

**2007 Southeast Alaska Purse Seine Fishery  
Management Plan**

by

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June 2007

Alaska Department of Fish and Game

Division of 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, Special Publications and the Division of Commercial Fisheries Regional Reports. 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.

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

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**2007 SOUTHEAST ALASKA PURSE SEINE FISHERY MANAGEMENT  
PLAN**

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## ABSTRACT

The Southeast Alaska purse seine fishery is managed according to statute, regulations, emergency order authority, and in consultation with the public and industry through the Purse Seine Management Task Force process. The Alaska Department of Fish and Game issued a preseason forecast for harvest of 47 million pink salmon in 2007. This forecast for pink salmon, together with historical escapement estimates, fishery performance data, private non-profit hatchery forecasts for chum salmon and other species, are used to establish the management plan. The management plan for the 2007 Southeast Alaska salmon purse seine fishery is described in detail, along with expected run sizes, harvest strategies, and related management issues.

Key words: purse seine, management, pink salmon, chum salmon, coho salmon, sockeye salmon, Chinook salmon

## INTRODUCTION

This plan describes how the Southeast Alaska salmon purse seine fishery will be managed during the 2007 season and includes expected run sizes, harvest strategies, and related management issues. The plan is based on the Alaska Department of Fish and Game (ADF&G) 2007 preseason pink salmon forecast, historical escapement, fishery performance data and input through the Purse Seine Management Task Force process. ADF&G area management biologists listed at the end of this document can provide further details regarding the implementation of the plan in their respective areas.

Regulations allow purse seine fishing in Districts 1 (Sections 1-C, 1-D, 1-E, and 1-F only), 2, 3, 4, 5, 6 (Sections 6-C and 6-D only), 7, 9, 10, 11 (Sections 11-A and 11-D only), 12, 13, and 14. Purse seine fishing is also allowed in hatchery terminal harvest areas (THA) at Nakat Inlet, Neets Bay, Kendrick Bay, Anita Bay, Deep Inlet, and Hidden Falls. Although the areas specified above are designated seine fishing areas, specific open areas and fishing times are established by emergency order.

On average, 70 to 90% of the salmon harvested in Southeast Alaska commercial fisheries are caught with purse seines. Pink salmon *Oncorhynchus gorbuscha* is the primary species targeted by the seine fleet, therefore most management actions are based on the abundance of pink salmon stocks. Other species are generally harvested incidental to pink salmon. On average, chum salmon *O. keta*, account for approximately 12%; sockeye salmon *O. nerka* and coho salmon *O. kisutch* account for approximately 2%; , and Chinook salmon *O. tshawytscha* account for less than 1% of the total purse seine salmon harvest.

Tagging studies of adult pink salmon have demonstrated that the stocks in Southeast Alaska exhibit a distinct separation between the northern and southern portions of the region. For purposes of catch tabulation and management, Districts 1–8 are grouped as “Southern Southeast” and Districts 9–14 as “Northern Southeast.”

Inseason assessments of pink salmon run strength are determined primarily from spawning escapement information obtained from aerial surveys of terminal areas and streams and from fishery performance data (catch and catch per unit effort, or CPUE). ADF&G staff use fishery performance data and associated information to make inseason evaluations of pink salmon harvests to Northern and Southern Southeast Alaska. ADF&G also charters purse seine vessels to conduct test fishing assessments of run strength in selected index areas and monitors pink salmon sex ratios in the commercial harvest to evaluate run timing.

## 2007 PINK SALMON FORECAST

The pink salmon return in 2007 is predicted to be strong, with a potential total Southeast Alaska harvest of **47 million fish (with an 80% CI range of 36 to 58 million fish)**. The Strong category represents harvests between the 61<sup>st</sup> and 80<sup>th</sup> percentiles of the historical Southeast Alaska pink salmon harvest from 1960 to 2006:

Category	Range (millions)	Percentile
Disaster	Less than 11	Less than 20th
Weak	11 to 16	21st to 40th
Average	17 to 28	41st to 60th
<b>Strong</b>	29 to 51	61st to 80th
Excellent	Greater than 51	Greater than 80th

### FORECAST METHODS

The ADF&G forecasts of pink salmon harvests in Southeast Alaska for the past three years were based on a time-series technique called *exponential smoothing*. This technique is similar to a running average, except that all harvests since 1960 were used in the annual forecast estimate. Recent harvest observations were given more weight in the analysis, while past harvest observations were increasingly down-weighted with time; i.e., the older the data, the less influence it has on the forecast. If  $x_t, x_{t-1}, \dots$  denotes the observed harvests in year  $t, t-1$ , and so on, then the forecast in year  $t+1$  is given by,

$$\hat{x}_{t+1} = cx_t + (1-c)\hat{x}_t .$$

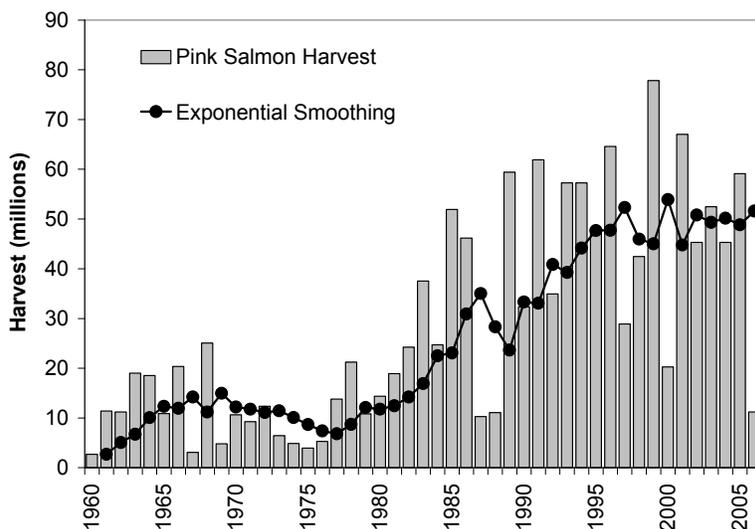
The forecast for year  $t$ , that is  $\hat{x}_t$ , is also a weighted average of the observed catch in year  $t-1$ , and the forecast in year  $t-2$ . This is a kind of recursive equation that contains all of the data in the series. In this case, we choose a value of  $c$  to be approximately 0.44, based on minimizing the sum of past squared errors. This method is excellent for tracking the underlying, long-term trend in pink salmon abundance, but it is not useful for tracking annual fluctuations in pink salmon abundance, and it is not useful for forecasting a surprise event, such as an extremely large or small run. The Southeast Alaska pink salmon harvest contains a long-term increasing trend in the harvest, up to the 1990s, as well as considerable year-to-year change in harvest level (Figure 1).

ADF&G salmon research biologists have made two changes for the 2007 forecast. First, because of the possibility that pink salmon returns may be developing a stronger odd and even year cycle, they let  $t$  be 2005, the parent year for the 2007 return. That is, all of the data up to 2005 were used, and the 2006 catch was excluded from the exponential-smooth algorithm, assuming the 2005 parent year will better predict the 2007 return than the 2006 return year. Second, pink salmon fry catch-per-unit-effort (CPUE) statistics from the NOAA Fisheries, Alaska Fisheries Science Center, Auke Bay Laboratory (Joe Orsi<sup>1</sup>, unpublished data) were used to adjust the exponential smooth function. These observations are based on the catches of juvenile pink

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<sup>1</sup> We gratefully acknowledge the assistance and advice of Joe Orsi and Alex Wertheimer of NOAA Auke Bay Lab. However, we accept responsibility for this forecast, and we accept sole responsibility for this use of their data.

salmon in a scientific cruise the year prior to the pink salmon return, and as such provide information on the early marine survival and abundance in the ocean. Although there are only nine paired exponential-smooth forecasts and CPUE statistics, an equation was developed to predict the forecast error in the exponential-smooth using linear regression. This approach had fair to good performance in predicting the direction of error and this technique may help forecast exceptionally big or exceptionally small harvests (Figure 2). The forecast range is based on an 80% confidence interval, calculated by cross-validation estimates of the forecast error.



**Figure 1.**—Comparison of annual harvest of pink salmon in Southeast Alaska, and exponential smoothed hindcast values of the harvest used in the 2006 forecast model. Note that the 2006 harvest of 11.2 million pink salmon was well below the forecast.

## FORECAST DISCUSSION

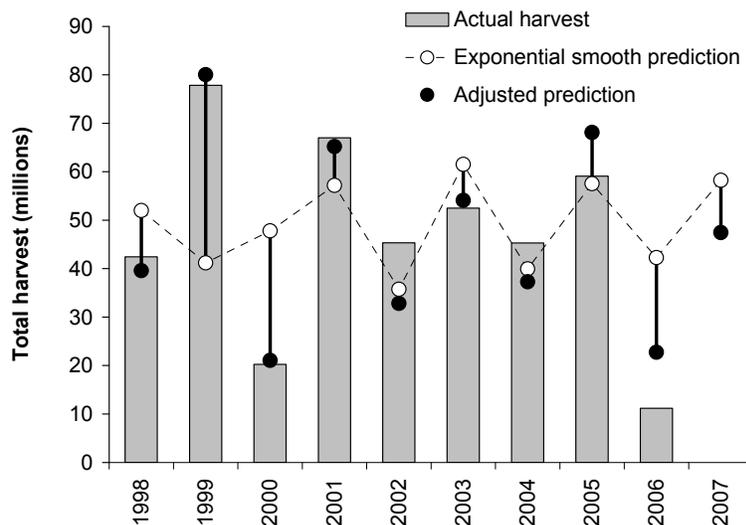
As was typical in recent years, the parent-year escapement in 2005 appears to have been ample to provide a strong total return in 2007 if marine conditions remain favorable for pink salmon. Brood-year escapement indices in 2005 were the 4th highest since 1960, and were above the recently established sub-regional biological escapement goals (Table 1). However, there were very warm conditions in many streams in 2005, which may have resulted in some reduced spawning success.

The current forecast does not rely on estimates of total escapement or total run size, as did prior forecasts, because accurate measures of these variables are not currently available. Because it is strictly based on historical harvests, this new method of forecasting does not directly forecast the amount of fish that might be available for harvest. This is the fourth year that exponential smoothing has been used to forecast the harvest. The first two exponential-smooth forecasts were accurate to within 5 million fish and 10 million fish; or about 10%–20% of the forecast, as the harvests were about average for recent years. Last year this forecast method failed to predict the unusually small run and harvest. The actual harvest of 11.2 million pink salmon in 2006 was far below the lower end of our 2006 forecast range of 29–74 million (Figure 1).

This is the first year that salmon research biologists have tried to adjust the exponential-smooth forecast based on information from the NOAA Auke Bay Lab. Their CPUE statistic from 2006 is only slightly below the average for 10 years we have CPUE statistics. The data set includes three

out of ten observations smaller than this year's value. Harvests from those three years ranged from 11.2 million to 42.4 million, while all harvests during those nine years we have paired CPUE and catch statistics ranged from 11.2 million to 77.8 million.

The department will manage fisheries *inseason* based on the strength of salmon runs. Aerial escapement surveys and fishery performance data will continue, as always, to be essential in making inseason management decisions.



**Figure 2.**—Annual harvest of pink salmon in Southeast Alaska, 1998–2006, compared to the exponential smoothed hindcast predictions of the harvest (based on the parent-year harvest) adjusted from NOAA Auke Bay Laboratory pink salmon fry data. The 2007 harvest prediction is 47 million pink salmon.

**Table 1.**—2005 Southeast Alaska pink salmon escapement indices by district and subregion, compared to management target ranges by district, and biological escapement goal ranges by subregion (units of escapement index in millions).

Subregion	District	2005 Index	Lower Target	Upper Target
Southern	101	2.9	1.3	3.0
Southern	102	1.4	0.4	1.1
Southern	103	2.7	1.1	2.6
Southern	105	1.1	0.3	0.7
Southern	106	0.8	0.4	0.9
Southern	107	0.8	0.4	0.9
Southern	108	0.1	No Target	No Target
Northern Inside	109	1.8	0.4	0.9
Northern Inside	110	1.1	0.7	1.5
Northern Inside	111	0.5	0.3	0.7
Northern Inside	112	2.0	0.4	0.9
Northern Inside	Inside 113	0.7	0.4	0.9
Northern Inside	114	0.5	0.3	0.7
Northern Inside	115	0.1	No Target	No Target
Northern Outside	Outside 113	3.8	0.8	1.8

	<b>Total 2005 Index</b>	<b>Lower Escapement Goal</b>	<b>Upper Escapement Goal</b>
Southern	9.8	4.0	9.0
Northern Inside	6.6	2.5	5.5
Northern Outside	3.8	0.8	1.8

## **GENERAL MANAGEMENT GOALS**

The primary management goals for the 2007 Southeast Alaska purse seine fishery are as follows:

1. Obtain overall pink salmon spawning biological escapement goals by subregion and within subregions obtain escapements consistent with district and stock group management targets to ensure that spawning escapements are well distributed.
2. Obtain overall adequate chum salmon spawning escapements and ensure that spawning escapements are well distributed.
3. Provide for an orderly fishery while harvesting fish in excess of spawning escapement needs.
4. Minimize, to the extent possible, the interceptions of salmon destined for fishing districts where weak returns are expected.
5. Promote a harvest of good quality fish within constraints dictated by run size and timing.
6. Manage the District 4 purse seine fishery consistent with the provisions of the U.S./Canada Pacific Salmon Treaty.
7. Restrict the total purse seine harvest of Chinook salmon (28 inches or larger) to no more than 4.3% of the all-gear Chinook salmon catch ceiling of 14,164 established for the 2006/2007 season.
8. Manage the seine fishery in the waters of District 12, north of Point Marsden (along the Hawk Inlet Shore), and in Section 14-C north of the latitude of Porpoise Islands, consistent with the Northern Southeast Purse Seine Management Plan (5 AAC 33.366).

## **GENERAL MANAGEMENT PROBLEMS**

### **EXPECTED FISHING REGIME**

ADF&G will strive to maintain and improve the high quality of the harvest achieved in recent years. This will mean an aggressive fishing schedule early in the season in areas where strong returns are expected. As the season progresses, based on catch rates, fleet distribution, expected harvest, and terminal area abundance, fishing times may be increased from 15-hour periods once or twice per week, to 39-hour openings, to 2-days-on/2-days-off, to 4-on/1-off, or to continuous fishing in some areas. Implementation of the 4-on/1-off fishing regime may be expected by late July or early August. The exact timing and implementation will be determined inseason by management staff and regionally coordinated. The 4-on/1-off fishing regime was first implemented in 2002 to: 1) supply processing plants with more consistent deliveries of fresh-caught fish to maximize flesh quality, 2) increase roe recovery and therefore 3) maximize the value of final products. The 4-on/1-off was again discussed at the November 2006 Purse Seine Task Force meeting. Processors present were in favor of this regime if the runs were large

enough to warrant it. Fishermen present were in disagreement with each other if they wanted to continue with extended fishing regime or revert back to the standard 2-days-on/2-off.

## **EFFORT LEVELS**

The size of the purse seine fleet will have some impact on the management decisions the ADF&G makes as the season progresses. Effort levels in 2006 remained about the same as 2005 with 234 permits fishing in common property fisheries. The total number of permits issued in 2006 was 414; indicating 180 permits were eligible to fish and did not fish. The 2006 effort level increased slightly to 76% of the recent 10-year average of effort of 309 permits for the purse seine fishery.

## **DAILY START TIMES**

For the 2007 season the fishery opening and closing times will be as follows:

1. From the start of the seine season (June 17) through approximately August 15: 5:00 a.m. to 8:00 p.m.
2. From approximately August 15 through the end of the pink salmon season: 6:00 a.m. to 9:00 p.m.
3. From the start of the chum salmon season until the season closes: 7:00 a.m. to 7:00 p.m.

## **REGULATION MARKERS**

In November 2006, at the Purse Seine Task Force meeting, the department was asked to clarify the definition of closed waters near a salmon stream. Fish and Game Regulation 5AAC 33.350 lists all closed waters in Southeast Alaska. Regulation 5AAC 39.290(a) prohibits fishing **within 500 yards of any salmon stream or river or any stream or river bed or channel at all stages of the tide**. This means that fishing is prohibited within 500 yards of where the stream channel exists including where it ends at low tide. 5 AAC 39.290(b) provides that the Department shall place closure markers for any stream as close as practically possible to the distance or location specified by the applicable regulation or emergency order. Often these markers will be more than 500 yards from the mouth of the stream at low tide in order to provide additional protection to fish accumulated near streams or because markers are placed where they can be seen and where they can be attached to a tree. Each stream has a different shoreline configuration. Some streams are in bays and the 500-yard markers can be connected by a straight line between the two markers because the location where the stream channel ends at low tide is 500 yards or more from the straight line between the two markers. Other streams are located along straight shorelines and 500 yards from the stream channel at low tide is defined by an “arc” or half of a circle originating from the two regulation markers with the arc being at least 500 yards from any part of the stream channel at low tide. The most important thing to remember is the shoreline around every stream, and the stream channel at low tide in every stream, is different. Unless fishermen are very familiar with the exact location where 500 yards from the stream channel ends at low tide, they should fish outside of the arc defined by the two stream markers. This will ensure that they are outside of the 500-yard stream closure.

## **NEWS RELEASE INFORMATION**

The department will announce each fishery opening by news release. Announcements in general will be made more than one full day in advance of the opening to provide a fair start, unless an announcement of shorter duration is needed to prevent the loss of a fishery. Line changes and

time changes differing from prior announcements will be indicated in bold type to highlight those changes. News releases will be available at ADF&G offices throughout Southeast Alaska, posted on the ADF&G web site, and will be available at fish buying locations or other prominent locations throughout the region. ADF&G contact numbers as well as telephone message recordings of the most recent news releases will be listed in the footer at the bottom of each news release.

The purse seine task force has requested a single telephone recording of the entire news release broken down into a menu of openings by area. Further details will be provided on regular news releases when this system is implemented.

## **MATURE PINK SALMON FISHERIES**

In 2001, ADF&G, at the request of several processors, initiated terminal area fisheries for mature pink salmon in areas where escapement needs had been exceeded. These fisheries were directed at harvesting the roe or ikura of the pink salmon. Approximately 2.4 million pink salmon were harvested in the fisheries that took place in Districts 1, 3, 5, 6, and 7. In order to meet the added cost of this fishery the department had a test fishery for mature pink salmon in District 3.

No terminal area pink salmon fisheries occurred during the 2002 season.

In 2003, ADF&G allowed for terminal area pink salmon fisheries in District 1 in Carroll Inlet, in District 3 in El Capitan Passage, and Section 9-A in Red Bluff Bay. No harvest occurred in either Districts 1 or 3; however, 69,000 pink salmon were harvested from Red Bluff Bay.

No terminal area pink salmon fisheries occurred during the 2004 season.

In 2005, ADF&G opened terminal area pink salmon fisheries in District 5 in Shipley Bay and Affleck Canal, in District 6 in Steamer Bay, and in Section 13-A in Slocum Arm. In Section 13-A, 255,000 pink salmon were harvested by five boats. Some pink salmon were also harvested in District 5.

No terminal area pink salmon fisheries occurred during the 2006 season.

ADF&G will continue to look for opportunities to continue the terminal area pink salmon fisheries in 2007 if there is an expressed interest and a market. A key requirement for mature salmon fisheries is that such fisheries must adhere with provisions of 5AAC 93.310 WASTE OF SALMON, which provides that salmon are not wasted, certain disposals may first need be authorized, and logbooks may be required. The department will continue to open fisheries so all of the fish can be harvested in the best possible quality in the existing, traditional fisheries. However, if certain systems end up with significant numbers of pink salmon that are in excess to all expected spawning needs, openings to target mature fish may occur. It is anticipated that this type of fishery, if it occurs, would primarily be in late August and September. Since this is still a new method of management, it is anticipated that several types of openings may occur to determine what works best for the industry while insuring needed escapement is not jeopardized. Openings of this nature will be announced via standard news releases and will be clearly differentiated from traditional openings. If these fisheries are to continue, test fisheries may be required to cover additional aerial surveys and personnel costs. Before such test fisheries are allowed, the department will also need to evaluate if any planned test fisheries can be accomplished within the Region 1 authorized test fishing receipt authority without compromise to existing programs or other fisheries.

## **CHINOOK SALMON HARVEST**

ADF&G is required to manage the Southeast Alaska purse seine fishery for a maximum harvest of 4.3% of the annual all-gear Chinook salmon catch ceiling determined under the terms of the Pacific Salmon Treaty [5AAC 29.060 (b)(1)]. Prior to 1997, the purse seine fishery was limited to a fixed quota of 11,400 Chinook salmon (not including Alaska hatchery-produced fish). The purpose of the 1997 regulation was to make management of the purse seine harvest of Chinook salmon more consistent with the abundance-based management approach agreed to by the U.S. Section of the Pacific Salmon Commission in June 1999. The Chinook salmon all-gear catch ceiling is driven by the pre-season abundance index that is determined by the Chinook Technical Committee. For 2007, the purse seine Chinook salmon allocation will be 14,164 fish.

The Alaska Board of Fisheries (BOF) has adopted size limits [5AAC 33.392] and directed ADF&G to manage the purse seine fishery such that incidental mortality from catch and release is minimized. The specific provisions for management of the seine fishery harvest of Chinook salmon are as follows:

1. Chinook salmon taken in the purse seine fishery that are less than 28 inches in length (as measured from the tip of the snout to the tip of the tail) will not be counted against the Chinook salmon harvest quota.
2. Chinook salmon greater than 21 and less than 28 inches in length may be harvested by purse seine fishers but not sold.
3. Purse seine fishers may possess and sell Chinook salmon that are less than 21 inches (approximately 5 pounds or less).

## **CHINOOK SALMON IMPLEMENTATION PLAN**

Non-retention of 28-inch and larger Chinook salmon has been the primary management measure for maintaining the catch limit. Because of the Chinook salmon seine allocation for 2007, retention of Chinook salmon will be permitted from the beginning of the season and for as long as possible during the time period when the catch rate for other species is high. If the quota is reached, non-retention regulations will be implemented by emergency order late in the season.

There may be specific terminal areas in which all Chinook salmon may be, or must be, retained. ADF&G intends to implement full retention (5AAC 39.265) from the beginning of the season for net fisheries in the Deep Inlet THA. Additional areas may be announced via news releases.

During periods of non-retention, purse seine fishers are encouraged to avoid fishing in areas with high concentrations of Chinook salmon and to quickly release those caught in a manner that minimizes mortality. To ensure small (less than 21 inches) Chinook salmon are not counted against the quota, ADF&G needs the cooperation of the fishing industry. To accomplish this, all Chinook salmon sold that are 28 inches or longer must be specified on fish tickets as species code 410; this is pre-printed on each fish ticket. Chinook salmon 21 inches or less should be indicated on fish tickets as species code 411. This code will need to be handwritten on the fish ticket at the time of sale if it is not pre-printed.

## **SOUTHERN DISTRICTS PURSE SEINE FISHERY**

### **2007 PINK SALMON RETURNS**

The 2005 pink salmon escapement indices were all within or above management target ranges for Districts 1–8 (Table 1). The District 1 pink salmon escapement index was 2.9 million fish, at the upper end of the escapement range of 1.3 to 3.0 million fish. The District 2 pink salmon index escapement of 1.4 million fish was within the escapement range of 400 thousand to 2.6 million pink salmon. The District 3 pink salmon index escapement of 2.7 million fish was above the upper goal of 2.6 million pink salmon. The District 5 pink salmon index escapement of 1.1 million fish was well above the escapement range of 0.3 to 0.7 million pink salmon. The District 6 pink salmon index escapement of 0.8 million fish was within the goal range of 0.4–0.9 million pink salmon. The District 7 pink salmon index escapement of 0.8 million fish was at the upper end of the goal range of 0.4–0.9 million pink salmon. The total Southern Southeast Alaska pink salmon escapement index of 9.8 million fish was above the escapement goal range of 4.0 to 9.0 million fish.

### **MANAGEMENT CONCERNS**

Implementation of the 4-days-on/1-day-off fishing regime strategy that started in 2002 will still pose the largest management problem in 2007. Uncertainties about fleet size and distribution and the department's reaction to those can only be answered inseason. ADF&G and the fishing industry will have to be flexible and be able to react quickly in season to changes from historical fishing patterns. Above all, meeting escapement goals will continue to be the number-one objective of the department. Within that conservation mandate, the department will attempt to meet the objective of the modified fishing strategy and provide a more stable supply of fresher fish.

### **McDonald Lake Sockeye Salmon**

In 2007, there will be increased restrictions to the Southern Southeast purse seine, gillnet and personal use fisheries in an effort to meet the McDonald Lake sockeye salmon escapement goal of 70,000–100,000 fish. The McDonald Lake run is not currently a stock of concern; however, it has been below the escapement goal in five of the last six seasons, despite conservation measures taken in the District 6 seine and gillnet fisheries in 2005 and 2006. In addition to these measures for sockeye salmon conservation, overall purse seine fishing time in Southern Southeast was very limited during the 2006 season because of the poor run of pink salmon.

Most of the harvest of McDonald Lake sockeye salmon by the purse seine fleet probably occurs along the Gravina Island shoreline. In order to pass McDonald Lake sockeye salmon, the Gravina Island shoreline will be closed north of the latitude of Cone Island during statistical weeks 29, 30, and 31. Seine fisheries in west Behm Canal, which have not been significant in recent years, will be limited in 2007, and the Yes Bay terminal area will again be closed. The District 6 gillnet fishery, the major harvest area of McDonald Lake sockeye salmon, will be limited to a maximum fishing time of two days a week for three weeks between statistical weeks 29 and 31. In addition, the western portion of Sumner Strait (the Point Baker fishery) will be closed during the second week of conservation. The District 5, 6, and 7 seine fisheries will most likely have reduced fishing time during these key weeks of the McDonald Lake sockeye salmon run. Finally, the McDonald Lake Personal Use fishery will have harvest limits, and seasons reduced from previous years.

ADF&G will continue to estimate the sockeye salmon escapement at McDonald Lake through extensive surveys of the spawning grounds from late August through mid-October. In addition, the department will conduct genetic sampling of the sockeye salmon harvested in the fisheries that occur in Clarence Strait and Sumner Strait. This sampling will update information about the time and area distribution of McDonald Lake sockeye salmon in those fisheries.

### **Hugh Smith Lake Sockeye Salmon**

During the 2006 meeting in Ketchikan, the BOF de-listed the Hugh Smith Lake sockeye stock as a stock of concern at the recommendation of ADF&G. This means the Hugh Smith Lake Sockeye Action Plan is no longer in effect; however, ADF&G will continue to closely monitor the system, and if escapement levels are not projected to reach the lower end of the escapement goal of 8,000 fish, both the District 1 gillnet fleet and the District 1 purse seine fleet may need to be restricted in order to reach the escapement goal.

### **MANAGEMENT PLAN**

The Southern Southeast Alaska area purse seine management plan consists of separate segments which include the District 4 fishery, the inside districts pink salmon fishery, the fall chum salmon fishery in Cholmondeley Sound, and the THA fisheries.

#### **District 4**

The early portion of the District 4 purse seine fishery will be managed to comply with the Pacific Salmon Treaty. The agreement calls for the following:

Manage the Alaskan District 4 purse seine fishery prior to Statistical Week 31 to:

- i. Achieve an annual catch share of the Nass and Skeena Rivers sockeye salmon of 2.45% of the Annual Allowable Harvest (AAH) of the Nass and Skeena Rivers sockeye salmon stocks in that year.
- ii. Carry forward from year to year annual deviations from the catch share arrangement.

The AAH each year will be calculated as the combined total run of adult Nass and Skeena Rivers sockeye salmon in that year less the combined Nass and Skeena Rivers escapement target of 1.1 million fish. In the event the actual Nass and Skeena Rivers spawning escapement for the season is below the target level, the actual spawning escapement will be used in the AAH calculation.

The total run calculation includes the catches of Nass River and Skeena Rivers sockeye salmon in the principal boundary area fisheries and the spawning escapements to the Nass and Skeena Rivers watersheds. This includes the catch of Nass and Skeena Rivers sockeye salmon in Alaska Districts 1, 2, 3, 4, and 6 net fisheries, Canadian Areas 1, 3, 4, and 5 net fisheries, and Canadian Nass and Skeena in-river fisheries. Catches in other boundary area fisheries may be included as jointly agreed by the Northern Boundary Technical Committee (NBTC).

Although the management intent shall be to harvest salmon at the AAH, it is recognized that overages and underages will occur and an accounting mechanism is required. The management intent for each fishery shall be to return any overages to a neutral or negative balance as soon as possible. After five years of consecutive overages, a management plan must be provided to the Northern Panel with specific management actions that will eliminate the overage. The accrual of

underages is not intended to allow either Alaska or Canada to modify its fishing behavior in any given year to harvest the accrued underage.

Over the past three years the bilateral NBTC has worked to finalize the total run reconstructions for the Nass and Skeena Rivers. In February 2006 the bilateral Northern Panel accepted the work of the Technical Committee for the run reconstructions of the Nass and Skeena Rivers for the 2005 season. Information in Table 2 reflects the performance of the District 4 fishery for 1999 through 2005, preliminary numbers for the 2006 season and a 2007 forecast. The final bi-lateral stock identification work will not be completed until February 2008.

The Canadian Department of Fisheries and Oceans (DFO) has a preseason expectation of approximately 3,328,000 sockeye salmon to the Nass/Skeena Rivers in 2007 (Table 2). If the 2007 forecast is accurate and escapement goals are achieved, then the AAH for District 4 will be approximately 55,700 Nass/Skeena sockeye salmon (Table 2).

**Table 2.**—Sockeye salmon allocations for the District 4 purse seine fishery based on Nass and Skeena Rivers allocation calculations, 1999 to 2007.

	Nass/Skeena Total Return	Nass/Skeena Escapement	Allowable Nass/ Skeena AAH	Allowable D4 Harvest (2.45%)	Total Pre- Week 31 Sockeye Harvest	Actual Nass/Skeena Harvest	Overage/ Underage Per Year	Cumulative overage (underage)
1999	1,777,048	936,705	834,343	20,441	7,664	3,232	-17,209	-17,209
2000	5,318,228	1,100,000	4,218,228	103,347	48,969	29,221	-74,126	-91,335
2001	4,965,291	1,100,000	3,865,291	94,700	203,090	167,854	73,154	-18,181
2002	2,776,502	1,030,688	1,725,169	42,267	26,554	18,627	-23,640	-41,820
2003	3,313,785	1,100,000	2,213,785	54,238	84,742	44,258	-9,980	-51,800
2004	2,628,088	1,100,000	1,528,088	37,438	30,758	19,233	-18,205	-70,005
2005	1,770,494	1,100,000	670,494	16,427	35,690	28,000	11,573	-58,432
2006 <sup>1</sup>	2,950,000	1,100,000	1,850,000	45,325	90,000	63,000	17,675	-40,757
2007 <sup>2</sup>	3,328,000	1,100,000	2,228,000	55,700				

<sup>1</sup>Data for 2006 is preliminary and <sup>2</sup>2007 is based on forecast returns.

In 2007, the District 4 purse seine fishery will start on Sunday, July 1. It is anticipated that the initial opening on July 1 will be 10 hours in length. The duration of subsequent openings will be based on the run strength of sockeye and pink salmon, the amount of effort in the district, and the need to stay within Pacific Salmon Treaty numbers. District 4 will be managed under the Pacific Salmon Treaty annex through July 28, 2007. Starting on Sunday, July 29, 2007 the district will be managed on the strength of Southern Southeast Alaska salmon.

If the management regime of 4-days on/1-day off is implemented after Statistical Week 30, it is ADF&G's intent to manage the district similarly in terms of boat-days of overall effort to that since the signing of the Pacific Salmon Treaty. Weekly fishing periods in August will be decided only after the department starts to realize the distribution of the fleet and the run size of pink salmon. In past years, District 4 was opened for the same amount of time as inside waters after the treaty period; however, that may not be the case in 2007.

## **Inside Fishing Areas**

As in past years, aerial surveys of early-run pink salmon producing areas, primarily Boca de Quadra, east Behm Canal, and Ernest Sound, will begin in late June. Seining is expected to begin on Sunday, July 1, (Statistical Week 27). The initial fishing period will be for 15 hours and will be confined to the southeast portion of Section 1-F, the southern portion of District 2, and portions of Section 7-A (Anan).

Fishing time will begin with a series of 15-hour to 39-hour openings depending on run strength and the distribution of the purse seine fleet.

That fishing regime will probably change into a 2-on/2-off fishing pattern unless it becomes obvious to ADF&G that due to the size and distribution of the purse seine fleet, the 4-on/1-off can be implemented before any 2-on/2-off fishing periods. Based on the preseason forecast, historical run timing, and the anticipated size of the purse seine fleet, the ADF&G anticipates the implementation of the 4-on/1-off by late July or early August. Until that time, the purse seine fishery will be managed similarly to previous years. Fishing times may occur in blocks of 15-hours rather than continual fishing, and areas may be opened and closed during the extended fishing opportunities.

In District 1 the area from Boca de Quadra to Foggy Point will be managed to reflect the harvest patterns, effort levels, and fishing time in recent years. Other areas in District 1, such as the Gravina Island shoreline, will also be managed to take into account other user groups, McDonald Lake sockeye salmon concerns and the need to achieve escapement of salmon into the back Behm Canal systems.

In District 2, the ADF&G will open a portion of the lower district outside of the THA when Kendrick Bay opens on Sunday, June 17. This will be done to target Kendrick Bay summer chum salmon at a time when few wild stock chum salmon are available, and to maximize the quality of those chum salmon.

Purse seining will be limited to the southern portion of District 2 until escapements of pink salmon to northern Clarence Strait, Ernest Sound, Cholmondeley Sound, and Kasaan Bay can be adequately assessed. Additionally, no purse seining should be expected in middle Clarence Strait, along the Ship Island and Tolstoi Bay shorelines, until run strength of pink salmon returns to west Behm Canal, Thorne Bay, District 6, and Section 7-B is determined. Also, in District 2, the fishing pattern along the Ship Island shore and near Thorne Bay will be managed to reflect historical fishing patterns to take into account other user groups and the need to achieve escapement to Thorne River and back Behm Canal systems.

Returns of pink salmon to District 3 are expected to be above average based on parent-year escapements. Portions of Section 3-A will open in mid to late July if pink salmon harvest in the early District 4 fishery indicates run strength is sufficient. By late July or early August, Sections 3-B and 3-C will also open. Under the extended fishing periods expected during August it is possible portions of District 3 may have longer fishing periods than inside districts if there is less effort in some of the more remote areas of the district.

## **Districts 5, 6, and 7**

Parent-year pink salmon escapements were excellent throughout District 5 (Sumner Strait). Seine openings can be expected to occur in portions of the district during the last week of July or the

first week of August. Escapements were excellent in the portion of District 6 that is available for seiners to fish (upper Clarence Strait). Openings are expected to begin during the second week in August. Parent-year escapements were excellent in District 7. Openings in Section 7-B are expected to begin in late July. If run strengths are strong, the plan is to ideally have all these districts open together even if it is with less area in each district. If that were not possible due to effort distribution or run strength, openings would rotate between District 6 and Districts 5 and 7. This could potentially include 2-day fisheries during one 5-day period and then switch to 3-day fisheries the following 5-day period. Every effort will be made to begin more continuous openings as soon as possible to give industry maximum flexibility for harvesting large returns. As mentioned previously under the McDonald Lake section, fishing will be curtailed in areas during times when there has historically been a high incidence of sockeye salmon in late July and early August.

### **Fall Chum Salmon Fisheries**

Some watersheds along the eastern shoreline of Prince of Wales Island in District 2 produce late-run chum salmon that have traditionally supported fall purse seine fisheries. Although no formal forecasts are made for these stocks, some expectations can be based on parent-year escapements. In Disappearance Creek and Lagoon Creek, the primary chum salmon spawning systems in Cholmondeley Sound, the majority of the 2002, 2003, and 2004 parent-year chum salmon escapements were average to above average. The first opening for fall-run chum salmon can be expected about September 9. In 2006, approximately 35,000 chum salmon were caught in the District 2 fall chum fishery. The ADF&G will be monitoring this fishery closely in 2007 to ensure sufficient escapement to Cholmondeley Sound systems.

ADF&G has opened portions of Section 3-A (Cordova Bay) in recent years to target fall chum salmon. However, there has been little or no effort in those years and no reported harvest. The department will again open portions of Section 3-A in 2007. Open areas and fishing times will be similar to the 2004 through 2006 seasons.

### **Terminal Hatchery Fisheries**

For the 2007 season, THA purse seine and gillnet fisheries will occur at Neets Bay, Nakat Inlet, Anita Bay, and Kendrick Bay to harvest fish returning to Southern Southeast Regional Aquaculture Association (SSRAA) enhancement facilities. The fisheries in these THAs will be managed jointly with SSRAA, and in accordance with existing BOF approved management plans. Details regarding the open fishing periods by gear type in each of these areas will be announced via commercial fishery news releases. Table 3 details the expected returns to each of SSRAA's release locations.

Fishers are requested to ensure fish caught in THAs are reported correctly on the fish tickets. This will enable the accurate otolith-mark sampling and documentation of fish taken from THAs.

### **Terminal Area—Neets Bay [5AAC 33.370]**

ADF&G in consultation with SSRAA, will manage Neets Bay to include those waters of Neets Bay from the easternmost point of Bug Island to the closed waters at the head of the bay. From the second Sunday in June (June 10) through August 1, the Neets Bay THA will be expanded to include those waters of Neets Bay east of the longitude of Chin Point to the closed waters at the head of the bay. After August 1, the Neets Bay THA will consist of those waters east of the longitude of the easternmost tip of Bug Island to the closed waters at the head of the bay.

In 2007, SSRAA is expecting a total return of 1,852,000 summer chum, 463,000 fall chum, 150,000 coho, and 11,500 Chinook salmon to return to Neets Bay.

From May 15 to June 10 Neets Bay will be opened continuously to purse seine, drift gillnet and troll unless closed by emergency order. The rotational fishery from June 11 through 20 according to 5 AAC 33.370 will be announced on a separate Neets Bay THA news release. From June 21 to November 14 no common property openings are scheduled so that cost recovery can take place. If openings can be scheduled they will be announced by News Release in September or once cost recovery has been completed.

### **Neets Bay THA Calendar**

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#### **May 15–June 10, 2007**

Open continuously to purse seine, drift gillnet and troll unless closed by emergency order.

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#### **June 11–June 20, 2007**

Rotational fishery for drift gillnet and purse seine.

#### **June 21–November 14, 2007**

No common property openings are scheduled during this time so that cost recovery can take place. If openings can be scheduled they will be announced by News Release in September or once cost recovery has been completed.

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### **Terminal Area–Nakat Inlet [5AAC 33.372]**

The Nakat Inlet THA includes the waters of Nakat Inlet between 54°50' N. latitude and 54°56' N. latitude.

During the 2006 season the southern line of the Nakat Inlet THA was extended to include those waters north of Surprise Point at 54°49.10 N. latitude. This extension will remain in effect for the 2007 fishing season, along with the removal of the northern closure line at 54°56.00. The 500-yard stream closure regulation [5AAC 39.290 (1)] will remain in effect.

In 2007, approximately 614,000 summer chum, 25,000 fall chum, and 14,000 coho salmon are expected to return to Nakat Inlet. Peak chum salmon catches from these releases are expected between mid-July to mid-August for summer chum and late August to early September for fall chum and coho salmon.

Due to recent BOF changes the Nakat Inlet THA will open from June 1 to August 31 for drift gillnet and troll gear only. Beginning on September 1, fishing with purse seine gear will be allowed on a rotational basis. On September 17, the fishery will open on a continual basis for drift gillnet, troll, and purse seine gear through November 10. The rotational fishery from September 1 to 16, according to 5AAC 33.372, will be announced on a separate Nakat Inlet THA news release.

## **Nakat Inlet THA Calendar**

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### **June 1–August 31, 2007**

Open continuously to drift gillnet and troll unless closed by emergency order.

### **September 1–September 16, 2007**

Rotational Fishery for drift gillnet and purse seine

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### **September 17–November 10, 2007**

Open continuously to drift gillnet, troll and purse seine unless closed by emergency order.

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## **Terminal Area–Anita Bay [5AAC 33.383]**

The Anita Bay THA in District 7 consists of those waters of Anita Bay west of a line from Anita Point at 56° 13.67' N. latitude, 132° 22.49' W. longitude to 56° 14.26' N. latitude, 132° 23.92' W. longitude.

By regulation portions of the Anita Bay THA will be closed to the harvest of salmon as follows:

- (1) From June 15 through June 25, the waters of the Anita Bay THA that are west of 132°26.22' W. long. will be closed to the harvest of salmon;
- (2) From June 26 through July 1, the waters of the Anita Bay THA that are west of 132°26.98' W. long. will be closed to the harvest of salmon;
- (3) From July 2 through July 10, the waters of the Anita Bay THA that are west of 132°28.00' W. long. will be closed to the harvest of salmon.

In 2007, approximately 1,161,000 chum, 2,750 Chinook and 15,000 coho salmon are expected to be returning in total. It is anticipated that approximately 600,000 chum, 500 Chinook and 1,500 coho salmon will return to the terminal area and be available for harvesting in the rotational fisheries.

## **Anita Bay THA Calendar**

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### **May 1–June 1, 2007**

May 1 beginning at 12:01 a.m. through June 1, 11:59 p.m.: Open continuously to purse seine, drift gillnet and troll unless closed by emergency order.

### **June 2– October 11, 2007**

Rotational fishery for drift gillnet and purse seine

### **October 12–November 10, 2007**

Beginning 12:01 a.m. Thursday, October 12, 2006, the Anita Bay THA will be open to the harvesting of salmon concurrently by drift gillnet, purse seine and troll gear. The Anita Bay THA will close for the season at 12:00 noon Friday, November 10, 2006.

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### **Kendrick Bay THA–[5AAC 33.377]**

The Kendrick Bay THA, which includes the waters of Kendrick Bay west of 131° 59.00 W. longitude, will be open on a continual basis beginning Sunday, June 17, 2007, Statistical Week 25, and will remain open until further notice. For 2007 SSRAA is expecting a return of 1,594,000 summer chum salmon. Peak catches are expected to occur during statistical weeks 27–29. As in recent years there will be area outside of the THA that will be open to target returning hatchery chum salmon at a time when few wild stock salmon are available for harvest. Fishing will begin on June 17 and have open areas similar to those established in recent years. ADF&G will consider additional fishing time and area in District 2 during these early weeks if wild salmon run strength, effort, and other pertinent considerations allow.

**Table 3.**—Expected 2007 Returns to SSRAA enhancement projects by release location.

<b>Species/Run</b>	<b>Release Location</b>	<b>Common property Harvest</b>	<b>Other</b>	<b>Total Return</b>
Coho	Herring Cove	6,900	2,100	9,000
Coho	Nakat Inlet	14,000	0	14,000
Coho	Anita Bay	15,000	0	15,000
Coho	Neets Bay	115,500	34,500	150,000
Summer Coho	Burnett Inlet	3,200	4,800	8,000
Summer Coho	Neck Lake	24,500	43,500	68,000
Chinook	Whitman Lake	7,650	7,650	15,300
Chinook	Anita Bay	2,750	0	2,750
Chinook	Neets Bay	5,750	5,750	11,500
Summer Chum	Neets Bay	415,000	1,437,000	1,852,000
Summer Chum	Anita Bay	1,161,000	0	1,161,000
Summer Chum	Kendrick Bay	1,594,000	0	1,594,000
Summer Chum	Nakat Inlet	614,000	0	614,000
Fall Chum	Nakat Inlet	25,000	0	25,000
Fall Chum	Neets Bay	101,000	362,000	463,000
Sockeye	Neck Creek	14,000	21,000	35,000

## **NORTHERN DISTRICTS PURSE SEINE FISHERY**

### **2007 PINK SALMON RETURNS**

Pink salmon escapement goals were met or exceeded in the 2005 parent year for Districts 9–14 in Northern Southeast Alaska (Table 1.). ADF&G expects good returns from the good parent year escapements observed in all of the northern districts.

### **MANAGEMENT CONCERNS**

As with Southern Southeast seine areas, implementation of the new management strategy will pose the most significant management problems in 2007. Uncertainties about fleet size and distribution and the department's reaction to those can only be answered in season. ADF&G and the fishing industry will have to be flexible and be able to react quickly in season to changes from historical fishing patterns. Above all, meeting escapement goals will continue to be the number-one objective of the department. Within that conservation mandate, the department will attempt to meet the objective of the modified fishing strategy and provide a more stable supply of fresher fish. With no specific Northern Southeast Alaska pink salmon return prediction, it will be necessary to assess the overall run strength of the return early in the season. An early-season management concern will be to prevent excessive interception of weak salmon stocks in mixed stock fishing corridors (e.g., Icy Strait and West Admiralty) until run strengths to near-terminal and terminal areas can be adequately assessed.

### **MANAGEMENT PLAN**

The Northern Southeast Alaska purse seine fishery management plan consists of separate segments for the outside areas (Sections 13-A and 13-B), the inside areas, the fall chum salmon fishery, and the Hidden Falls and Deep Inlet Hatchery terminal fisheries.

### **Fishing Regime Implementation**

When run strengths are strong enough to warrant additional fishing time, the fisheries will go from 15- and 39-hour openings to 2-on/2-off or more continuous openings. The fishing regime will probably shift to a 2-on/2-off fishing pattern for some limited time unless it becomes obvious to ADF&G that due to the size and distribution of the purse seine fleet, the 4-on/1-off can be implemented before any 2-on/2-off fishing periods. Based on the preseason forecast and historical run timing the department anticipates this will occur in early August. Until that time the purse seine fishery will be managed similarly to previous years.

### **Inside Fishing Areas, Early Runs**

The 2007 seining season will begin on Sunday, June 17, with initial open periods of 15 hours to harvest expected surplus summer chum and early pink salmon returns. During the first open period, seining will be allowed in portions of District 12 in Tenakee Inlet and Point Augusta in Chatham Strait; the opening will be in conjunction with the first opening at the Hidden Falls Terminal Harvest Area. Very few pink salmon have been harvested in District 10 and Section 13-C during previous mid-June openings so the first openings in these areas will occur on Sunday, June 24.

Escapements of summer chum salmon in the 2002–2003 parent years in Tenakee Inlet were mixed. The 2002 chum salmon escapement was 1.5 times the 10-year average but the 2003 parent-year escapement was only 1/3 of the 10-year average. The 2005 parent-year pink salmon

escapement index for Tenakee Inlet of 527,000 fish was well above the upper end of the escapement goal range of 180,000 to 370,000 pink salmon. The upper portion of Tenakee Inlet may be opened and fishing will continue as long as escapement continues to build adequately. Portions of the Basket Bay shoreline may also be opened to harvest pink salmon returns to Tenakee Inlet and Peril Strait if escapements to local streams are adequate including escapement of Kook Lake sockeye. The commercial seine fishery has routinely been closed within 4 nautical miles of state marine waters around the entrance to Basket Bay to manage for sockeye escapement to Kook Lake and for the Basket Bay subsistence fishery.

Parent-year pink salmon escapements were good in Peril Straits and Hoonah Sound with a 2005 escapement index of 686,000 in the middle of the management target of 400,000–900,000 pink salmon. Parent-year chum salmon escapements to Saook Bay and Rodman Bay were generally good with average escapements in 2002 and 2003. Beginning June 24, portions of Section 13-C will be open to harvest surplus salmon and to assess run strength of pink and chum salmon returning to Hoonah Sound streams. Further openings in 13-C will be determined inseason based on catch and observations of escapement. In the event that chum salmon returns provide for sufficient escapement, ADF&G may adjust open area in the associated bays for limited times to provide for harvest opportunities. In mid July, the west boundary of the fishing area in Peril Strait may be moved towards Chatham Strait to improve the quality of the harvest and to ensure pink salmon escapement for Hoonah Sound and Peril Strait streams is obtained. Portions of Section 13-C, west of the Duffield Peninsula, and Section 13-A in lower Peril Strait, may remain open to provide fishing opportunity on pink salmon migrating through Salisbury Sound and western Peril Strait to Hoonah Sound streams.

The parent-year escapement index for District 10 was 1.1 million pink salmon, near the midpoint of the escapement goal range of 0.7–1.45 million fish and the seventh highest escapement ever recorded. Escapements were uniformly excellent throughout the district. Extensive fisheries are expected in District 10 if survival from the 2005 spawning cycle is good. The parent-year escapement for Seymour Canal (Section 11D) was 200,000 pink salmon; within the escapement goal range of 0.2–0.4 million fish. If Seymour Canal runs develop adequately in 2007, openings to access these fish may be allowed along the Big Bend shoreline in District 10 and in lower Seymour Canal. It is anticipated that the portion of District 10 south of Gambier Island Light will open no later than July 15.

The 2002 and 2003 chum salmon parent-year escapements for Southwest Admiralty chum salmon systems (primarily in Hood and Chaik bays) were mixed. The department will monitor summer chum salmon escapements to these systems and open targeted seine fisheries for chum salmon as appropriate.

Subsequent seining for early-run pink salmon returns will be based upon aerial survey and fishery performance assessments of run strength. Aerial surveys to evaluate run strength will begin in late June for the northern inside fishing districts. Catch rates in the Cross Sound troll fishery and incidental catches of pink salmon at the Hidden Falls Hatchery terminal fishery during the first three weeks of the season will also be monitored as indicators of pink salmon run strength. To provide an additional assessment of incoming run strength of early-run pink salmon the department will open a one-mile area along the Point Augusta shoreline in District 12 in conjunction with other weekly openings. Test fishing will be conducted at Point Gardner starting in late June and Kingsmill Point starting in early July to assess the strength and timing of the pink salmon returns entering Frederick Sound. Test fishing will also occur along the Hawk Inlet

Shoreline beginning June 22 to assess the strength of pink salmon returns entering the northern inside waters of Districts 11 and 15.

During the 2006 purse seine task force meeting, the department agreed to initiate a salmon test fishery in District 14 along the shoreline from Point Howard to Homeshore Creek to assess the abundance of pink salmon and to evaluate the presence or absence of non-targeted stocks of fish. This test fishery, however, is not planned for the 2007 season because the Region 1 has not been awarded additional test fish receipt authority and existing sources are fully allocated to existing projects.

In District 12, based on a well-defined evaluation of run strength and timing, the Hawk Inlet shoreline fishery is opened in July to provide access to harvestable surpluses of northbound pink salmon stocks that would otherwise not be harvested. This fishery is managed according to the Northern Southeast Seine Fishery Management Plan (5AAC 33.366) and is described in detail in a subsequent section of this plan.

### **Inside Fishing Areas—Middle and Late Runs**

Middle-run pink salmon returns should begin entering the inside waters of the northern districts during July. Seining in District 12 along the west Admiralty Island shoreline may expand in mid-to-late July depending on the observed run strength of pink salmon stocks in District 10 and 11 and continue as long as Chatham escapements develop satisfactorily. Southern boundaries for the fishery typically are extended into statistical area 112-17, from Point Hepburn to Fishery Point and then to Parker Point, either the last week of July or in early August. Because Kanalku sockeye salmon transit through this area in July and because the Kanalku sockeye stock is an important subsistence salmon resource to the community of Angoon, the department will close an area of approximately 9 nautical miles from Parker Point to Point Samuel for an extended period into early August. Parent-year pink salmon escapements were above average in streams on the northern Chatham Strait shoreline of Chichagof Island and well above average in streams along the west and southwest Admiralty Island shoreline. Openings along these shorelines will depend on developing returns of local stocks as well as Peril Strait and Tenakee stocks. Fishing may begin in this area in late July depending on the observed run strength.

Seining is expected to begin in District 9 during mid-July near Red Bluff Bay in Section 9-A, in late July along the Admiralty Island shore in Section 9-B, and in early August in Section 9-A near Little Port Walter north of Armstrong Point. Parent-year escapements of pink salmon to Red Bluff Bay were well above the recent 10-year average and mid-July openings can be expected. July openings will include only the shoreline north of Red Bluff Bay in order to provide for escapement needs as well as subsistence uses at Falls Lake. Openings to the south of Red Bluff Bay may occur beginning in early August depending upon pink salmon abundance. If pink salmon escapements into Red Bluff Bay are sufficient, openings inside of the bay may occur to harvest pink salmon surplus to escapements. In Section 9-A south of Patterson Point parent-year pink salmon escapements were above the upper management target range. Openings can be expected beginning early to mid-August depending upon inseason observations of pink salmon abundance. Parent-year escapements of pink salmon were good to excellent in all of Section 9-B. The escapement index for all of District 9 was 1.46 million fish, which is well above the upper end of the 0.4 to 0.9 million escapement goal range.

Pink salmon escapements in District 14 were good in 2005. As a result, openings to harvest local stocks at Idaho Inlet and Port Althorp are expected to occur in late July or early August. To try to

attract effort to these remote areas, fishery openings in these locations may be announced out of cycle before or after regionwide openings. The decision when these remote areas will be open will be made based on inseason information. The Whitestone shoreline area in District 14 may open in late July or early August with fishing times and areas dependent upon observed strengths of local pink salmon stocks. The department will also monitor pink salmon escapements in streams adjacent to Porpoise Islands along Homeshore and will consider seine openings in this area if there is a harvestable pink salmon surplus to escapement needs.

Every effort will be made to begin more continuous openings as soon as possible in District 9. That should give industry maximum flexibility for harvesting large returns. If run strengths are uniformly strong, the present plan is to ideally have both Districts 9 and 10 open together even if it is with less area in each district. If that is not possible due to effort distribution or run strength, openings would rotate between the two districts.

Openings in District 12 along the Catherine Island shoreline and in portions of Kelp Bay may occur from middle July to early August, to harvest surplus pink salmon returning to Kelp Bay or to harvest surplus chum salmon returning to the Hidden Falls hatchery if wild chum and pink salmon escapements are being met. Parent-year escapements of pink salmon to Kelp Bay streams were the second highest recorded since statehood. Parent-year chum salmon escapements to Kelp Bay streams were mixed with good escapements to Ralph's Creek in Middle Arm and below average escapements to Clear River in South Arm. Since 2002, chum salmon escapements to Clear River have been well below historic levels. In 2007, expansion of the Hidden Falls THA north of South Point in July may be more restrictive in time and area than traditionally seen in past years to provide additional chum salmon escapement to Clear River. Openings to harvest surplus pink salmon generally occur following chum salmon returns.

### **Hawk Inlet Shore Fishery**

The Admiralty Island shoreline between Funter Bay and Point Marsden in Chatham Strait is known as the Hawk Inlet shoreline. Purse seine fishing is allowed in this area to harvest pink salmon stocks migrating northward to Taku River, Lynn Canal, and Stephens Passage. During July, the department will manage the Hawk Inlet Shore fishery in accordance with the Northern Southeast Seine Fishery Management Plan (5AAC 33.366). This plan stipulates that any portion of the area north of Point Marsden may be opened when a harvestable surplus of pink salmon is observed. Openings must also consider the conservation of all species, and the area must be closed in July after 15,000 wild sockeye salmon have been harvested. In January 2006, the Board of Fisheries clarified that only the harvest of wild sockeye salmon would count toward the 15,000 fish cap.

During August, openings along the Hawk Inlet shore may extend northward to the latitude of Hanus Reef Light if north-migrating pink salmon stocks remain strong. If north-migrating salmon returns are poor and south-migrating stocks are strong, seining will be allowed only south of Point Marsden.

Parent-year pink salmon escapements to Stephens Passage and lower Lynn Canal were above the upper end of their escapement goal ranges. Openings along the Hawk Inlet shore north of Point Marsden will be based on the observed run strength of north-migrating stocks of pink salmon. The assessment methods used by the department to determine if run strengths are adequate and a harvestable surplus of pink salmon is available for harvest will include:

1. Parent-year escapements of pink salmon stocks in the Taku River, Stephens Passage, and Lynn Canal.

2. Test fishing at designated locations along the Admiralty Island shoreline north of Point Marsden.
3. Aerial assessments of pink salmon abundance along the Admiralty Island Shoreline north of Point Marsden.
4. Pink salmon catches in the department's Taku River fish wheels.
5. Pink salmon marine sport fish catch rates in the Juneau area (lower Lynn Canal and upper Stephens Passage).
6. Fishery performance of District 11 and District 15 drift gillnet fisheries.

In 2003, the Alaska Board of Fisheries adopted a department proposal codifying the sockeye salmon reporting requirements for the Hawk Inlet shoreline fishery. The provisions of that proposal encapsulated the agreement reached between net gear groups during the January 1994 meeting in Ketchikan. The regulation is summarized below:

“All sockeye salmon harvested by any seine boat the department identifies as fishing north of Point Marsden during any July fishing period when other nearby areas (i.e., Point Marsden to Point Hepburn, Whitestone Shore, or the Point Augusta Test Fishery) are open concurrently, will be counted against the 15,000 sockeye salmon quota for the Hawk Inlet fishery north of Point Marsden. During the openings, the department will utilize fishery overflights, on-the-grounds sampling, and interviews to estimate the sockeye salmon harvest north of Point Marsden.”

The purpose of this change was to provide the department with more flexibility to open areas adjacent to the Hawk Inlet shore fishery (e.g., south of Point Marsden, Point Augusta, and Whitestone Shore) when pink salmon run strength warrants.

### **Outside Fishing Areas (Sections 13-A and 13-B)**

Management of Sections 13-A and 13-B, along the outer coasts of Baranof and Chichagof Islands, is distinct from the management of the northern inside areas. Salmon returning to these areas enter directly from the ocean and do not pass through major inside migration corridors. In Section 13-A parent-year pink salmon escapements were uniformly strong in all areas including Salisbury Sound, Slocum Arm, Portlock Harbor and Lisianski Inlet. Openings can be expected to begin around the third week in July depending upon observed pink salmon abundance. In Section 13-B, parent-year pink salmon escapements in Sitka Sound, West Crawfish and Whale Bay were excellent. Pink salmon seine fisheries can be expected in all of these areas depending on inseason observations and could begin as early as mid July.

Summer chum salmon returns will be monitored to determine run strengths beginning in early July. If harvestable surpluses can be identified, seiners may expect portions of Sections 13-A and 13-B to be open by mid-July. Openings are possible in Whale Bay, West Crawfish Inlet, Slocum Arm, and Portlock Harbor.

Short purse seine openings to harvest sockeye salmon along the outer coast of Baranof Island may occur in early July to target fish returning to Necker Bay, and in early August to target returns to Redfish Bay. Openings will be dependent on inseason observations of run strength and a cautious approach will be used to ensure that escapement needs and subsistence fishery needs are met. Targeted sockeye salmon openings are also a possibility at Redoubt Bay between July 15 and August 31 provided that the inseason forecast, based on historic run timing and inseason

enumeration of sockeye salmon through a weir operated by the United States Forest Service, indicates that an escapement greater than 40,000 will occur.

A modified fishing regime may be implemented in early to middle August of 2007 provided that regional pink salmon returns to Southeast Alaska develop as expected. The fishing regime will probably change into a 2-on/2-off fishing pattern for a limited amount of time unless it becomes obvious to ADF&G that, due to the size and distribution of the purse seine fleet, the 4-on/1-off can be implemented before any 2-on/2-off fishing periods. Depending on fleet size, fishing patterns, catch rates, and escapements, this pattern may continue or be modified as the season progresses. Fishing patterns in southern Sitka Sound will likely be scheduled as alternating 2-on/3-off and 3-on/2-off to prevent changes in the allocation of enhanced chum salmon returning to the Deep Inlet THA that are also targeted by the other gear groups, yet will maintain the historic 50% seine fishing opportunity. Also, due to the expected concentration of effort targeting enhanced chum salmon in the Sitka Sound area, the 2-on/2-off fishing pattern has been shown to provide for a good distribution and amount of escapement at most run sizes. Continuous fishing opportunities can be provided in the general Sitka area and in northern Sitka Sound by scheduling openings of nearby areas including Salisbury Sound, Whale Bay, and West Crawfish during those days when portions of Sitka Sound are closed. Seine fisheries in much of Sections 13-A and 13-B were opened on a 7-day/week basis during portions of the 2005 season. This was supported by high escapement and low fishing effort. Continuous fishing opportunities may again occur if a similar pattern of escapement and fishing effort develop during the 2007 season. Consecutive 15-hour openings will also be considered as a management option to 39-hour or continuous openings at intermediate run sizes in order to ensure escapement needs will be met.

### **Fall Chum Salmon Fisheries**

Portions of Northern Southeast Alaska support returns of fall-run chum salmon that are harvested by purse seine gear. Fishing opportunities are not expected in Port Camden due to lower than normal escapement during the parent year. Fishing in Security Bay usually occurs the first week in September if the observed run strength is good. Escapements in Security Bay were poor in the 2002 and 2003 parent years. Fishing opportunities in Excursion Inlet may occur in late August or early September but are not anticipated. Parent-year escapements to Excursion River were 1/2 of the 10-year average in 2002 and 2003. In Section 13-B, targeted fall chum salmon openings may occur in Nakwasina Sound and Katlian Bay, however opportunities are most often concurrent with pink salmon fisheries in Sitka Sound. Fall chum salmon fisheries will be managed based on observations of run strengths in the bays beginning in mid August and continuing through September.

### **Hidden Falls Terminal Hatchery Fishery**

The Hidden Falls Hatchery, operated by the Northern Southeast Regional Aquaculture Association (NSRAA), expects a return of approximately 2,470,000 chum salmon in 2007. Of this total return, approximately 1,855,000 will be available for the common property harvest after allowing 495,000 for cost recovery and 120,000 for broodstock requirements. In 2007, cost recovery will be managed by NSRAA to harvest 2,240,000 pounds, and the goal in numbers of fish will be adjusted as needed to achieve the goal in pounds. The initial Hidden Falls opening for the 2007 season is scheduled for June 17. As usual, seiners are advised that openings at Hidden Falls during the 2007 season may be announced with a minimum 24-hour notice if

necessary in order to maximize fish quality. In the event that a large abundance of chum salmon develops early, the Hidden Falls Terminal Harvest Area may open prior to June 17. NSRAA cost recovery fishing will likely occur during the week of June 18. A mid-week opening on Thursday, June 21 is considered unlikely at this time. Decisions to provide for mid-week openings will depend on both run strength and progress toward cost recovery goals. This year, on news releases announcing fishery openings, ADF&G will coordinate with NSRAA to provide updates including any changes in the seasonal cost recovery goal, progress made toward reaching the cost recovery goal, and other pertinent information such as average weights or sex ratios.

The Hidden Falls Hatchery Terminal Harvest Area Management Plan (5AAC 33.374) provides guidelines for allocation of hatchery produced chum and Chinook salmon in the Hidden Falls THA. The management plan sets forth different management approaches through June 30 and beginning July 1. If it becomes necessary to close a purse seine fishery to chum salmon that is scheduled in this plan in June in order to achieve broodstock and cost recovery goals, then troll retention of chum salmon in the THA will be prohibited as long as at least seven days remain until July 1. Troll non-retention of chum salmon would occur in June in the event that there is no purse seine fishery on either June 17 or June 24. Also, provided that some trollers are present, in order to allow increased troll access to Chinook salmon, Kasnyku Bay will be closed to purse seining in June west of a line from North Point to the westernmost tip of Round Island and north of the latitude of the westernmost tip of Round Island. Beginning July 1, areas within the THA may be closed to protect chum or Chinook salmon broodstock, and trollers may only retain chum salmon in number not exceeding the total number of Chinook salmon on board.

The Hidden Falls terminal harvest area will include the waters of Chatham Strait, Kasnyku Bay, and Takatz Bay, within two nautical miles of the Baranof Island shoreline south of a range marker at South Point, and north of a range marker located at 57°06.83' N. latitude (1/2 mile south of Takatz Bay). The boundaries may be extended north to include Kelp Bay and the Catherine Island shoreline if wild chum salmon escapements to Kelp Bay streams are being met. The southern boundary may be expanded south to the District 12 boundary near Cascade Bay if the overall strength of pink salmon returns are sufficient to meet escapements in the area and provided that eastern Baranof Island sockeye salmon escapements and subsistence uses are being met. Any boundary expansions will be determined based on inseason observations of run strength.

### **Deep Inlet Terminal Hatchery Fishery**

The terminal hatchery fishery at Deep Inlet will be managed jointly with NSRAA and according to BOF management plans. The open seine and gillnet fishing times and any modifications of the terminal fishing area will be announced by ADF&G news releases prior to, and during the fishing season.

### **Terminal Area–Deep Inlet [5AAC 33.376]**

NSRAA expects a return of 1,764,000 chum salmon to the Deep Inlet remote release site and the Medvejie Hatchery in 2007. Cost recovery and broodstock goals for the Deep Inlet returns are approximately 355,000 fish and 60,000 fish respectively, allowing for a common property harvest of approximately 1,349,000 chum salmon by purse seine, drift gillnet, and troll gear. In 2007, cost recovery will be managed by NSRAA to harvest 2,840,000 pounds. Actual numbers of chum salmon harvested for cost recovery will be adjusted to achieve this total weight. The majority of the common property harvest can be expected to occur in the Deep Inlet THA by

drift gillnet and purse seine gear, but some harvest is likely outside the THA by troll and purse seine gear as well.

The NSRAA board has requested that the common property rotational fishery begin on April 29 in order to provide for additional common property harvest of hatchery Chinook salmon returning to the Medvejie Hatchery. Rotational gear fisheries are scheduled to begin on Sunday, April 29, and continue through June 30, with four days of gillnet and two days of seine per week. A small area of the Deep Inlet THA west of 135° 21.52' W. longitude will be closed May 1 through May 21 in order to exclude a small area traditionally used by trollers during that period.

During the period July 1–28, THA openings will be reduced to one day of seine and two days of gillnet per week and an area within Deep Inlet will be closed south of a line from 56° 58.50' N. latitude and 135° 16.50' W. longitude, to 56° 58.35' N latitude and 135° 17.10' W. longitude in order to help achieve the season's cost recovery goal. NSRAA plans to begin cost recovery fishing in late June or during the first week of July. The THA rotational schedule will change to two days of seine and four days of gillnet during the period July 29–August 11 and all of Deep Inlet will be opened to common property fishing. This period, between the earlier run Hidden Falls chum salmon stock and the later run Medvejie chum salmon stock, has historically been unproductive for cost recovery harvest. Beginning August 12 the schedule will again return to one day of seine and two days of gillnet with the southern portion of Deep Inlet closed until NSRAA has reached or is close to reaching the cost recovery goal for the season. The change in schedule back to the full rotation is expected to occur sometime during the mid-August period of peak returns. The NSRAA board has directed NSRAA staff to manage cost recovery fishing inseason in order to achieve the cost recovery goal. If necessary, the THA rotational gear fisheries may be fully closed in order to achieve the cost recovery goal.

The following rotational fishing schedule will be in effect for the 2007 season:

April 29–June 30, July 29–August 11, and after cost recovery goals are met until the end of the season:

<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
Seine	Gillnet	Gillnet	Seine/Troll*	Seine/Troll*	Gillnet	Gillnet

\*Seine and Troll gear alternates between Wednesday and Thursday.

From July 1–July 28 and from August 12 until cost recovery goals are met:

<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
Seine	CR/Troll	CR/Troll	Gillnet	Gillnet	CR/Troll	CR/Troll

The schedule indicated above is subject to inseason adjustments to ensure that NSRAA cost recovery remains on schedule and the seasonal cost recovery goal is achieved. A detailed initial schedule for common property harvest in the THA will be published in a news release at the outset of the season. When changes are necessary the revised schedule will be issued in a subsequent news release.

Cost recovery management is planned such that NSRAA may conduct cost recovery in the Deep Inlet Special Harvest area and in the Silver Bay Special Harvest Area. In January of 2006 the BOF implemented changes to Deep Inlet SHA and Silver Bay SHA. The Silver Bay Special

Harvest (SHA) area was expanded to include most of Silver Bay and Eastern Channel east of a line from Makhnati Island to Sentinel Rock to Cape Burunof through July 21 and after the troll coho salmon closure in August or August 20 if there is no August coho salmon closure. From July 22 until the end of the August troll coho salmon closure, or August 20 if there is no August coho salmon closure, the Silver Bay SHA includes the waters of Eastern Channel and Silver Bay east of Galankin Island to Silver Point and the waters of Sitka Sound enclosed by a line from the southernmost tip of Galankin Island, to Simpson Rock Light, to the Makhnati Island Buoy, to Black Rock, to the southernmost tip of Neva Island, to the northernmost tip of Sasedni Island and from the southernmost tip of Volga Island to the northernmost tip of Galankin Island. The Deep Inlet SHA is defined in 5AAC 40.042 (a) (7) and includes all the waters of the Deep Inlet THA except that the western boundary of the SHA has been moved westward to now also include the waters enclosed by a line from the westernmost tip of Cape Burunof to a point west of Cape Burunof at 56° 59.11' N. latitude and 135° 23.59' W. longitude, to a point one-mile west of the westernmost tip of Long Island at 57° 00.17' N. latitude and 135° 22.69' W. longitude to the westernmost tip of Long Island.

The Deep Inlet THA fishery will be managed jointly with NSRAA, and in accordance with the Deep Inlet Terminal Harvest Management Plan (5AAC 33.376). The plan provides for the distribution of the harvest of hatchery-produced salmon between the purse seine and drift gillnet fleets. The ratio of gillnet fishing time to purse seine fishing time will be 2:1. Additionally, the BOF has allowed trolling to occur when net fisheries are closed and when trolling does not interfere with cost recovery.

The terminal harvest area during the 2007 season will be as follows:

**Deep Inlet THA:** Deep Inlet, Aleutkina Bay, and contiguous waters south of a line from a point west of Pirates Cove at 135°22.63' W. longitude, 56°59.35' N. latitude to the westernmost tip of Long Island to the easternmost tip of Long Island to the westernmost tip of Emgeten Island to the westernmost tip of Error Island to the westernmost tip of Berry Island to the southernmost tip of Berry Island to the westernmost tip of the southernmost island in the Kutchuma Island group to the easternmost tip of the southernmost island in the Kutchuma Island group to the westernmost tip of an unnamed island at 135°17.67' W. longitude, 57°00.30' N. latitude to a point on the southern side of the unnamed island at 135°16.78' W. longitude, 57°00.08' N. latitude and then to a point on the Baranof Island Shore at 135°16.53' W. longitude 56°59.93' N. latitude with the following restrictions:

Sandy Cove: will be closed.

Deep Inlet: will be closed south of a line from 56° 58.50 N. latitude, 135° 16.50' W. longitude, to 56° 58.35' N latitude, 135° 17.10' W. longitude from July 1 through July 28 and from August 12 until cost recovery goals are met.

Deep Inlet THA: will be closed west of 135° 21.52' W. longitude from May 1 through May 21.

During the 2007 season, the boundaries of the Deep Inlet THA may be changed by NSRAA and ADF&G to help resolve conflicts between fishers and local private landowners in the area if they occur. Conflicts can be avoided by reducing boat wakes in areas near private docks, by reducing

excessive noise and lights prior to openings, and by anchoring well away from private residences.

In order to promote full utilization of salmon, to prevent waste of salmon, to determine harvest patterns of incidentally harvested coho and sockeye salmon, and to allow full and accurate reporting of returns, the Deep Inlet THA fishery will be managed in 2007 by emergency order under authority of 5AAC 39.265 FULL RETENTION AND UTILIZATION OF SALMON. This requires that all salmon harvested in net fisheries are retained, utilized, and reported on fish tickets whether they are sold or retained for personal use.

In early September, the Deep Inlet THA boundaries may be adjusted by ADF&G to reduce interception of wild coho salmon returning to Salmon Lake or hatchery coho salmon returning to Medvejie Hatchery needed for broodstock. THA boundary adjustments to protect coho salmon will be based on historic run timing and inseason observations of abundance. Since voluntary compliance with reporting of coho salmon in the Deep Inlet Terminal Harvest Area fishery has in the past been poor and the department needs detailed information on coho and sockeye salmon harvest patterns, personnel from ADF&G or Alaska Bureau of Wildlife Enforcement may board some vessels and conduct hold inspections to ensure compliance.

### **Gunnuk Creek Hatchery Returns**

Chum salmon returns to Gunnuk Creek Hatchery at Kake and Southeast Cove on northeast Kuiu Island in Keku Strait are forecast to be the 2nd largest return from this program. These returns occur primarily in July and are taken incidentally in seine fisheries in Chatham Strait and western Frederick Sound during that time period. A total return of 890,000 chum salmon is expected. This would be significantly higher than the returns in 2005 and 2006 and the highest return since 1.2 million chums were harvested in 2003.

**Table 4.**—Expected 2007 returns to Northern Southeast area enhancement projects by hatchery organization and release location.

<b>NSRAA</b>					
<b>Species</b>	<b>Release Location</b>	<b>Common Property Harvest</b>	<b>Cost Recovery</b>	<b>Broodstock</b>	<b>Total Return</b>
Chum	Medvejie/Deep Inlet	1,349,000	355,000	60,000	1,764,000
Chum	Hidden Falls	1,855,000	495,000	120,000	2,470,000
Chinook	Medvejie/Deep Inlet	7,200	4,800	4,000	16,000
Chinook	Hidden Falls	7,220	980	3,000	11,200
Coho	Hidden Falls	116,100	98,100	10,000	224,200
Coho	Deer Lake (Mist Cove)	14,600	8,000	NA	22,600
Coho	Deep Inlet	8,075	1,425	NA	9,500

-Continued-

**Table 4.** (continued)

<b>Armstrong Keta, Inc.</b>						
<b>Species</b>	<b>Release Location</b>	<b>Common Property</b>	<b>Harvest</b>	<b>Cost Recovery</b>	<b>Broodstock</b>	<b>Total Return</b>
Pink	Port Armstrong		1,269,000	1,465,000	150,000	2,884,000
Chum	Port Armstrong		35,000	100,000	40,000	175,000
Coho	Port Armstrong		131,000	128,000	3,000	262,000
Chinook	Port Armstrong		500	500	1,000	2,000
<b>Sheldon Jackson College</b>						
<b>Species</b>	<b>Release Location</b>	<b>Common Property</b>	<b>Harvest</b>	<b>Cost Recovery</b>	<b>Broodstock</b>	<b>Total Return</b>
Pink	Crescent Bay		21,000	24,000	2,000	47,000
Chum	Crescent Bay		5,400	4,400	1,000	10,800
Coho	Crescent Bay		3,100	3,800	70	6,970
Chinook	Crescent Bay		40	0	50	90
<b>Gunnuck Creek Hatchery</b>						
<b>Species</b>	<b>Release Location</b>	<b>Common Property</b>	<b>Harvest</b>	<b>Cost Recovery</b>	<b>Broodstock</b>	<b>Total Return</b>
Chum	SE Cove		unknown	590,000	100,000	690,000

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The following ADF&G Division of Commercial Fisheries management staff may be contacted regarding this plan:

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The following is a list of telephone numbers that may be called during the fishing season to obtain recorded announcements concerning areas open to purse seine fishing:

Ketchikan	(907) 225-6870
Petersburg	(907) 772-3700
Sitka	(907) 747-1009
Juneau	(907) 465-8905