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2011 Southeast Alaska Drift Gillnet Fishery Management Plan

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Alaska Department of Fish and Game **Division of Commercial Fisheries**

Symbols and Abbreviations

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Weights and measures (metric)

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

Weights and measures (English)

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

Time and temperature

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

Physics and chemistry

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

General

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

Measures (fisheries)

fork length	FL
mideye-to-fork	MEF
mideye-to-tail-fork	METF
standard length	SL
total length	TL

Mathematics, statistics

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

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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 2011. 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, 2011.

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 2011.

For the recent 10-year period 2000 to 2009, an average of 478 Southeast Alaska drift gillnet limited entry permits were issued annually, of which an average of 81% were actively fished each year. In 2010, 462 permits were issued, of which 425 (92%) 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 2000 to 2009, and 2.8 million salmon since statehood from 1962 to 2009. Of the total commercial salmon harvest in Southeast Alaska, the most recent 10-year average drift gillnet fishery harvests have included 42% of the sockeye, 21% of the chum, 11% of the coho, 3% of the pink, and 7% of the Chinook salmon (Tingley and Davidson, in prep)

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 2010 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 2011 preseason forecast for the Taku Chinook return does allow for a directed commercial fishery, and due to the small allowed catch associated with the forecast, fishing will not take place unless provided by inseason information. District 8 had four consecutive directed Stikine Chinook fisheries from 2005 through 2008. Similar to 2009 and 2010, the preseason forecast for 2011 indicates a below average run size.

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 2011 are forecast 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 2011 Stikine River preseason terminal run forecast of 30,000 large adults allows for a U.S. AC of 190 fish. For Taku River, the 2011 preseason terminal run forecast is 40,986 large adults allowing for a U.S. AC of 1,533 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). Most Alaska hatchery produced Chinook salmon harvested in drift gillnet fisheries do not count against the harvest ceiling mandated by the BOF allocation plan.

For 2011, the preliminary terminal run forecast for Stikine sockeye salmon is 183,000 fish, which constitutes an approximately average to slightly below average run. For comparison, the recent 10-year average (2001–2010) total Stikine sockeye run size is approximately 195,000 fish. The 2011 forecast includes approximately 88,200 Tahltan (48%), 43,200 enhanced Tuya (24%), and 51,600 wild mainstem sockeye salmon (28%). Returns to the Taku River, are expected to be near the 10-year average terminal run size of approximately 230,000 sockeye salmon based on Canadian stock recruit and sibling forecasts. Chilkoot Lake sockeye returns are expected to be well below average, and returns to Chilkat Lake are expected to be near average. Douglas Island Pink and Chum, Inc. (DIPAC) has forecast 203,000 enhanced sockeye returning to Port Snettisham.

The projected regionwide forecast of hatchery chum salmon returns for 2011 is expected to be 8.6 million. This includes 3.05 million to four DIPAC locations, 2.11 million to two Northern Southeast Regional Aquaculture Association (NSRAA) locations, 2.5 million to four Southern Southeast Regional Aquaculture Association (SSRAA) locations, 0.20 million to two Kake locations, and 0.3 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 2001 to 2010. Of the total harvest in numbers for all species chum salmon accounts for half of the salmon harvested in the drift gillnet fisheries.

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 2010 were estimated by hatchery operators at 252,000 fish, around 50% of total harvests. The majority of this harvest was in District 6 with significant harvests in Districts 1 and 8.

The Southeast Alaska pink salmon harvest forecast in 2011 is 55 million, with a range of 43 to 67 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 2011 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, exclusive of Alaskan hatchery-produced fish (8,549 Chinook salmon);
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 fishing 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 focus 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 District 11 open on Mondays at 12:01 p.m., except following the Memorial Day Holiday, when the fishery opens on Tuesday. If inseason Stikine Chinook run estimates allow for a directed Chinook fishery, District 8 will open on Monday at 8:00 a.m. with the same caveats for the Memorial Day Holiday as District 11. 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 also 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, Neets Bay, and Nakat Inlet 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 2011 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 2011 the all-gear Treaty Chinook allocation, based on a preseason Abundance Index of 1.69, is 294,800 Chinook salmon. Therefore, the drift gillnet Treaty Chinook salmon allocation is 8,549 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 may target Chinook salmon in Districts 8 and 11 dependant on 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.

2011 OUTLOOK

Chum Salmon

Runs of summer chum salmon in southern Southeast Alaska were poor in 2010: the escapement index was 30% below the escapement goal for this region and was the fourth lowest since the 1970s. The escapement of summer chum salmon in the southern Southeast Alaska subregion have been below the sustainable escapement goal threshold of 68,000 index spawners for three consecutive years. The estimated escapement of 8,700 summer chum salmon at Fish Creek, near Hyder, was 32% of the recent 10-year average of 27,100. ADF&G will pay close attention to Portland Canal chum salmon in 2011 and will take necessary management action early in the season to ensure adequate escapements of these stocks. ADF&G will conduct aerial surveys starting in late June to determine the strength of returning chum salmon runs to these areas.

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 that year;

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 2008. 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 2010 was 442,178 fish. That allowed for a harvest of approximately 33,420 Nass River sockeye salmon at Tree Point in 2010.

The Canadian Department of Fisheries and Oceans (DFO) has a preseason expectation for 2011 returns of approximately 523,000 Nass River sockeye salmon (Northern Boundary Technical Committee Report). If the forecast is accurate, then the AAH for Tree Point will be approximately 44,574 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 contribute significantly to the Tree Point gillnet fishery in 2011. Information concerning SSRAA forecast returns is included under the THA Fisheries section of this plan.

Pink Salmon

Pink salmon returns are expected to be above average to southern Southeast Alaska in 2011. If the actual returns come back as forecasted, the Tree Point drift gillnet fishery may receive four,

and 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 17, 2011) 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 for the 2011 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 19, 2011. The length of subsequent fishing periods up to the start of the PSMP on July 17 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 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 rebuilding 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 17, 2011. The overall pink salmon return to southern Southeast Alaska is expected to be above average in 2011. 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 four and 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 reaches 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, 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 fisheries performance data indicates above average returns of wild chum and coho salmon. During recent years, approximately 50% of the fall chum and coho 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 to commercial fishing through November 10, 2011.

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 intends to take the following actions:

1. In Statistical Weeks 29 and 30 the department will 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 will 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.

2011 OUTLOOK

Chinook Salmon

The 2011 preseason forecast of 30,000 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. However, after allowing for escapement, assessment fishery harvest and each countries base level catches, the resultant U.S. AC of 190 fish is not large enough to allow for directed U.S. commercial fisheries in District 8. An inseason run estimate is produced towards the end of May and if the inseason estimate of abundance shows that there is harvestable surplus available then a directed Stikine Chinook fishery could occur. For enhanced Chinook returning to the area, the 2011 Anita Bay Chinook total run forecast is 10,000 fish.

Sockeye Salmon

The 2011 Stikine River sockeye salmon return is expected to below the previous 10 year average but larger than 2010 return. The preliminary forecast for total return to the Stikine River is 183,000 sockeye salmon. The 2011 forecast includes approximately 88,200 Tahltan (48%), 43,200 enhanced Tuya (24%), and 51,600 wild mainstem sockeye salmon (28%). The Tuya return is the only return expected to be above average. 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 actual inseason abundance of Tahltan Lake return. Typically, the Tahltan Lake and Tuya Lake sockeye salmon run timing peaks in statistical week 27 or 28 (beginning June 27 or July 4) through the District 6 and District 8 fisheries. During an average Tahltan Lake run, like the run anticipated this year, significant numbers of sockeye could be present as early as statistical week 25 (June 13) and as late as statistical week 31 (July 31).

The 2011 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 to average with the exception of Salmon Bay Lake which was well below average. In addition, the sockeye salmon return McDonald Lake is expected to be below average based parent year escapements and fry assessment surveys.

Pink Salmon

The 2011 Southeast Alaska pink salmon forecast for 55 million fish harvest is well above average. The pink salmon returns to Districts 6 and 7 are expected to be good whereas the pink salmon return to District 8 is expected to be average at best.

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 185,000 summer chum salmon in 2011. The 2011 forecast is substantially below both the 2010 forecast of 279,000 and 2010 estimated return of 274,000. Returns to Anita Bay have typically peaked during statistical weeks 30, 31 or 32 (July 17, July 24, or July 31). Summer chum salmon production from Ketchikan area hatcheries is expected to once again be significant. Chum salmon returning to the Ketchikan area hatchery facilities migrate through District 6 and are expected to contribute to the harvest in this district.

Coho Salmon

The overall coho salmon returns for 2011 are expected to be average. The combined 2010 returns to Neck Lake and Burnett Inlet in upper Clarence Strait were approximately 146,500 coho salmon. The 2011 returns forecasted for Neck Lake and Burnett Inlet are 112,000 and 21,100

coho salmon. The 2010 coho salmon return to Anita Bay was approximately 20,900 fish with a forecast for 2011 of 20,200 fish. Approximately 211,800 fall coho salmon returned to enhancement projects in the Ketchikan area in 2010. The 2011 total forecasted Ketchikan area enhanced coho salmon return is 279,100 fish, and includes: Neets Bay (210,000), Nakat Inlet (20,700) Herring Cove (28,100), and Bakewell Lake (20,300). Wild coho salmon returns for 2011 are expected to be similar to the long-term average. Extended fishing periods in Districts 6 or 8 could occur beginning in Statistical Week 36 (August 28); however, actual fishing periods will be determined weekly inseason, based on wild coho salmon estimated abundance.

MANAGEMENT GOALS

Management goals for the District 6 and District 8 drift gillnet fisheries for the 2011 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

If Stikine Chinook inseason run estimates produced towards the end of May indicate a large enough surplus available for directed fishing, the openings would be similar to the 2005 through 2008 seasons. Openings would start at 8:00 a.m. on Mondays, unless the first opening occurred during the week of Memorial Day, in which case the opening would start on Tuesday. The length of subsequent openings each week will depend upon the number of boats fishing, 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 old Stikine closure lines would likely be utilized if directed Chinook salmon fishing were to occur. These lines would close 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 minimum mesh size is seven inches for the District 8 directed Stikine Chinook gillnet fishery. Based on inseason surveys from the 2005 through 2008 seasons, the mesh restriction will result in increased Chinook salmon harvest while minimizing the incidental harvest of steelhead. The standard 300-fathom length and 60 meshes deep net restrictions will apply to this fishery.

There are specific closed waters for the District 8 Chinook fishery. There are six areas where Chinook salmon are usually concentrated that can possibly be closed to drift gillnetting for varying lengths of time. 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. Closed waters for drift gillnetting in District 8 include areas near Babbler Point, Wrangell Harbor, the Nose on Woronkofski Island, Woodpecker Cove, Bear Creek, and Point Frederick to Beacon Point. The exact closed waters will be identified in the drift gillnet news release prior to each opening. Most closures will remain in effect throughout the entire fishery, through the second Saturday in June. The two exceptions are in the Nose and Woodpecker Cove Area closures. These closures will only be in effect if the gillnet fishery is open for more than 48 hours. 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. It is unlikely there will be a directed Chinook opening the week before Memorial Day in 2011. 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 2011 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 as usual. 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. Processors are requested to identify the numbers of Chinook salmon less than 28 inches long on the fish tickets as well as the numbers of Chinook salmon of lengths 28 inches or longer. ADF&G samplers working at the processing facilities will identify hatchery-reared Chinook salmon so those fish are not counted against the Alaskan share of the harvest.

Canada will prosecute a directed commercial Chinook salmon fishery on the Stikine in 2011. The Canadian AC is based on the preseason forecast of 30,000 Chinook salmon and using the mid-point of the escapement goal range of 21,000 fish is 1,710 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 83,500 and Canada has harvested 58,500 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 a 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 will start at 12:00 noon on Monday, June 13, (SW25) 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 District 108 will also open on June 13. Area restrictions may be implemented during the initial openings of District 108. Monday start dates in Districts 6 and 8 will occur through June 20. Starting June 26, District 6 and 8 will start on Sundays for the remainder of the season. The first openings in each district are dependent on the final 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 strong, then more liberal fishing periods and/or mid-week openings will be allowed in District 8. Fishing time in addition to the standard 48 hour opening is most likely to occur during the last two weeks of June and the first two weeks of July when the bulk of the Tahltan Lake sockeye run is passing through District 8. Reduced fishing time in District 8 to conserve Stikine River mainstem sockeye salmon in mid July may occur. 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 for harvesting local Alaskan sockeye stocks and normally is not influenced under most conditions by the presence of sockeye salmon stocks of Stikine River origin. 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, 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 Stikine sockeye model 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 escapements were below the escapement goal four of five seasons from 2004 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 presented to, and approved by, the BOF at the 2009 meeting in Sitka. This Action Plan outlines a conservative fishing regime that will occur during the peak of the McDonald Lake sockeye salmon return. In District 6, three openings, in stat weeks 29, 30, and 31, will have a maximum fishing time of two days. Additional area closures are not perceived at this time. However, ongoing GSI analyses may highlight certain areas and time that McDonald Lake

sockeye salmon are more susceptible to harvest and modifications to these conservation measures would proceed accordingly.

Any announcements of fishery extensions or mid-week openings will be made on the fishing grounds by 10:00 a.m. of the last day of the regular 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 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. The forecasted return of pink salmon may result in some extended fishing time in District 6 throughout August.

Coho Salmon

The coho salmon season will begin during late August or early September. Management of the District 6 fishery will be based predominantly 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 13) through the first Saturday in August (August 6), and from the first Sunday in September (September 4) 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.

2011 OUTLOOK

Chinook Salmon

The 2011 preseason forecast of 41,000 large Chinook salmon provides a U.S. AC of 1,500 fish. Considering the small AC, forecast confidence intervals, and recent forecast performance, directed Chinook commercial troll and gillnet fisheries in District 11 will not open by regulation on the first Monday in May. A limited fishery may occur beginning in late May or early June 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 2011 is expected to be average. This is based on both spawner-recruit analysis, sibling forecast and ocean survivals. The 2006 main parent year escapement of 146,150 fish was above the escapement goal of 75,000 fish, as well as the 10-year average escapement of approximately 105,000 sockeye salmon. The 2007 parent year had an escapement of 81,800 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 2011.

Escapement through the Speel Lake weir of the 2006 parent year was 4,163 sockeye salmon, approximately equal to the lower bound of the 4,000–13,000 fish escapement goal range, and the 3,099 fish escapement in 2007 was below the goal range. 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 2006 was 11,492 fish, and in 2007 was 1,927 fish. The 2005 to 2010 average sonar count is approximately 7,100 fish.

The DIPAC forecast for enhanced sockeye salmon returning to the Snettisham Hatchery is 203,000 fish, well-above last year's return of 67,600 fish.

Chum Salmon

In 2011, approximately 1,046,000 summer chum salmon are forecast to return from DIPAC hatchery releases in Gastineau Channel, and 190,000 chum salmon from Limestone Inlet remote releases. The total estimated DIPAC chum salmon contribution to the Section 11-B drift gillnet fishery is 577,000 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 average to above average in 2011. Parent year pink salmon escapements to District 11 were above both management target ranges and the recent 10-year average. Pink salmon counted through the Taku River Canyon Island fish wheels in 2009 were 60% of the even-year average, indicating 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 to a total return of 163,900 adults. This compares to the 10-year average total return of 208,500 adults.

DIPAC projects a 2011 return of approximately 33,000 hatchery coho salmon from their smolt releases into Gastineau Channel.

MANAGEMENT GOALS

Management goals for the 2011 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 2011 fishing season are specified in the annex.

Chinook Salmon

If there is a directed Chinook salmon drift gillnet commercial fishery, the first opening will occur once an inseason estimate of abundance is available. This is anticipated to occur mid to late May and is dependent on the number of tags recaptured in the joint US/Canadian mark recapture project. The allowable harvest will be based upon inseason projections, which are derived from returning Chinook salmon caught and tagged at the Canyon Island fish wheels. Due to the small Allowable Catch, the department anticipates weekly openings will consist of no more than one 24 hour fishing period per week should a directed fishery begin. Early in the season line closures may be in effect at the latitude of Jaw Point to protect milling fish off the flats. Per regulation, commercial fishery openings will begin on Mondays at 12:01 P.M. and 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. The western boundary is the 11-A/11-B section boundary (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. Processors are requested to identify the numbers of Chinook salmon less than 28 inches on the fish tickets as well as the numbers of Chinook salmon 28 inches or greater. Fish and Game samplers working at the processing facilities will identify 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 19) 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 analysis of scale pattern and parasite incidence data from 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 the wild 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 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 in 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 2010 Juneau Golden North Salmon Derby (August 12–14). Consequently, during Statistical Week 34, the District 11 gillnet fishery will not open until Monday, August 15.

LYNN CANAL GILLNET FISHERY

INTRODUCTION

The Lynn Canal drift gillnet fishery occurs 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). These regulatory sections are further divided into eight statistical areas.

Sockeye salmon are targeted from late 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.

The sockeye salmon runs in Lynn Canal have historically been among the largest in Southeast Alaska. The coho and fall chum salmon runs to the Chilkat River are among the largest in northern Southeast Alaska. In recent years, Chilkat Lake sockeye, Chilkat River mainstem sockeye, coho and fall chum salmon stocks have been productive and meeting escapement goals. Chilkat River fall chum salmon returns have been above average in the last several years with the exception of the below average return in 2010. Returns of Chilkoot Lake sockeye salmon has been below average since 2008 and is not expected to improve in 2011. The department believes that the decline in Chilkoot Lake sockeye salmon production is caused by a downturn in zooplankton production during 2005 through 2007 brood years. Wide fluctuations in

zooplankton abundance have been observed in Chilkoot Lake in recent years and hydroacoustic estimates since 2005 have improved. Returns of Chilkoot Lake sockeye salmon is expected to improve beginning in 2012. The 2011 return of Chilkat Lake sockeye salmon is expected to be below average. This is due to below average returns during the 2005-2007 brood years. Management strategies designed to ensure proper escapement of sockeye salmon to systems in the District will be in place during 2011.

During the 2009 Board of Fish meeting, revised escapement goals for Chilkoot and Chilkat Lake sockeye salmon were presented 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 2011, sockeye and coho salmon escapement into Chilkat Lake will be assessed with a DIDSON (**D**ual frequency **ID**entification **SON**ar) system. This system has allowed the department to monitor the escapement of Chilkat Lake sockeye salmon during all environmental conditions and will allow the department to review escapement goals for this stock. This equipment has enabled department crews to monitor Chilkat Lake salmon escapement during flow reversal, severe whether 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. Specific management goals for the 2011 Lynn Canal drift gillnet fishery and formal escapement goals 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 and 3,500 3-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 northern Lynn Canal.

2011 OUTLOOK

Chilkat River Drainage Sockeye Salmon

The 2011 forecasted return of Chilkat Lake sockeye salmon is expected to be below average. The department no longer collects information on Chilkat Lake sockeye salmon smolt, therefore returns for 2011 are not predictions but characterized as general expectations based on escapement and lake rearing conditions. Zooplankton density during 2007 and 2008, the lake rearing years for the 2011 return was below the previous 10-year average of 115,000 organisms/m^2 but the 2008 level was well above average.

The 2011 run size of Chilkat River mainstem sockeye salmon is expected to be near average based on parental year escapement and near average proportions of 2-ocean aged fish in the 2010 escapement.

Chilkat Lake escapement estimates of 84,000 and 73,000 during the 2005 and 2006 parent years were within the sustainable escapement goal range of 70,000 to 150,000 but well below average. Although no total smolt estimates are available for the dominant smolt years (2008 and 2009) for the 2011 return, the average size and weight of age-1.0 and age-2.0 smolt sampled were near or above the historical average in 2008 indicating productive rearing conditions in Chilkat Lake during that time. The age composition of the 2010 run of 2-ocean age fish was near average indicating an average return of 3-ocean age fish in 2011.

Escapement estimates of the Chilkat River mainstem sockeye salmon escapements in 2006, 2007, and 2008, (the dominant parent-years) were 24,000, 19,700 fish and 35,700 fish, respectively. Escapement estimates during the parent years for the 2011 return were near the historical 1994 to 2010 average of 32,800 fish for all brood years except 2007 which was well below this average. The proportion of age-0.2 and age-1.2 fish in the 2010 escapement was near average indicating that the 2011 return of age-0.3 and 1.3 fish to the mainstem Chilkat River may be near average in run strength.

Chilkoot Sockeye Salmon

Returns of Chilkoot Lake sockeye salmon in 2011 are expected to be below average. Although the total return of 215,000 Chilkoot Lake sockeye salmon in 2006 (dominant brood year) was well above average, rearing conditions in Chilkoot Lake in 2007 was poor. The Chilkoot Lake sockeye salmon weir count during the dominant parental brood year (2006) for the 2011 return was 96,200 fish, well above the desired escapement goal range. The Chilkoot River weir is used to collect scale samples for age composition, and to monitor the escapement of this stock during the return.

The reason production is expected to be down for the 2011 return of Chilkoot Lake sockeye salmon is due to a severe drop zooplankton production in 2007 possibly caused by the very warm summer weather in 2004 and 2005. The 2007 fall hydroacoustic pre-smolt estimate and zooplankton density was well below average indicating poor lake rearing conditions in 2007. Due to expected low returns of Chilkoot 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. Smolt abundance has improved since 2007.

Age composition of the 2010 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 2010 Chilkoot Lake escapement was below average. Given this information, the department is expecting a poor return of Chilkoot Lake sockeye salmon for 2011. Management decisions will continue to be based on inseason data and site specific sampling results from the District 15 drift gillnet fishery.

Berners Sockeye Salmon

An average run of Berners Bay sockeye salmon is expected in 2011 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 since harvests are typically a mix of Chilkat River mainstem fish. Peak aerial escapements to Berners Bay streams were near or generally above average for all brood years. The 2007 and 2008 commercial harvests of Berners Bay and Chilkat River mainstem sockeye salmon were estimated at 17,300 and 17,000 fish respectively. These harvests are near the historic 1976 to 2010 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). Projections for the Boat Harbor Terminal Harvest Area chum salmon return in 2011 is approximately 358,000 fish. This forecast return is above the historical average of 201,200 fish. The preseason projection for the Amalga Harbor chum salmon return is approximately 1,452,000 fish, well above the 1991–2010 average of 1,009,000 fish.

Based on parental-year escapement counts, the wild summer chum salmon return in 2011 should be average in run strength but at a much lower scale than the hatchery summer chum salmon return. Escapements of wild chum salmon to the Endicott River during the important parent years (2006-2008) of the 2011 return were well below average.

The majority of the summer chum salmon harvest in lower Lynn Canal is comprised of hatchery fish from remote release sites at Boat Harbor and Amalga Harbor. Smaller 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.

Fall Chum Salmon

The 2010 return of Chilkat River drainage fall chum salmon stock is expected to be above average. For the parent years, the peak aerial survey counts were 2,000 and 29,250 fish. These counts were well above the peak aerial escapement count average of 23,000 fish in 2007. No late aerial surveys were completed in 2006 therefore the peak count of 2,000 fish in 2006 does not indicate a poor escapement as this run typically peaks during the late fall. Peak aerial survey counts in the Klehini River were 21,400 fish. No survey was conducted in 2008. The total drainage wide estimated escapement in 2006 and 2007 based on mark-recapture index methods was 704,000 and 331,000 chum salmon. These estimates are above average for years where total drainage escapements estimates are available.

The commercial harvests during the dominant parental brood years (2006 and 2007) were near the previous ten-year average. A relationship between fish wheel catch and mark-recapture estimates has been developed for this stock. Results from mark-recapture work during years 2002 to 2005 estimated that 1.5% of the total number of fall chum salmon returning to the Chilkat River drainage are captured in the fish wheels.

Coho Salmon

The Chilkat River drainage coho salmon return is expected to be average during 2011. 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 2007 and 2008 escapements to Berners Bay (3,915 and 6,900) were below the escapement goal range of 4,000 to 9,200 fish in 2007 and within goals in 2008.

Sport Fish Division has been conducting coho salmon smolt coded-wire tagging (CWT) studies on the Chilkat River to estimate smolt size, age structure, production of coho salmon smolts and marine survival of coho salmon since 1999. The 2007 and 2008 Chilkat River fish wheel catches of 1,658 and 3,217 coho were below the previous 10-year average in 2007 and above average in 2008. Chilkat River index stream escapements for coho salmon in 2006 and 2007 were 24,600 and 57,400 fish, respectively. These escapement counts were below the escapement goal range in 2007 and within goals in 2008. Estimates of harvest were below average in 2007 and near the previous 10-year average in 2008. Forecasts for Lynn Canal coho stocks are based on recent marine survival trends, trapping CPUE and escapement estimates. Prior to 2005, the average marine survival for years 1999 to 2003 for Chilkat River coho salmon was 11.4%. In recent years, the average marine survival has dropped to 7.1% in years 2005 to 2008. The 2008-2010 return exhibited a marine survival rate of 11-12%, an increase over recent years.

Coho salmon production from streams in Berners Bay continues to be in decline. Coho salmon smolt production in Berners Bay has been below average since 2005 and this trend is continuing. Marine survival for this stock has decreased in recent years as well from a 1990–2004 average of 17.5% to a 2005–2009 average of 10.7%. A roughly similar proportionate decline in smolt production and marine survival has been observed in the Chilkat, Taku and Auke Creek drainages. Information collected in 2010 indicated fresh water and marine survival may be increasing. If marine survival rates are similar to 2010, the Chilkat River coho salmon return could be better than average.

Chinook Salmon

The 2011 preseason inriver abundance forecast for large (≥ age 1.3) Chilkat River Chinook salmon is estimated to be near historical averages and within the inriver abundance goal range of 1,850 to 3,600 fish. Since the preseason forecast is projected to be within the biological escapement goal range, the northern line in Chilkat Inlet will move northward to Glacier Point on the third week of the season and may be moved to the latitude of Cannery point by the fourth week of the season depending on sockeye salmon run strength as indicated by information collected by the lower Chilkat River fish wheel and drift net projects.

MANAGEMENT PLAN

The Lynn Canal drift gillnet fishery will open at 12:01 p.m. on June 19, the third Sunday of June. Weekly fishing periods are established by emergency order and announced to the public by news releases that are generally issued on Thursday afternoons.

In 2011, 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 Chilkoot and 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 19 (statistical week 26) with no mesh restriction. If the Chilkoot River weir count through June 16 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 16, the eastern portion of 15-A may be opened in the area south of Seduction Point. During the first three weeks of the season, Chilkat Inlet will be managed in accordance to the Chilkat River King Salmon Fishery Management Plan. Since the preseason forecast for Chilkat River drainage Chinook salmon is within the goal range, during the first two weeks of the season, Chilkat Inlet will be closed north of the latitude of Seduction Point. In week 28, Chilkat Inlet may be open south of the latitude of the Glacier Point-Twin Coves line. In week 29, Chilkat Inlet may be open south of the northernmost tip of Kochu Island (latitude). Chilkat Lake sockeye salmon run strength as measured by the lower Chilkat River fish wheel project will dictate commercial fishery openings in Chilkat Inlet after statistical week 28. It is likely that the northern boundary line within Chilkat Inlet will remain at the northernmost tip of Kochu Island or Cannery Point for the remainder of the summer season if escapements of Chilkat Lake sockeye salmon are projected to be within the escapement goal range. ADF&G is forecasting a below average return of sockeye salmon to Chilkoot and Chilkat Lake and an average return to the Chilkat River mainstem. It is likely that openings in northern Section 15-A will be very conservative if sockeye returns are below average. Decisions will be dictated by the results of various in season stock assessment programs operating on the Chilkat and Chilkoot River drainages. 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 to increase sockeye escapement within desired goal ranges. A six-inch minimum mesh size gear restriction 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 early 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 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 will be based on overall inriver abundance of fall chum and coho salmon. Fisherman are reminded that any extensions in fishing time during the fall season could be announced with little advanced notice as requested by industry. 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 below average return of coho salmon for Berners Bay streams, it is unlikely that openings within Berners Bay will occur in 2011. 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 19 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 16, 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 Chilkoot and 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 projection, it is possible that additional time, area, and gear restrictions 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 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 Chilkoot 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.

The Boat Harbor Terminal Harvest Area (THA) will be opened for extended periods beginning in week 27 (June 27). The Boat Harbor THA is defined in regulation as: those waters within two nautical miles of the western shoreline of Lynn Canal south of the latitude of Lance Point at 58°43.95' 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 instead be at the latitude of Danger Point (58°41.73' N. latitude) by Emergency Order 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 returns of hatchery chum salmon are present. This action has been in place for the last several seasons. Escapements of wild chum salmon to the Endicott River have improved in recent years due to 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 returns of hatchery chum salmon that enter the Boat Harbor proper area with little risk to wild salmon stocks outside of this area.

Fall season management will begin in statistical week 34 (August 15). 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 information collected from the 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. Shortened extension notice was requested by industry during the 2009 drift gillnet task force meeting.

In order to avoid conflicts with sport fisheries, the District 15 drift gillnet fishery will not be open concurrent with the 2011 Juneau Golden North Salmon Derby (August 12 to 14). Consequently, during Statistical Week 34, the District 15 gillnet fishery will not open until Monday, August 15.

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 2011 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 plans. 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 1,060,000 chum salmon to the Deep Inlet remote release site and the Medvejie Hatchery in 2011. The cost recovery goal for the Deep Inlet return is 200,000 chum salmon and 60,000 chum salmon are needed for brood stock. 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 the February 2009 meeting adopted a new regulation which modifies the time ratio of gillnet fishing time to purse seine fishing time during chum management (beginning the third Sunday in June) from two to one to a one to one ratio. The time ratio of gillnet fishing time to purse seine fishing time during Chinook management will remain two to one. Additionally, the Board of Fisheries has allowed trolling to occur when net fisheries are closed and when trolling does not interfere with cost recovery. During Chinook management (May 29 to June 18) gillnet fishing is scheduled on Mondays, Tuesdays, Thursdays and Fridays, and seine fishing scheduled on Sundays and Wednesdays. During the first half of chum management (June 19 thru August 6) gillnet fishing is scheduled on Mondays, Tuesdays and Wednesdays, and seine fishing scheduled on Sundays, Thursdays and Fridays. During the second half of chum management (August 7 thru September 29) a rolling schedule will begin with two days of seine fishing followed by two days of gillnet fishing until Deep Inlet closes for cost recovery harvest. The rolling schedule will resume after cost recovery and broodstock collection is complete. Details of the rotational fishery schedule for Deep Inlet were announced in an ADF&G News Releases on April 6, 2011.

The NSRAA board has requested that the common property rotational fishery begin May 29 in order to provide for common property harvest of king salmon returning to the Medvejie Hatchery. NSRAA expects a return of 34,550 Chinook salmon to Medvejie Hatchery in 2011. THA rotational gear fisheries are scheduled to begin on Sunday, May 29 and continue through June 18 with four days of gillnet and two days of seine per week.

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 2011, drift gillnet fishermen will be required to fish with a minimum mesh size of six inches prior to June 18. 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.

The NSRAA Board decided at their 2010 March meeting in Sitka to take a new approach to the Deep Inlet chum salmon cost recovery harvest this year. Cost recovery fishing will be conducted in August, when larger numbers of chum salmon begin entering the Deep Inlet THA, in an effort

to conduct the harvest in as short a period as possible. NSRAA staff will monitor catch rates, sex ratios and run strength in making the decision as to when the THA should close to commercial fishing. The THA will reopen on the first day after the date cost recovery is completed.

The cost recovery closure is expected to begin sometime between August 10 and August 23. While every attempt will be made to give longer notice, the closure announcement may have to be made on less than 24-hour notice. Every effort will be made to close fishing at a time the one to one ratio is in balance; however, a closure may occur, where the one to one ratio is not in balance.

The NSRAA Board decided that the re-opening schedule after cost recovery is complete will occur as follows: **Case 1:** If a two day period can be identified during cost recovery when there is abundant fish in the terminal harvest area and when cost recovery fishing is not occurring, trollers will be given 24-hour notice and be allowed to fish at that time allowing the rolling schedule, of two days of seine fishing followed by two days of gillnet fishing, to begin immediately following cost recovery: **Case 2:** Fishing will resume the day immediately following the completion of cost recovery, with two troll days, followed by the rolling schedule until the end of the season:

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 easternmost tip of Long Island to the westernmost tip of Emgeten Island to the westernmost tip of Error Island to the westernmost tip of Berry Island to the southernmost tip of Berry Island to the westernmost tip of the southernmost island in the Kutchuma Island group to the easternmost tip of the southernmost island in the Kutchuma Island group to the westernmost tip of an unnamed island at 135°17.67' W. longitude, 57°00.30' N. latitude to a point on the southern side of the unnamed island at 135°16.78' W. longitude, 57°00.08' N. latitude and then to a point on the Baranof Island Shore at 135°16.53' W. longitude 56°59.93' N. latitude with the following restrictions: all waters of Sandy Cove and Leesofskaia Bay will be closed.

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 2011 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.

During the 2011 season, the boundaries of the Deep Inlet THA may be changed by Emergency Order to help resolve conflicts between fishers and local private landowners in the area, if they occur. Conflicts can be avoided by reducing boat wakes in areas near private docks, by reducing excessive noise and lights prior to openings, and by anchoring well away from private residences.

In 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 Error 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 and according to Board of Fisheries management plans. The open drift gillnet fishing times will be announced via news releases prior to, and during, the fishing season. These times 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 12) 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 2011, SSRAA is expecting a total return of 1,169,000 summer chum, 354,000 fall chum, 210,000 coho, and 22,500 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, June 28, a rotational fishery according to 5 AAC 33.370 will be conducted for the drift gillnet and purse seine fleet. Details of the 2011 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 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]

Due to the Board of Fisheries action taken in February of 2009 the Nakat Inlet THA will include the waters of Nakat Inlet north of Surprise Point at 54°49.10' N. latitude and west of 130°42.75' W. longitude. In 2011, approximately 190,000 summer chum, 59,900 fall chum, and 20,700 coho salmon are expected to return to Nakat Inlet. Peak chum salmon catches from these releases are expected between early-July to early-August for summer chum and late August to early 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 2011.

The total Crystal Lake Hatchery coho salmon return is expected to be 4,500 fish; of that, an estimated 2,250 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 2011.

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 2011, approximately 185,000 summer chum, 10,000 Chinook, and 20,200 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. Sunday, May 1, through 12:00 noon June 12. Beginning June 13, the Anita Bay THA will be open according to a rotational schedule for purse seine/drift gillnet fisheries. The schedule will be the same as last year with the gillnet openings to seine openings of one to one throughout the chum salmon return. Details of this schedule were developed by SSRAA and will be announced by the department in a News Release. 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 2011 is approximately 358,050 fish. This forecast return is above the historical average of 201,200 fish. The preseason projection for the Amalga Harbor chum salmon return is approximately 1,452,000 fish, well above the 1991–2010 average of 1,009,178 fish. The Boat Harbor Terminal Harvest Area (THA) will be opened for extended periods beginning in week 27. 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. This action has been in place for the last six seasons. 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 2011 is 203,000 fish. This is an increase from last year's total return of approximately 67,600 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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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, 2010.

Fishery	Chinook[a]	Jacks[a]	Sockeye	Coho	Pink	Chum	Total
District 1							
Traditional (Tree Point)	1,428	16	62,680	87,863	569,510	325,087	1,046,584
Terminal Harvest Area	1,858	0	2,067	11,218	27,628	133,535	176,306
Annette Island	692	0	9,823	74,109	469,320	242,894	796,838
District 6							
Traditional (Prince of Wales)	1,223	1,250	112,428	225,520	309,566	97,948	747,935
District 7							
Terminal Harvest Area	3,792	137	296	7,166	1,484	61,587	74,462
District 8							
Traditional (Stikine)	1,562	797	32,737	42,772	58,610	51,005	187,483
District 11							
Traditional (Taku/Snettisham)	1,288	388	61,947	62,204	132,354	489,035	747,216
Terminal Harvest Area	3	6	14,660	37	431	28	15,165
District 13							
Terminal Harvest Area	4,696	1	295	456	45,087	296,731	347,266
District 15							
Traditional (Lynn Canal)	531	201	89,628	64,937	133,335	586,623	875,255
Terminal Harvest Area	81	62	11,340	933	37,719	178,006	228,141
Subtotals							
Traditional	6,032	2,652	359,420	483,296	1,203,375	1,549,698	3,604,473
Terminal Harvest Areas	10,430	406	28,658	20,455	112,420	669,887	842,256
Common Property Total	16,462	3,058	388,078	503,751	1,315,795	2,219,585	4,446,729
Hatchery Cost Recovery	0	0	0	0	0	0	0
Annette Island	692	0	9,823	74,109	469,320	242,894	796,838
Miscellaneous	0	0	0	0	0	0	0
Total	17,154	3,058	397,901	577,860	1,785,115	2,462,479	5,243,567

* Cost recovery using gillnet gear.

** 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 2010.

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	4,920	70,607	68,522	174,052	339,159	657,260
2010	**3,286**	**64,747**	**99,081**	**597,138**	**458,622**	**1,222,874**
Average 2000–2009	2,136	86,200	56,571	408,482	289,501	842,890

* Does not include jacks.

Table 3.–Southeast Alaska annual Prince of Wales (District 6) traditional drift gillnet salmon harvest, in numbers, by species, 2000 to 2010.

Year	Chinook*	Sockeye	Coho	Pink	Chum	Total*
2000	1,220	90,076	96,207	156,619	199,836	543,958
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	1,625	111,984	144,569	143,589	287,707	689,474
2010	**1,223**	**112,428**	**225,520**	**309,566**	**97,948**	**746,685**
Average 2000–2009	1,375	98,056	138,659	300,921	216,153	755,164

* Does not include jacks.

Table 4.–Southeast Alaska annual Stikine River (District 8) traditional drift gillnet salmon harvest, in numbers, by species, 2000 to 2010.

Year	Chinook*	Sockeye	Coho	Pink	Chum	Total*
2000	1,671	15,833	5,651	9,497	40,337	72,989
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	2,406	36,680	30,860	27,010	190,800	287,756
2010	**1,562**	**32,737**	**42,772**	**58,610**	**51,005**	**186,686**
Average 2000–2009	9,081	46,590	26,478	36,983	108,165	227,297

* Does not include jacks.

Table 5.–Southeast Alaska annual Taku/Snettisham (District 11) traditional and terminal harvest area drift gillnet salmon harvest, in numbers, by species, 2000 to 2010.

Year	Chinook*	Sockeye	Coho	Pink	Chum	Total*
2000	1,154	185,956	7,828	58,696	669,994	923,628
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	283,846	45,774	154,775	131,856	618,596
2005	23,301	106,048	21,289	182,778	93,700	427,116
2006	11,261	262,528	60,145	192,001	382,988	908,923
2007	1,452	112,241	22,394	100,375	590,169	826,631
2008	2,193	116,693	37,347	90,162	774,095	1,020,490
2009	5,694	61,790	36,615	56,391	918,195	1,078,685
2010	**1,291**	**76,607**	**62,241**	**132,785**	**489,063**	**761,987**
Average 2000–2009	4,847	186,460	31,884	115,126	420,095	758,412

* Does not include jacks

Table 6.–Southeast Alaska annual Lynn Canal (District 15) traditional and terminal harvest area drift gillnet salmon harvest, in numbers, by species, 2000 to 2010.

Year	Chinook*	Sockeye	Coho	Pink	Chum	Total*
2000	297	109,560	35,638	21,001	759,357	925,853
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	711	65,469	27,947	209,833	326,895	630,855
2006	344	145,579	55,133	94,700	1,094,212	1,389,968
2007	1,063	156,798	18,137	89,782	823,158	1,088,938
2008	659	46,655	46,932	26,034	1,072,135	1,192,415
2009	519	126,594	35,820	163,057	845,710	1,171,700
2010	**612**	**100,968**	**65,870**	**171,054**	**764,629**	**1,103,133**
Average 2000–2009	692	112,697	44,390	91,213	717,302	966,294

* Does not include jacks.

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 [a]	442,178	200,000	242,178	33,421	43,856	*-140,636*
2011 [b]	523,000	200,000	323,000	44,574		

[a] Preliminary Information

[b] 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	Escapement Method
Sockeye[a]	Chilkoot Lake Total	Sustainable	38,000 to 86,000	Weir Count
Sockeye[a]	Chilkat Lake Total	Biological	70,000 to 150,000	DIDSON Count
Coho[b]	Berners River	Biological	4,000 to 9,200	Peak Foot Count
Coho[c]	Chilkat River Combined	Biological	30,000 to 70,000	Sum of Peak Foot Index Counts
Chinook[d]	Chilkat River Combined	Biological	1,750 to 3,500	Mark-Recapture Estimate
Fall Chum[e]	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

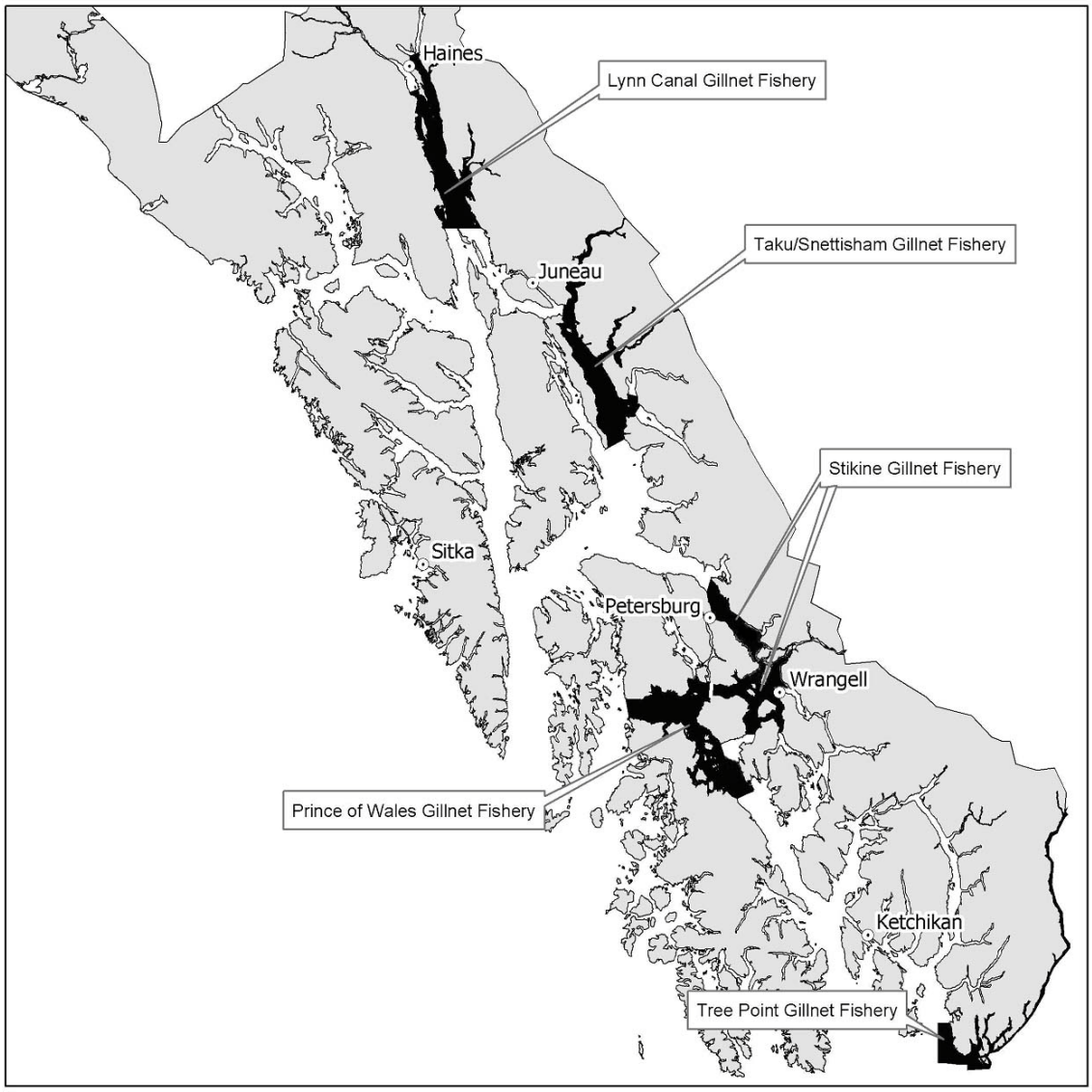

Figure 1.–Traditional Drift Gillnet Fishing Areas in Southeast Alaska.