# 2012 Southeast Alaska Drift Gillnet Fishery Management Plan

by

Bill Davidson,

Randall Bachman,

Bo Meredith,

Eric Coonradt,

David Harris,

Tom Kowalske,

and

**Troy Thynes** 

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Alaska Department of Fish and Game



**Division of Commercial Fisheries** 

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Weights and measures (metric)		General		Measures (fisheries)	
centimeter	cm	Alaska Administrative		fork length	FL
deciliter	dL	Code	AAC	mideye-to-fork	MEF
gram	g	all commonly accepted		mideye-to-tail-fork	METF
hectare	ha	abbreviations	e.g., Mr., Mrs.,	standard length	SL
kilogram	kg		AM, PM, etc.	total length	TL
kilometer	km	all commonly accepted			
liter	L	professional titles	e.g., Dr., Ph.D.,	Mathematics, statistics	
meter	m		R.N., etc.	all standard mathematical	
milliliter	mL	at	@	signs, symbols and	
millimeter	mm	compass directions:		abbreviations	
		east	E	alternate hypothesis	$H_A$
Weights and measures (English)		north	N	base of natural logarithm	e
cubic feet per second	ft <sup>3</sup> /s	south	S	catch per unit effort	CPUE
foot	ft	west	W	coefficient of variation	CV
gallon	gal	copyright	©	common test statistics	$(F, t, \chi^2, etc.)$
inch	in	corporate suffixes:		confidence interval	CI
mile	mi	Company	Co.	correlation coefficient	
nautical mile	nmi	Corporation	Corp.	(multiple)	R
ounce	OZ	Incorporated	Inc.	correlation coefficient	
pound	lb	Limited	Ltd.	(simple)	r
quart	qt	District of Columbia	D.C.	covariance	cov
yard	yd	et alii (and others)	et al.	degree (angular )	0
•	·	et cetera (and so forth)	etc.	degrees of freedom	df
Time and temperature		exempli gratia		expected value	E
day	d	(for example)	e.g.	greater than	>
degrees Celsius	°C	Federal Information		greater than or equal to	≥
degrees Fahrenheit	°F	Code	FIC	harvest per unit effort	HPUE
degrees kelvin	K	id est (that is)	i.e.	less than	<
hour	h	latitude or longitude	lat. or long.	less than or equal to	≤
minute	min	monetary symbols		logarithm (natural)	ln
second	S	(U.S.)	\$, ¢	logarithm (base 10)	log
		months (tables and		logarithm (specify base)	log <sub>2</sub> , etc.
Physics and chemistry		figures): first three		minute (angular)	•
all atomic symbols		letters	Jan,,Dec	not significant	NS
alternating current	AC	registered trademark	®	null hypothesis	$H_{O}$
ampere	A	trademark	TM	percent	%
calorie	cal	United States		probability	P
direct current	DC	(adjective)	U.S.	probability of a type I error	
hertz	Hz	United States of		(rejection of the null	
horsepower	hp	America (noun)	USA	hypothesis when true)	α
hydrogen ion activity (negative log of)	pН	U.S.C.	United States Code	probability of a type II error (acceptance of the null	
parts per million	ppm	U.S. state	use two-letter	hypothesis when false)	β
parts per thousand	ppt,		abbreviations	second (angular)	"
para per mousanu	ррі, ‰		(e.g., AK, WA)	standard deviation	SD
volts	<sup>700</sup> V			standard deviation	SE SE
watts	W			variance	SL
watto	**			population	Var
				sample	var
				sample	v ai

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# 2012 SOUTHEAST ALASKA DRIFT GILLNET FISHERY MANAGEMENT PLAN

By

Bill Davidson and Eric Coonradt Alaska Department of Fish and Game, Division of Commercial Fisheries, Sitka

Randall Bachman

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

David Harris

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

Tom Kowalske

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

Bo Meredith

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

Troy Thynes

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

Alaska Department of Fish and Game Division of Commercial Fisheries, Publications Section 802 3<sup>rd</sup> Street, Douglas, AK 99824

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Bill Davidson and Eric Coonradt

Alaska Department of Fish and Game, Division of Commercial Fisheries, 304 Lake St. Rm. 103, Sitka, AK 99835-7563

Randall Bachman

Alaska Department of Fish and Game, Division of Commercial Fisheries, Mile 1, Haines Highway, Haines, AK 99827-0330

David Harris

Alaska Department of Fish and Game, Division of Commercial Fisheries, 802 3<sup>rd</sup> Street, Douglas, AK 99824

Trov Thynes

Alaska Department of Fish and Game, Division of Commercial Fisheries, 16 Sing Lee Alley, Petersburg, AK 99833-0667

Bo Meredith

Alaska Department of Fish and Game, Division of Commercial Fisheries, 2030 Sea Level Drive, Suite 205 Ketchikan, AK 99901

Tom Kowalske

Alaska Department of Fish and Game, Division of Commercial Fisheries, 215 Front Street, Wrangell, AK 99929

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# **ABSTRACT**

This management plan provides an overview of the expected salmon run sizes, regulations, management issues, and harvest strategies for the Southeast Alaska drift gillnet fisheries in 2012. Drift gillnet fisheries are planned at Tree Point and Portland Canal (District 1), Prince of Wales and Stikine (Districts 6 and 8), Taku River/Snettisham (District 11), Lynn Canal (District 15), and in the following terminal hatchery areas: Neets Bay (District 1), Nakat Inlet (District 1), Anita Bay (District 7), Speel Arm (District 11), Deep Inlet (District 13), and Boat Harbor (District 15).

Key words: Southeast Alaska, drift gillnet, management plan, Pacific salmon, *Oncorhynchus*, outlook, forecast, terminal harvest area, hatchery, 2012.

# INTRODUCTION

This management plan provides an overview of the expected salmon run sizes, regulations, management issues, and harvest strategies for the Southeast Alaska drift gillnet fisheries in 2012.

For the recent 10-year period 2001 to 2010, an average of 477 Southeast Alaska drift gillnet limited entry permits were issued annually, of which an average of 81% were actively fished each year (Pontius and Davidson 2011). In 2011, 474 permits were issued, of which 443 (93%) were actively fished. A historic low of 348 permits were fished in 2004. Drift gillnet harvests have averaged approximately 4.0 million salmon annually over the recent 10 years from 2001 to 2010, and 2.8 million salmon since statehood from 1960 to 2010 (Davidson et al. 2012). In the last ten years, the species composition of the drift gillnet harvest has been 52% chum, 26% pink, 13% sockeye, 8% coho, and 1% Chinook salmon. Of the total commercial salmon harvest in Southeast Alaska, the most recent 10-year average drift gillnet fishery harvests have included 40% of the sockeye, 23% of the chum, 13% of the coho, 8% of the Chinook, and 3% of the pink salmon.

Five traditional drift gillnet fishing areas in Southeast Alaska are shown in Figure 1: Tree Point and Portland Canal (District 1); Prince of Wales (District 6); Stikine (District 8); Taku-Snettisham (District 11); and Lynn Canal (District 15). In addition, drift gillnet fisheries occur in several Terminal Harvest Areas (THAs) adjacent to hatchery facilities and at remote release sites throughout the region. Each of these gillnet fisheries are discussed separately in this management plan. A summary of the 2011 season drift gillnet harvest for each species by fishery area and type is presented in Table 1. The most recent 10-year historical harvests and average harvests are presented in Table 2 for Tree Point, Table 3 for Prince of Wales, Table 4 for Stikine River, Table 5 for Taku-Snettisham, and Table 6 for Lynn Canal.

The drift gillnet fishery primarily targets Chinook salmon during the spring season; sockeye, pink, and chum salmon during the summer season; and coho and chum salmon during the fall season. The first commercial fisheries directed at harvesting Stikine and Taku River Chinook salmon since the 1970s took place beginning in 2005. Returns were adequate to allow directed Chinook fisheries in Taku Inlet in 2005, 2006, and 2009. The 2012 preseason forecast for the Taku Chinook return allows for directed fisheries beginning in May. Due to recent forecasts exceeding actual returns, fishing time in District 11 will initially be conservative until inseason information is available. District 8 had four consecutive directed Stikine Chinook fisheries from 2005 through 2008. The 2009 through 2011 Stikine River Chinook river run sizes were not robust enough to allow for directed commercial fisheries and saw significant decreases in preseason forecast to post season run size estimates. The 2012 preseason forecast will allow for limited directed Chinook fisheries in District 8 beginning in May.

## SALMON RETURN EXPECTATIONS

In Southeast Alaska, the Alaska Department of Fish and Game (ADF&G) issues a region wide preseason harvest forecast for pink salmon. ADF&G also derives preseason forecasts for several specific stocks including Taku and Stikine River Chinook salmon, Stikine River sockeye salmon, and other Chinook salmon stocks. Private non-profit hatchery operators also derive preseason forecasts for salmon returning to many enhancement projects throughout Southeast Alaska. The projected returns of sockeye, chum, and coho salmon presented in this management plan are qualitative and should not be considered official department forecasts. These return projections are calculated primarily from parent-year catch and escapement data and are expressed in terms of probable magnitude of return relative to historic levels.

Significant for 2012 are returns of Chinook salmon to the Stikine and Taku Rivers. The United States and Canada successfully negotiated abundance based fishery regimes for those two stocks in February 2005. A major component of the negotiations was specific harvest shares for both countries that are referred to as Allowable Catch (AC). A preliminary AC is calculated using preseason forecasts of terminal run for each stock. The 2012 Stikine River preseason terminal run forecast of 40,800 large adults allows for a U.S. AC of 5,890 fish. For Taku River, the 2012 preseason terminal run forecast is 48,036 large adults allowing for a U.S. AC of 6,703 fish. The ACs for each river will be adjusted as inseason information on run strength becomes available. The harvests of Stikine and Taku River Chinook salmon in Districts 8 and 11 above base harvest levels will not count against the 2.9% drift gillnet harvest ceiling allowed under the Chinook salmon allocation plan adopted by the Alaska Board of Fisheries (BOF). Alaska hatchery produced Chinook salmon harvested in drift gillnet fisheries do not count against the harvest ceiling mandated by the BOF allocation plan.

For 2012, the preliminary terminal run forecast for Stikine River sockeye salmon is 134,000 fish, which constitutes a below average run. For comparison, the recent 10-year average (2002–2011) total Stikine sockeye run size is approximately 204,000 fish. Returns to the Taku River, are expected to be slightly below the 10-year average terminal run size of approximately 218,000 sockeye salmon based on Canadian stock recruit and sibling forecasts. Chilkoot Lake sockeye returns are expected to be above average, and returns to Chilkat Lake are expected to be below average. Douglas Island Pink and Chum, Inc. (DIPAC) has forecast 230,000 enhanced sockeye returning to Port Snettisham.

The projected regionwide forecast of hatchery chum salmon returns for 2012 is expected to be 9.81 million. This includes 3.95 million to four DIPAC locations, 1.57 million to two Northern Southeast Regional Aquaculture Association (NSRAA) locations, 3.44 million to four Southern Southeast Regional Aquaculture Association (SSRAA) locations, 0.10 million to two Kake locations, and 0.27 million to one Armstrong Keta Inc. location. A portion of these returns above broodstock needs and cost recovery harvests may be intercepted in traditional drift gillnet fisheries in Districts 1, 6, 8, 11, and 15 as well as in terminal area drift gillnet fisheries in Boat Harbor, Deep Inlet, Anita Bay, Neets Bay, and Nakat Inlet. Chum salmon harvests in combined regional drift gillnet fisheries has averaged 2.2 million fish per year over the recent 10-year period from 2002 to 2011. In the drift gillnet fisheries, chum salmon account for just over half of all the salmon harvested.

Overall, returns of coho salmon are expected to be consistent with the recent year averages. Alaska hatchery coho salmon contributions to drift gillnet fisheries in 2011 were estimated by

hatchery operators at 87,500 fish, around 37% of total harvests. The majority of this harvest was in District 6 with significant harvests in Districts 1, 15, and 11.

The Southeast Alaska pink salmon harvest forecast for 2012 is 17 million, with a range of 10 to 29 million fish. The major portion of the pink salmon harvest for the region is generally taken by purse seine gear. Drift gillnet harvests of pink salmon have averaged 2% to 3% of regional harvests.

# MANAGEMENT APPROACH

A flexible management approach is required because of the uncertainty of salmon run size to the drift gillnet fishing areas. Thus, this management plan presents only a general outlook as to how the season is expected to develop. Some specific management approaches may be altered depending on inseason assessments of salmon run strength. Gillnet fishermen are encouraged to contact ADF&G management staff listed at the end of this plan for more detailed information.

The primary objectives for management of the 2012 drift gillnet fishery are as follows:

- 1. Obtain overall salmon spawning escapements with the best possible distribution to all systems;
- 2. Provide for orderly fisheries while harvesting those salmon in excess of escapement objectives;
- 3. Promote the harvest and processing of good quality salmon within the constraints dictated by run size;
- 4. Manage for a total Southeast drift gillnet Chinook salmon harvest ceiling of 2.9% of the all-gear quota (7,737 Chinook salmon), exclusive of Alaskan hatchery-produced fish;
- 5. Minimize, to the extent possible, the interception of salmon destined for locations where weak returns are expected;
- 6. Manage Districts 1, 6, 8, and 11 drift gillnet fisheries consistent with the provisions of the U.S./Canada Pacific Salmon Treaty (PST);
- 7. Manage hatchery THA's in accordance with provisions in existing THA management plans adopted by the BOF;
- 8. Manage Districts 8 and 11 directed Chinook salmon fisheries for all-gear harvests as provided under the PST.

Achievement of these management objectives will be accomplished by inseason adjustments of time and area to control harvests in specific areas in accordance with salmon run strength and timing. Comparisons of current-year fishing performance to historical fishing success (i.e., catch per unit effort [CPUE] analysis) are a major component of inseason run strength assessment. This approach assumes catch rates are an accurate reflection of run strength by time period and can be relied upon as an indication of salmon escapements throughout the fishing area.

Past experience has demonstrated that management of salmon fisheries based only on fishery performance, or CPUE data, can be misleading, especially for mixed-stock fisheries. Therefore, other available run-strength indicators will also be used including spawning escapements, stock composition estimates, test fishing, observed salmon concentrations in closed water areas, catches from other fisheries, and salmon run timing models.

The increasing availability of hatchery-produced salmon has become a major factor in the management of the Southeast Alaska drift gillnet fisheries, including coho and summer chum salmon throughout the region and sockeye salmon in District 11. Where inseason management is

based on fishery performance, it may be difficult to gauge natural stock run strength if significant numbers of hatchery fish are present in the catch. Where possible, the hatchery component of the catch will be separated when evaluating fishery performance and management decisions outside of terminal areas will be based on wild stocks.

#### WEEKLY FISHING ANNOUNCEMENTS

Inseason management of the District 1 drift gillnet fishery is conducted by the Ketchikan area management staff; Districts 6 and 8 by the Petersburg and Wrangell area staff; District 11 by the Juneau area staff; and District 15 by the Haines area staff. Because permit holders can move freely among all drift gillnet fisheries, the weekly fishing announcements will be issued to include all areas in the region. These will normally be released simultaneously in all area offices by mid-afternoon each Thursday during the fishing season.

## WEEKLY FISHING PERIODS

Weekly fishing periods in most traditional areas can generally be expected to begin on Sundays at 12:01 p.m. However, directed Chinook salmon drift gillnet fisheries in Districts 8 open on Mondays at 8:00 a.m., and District 11 fisheries open on Mondays at 12:01 p.m., except following the Memorial Day Holiday, when these fisheries open on Tuesday. Also, the BOF passed a proposal at the February 2009 meeting in Sitka to change the start day in District 8 to Monday for the first two weeks of the sockeye management period. District 6 and 8 are managed together due to their close proximity. As a result, the District 6 weekly start day will be Monday for the first two weeks of the sockeye season. Fishing periods in hatchery THAs, including the Northern and Southern Southeast Regional Aquaculture Association's (NSRAA and SSRAA) terminal fisheries in Deep Inlet, Anita Bay, and Neets Bay will be in accordance with rotational harvest management plans for drift gillnet, seine, and troll fisheries adopted by the BOF.

# **FULL RETENTION**

ADF&G will require full retention (5 AAC 39.265) of all salmon harvested in the Deep Inlet THA net fisheries from the onset of the 2012 season. This regulation may be implemented by emergency order in other areas of Southeast Alaska if necessary after consultation with the Alaska Wildlife Troopers (AWT). Further details regarding the implementation of this regulation will be announced at later dates.

# U.S./CANADA PACIFIC SALMON TREATY

The Pacific Salmon Treaty (PST) will influence management of Districts 1, 6, 8, and 11 drift gillnet fisheries [5AAC 33.361]. The management provisions specified by the PST will be considered separately under the specific management plan for each respective fishery. Fishermen are encouraged to contact local ADF&G staff for more detailed information concerning Alaska's PST obligations under the 2009–2018 Transboundary River (TBR) Annex agreement.

# CHINOOK SALMON

The need for management measures to comply with the drift gillnet harvest quota for Chinook salmon will depend on inseason evaluation of Chinook salmon catch rates relative to the 2.9 % drift gillnet allocation of the Treaty fish harvest ceiling [5AAC 29.060]. For 2012 the all-gear Treaty Chinook allocation, based on a preseason Abundance Index of 1.52, is 266,800 Chinook salmon. Therefore, the drift gillnet Treaty Chinook salmon allocation is 7,737 fish. If the need arises, nighttime fishing closures may be implemented in certain areas to reduce the incidental

catch of immature, "feeder" Chinook salmon. Management measures to limit the drift gillnet harvest of PST Chinook salmon have not been necessary in recent years.

The District 15 drift gillnet fishery will be managed in accordance with provisions in the Lynn Canal and Chilkat River Chinook Salmon Fishery Management Plan [5AAC 33.384].

Drift gillnet fisheries will target Chinook salmon in Districts 8 and 11 based on preseason and inseason estimates of abundance. Only historic base level catches will be counted towards the PST fish ceiling [5AAC 29.060 (b)(2) and (e)].

# TREE POINT AND PORTLAND CANAL FISHERY

# Introduction

The Tree Point and Portland Canal drift gillnet fishing area consists of regulatory Sections 1-A and 1-B. This fishery targets summer chum and sockeye salmon early in the season, followed by pink salmon, and finally fall chum and coho salmon at the end of the season.

## 2012 OUTLOOK

#### Chum Salmon

Runs of summer chum salmon in southern Southeast Alaska were strong in 2011: the summer chum salmon escapement index was 157,000 fish, which is well above the new lower bound sustainable escapement goal (SEG) of 54,000. However, escapements of summer chum salmon in the southern Southeast Alaska subregion have been below the SEG for three of the last four years. The estimated escapement of 8,917 summer chum salmon at Fish Creek, near Hyder, was 34% of the recent 10-year average of 26,515. ADF&G will pay close attention to Portland Canal chum salmon, as well as the other summer chum index streams in the Ketchikan area in 2012 and will take necessary management action early in the season to ensure adequate escapements of these stocks. New for 2012, ADF&G will conduct helicopter surveys in key chum salmon index streams in the Ketchikan area. These surveys will begin in mid to late July and will be used to more accurately assess the strength of returning chum salmon at a time when large numbers of pink salmon make it difficult to enumerate other species.

# U. S./Canada Tree Point Fishery Agreement

In the spring of 2009, the United States and Canada re-negotiated a 10-year annex, 2009–2018, for the Tree Point fishery. There was no change to the District 1 gillnet portion of the PST and the agreement still calls for the following:

Manage the Alaskan District 1 drift gillnet fishery to:

- 1. Achieve an annual catch share of Nass River sockeye salmon of 13.8% of the Annual Allowable Harvest (AAH) of the Nass River sockeye salmon stocks;
- 2. Carry forward from year to year annual deviations from the prescribed catch share arrangement.

# Nass River Sockeye Salmon Annual Allowable Harvest

The AAH each year will be calculated as the total run of adult Nass River sockeye salmon in that year less the escapement target of 200,000 fish. In the event that the actual Nass River spawning escapement for the season is below the target level, the actual spawning escapement will be used in the AAH calculations.

The total run calculation includes the catches of Nass River sockeye salmon in the principal boundary area fisheries and the spawning escapement to the Nass River watershed. This includes the catch of Nass River sockeye salmon in Alaskan Districts 1, 2, 3, 4, and 6 net fisheries, Canadian Areas 1, 3, 4, and 5 net fisheries and Canadian Nass 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 percentage, it is recognized that overages and underages will occur and an accounting mechanism is required. The payback mechanism for the fishery will be based on the number of fish a party is over or under its AAH.

The management intent for the fishery shall be to return any overages to a neutral or negative balance as soon as possible. After 5 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, nor to harvest the accrued underage.

During the Pacific Salmon Commission meeting in January 2010, the bi-lateral Northern Panel and the NBTC finalized and agreed upon the run reconstruction of the Nass River for 2009. The performance of the Tree Point drift gillnet fishery under the 1999 agreement is shown in Table 7.

Preliminary reports indicate that the total sockeye salmon return to the Nass River in 2011 was 571,000 fish. That allowed for a harvest of approximately 51,198 Nass River sockeye salmon at Tree Point in 2011. Total sockeye harvest at Tree Point for 2011 was 88,618 sockeye salmon of these approximately 62,033 were Nass River sockeye.

The Canadian Department of Fisheries and Oceans (DFO) has a preseason expectation for 2012 returns of approximately 446,000 Nass River sockeye salmon. If the forecast is accurate, then the AAH for Tree Point will be approximately 33,948 Nass River sockeye salmon.

#### **Chum and Coho Enhancement**

Hatchery returns of summer chum, fall chum, and coho salmon to SSRAAs enhancement projects are expected to again contribute significantly to the Tree Point gillnet fishery in 2012. Information concerning SSRAA forecast returns is included under the THA Fisheries section of this plan.

#### Pink Salmon

Pink salmon returns are expected to be below average to southern Southeast Alaska in 2012. If the actual returns come back as forecasted, the Tree Point drift gillnet fishery may receive two, four, and potentially five day fishing weeks during periods of the District 1 Pink Salmon Management Plan (PSMP; 5 AAC 33.360).

The PSMP establishes drift gillnet fishing time in Section 1-B in relation to District 1 purse seine fishing time when both gear types are concurrently harvesting the same pink salmon stocks. By regulation, the plan starts on the third Sunday in July (July 15, 2012) with the following fishing time schedule:

1. When the purse seine fishery is open for any portion of one day during a fishing week, the drift gillnet fishery must be open for 48 hours during the same fishing week;

- 2. When the purse seine fishery is open for any portion of two days during a fishing week, the drift gillnet fishery must be open for 96 hours during the same fishing week;
- 3. When the purse seine fishery is open for any portion of three or more days during a fishing week, the drift gillnet fishery must be open for 120 hours during the same week.

#### MANAGEMENT GOALS

Management goals specific for the 2012 Tree Point drift gillnet fishery are as follows:

- 1. Manage the fishery in accordance within the PSMP (5 AAC 33.360);
- 2. Manage the fishery consistent with the current provisions of the PST (5 AAC 33.361).

## MANAGEMENT PLAN

The Tree Point gillnet fishery will open by regulation in Section 1-B for four days beginning at 12:01 p.m., Sunday, June 17, 2012. The length of subsequent fishing periods up to the start of the PSMP on July 15 will be based on the strength of wild stock sockeye and chum salmon returns to Alaskan and Canadian waters. The effort levels at Tree Point will also influence the amount of time the fishery is given up to the start of the District 1 PSMP.

As in recent years, the catch of hatchery-produced, summer chum salmon returning to the Nakat Inlet release site will not be included in the evaluation of natural stock fishery performance. The contribution of Nakat Inlet chum salmon will be estimated by inseason analysis of otolith marked fish. Hatchery chum salmon have contributed as much as 90% of the weekly chum salmon harvest at Tree Point and as much as 70% of the total chum salmon harvest in recent years.

The PST requires that the harvest of natural stocks of chum salmon returning to Portland Canal streams be minimized to ensure adequate escapement of these stocks. As a result, no fishing should be expected in Section 1-A for Portland Canal chum salmon unless it is determined that a harvestable surplus exists. Any management decision to fish Portland Canal must assume there is sufficient additional surplus fish to support a Canadian as well as an Alaskan fishery.

The Section 1-B drift gillnet fishery will be managed according to the District 1 PSMP starting July 15, 2012. The overall pink salmon return to southern Southeast Alaska is expected to be below average in 2012. If the returns come in as predicted then beginning in mid-July through the end of August, Tree Point drift gillnetters can anticipate fishing periods of two, four and potentially five days.

Fall management at Tree Point starts after the end of the pink salmon season. During the fall season the Tree Point fishery targets primarily fall chum and coho salmon. Little is known about the stock composition of the chum and coho salmon harvest at this time of the year. However, if the estimated exploitation rate of the Hugh Smith Lake coho salmon stock, which has reached 80% in some years, holds true for adjacent areas then wild coho salmon stocks in the surrounding Tree Point area may benefit from a closing date at Tree Point of approximately September 20. Due to the uncertainties of the escapement levels of the stocks being harvested, the documented high exploitation rate of Hugh Smith Lake coho salmon in some years, and the high preponderance of hatchery fish in the harvest, ADF&G will continue to take a conservative approach to the fall season at Tree Point. However, fishing periods will be allowed after September 20 if fishery performance data indicates above average returns of wild chum and coho salmon. During recent years, approximately 50% of the fall coho salmon and as much as 90% of the fall chum salmon have been hatchery fish. Nakat Inlet fish not harvested in the common

property fisheries can be harvested in the Nakat Inlet THA, which remains open by regulation to commercial fishing through November 10, 2012.

# **Hugh Smith Lake Sockeye Salmon**

The BOF, during the 2006 meeting in Ketchikan, removed the formal designation of the Hugh Smith Lake sockeye salmon as a *stock of concern*. With this change the Hugh Smith Lake Sockeye Salmon Action Management Plan is no longer in effect. However, ADF&G will continue to closely monitor the system and, if escapement levels are below that needed to reach the lower end of the escapement goal of 8,000 fish, the department may take the following actions:

- 1. In Statistical Weeks 29 and 30 the department may close that portion of the District 1 purse seine fishery east of a line from Quadra Point to Slate Island Light to Black Rock Light to a point on the mainland shore at 55°01.40' N. latitude, 131°00.20' W. longitude.
- 2. In Statistical Weeks 31, 32, and 33 the department may close that portion of the District 1 purse seine fishery east of a line from Foggy Point Light to Black Rock Light to the southernmost tip of Black Island and close the northern portion of the Section 1-B drift gillnet fishery to one nautical mile south of the latitude of Foggy Point Light.

# PRINCE OF WALES AND STIKINE FISHERIES

#### Introduction

The Prince of Wales (District 6) drift gillnet fishery occurs in the waters of northern Clarence Strait and Sumner Strait, in regulatory Sections 6-A, 6-B, 6-C, and portions of Section 6-D. The Stikine fishery encompasses the waters of District 8 surrounding the terminus of the Stikine River. Due to their close proximity, management of these fisheries is interrelated, resulting in some major stocks being subject to harvest in both fisheries. Two distinct management areas exist within each district: the Frederick Sound (Section 8-A) and Wrangell (Section 8-B) portions of District 8, and the Sumner Strait (Section 6-A) and Clarence Strait (Sections 6-B, 6-C, and 6-D) portions of District 6. The harvest of terminal hatchery returns to the Crystal Lake and Anita Bay hatchery facilities will be discussed in the THA Fisheries portion of this management plan.

## **2012 OUTLOOK**

#### Chinook Salmon

The preseason forecast for Chinook salmon returning to the Stikine River is approximately 40,800 fish. The resulting U.S. AC is 5,890 large Stikine Chinook salmon. This forecast is above the midpoint of the escapement goal range of 21,000 large Chinook upon which the preseason harvest allocations are based. A directed Stikine River Chinook salmon commercial fishery will occur in District 8 in 2012 and is the first directed commercial fishery for Chinook salmon since 2008. Additionally, enhanced Chinook salmon returning to Anita Bay Terminal Harvest area may be harvested in this fishery and the expected return is 10,000 fish.

# **Sockeye Salmon**

The 2012 Stikine River sockeye salmon return is expected to below the previous 10 year average. The preliminary forecast for total return to the Stikine River is 134,000 sockeye salmon. The 2012 forecast includes approximately 51,700 Tahltan (39%), 32,600 enhanced Tuya (24%), and 49,700 wild mainstem (37%) sockeye salmon. Due to the near identical return timing of the Tahltan Lake and Tuya Lake stocks, any open fishing periods in District 8, and to a lesser extent in District 6, will be determined by the inseason abundance estimate of the Tahltan Lake return. Typically, the Tahltan Lake and Tuya Lake sockeye salmon run timing peaks in statistical week 27 (July 1–7) through the District 6 and 8 fisheries. During an average Tahltan Lake run significant numbers of sockeye could be present as early as statistical week 24 (June 10–16) and as late as statistical week 31 (July 29–Aug 4).

The 2012 returns of local area sockeye salmon stocks are expected to be average to below average based on parent year escapements. Parent-year escapements to most local sockeye systems were near average with the exception of the Salmon Bay Lake return which was well below average. The sockeye salmon return to McDonald Lake may be below average based on low parent year escapements and rearing fry estimates. However, recent escapements have been stronger than anticipated and the number of 2-ocean fish in the 2011 escapement was the highest since 1990, indicating that survival rates have likely increased for McDonald Lake sockeye salmon.

#### Pink Salmon

Pink Salmon typically begin entering District 6 in significant numbers by the third or fourth week of July. The 2012 S.E. Alaska pink salmon return is forecasted to be weak with an expected harvest of 17 million fish, well below the recent ten-year average. Parent year escapements in both District 6 and 8 were within the target range.

#### Chum Salmon

No directed chum salmon fishing occurs in either District 6 or 8. Chum salmon are caught incidentally in fisheries targeting sockeye, pink, and coho salmon. Returns of chum salmon to Anita Bay, as well as Ketchikan area hatcheries, may result in increased harvests in Districts 6 and 8. Anita Bay is expecting a total run of 441,000 summer chum salmon in 2012. The 2012 forecast is higher than the 2011 return of 316,000 chum salmon. Returns to Anita Bay have typically peak during statistical weeks 30 through 32 (July 22–Aug 11). Summer chum salmon production from Ketchikan area hatcheries are expected to again be strong. Chum salmon returning to the Ketchikan area hatchery facilities migrate through District 6 and are expected to contribute to the District 6 harvest.

#### Coho Salmon

The overall coho salmon returns for 2012 are expected to be average. The 2012 forecasted returns to Neck Lake and Burnett Inlet are 108,000 and 21,000 coho salmon. The 2011 coho salmon return to Anita Bay was approximately 1,700 fish with a forecast for 2012 of 17,000 fish. Approximately 114,000 fall coho salmon returned to enhancement projects in the Ketchikan area in 2011. The 2012 total forecasted Ketchikan area enhanced coho salmon return is 302,600 fish. Wild coho salmon returns for 2012 are expected to be similar to the long-term average. Extended fishing periods in Districts 6 or 8 could occur beginning in Statistical Week 35 (August 26–Sep 1); however, fishing periods will be determined weekly based on wild coho salmon abundance.

#### MANAGEMENT GOALS

Management goals for the District 6 and District 8 drift gillnet fisheries for the 2012 season are as follows:

- 1. Achieve the Stikine River Chinook salmon escapement goal while harvesting the Alaskan share of the Chinook salmon in excess of the goal;
- 2. Achieve the Tahltan Lake sockeye salmon escapement goal while maximizing the harvest of surplus Tahltan Lake sockeye and maximizing the harvest of Tuya Lake sockeye salmon;
- 3. Achieve pink salmon spawning escapement objectives in District 6 and District 7;
- 4. Achieve good spawning escapements of sockeye salmon in local Alaskan systems;
- 5. Manage the District 6 and District 8 drift gillnet fisheries consistent with the provisions of the PST (5 AAC 33.361).

# MANAGEMENT PLAN

#### **Chinook Salmon**

The first opening of the Chinook salmon fishery will start in District 8 at 8:00 a.m. on Monday, May 7, for 24 hours. Openings will start at 8:00 a.m. on Mondays, except during the week of Memorial Day, in which case the opening will start on Tuesday. The length of subsequent openings will depend upon fishing effort, the number of Chinook salmon harvested, and results from stock assessment projects. Inseason projections are predominantly derived from Chinook salmon caught and tagged near Shakes Slough on the Stikine River and recovered in Canadian fisheries.

The minimum mesh size is seven inches for the District 8 directed Stikine Chinook gillnet fishery to minimize the incidental harvest of other species. The standard 300-fathom length and 60 meshes deep net restrictions will apply to this fishery.

The "old Stikine closure line" will likely be utilized for the duration of the directed Chinook salmon fishery. The line restricts fishing on or near the Stikine River flats by closing waters inside a line from Babbler Point to Hour Point along the shore of Wrangell Island to Point Highfield to the southern end of Liesnoi Island to the southern end of Greys Island to the small island near the eastern entrance of Blind Slough to the nearest point of Mitkof Island to the prominent point of Mitkof Island nearest Coney Island to the northern end of Coney Island to a point 500 yards north of Jap Creek on the mainland shore.

The District 8 king salmon management plan designates areas closed to drift gillnetting during the directed Chinook salmon fishery. There are four areas that will be closed for the duration of the directed Chinook fishery: Babbler Point, Wrangell Harbor, Bear Creek, and Point Frederick to Beacon Point. In addition, if the gillnet fishery is open for two or more days, an additional two areas will be closed: Woodpecker Cove and The Nose on Woronkofski Island. These closures are designed to provide sport fishermen with exclusive areas to fish without interference from commercial fishing gear and/or to provide increased protection for steelhead returning to Petersburg Creek and Bear Creek on Mitkof Island. The exact closed waters will be identified in the drift gillnet news release prior to each opening. The closure from Point Frederick to Beacon Point will continue during the sockeye fishery to protect Petersburg Creek sockeye stocks.

In District 8, for the week before Memorial Day, the drift gillnet fishery will be limited to a maximum of two days to prevent conflicts with the Chinook salmon derbies in Petersburg and Wrangell. There will be no openings on weekends or holidays to decrease any potential conflict with other user groups.

Drift gillnet fishermen are asked to notify management biologists, who will be monitoring the fishery, of any incidence of steelhead. For the 2012 season, any steelhead retained during the directed Chinook salmon fishery must be recorded on fish tickets.

Chinook salmon less than 28 inches long that are harvested in the commercial drift gillnet fisheries may be retained and sold. Chinook salmon less than 28 inches long, and those of Alaska hatchery origin will not be counted against the Alaskan share of the allowable harvest. ADF&G samplers will sample harvest to identify hatchery reared Chinook, size composition, and age composition of the harvest.

Canada will prosecute a directed commercial Chinook salmon fishery on the Stikine in 2012. The Canadian AC is based on the preseason forecast of 41,800 Chinook salmon and using the mid-point of the escapement goal range of 21,000 fish is 6,810 Chinook salmon. The harvest sharing agreement in the PST is based on a sliding scale. During large returns of Chinook salmon to the Stikine River, the U.S. has a larger share of the TAC. During smaller returns, Canada has larger share of the TAC. Since 2005, the U.S. has harvested 85,200 and Canada has harvested 62,900 Stikine Chinook salmon. The PST allows for 1,400 Stikine Chinook salmon to be harvested in an assessment fishery. The assessment fishery is necessary for the Chinook salmon stock assessment. The stock assessment provides inseason and post season estimates of the Chinook salmon return. When Canada is prosecuting a directed Chinook salmon fishery, the assessment fishery is usually not necessary. If the inseason forecast were to decrease resulting in a small Canadian AC or no AC at all, the assessment fishery would need to be prosecuted in order to obtain the necessary information to accurately assess the Stikine River Chinook salmon return.

# **Sockeye Salmon**

The sockeye season could open as early as 12:00 noon on Monday, June 11, (SW 24) but will likely not open until Monday, June 18 (SW 25). The opening on June 18 will be for an initial 48-hour fishing period in District 6. If the inseason Stikine River Chinook salmon run size estimate is similar to, or greater than the preseason forecast, then District 8 will also open on June 18. Area restrictions may be implemented during the initial openings of District 8. Monday start dates in Districts 6 and 8 will occur through June 18. Starting June 24, District 6 and 8 will begin on Sundays for the remainder of the season. The first directed sockeye fishery in each district is dependent on the preseason forecast for Stikine River sockeye salmon, specifically the Tahltan component of the return. Subsequent openings will be determined inseason based on catches and stock proportion data. If inseason catch and stock data indicate that the Tahltan sockeye salmon return is stronger than forecasted, more liberal fishing periods and/or mid-week openings may be allowed in District 8. Extended fishing time in District 6 will be based primarily on the abundance of sockeye salmon from local island stocks.

The sockeye salmon fishery in both districts will be managed in accordance with the Transboundary Rivers (TBR) Annex of the Pacific Salmon Treaty. The Annex allows the District 6 fishery to be managed primarily for harvesting local Alaskan sockeye salmon stocks. Management of the District 8 fishery is based on the need to harvest sockeye salmon of Stikine

River origin, as allowed by the sharing provisions of the TBR Annex, and the conservation of the resource.

Management actions during the sockeye salmon fishing season will be based on analysis of CPUE and stock specific data to determine the availability of Stikine River fish. These stock abundance indicators, along with fishery performance and stock composition data obtained from U.S. and Canadian fisheries, will be incorporated into the Stikine Sockeye Management Model (SSMM). As the season progresses, this model will be the primary method used to estimate the availability of sockeye salmon for harvest by the Alaskan drift gillnet fishery in District 8 and the Canadian inriver fisheries. Any conservation measures required for Stikine River sockeye salmon are implemented first in District 8 followed by Sumner Strait in District 6. Reductions in fishing time, area, or district-wide closures will be used when conservation measures are needed. All openings will be based upon the most recent SSMM update and the current weekly sockeye salmon harvest.

The numbers of Stikine River sockeye generally begin to decrease in mid-July and other stocks including McDonald Lake sockeye salmon begin to pass through the fishery. McDonald Lake sockeye salmon escapements were below escapement goal five of seven years from 2002 through 2008. Given this history, the department recommended McDonald Lake sockeye salmon as a stock of concern as defined by the Sustainable Salmon Fishery Policy. An Action Plan for this stock was approved by the BOF at the 2009 meeting in Sitka. This plan limited fishing time to two days when McDonald Lake sockeye salmon are transiting through District 6 in stat weeks 29 through 31. The McDonald Lake sockeye salmon stock was removed as a stock of concern by the BOF at the 2012 meeting in Ketchikan because escapement was met the previous two seasons and escapements are showing an upward trend. However, a conservative management approach may need to continue to be taken to ensure the escapement goal for McDonald Lake sockeye salmon continues to be met.

Announcements of fishery extensions or mid-week openings will be made on the fishing grounds by 10:00 a.m. on the final day of the scheduled fishery opening. Open area and fishing time during any extensions may not necessarily be the same as the general weekly opening.

#### **Pink Salmon**

Pink salmon normally begin entering District 6 in significant numbers by the third or fourth week of July. The 2012 S.E. Alaska pink salmon run is forecasted to be weak with an expected harvest of 17 million fish, well below the recent ten-year average. The early portion of the pink salmon fishery will be managed primarily on CPUE and parent year escapement. By mid-August, pink salmon destined for local systems will begin to enter the fishery in greater numbers and at that time management will be based on observed escapements to local area streams. If escapements are not evenly dispersed throughout the district, area and/or time restrictions may be necessary.

#### **Coho Salmon**

The coho salmon season will begin during late August or early September. Management of the District 6 fishery will be based on wild stock CPUE. Crystal Lake Hatchery, Burnett Inlet Hatchery, facilities in the Ketchikan area, the Anita Bay remote release site, and the Neck Lake remote release site at Whale Pass all contribute coho salmon to the Districts 6 and 8 fisheries.

Inseason estimates from coded-wire tag recovery data will be used to identify the hatchery component of the harvest.

#### Screen Island Shore Drift Gillnet

Regulation 5 AAC 33.310(c)(2)(B) allows drift gillnetting along the Screen Island shore of Section 6-D during the early and late portions of the season. Specifically, this area encompasses those waters of Section 6-D west of a line from Mariposa Rock Buoy to the northernmost tip of Point Harrington to a point on the shore of Etolin Island at 56°09.60' N. latitude, 132°42.70' W. longitude to the southernmost tip of Point Stanhope. Actions by the BOF, based on an agreement between drift gillnet and purse seine representatives at the board meeting in February of 2000 increased the fishing time for drift gillnetting in this area by one week on each end of the closure. The periods when fishing may be allowed are: from the second Monday in June (June 11) through the first Saturday in August (August 4), and from the first Sunday in September (September 2) until the season is closed. During this time, drift gillnetting is allowed during the same time periods that the adjoining waters of Section 6-C are open.

# TAKU/SNETTISHAM GILLNET FISHERY

## **INTRODUCTION**

The Taku/Snettisham (District 11) gillnet area encompasses Section 11-B (Taku Inlet, Port Snettisham, and Stephens Passage north of Midway Island) and Section 11-C (Midway Island south to a line from Point League to Point Hugh). This fishery has historically targeted sockeye salmon from late June to mid-August and fall chum and coho salmon from mid-August to mid-October. In recent decades, the fishery has harvested significant numbers of hatchery summer chum and sockeye salmon. Directed Chinook salmon fisheries occur in District 11 when run strength is sufficient.

# **2012 OUTLOOK**

#### **Chinook Salmon**

The 2012 preseason forecast of 48,000 large Chinook salmon provides a U.S. AC of 6,700 fish. Directed gillnet and troll fisheries in District 11 can begin the first Monday in May (May 7<sup>th</sup>). Considering recent forecast performance, initial gillnet fisheries will be conservative. Fishery time may be liberalized if the in-season run projection data indicate a sufficient harvestable surplus is available.

# **Sockeye Salmon**

The total return of wild Taku River sockeye salmon in 2012 is expected to be slightly below average. This is based on both spawner-recruit analysis, sibling forecast and ocean survivals. The 2007 main parent year escapement of 87,750 fish was above the escapement goal of 75,000 fish, but below the 10-year average escapement of approximately 109,500 sockeye salmon. The 2008 parent year had an escapement of 68,000 sockeye salmon, slightly below the lower bound of the escapement goal range (71,000–80,000 fish). Adult returns to date from the joint U.S./Canada Taku River sockeye salmon enhancement projects at Tatsamenie and Trapper Lakes have been low, and numbers of enhanced sockeye salmon returning to these systems are not expected to contribute significantly to harvest in 2012.

Escapement through the Speel Lake weir of the 2007 parent year was 3,099 sockeye salmon, below the lower bound of the 4,000–13,000 fish escapement goal range, and the 1,763 fish escapement in 2008 was below the goal range as well. Beginning in 2005, DIPAC has operated side scan sonar to monitor salmon escapements into Crescent Lake. Although all species of salmon enter Crescent Lake, the majority are thought to be sockeye. The sonar count in 2007 was 1,927 fish, and in 2008 was 1,903 fish. The 2005 to 2010 average sonar count is approximately 7,100 fish. Technical issues with the Crescent Lake sonar prevented meaningful counts of fish passage in 2011. Crescent Lake escapements will be monitored by aerial surveys in 2012.

The DIPAC forecast for enhanced sockeye salmon returning to the Snettisham Hatchery is 230,000 fish, above last year's return of 140,000 fish.

#### Chum Salmon

In 2012, approximately 1,027,000 summer chum salmon are forecast to return from DIPAC hatchery releases in Gastineau Channel, and 189,000 chum salmon from Limestone Inlet remote releases. The total estimated DIPAC chum salmon contribution to the Section 11-B drift gillnet fishery is forecast to be 511,000 fish. Returns of fall chum salmon to the Taku River are expected to be similar to recent seasons.

#### **Pink Salmon**

Returns of pink salmon to District 11 systems are expected to be below average to average in 2012. Parent year pink salmon escapements to District 11 were close to both management target ranges and the recent 10-year average. Pink salmon counted through the Taku River Canyon Island fish wheels in 2010 were 90% of the even-year average, indicating slightly below average escapement to the Taku River.

#### Coho Salmon

The return of Taku River coho salmon is expected to be below average. The forecast return, based on the relationship between smolt tagging CPUE and the total and inriver run estimates over the past 14 years, projects a total return of 164,000 adults. This compares to the 10-year average total return of 212,000 adults. DIPAC projects a 2012 return of approximately 35,000 hatchery coho salmon from their smolt releases into Gastineau Channel.

#### MANAGEMENT GOALS

Management goals for the 2012 Taku/Snettisham drift gillnet fishery are as follows:

- 1. Provide for sufficient salmon spawning escapements to Taku River, Port Snettisham, and Stephens Passage streams while harvesting those fish in excess of escapement needs;
- 2. Monitor the incidental harvest of Chinook salmon to stay within the BOF Southeast drift gillnet allocation of 2.9% of treaty Chinook salmon quota;
- 3. Manage the fishery consistent with current provisions of the PST (5 AAC 33.361);
- 4. Maximize the harvest of hatchery-produced chum salmon returning to Limestone Inlet while minimizing the incidental harvest of Port Snettisham wild sockeye salmon;
- 5. Manage the return of enhanced Port Snettisham sockeye salmon consistent with the Board of Fisheries Snettisham Hatchery Management Plan (5 AAC 33.378);
- 6. Manage the Speel Lake sockeye salmon return to achieve an escapement to the lake of between 4,000 to 13,000 spawners. This goal is a biological escapement goal based on an analysis completed during the winter of 2002–2003;

7. Manage the District 11 directed Chinook salmon fishery to harvest large adult Chinook salmon in accordance with the PST Treaty and the BOF District 11 Chinook salmon management plan.

#### MANAGEMENT PLAN

The District 11 gillnet fishery will be managed in accordance with the TBR Annex of the PST. Harvest sharing arrangements for Chinook, sockeye, and coho salmon through the 2012 fishing season are specified in the annex.

#### Chinook Salmon

There will be directed commercial drift gillnet fisheries for Taku River Chinook salmon in 2012. By regulation, the first opening may occur the first Monday in May, May 7<sup>th</sup>. Initial openings based on the preseason forecast will likely consist of no more than one fishing period per week and could be less than 24-hours duration. Inseason management will be based on abundance estimates derived from returning Chinook salmon caught and tagged at the Canyon Island fish wheels, then recaptured in the Canadian inriver commercial fishery. It is anticipated the first estimate of inseason abundance will be available in mid to late May. The allowable harvest based upon these inseason projections and adjusted for run timing will determine the time and extent of further openings. Line closures may be in effect at the latitude of Jaw Point to protect milling fish off the flats. Per regulation, commercial fishery openings may begin on Mondays at 12:01 P.M. and will close as specified in news releases. There will be no openings on weekends or holidays. The time and area of commercial openings will ultimately depend upon the numbers of boats fishing, the numbers of Chinook salmon harvested, and results from stock assessment projects.

Regulations require a seven inch minimum mesh size through the third Saturday in June for the District 11 fishery. The standard 200 fathom length and 60 mesh deep net restrictions will apply to this fishery.

The waters open to drift gillnet fishing prior to the third Sunday in June are the waters of Section 11-B north of the latitude of Graves Point Light, and east of the 11-A/11-B section boundary (a line from Point Bishop to Point Arden).

Chinook salmon less than 28 inches long that are harvested in the commercial drift gillnet fisheries may be retained and sold as usual. Chinook salmon less than 28 inches in length and those of Alaska hatchery origin will not be counted against the Alaskan share of the allowable harvest. Fish and Game samplers working at processing facilities will identify fish less than 28 inches in length and hatchery-reared Chinook salmon so those fish are not counted against the Alaskan share of the harvest.

# **Sockeye Salmon**

Section 11-B will open for directed sockeye salmon fishing on the third Sunday in June (June 17) for a three day fishing period. If Chinook salmon conservation is a concern then a shorter opening and/or an area restriction may be implemented. Subsequent openings will be based on inseason fishery performance and stock assessment information.

The District 11 fishery will be managed through mid-August primarily on the basis of sockeye salmon abundance. Run strength will be evaluated using fishery catch and CPUE data, and weekly inriver run size estimates derived from the Taku River fish wheel mark-recapture project

operated at Canyon Island. Contribution of enhanced stocks of sockeye salmon will be estimated inseason by analysis of salmon otoliths sampled from the commercial harvests. The age and stock compositions of the harvest of wild sockeye salmon will be estimated after the fishing season by scale pattern and GSI analysis of commercial catch samples.

The return of enhanced Port Snettisham sockeye salmon will be managed according to the Board of Fisheries' Snettisham Hatchery Management Plan. The plan provides basic guidelines for managing enhanced sockeye salmon production from Port Snettisham including the following provisions, in order of priority:

- 1. Sustainable production of wild sockeye salmon from Crescent and Speel Lakes;
- 2. Management of enhanced Snettisham sockeye salmon returns may not prevent achieving escapement goals or PST harvest sharing agreements for Taku River salmon stocks;
- 3. Assessment programs shall be conducted to estimate Snettisham wild sockeye salmon stock escapements and contributions of enhanced sockeye salmon to the District 11 commercial fishery;
- 4. Common property harvests in the Speel Arm SHA shall be conducted by limiting time and area to protect wild sockeye salmon returns.

Management of the fishery in Stephens Passage will focus on conservation of wild Port Snettisham sockeye salmon stocks, particularly in July. The department intends to implement extensive use of six inch minimum gillnet mesh size restrictions in Section 11-B south of Circle Point in order to limit harvest rates on wild Snettisham sockeye salmon and yet allow harvest of enhanced chum salmon returning to the Limestone remote release site. The mesh restriction in Section 11-B may be relaxed at the end of July or after the peak migration timing of wild Snettisham sockeye salmon stocks through Stephens Passage.

A personal use fishery will be allowed in Sweetheart Creek to ensure enhanced sockeye returns to this site are fully utilized. Sweetheart Creek is naturally blocked to anadromous fish migration several hundred yards upstream from the mouth. The Sweetheart Creek personal use fishery will be open seven days per week.

#### Pink Salmon

Pink salmon will be harvested in Section 11-B incidental to the sockeye salmon and enhanced summer chum fisheries. Fishing time for a directed pink fishery in Section 11-C will depend upon the strength of pink salmon returns to lower Stephens Passage, Seymour Canal, and the northern portions of District 10. Returns will be closely monitored and if surpluses are present, openings could occur in August.

#### **Coho and Fall Chum**

Beginning in mid-August, management of the Taku/Snettisham gillnet fishery will be based on the run strength of coho and fall chum salmon. The TBR Annex of the PST calls for the U.S. to manage its fisheries to achieve a minimum above-border run size of 38,000 coho salmon. Inseason management will be based on evaluation of the fishery catch, effort, and CPUE relative to historical levels, inriver run size estimates from the Taku River mark-recapture project, and recovery of coded wire tagged wild Taku River and hatchery coho salmon in marine fisheries. Coho salmon is the primary species managed during the fall season.

In order to avoid conflicts with sport fisheries, the District 11 drift gillnet fishery will not be open concurrent with the 2012 Juneau Golden North Salmon Derby (August 10–12). Consequently, during Statistical Week 33, the District 11 gillnet fishery will not open until Monday, August 13.

#### LYNN CANAL GILLNET FISHERY

#### INTRODUCTION

The Lynn Canal drift gillnet fishery operates in the waters of District 15. The district is divided into three regulatory sections: 15-A (upper Lynn Canal), 15-B (Berners Bay), and 15-C (lower Lynn Canal). The Lynn Canal drift gillnet fishery targets sockeye, summer chum, pink, coho, and fall chum salmon. Chinook salmon are taken incidentally.

Sockeye salmon returns to Lynn Canal are some of the largest in Southeast Alaska. Coho and fall chum salmon runs to the Chilkat River are among the largest in northern Southeast Alaska. In recent years Chilkoot Lake sockeye, Chilkat River mainstem sockeye, coho and fall chum salmon stocks have been productive and meeting escapement goals. Production of Chilkat Lake sockeye salmon has been below average since 2010 and is not expected to improve enough to provide for directed commercial fisheries. The 2012 return of Chilkat Lake sockeye salmon is expected to be below average. The department believes that the decline in Chilkat Lake sockeye salmon production is caused by a downturn in zooplankton production from 2006 and 2007 brood years. Zooplankton production has generally improved since 2008. Returns of Chilkoot Lake sockeye salmon is expected to be above average in 2012. Chilkat River mainstem returns are expected to be near the long term average.

Sockeye salmon are targeted from June through early September. The primary stocks originate from Chilkat Lake, Chilkoot Lake, Berners Bay rivers, and mainstem spawning areas of the Chilkat River. Hatchery and wild summer chum salmon are harvested from late June through early August. Fall chum and coho salmon are targeted from September through early October. The primary fall chum salmon stocks originate in the Klehini and Chilkat rivers. Coho salmon stocks originate from the Chilkat and Berners Bay river systems.

Formal escapement goals for Chilkoot and Chilkat Lake sockeye salmon (Table 8) are based on an updated spawner-recruit analysis. Weekly escapement targets for Chilkoot Lake sockeye salmon are based on the historical run timing of fish through the Chilkoot River weir. Chilkat Lake sockeye salmon escapement goals are now based on a weir count corrected series of data based on years where mark-recapture estimates were used to estimate escapement of this stock. Continuing in 2012, sockeye and coho salmon escapement to Chilkat Lake will be assessed with a DIDSON (Dual frequency IDentification SONar) system. This new technology has allowed the department to monitor the escapement of Chilkat Lake sockeye salmon much more accurately since it can operate during all environmental conditions and will allow the department to review escapement goals for this stock in the future. This equipment has enabled department crews to monitor Chilkat Lake salmon escapement during flow reversal and bad weather events and during periods of high boat traffic.

## **MANAGEMENT GOALS**

The overall management goal is to achieve desired spawning escapement levels while harvesting the available surplus for a long-term maximum sustainable yield of all Lynn Canal salmon stocks. Escapement to Chilkoot Lake is monitored by a weir located on the outlet of Chilkoot Lake. Escapements to Chilkat River and Chilkat Lake are monitored using fish wheels operated in the lower Chilkat River and a weir/DIDSON located near the outlet to Chilkat Lake. Other stocks in the general Lynn Canal area are monitored by aerial surveys, foot surveys, or mark-recapture studies. Specific management goals for the 2012 Lynn Canal drift gillnet fishery and formal escapement goals (see also Table 8) are as follows:

- 1. Obtain an escapement of between 38,000 and 86,000 (weir count units) sockeye salmon to Chilkoot Lake.
- 2. Obtain an escapement of between 70,000 and 150,000 sockeye salmon to Chilkat Lake. The escapement will be monitored in season by the lower Chilkat River fish wheel project and the final escapement will be derived from DIDSON counts at the outlet of Chilkat Lake.
- 3. Obtain an escapement of between 1,750 to 3,500 three-ocean age and older king salmon to the Chilkat River.
- 4. Obtain a peak foot escapement count between 4,000 and 9,200 coho salmon to Berners River.
- 5. Obtain a peak index stream count for Chilkat River drainage coho salmon that corresponds to a total escapement of 30,000 to 70,000 fish.
- 6. Provide for sufficient chum, coho, and pink salmon spawning escapements to the Chilkat, Chilkoot, and Berners rivers and other Lynn Canal systems, while harvesting those fish in excess of escapement needs.
- 7. Harvest all DIPAC hatchery-produced chum salmon available in the Boat Harbor Terminal Harvest Area or in the Vanderbilt Reef (Postage stamp) area while conserving wild stock summer chum salmon migrating to streams on the western shoreline of Lynn Canal and other wild stocks originating in upper Lynn Canal.

#### 2012 OUTLOOK

#### **Sockeve Salmon**

The 2012 forecasted return of Chilkat Lake sockeye salmon is expected to be poor. The total return is expected to be well below the 1967–2011 historical average of 170,000 fish. Escapements were well below average and near the lower end of the escapement goal range during 2006 and 2007 (73,000 and 60,000 fish, respectively). Below average zooplankton levels in 2007 and 2008 may also be a factor for the poor projected return of Chilkat Lake sockeye salmon. On average, 77% of the Chilkat Lake sockeye salmon escapements are 3-ocean age fish (39% are age-1.3 fish, 37.3% are age-2.3 fish and 0.5% is age-3.3 fish. Approximately 21.3% of this run is fish that have spent 2 years in the marine environment, or 2-ocean age fish. The age composition of the 2011 run of 2-ocean age fish was well above the previous 10-year average and may indicate a better return of 3-ocean age fish in 2012.

There is currently no smolt program in place to monitoring the juvenile sockeye production leaving Chilkat Lake during the spring. A proposal to initiate a sockeye salmon smolt program at Chilkat Lake has been prepared and if granted may be funded during FY13. Sockeye returns for 2012 are not predictions but may be characterized as general expectations based on escapement and lake rearing conditions. Due to expected low returns of Chilkat Lake sockeye salmon the

department will implement management decisions in the commercial drift gillnet salmon fishery to achieve target escapement levels within the escapement goal range for this stock

The 2012 run size of Chilkat River mainstem sockeye salmon is expected to be near average in run strength based on near average age structure of the 2012 escapement. Mark-recapture estimates of the Chilkat River mainstem sockeye salmon escapements in 2007, 2008, and 2009, (the dominant parent-years) were 35,700, 27,800 fish and 35,000 fish, respectively. Escapement estimates during the parent years for the 2012 return were near the historical 1994 to 2010 average of 33,000 fish for all brood years. The dominant age classes for this run includes age-0.2 (23.6%), age-0.3 (35.9%), and age-1.3 (23.5%) fish. The proportion of age-0.2 and age-1.2 fish of the 2011 escapement was near average indicating that the 2012 return of age-0.3 and 1.3 fish to the mainstem Chilkat River may be near average in run strength. The Lower Chilkat River fish wheel project has been providing inseason stock assessment and post-season escapement estimates of Chilkat River mainstem sockeye salmon since 1994.

Returns of Chilkoot Lake sockeye salmon in 2012 are expected to be above average. The total return of 205,000 Chilkoot Lake sockeye salmon in 2007 (dominant brood year) was well above the historical average of 160,000 fish. The Chilkoot Lake sockeye salmon weir count during the dominant parental brood year (2007) for the 2012 return was 72,600 fish, within the desired escapement goal range. The Chilkoot River weir is also used to collect scale samples for age composition, and to monitor the escapement of this stock during the commercial fishing season.

The above average Chilkoot Lake sockeye salmon expected return is based on the above average 2008 fall hydroacoustic pre-smolt estimate and zooplankton density at that time. Smolt and zooplankton abundance have improved since 2008. In addition, age composition of the 2011 escapement was near average for most of the dominant age classes with the exception of age-1.2 fish. The proportion of age-1.2 fish in the 2011 Chilkoot Lake escapement was well above average (24.8% vs. 14.3% average). Given this information, the department is expecting an above average return of Chilkoot Lake sockeye salmon for 2012. Management decisions will continue to be based on inseason escapement data and site specific sampling results from the District 15 drift gillnet fishery.

An average run of Berners Bay sockeye salmon is expected in 2012 for similar reasons the Chilkat River mainstem run is expected to be average in run strength. Total escapement estimates are not available for Berners Bay sockeye salmon systems as escapements are accessed via aircraft survey. Peak aerial escapements to Berners Bay streams were generally near average for all brood years. The 2008 and 2009 commercial harvests of Berners Bay and Chilkat River mainstem sockeye salmon were estimated at 17,000 and 24,600 fish respectively. These harvests are below and near the historic 1976 to 2011 average harvest of 15,000 fish.

#### **Summer Chum Salmon**

The majority of the summer chum salmon production in the district is from hatchery releases at Amalga Harbor and the Boat Harbor terminal harvest areas by the Douglas Island Pink and Chum Salmon Inc. (DIPAC). DIPAC has been enhancing the chum salmon returns to Lynn Canal since 1987. Projections for the Boat Harbor Terminal Harvest Area chum salmon return in 2012 is approximately 296,000 fish. This forecast return is below the 2011 return and near the 1991–2011 average of 218,000 fish. The preseason projection for the Amalga Harbor chum salmon return is approximately 947,000 fish, below the average of 1.15 million fish.

Based on parental-year escapement counts, the wild summer chum salmon return in 2012 should be average in run strength but at a much lower scale than the hatchery summer chum salmon return.

Small numbers of wild chum salmon are produced from local area streams such as Sawmill Creek and other Berners Bay rivers on the eastern side of Lynn Canal. The Endicott, Beardslee, and St. James Bay rivers on the western side of Lynn Canal are also important contributors to the wild summer chum harvest in the drift gillnet fishery.

Peak aerial escapement counts of summer chum salmon in Sawmill Creek in 2007 and 2008 were 600 and 850 fish respectively, above the average of 500 fish. Combined peak counts of chum salmon in Endicott River for the same brood years were below historical averages.

#### **Fall Chum Salmon**

The 2012 return of Chilkat River drainage fall chum salmon stock is expected to be near average. For the Chilkat River parent years, the peak aerial survey counts were 29,250 and 25,500 fish. These counts were near the peak aerial escapement count average of 30,000 fish. Peak aerial survey counts in the Klehini River were above average for 2007 and below average in 2008. The total drainage wide estimated escapement in 2007 and 2008 based on mark-recapture index methods was 331,000 and 451,000 chum salmon. These estimates are above average for years where total drainage escapements estimates are available (1990, 1998–2011).

The commercial harvest during the dominant parental brood years (2007 and 2008) was above the recent average. Generally, escapements of Klehini River and Chilkat River fall chum salmon in recent years have improved. Fish wheel counts, mark-recapture estimates and aerial escapement surveys in recent years have indicated an increasing trend in abundance for this stock. During the years 2002 to 2005, on average, the fish wheel catch is approximately 1.5% of the total number of fall chum salmon returning to the Chilkat River drainage.

#### Coho Salmon

The Chilkat River drainage coho salmon return is expected to be average during 2012. Coho salmon systems in the district include the Chilkat River, Berners River and Chilkoot River. Parent-year survey counts at the Chilkat River tributaries and Chilkoot River drainage were generally good and above the 10-year average. The 2008 and 2009 escapements to Berners Bay (6,870 and 4,230) were well within the escapement goal range of 4,000 to 9,200 fish.

Sport Fish Division has been conducting coho salmon smolt coded-wire tagging (CWT) studies on the Chilkat River to estimate smolt size, age structure, and production of coho salmon smolts and marine survival of adult coho salmon since 1999. The 2008 and 2009 Chilkat River fish wheel catches of 3,217 and 2,029 coho were above the 1997–2011 average in 2008 and below average in 2009. Chilkat River index stream escapements for coho salmon in 2008 and 2009 were 57,400 and 48,900 fish, respectively. These escapement counts were both within the escapement goal range of 30–70 thousand fish. Estimates of harvest were below the previous 10-year average for both brood years. Forecasts for Lynn Canal coho stocks are based on recent marine survival trends, trapping CPUE and escapement estimates.

Coho salmon production from streams in Berners Bay continues to be in recovery from a series of less productivity years. Coho salmon smolt production in Berners Bay has been below average since 2005 and this trend is continuing.

#### **Chinook Salmon**

The 2012 preseason inriver abundance forecast for large (≥ age 1.3) Chilkat River Chinook salmon is estimated to be near historical averages and above the inriver abundance goal range of 1,850 to 3,600 fish. Since the preseason forecast is projected to be above the inriver abundance goal range, Chilkat Inlet will be managed for sockeye salmon abundance. The northern line in Chilkat Inlet will remain at Seduction Point or the latitude of the southernmost tip of Talsani Island depending on sockeye and Chinook salmon run strength as indicated by the lower Chilkat River fish wheel and drift net projects. Due to poor projections for Chilkat Lake sockeye salmon, the department will take a precautionary approach to boost Chilkat Lake sockeye salmon escapement.

#### MANAGEMENT PLAN

In 2012, ADF&G intends to manage the summer Lynn Canal drift gillnet fishery to obtain escapements within the established escapement goal ranges for all salmon stocks. The department intends to manage the fishery to minimize harvest of wild stock summer chum salmon while harvesting returns of hatchery chum salmon in Section 15-C. The fall Lynn Canal drift gillnet fishery will be managed to conserve Klehini River (early-run) fall chum salmon while providing opportunity to harvest Chilkat River fall chum and coho salmon if run strength indicates a harvestable surplus. It is anticipated that area, time and gear restrictions will be in place to protect projected poor returns of Chilkat Lake sockeye salmon during the summer season.

#### Section 15-A

Section 15-A will open for two days south of the latitude of Seduction Point beginning 12:01 PM Sunday June 17 (statistical week 25) with no mesh restriction. If the Chilkoot River weir count through June 14 is less than 2,500 sockeye salmon, the eastern side of Section 15-A will be closed. If the weir count is 2,500 sockeye salmon or greater on June 17, the eastern portion of 15-A may be opened in the area south of Seduction Point. During the first two weeks of the season, Chilkat Inlet will be closed north of the latitude of Seduction Point. If inseason projections for Chilkat Lake sockeye salmon early in the season are poor, Chilkat Inlet may remain closed until Chilkat Lake sockeye salmon abundance at the fish wheels indicates good returns of Chilkat Lake sockeye salmon. In week 27, Chilkat Inlet may be open south of the latitude of the Glacier Point-Twin Coves line or at the latitude of the northernmost tip of Kochu Island if sockeye escapements are within goals as measured by the fish wheel project. Chilkat Lake sockeye salmon run strength as measured by the lower Chilkat River fish wheel project will dictate commercial fishery openings in Chilkat Inlet in 2012. If escapements of sockeye salmon to Chilkat Lake are poor, the northern boundary line may be moved to the Southernmost tip of Talsani Island for most of the summer season to boost escapement to Chilkat Lake. ADF&G is forecasting a poor return of sockeye salmon to Chilkat Lake and an above average Chilkoot Lake and slightly above average Chilkat River mainstem sockeye salmon return in 2012. Decisions will be dictated by the results of various in season stock assessment programs operating on the Chilkat and Chilkoot River drainages. Fishing opportunity is expected to be very limited in Chilkat Inlet and western Lynn Canal in 2012 to conserve Chilkat Lake sockeye salmon. If the inseason information system indicates that the Chilkat Lake sockeye salmon return is not forecasted to meet minimum escapement goals, limits in time and area of western and northern Section 15-A will be implemented until the department can project sockeye escapement within

desired goal ranges. Six-inch minimum mesh size gear restrictions may be in place to reduce the harvest rate on Chilkat Lake sockeye salmon during the late summer and fall season if necessary. Data from the Chilkat River fish wheel mark-recapture program and from the commercial fishery will be used to judge run strength inseason for Chilkat River drainage salmon stocks.

Chilkat mainstem sockeye salmon returns overlap with Chilkat Lake sockeye returns and peaks in early to middle July followed by late run Chilkat Lake sockeye salmon, which dominate during August. Return timing is tied to freshwater age: mainstem sockeye salmon are predominantly age 0, Chilkat Lake early run fish are predominantly age 1, and Chilkat Lake late run fish are predominantly age 2.

Fall fishery management in Section 15-A will begin from statistical week 34 (August 19) until the end of the season. As in recent years, the northern boundary line in Section 15-A will move northward in stages as the coho and fall chum stocks begin to migrate back to parental streams. Depending on effort levels, and coho and fall chum salmon run strength, fishing opportunity in Section 15-A may be similar to openings in 2011. Fisherman are reminded that any extensions in fishing time during the fall season could be announced with little advanced notice as requested by industry at the drift gillnet task force meeting. Extensions in fishing opportunity will be based on results of in river stock assessment and projected escapement in comparison to escapement goals.

#### Section 15-B

During years of high coho salmon abundance, openings in Section 15-B (south of the latitude of Cove Point) occurred for 2 or 3 days from week 38 through the end of the season. Inseason information collected from coded wire tag recoveries and commercial harvest from various gear types will provide the data to manage fishing opportunity is Section 15-B. Since the preseason forecast is for a near average return of coho salmon for Berners Bay streams, it is unlikely that openings within Berners Bay will occur in 2012. Inseason information collected from coded wire tag recoveries and commercial harvest from other gear types will provide the data to manage commercial fishing opportunity in Section 15-B.

#### Section 15-C

Section 15-C will open for two days beginning 12:01 PM Sunday, June 17 with a six-inch minimum mesh size restriction except for the Boat Harbor terminal harvest area. If the Chilkoot River weir count is less than 2,500 sockeye salmon through June 14, the eastern side of Section 15-C will be closed north of the latitude of Bridget Point (excluding the Boat Harbor Terminal Harvest Area).

Due to the below average expected returns of Chilkat Lake sockeye salmon, open fishing time in Section 15-C will be limited to 2 or 3 days (except for the Boat Harbor THA). If in season projections for the Chilkat or Chilkoot Lake sockeye salmon returns are below the escapement goal range, it is possible that additional time, area, and gear restrictions will be placed in Section 15-C during the summer season to boost escapement of sockeye salmon to desired levels.

To provide adequate escapements for northbound wild salmon stocks while providing opportunity to harvest enhanced chum salmon, some openings may be limited to the small area in eastern Section 15-C (known as the "postage stamp area") and defined as:

the waters of Section 15-C from the eastern shoreline of Lynn Canal at the latitude of Vanderbilt Reef Light to Vanderbilt Reef Light and east of a line from Vanderbilt Reef Light to Little Island Light.

Depending on effort and escapement levels, this area could open on the 3rd and/or 4th day during peak weeks (statistical weeks 27 through 31) of the hatchery chum salmon return. This strategy will be used to provide opportunity to harvest summer chum salmon while reducing the harvest of northbound wild salmon stocks migrating through eastern Section 15-C. The decision to use this strategy will be considered inseason based on Chilkat River fish wheel counts, Chilkoot Lake weir counts, aerial survey results and results from site-specific sampling of the commercial fishery. Since the Chilkat Lake sockeye salmon return is expected to be very poor, openings in eastern Section 15-C could be limited to just the postage stamp area if the stock is very weak.

Management of the Boat Harbor Terminal Harvest Area (THA) will be opened for extended periods beginning in week 27, (June 24). Management of this THA is described under the heading **DOUGLAS ISLAND PINK AND CHUM, INC. TERMINAL AREA FISHERIES**.

Fall season management will begin in statistical week 34 (August 19) in Section 15-C. Management of Section 15-C during the fall season will be based on overall coho and fall chum salmon run strength and fishing effort levels. Commercial fishing effort will be directed at harvesting coho and fall chum salmon in Section 15-C in excess of escapement needs. Fishing time will more likely be limited from 2 to 3 days each week in the fall season. Any extensions to area or fishing time in the fall season will depend on the results of various stock assessment projects in the Chilkat and Chilkoot watersheds. Extensions could be announced without advance notice during the fall season if salmon returns warrant.

In order to avoid conflicts with sport fisheries, the District 15 drift gillnet fishery will not be open concurrent with the 2012 Juneau Golden North Salmon Derby (August 10–12). Consequently, during Statistical Week 33, the District 15 gillnet fishery will not open until Monday, August 13.

As in previous years, ADF&G's management crews, as part of the marine fishery performance project, will be on the fishing grounds during commercial fishing periods to sample sockeye and Chinook salmon and to monitor the fishery during each opening. ADF&G respectfully requests that commercially caught sockeye and Chinook salmon are retained in separate fish holds or totes so department staff can collect scale and length data from salmon while on the grounds monitoring the fishery. The sockeye salmon scale samples that are collected from the commercial gillnet fishery form the basis of our stock separation analysis and is a very important part of the management of this fishery. ADF&G vessels stand by on channel 10 VHF when on the fishing grounds.

## TERMINAL HARVEST AREA FISHERIES

During the 2012 season, drift gillnet terminal area fisheries can be expected in Deep Inlet, Neets Bay, Nakat Inlet, Anita Bay, Speel Arm, and Boat Harbor to harvest salmon returning to DIPAC, NSRAA, and SSRAA enhancement facilities.

# NORTHERN SOUTHEAST REGIONAL AQUACULTURE ASSOCIATION TERMINAL AREA FISHERIES

The terminal hatchery fishery at Deep Inlet will be managed jointly with NSRAA and according to Board of Fisheries management plan. The open 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.

# Deep Inlet Terminal Harvest Area—[5 AAC 33.376]

NSRAA expects a return of 730,000 chum and 30,800 Chinook salmon to the Deep Inlet remote release site and the Medvejie Hatchery in 2012. The cost recovery goal for this season is a range from 70,000–120,000 pounds of chum salmon, and 70,000 chum salmon are needed for broodstock. 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 Deep Inlet THA fishery will be managed jointly with NSRAA, and in accordance with the Deep Inlet Terminal Harvest Management Plan (5 AAC 33.376). The plan provides for the distribution of the harvest of hatchery-produced salmon between the purse seine and drift gillnet fleets. The Alaska Board of Fisheries, during its February 2012 meeting, extended the sunset date of the regulation which modifies the time ratio of gillnet fishing to purse seine fishing time during chum salmon management (beginning on the third Sunday in June) from 2:1 to 1:1, thru the 2014 season. The time ratio of gillnet fishing time to purse seine fishing time during Chinook salmon management (prior to the third Sunday in June) will remain 2:1. The Board also closed the waters of the Deep Inlet THA west of 135°20.75' W. longitude to purse seine and drift gillnet gear beginning with the first emergency order of the season through the third Saturday in June. This closure allows trollers access to a historically used area. Additionally, the Board has allowed trolling to occur when net fisheries are closed and when trolling does not interfere with cost recovery. During Chinook management (May 27 to June 16) gillnet fishing is scheduled on Mondays, Tuesdays, Thursdays and Fridays, and seine fishing scheduled on Sundays and Wednesdays. During chum management (June 17 thru Sept 29) gillnet fishing is scheduled on Mondays, Tuesdays and Wednesdays, and seine fishing scheduled on Sundays, Thursdays and Fridays. Details of the rotational fishery schedule for Deep Inlet were announced in an ADF&G News Releases on April 18, 2012.

The NSRAA board has requested that the common property rotational fishery begin May 27 in order to provide for common property harvest of king salmon returning to the Medvejie Hatchery. NSRAA expects a return of 30,800 Chinook salmon to Medvejie Hatchery in 2012. THA rotational gear fisheries with four days of gillnet and two days of seine per week are scheduled to begin for gillnet gear on Monday, May 28 and continue through Friday, June 15.

Regulations allow ADF&G to require that commercial gillnets fished in the Deep Inlet THA prior to July 1 have a minimum mesh size of six inches. In 2012, drift gillnet fishermen will be required to fish with a minimum mesh size of six inches prior to June 16. The purpose of the minimum mesh restriction is to reduce the harvest of local wild sockeye salmon returning to Silver Bay that are passing through the Deep Inlet THA.

Due to the small amount of cost recovery harvest necessary this season, no cost recovery closure is expected. Instead NSRAA will conduct cost recovery harvest in the THA on Saturdays or outside the THA as opportunities arise.

The Deep Inlet THA is described 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 westernmost 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 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: all waters of Sandy Cove and Leesofskaia Bay will be closed. The Deep Inlet THA west of 135°20.75' W. longitude will be closed to purse seine and drift gillnet gear beginning with the first emergency order of the season through the third Saturday in June.

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 2012 by emergency order under authority of 5 AAC 39.325 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 the department 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 the Department or Alaska Wildlife Troopers may board some vessels and conduct hold inspections to ensure compliance or ADF&G staff may board some vessels in order to sample marked coho for coded wire tags.

# **Deep Inlet Cost Recovery**

Cost recovery management is planned such that NSRAA may conduct cost recovery in the Deep Inlet Special Harvest Area (SHA) and in the Silver Bay SHA. The Silver Bay SHA is expanded to include the waters of Eastern Channel and Silver Bay enclosed by a line from Entry Point Light, to the southernmost tip of Harris Island, to the southernmost tip of Galankin Island, to Simpson Rock Light, to the southernmost tip of Makhnati Island, to Sentinel Rock, to the westernmost tip of Cape Burunof, to a point west of Pirates Cove at 135° 59.35' N. lat., to the westernmost tip of Long Island, to the westernmost tip of Emgeten Island, to the westernmost tip of Ferror Island, to the northernmost tip of Luce Island, and to the westernmost tip of Silver Point; through July 22 and after 12:01 a.m. the day before the troll coho salmon fishery is reopened in August. The Silver Bay SHA, from July 22 to 12:01 a.m. the day before the end of August coho

salmon fishery closure, includes the waters of Eastern Channel and Silver Bay south of a line from Entry Point Light to the southernmost tip of Harris Island, to the southernmost tip of Galankin Island, and east of a line from Galankin Island to the northernmost point of 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 buy, to Black Rock, to the southernmost tip of Neva Island to the northernmost tip of Sasendi Island, from the southernmost tip of Volga Island, to the northernmost tip of Galankin Island. In addition, the Deep Inlet SHA is expanded to include the waters east of a line from the westernmost end of cape Burunof at 56°59.04' N Latitude, 135°23.23' W Longitude to a point west of Cape Burunof at 56°59.11' N Latitude, 135°23.59' W. Longitude to 57°00.17' N. Latitude, 135°22.69' W. Longitude to the westernmost tip of Long Island.

# SOUTHERN SOUTHEAST REGIONAL AQUACULTURE ASSOCIATION TERMINAL AREA FISHERIES

The terminal hatchery fisheries at Neets Bay, Nakat Inlet, and Anita Bay will be managed jointly with SSRAA in accordance with management plans adopted by the Board of Fisheries. The open drift gillnet fishing times will be announced via news releases prior to, and during, the fishing season. These openings are subject to change during the season by EO if necessary.

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

The department in consultation with SSRAA, shall manage Neets Bay to include those waters of Neets Bay east of the longitude of 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 shall include those waters of Neets Bay east of the longitude of Chin Point to the closed waters at the head of the bay.

In 2012, SSRAA is expecting a total return of 1,700,000 summer chum, 390,000 fall chum, 215,000 coho, and 22,000 Chinook salmon to return to Neets Bay.

The Neets Bay fishery will open to all gear beginning at 12:01 a.m., May 1 and ending at 12:00 noon June 10. During this time the fishery will be open concurrently to drift gillnet, purse seine, and troll gear unless closed by emergency order. Beginning at 12:00 noon June 10 through 12:00 noon, July 2, a rotational fishery according to 5 AAC 33.370 will be conducted for the drift gillnet and purse seine fleet. Details of the 2012 season fishing schedule at Neets Bay will be available in a separate department news release.

It is anticipated that SSRAA will be conducting cost recovery operations throughout the summer in the Neets Bay THA and additional rotational fisheries will not occur until cost recovery and broodstock needs have been met. Additional fisheries in Neets Bay will be opened by ADF&G via emergency order in consultation with SSRAA.

# Nakat Inlet Terminal Harvest Area—[5 AAC 33.372]

The Nakat Inlet THA includes the waters of Nakat Inlet north of Surprise Point at 54°49.10' N. latitude and west of 130°42.75' W. longitude. For 2012, approximately 403,000 summer chum, 85,700 fall chum, and 21,000 coho salmon are expected to return to Nakat Inlet. Peak chum salmon catches from these releases are expected between early July and early August for summer chum and between late August to mid-September for fall chum and coho salmon.

The Nakat Inlet THA will be open from June 1 to November 10 concurrently to gillnet and troll gear. The 500 yard stream closure regulation [5 AAC 39.290 (1)] will remain in effect.

# Crystal Lake Terminal Harvest Area—[5 AAC 33.381]

The initial projected Crystal Lake Chinook salmon total return is 1,700 adults. In the Wrangell Narrows (District 6) terminal area, around 850 fish are expected. Under provisions of the Wrangell Narrows-Blind Slough THA Management Plan the commercial fishery will be open to harvest 50% of the projected terminal return over 4,000 fish. Based on the forecast there is not likely to be surplus fish designated for commercial troll or gillnet harvest in the terminal area in 2012.

The total Crystal Lake Hatchery coho salmon return is expected to be 5,600 fish; of that, an estimated 2,800 fish will be available for sport and commercial harvest in the Wrangell Narrows-Blind Slough area. No commercial gillnet fishery is expected on these fish in 2012.

# Anita Bay Terminal Harvest Area—[5 AAC 33.383]

The Anita Bay THA consists of the waters of Anita Bay west of a line from Anita Point to 56° 14.26' N. latitude 132° 23.92' W. longitude.

In 2012, approximately 441,000 summer chum, 10,000 Chinook, and 17,000 coho salmon are expected to return. The Anita Bay THA will be open to the harvest of salmon by troll, drift gillnet, and purse seine concurrently from 12:01 a.m. Tuesday, May 1, through 12:00 noon June 12. Beginning June 13, the Anita Bay THA will be open on a rotational schedule for purse seine/drift gillnet fisheries. This schedule will be similar as last year with the gillnet openings/seine openings occurring on a one to one basis with a 24 hour closed period between gear groups throughout the chum salmon return. Details of this schedule were developed by SSRAA and were announced by the department in a News Release issued on April 16, 2012. The rotational schedule will remain in place until the August 31 at which point the terminal area will be open to all gear groups concurrently until November 10.

## DOUGLAS ISLAND PINK AND CHUM INC. TERMINAL AREA FISHERIES

#### **Boat Harbor Terminal Harvest Area**

Projections for the Boat Harbor Terminal Harvest Area chum salmon return in 2012 is approximately 296,000 fish. This forecast return is below the 2011 return and near the 1991–2011 average of 218,000 fish. The preseason projection for the Amalga Harbor chum salmon return is approximately 947,000 fish, just below the average of 1.15 million fish.

The Boat Harbor Terminal Harvest Area (THA) will be opened for extended periods beginning in week 27, (July 1). The Boat Harbor THA is defined as: those waters within 2 nautical miles of the western shoreline of Lynn Canal south of the latitude of Danger Point at 58°41.73' N. latitude and north of a point 2.4 miles north of Point Whidbey at 58°37.05' N. latitude. The northern line of the Boat Harbor area will remain at the latitude of Danger Point through week 31. The purpose of this strategy is to decrease the harvest rate on Endicott River and other western Lynn Canal wild chum salmon stocks that migrate through this area during the summer season when large returns of hatchery chum salmon are present. Escapements of wild chum salmon to the Endicott River have improved because of this action.

The section within the Boat Harbor area west of a line from the entrance to the Boat Harbor proper area will be opened continuously beginning the first week of the season. This strategy will be used to harvest expected large returns of hatchery chum salmon that enter the Boat Harbor proper area with little risk to wild salmon stocks outside of this area.

# Speel Arm Special Harvest Area

The forecast total return of Snettisham Hatchery sockeye salmon in 2012 is 230,000 fish. This is an increase from last year's total return of approximately 140,000 fish. This return will be principally harvested in the traditional District 11 commercial gillnet fishery. Common property fishery openings may occur during August in DIPAC's Speel Arm SHA, which is located in the waters of Speel Arm north of 58°03.42' N. latitude. Timing of openings in the SHA will depend on DIPAC's progress toward brood stock and cost recovery goals and the sockeye salmon escapement to Speel Lake. DIPAC cost recovery efforts in the SHA during July will be limited to waters in the immediate vicinity of the hatchery where wild and hatchery stocks are well segregated. Fishery management decisions for the Speel Arm SHA will be made jointly by ADF&G and DIPAC. ADF&G and industry formalized the notification procedure for any extended fishery openings in Speel Arm.

The Southeast Alaska Drift Gillnet Task Force agreement specified:

- 1. That ADF&G include notice in the Southeast Alaska Drift Gillnet Fishery Management Plan that extended openings in Speel Arm could be expected on short notice once Speel Lake escapement goals are met;
- 2. That ADF&G include notice in the region wide news release on or near the end of July that extended openings in Speel Arm could be expected on short notice once Speel Lake escapement goals are met;
- 3. If an announcement is made for extended fishing time in Speel Arm, ADF&G shall provide a minimum of **6 hours**-notice from the time of the news release to the time the fishery opens.

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# FISHERY CONTACTS

The following people are Division of Commercial Fisheries contacts for this management plan:

Scott Kelley

Region 1 Supervisor

802 3<sup>rd</sup> St

Douglas, AK 99824 (907) 465-4250

Kevin Monagle or Dave Harris Area Management Biologists

802 3<sup>rd</sup> St

Douglas, AK 99824 (907) 465-4205

Dave Gordon or Eric Coonradt Area Management Biologists 304 Lake Street, Room 103

Sitka, AK 99835 (907) 747-6688

Randy Bachman or Mark Sogge Area Management Biologists

P.O. Box 330 Haines, AK 99827 (907) 776-2830

Tom Kowalske Assistant Area Management Biologist

P.O.Box 200 Wrangell, AK 99929 (907) 874-3822 Bill Davidson

Region 1 Management Coordinator 304 Lake Street, Room 103

Sitka, AK 99835 (907) 747-6688

Scott Walker, Bo Meredith, or Justin Breese

Area Management Biologists 2030 Sea Level Drive, Suite 205

Ketchikan, AK 99901 (907) 225-5195

Troy Thynes or Kevin Clark Area Management Biologists

P.O. Box 667

Petersburg, AK 99833 (907) 772-3801

Jim Craig

**Publications Specialist** 

802 3<sup>rd</sup> St

Douglas, AK 99824 (907) 465-4236

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

Ketchikan: (907) 225-6870

Petersburg: (907) 772-3700

Juneau: (907) 465-8905

Haines: (907) 766-2830

# **TABLES AND FIGURES**

Table 1.—Southeast Alaska commercial drift gillnet salmon harvest, in numbers, by area, harvest type and species, 2011.

Fishery	Chinook <sup>a</sup>	<b>Jacks</b> <sup>a</sup>	Sockeye	Coho	Pink	Chum	Total
District 1			-				
Traditional (Tree Point)	1,737	7	88,618	28,622	335,823	339,927	794,734
Terminal Harvest Area	2,914	3	3,207	7,561	21,988	226,581	262,254
Annette Island	1,277	5	17,292	10,074	241,563	263,824	535,035
District 6							
Traditional (Prince of Wales)	2,103	904	146,089	117,854	337,170	158,096	762,216
District 7							
Terminal Harvest Area	5,818	387	496	313	3,536	67,183	77,733
District 8							
Traditional (Stikine)	4,099	1,222	51,478	20,717	65,022	142,526	285,064
District 11							
Traditional (Taku/Snettisham)	1,371	1,067	100,480	27,540	338,657	667,709	1,136,824
Terminal Harvest Area	44	28	63,496	1,011	6,109	220	70,908
District 13							
Terminal Harvest Area	8,106	0	442	550	23,541	82,546	115,185
District 15							
Traditional (Lynn Canal)	640	305	57,534	33,292	330,896	853,451	1,276,118
Terminal Harvest Area	126	95	6,254	461	178,034	262,370	447,340
Subtotals							
Traditional	9,875	3,580	444,199	228,025	1,407,568	2,161,709	4,254,956
Terminal Harvest Areas	17,008	513	73,895	9,896	233,208	638,900	973,420
<b>Common Property Total</b>	26,883	4,093	518,094	237,921	1,640,776	2,800,609	5,228,376
Hatchery Cost Recovery*	0	0	0	0	0	0	0
Annette Island Reserve	1,277	5	17,292	10,074	241,563	263,824	534,035
Miscellaneous**	0	0	5	0	12	321	338
Total	28,160	4,098	535,391	247,995	1,882,351	3,064,754	5,762,749

<sup>&</sup>lt;sup>a</sup> Jacks are Chinook salmon less than 28 inches in overall length or less than 659 mm mid-eye to fork length.

<sup>\*</sup> Cost recovery using gillnet gear.

<sup>\*\*</sup> Confiscated fish or fish harvested in test fisheries.

Table 2.—Southeast Alaska annual Portland Canal/ Tree Point (District 1) traditional and terminal harvest area drift gillnet salmon harvest, in numbers, by species, 2000 to 2011.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
2000	1,196	94,720	19,577	424,672	218,818	758,983
2001	1,393	80,440	36,420	521,645	252,438	892,336
2002	1,127	121,116	68,724	515,395	174,794	881,156
2003	829	105,878	97,538	626,916	322,608	1,153,769
2004	2,069	142,763	50,820	409,429	327,439	932,520
2005	1,711	80,027	65,353	559,296	252,630	959,017
2006	2,271	63,368	31,271	216,779	297,660	611,349
2007	2,057	68,170	29,890	360,986	389,744	850,847
2008	4,059	34,915	97,599	275,654	319,718	731,945
2009	4,922	70,607	68,522	174,052	339,159	657,262
2010	3,302	64,747	99,081	597,138	458,622	1,222,890
2011	4,461	91,825	36,183	357,811	566,508	1,056,988
Average						
2000-2010	2,374	83,203	64,522	425,729	313,481	889,309

Table 3.–Southeast Alaska annual Prince of Wales (District 6) traditional drift gillnet salmon harvest, in numbers, by species, 2001 to 2011.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
2001	1,138	164,013	188,465	825,447	283,462	1,462,525
2002	446	56,135	226,560	82,951	112,541	478,633
2003	422	116,904	212,057	470,697	300,253	1,100,333
2004	2,735	116,259	138,631	245,237	110,574	613,436
2005	1,572	110,192	114,440	461,187	198,564	885,955
2006	1,948	91,980	69,015	149,907	268,436	581,286
2007	2,144	92,481	80,573	383,355	297,998	856,551
2008	1,619	30,533	116,074	90,217	102,156	340,599
2009	2,138	111,984	144,569	143,589	287,707	689,987
2010	2,473	112,428	225,520	309,566	97,948	747,935
2011	3,007	146,089	117,854	337,170	158,096	762,216
Average						
2001–2010	1,663	100,291	151,590	316,215	205,964	775,724

Table 4.—Southeast Alaska annual Stikine River (District 8) traditional drift gillnet salmon harvest, in numbers, by species, 2001 to 2011.

Year	Chinook*	Sockeye	Coho	Pink	Chum	Total*
2001	7	610	10,731	11,012	5,397	27,757
2002	25	208	21,131	4,578	2,017	27,959
2003	312	42,158	38,795	76,113	51,701	209,079
2004	7,410	103,392	26,617	20,439	37,996	195,854
2005	26,970	99,465	42,203	106,395	150,121	425,154
2006	30,033	61,298	34,430	56,810	343,637	526,208
2007	17,463	70,580	19,880	39,872	177,547	325,342
2008	14,599	35,679	34,479	18,105	81,876	184,738
2009	2,830	36,680	30,860	27,010	190,800	288,180
2010	2,359	32,737	42,772	58,610	51,005	187,483
2011	5,321	51,478	20,717	65,022	142,526	285,064
Average						
2001–2010	10,201	48,281	30,190	41,894	109,231	239,797

<sup>\*</sup>Chinook and Total columns includes large Chinook plus jacks

Table 5.—Southeast Alaska annual Taku/Snettisham (District 11) traditional and terminal harvest area drift gillnet salmon harvest, in numbers, by species, 2001 to 2011.

Year	Chinook*	Sockeye	Coho	Pink	Chum	Total*
2001	1,698	293,043	22,646	123,026	237,122	677,535
2008	1,850	204,103	40,464	78,624	231,936	556,977
2003	1,467	238,160	24,338	114,166	170,874	549,005
2004	2,345	283,756	45,769	154,640	131,757	618,267
2005	23,301	106,048	21,289	182,778	93,700	427,116
2006	11,261	262,527	60,145	191,992	382,952	908,877
2007	1,452	112,241	22,394	100,375	590,169	826,631
2008	2,193	116,693	37,349	90,162	774,095	1,020,492
2009	6,800	62,070	36,615	56,801	918,350	1,080,636
2010	1,685	76,607	62,241	132,785	489,063	762,381
2011	2,510	163,976	28,551	344,766	667,929	1,207,732
Average						
2001-	5,406	175,525	37,325	122,535	402,002	742,793

<sup>\*</sup> Chinook and Total columns includes large Chinook plus jacks

Table 6.—Southeast Alaska annual Lynn Canal (District 15) traditional and terminal harvest area drift gillnet salmon harvest, in numbers, by species, 2001 to 2011.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
2001	1,672	147,811	34,606	67,718	445,578	697,385
2002	582	82,014	77,941	88,044	665,398	913,979
2003	663	95,111	59,742	53,621	394,250	603,387
2004	805	151,245	51,960	98,341	745,450	1,047,801
2005	710	65,469	27,947	209,833	326,895	630,854
2006	344	145,579	55,133	94,700	1,094,212	1,390,002
2007	1,063	156,798	18,137	89,782	823,158	1,089,957
2008	659	46,655	46,932	26,034	1,072,135	1,192,415
2009	681	126,594	35,820	163,057	845,710	1,171,862
2010	875	100,968	65,870	171,054	764,629	1,103,396
2011	1,166	63,788	33,753	508,930	1,115,821	1,723,458
Average						
2001–2010	806	111,838	47,413	106,218	717,829	984,104

Table 7.-Performance of the Tree Point drift gillnet fishery sockeye salmon harvest under the 1999 agreement.

Year	Nass River Total Return	Nass River Escapement	Allowable Nass River AAH	Allowable Alaska Harvest (13.8%)	Actual Nass River Alaska Harvest	Cumulative: +overage / (- underage)
1999	842,806	200,000	642,806	88,707	129,794	41,087
2000	625,983	200,000	425,983	58,786	46,305	28,606
2001	580,616	167,258	413,358	57,043	55,096	26,659
2002	1,403,976	200,000	1,203,976	166,149	90,553	-48,937
2003	1,177,472	200,000	997,472	131,891	72,942	-110,886
2004	986,098	200,000	786,098	108,482	110,340	-109,028
2005	666,880	200,000	466,880	64,429	55,319	-118,138
2006	775,110	200,000	575,110	79,365	47,948	-149,555
2007	602,208	164,745	437,463	60,370	46,369	-163,556
2008	380,397	200,000	180,397	24,895	24,359	-164,092
2009	460,000	200,000	260,000	35,880	48,901	-151,071
2010 <sup>a</sup>	442,178	200,000	242,178	33,421	43,856	-140,636
2011 <sup>a</sup>	571,000	200,000	371,000	51,198	88,618	-129,801
2012 <sup>b</sup>	446,000	200,000	246,000	33,948		

<sup>&</sup>lt;sup>a</sup> Preliminary Information

<sup>&</sup>lt;sup>b</sup> DFO (Department of Fisheries and Oceans) forecast

Table 8.-Biological and sustainable escapement goals for Lynn Canal salmon stocks by species and location.

Species	Stock	Escapement Goal Type	Escapement Goal Range	<b>Escapement Method</b>
Sockeyea	Chilkoot Lake Total	Sustainable	38,000 to 86,000	Weir Count
Sockeyea	Chilkat Lake Total	Biological	70,000 to 150,000	DIDSON Count
Coho <sup>b</sup>	Berners River	Biological	4,000 to 9,200	Peak Foot Count
Coho <sup>c</sup>	Chilkat River Combined	Biological	30,000 to 70,000	Sum of Peak Foot Index Counts
Chinook <sup>d</sup>	Chilkat River Combined	Biological	1,750 to 3,500	Mark-Recapture Estimate
Fall Chum <sup>e</sup>	Chilkat River Total	Sustainable	75,000 to 170,000	Fish wheel index

a Eggers et al. 2009

b Shaul and Crabtree 2005

c Ericksen and Fleischman 2006

d Ericksen and McPherson 2004

e Eggers and Heinl 2008

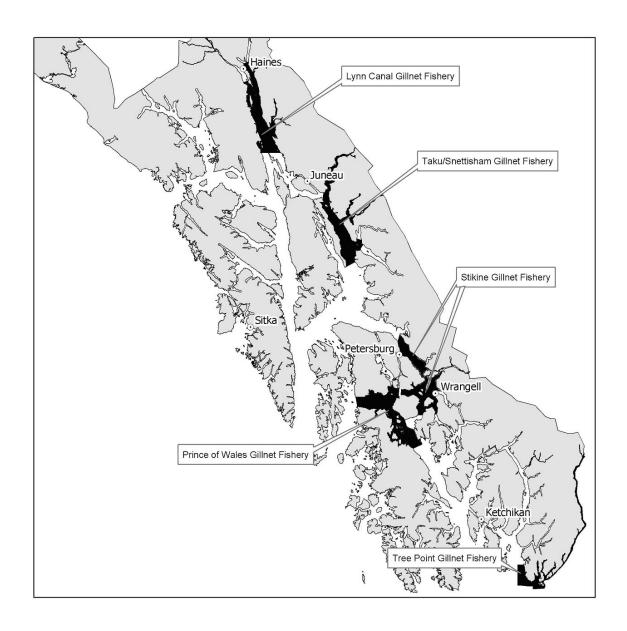


Figure 1.-Traditional Drift Gillnet Fishing Areas in Southeast Alaska.