alternating Gear Zone (AGZ) of the Main Bay Subdistrict (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 THA of Main Bay Subdistrict where this distance is 50 fathoms, and in the Alternating Gear Zone 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 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 Alternating Gear Zone is only open to either set gillnet or drift gillnet gear at any one time.

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

- In the Alternating Gear Zone (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 per week.

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

The 2008 preseason forecast of sockeye salmon returning to Eshamy Lake was 83,752 fish. Allowing for the midpoint BEG of 30,000, would leave 53,752 fish for the common property set and drift gillnet fisheries. Total onsite returns of enhanced sockeye salmon to Main Bay Hatchery (MBH) were projected by PWSAC to be 929,000 fish. The entire projected run was stock of Coghill Lake origin, of which 7,930 fish were to be used for broodstock and none were to be harvested for cost recovery, with the remaining 921,000 sockeye salmon available for CPF harvest. According to the Prince William Sound Management and Salmon Enhancement Allocation plan (5AAC 24.370), the set gillnet gear group allocation is 4% of the 5-year average value of PWSAC enhanced salmon stocks. Because the set gillnet 5-year average exvessel value, from 2002 through 2006 was 6.0%, weekly time limits after July 10 were imposed.

### **Season Summary**

The run timing of Coghill Lake sockeye stock is from mid-June to late-July, with the peak anticipated on July 4. Sockeye salmon began arriving at Main Bay Hatchery in mid-June in numbers near the anticipated. A schedule of 2 extended fishing periods per week was established beginning on June 2. Drift gillnet fleet participation was higher than in recent years given the poor sockeye and Chinook salmon runs in the Copper River District, a strong run of hatchery chum salmon to WNH in the neighboring Coghill District and availability of nearly the entire Main Bay run to the fleet. Harvests from weeks 23 and 24 were minimal as anticipated as shown in Table 8.

Sockeye salmon harvests increased rapidly in late June with peak harvest and participation for drift gillnet occurring in statistical week 26 and for set gillnet in the following week. Peak chum salmon harvest for the drift gillnet fleet occurred in week 26 with the peak set gillnet harvest for this species occurring during the previous week. Harvest following this remained strong until the week following July 10 when set gillnet harvest was restricted to no more than 36 hours per week in accordance with 5AAC 24.370. During this week both set gillnet harvest and the number of set gillnet permits reporting deliveries declined to one-third of the previous week's level.

Eshamy River weir was installed and fish tight on July 10. Passage of Eshamy River sockeye salmon was extremely slow with only 8 fish counted from July 10–21. The minimum cumulative BEG for this period is 2,186 sockeye salmon. Commercial fishing was restricted July 17-August 6 to the northern half of Eshamy District where the focus would be on residual hatchery fish. During this time harvests of sockeye and chum salmon decreased to a few thousand fish per week while harvests of pink salmon remained somewhat steady with 10,000 to 18,000 harvested each week. This was likely driven by the \$ 0.35 to \$ 0.37 per pound being paid for this species. Escapement of pink salmon in PWS as measured by aerial escapement surveys dwindled and fell below the SEG in late July. As a result, commercial fishing during week 32 was restricted to waters of Main Bay Subdistrict. Passage of sockeye salmon at Eshamy weir increased slowly in late July and early August. By August 8, cumulative passage was within 300 fish of the goal for that date. On August 11, waters of Eshamy District outside of Main Bay and Eshamy Bay were closed to commercial harvest and waters in the outer Eshamy Bay were opened. This allowed commercial fishers access to Eshamy River sockeye which were increasing in number and to any remaining Main Bay Hatchery sockeye while minimizing the harvest of traveling pink salmon in the Eshamy general district. There were no harvests reported after statistical week 34. Eshamy District remained open to commercial harvest until September 24 when it was closed for the 2008 season.

Preliminary contribution estimates show that prior to July 10 wild sockeye comprised 7.9% of the 624,719 sockeye salmon harvested and that after July 10 wild sockeye comprised 35.1% of the 98,297 sockeye salmon harvested. Wild chum comprised 14.2% of the 305,007 chum salmon harvested in this district and wild pink salmon comprised 95.8% of the 123,784 pink salmon harvested in Eshamy District.

There are 12 proposals currently before the board that deal with issues specifically related to Eshamy District. These are,

Gear and site related (5 proposals)

- #62—seeks to require the removal of set gillnet anchor buoys at inactive sites.
- #63—seeks to require the removal of set gillnet anchor buoys and running lines at inactive sites.
- #64—seeks to increase the distance between set gillnet sites in the Eshamy District outside of the Main Bay Subdistrict from 100 to 200 fathoms.
- #65 and #66—seek to increase the distance that drift gillnet permit holders are required to maintain from a set gillnet in the Main Bay Hatchery Subdistrict excluding the Terminal Harvest Area from 25 fathoms to 60 fathoms.

Fishing periods (2 proposals)

- #67—seeks to correct language in regulation that describes the scheduling of set and drift gillnet fishing periods in the Alternating Gear Zone of the Main Bay Subdistrict.
- #68—seeks to establish alternating periods in the Eshamy District for drift and set gillnet gear.

Allocation related (4 proposals)

- #75—seeks to reduce set gillnet harvest to no more than 4% of PWS enhanced salmon stocks through inseason management of set gillnet fishing.
- #78 and #79—seek to increase the set gillnet allocation trigger in 24.370 from 4% to 7%.
- #80—seeks to change the date in 24.370 after which set gillnet is restricted to 36 hours from July 10 to June 10.

Permitting and reporting (1 proposal)

- #82—seeks to allow two set gillnet permit holders to share gear, site and reporting responsibilities.

Eshamy River weir was operated from July 10 through August 27. Total escapement on August 28 was 18,495 sockeye salmon. This was above the cumulative BEG for that date. In addition, 2,060 pink, 20 chum, and 27 coho salmon were passed through Eshamy River weir.

## **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 PWS Management and Salmon Enhancement Allocation Plan (5 AAC 24.370(d)) closes Southwestern District prior to July 18. The plan also closes Coghill District to purse seine gear prior to July 21, except under the WNH Management Plan (5 AAC 24.368(f)), to prevent deterioration of fish quality of the harvestable surplus of chum salmon, or under the PWS Management and Salmon Enhancement Allocation Plan (5AAC 24.370(e)) if the purse seine fleet caught 45% or less of the total commercial CPF exvessel value in the PWS area in the previous year. Beginning July 21, both purse seine and drift gillnet gear are allowed in Coghill District. Purse seine gear is allowed in Coghill District as long as the harvestable surplus is predominantly pink salmon by number. Fishing periods in all districts are established by EO.

The general purse seine districts are managed to achieve wild pink and chum salmon escapement goals by district and allow for the orderly harvest of surplus wild and hatchery stocks. Aerial survey pink and chum salmon escapement trends, compared to average historical performance, will determine the duration and area of openings in these districts. Escapement of pink and chum salmon is monitored through the season by weekly aerial surveys of 208 index streams. Management to achieve hatchery broodstock and cost recovery goals is accomplished by opening and closing subdistricts near the hatcheries. Subdistrict openings are also utilized to target the fleet on hatchery stocks when wild salmon escapement is weak. ADF&G may use the yellow Salmon Harvest Task Force (SHTF) markers as a management tool for closing wild stock terminal areas when escapements are lower than expected; and these markers may be employed as an intermediate step before area wide closures are used.

Inseason modifications to harvest projections, season opening dates, and strategies for weekly fishing periods occurred as fisheries developed. Hatchery Annual Management Plans (AMP) were used to provide guidelines to ADF&G in managing fisheries to achieve cost recovery and broodstock objectives. Hatchery annual management plans (AMPs) from VFDA and PWSAC underwent Regional Planning Team (RPT) review on April 14, and signed by the Commissioner.

The forecast CPF harvests by species are summarized in Table 6. ADF&G forecasted wild fish runs, while hatchery run projections were provided by either PWSAC or VFDA. Run projections for species and districts without formal forecasts were based on average historical production. These projections provided the basis for early inseason management for all districts. Harvest projections for enhanced runs may change depending upon the price per pound that VFDA and PWSAC receive for their cost recovery harvest.

On March 14, 2008, the PWSAC Board of Directors approved the annual corporate budget for Fiscal Year 2008. The overall pink salmon and Wally Noerenberg Hatchery (WNH) chum salmon revenue goals are \$3,319,321 and \$2,414,181, respectively.

The 2008 pink salmon forecast for PWS was 29.53 million fish. This estimate includes 3.51 million wild stock fish, 9.82 million VFDA fish, and 16.20 million PWSAC hatchery fish. The basis for the hatchery forecast was the release of approximately 614 million pink salmon fry in 2006. Approximately 3.48 million pink salmon (22%) of the projected 16.20 million pink salmon returning to the PWSAC hatcheries were estimated to be needed for cost recovery and broodstock. The remaining 12.72 million PWSAC fish were intended to be available for CPF. Approximately 5.02 million pink salmon (51%) of the projected 9.82 million pink salmon returning to the VFDA hatchery were anticipated to be needed for cost recovery and broodstock. The remaining 4.80 million VFDA fish were intended to be available for the CPF. A total of 1.51 million wild stock pink salmon were projected to be available for harvest after an escapement of 2.0 million fish.

The 2008 chum salmon forecast total return in Prince William Sound was 3.81 million fish. The majority (88%) of the return was anticipated to be the result of PWSAC hatchery production. PWSAC forecasted a run of 2.27 million chum salmon to WNH of which 640,000 (28% of the WNH return) would be needed for cost recovery and broodstock. The remaining 1.63 million chum salmon were anticipated to be available for the CPF. PWSAC also forecasted a 787,000 enhanced chum salmon run to Port Chalmers and 309,000 chum salmon to AFK. All Port Chalmers and AFK chum salmon were intended for harvest by the purse seine CPF. Based on the ADF&G's wild chum salmon forecast of 446,000 fish, there was a potential CPF of 246,000 wild chum salmon.

At the May 2008 SHTF meeting, ADF&G described the potential for a poor 2008 wild pink salmon run based on poor run strength and environmental factors, such as severe flooding in August and again in October of 2006 and an extended cold and dry period during the winter of 2006/2007, that may have killed eggs and fry in streams. The SHTF discussed the pink salmon harvest strategy in anticipation of a potential poor pink salmon run. The strategy would initially focus fishing effort in hatchery terminal areas to allow for a continued CPF while limiting wild stock harvest. ADF&G would open additional areas as wild stock aerial survey estimates indicated adequate numbers of returning fish to meet escapement goals.

Both VFDA and PWSAC expected moderate runs of coho salmon in 2008. PWSAC's expected 2008 return of coho salmon was 148,000 fish (128,000 fish to WNH and 20,000 fish to remote release sites). Approximately 2,700 fish were required for broodstock leaving 125,000 fish for CPF. Coghill District is managed for pink salmon after July 21, until the harvestable surplus is no longer predominantly pink salmon. The 2008 return of coho salmon to the VFDA hatchery was anticipated to be 211,000 fish. A total of 2,000 salmon were anticipated to be needed for VFDA broodstock. Port Valdez was anticipated to be closed to CPF purse seine fishing north of

a line from Entrance Point to Potato Point beginning on August 15. Port Valdez was anticipated to open to purse seine fishing on September 2 (day after Labor Day) to target surplus VFDA produced coho salmon.

There are 6 proposals currently before the Alaska Board of Fisheries that are specific to purse seine fisheries in the PWS area. These are,

Purse seine related (6 proposals)

- #60–seeks to modify the boundary of regulatory closed waters in the Eastern and Southeastern districts.
- #69–seeks to open purse seine areas when there are sufficient stock to provide harvest opportunity.
- #83–seeks to increase allowable purse seine length from 150 fathoms to 225 fathoms.
- #84–seeks to modify specifications regarding purse seine lead mesh.
- #85–seeks to eliminate the 200 mesh minimum depth requirement for purse seines in PWS.
- #86–seeks to eliminate the 58 foot salmon seine vessel limit.

### **Chum Salmon Season Summary**

The PWS 2008 chum salmon purse seine CPF harvest of 1.83 million fish was composed of approximately 4% wild fish and 96% hatchery fish. This harvest composition is calculated as the total purse seine chum salmon harvest multiplied by the hatchery and wild proportions of total PWS harvest contribution estimates. PWSAC reported meeting their 2008 chum salmon cost recovery and broodstock needs with a harvest of approximately 653,000 enhanced chum salmon.

Aerial surveys to assess wild chum salmon escapements in the Eastern and Northern Districts began in mid-June. Surveys in all other purse seine districts started in early July. As in previous years, high pink salmon densities during aerial surveys made accurate chum salmon counting difficult. Aerial estimates of chum salmon escapement often differed from foot survey counts in situations where chum salmon mixed in with large numbers of pink salmon. Inseason wild chum salmon aerial survey escapement estimates were below cumulative anticipated levels in all but the Coghill and Northwestern districts. The 2008 total PWS wild stock chum salmon escapement of 203,000 in districts with SEGs (211,000 in all districts) was more than double the SEG lower threshold of 91,000.

CPF effort targeting wild chum stocks was limited by low pink salmon escapement estimates that resulted in few openings outside hatchery subdistricts. Purse seine fishing effort was focused on large hatchery pink salmon runs, minimizing the effort on wild pink and chum salmon during openings outside hatchery subdistricts. Pink and chum salmon travel and spawn in the same areas creating a mixed species/stock fishery. In mixed species/mixed stock fisheries, if one component requires protection from fishing effort because of low numbers, fishing opportunity on stocks with a harvestable surplus may be limited.

### **Pink Salmon Season Summary**

The 2008 harvest of 42.40 million pink salmon, composed of approximately 3% wild fish and 97% hatchery fish, was the second largest even-year PWS pink salmon harvest on record. The



overall harvest by gear type was: 33.73 million by purse seine, 20,000 by set gillnet, 961,000 by drift gillnet, and 7.71 million (4.25 million VFDA and 3.46 million PWSAC) for hatchery cost recovery and broodstock. The enhanced stock contribution to the overall pink salmon harvest was 35% VFDA fish and 62% PWSAC fish. VFDA cost recovery and broodstock harvest was approximately 29% of the total pink salmon run to SGH. PWSAC cost recovery and broodstock harvest was approximately 13% of the total pink salmon run to PWSAC hatcheries.

Aerial surveys to assess early chum and pink salmon escapements in the Eastern and Northern Districts began in mid June. Surveys began in all other PWS districts in July. Despite limited fishing opportunity, inseason wild pink salmon aerial survey escapement estimates were below cumulative anticipated levels in all but Coghill and Northwestern districts. The 2008 total PWS wild stock pink salmon escapement of 862,000 was below the even-year SEG lower bound of 1.25 million, and was the lowest escapement since 1992. The preliminary PWS wild stock pink salmon harvest of 1.37 million fish, 140,000 fish below the 2008 commercial harvest forecast mid-point estimate, was the third lowest wild stock harvest contribution by number (second lowest by percent of total harvest) in the last 30 years. The ratio of enhanced pink salmon to wild pink salmon in the 2008 total commercial common property harvest is estimated to have been 32:1.

### **Eastern District**

The VFDA 2008 Solomon Gulch Hatchery pink salmon forecast was 9.82 million fish, assuming a 4.46% marine survival from the 2007 fry release of 220.41 million. A total of 323,000 salmon were needed to meet egg take objectives. The 2008 cost recovery goal was approximately \$3.03 million and a total of approximately 5.02 million pink salmon were required for cost recovery and brood stock. Approximately 4.80 million pink salmon were forecast to be available for CPF.

A total of 27 CPF fishing periods were opened in 2008 with a total of 129 permits recording 1,367 landings. The Eastern District CPF harvest of 10.85 million pink salmon was composed of 97% VFDA fish, 2% AFK fish, and 1% wild pink salmon. The preliminary harvest estimate of 14.49 million VFDA enhanced pink salmon was 50% above the preseason forecast and was composed of 10.24 million CPF harvest, 4.25 million hatchery harvest (cost recovery and broodstock). The VFDA cost recovery harvest contribution estimates are not available at this time. Additionally, preliminary contribution estimates indicate that 215,000 VFDA pink salmon were harvested in the CPF outside of the Eastern District, including 208,000 fish harvested in the Montague District and 5,000 fish harvested in the Coghill District. The 2008 Eastern District harvest by species was 15.10 million pink salmon, 27,000 chum salmon, 800 sockeye salmon, 158,000 coho salmon, and 1 Chinook salmon.

ADF&G began receiving reports of pink and chum salmon in the Eastern District in mid-June. Three Eastern District CPF periods were scheduled concurrently with Southeastern and Northern district openings in an effort to provide harvest opportunity on wild chum salmon stocks during early run entry. A total of 3 Eastern District CPF periods were scheduled from June 16 to June 23 as wild stock run entry indices and fishing effort allowed. Approximately 35,000 pink salmon were harvested in Valdez Arm and Port Fidalgo during the June 23 period. This CPF harvest information provided ADF&G with an early indication of pink salmon run strength and timing. Cost recovery started as scheduled on June 23 and was 30% complete by June 28. Cost recovery harvests were conducted throughout Port Valdez and a portion of Valdez Arm. ADF&G issued an EO to allow for an expanded cost recovery area slightly further outside Port Valdez (61° 02.855'N, 146° 44.204'W to 61° 03.003'N 146° 39.293'W) than the typical Potato Point Entrance

Point line. The expanded SHA allowed VFDA to collect run progress information (sex ratios) not readily available from the CPF. VFDA requested, as a prerequisite to initiating CPF harvest, cost recovery beyond the typical 30% trigger due to lower than expected daily cost recovery harvest. The CPF in Port Valdez and a portion of Valdez Arm opened on July 1 with 45% of cost recovery completed.

The 12-hour CPF, on July 1, resulted in the harvest of 1.51 million pink salmon. A daily average of 1.48 million pink salmon was harvested during the 6 fishing periods between July 1 and July 13. In July, the Eastern District was open every third day for the first 3 periods and then shifted to every other day between July 9 and July 21 with a total harvest for July 1–21 of over 10.82 million pink salmon. The preliminary wild pink salmon harvest estimate for July was approximately 78,000 fish.

Aerial surveys throughout the season indicated cumulative wild pink and chum salmon escapement estimates below anticipated counts. The final wild stock pink salmon escapement index was below the SEG range in the Eastern District. The 2008 adjusted aerial pink salmon survey index was 194,000 fish, 231,000 fish below the even-year SEG lower bound of 425,000 fish. The 2008 adjusted aerial chum salmon survey index of 75,000 fish was above the SEG of 50,000 chum salmon. Aerial surveys of the Eastern District were flown until October 1 this year in an effort to ensure that late-timed stocks were represented in the escapement index. It is likely that the index was higher than calculated due to frequent weather delays throughout the season.

Port Valdez was closed to the commercial CPF north of a line from Entrance Point to Potato Point beginning July 22. Port Valdez and a portion of Valdez Arm opened September 2 to target surplus VFDA produced coho salmon. The purse seine fleet harvested approximately 158,000 coho salmon, the majority of which are assumed to be VFDA enhanced coho salmon. VFDA expressed concern that allowing the fleet into Port Valdez near the hatchery could jeopardize coho salmon broodstock collection. Accordingly, ADF&G provided a closed area buffer around the hatchery to protect coho broodstock. A total of 24,230 coho salmon were harvested by VFDA, of these, 1,460 fish were utilized for brood, 420 fish were given away, and 22,360 fish were sold.

Of the 27,000 chum salmon harvested in the Eastern District, 76% were of wild stock origin and 24% were of hatchery origin. The peak harvest of 6,500 chum salmon occurred on August 11 during a 14-hour period, restricted to portions of Port Fidalgo and Port Gravina, targeting local stocks with a harvestable surplus of chum salmon.

### **Northern District**

The 2008 PWSAC forecast for pink salmon returning to CCH was 4.50 million fish. The preliminary total harvest estimate of 11.32 million enhanced pink salmon returning to CCH is 2.5 times the forecast. PWSAC harvested 1.25 million pink salmon for cost recovery and broodstock in the Northern District. ADF&G expanded the CCH SHA for the duration of cost recovery, upon PWSAC's request, to expedite cost recovery in an effort to maintain fish quality and allow for a timely CPF during early run entry. The SHA expansion was restricted to waters 1 nautical mile offshore on the east side of Unakwik Inlet north of a line at 60° 58.00 N. latitude due to weak wild stock pink and chum salmon aerial escapement indices. PWSAC harvested approximately 991,000 pink salmon to meet a 736,000 cost recovery goal at CCH. PWSAC exceeded their pink salmon cost recovery goal at CCH, in part, to make up for a cost recovery short fall at AFK. The CCH cost recovery harvest contribution estimates are not available at this

time. The broodstock harvest of approximately 259,000 was 8% below the broodstock goal of 281,000 fish. Northern District wild stock pink salmon escapement indices were below anticipated levels for the entire season. The Northern District did not meet the pink salmon SEG in 2008. The wild stock pink salmon adjusted escapement of 141,000 fish was below the 282,500 lower bound of the even-year SEG. The Northern District chum salmon adjusted escapement estimate of 39,000 was above the SEG lower threshold of 20,000.

The large hatchery pink salmon run necessitated the prosecution of an aggressive daily fishery to keep up with run entry while the lagging wild pink salmon escapement required a conservative management approach that resulted in area restrictions. The management strategy in the Northern District consisted of keeping the CPF restricted to portions of the CCH SHA and THA, and to portions of the CCH Subdistrict along the eastern shore of Unakwik Inlet during the latter half of the season. This strategy allowed for cost recovery and the protection of wild chum and pink salmon in the general district and within Siwash and Jonah bays.

The 2008 Northern District CPF harvest was composed of 8.34 million pink salmon, 39,000 chum salmon, 1,500 sockeye salmon, 700 coho salmon, and 1 Chinook salmon. In 2008, the Northern District was open for 40 CPF periods with a total of 91 permits recording 1,027 landings. The Northern District season started with 3 CPF periods in mid-June. These CPF periods were scheduled concurrently with Eastern and Southeastern district openings in an effort to provide early harvest opportunity on a forecasted strong run of early timed wild chum salmon stocks. Approximately 38,000 chum salmon were harvested on the west side of the district in this early season effort, of which, 97% were of hatchery origin (75% WNH releases and 25% from Port Chalmers and AFK remote releases). This early CPF ceased as fishing effort shifted to more productive areas and run timing overlap increased on wild pink salmon stocks. Northern District was open for eighteen 14-hour CPF periods between August 9 and August 27, during which time 89% of the 8.34 million CPF pink salmon harvest occurred. This fishery had a maximum single-period harvest of 833,000 fish and an average of 415,000 pink salmon harvested per 14-hour period during this time. The pink salmon CPF harvest was composed of 2% wild stock pink salmon and 94% CCH, 2% WNH, 2% AFK, and 0% VFDA fish.

### **Coghill District**

PWSAC's 2008 forecast for pink salmon returning to WNH was 3.7 million fish. PWSAC set a broodstock goal of 264,000 pink salmon and a cost recovery goal of 605,000 pink salmon. The combination of this hatchery harvest equated to 31% of the anticipated run of pink salmon to WNH. The preseason forecast for common property harvest of pink salmon returning to WNH is 2.83 million fish. Management for pink salmon returning to WNH began on July 21. The management strategy in Coghill District focused effort on hatchery fish initially with the possibility of expanding area as wild stock escapement in Port Wells and Northwestern District allowed through August. This was accomplished by alternating the expansion and contraction of available open area on a period by period basis to allow for the migration of wild stocks through Wells Passage and Esther Passage. Daily fishing in Esther Subdistrict allowed for an effective harvest of enhanced pink salmon in close proximity to WNH while minimizing harvest opportunity on wild stocks. Coghill District wild stock pink and chum salmon aerial escapement indices remained above cumulative anticipated levels starting in mid-August. Wild stock pink salmon spawning escapement of 145,000 fish was above the even year SEG lower bound of 115,000. The Coghill District spawning escapement estimate of 40,000 wild chum salmon was five times the SEG lower threshold of 8,000.

In 2008, the WNH enhanced pink salmon run was significantly greater than PWSAC's preseason projections. Run timing was early and harvest rates were stronger than anticipated. Esther Subdistrict opened to purse seine gear on July 21. Purse seine fishing was permitted for 33 CPF periods between July 21 and September 4, with a total of 75 permits recording 939 landings. The 2008 Coghill District CPF purse seine harvest was composed of 9,400 chum salmon, 6.56 million pink salmon, 600 sockeye salmon, 37,000 coho salmon, and 14 Chinook salmon. The 6.56 million pink salmon CPF harvest was composed of 8% wild stock pink salmon and 84% WNH, 7% CCH, 2% AFK, and <1% VFDA fish. Pink salmon cost recovery harvests began on July 29 and continued through August 8. PWSAC harvested approximately 1.03 million pink salmon for cost recovery at WNH, exceeding their pink salmon cost recovery goal of 605,000 at WNH, in part, to make up for a cost recovery shortfall at AFK. The WNH cost recovery harvest contribution estimates are not available at this time. The broodstock harvest of approximately 283,000 pink salmon was 7% above the broodstock goal of 264,000 fish. Additional information, including the preseason outlook, harvest strategy, and results, is detailed in the Coghill District section of this report.

### **Northwestern District**

Northwestern District had limited time and area fishery openings, and no fishing effort during the 2008 season. A total of 6 Northwestern District CPF periods were scheduled from late August to early September as escapement indices and fishing effort allowed. Northwestern District CPF periods were scheduled concurrently with Northern, Coghill, and Southwestern district openings to spread effort and provide harvest opportunity on specific wild chum and pink salmon stocks.

Northwestern District wild stock pink and chum salmon aerial survey escapement indices remained above the cumulative anticipated escapement in late August and early September. Wild stock pink spawning escapement of 142,000 fish was above the even-year SEG lower bound of 110,000 fish, but below the even-year SEG midpoint of 175,000. Northwestern District escapement of 28,051 wild stock chum salmon was more than five times the SEG of 5,000 fish.

### **Southwestern District**

The 2008 Southwestern District CPF harvest was composed of 7.76 million pink salmon, 528,000 chum salmon, 63,000 sockeye salmon, and 7,000 coho salmon. There were 45 CPF periods in the Southwestern District. Fishing to target remote release chum salmon at the AFK THA and SHA, in the Southwestern District, started with a 156-hour period on May 26, followed by a directed fishery targeting the enhanced sockeye salmon run to Marsha Bay on June 9. A regular schedule of consecutive 156-hour periods continued in the AFK THA and SHA until July 27 and in Marsha Bay until August 10. PWSAC did not harvest any portion of the AFK enhanced chum salmon run for cost recovery, instead opting to solely conduct chum salmon cost recovery at WNH. Of the 528,000 chum salmon harvested in the AFK THA and SHA, 19% were WNH and 80% were Port Chalmers marked fish, and 1% were wild stock fish. The Marsha Bay sockeye salmon remote release returned a harvest of 23,000, matching the 23,000 fish forecast. Additionally, 28,000 sockeye salmon were harvested in the AFK THA and SHA during the 156-hour CPF periods in June. There were 9,000 sockeye salmon harvested in the CPF during the remainder of the season for a total of 37,000 fish. ADF&G has been concerned about the harvest of wild sockeye during early-season fishing in the Southwestern District. For that reason early-season fishing area is limited to the AFK THA and SHA. Otolith sampling revealed that

12% of the sockeye salmon harvested were of wild stock origin and ADF&G adjusted the open fishing area in the AFK THA to further reduce the harvest of these stocks. The enhanced sockeye salmon harvest at the AFK SHA is likely the combined result of fishing on the edge of a migratory corridor and the timing of MBH and Coghill wild stock sockeye salmon overlapping the timing of the AFK enhanced chum salmon run. ADF&G arranged with Icicle Seafood and Trident Seafoods to report sockeye salmon harvest in this fishery. These processors also provided an opportunity to sample the harvest to determine stock composition. This is an important arrangement because harvest reporting is only required by regulation on the day following the close of a fishing period. Without voluntary reporting by processors and the fishing fleet, a 156-hour fishing period scenario would be difficult to effectively manage.

The preliminary AFK enhanced pink salmon run estimate of 6.33 million fish was 79% of PWSAC's pre-season 8.00 million fish projection. PWSAC fell 44% short of their 1.60 million pink salmon harvest goal (cost recovery and broodstock combined) at AFK with a harvest of 896,000 fish. The cost recovery harvest of 523,000 pink salmon was under the cost recovery goal by 60% (785,000), while the broodstock goal of 289,000 fish was exceeded by 29% (84,000 fish). The AFK cost recovery harvest contribution estimates are not available at this time. Run entry at AFK was late, with a daily average of 31,000 pink salmon harvested for cost recovery from July 31 to August 5. Average daily cost recovery harvest for that time period in 2007 was 358,000 and in 2006 was 58,000. Run entry gradually increased through the rest of the season with a daily average of 335,000 pink salmon harvested from August 6 to 29. Pink salmon CPF did not start until August 9 because of the slow cost recovery progress. The total Southwestern District pink salmon CPF harvest of 7.76 million fish was composed of 6% wild stock, 65% AFK, 13% WNH, 16% CCH, and 0% VFDA fish.

Pink salmon harvest management was based on aerial survey escapement data, test fishing in the Southwestern District, harvest rates, and AFK terminal area run entry. Test fishing in Southwestern District by the R/V Solstice provided crucial pink salmon stock composition and sex ratio data. Test fishing at Point Elrington found low abundance, capturing 0–1,500 pink salmon per 15-minute set, with the proportion of hatchery pink salmon ranging between 54%-78%. In 2008, the test fishery provided early corroboration of weak wild stock runs and hatchery pink salmon delayed run entry. Because of the relatively high proportion of wild stocks in the test fishery and weak wild stock escapements, ADF&G maintained wild stock conservation concerns and prosecuted a conservative commercial CPF throughout the season.

Southwestern District did not meet the pink salmon SEG in 2008. The wild stock pink salmon escapement of 70,000 fish was below the lower bound of the even year SEG of 130,000. The Southwestern District has chum salmon streams (3,000 estimated in adjusted aerial survey indices) and has no SEG or population estimates for that species. Of the estimated 420,000 wild stock pink salmon harvested in the Southwestern District, the majority were harvested in the Port San Juan Subdistrict. It is unknown how many of those fish were destined for the Southwestern District or other areas in the sound. Due to wild stock escapement concerns, ADF&G limited initial CPF open area in the Port San Juan Subdistrict to waters south of the latitude of a point on Evans Island approximately 1 nautical mile to the south of Bishop Rock. To further minimize the harvest of wild stocks, the Port San Juan Subdistrict was opened on an every-other-day schedule between August 18 and September 10. Windowing the Port San Juan Subdistrict openings was intended to allow wild stock pink and chum salmon to pulse through the Port San Juan Subdistrict while still providing harvest opportunity outside the AFK THA and SHA.

## **Montague District**

The 2008 Montague District harvest was composed of 1.23 million chum, 216,000 pink, 13,700 sockeye, 23 coho, and 84 Chinook salmon. Montague District wild stock pink and chum salmon cumulative aerial escapement indices were below anticipated levels for the entire season. Wild stock pink salmon spawning escapement of 57,000 fish was below the even year SEG lower bound of 75,500. Montague District had an estimated 5,403 wild chum salmon spawning escapement, but has no chum salmon escapement goal.

The Port Chalmers remote chum salmon run exceeded the 787,000 fish forecast with a preliminary harvest estimate of 1.58 million fish. A fishing schedule of 9 consecutive 156-hour periods was initiated in the Port Chalmers Subdistrict on May 26 and continued through July 27. The peak harvest occurred during period 5 (6/23–6/29) with a harvest of 271,000 chum salmon. An unexpected 119,000 pink salmon were harvested in Port Chalmers Subdistrict during period 7 (7/7–7/13) and fishing area was subsequently restricted to within .5 mile of Montague Island to limit pink salmon interception and focus effort on enhanced chum salmon. There was no harvest or effort in the Montague District reported after July 21. Based on otolith sampling, the Montague District chum salmon harvest was composed of 4% wild chum salmon and 96% enhanced fish.

## **Southeastern District**

Southeastern District was limited to 3 fishing periods with no fishing effort during the 2008 season. Southeastern District CPF periods were scheduled concurrently with Eastern and Northern district openings in an effort to provide harvest opportunity on wild chum salmon stocks during early run entry in June. Southeastern District wild stock pink and chum salmon aerial survey escapement indices remained below the daily and cumulative anticipated escapement in July, August, and September. These low escapement indices did not allow for fishing opportunity on wild salmon stocks. The 2008 adjusted aerial pink salmon survey index was 112,000 fish, which was below the lower bound even-year SEG of 215,000 fish. The 2008 adjusted aerial chum salmon survey index was 22,000 fish, almost three times the SEG lower threshold of 8,000 chum salmon.

## **TABLES AND FIGURES**

Table 1.–Prince William Sound Management Area commercial salmon harvest by gear type and district, 2008.

District	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Eastern	129	1	760	157,883	10,853,722	26,583	11,038,949
Northern	91	1	1,487	726	8,330,235	38,525	8,370,974
Coghill	75	14	560	36,721	6,564,464	9,358	6,611,117
Southwestern	99	19	63,075	6,606	7,762,085	528,248	8,360,033
Montague	81	84	13,664	23	216,013	1,229,945	1,459,729
Southeastern	0	0	0	0	0	0	0
Unakwik	0	0	0	0	0	0	0
Purse Seine	141	119	79,546	201,959	33,726,519	1,832,659	35,840,802
Bering River	60	46	1,178	38,720	8	1	39,953
Copper River	492	11,437	320,582	202,621	1,437	1,279	537,356
Coghill	413	103	178,451	80,469	854,900	2,304,616	3,418,539
Eshamy	366	48	560,869	1,930	103,329	251,280	917,456
Unakwik	5	0	389	0	878	58	1,325
Drift Gillnet	507	11,634	1,061,469	323,740	960,552	2,557,234	4,914,629
Eshamy	25	18	162,231	151	20,455	53,727	236,582
Set Gillnet	25	18	162,231	151	20,455	53,727	236,582
Solomon Gulch	1	0	0	22,356	4,247,241	0	4,269,597
Cannery Creek	1	0	0	0	1,250,278	0	1,250,278
Wally Noerenberg	1	0	0	267	1,312,086	645,392	1,957,745
Main Bay	1	0	0	0	0	0	0
Armin F. Koernig	1	0	0	0	895,835	0	895,835
Hatchery <sup>a</sup>		0	0	22,623	7,705,440	645,392	8,373,455
Educational Permit	1	47	29	0	0	0	76
Personal Use	248	615	2,403	449	53	54	3,574
Donated Fish	72	4	80	154	6,596	0	6,834
Misc total		666	2,512	603	6,649	54	10,484
Prince William Sound							
Total		12,437	1,305,758	549,076	42,419,615	5,089,066	49,375,952

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



Table 2.—Total commercial salmon harvest by species from all gear types, Prince William Sound area, 1971–2008.

Year <sup>a</sup>	Harvest					
	Chinook	Sockeye	Coho	Pink	Chum	Total
1971	20,142	741,945	327,697	7,312,730	579,552	8,982,066
1972	23,003	976,115	124,670	57,090	46,088	1,226,966
1973	22,638	473,044	199,019	2,065,844	740,017	3,500,562
1974	20,602	741,340	76,041	458,619	89,210	1,385,812
1975	22,325	546,634	84,109	4,453,041	101,286	5,207,395
1976	32,751	1,008,912	160,494	3,022,426	370,657	4,595,240
1977	22,864	943,943	179,417	4,536,459	573,166	6,255,849
1978	30,435	505,509	312,930	2,917,499	489,771	4,256,144
1979	20,078	369,583	315,774	15,615,810	349,615	16,670,860
1980	8,643	208,724	337,123	14,161,023	482,214	15,197,727
1981	20,782	784,469	396,163	20,558,304	1,888,822	23,648,540
1982	47,871	2,362,328	623,877	20,403,423	1,336,878	24,774,377
1983	53,879	908,469	365,469	13,977,116	1,048,737	16,353,670
1984	39,774	1,303,515	609,484	22,119,309	1,229,185	25,301,267
1985	43,735	1,464,563	1,025,046	25,252,924	1,321,538	29,107,806
1986	42,128	1,288,712	426,240	11,410,302	1,700,906	14,868,288
1987	41,909	1,737,989	175,214	29,230,303	1,919,415	33,104,830
1988 <sup>a</sup>	31,797	767,674	477,816	11,820,121	1,843,317	14,940,725
1989 <sup>a</sup>	32,006	1,175,238	424,980	21,886,466	1,001,809	24,520,499
1990 <sup>a</sup>	22,163	911,607	524,274	44,165,077	967,384	46,590,505
1991 <sup>b</sup>	35,355	1,734,544	641,854	37,135,561	352,321	39,899,635
1992 <sup>c</sup>	41,306	1,771,612	619,460	8,637,116	334,376	11,403,870
1993 <sup>d</sup>	32,005	1,851,133	445,612	5,761,097	1,186,365	9,276,212
1994 <sup>e</sup>	48,558	1,514,329	1,058,154	36,886,301	1,058,213	40,565,555
1995 <sup>e</sup>	67,083	1,523,464	992,798	16,221,493	864,245	19,669,083
1996 <sup>e</sup>	56,457	3,000,602	459,253	26,042,942	2,103,559	31,662,813
1997 <sup>e</sup>	52,482	4,163,074	83,113	25,836,563	2,227,190	32,362,422
1998 <sup>e</sup>	70,910	1,715,778	194,621	28,685,115	1,271,911	31,938,335
1999 <sup>e</sup>	63,434	2,035,293	244,754	45,003,656	2,989,255	50,336,392
2000 <sup>e</sup>	32,411	1,430,838	714,286	38,885,528	5,163,760	46,226,823
2001 <sup>e</sup>	40,461	2,261,097	494,135	35,246,524	3,099,794	41,142,011
2002 <sup>e</sup>	39,706	2,262,134	650,331	18,950,931	6,373,491	28,276,593
2003 <sup>e</sup>	49,227	2,838,679	502,135	51,136,305	3,779,657	58,306,003
2004 <sup>e</sup>	39,142	1,892,525	619,884	23,531,483	2,001,918	28,084,952
2005	36,118	1,988,771	536,675	59,896,419	1,996,956	64,446,609
2006 <sup>e</sup>	31,634	2,524,496	761,044	21,673,378	2,181,482	27,172,034
2007 <sup>e</sup>	41,149	3,231,202	328,980	63,464,830	3,579,068	70,645,229
<b>10-Year Average</b>	<b>44,419</b>	<b>2,218,081</b>	<b>504,685</b>	<b>38,647,417</b>	<b>3,243,729</b>	<b>44,657,498</b>
2008 <sup>f</sup>	12,437	1,305,758	549,076	42,419,615	5,089,066	49,375,952

<sup>a</sup> Includes confiscated and educational special use permits. Also includes hatchery sales harvests and carcass sales.

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

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

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

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

<sup>f</sup> Includes commercial common property, hatchery sales, test fisheries harvest, personal use, and educational special use permit harvest, and donated fish.

Table 3.–Mean price and estimated exvessel value of the total commercial salmon harvest by gear type, Prince William Sound, 2008.

<b>PURSE SEINE</b>					
Species	Number	Pounds <sup>a</sup>	Average Weight	Price <sup>a</sup>	Value
Chinook	119	2,251	18.92	\$1.01	\$2,284
Sockeye	79,546	491,519	6.18	\$1.17	\$577,467
Coho	201,959	1,838,321	9.10	\$1.12	\$2,056,411
Pink	33,726,519	114,794,023	3.40	\$0.34	\$39,047,600
Chum	1,832,659	14,235,131	7.77	\$0.57	\$8,046,854
<b>Total</b>	<b>35,840,802</b>	<b>131,361,245</b>			<b>\$49,730,616</b>
<b>DRIFT GILLNET</b>					
Species	Number	Pounds	Average Weight	Price	Value
Chinook	11,634	254,805	21.90	\$5.92	\$1,509,063
Sockeye	1,061,469	6,523,081	6.15	1.77	\$11,538,303
Coho	323,740	3,164,912	9.78	\$1.24	\$3,911,554
Pink	960,552	3,556,956	3.70	0.34	\$1,194,913
Chum	2,557,234	19,597,995	7.66	\$0.55	\$10,846,245
<b>Total</b>	<b>4,914,629</b>	<b>33,097,749</b>			<b>\$29,000,078</b>
<b>SET GILLNET <sup>b</sup></b>					
Species	Number	Pounds	Average Weight	Price	Value
Chinook	18	365	20.28	\$1.46	\$533
Sockeye	162,231	1,004,664	6.19	\$1.23	\$1,237,362
Coho	151	1,232	8.16	\$1.15	\$1,414
Pink	20,455	75,112	3.67	\$0.28	\$20,966
Chum	53,727	420,780	7.83	\$0.55	\$231,785
<b>Total</b>	<b>236,582</b>	<b>1,502,153</b>			<b>\$1,492,060</b>
<b>HATCHERY SALES</b>					
Species	Number	Pounds	Average Weight	Price	Value
Chinook	0	0		\$0.00	\$0
Sockeye	0	0		\$0.00	\$0
Coho	22,623	201,444	8.90	\$0.34	\$67,879
Pink	7,705,440	25,300,427	3.28	\$0.30	\$7,574,535
Chum	645,392	5,195,406	8.05	\$0.47	\$2,465,426
<b>Total</b>	<b>8,373,455</b>	<b>30,697,277</b>			<b>\$10,107,840</b>
<b>OTHER GEAR <sup>c</sup></b>					
Species	Number	Pounds	Average Weight	Price	Value
Chinook					\$0
Sockeye					\$0
Coho					\$0
Pink					\$0
Chum					\$0
					<b>\$0</b>
<b>Value of Common Property Fishery (CPF) Catch</b>					
Gear Type	Value of Catch	No. of Permits	Average Earnings		
Purse Seine	\$49,730,616	141	\$352,699		
Drift Gillnet	\$29,000,078	507	\$57,199		
Set Gillnet	\$1,492,060	25	\$59,682		
<b>Value of CPF Catch</b>	<b>\$80,222,753</b>				
Hatchery	\$10,107,840				
Other Gear	\$0				
<b>TOTAL VALUE</b>	<b>\$90,330,593</b>				

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

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

<sup>c</sup> Includes the sales of confiscated fish.

Table 4.—Average price paid to permit holders for salmon, Prince William Sound, 1991–2008.

Year	Gillnet Harvest						Seine Harvest				
	Chinook Salmon		Sockeye Salmon				Coho Salmon	Pink Salmon	Chum Salmon	Sockeye Salmon	Coho Salmon
	Copper River	Prince William Sound	Copper River	Bering River	Coghill and Unakwik Districts	Eshamy	Copper River	PWS	PWS	PWS	PWS
1991	\$1.65	\$1.00	\$1.28	\$1.28	\$1.28	\$1.28	\$0.65	\$0.12	\$0.40	\$1.00	\$0.45
1992	\$2.50	\$1.55	\$2.50	\$1.04	\$1.55	\$1.55	\$0.90	\$0.18	\$0.55	\$1.55	\$0.90
1993	\$1.82	\$1.07	\$1.32	\$1.17	\$0.93	\$0.86	\$0.80	\$0.16	\$0.68	\$0.83	\$0.77
1994	\$1.43	\$0.80	\$1.27	\$1.13	\$0.94	\$1.19	\$0.74	\$0.16	\$0.45	\$0.88	\$0.60
1995	\$2.19	\$0.91	\$1.67	\$0.34	\$0.75	\$1.06	\$0.52	\$0.18	\$0.45	\$0.94	\$0.42
1996	\$1.96	\$0.71	\$1.38	\$0.57	\$0.82	\$0.85	\$0.53	\$0.07	\$0.13	\$0.73	\$0.36
1997	\$2.00	\$1.00	\$0.88	\$0.88	\$0.80	\$0.80	\$0.30	\$0.12	\$0.27	\$0.85	\$0.30
1998	\$2.07	\$0.94	\$1.49	\$1.35	\$1.24	\$1.11	\$0.46	\$0.13	\$0.22	\$1.06	\$0.33
1999	\$3.44	\$1.28	\$1.84	\$1.81	\$1.60	\$0.89	\$0.58	\$0.15	\$0.21	\$1.18	\$0.33
2000	\$4.02	\$1.59	\$1.72	\$5.94	\$1.14	\$1.14	\$0.57	\$0.15	\$0.28	\$0.90	\$0.42
2001	\$3.30	\$0.92	\$1.35	\$2.35	\$0.77	\$0.77	\$0.32	\$0.13	\$0.37	\$0.74	\$0.26
2002	\$3.34	\$0.92	\$1.29	\$1.23	\$0.64	\$1.14	\$0.35	\$0.09	\$0.15	\$0.56	\$0.26
2003	\$3.48	\$0.48	\$1.16	\$0.35	\$0.80	\$0.80	\$0.48	\$0.08	\$0.17	\$0.71	\$0.42
2004	\$4.69	\$0.82	\$1.81	\$0.55	\$0.85	\$0.85	\$0.69	\$0.10	\$0.20	\$0.55	\$0.39
2005	\$4.70	\$0.94	\$1.79	\$1.79	\$1.03	\$1.03	\$0.83	\$0.08	\$0.18	\$0.54	\$0.75
2006	\$5.03	\$1.27	\$1.83	\$1.79	\$1.15	\$1.15	\$0.92	\$0.16	\$0.33	\$1.05	\$0.61
2007	\$4.50	\$1.19	\$1.81	\$1.81	\$1.06	\$1.05	\$0.90	\$0.16	\$0.29	\$0.92	\$0.74
<b>10-year Average</b>	<b>\$3.86</b>	<b>\$1.04</b>	<b>\$1.61</b>	<b>\$1.90</b>	<b>\$1.03</b>	<b>\$0.99</b>	<b>\$0.61</b>	<b>\$0.12</b>	<b>\$0.24</b>	<b>\$0.82</b>	<b>\$0.45</b>
2008	\$5.96	\$1.40	\$3.12	\$3.00	\$1.24	\$1.24	\$1.23	\$0.34	\$0.57	\$1.17	\$1.12

<sup>a</sup> 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 an estimate, and do not reflect postseason adjustments and bonuses. Caution should be used if estimating value from these prices.

Table 5.—Estimated exvessel value of the total commercial salmon harvest by gear type with previous 10-year average, Prince William Sound, 1998–2008.

	Species	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Previous 10-yr	
												Average	2008
PURSE	Chinook	4,386	7,427	2,706	5,435	1,353	924	1,270	1,787	4,940	9,330	3,956	2,284
SEINE	Sockeye	127,854	141,923	195,169	539,388	58,142	847,966	46,573	207,022	219,984	338,262	272,228	577,467
	Coho	124,325	329,317	965,404	398,532	69,207	226,619	121,688	103,312	1,426,736	546,805	431,194	2,056,411
	Pink	8,565,392	9,456,108	13,728,606	9,584,465	2,425,505	10,716,380	4,293,551	13,104,242	6,688,126	28,839,799	10,740,217	39,047,600
	Chum	950,912	3,128,816	3,964,546	2,863,466	2,423,525	1,717,083.00	1,228,965	773,620	3,007,947	3,499,189	2,355,807	8,046,854
		\$9,772,869	\$13,063,591	\$18,856,431	\$13,391,287	\$4,977,731	\$13,508,972	\$5,692,047	\$14,189,982	\$11,347,734	\$33,233,386	\$13,803,403	\$49,730,616
DRIFT	Chinook	3,341,148	5,510,840	2,698,417	2,791,619	2,691,215	3,810,019	4,050,947	3,575,253	3,145,401	3,886,795	3,550,165	1,509,133
GILLNET	Sockeye	13,223,761	20,048,000	13,554,212	14,158,076	14,964,894	13,791,971	13,436,808	15,849,204	19,375,916	26,169,047	16,457,189	11,689,889
	Coho	379,366	733,022	2,486,184	790,544	2,027,738	1,762,604	3,561,659	2,374,703	3,972,107	1,391,204	1,947,913	3,909,839
	Pink	249,293	43,612	177,559	144,896	23,889	27,904	12,134	84,308	54,070	82,356	90,002	1,189,348
	Chum	1,035,808	1,529,765	3,550,614	3,371,206	2,206,854	821,818	976,553	1,965,383	845,703	2,542,327	1,884,603	10,829,452
		\$18,229,376	\$27,865,239	\$22,466,986	\$21,256,342	\$21,914,590	\$20,214,316	\$22,038,101	\$23,848,851	\$27,393,197	\$34,071,729	\$23,929,873	\$29,127,660
SET	Chinook	25	592	2,902	787	765	0	189	0	143	1,267	667	533
GILLNET	Sockeye	177,723	407,497	912,603	844,123	1,701,077	1,070,058	454,709	608,528	822,232	1,318,799	831,735	1,237,362
	Coho	336	1,877	3,346	1,686	388	1,611	1,635	4,737	1,869	873	1,836	1,414
	Pink	16,659	8,721	53,160	22,048	10,848	6,324	7,439	23,542	8,325	5,416	16,248	20,966
	Chum	337	13,630	25,641	20,045	27,638	6,742	17,261	6,880	29,925	53,380	20,148	231,785
		\$195,079	\$432,317	\$997,652	\$888,689	\$1,740,716	\$1,084,735	\$481,233	\$643,687	\$862,493	\$1,379,735	\$870,634	\$1,492,060
HATCHERY	Chinook	22,621	0	0	0	15	0	0	0	0	0	2,264	0
SALES	Sockeye	953,857	143,855	478	174,418	418,114	1,769,179	997,020	2,383,400	2,173,808	1,790,819	1,080,495	0
	Coho	63,980	0	2	9,459	1	0	35,733	0	102,792	161,995	37,396	67,879
	Pink	6,283,525	6,312,337	6,358,529	6,430,468	4,989,921	6,068,403	5,718,678	7,288,894	7,300,390	6,809,392	6,356,054	7,574,535
	Chum	1,261,354	2,380,321	4,007,449	3,070,274	3,794,069	1,643,243	779,268	1,704,693	2,893,174	2,105,903	2,363,975	2,465,426
		\$8,585,338	\$8,836,513	\$10,366,458	\$9,684,619	\$9,202,119	\$9,480,825	\$7,530,699	\$11,376,987	\$12,470,164	\$10,868,110	\$9,840,183	\$10,107,840

Table 5.–Page 2 of 2.

		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Previous 10-yr Average	2008
	Species												
OTHER	Chinook	5,004	448	1,266	0	200	26	493	81	0	0	752	0
GEAR	Sockeye	2,085	68,525	5,944	509	1,324	195	614	289	0	0	7,948	0
	Coho	10	106		468	0	0	0	0	0	0	65	0
	Pink	271	81,476		382	0	2812	0	0	0	0	9,438	0
	Chum	13	358		4,206	5	0	0	0	0	0	509	0
		\$7,383	\$150,913	\$7,210	\$5,565	\$1,529	\$3,033	\$1,107	\$370	\$0	\$0	\$17,711	\$0
AVERAGE	Purse Seine	\$65,590	\$93,983	\$143,942	\$88,101	\$41,481	\$127,443	\$54,210	\$137,767	\$102,232	\$299,400	\$115,415	\$352,699
EARNINGS	Drift Gillnet	\$34,922	\$53,280	\$41,994	\$39,731	\$41,039	\$39,327	\$42,219	\$46,807	\$55,452	\$67,335	\$46,211	\$57,451
	Set Gillnet	\$12,192	\$20,587	\$35,630	\$27,772	\$62,168	\$38,741	\$17,823	\$23,840	\$33,173	\$53,067	\$32,499	\$59,682
NO. OF	Purse Seine	149	139	131	152	120	106	105	103	111	111	123	141
PERMITS	Drift Gillnet	522	523	535	535	534	514	522	508	494	506	519	507
FISHED	Set Gillnet	16	21	28	32	28	28	27	27	26	26	26	25

Table 6.–Preseason harvest projections for the 2008 commercial salmon fishery by district and species (1,000's of fish), Prince William Sound Area.

District/Facility <sup>a</sup>	Forecast Type <sup>b</sup>	Chinook		Sockeye		Coho		Pink		Chum	
		Point Estimate	Range	Point Estimate	Range	Point Estimate	Range	Point Estimate	Range	Point Estimate	Range
Copper River <sup>c</sup>	commercial harvest	47		742	64 - 1,420	288	69 - 507				
Bering River <sup>d</sup>	commercial harvest			19	1 - 37	43	0 - 95				
Coghill <sup>e</sup>	commercial harvest			90	0 - 257						
Eshamy <sup>e</sup>	commercial harvest			54	39 - 69						
Unakwik <sup>f</sup>	commercial harvest			9	6 - 12						
General PWS Districts	commercial harvest							1,510	0 - 7,560	246	134 - 357
Total Wild Stock		47		914	75 - 1,445	331	69 - 516	1,510	0 - 7,560	246	134 - 357
Solomon Gulch <sup>g</sup>	total return							9,825	7,273 - 16,971		
Armin F. Koernig <sup>g</sup>	total return							8,000	6,000 - 10,100	309	266 - 351
Wally Noerenberg <sup>g,h</sup>	total return					125		3,700	2,300 - 5,000	2,267	1,893 - 2,641
Cannery Creek <sup>g</sup>	total return							4,500	2,000 - 8,100		
Main Bay <sup>g,i</sup>	total return			929	743 - 1,115						
Gulkana <sup>j</sup>	total return			252	137 - 367						
Total Hatchery				1,181	756 - 1,174	125	0 - 0	26,025	9,909 - 21,923	2,576	1,912 - 2,664
Total Hatchery and Wild		47		2,095		456		27,535		2,822	

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

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

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

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

<sup>e</sup> 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.

<sup>f</sup> The Unakwik District sockeye salmon harvest estimate is based on the 10-year mean annual harvest.

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

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

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

<sup>j</sup> Wild fish runs are estimated by fishing district and enhanced runs are estimated by facility of origin. The Alaska Department of Fish and Game completed all wild stock forecasts and the Gulkana Hatchery forecast.

Table 7.—Drift gillnet and purse seine harvests in the Coghill District of Prince William Sound, 2008.

Stat Week, (Dates)	Gear	Permits Fished	Sockeye Salmon	Coho Salmon	Pink Salmon	Chum Salmon
Week 23, (6/1-6/7)	drift gillnet	96	115	0	0	146,712
Week 24, (6/8-6/14)	drift gillnet	308	2,005	3	6	390,181
Week 25, (6/15-6/21)	drift gillnet	316	11,620	0	19	373,032
Week 26, (6/22-6/28)	drift gillnet	271	68,805	6	36	404,331
Week 27, (6/29-7/5)	drift gillnet	289	34,059	20	961	498,981
Week 28, (7/6-7/12)	drift gillnet	291	44,395	196	10,692	372,887
Week 29, (7/13-7/19)	drift gillnet	215	15,078	147	26,264	105,328
	drift gillnet	44	1128	64	6005	11529
Week 30, (7/20-7/26)	purse seine	7	64	8	7541	2517
	drift gillnet	8	60	22	2266	528
Week 31, (7/27-8/2)	purse seine	11	120	4	42888	1395
	drift gillnet	10	41	35	9989	139
Week 32, (8/3-8/9)	purse seine	47	104	78	780008	5160
	drift gillnet	45	362	1548	174714	534
Week 33, (8/10-8/16)	purse seine	57	197	1259	3117392	242
	drift gillnet	85	219	7221	351696	176
Week 34, (8/17-8/23)	purse seine	48	61	14434	1973485	41
	drift gillnet	99	423	24781	236577	100
Week 35, (8/24-8/30)	purse seine	34	14	19531	615048	3
	drift gillnet	115	141	42710	35549	158
Week 36, (8/31-9/6)	purse seine	4	0	1407	28102	0
Week 37, (9/7-9/13)	drift gillnet	67	0	3,560	126	0
Week 38, (9/14-9/20)	drift gillnet	3	0	156	0	0
	drift gillnet	413	178,451	80,469	854,900	2,304,616
Totals	purse seine	75	560	36,721	6,564,464	9,358
	combined gear	488		117,190	7,419,364	2,313,974

Table 8.—Drift and set gillnet harvests in the Eshamy District of Prince William Sound, 2008.

Stat Week, (Dates)	Gear	Hours of		Sockeye Salmon	Chum Salmon	Pink Salmon
		Permits Fished	Fishing time			
	drift gillnet	0		0	0	0
Week 23, (6/1-7)	set gillnet	10	120	27	1,524	1
	drift gillnet	23		2,089	9,255	0
Week 24, (6/8-14)	set gillnet	18	120	3,430	10,046	1
	drift gillnet	245		62,091	63,424	46
Week 25, (6/15-21)	set gillnet	22	120	22,371	12,932	61
	drift gillnet	327		242,142	101,543	212
Week 26, (6/22-28)	set gillnet	24	120	46,300	11,863	154
	drift gillnet	232		137,339	39,227	4,178
Week 27, (6/29-7/5)	set gillnet	25	120	50,569	8,426	1,691
	drift gillnet	127		63,881	20,389	12,969
Week 28, (7/6-7/12)	set gillnet	25	120	27,009	7,210	3,554
	drift gillnet	88	120	27,573	9,994	17,008
Week 29, (7/13-7/19)	set gillnet	22	36	6,476	897	1,200
	drift gillnet	54	120	11,329	3,851	9,416
Week 30, (7/20-7/26)	set gillnet	12	36	3,161	422	696
	drift gillnet	31	120	8,527	2,188	11,038
Week 31, (7/27-8/2)	set gillnet	8	36	1,736	311	1,351
	drift gillnet	26	120	3,439	717	11,218
Week 32, (8/3-8/9)	set gillnet	4	36	580	48	808
	drift gillnet	28	48	1,877	597	19,196
Week 33, (8/10-8/16)	set gillnet	3	36	326	30	2,596
	drift gillnet	13	48	498	27	18,007
Week 34, (8/17-8/23)	set gillnet	4	36	246	18	8,338
	drift gillnet	301	1296	560,785	251,212	103,288
Totals	set gillnet	25	936	162,231	53,727	20,451
	combined gear	326		723,016	304,939	123,739



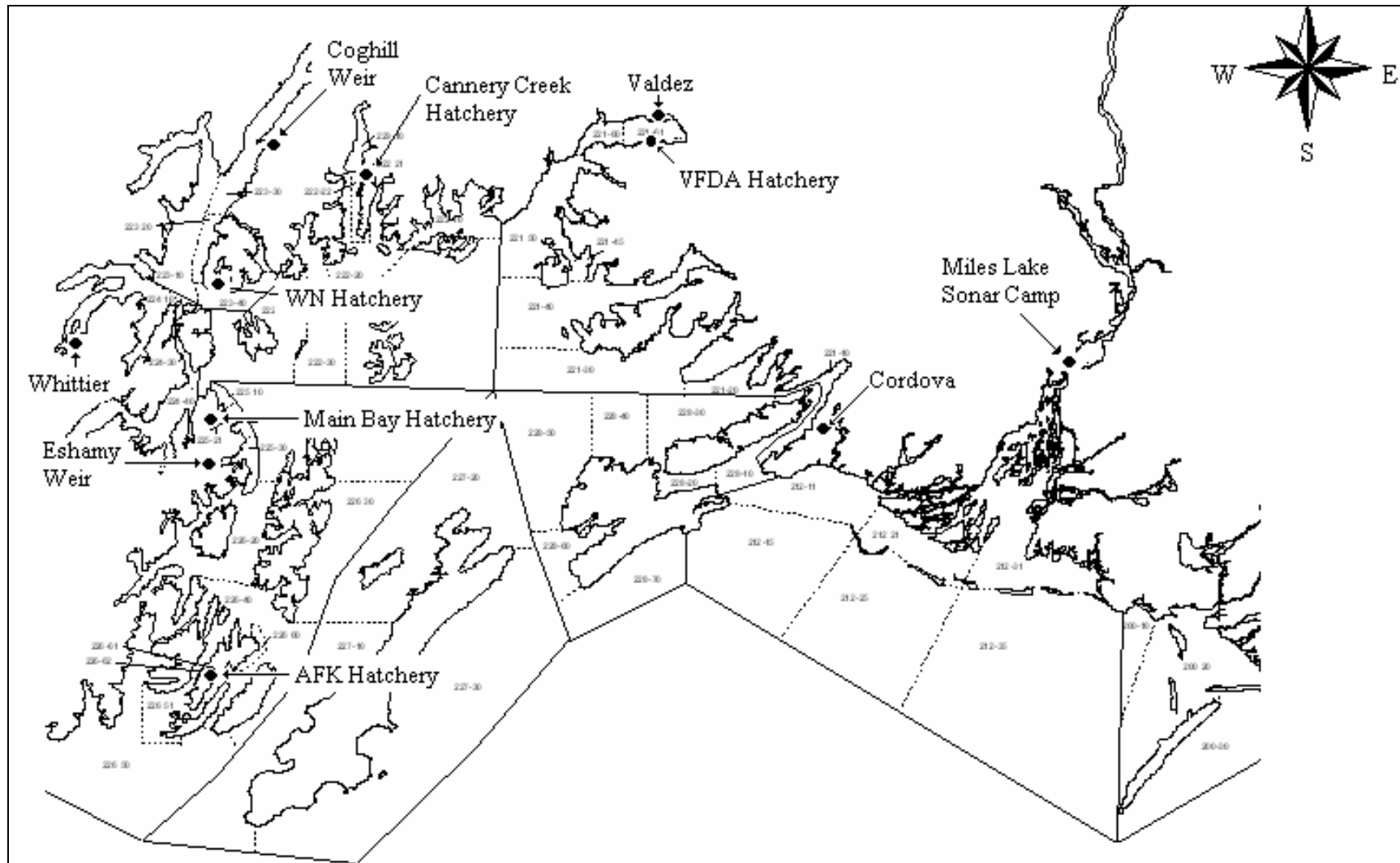


Figure 1.—Prince William Sound Management Area showing towns, commercial fishing districts, salmon hatcheries, weir locations and Miles Lake sonar camp.

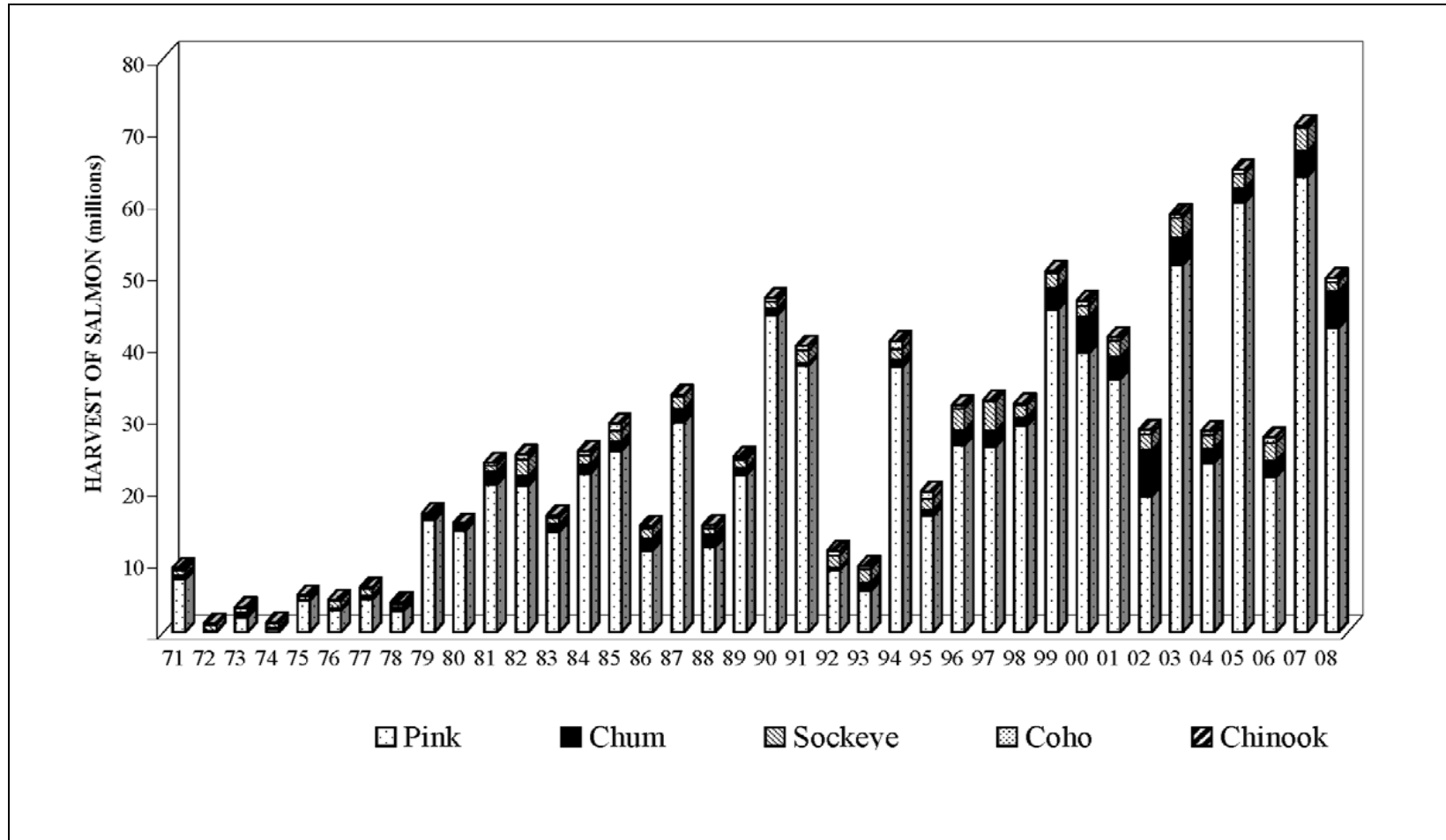


Figure 2.—Commercial salmon harvests in Prince William Sound, 1971–2008.

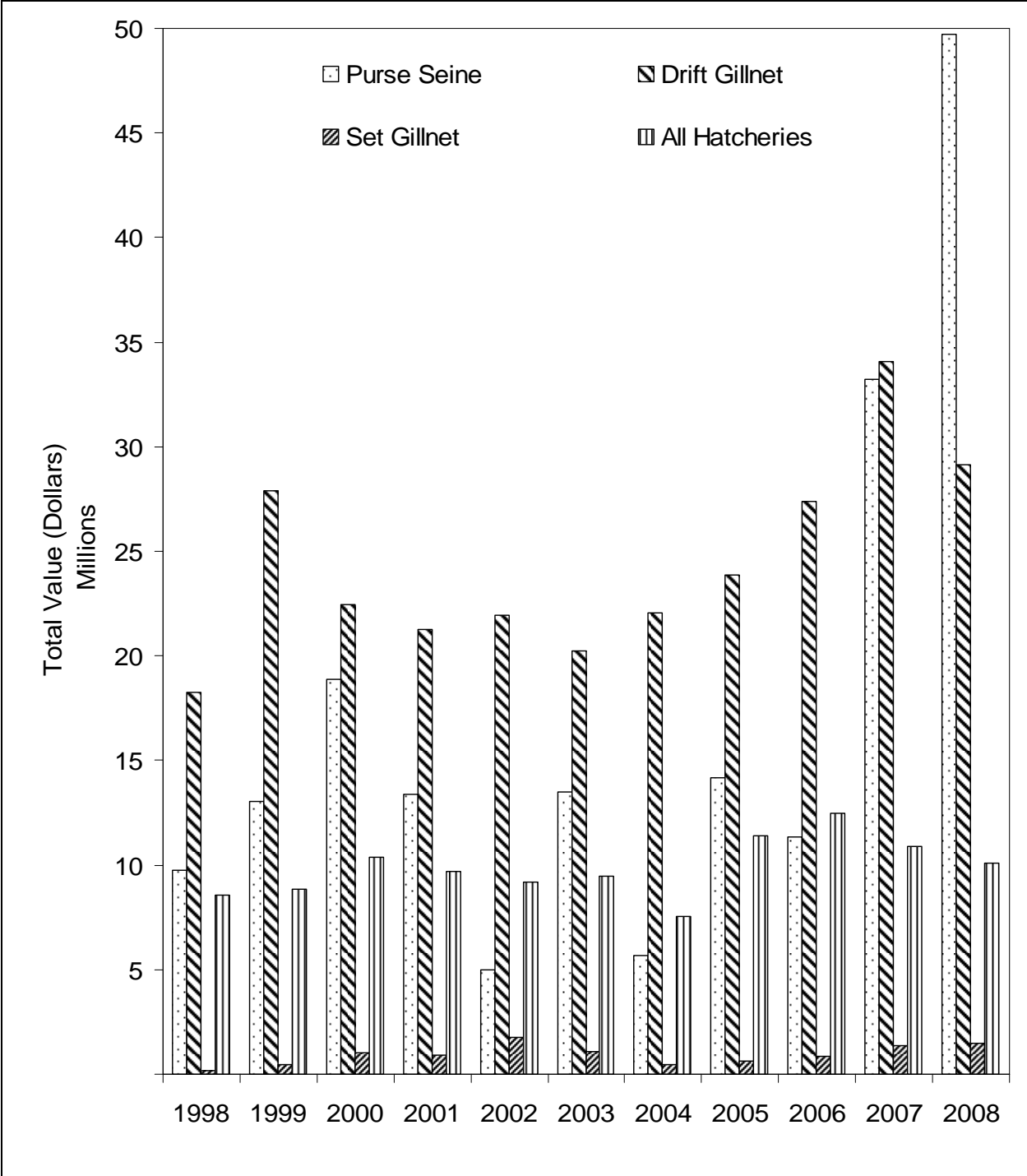


Figure 3.—Exvessel value of the commercial salmon harvest by gear type, 1998–2008.