

2021 Southeast Alaska Purse Seine Fishery Management Plan

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May 2021

Alaska Department of Fish and Game

Division of Commercial Fisheries



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

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**2021 SOUTHEAST ALASKA PURSE SEINE FISHERY MANAGEMENT
PLAN**

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ABSTRACT

The Southeast Alaska purse seine fishery is managed according to statute, regulations, emergency order authority, and in consultation with the public and industry through the Purse Seine Management Task Force process. The Alaska Department of Fish and Game issued a preseason forecast for a harvest of 28 million pink salmon for 2021. This forecast for pink salmon, together with historical escapement estimates, fishery performance data, private nonprofit hatchery forecasts for chum salmon and other species, are used to determine the management plan. The management plan for the 2021 Southeast Alaska salmon purse seine fishery is described in detail, along with expected run sizes, harvest strategies, and related management issues.

Key words: Purse seine, management, pink salmon, chum salmon, coho salmon, sockeye salmon, Chinook salmon, Fishery Management Plan

INTRODUCTION

This plan describes how the Southeast Alaska (SEAK) salmon purse seine fishery will be managed during the 2021 season and includes expected run sizes, harvest strategies, and related management issues. The plan is based on the Alaska Department of Fish and Game (ADF&G or department) 2021 preseason pink salmon forecast, historical escapement data, fishery performance data, private nonprofit hatchery forecasts, and input through the Purse Seine Task Force process. ADF&G area management biologists listed at the end of this document can provide further details regarding the implementation of the plan in their respective management areas. Average, unless defined otherwise, refers to the most recent 10-year average (2011–2020). Harvest, escapement, and run forecasts and outlooks, unless otherwise indicated, are in numbers of fish. 2021 statistical weeks can be referenced in Table 1.

Table 1.—Statistical week calendar for 2021 purse seine season.

Week	Beginning Date	Ending Date	Week	Beginning Date	Ending Date
23	30-May	5-Jun	32	1-Aug	7-Aug
24	6-Jun	12-Jun	33	8-Aug	14-Aug
25	13-Jun	19-Jun	34	15-Aug	21-Aug
26	20-Jun	26-Jun	35	22-Aug	28-Aug
27	27-Jun	3-Jul	36	29-Aug	4-Sep
28	4-Jul	10-Jul	37	5-Sep	11-Sep
29	11-Jul	17-Jul	38	12-Sep	18-Sep
30	18-Jul	24-Jul	39	19-Sep	25-Sep
31	25-Jul	31-Jul	40	26-Sep	2-Oct

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

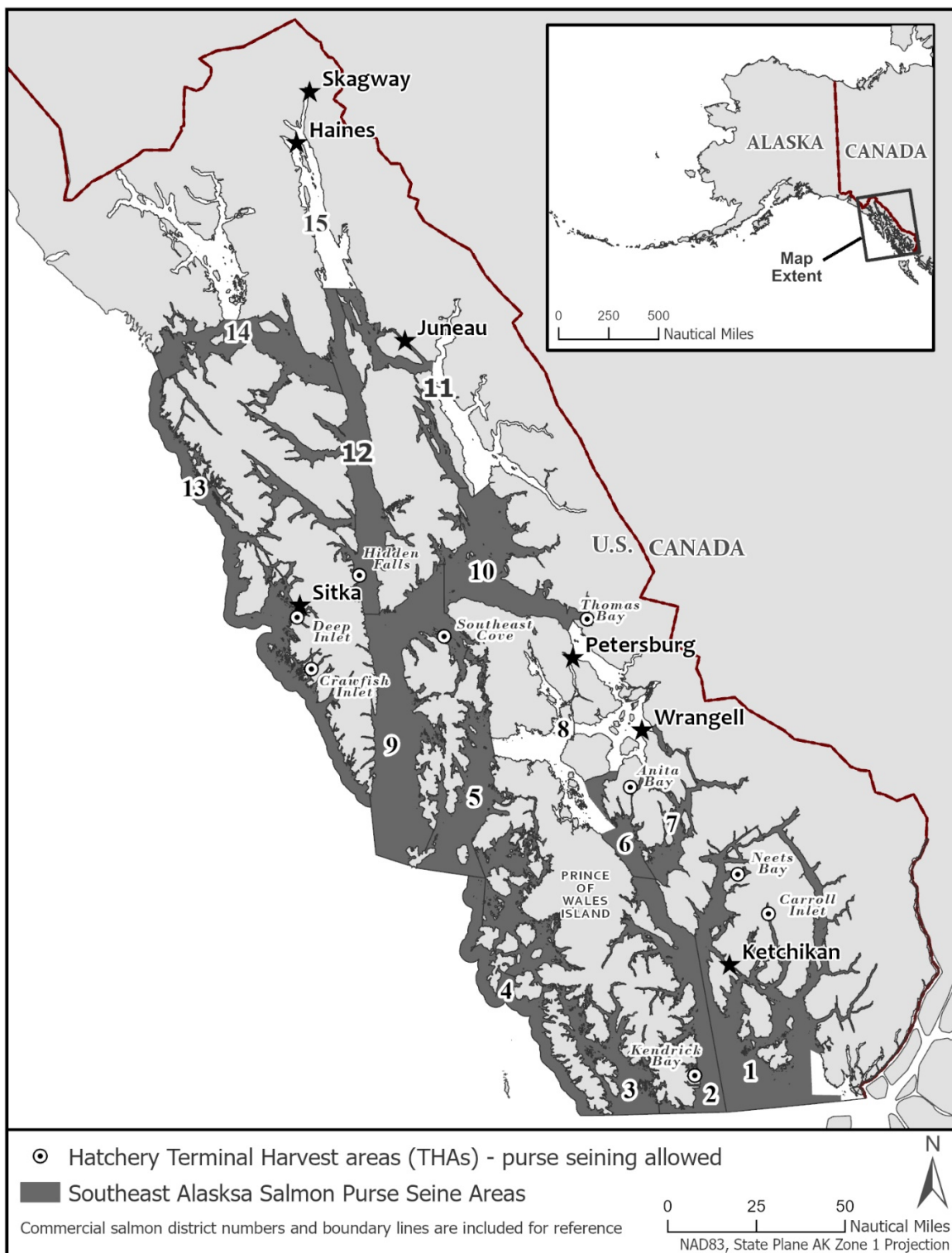


Figure 1.—Map of Southeast Alaska purse seine fishing areas.

Since statehood, 76% of the salmon harvested in SEAK commercial fisheries have been caught with purse seine gear (Conrad and Thynes *In Prep*). Pink salmon (*Oncorhynchus gorbuscha*) is the primary species targeted by the purse seine fleet; therefore, most management actions are based on the abundance of pink salmon stocks. Chum salmon (*O. keta*) are targeted in or near hatchery terminal areas and the majority of chum salmon harvest is from hatchery production. Other species of salmon are harvested incidentally to pink and chum salmon. Over the recent 10-year period (2011–20), the species composition of the purse seine harvest has included 81% pink, 16% chum, 2% sockeye (*O. nerka*), 1% coho (*O. kisutch*), and less than 1% Chinook salmon (*O. tshawytscha*).

Tagging studies of adult pink salmon have demonstrated that the stocks in SEAK exhibit a distinct separation between the northern and southern portions of the region. For purposes of catch tabulation and management, Districts 1–8 are grouped as “Southern Southeast” and Districts 9–15 as “Northern Southeast.”

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

STOCK OF CONCERN

The *Policy for Management of Sustainable Salmon Fisheries* (SSFP; 5 AAC 39.222) directs the Alaska Department of Fish and Game to provide the Alaska Board of Fisheries (board or BOF) with reports on the status of salmon stocks and identify any salmon stocks that present a concern related to yield, management, or conservation during regularly scheduled board meetings. In October 2017, the department recommended that the board designate Unuk, King Salmon, and Chilkat Rivers stocks of Chinook salmon, and the McDonald Lake stock of sockeye salmon, as a “stock of management concern” and the board adopted these recommendations in January 2018. In October 2020, the department recommended continuing the designation for these stocks, and additionally recommended that the Chickamin, Stikine, and Taku Rivers, and Andrew Creek, stocks of Chinook salmon be added as a “stock of management concern”.

These recommendations were based on guidelines established in the SSFP, which describes a management concern as “a concern arising from a chronic inability, despite use of specific management measures, to maintain escapements for a salmon stock within the bounds” of the established escapement goal whether it be a sustainable escapement goal (SEG), biological escapement goal (BEG), optimal escapement goal (OEG), or other specified management objective. Chronic inability is further defined in the SSFP as the “continuing or anticipated inability to meet escapement thresholds over a 4 to 5-year period, which is approximately the generation time of most salmon species.”

The “stock of concern” designation requires the department to develop a draft action plan to be presented to the board. The action plan provides the department’s assessment of the stock(s) of concern, summarizes historical run sizes, and describes the existing regulations and emergency order (EO) authority that the department follows to manage for escapement. The plan lists potential management actions for the sport, commercial, and personal use fisheries, and research projects. Criteria that must be met for future removal of the stock of concern designation are also outlined.

Action plans will be presented to the board and public in draft form at the 2022 Alaska Board of Fisheries meeting on Southeast and Yakutat Finfish and Shellfish. The department will finalize these reports and include descriptions of any management measures or recommendations from the board. Final action plans will be published in the Regional Informational Report series after the board meeting, and until that time, the department will continue to manage commercial, sport, and personal use fisheries per the 2018 action plans and the Pacific Salmon Treaty (PST).

2021 PINK SALMON FORECAST

The 2021 SEAK pink salmon harvest is predicted to be in the *average* range with a point estimate of **28 million fish (80% prediction interval: 19–42 million fish)**. The categorical ranges of pink salmon harvest in SEAK were formulated from the 20th, 40th, 60th, and 80th percentiles of historical harvest over the 60-year period 1960–2019:

Category	Range (millions)	Percentile
Poor	Less than 11	Less than 20 th
Weak	11 to 19	20 th to 40 th
Average	19 to 33	40 th to 60 th
Strong	33 to 49	60 th to 80 th
Excellent	Greater than 49	Greater than 80 th

The National Oceanic and Atmospheric Administration (NOAA) Alaska Fisheries Science Center, Auke Bay Laboratories initiated the Southeast Alaska Coastal Monitoring (SECM) project in 1997 to better understand the effects of climate and nearshore ocean conditions on year class strength of salmon and ecologically related species (Orsi et al. 1997). Since 2018, the SECM project has been conducted cooperatively by NOAA and ADF&G, and the two agencies have combined efforts to produce a joint pink salmon harvest forecast using SECM data (Piston et al. 2019). The ADF&G research vessel *Medeia* is now used to conduct the SECM surveys and biologists from NOAA, ADF&G, and the regional aquaculture associations provide direct assistance to the sampling effort during surveys in June and July. We will continue working towards increased coordination between agencies and will continue to look for ways to focus and expand the SECM survey to provide a wide variety of valuable information to the fishing industry.

The 2021 SEAK pink salmon harvest forecast was primarily based on juvenile pink salmon abundance indices collected by the SECM project in northern SEAK inside waters (Figure 2). These data were obtained from systematic surveys conducted annually in June and July in upper Chatham and Icy Straits and are highly correlated with the harvest of adult pink salmon in the following year (Wertheimer et al. 2011). The 2020 juvenile pink salmon abundance index (monthly peak juvenile CPUE; standardized catch based on 20-minute trawl sets) of 2.15 was below the average of 2.63 in the 24 years of SECM surveys.

Forecasts were developed using an approach described by Murphy et al. (2019). A multiple regression model was developed using the juvenile pink salmon abundance index and temperature. The model used is:

$$E(y) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

where $E(y)$ is the expected value for y , the natural log of Southeast Alaska pink salmon harvest, β_1 is the coefficient for the natural log of CPUE +1, β_2 is the coefficient for water temperature (e.g., May–July water temperature index in the upper 20 m in Icy Strait), and ε represents the

normally distributed error term. Leave-one-out cross validation (hindcast), Akaike Information Criterion for small sample sizes (Burnham and Anderson 2004), and the model performance metric mean absolute scaled error (MASE; Hyndman and Kohler 2006) were then used to examine alternative models. The 80% prediction interval around the forecast was calculated using the *car* package (Fox and Weisberg 2019) in program R version 3.6.3 (R Core Team 2020).

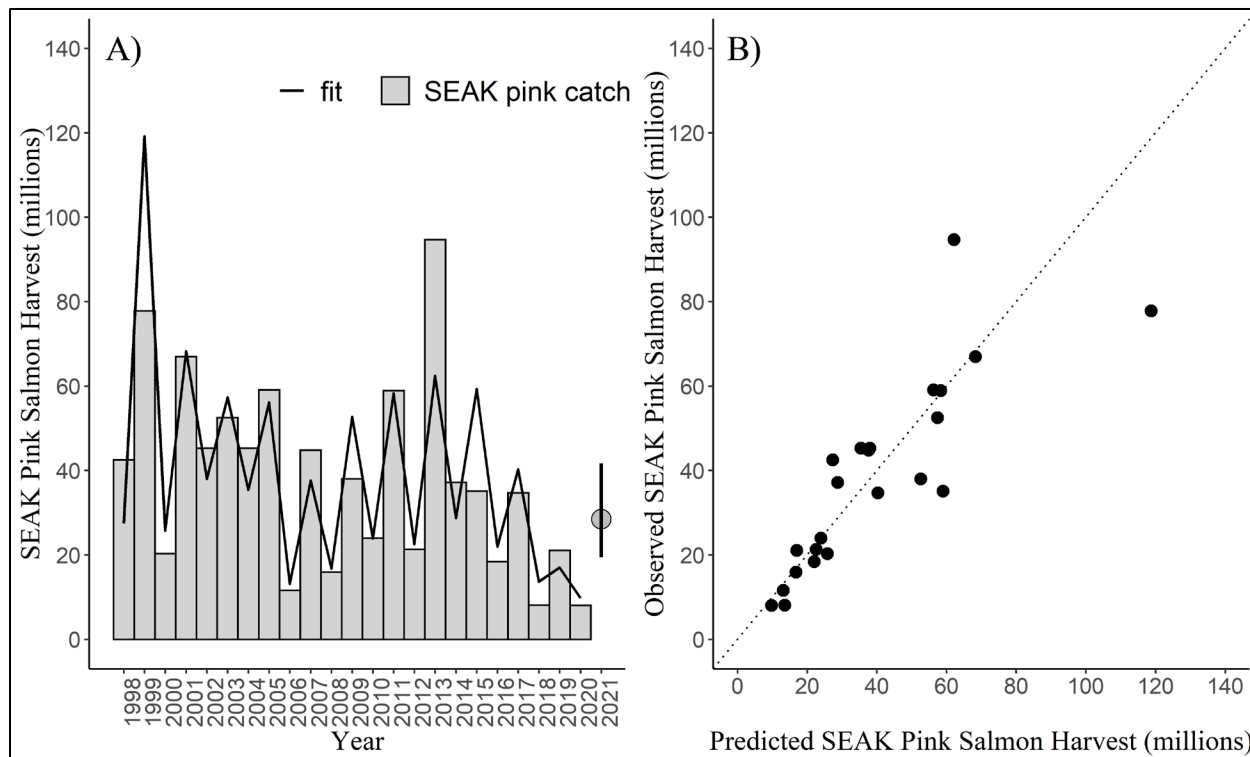


Figure 2.—Forecast model fit (hindcasts) for total Southeast Alaska (SEAK) pink salmon harvest, 1998–2020 by year (A) and by the fitted values (B). The 2021 forecast is shown as a grey circle in panel A with the 80% prediction interval as a black vertical line. The observed SEAK pink salmon harvest is represented by the grey bars and the model fit is shown by the black line in panel A. The dotted line in panel B represents a one-to-one line; circles above the line represent hindcasts that would have been less than the actual harvest and circles below the line represent hindcasts that would have been more than the actual harvest.

The 2021 harvest forecast of 28 million pink salmon is below the average harvest of 34 million pink salmon. A forecast of 28 million pink salmon is an improvement over the previous odd-year harvest in 2019 (21 million) and is just over half of the average odd-year harvest since 2001. The 2020 peak June–July juvenile pink salmon index value (2.15) ranked 16 out of the 24 years that SECM information has been collected. Pink salmon harvests associated with juvenile indices between a value of 2.0 and 2.5 have ranged from 12 to 42 million fish (mean=29 million fish).

The juvenile abundance index in 2020 was higher than in the past three years and may reflect improved freshwater and early marine survival in SEAK. Pink salmon harvests were well distributed throughout the Upper Chatham and Icy Strait stations in 2020, which resulted in a higher average log-transformed abundance index in 2020 than 2019, although the total catches were similar between these two years. Juvenile pink salmon caught in the 2020 SECM survey trawls were near the average size (in length) for the 24-year time series and further growth and survival will be dependent on favorable resources being available over winter in the Gulf of Alaska. Unlike many recent years, juvenile pink salmon heading to sea in 2020 did not experience

the anomalously warm sea surface temperatures that persisted throughout the Gulf of Alaska from fall 2013 through much of 2016 (Bond et al. 2015; Di Lorenzo and Mantua 2016; Walsh et al. 2018) and in 2018 and 2019¹. Sea surface temperatures were still modestly above average in the summer and fall of 2020 through much of the Gulf of Alaska, but the summer water temperature index in the upper 20 meters in Icy Strait was slightly below average indicating more moderate marine temperatures for juvenile salmon heading to sea in 2020.

Point estimates of our forecasts have been above the actual harvest in five of six years since 2015, and there is some concern that the actual harvest may be below our forecast estimate for 2021. The reason for the tendency to over forecast in recent years is unknown but may be related to increased offshore mortality in the Gulf of Alaska, error introduced in vessel calibrations and calculation of the juvenile abundance index, and/or error in how temperature is incorporated in the forecast model. Pink salmon escapements in the parent year (2019) were poor throughout northern SEAK inside waters and the escapement goal was not met in that subregion (Table 2). The poor run in 2019 was a dramatic departure from what have generally been strong odd-year runs. Pink salmon escapement goals for the Southern SEAK and Northern SEAK Outside subregions were met in 2019, and most of the region's harvest occurred in the southern half of the region. It will be challenging to reach a regionwide harvest of 28 million fish in 2021 without a strong rebound in northern inside waters. As noted above, the total catch of juvenile pink salmon in the 2020 trawl surveys was similar to the total catch in 2019, which produced a very low forecast and harvest in 2020. The distribution of juvenile salmon in the trawl catches has a large impact on the average log-transformed juvenile abundance index. Conceptually, consistent catches of juvenile pink salmon in most trawls conducted over a wide geographic area (as occurred in 2020) would reasonably relate to higher overall juvenile abundance compared to a survey in which one or two trawls accounted for most of the catch and many trawls captured few or no fish (as occurred in 2019); however, the low raw juvenile pink salmon catches in 2020 are still concerning.

Temperature has been included in most historical NOAA pink salmon forecast models and several different measures of temperature have been used since 2004 (Wertheimer et al. 2013). Temperature is a significant negative covariate in our forecast model and the negative linear relationship between temperature and harvest, as well as the positive effect of temperature on pink salmon growth, suggests that temperature may impact forecasts through effects on juvenile distribution and migration (Murphy et al. 2019). Recently, we began exploring the potential use of satellite temperature data (available from the NOAA National Environmental Satellite data and Information Service²) in our forecast models and preliminary results have been encouraging. Satellite data allows for averaging of temperature readings of an almost infinite variety of temporal and geographic units. An initial model run incorporating satellite sea surface temperature data at the location of the upper Chatham Strait SECM trawl stations produced a lower forecast range for the 2021 pink salmon harvest than we presented here. We plan to examine alternative approaches for incorporating temperature data and alternative power transformations of the catch data in greater detail prior to the 2022 forecast. Despite the uncertainties that surround every salmon forecast, the track record of our pink salmon harvest forecasts has been good, especially considering the difficulties unique to forecasting pink salmon (Haeseker et al. 2005).

¹ <https://www.ncdc.noaa.gov/data-access/marineocean-data/extended-reconstructed-sea-surface-temperature-ersst-v5>.

² <https://www.nesdis.noaa.gov/>

Table 2.–Southeast Alaska pink salmon escapement indices (in millions) by district and subregion, compared to management targets and biological escapement goal (BEG) ranges the 2019 parent year.

Subregion	District	2019 Index	Lower Management Target	Upper Management Target
Southern	101	2.24	1.02	2.71
Southern	102	0.67	0.29	0.77
Southern	103	1.49	0.95	2.54
Southern	105	0.33	0.25	0.66
Southern	106	0.43	0.21	0.57
Southern	107	0.36	0.26	0.69
Southern	108	0.10	0.02	0.06
Northern Inside	109	0.68	0.63	1.50
Northern Inside	110	0.28	0.59	1.41
Northern Inside	111	0.09	0.27	0.65
Northern Inside	112	0.32	0.53	1.26
Northern Inside	Inside 113	0.20	0.32	0.76
Northern Inside	114	0.05	0.15	0.35
Northern Inside	115	0.02	0.03	0.07
Northern Outside	Outside 113	1.53	0.75	2.50
BEGs	Total		Lower	Upper
by Subregion		2019 Index	Escapement Goal	Escapement Goal
Southern		5.63	3.00	8.00
Northern Inside		1.65	2.50	6.00
Northern Outside		1.53	0.75	2.50

The department will manage the 2021 commercial purse seine fisheries inseason based on the strength of salmon runs. Aerial escapement surveys and fishery performance data will continue, as always, to be essential in making inseason management decisions.

GENERAL MANAGEMENT GOALS

The following are primary management goals for the 2021 SEAK purse seine fishery:

1. Achieve overall pink salmon BEGs by subregion and within subregions and obtain escapements consistent with district and stock group management targets to ensure that escapements are well distributed.
2. Achieve overall adequate chum salmon escapements and ensure escapements are well distributed.
3. Provide for an orderly fishery while harvesting fish in excess of spawning escapement needs.
4. Minimize, to the extent possible, the harvest of salmon destined for fishing districts where weak returns are expected.
5. Promote a harvest of good quality fish within constraints dictated by run size and timing.
6. Manage the District 4 purse seine fishery consistent with the provisions of the PST.
7. Minimize harvest of Chinook salmon using conservation actions adopted by the BOF in 2018 including nonretention of Chinook salmon 28 inches or larger during portions of the 2021 purse seine season.

8. Manage the purse seine fishery in the waters of District 12 and in Section 14-C north of the latitude of Porpoise Islands, consistent with the *Northern Southeast seine salmon fishery management plans* (5 AAC 33.366).

REGIONAL MANAGEMENT PLAN

EXPECTED FISHING REGIME

The 2021 forecasts indicate an expected average pink salmon return throughout SEAK and a conservative fishing regime is expected. Areas around the region will open as described in this plan and are subject to inseason adjustments. Areas will open in mid- to late-June and focus on hatchery returns of chum salmon to lower District 2 (Prince of Wales shoreline from McLean Point to Polk Island) and Hidden Falls. The first pink salmon openings will begin in late June and early July in Districts 1, 2, 4, 7, and 12. Subsequent openings will be based on aerial observations and fishery performance data. The department will carefully monitor inseason information and will manage the fishery to ensure escapement goals are met, obtain district and stock group escapement targets, and distribute escapements throughout the run while providing maximum fishing opportunity. The department is prepared to provide additional fishing opportunity as run strength and fleet distribution allows by expanding fishing opportunity from one to two 15-hour periods per week, to 39-hour periods, to 2-days-on/2-days-off, or a more continuous fishing schedule. The department may have to reduce fishing opportunity after initially expanding opportunity depending on how runs develop and fleet distribution. Specific areas may warrant more, or less fishing time than the regional schedule depending on run strength and effort in those areas.

EFFORT LEVELS

The size of the purse seine fleet will have some impact on management decisions as the season progresses. Purse seine effort in 2020 was 201 permits fished, in 2019 was 240 permits fished, and in 2018, 242 permits fished. Effort levels are generally higher in odd years and lower in even years reflecting the current odd-year cycle of stronger pink salmon returns; effort in 2021 is anticipated to be similar to 2019. Since 2007, the number of total permits has decreased from 415 to 315 due to the permit buyback program. The average effort in the purse seine fishery is 257 permits fished.

DAILY START TIMES

For the 2021 season, the fishery opening and closing times will be:

1. 5:00 a.m. to 8:00 p.m. from the start of the purse seine season (June 20) through approximately August 15.
2. 6:00 a.m. to 9:00 p.m. from approximately August 16 through the end of the pink salmon season; and
3. 7:00 a.m. to 7:00 p.m. from the start of the fall chum salmon season until the season closes.

REGULATION MARKERS

Closed waters, stream markers defining closures around salmon streams, and salmon streams (that may not have markers) have been a topic at Purse Seine Task Force meetings over the years. Regulation 5 AAC 33.350 lists all closed waters in SEAK. Regulation 5 AAC 39.290 was amended at the 2013 statewide BOF meeting:

- (a) Except as otherwise provided in this title, commercial fishing for salmon is prohibited at all times in the waters of Alaska that are

- (1) within the streams and rivers of this state;
- (2) within 500 yards of the fresh waters of any salmon stream; or
- (3) over the beds or channels of streams and rivers of this state during all stages of the tide.

Also adopted in this regulation:

(e) The points established for stream mouths listed in the *Catalog of Waters Important for the Spawning, Rearing, or Migration of Anadromous Fishes* under 5 AAC 95.011 do not apply to enforcement of this section or other regulations limiting the distance that commercial fishing may occur from the fresh waters of any salmon stream.

Subsection (e) of the regulation above was added to clarify that fishing is prohibited within 500 yards of the fresh water of salmon streams and not 500 yards from the midpoint of the river mouth as listed in the *Anadromous Waters Catalog*.

The *Anadromous Waters Catalog* has maps identifying the locations of salmon streams and is available online on the department's web site at: <http://www.adfg.alaska.gov/sf/SARR/AWC/> and copies are available for review at ADF&G area offices.

Useful definitions of terms in the regulation are found in 5 AAC 39.975. *Definitions (a):*

- (10) “salmon stream” means a stream used by salmon, at any stage of life, for spawning, rearing, presence, or migration;
- (26) “fresh water of streams and rivers” means fresh water separated from salt water at the mouth of streams and rivers by a line drawn between the seaward extremities of the exposed tideland banks at the present stage of the tide

Under the authority of 5 AAC 39.290(b) the department may post closed areas by appropriate markers. If posted, the department shall place appropriate markers for any stream as close as practically possible to the distance or location specified by the applicable regulation or emergency order. Often these markers will be more than 500 yards from the mouth of the stream at mean lower low water (MLLW) in order to provide additional protection to fish accumulated near streams or because markers are placed where they can be seen and where they can be attached to a tree. Each stream has a different shoreline configuration. Some streams are in bays and the 500-yard markers can be connected by a straight line between the two markers because the location where the stream channel ends at MLLW is 500 yards or more from the straight line between the two markers. Other streams are located along straight shorelines and 500 yards from the stream channel at MLLW is defined by an “arc” or half of a circle originating from the two regulation markers with the arc being at least 500 yards from any part of the stream channel at MLLW. The most important thing to remember is the shoreline and the stream channel at low tide around every stream is different. Fishermen must always fish outside the markers, despite their distance from the stream, and must always fish 500 yards from where the stream channel ends at low tide, and they should fish outside of the arc defined by the two stream markers. This will ensure that they are outside of the 500-yard stream closure.

ADVISORY ANNOUNCEMENT INFORMATION

ADF&G will announce each fishery opening by advisory announcements (formerly news releases). Announcements will generally be made more than one full day in advance of the opening to provide a fair start unless an announcement with a shorter notice is needed to prevent the loss of opportunity and potentially over escaping a system. In the uncommon situation where the

department has announced a fishery inside normal markers and additional line changes are needed during an opening, the department may make those additional changes with less than 24-hour notice and will notify processors and fishermen in the vicinity by field announcement. Line changes and time changes differing from prior announcements will be indicated in **bold type** to highlight those changes. Advisory announcements will be available at ADF&G offices throughout SEAK, posted on the ADF&G web site, and may be available at fish buying locations or other prominent locations throughout the region. Advisory announcements can automatically be sent to any email address by subscribing for this service at this site:

<http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main>.

ADF&G area office contact numbers will be listed in the footer at the end of each advisory announcement. The department has discontinued the telephone message recording system for purse seine advisory announcements because of the difficulty in providing lengthy and detailed information on a telephone message recording, typical of purse seine advisory announcements. Advisory announcements are organized in numerical order by district, then within a district from the shortest duration opening to the longest duration opening, followed by the current Chinook salmon landing restrictions, information and comments, and a harvest report from the previous fishing period.

TERMINAL PINK SALMON FISHERIES

Terminal fisheries may open inside normal markers or stream markers at various locations throughout the region. These areas may open to harvest buildups of pink salmon in excess of escapement needs. These fisheries are conducted at the discretion of the area management biologists in consideration of providing an orderly harvest that does not compromise escapement needs and budgetary constraints.

ADF&G will strive to open fisheries so that fish of the best possible quality can be harvested in existing traditional fisheries. If substantial buildups of pink salmon occur inside normal closed waters in excess of spawning needs, openings to target these fish may occur, most likely in late August and early September. Openings of this nature will be announced via standard advisory announcements.

CHINOOK SALMON HARVEST

ADF&G is required to manage the SEAK purse seine fishery for a maximum harvest of 4.3% of the annual all-gear Chinook salmon harvest ceiling determined under the terms of the PST [5 AAC 29.060 (b)(1)]. For 2021, the all-gear PST Chinook salmon allocation is 201,100 Treaty Chinook salmon. This year's all-gear harvest limit includes a 2% reduction that will serve as a buffer to avoid exceeding the all-gear limit and payback provisions within the PST. The all-gear harvest limit for SEAK is determined by the catch per unit effort metric from the SEAK early winter power troll fishery. The 2021 purse seine Treaty Chinook salmon allocation is 8,650 fish. The need for management measures to comply with the purse seine allocation will depend on inseason evaluation of Chinook salmon harvest.

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

1. Chinook salmon taken in the purse seine fishery that are less than 28 inches in length (as measured from the tip of the snout to the tip of the tail) will not be counted against the Chinook salmon harvest quota.
2. Chinook salmon less than 28 inches in length may be harvested by purse seine fishermen but not sold. All retained Chinook salmon must be reported on fish tickets as personal use (harvest code 95).

CHINOOK SALMON IMPLEMENTATION PLAN

SEAK Chinook salmon stocks are currently experiencing a cycle of very low abundance. Over the past seven years (2013–2019), the eleven monitored Chinook salmon index systems did not meet escapement goals over 50% of the time. In 2020, five of the eleven monitored Chinook salmon index systems were below their escapement goal ranges and four of the five systems for which forecasts are developed are projecting runs below their escapement goal ranges in 2020. In addition, four of the five Chinook salmon stocks for which the department develops formal forecasts are anticipating 2021 runs less than what is needed to achieve minimum escapements: Chilkat, Taku, Stikine, and Unuk Rivers. To meet escapement goals in 2021, restrictions will be implemented in gillnet, purse seine, troll, sport, personal use, and subsistence fisheries throughout SEAK.

The Alaska Board of Fisheries approved action plans for three Chinook salmon Stocks of Management Concern (Unuk, King Salmon, and Chilkat Rivers) at the 2018 Southeast and Yakutat Finfish Meeting. These plans outline specific actions to be taken in the Neets Bay THA, Districts 11 and 15 drift gillnet fisheries, as well as purse seine, troll, sport, personal use, and subsistence fisheries throughout the region to minimize harvest of Chinook salmon returning to these systems. In October 2020, the department recommended the board continue the Unuk, King Salmon, and Chilkat Rivers as stock of concern and recommended the board declare the Andrew Creek and the Chickamin, Taku, and Stikine Rivers stocks of Chinook salmon as stocks of concern. Management actions for 2021 will be similar to those in 2020.

More information about the basis for 2021 Chinook salmon conservation measures in SEAK is publicly available (links provided below).

Chilkat River and King Salmon River King Salmon Stock Status and Action Plan, 2018:

<http://www.adfg.alaska.gov/FedAidPDFs/RIR.1J.2018.05.pdf>

Unuk River King Salmon Stock Status and Action Plan, 2018:

<http://www.adfg.alaska.gov/FedAidPDFs/RIR.1J.2018.04.pdf>

2021 Southeast Alaska Chinook Salmon All-gear Harvest Limit press release:

http://www.adfg.alaska.gov/index.cfm?adfg=pressreleases.pr&release=2021_02_05

Southeast Alaska Chinook Salmon Management Restrictions for Troll, Purse Seine, and Drift Gillnet Fisheries Advisory Announcement:

<http://www.adfg.alaska.gov/static/applications/dcfnewsrelease/1242554703.pdf>

CHINOOK SALMON NON-RETENTION

Management actions taken in the purse seine fishery to conserve SEAK Chinook salmon and stay within the harvest limits outlined in the Pacific Salmon Treaty will be highly restrictive in 2021.

Nonretention of Chinook salmon 28 inches or larger will be in place through at least July 31 for the 2021 purse seine season. Chinook salmon retention after July 31 will be dependent on areas open to directed pink salmon fisheries and the magnitude of pink salmon harvests. Chinook salmon harvests will be monitored closely, and the purse seine fishery will return to nonretention in advance of exceeding the purse seine allocation of the annual PST harvest ceiling. Chinook salmon less than 28 inches in length may be harvested by purse seine fishermen but not sold. All retained Chinook salmon must be reported on fish tickets as personal use (harvest code 95). When under nonretention, purse seine fishermen are encouraged to avoid fishing in areas with high concentrations of Chinook salmon and to quickly release those caught in a manner that minimizes mortality.

There may be specific terminal areas in which all Chinook salmon may be, or must be, retained. ADF&G intends to implement full retention (5 AAC 39.265) from the beginning of the season for net fisheries in the Deep Inlet THA. Due to expectations of lower enhanced Chinook salmon harvests from the Hidden Falls THA, retention will be allowed during openings of the Hidden Falls THA until mid- to late July when chum salmon harvests in the THA generally decline. Specific retention and nonretention periods will be announced in each purse seine fishery advisory announcement. Additional areas may also be announced via advisory announcement.

REPORTING OF PERSONAL USE HARVEST

Fishermen and processors should be aware that all salmon, including steelhead, commercially harvested but retained for personal use and not sold must be reported on fish tickets (harvest code 95) at the time other fish from an opening are delivered.

TEST FISHERIES

Test fisheries to assess run strength and timing of pink and chum salmon and to generate revenue for fisheries management will continue in 2021. The Point Gardner test fishery begins in late June and runs through the end of July. The Kingsmill Point test fishery begins the first week of July and runs through the end of July. These test fisheries are useful in determining the run strength and timing of pink and chum salmon returning to Section 9-B and District 10. The Hawk Inlet test fishery begins the last week of June and runs through mid-July and is useful in determining the run strength and timing of pink salmon entering Districts 11 and 15.

SEASON END

Concern has been expressed at Purse Seine Task Force meetings regarding the potential loss of fishing opportunity after the department has announced the closure of the purse seine fishing season. The department agreed that the end of the season would be announced following review of catch and escapement data from the final opening. If there are areas needing additional escapement adjacent to areas with adequate escapement, the department could consider closure lines, if appropriate, to provide harvest opportunities on fish returning to areas where escapements have been met. The department did caution fishermen regarding implementation of this plan that the season closure is based on several factors including providing good overall distribution of escapements, higher concentrations of females at the end of the run, incomplete escapement information at the end of the season, and consideration for harvest of other species.

USE OF AIRCRAFT PROHIBITED

A regulation (5 AAC 33.398) adopted by the BOF in 2015 and amended in 2018, prohibits the use of aircraft to locate salmon for the commercial taking of salmon or to direct commercial salmon

fishing operations during an open commercial salmon fishing period in SEAK. Additionally, during an open commercial purse seine fishing period for an area other than a terminal harvest area, no person may use an aircraft to locate salmon for the commercial taking of those fish or to direct commercial fishing operations one hour before, during, and one hour after the open commercial purse seine fishing period.

SOUTHERN SOUTHEAST PURSE SEINE FISHERIES

2019 PINK SALMON RETURNS

The Southern Southeast Alaska Subregion includes the area from Sumner Strait south to Dixon Entrance (Districts 1–8). The escapement index value of 5.6 million in 2019 was within the escapement goal range of 3.0 to 8.0 million index fish (Table 2). Escapement indices were within or exceeded management targets for all 7 districts and for all 18 pink salmon stock groups within this subregion.

MANAGEMENT CONCERNS

Uncertainties about fleet size, distribution, and the department’s reaction to those can only be addressed inseason. ADF&G and the fishing industry will have to be flexible and be able to react quickly to changes from historical fishing patterns. Above all, meeting escapement goals will continue to be the primary objective of the department. Within that conservation mandate, the department will attempt to work with industry to provide a stable supply of fresh fish.

McDonald Lake Sockeye Salmon

McDonald Lake sockeye salmon was designated a stock of management concern by the BOF in February 2009, due to a long-term decline in escapements. In February 2012, this stock of concern status was removed due to improved adult escapements and rearing fall fry estimates. The stock was again designated as a stock of concern by the BOF in January of 2018. From 2013 to 2020, escapements were below the sustainable escapement goal (SEG) of 55,000–120,000 fish in seven of the eight years and included the lowest escapements ever recorded at McDonald Lake in 2020 (8,200) and 2018 (11,000). A draft action plan with several management options each for commercial, sport, and personal use fisheries was presented to the board in January of 2018. The board considered the various options and adopted the management actions that were outlined in the 2009 action plan. The department will implement the board recommended actions to the Southern Southeast Alaska purse seine and gillnet fisheries in an effort to meet the McDonald Lake sockeye salmon escapement goal. In October of 2020, the department recommended the McDonald Lake stock of sockeye salmon continue as a stock of concern.

Management actions that *will be* instituted in commercial net fisheries consist of the following:

- District 1 purse seine—from statistical weeks (SWs) 29 through 31, the purse seine fishery on the western shore of Gravina Island will be closed north of the latitude of Cone Point.
- District 2 purse seine—from SWs 29 through 32, the purse seine fishery on the western shore of the Cleveland Peninsula (within 3.0 nautical miles [nmi] of the shoreline) will be closed.
- District 5 purse seine—from SWs 29 through 31, the District 5 purse seine fishery along the northwest corner of Prince of Wales Island between Point Baker and the Barrier Islands will remain closed.
- District 6 purse seine—from SWs 29 through 31, the District 6 purse seine fishery along the west side of Etolin Island between Point Stanhope and the latitude of Round Point will

remain closed. From SWs 29–31, the District 6 purse seine fishery along the east side of Prince of Wales Island between Luck Point and Narrow Point will remain closed.

- District 6 drift gillnet—from SWs 29 through 31, the District 6 drift gillnet fishery will open for a maximum of two days.
- District 7 purse seine—from SWs 29 through 31, the District 7 purse seine fishery in Section 7-B will remain closed. If pink salmon runs are extremely strong, the northern portion of section 7-B, north of Union Point may be open during SW 31. If this occurs, restrictions may occur in that area south of Union Point into SW 32 to reduce the overall interception of sockeye salmon.

ADF&G will continue to estimate the sockeye salmon escapement at McDonald Lake through surveys of the spawning grounds from late August through late September.

McDonald Lake Sockeye Salmon Stock Status and Action Plan, 2018 can be found at this link:
<http://www.adfg.alaska.gov/FedAidPDFs/RIR.1J.2018.03.pdf>

MANAGEMENT PLAN

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

U.S./Canada District 4 Purse Seine Agreement

In the spring of 2018, the United States and Canada renegotiated a 10-year annex, 2019–2028, for the District 4 purse seine fishery. There were minor changes to the language in the District 4 purse seine portion of the PST which will have little to no effect on the management strategy within the district and are outlined below. The management goals remain the same and the agreement calls for managing the Alaska District 4 purse seine fishery before statistical week 31 to

1. achieve an annual harvest share of the Nass and Skeena Rivers sockeye salmon of 2.45% of the Annual Allowable Harvest (AAH) of the Nass and Skeena Rivers sockeye salmon stocks in that year; and
2. carry forward from year-to-year annual deviations from the harvest share arrangement.

The Treaty specifies management actions in the District 1 drift gillnet and District 4 purse seine fisheries prior to SW 31 and Canadian fisheries based on total run size estimates of sockeye salmon to the Nass and Skeena Rivers as follows:

1. Skeena River
 - a. When the expected total run is below 900,000 sockeye salmon, there are no Canadian commercial marine harvests and the U.S. shall undertake measures to reduce the impact of the District 4 purse seine fishery, which may include delaying the start date and duration of the fishery.
 - b. When the expected total run is below 600,000 sockeye salmon, there are no Canadian marine or inriver commercial harvests except for terminal fisheries adjacent to enhancement spawning channels and the U.S. shall undertake additional measures to reduce the impact of the District 4 purse seine fishery, which may include delaying the start date and duration of the fishery, and/or reducing the fishing area.
2. Nass River

- a. When the expected total run is below 200,000 sockeye salmon, there are no Canadian commercial marine harvests and the U.S. shall undertake measures to reduce the impact of District 1 drift gillnet and District 4 purse seine fisheries, which may include delaying the start date and duration of these fisheries.
- b. When the expected total run is below 180,000 sockeye salmon, there are no Canadian marine or inriver commercial harvests and the U.S. shall undertake measures to reduce the impact of District 1 drift gillnet and District 4 purse seine fisheries, which may include delaying the start date, reducing the duration, reducing the area, and/or implementing mesh restrictions (District 1 drift gillnet fishery only) for these fisheries.

The AAH each year will be calculated as the combined total run of Nass and Skeena Rivers adult sockeye salmon in that year less the combined Nass and Skeena escapement target of 1.1 million fish. In the event the actual Nass and Skeena Rivers spawning escapement for the season is below the target level, the actual spawning escapement will be used in the AAH calculation. For 2021, the department estimates the escapement target will be 900,000 sockeye salmon.

The total run calculation includes the harvests of Nass and Skeena Rivers sockeye salmon in the principal boundary area fisheries and the spawning escapements to the Nass and Skeena watersheds. This includes the harvest of Nass and Skeena sockeye salmon in Alaska Districts 1, 2, 3, 4, 6, and 8 net fisheries, Canadian Areas 1, 3, 4, and 5 net fisheries, and Canadian Nass and Skeena inriver fisheries. Harvests in other boundary area fisheries may be included as jointly agreed by the Northern Boundary Technical Committee (NBTC).

Although the management intent shall be to harvest salmon at the AAH, it is recognized that overages and underages will occur, and an accounting mechanism is required. The management intent for each fishery shall be to return any overages to a neutral or negative balance as soon as possible. The accrual of underages is not intended to allow either Alaska or Canada to modify its fishing behavior in any given year to harvest the accrued underage.

Over past years, the bilateral NBTC has worked to finalize the total run reconstructions for the Nass and Skeena Rivers. In January 2021, the NBTC finalized the run reconstruction for 2019 and presented the preliminary run reconstruction for 2020 to the bilateral Northern Panel. Information in Table 2 reflects the performance of the District 4 purse seine fishery from 1999 through 2019, preliminary numbers for the 2020 season, and the 2021 forecast.

Fisheries and Oceans, Canada (DFO) has a preseason expectation of approximately 2,134,000 sockeye salmon to the combined Nass and Skeena Rivers in 2021. This is a combined forecast of 1,697,000 Skeena River sockeye salmon and 437,000 Nass River sockeye salmon. If the 2021 forecast is accurate, and the combined escapement is 1.1 million sockeye salmon, then the AAH for District 4 will be approximately 25,000 Nass and Skeena Rivers sockeye salmon (Table 3). District 4 time and/or area restrictions during the treaty period may be necessary to achieve Treaty obligations. In 2021, the District 4 purse seine fishery will start, by regulation, on Sunday, July 4. District 4 will be managed under the PST annex through July 24, 2021 (SWs 28, 29, and 30). The inseason forecast will be analyzed prior to the July 4 opening and if run size warrants an opening, the district will open on July 4. The initial opening on July 4 will be for a yet to be determined length and will be based on the best available data at the time of the announcement. The duration of following openings will be based on sockeye salmon escapement estimates through the Tyee test fishery at the mouth of the Skeena River, harvest and CPUE, effort levels, and pink salmon

run strength. The amount of effort and harvest of sockeye in the district will be monitored to stay within Pacific Salmon Treaty sockeye salmon allocations. As part of the new 2019 Chapter 2 agreement, ADF&G and DFO have set up an information exchange protocol that is intended to enhance inseason communication between both management agencies. This will allow the department to closely follow the returns to the Skeena and Nass Rivers so inseason adjustments can be made. Formal fishery summaries will also be exchanged on a weekly basis. In addition, the Tyee test fishery, at the mouth of the Skeena River, can be tracked daily from a web-based database. This protocol has worked in recent years and allowed managers to provide additional fishing opportunities or reduce time in order to stay within treaty obligations.

Table 3.–Sockeye salmon allocations for the District 4 purse seine fishery based on Nass and Skeena Rivers allocation calculations, 1999 to 2019.

Year	Nass/Skeena Total Return	Nass/Skeena Escapement	Nass/ Skeena AAH	Allowable D4 Harvest (2.45%)	Total Pre- SW 31 Sockeye Harvest	Actual Nass/Skeena Harvest	Annual Overage/ Underage	Cumulative Overage/ Underage
1999	1,771,048	936,705	834,343	20,441	7,664	3,232	-17,209	-17,209
2000	5,318,228	1,100,000	4,218,228	103,347	48,969	29,221	-74,126	-91,335
2001	4,965,291	1,100,000	3,865,291	94,700	203,090	167,854	73,154	-18,180
2002	2,776,502	1,051,333	1,725,169	42,267	26,554	18,627	-23,640	-41,820
2003	3,306,526	1,100,000	2,206,526	54,060	84,742	44,258	-9,802	-51,622
2004	2,620,994	1,100,000	1,520,994	37,265	30,758	19,233	-18,032	-69,653
2005	1,770,474	1,000,144	770,330	18,873	35,690	19,442	569	-69,084
2006	3,650,525	1,100,000	2,550,525	62,488	89,615	68,940	6,452	-62,632
2007	2,752,074	1,100,000	1,652,074	40,476	112,135	75,615	35,139	-27,493
2008	2,531,701	1,100,000	1,431,701	35,077	6,262	4,880	-30,197	-57,690
2009	1,602,959	1,053,858	549,101	13,453	15,971	10,128	-3,325	-61,015
2010	1,395,616	956,954	438,662	10,747	4,612	1,091	-9,656	-70,671
2011	2,487,985	1,100,000	1,387,985	34,006	25,280	16,599	-17,407	-88,077
2012	2,737,168	1,100,000	1,637,173	40,111	18,300	9,598	-30,513	-118,590
2013	981,476	642,461	339,015	8,306	13,102	4,228	-4,078	-122,668
2014	3,824,537	1,100,000	2,724,537	66,751	114,375	74,005	7,254	-115,414
2015	3,015,042	1,100,000	1,915,042	46,919	43,873	21,433	-25,491	-140,899
2016	2,140,259	1,100,000	1,040,259	25,486	110,346	65,039	39,553	-101,347
2017	1,422,783	1,100,000	322,783	7,908	12,036	6,916	-992	-102,339
2018	2,086,458	1,100,000	986,458	24,168	19,743	9,999	-14,169	-116,508
2019	1,200,155	862,549	337,606	8,271	9,399	4,450	-3,821	-116,508
2020 ¹	1,941,682	1,100,000	841,682	20,621	6,923	5,300	-15,321	-135,651
2021 ²	2,134,000	1,100,000	1,034,000	25,333	TBD	TBD	TBD	TBD

¹ Data for 2020 is preliminary

² 2021 is based on forecasted returns.

TBD = To be determined.

ADF&G will communicate with DFO on a weekly basis to monitor the sockeye salmon returns to the Skeena and Nass Rivers so inseason adjustments can be made to the sockeye salmon cap. Starting on Sunday, July 25 when the majority of Canada sockeye salmon have moved through the fishery, the district will be managed on the strength of returning Southern Southeast Alaska wild salmon.

Regardless of the strength of pink salmon returns after SW 30, it is the department's intent to manage the district in terms of boatdays and overall effort similar to levels since the signing of the PST. Weekly fishing periods in August will be decided only after the department assesses the distribution of the fleet and the run strength of pink salmon. In recent years, District 4 has been open a similar amount of time as inside waters after the treaty period.

Inside Fishing Areas

As in past years, aerial surveys of early-run pink salmon producing areas, primarily Boca de Quadra, East Behm Canal, and Ernest Sound, will begin in late June or early July. Seining is expected to begin initially in a portion of District 2 on Sunday, June 20, to target returning enhanced chum salmon to the Kendrick Bay THA.

Kendrick Bay Spring Fishery

ADF&G will open a portion of lower District 2 outside of the Kendrick Bay THA to target enhanced Kendrick Bay summer chum salmon at a time when few wild stock chum salmon are available and to maximize the quality of Kendrick Bay terminal chum salmon. This fishery is timed to occur prior to the return of pink salmon to the area.

The department modified the open area and fishing time in 2014 due to an increase in the harvest of wild chum, sockeye, and coho salmon. This harvest of other salmon species has become a concern due to recent increases in effort causing boats to fish further offshore. For 2021, the department will continue to open a fishing area that includes waters within 2.0 nmi of the shoreline. The first week (SW 26) will be open initially for 1 or 2 days. The department will monitor effort levels, wild chum, sockeye, and incidental Chinook salmon harvests to minimize harvest of these species by adjusting fishing time. The department's response may include reduced fishing time and/or area in subsequent weeks.

Traditional Fishery Openings

The traditional purse seine fishery will begin on July 4, (SW 28) in the southeast portion of Section 1-F, the southern portion of District 2, District 4, and Section 7-A. Fishing time will likely begin with a series of 15-hour openings. If returns warrant additional fishing time, the fisheries will go from 15-hour to 39-hour openings on a 2-days-on/2-days-off, or a more continuous fishing schedule. However, extensive openings will not occur if the pink salmon returns are weak. Areas may be opened and closed where additional fishing time is warranted or where a more conservative management strategy is needed.

In District 1, the area from Cone Island to Foggy Point will be managed to reflect recent harvest patterns, effort levels, returns to Boca de Quadra, Hugh Smith Lake sockeye, and East Behm Canal river systems. Other areas in District 1, such as the Gravina Island shoreline, will also be managed to consider other user groups, the McDonald Lake sockeye salmon action plan, and to evenly distribute escapements into the back Behm, West Behm Canal, Cholmondeley, and Kasaan systems.

In District 2, purse seining will be limited to the southern portion of the district until escapements of pink salmon to northern Clarence Strait, Ernest Sound, Cholmondeley Sound, Kasaan Bay, and West Behm Canal can be adequately assessed. Additionally, purse seining should not be expected in middle Clarence Strait, along the Ship Island and Tolstoi Bay shorelines, until pink salmon run strength to West Behm Canal, Thorne Bay, District 6, and Section 7-B are determined. In District 2, the fishing pattern along the Ship Island shore and near Thorne Bay will be managed to reflect historical fishing patterns, to consider other user groups, and the need to achieve escapement to Thorne River, McDonald Lake (sockeye salmon), Back Behm, and West Behm Canal systems.

Southern portions of Section 3-A and western portions of Section 3-B will open initially on or around July 19 (SW 30). Additional areas will be open based on the strength of pink salmon returns to District 3 systems. By late July or early August, Section 3-C may also open.

Hugh Smith Lake Sockeye Salmon

ADF&G will continue to monitor Hugh Smith Lake sockeye salmon. If escapement is below the lower bound of the escapement goal range of 8,000 fish, the department may consider the following management actions:

1. In SWs 29 and 30, the department may close that portion of the District 1 purse seine fishery east of a line from Quadra Point at 55°05.17' N lat, 130°59.05' W long, to Slate Island Light at 55°05.29' N lat, 131°03.17' W long, to Black Rock Light at 55°01.42' N lat, 131°03.59' W long, to a point on the mainland shore at 55°01.40' N lat, 131°00.20' W long.
2. In SWs 31, 32, and 33, the department may close that portion of the District 1 purse seine fishery east of a line from Foggy Point Light at 54°55.44' N lat, 130°58.65' W long, to Black Rock Light at 55°01.42' N lat, 131°03.59' W long, to the southernmost tip of Black Island at 55°07.85' N lat, 131°04.78' W long, and close the northern portion of the Section 1-B drift gillnet fishery to 1.0 nmi south of the latitude of Foggy Point Light.

Districts 5, 6, and 7

Pink salmon returns to District 5 are expected to be good based on parent-year escapements. Two stock groups are indexed for escapement in the district. Both the Affleck Canal and the Shipley Bay stock groups were comfortably within but towards the lower half of their escapement goal ranges. Purse seine openings will be dependent on observations of pink salmon abundance and are anticipated to begin at the end of July.

District 6 parent-year escapement was good to excellent. All of the stock groups (Burnett, Ratz Harbor, Totem Bay, and Whale Pass) were within their escapement goal ranges. Totem Bay was at the lower margin of the escapement goal range while Burnett and Whale Pass stock groups were in the upper third of their escapement goal ranges. The Ratz Harbor stock group exceeded the upper end of the escapement goal range. Purse seine openings will be dependent on observations of pink salmon abundance. Openings could begin in late July in the Mosman, Burnett, and McHenry Inlets area. Openings in the Clarence Strait portion of District 6 will be restricted for the conservation of McDonald Lake sockeye salmon and are anticipated to begin the first week of August.

District 7 purse seine openings will vary by section in 2021. Parent-year escapement to many of the early run systems in section 7-A, including Anan Creek, were moderate to excellent. Section 7-A will be open in late June or early July. Subsequent openings will be based on observations of pink salmon escapement primarily to Anan Creek, and harvest levels. The mid to late run systems in Sections 7-A and 7-B had moderate to good parent-year escapement. However, early openings in Section 7-B will be restricted for conservation of McDonald Lake sockeye salmon. Section 7-B will not open prior to SW 31 (July 25–July 31); the area would be restricted to the upper portion of the section if opened in SW 31.

Fall Chum Salmon Fisheries

Some watersheds along the eastern shoreline of Prince of Wales Island in District 2 produce late run chum salmon that have traditionally supported fall purse seine fisheries, including a directed fishery inside of Cholmondeley Sound. The Cholmondeley Sound fishery is supported by runs of fall chum salmon at Disappearance and Lagoon Creeks, as well as several smaller creeks

throughout the sound. Formal forecasts are not made for these stocks and parent-year escapements do not always provide an indication of potential run strength. The SEG range for the Cholmondeley Sound fall chum salmon is 30,000 to 48,000 fish based on aggregate peak aerial survey counts for Disappearance and Lagoon Creeks. Escapements were within or above the escapement goal range in four of the past five years.

After the closure of the directed pink salmon purse seine fishery in District 2, Cholmondeley Sound and waters of Clarence Strait may open for a directed fall chum salmon fishery. Initial aerial surveys of Cholmondeley Sound chum salmon will begin near the end of August and chum salmon harvest in District 2 during late August will be monitored as an early indication of run strength. This initial opening is expected to occur during the second week of September (SW 37) unless an earlier opening is warranted. Initial openings will be 12 hours in duration. The area that will be open to the purse seine fleet is open continuously for the troll fleet under summer troll regulations.

Additional openings will likely be one or two days each week, depending upon the strength of the run and expected effort levels. Waters inside Cholmondeley Sound will be open provided adequate numbers of chum salmon are observed in the South and West arms of Cholmondeley Sound. When Cholmondeley Sound is open, Sunny Cove and waters of Cholmondeley Sound proper will be closed south of Hump Island. These closures are needed to protect chum salmon escapements in the Lancaster, Dora Bay, and Kitkun systems, and closure lines may be moved further north than the closures listed in regulations.

If extensive troll effort is observed by the department, a fishery rotation may be set up for both troll and seine gear groups. During any troll fishery extensions in District 2, trolling inside Cholmondeley Sound will be limited to the same number of days as provided for the purse seine fishery.

NORTHERN SOUTHEAST PURSE SEINE FISHERIES

2019 PINK SALMON RETURNS

The Northern Southeast Inside pink salmon escapement index value of 1.65 million was below the escapement goal range of 2.5 to 6.0 million index fish. Escapement indices were below management targets for 6 of the 7 districts, and for 17 of the 21 pink salmon stock groups within this subregion. Most of the northern districts experienced extreme drought conditions in the summer of 2019, and the effects of this weather anomaly on pink salmon production are unknown. The Northern Southeast Outside Subregion, which includes Sections 13-A and 13-B, escapement index value of 1.53 million pink salmon was within the escapement goal range of 0.75 to 2.50 million index fish. Escapement indices were within or exceeded management targets for 5 of 7 pink salmon stock groups within this subregion (Table 2).

The NOAA SECM survey has been one of the best indicators of adult returns to Northern Southeast Inside waters the following year. The 2020 catch of juvenile pink salmon in the survey was similar to the previous years' poor results, but a more uniform distribution of juveniles throughout the survey area and cooler surface water temperatures that improve survival suggest adult returns to the northern districts could be improved over the previous year. Expectations for the Northern Inside districts for 2021 are uncertain.

MANAGEMENT CONCERNS

Uncertainties about fleet size, distribution, and the department's reaction to those can only be addressed inseason. ADF&G and the fishing industry will have to be flexible and be able to react

quickly to changes from historical fishing patterns. Above all, meeting escapement goals will continue to be the primary objective of the department. Within that conservation mandate, the department will attempt to work with industry to provide a stable supply of fresh fish.

Summer Chum Salmon

In 2009, ADF&G adopted a lower bound SEG of 149,000 index spawners for summer chum salmon in the Northern Southeast Inside Subregion. This goal was based on aggregate peak aerial survey counts for 63 index streams in northern SEAK inside waters. Escapements of summer chum salmon were below this escapement goal threshold from 2008 to 2011. In 2012, the escapement goal was revised downward, based on an analysis that incorporated two decades of additional data, to 119,000 index spawners (Piston and Heintz 2011). This goal was revised again to 107,000 fish in 2018 (Piston and Heintz 2017). Escapements of summer chum salmon have met the current escapement goal in 3 of the past 5 years.

MANAGEMENT PLAN

The Northern SEAK purse seine fishery management plan consists of separate segments for the outside areas (Sections 13-A and 13-B), the inside areas, the fall chum salmon fishery, and hatchery THA fisheries.

Inside Fishing Areas, Early Runs

The 2021 purse seine season will begin on Sunday, June 20, with initial open periods of 15 hours to harvest hatchery summer chum and to index the strength of early pink salmon returns. During the first open period, seining will be allowed in a portion of District 12 at the Point Augusta Index area in Chatham Strait.

Directed purse seine fisheries on early-run pink salmon will be based on aerial survey and fishery performance assessments of run strength. Aerial surveys will begin in late June for the northern inside fishing districts. To provide an additional assessment of incoming run strength of early-run pink salmon, the department will open a 1.0 nmi area along the Point Augusta shoreline in District 12 in conjunction with other weekly openings. Test fishing will be conducted at Point Gardner and Kingsmill Point to assess the strength and timing of the pink salmon returns entering Frederick Sound. The Point Gardner test fishery will start on or about June 30 and the Kingsmill Point test fishery will start on or about July 7. Both test fisheries are scheduled to occur weekly through the month of July. Test fishing will also occur along the Hawk Inlet shoreline beginning on or about June 25 to assess the strength of pink salmon returns entering the northern inside waters of Districts 11 and 15. Incidental harvest of pink salmon at the Hidden Falls Hatchery terminal fishery during the first three weeks of the season will also be monitored as an indicator of pink salmon run strength.

Parent year escapements of summer chum salmon in Tenakee Inlet were below average in 2016 and above average in 2017 parent years. Although no formal forecasts are made for these stocks, some expectations can be based on parent-year escapements. Escapements in 2016 were 58% of the previous 2006–2015 average, and escapements of the main parent year of 2017 were 245% of the 2007–2016 average.

The 2019 parent-year pink salmon escapement index for Tenakee Inlet of 0.04 million fish was below the management target range of 0.21–0.51 million, and well below the odd-year average index count of 0.37 million fish. In 2021, purse seine opportunity in Tenakee Inlet will depend on the observed development of escapements to local streams. Portions of the Basket Bay shoreline

may be opened to harvest pink salmon returns to Tenakee Inlet and Peril Strait if salmon escapements to local streams are adequate, including Kook Lake sockeye salmon.

The 2019 parent-year pink salmon escapement index for Section 13-C of 0.20 million fish was below the management target range of 0.32–0.76 million fish. Openings in Section 13-C are not likely to occur in 2021, however openings may occur if inseason assessment of pink salmon abundance indicates fish in excess of escapement needs. Parent-year summer chum salmon escapements (2016–2018) to Saook Bay and Rodman Bay were generally near long-term averages. Purse seine openings to target chum salmon will be based on inseason assessment of abundance. Chum salmon openings will likely be very restrictive in time and area and will occur only as pink salmon escapements allow.

The parent-year escapement index for District 10 was 0.48 million pink salmon, below the management target range of 0.59–1.39 million fish. The 2019 run was universally weak in the entirety of District 10. The parent-year escapement index for Seymour Canal (Section 11-D) of 0.03 million pink salmon was well below the management target range of 0.15–0.37 million fish. Early openings along the District 10 mainland shoreline, although unlikely, will be dependent on results from the Point Gardner test fishery and observations of pink salmon abundance in late June to mid-July. Likewise, openings along the Admiralty Island shoreline will be based on test fishery results and observations of pink salmon abundance and if they did occur, would begin in mid- to late July. It is unlikely openings will occur in Section 11-D in 2021 due to very poor parent-year escapements. As such, the Big Bend portion of Seymour Canal in District 10 will likely not open.

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

INSIDE FISHING AREAS—MIDDLE AND LATE RUNS

Middle-run pink salmon should begin entering the inside waters of the northern districts during July. Seining in District 12 along the west Admiralty Island shoreline typically expands in late July, depending on the observed run strength of pink salmon stocks in Districts 10 and 11, and continues as long as Chatham Strait and Fredrick Sound escapements continue to develop satisfactorily. Southern boundaries for the fishery are typically extended into Statistical Area 112-17, from Point Hepburn to Fishery Point, and then to Parker Point in the last week of July or in early August. At the 2015 Southeast and Yakutat Finfish BOF meeting, the *Northern Southeast seine salmon fishery management plans* was amended regarding openings along the west Admiralty shoreline: the portion of the Admiralty shoreline between Point Hepburn and Fishery Point may not open before July 17, and the portion of shoreline between Fishery Point and Parker Point may not open before July 21. Parent-year pink salmon escapements were below the management target range for Peril Strait stocks, and well below management targets for Freshwater Bay, West Admiralty, and southwest Admiralty Island stocks. Openings in this area will depend on developing returns of local stocks as well as Peril Strait and Tenakee Inlet stocks. Openings may occur in this area in mid- to late July depending on observed run strength.

In Section 9-A, purse seine openings can occur along the Baranof Island shoreline north of Red Bluff Bay beginning in mid- to late-July, and along southeast Baranof Island south of Patterson Point beginning mid- to late-August. The 2019 parent-year pink salmon escapement to Red Bluff

Bay of 0.08 million fish was below the management target range of 0.09–0.21 million fish making purse seine openings in the Red Bluff Bay area of Section 9-A unlikely in 2021. Openings will be based on inseason assessment of run strength. Openings provided in July will include only the shoreline north of Red Bluff Bay in order to provide for escapement needs as well as subsistence uses at Falls Lake. Openings to the south of Red Bluff Bay may begin in early August depending on pink salmon abundance. If pink salmon escapements into Red Bluff Bay are sufficient, openings inside the bay may occur to harvest surplus pink salmon. The 2019 Port Walter (southeast Baranof Island) pink salmon stock group escapement of 0.11 million fish was within the management target range of 0.07–0.16 million fish. Pink salmon runs to southeast Baranof Island normally begin after the first week of August—openings in 2021 may occur but will be based on inseason assessment of run strength.

Pink salmon returns to Section 9-B are expected to be weak. Parent-year escapements of pink salmon were at the lower end of the escapement goal ranges. The Saginaw stock group was within the escapement goal range but in the lower third, the Tebenkof stock group was at the bottom end of the range, and the Eliza Harbor group was well below the lower end of the range. If inseason indications of abundance justify fishing periods in Section 9-B, they may begin in late July in upper 9-B with lower 9-B opening the first week of August.

Pink salmon escapements in District 14 were poor in 2019, with Northern Chichagof and the Homeshore stock groups well below management targets. Openings to harvest local stocks at Idaho Inlet and Port Althorp in late July or early August may occur if returns in excess of escapement needs are observed. The Whitestone shoreline area in District 14 may be open in late July or early August with opening times and areas dependent on observed strengths of local pink salmon stocks. ADF&G will also monitor pink salmon escapements in streams adjacent to Porpoise Islands, along Homeshore, and will consider purse seine openings in this area if there are harvestable pink salmon surplus to escapement needs.

Openings in District 12 along the Catherine Island shoreline and in portions of Kelp Bay may occur beginning mid-July to early August to harvest surplus pink or chum salmon returning to Kelp Bay streams, or to harvest surplus chum salmon returning to Hidden Falls if wild chum and pink salmon escapements are being met. The 2019 parent-year escapement index of pink salmon to Kelp Bay streams was 0.14 million fish, at the upper end of the management target range of 0.06–0.14 million fish. Pink salmon openings in Kelp Bay or on the Catherine Island shoreline are possible. However, decisions to open these areas will not only be based on an inseason assessment of run strength to Kelp Bay, but the surrounding pink salmon stock groups will be considered as well. Chum salmon escapements to Clear River in South Arm have been well below historical averages since 2005, and chum salmon escapements to Ralph's Creek and Middle Arm Kelp Bay streams have generally been consistent with long-term averages, except for 2019 and 2020 which were well below average. If strong runs of chum salmon are observed in Middle Arm, directed openings are possible but only if they will not impact pink salmon escapements.

HAWK INLET SHORE FISHERY

The Admiralty Island shoreline between Funter Bay and Point Marsden in Chatham Strait is known as the Hawk Inlet shoreline. Purse seine openings may occur in this area to harvest pink salmon stocks migrating northward to Taku River, Lynn Canal, and Stephens Passage. During July, the department will manage the Hawk Inlet Shore fishery in accordance with the *Northern Southeast seine fishery salmon management plans* that stipulates that any portion of the area north of Point Marsden may be opened when a harvestable surplus of pink salmon is observed. Openings must

consider the conservation of all salmon species. At the 2018 BOF meeting, the *Northern Southeast seine salmon fishery management plans* was amended, reducing the time period the 15,000 wild sockeye salmon harvest limit applies during July. All wild sockeye salmon harvested by any purse seine boat the department identifies as fishing north of Point Marsden in District 12 during any fishing period through July 22 when other nearby areas (Point Marsden to Point Hepburn, Whitestone Shore, or the Point Augusta Test Fishery) are open concurrently, will be counted against the 15,000 wild sockeye salmon limit for the Hawk Inlet fishery. During openings, the department will utilize fishery overflights, on-the-grounds sampling, interviews, and fish tickets to estimate the sockeye salmon harvest north of Point Marsden. Otolith analysis will be utilized to determine the enhanced sockeye salmon component in the harvest. Also, at the 2018 BOF meeting, *Northern Southeast seine salmon fishery management plans* was further amended to remove the wild sockeye salmon harvested in common property fisheries in the Amalga Harbor SHA from the 15,000 wild sockeye salmon limit for the Hawk Inlet fishery. These amendments were intended to sunset after the 2020 season, but due to the rescheduling of the January 2021 BOF meeting because of the COVID-19 pandemic, the BOF extended this sunset date through the 2021 season.

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

Openings along the Hawk Inlet shore north of Point Marsden are based on the observed run strength of north migrating stocks of pink salmon. The assessment methods used by the department to determine if run strengths are adequate and a harvestable surplus of pink salmon is available for harvest include:

1. parent-year escapements of pink salmon stocks for Lynn Canal, Stephens Passage, and Taku River;
2. inseason test fishing at designated locations along the Admiralty Island shoreline north of Point Marsden;
3. inseason aerial assessments of pink salmon abundance along the Admiralty Island shoreline north of Point Marsden;
4. 2021 pink salmon catches in the department's Taku River fish wheels;
5. 2021 pink salmon marine sport fish catch rates in the Juneau area (lower Lynn Canal and upper Stephens Passage); and
6. 2021 fishery performance of Districts 11 and 15 drift gillnet fisheries.

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

Management of Sections 13-A and 13-B, along the outer coasts of Baranof and Chichagof Islands, is distinct from the management of the northern inside areas. Salmon returning to these areas enter directly from the ocean and do not pass through major inside migration corridors. In Section 13-A, 2019 parent-year pink salmon escapement indices were above the management target range for the Portlock Harbor and Lisianski stock groups; Salisbury Sound and Slocum Arm stock groups were within the target escapement ranges in 2019. Openings can be expected to begin around the third week in July depending on observed pink salmon abundance. In Section 13-B, parent-year pink salmon escapement indices were within the management target range for Whale Bay and below the management target ranges for West Crawfish Inlet and Sitka Sound stock groups. Based on the performance of the parent-year runs, purse seine fisheries are unlikely in Sitka Sound and

West Crawfish Inlet but can be expected in Whale Bay. Openings in these areas will depend entirely on inseason observations and could begin as early as mid-July.

Extended or continuous fishing opportunities may be provided on specific stock groups in Sections 13-A and 13-B if run size and fleet distribution allow for it. Consecutive 15-hour, 39-hour, or continuous openings will be considered as management options in order to provide opportunity and ensure that escapement goals are met.

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

Short purse seine openings to harvest sockeye salmon along the outer coast of Baranof Island may occur in early July to target fish returning to Necker Bay and in early August to target returns to Redfish Bay. Openings will be dependent on inseason observations of run strength and a cautious approach will be used to ensure that escapement and subsistence fishery needs are met. Targeted sockeye salmon openings are possible at Redoubt Bay beginning around mid-July provided that the inseason projection of escapement is greater than 40,000 fish.

Fall Chum Salmon Fisheries

Portions of Northern SEAK support returns of fall-run chum salmon that are harvested by purse seine gear. Openings targeting fall chum salmon will be based on observed run strength. Fishing in Security Bay and Port Camden typically occurs the first several weeks in September. Parent-year escapements to Security Bay were within or above the SEG goal range of 7,500 to 15,000 chum salmon in 2016 and 2017. In 2016, Port Camden chum salmon escapement was within the goal but near the low end of the goal in 2017. Port Camden fall chum salmon has an escapement goal range of 2,000 to 7,000 fish. Fishing opportunities in Excursion Inlet may occur in late August or early September, depending on run strength. Parent-year escapements to Excursion River were below the SEG range of 4,000 to 18,000 fish in 2016 and within the range in 2017. Admiralty Island streams do not have established goals for fall chum salmon escapements. These systems will be monitored, and targeted purse seine fisheries may occur if harvestable surpluses are identified. In Section 13-B, targeted fall chum salmon openings may occur in Nakwasina Sound and Katlian Bay; however, opportunities are most often concurrent with pink salmon fisheries in Sitka Sound. Fall chum salmon fisheries will be managed based on observations of run strength in the bays beginning in mid-August and continuing through September.

HATCHERY TERMINAL HARVEST AREA FISHERIES

For the 2021 season, THA purse seine fisheries to harvest fish returning to Southern Southeast Regional Aquaculture Association (SSRAA) hatchery release sites will occur at Anita Bay, Carroll Inlet, Kendrick Bay, Carroll Inlet, Neets Bay, and Anita Bay. Fisheries to harvest fish returning to Northern Southeast Regional Aquaculture Association (NSRAA) hatchery release sites will occur at Thomas Bay, Southeast Cove, Hidden Falls, Deep Inlet, and Crawfish Inlet, and possibly the Amalga Harbor SHA remote release site to harvest returning Douglas Island Pink and Chum (DIPAC) fish. These THA fisheries will be managed in accordance with existing BOF approved management plans and in consultation with the hatchery operators. Details regarding the open fishing periods by gear type in each area will be announced via commercial fishery advisory announcements. Table 4 summarizes the expected runs to each release site in Southern Southeast and Table 5 summarizes the expected runs to each release site in Northern Southeast.

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

SOUTHERN SOUTHEAST TERMINAL HARVEST AREAS

Carroll Inlet Terminal Harvest Area Fishery

For 2021, SSRAA has forecasted a total run of 9,300 Carroll Inlet Chinook salmon. By regulation, Carroll Inlet THA will be open June 1 through June 30, 2021. From June 1 through 12:00 noon, June 12, Carroll Inlet THA will be open concurrently to all-gear groups, however, as a measure to address allocation imbalance among the gear groups, the troll fleet will be given exclusive access to the lower portion of the THA through June 15. From June 1 through 12:00 noon, July 15 the Carroll Inlet THA will be open for net gear only in those waters of Carroll Inlet north of the latitude of 55°05.29' N lat (approx. 1.3 nmi north of Nigeli Point). Rotational net fisheries will begin 12:00 noon, Tuesday, June 15, through 12:00 noon, Wednesday, June 30, 2021. Details of the 2021 Carroll Inlet THA fishing schedule were included in an ADF&G advisory announcement on April 14, 2021.

Neets Bay Terminal Harvest Area Fishery

ADF&G, in consultation with SSRAA, will manage Neets Bay to include those waters of Neets Bay from the easternmost point of Bug Island to the closed waters at the head of the bay. Details of the 2021 Neets Bay THA fishing schedule and area were announced in a separate ADF&G advisory announcement released on April 14, 2021.

In 2021, SSRAA is expecting total runs of 768,000 summer chum, 31,000 fall chum, 108,800 coho, and 5,500 Chinook salmon to return to Neets Bay. The Neets Bay THA will open Tuesday, June 15, 2021 to troll gear only. From 12:00 noon, Thursday, June 17 through 12:00 noon, Tuesday, July 6, a rotational fishery according to the *District 1: Neets Bay Hatchery Salmon Management Plan* (5 AAC 33.370) will be conducted for the drift gillnet and purse seine fleets.

For 2021, the net rotational fishing schedule will again be modified during SWs 24–26 allowing additional closures and modified lines to conserve Unuk and Chickamin River Chinook salmon. This loss of time and area will coincide with the period when Unuk River Chinook salmon are present in the area according to coded wire tag (CWT) data. The open fishing area for the Neets Bay THA will be restricted initially to those waters east of the mid bay line, expand to those waters east of the easternmost tip of Bug Island, then revert back to the mid bay line for the last rotations. The Neets Bay THA will not expand to the longitude of Chin Point for net gear in 2021.

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

Neets Bay THA Calendar

June 15–July 6, 2021

Open continuously to troll unless closed by emergency order.

June 17–July 6, 2021

Rotational fisheries for purse seine and drift gillnet unless closed by emergency order.

July 6–November 15, 2021

No gillnet or purse seine openings are scheduled during this time so that cost recovery can take place. If openings are warranted, they will be announced by advisory announcement once cost recovery has been completed.

Kendrick Bay Terminal Harvest Area Fishery

By regulation, the Kendrick Bay THA opens on a continual basis June 15 through September 30. Due to budgetary shortfalls, SSRAA plans on closing the Kendrick Bay THA from 12:01 a.m., Sunday, July 11, through 11:59 p.m., Saturday, July 24, to allow for nontraditional cost recovery efforts. For 2021, SSRAA is expecting a total run of 714,000 summer chum salmon. Peak catches are expected to occur during SWs 29 and 30.

Anita Bay Terminal Harvest Area Fishery

The initial opening of Anita Bay will be delayed until June 1 to mitigate potential harvest of wild Chinook salmon. For 2021, SSRAA is forecasting total runs of 11,500 Chinook, 474,000 summer chum, and 11,100 coho salmon from releases at Anita Bay. Details of the 2021 Anita Bay THA fishing schedule and area were announced in a separate ADF&G advisory announcement released on April 16, 2021.

The Anita Bay THA will open to harvest salmon by troll, drift gillnet, and purse seine from 5:00 a.m., Tuesday, June 1, through 12:00 noon, Monday July 12, 2021, and from 12:01 a.m., Tuesday August 10, through 12:00 noon, Wednesday, November 10, 2021 (see Anita Bay THA calendar below). A rotational fishery will begin for drift gillnet and purse seine fleets as described in the *District 7: Anita Bay Terminal Harvest Area Salmon Management Plan* (5AAC 33.383). The rotational fishery will be in place until July 12, 2021. Because of budgetary shortfalls, SSRAA plans on suspending the rotational fisheries and conducting cost recovery operations from July 13 until August 9, 2021. If revenue goals are achieved, the rotational schedule may begin prior to August 9 and end by EO and subsequent advisory announcement. Rotational fishing will reopen for drift gillnet and seine gear from 12:00 noon, Wednesday, August 10, through 12:00 noon, Wednesday, August 31, 2021. From 12:01 a.m., Thursday, September 1, through 12:00 noon, Wednesday, November 10, 2021, the Anita Bay THA will be open to the harvest of salmon concurrently by drift gillnet and purse seine gear. The Anita Bay THA will close for the season at 12:00 noon on Wednesday, November 10, 2021.

Anita Bay THA Calendar

June 1–June 12, 2021
open continuously to harvest salmon by troll gear.
June 13–July 12, 2021
open on a rotational basis for the drift gillnet and purse seine fleets
July 13–August 9, 2021
Cost recovery only.
August 10–August 31, 2021
open on a rotational basis for the drift gillnet and purse seine fleets
August 10–August 31, 2021
open continuously to harvest salmon by troll gear
September 1–November 10, 2021
open continuously to harvest salmon by troll gear, drift gillnet and purse seine fleets

Table 4.–Expected 2021 runs to SSRAA enhancement projects by release location.

Species/Run	Release Location	Common Property Harvest	Terminal	Total Run
Coho	Herring Cove/Whitman	6,600	2,800	9,400
Coho	Nakat Inlet	11,500	4,900	16,400
Coho	Anita Bay	8,300	2,800	11,100
Coho	Neets Bay	79,200	33,900	113,100
Coho	Crystal Lake	2,500	1,600	4,100
Coho	Klawock	116,200	49,800	166,000
Coho	Port Asumcion	5,300	2,300	7,600
Summer Coho	Neck Lake	16,600	11,000	27,600
Summer Coho	Herring Cove/Whitman	2,100	2,100	4,200
Chinook	Whitman Lake	2,500	5,200	7,700
Chinook	Anita Bay	4,400	7,100	11,500
Chinook	Carroll Inlet	3,400	5,900	9,300
Chinook	Neets Bay	900	5,800	6,700
Chinook	Port St. Nick	1,600	3,400	5,000
Chinook	Crystal Lake	1,500	2,100	3,600
Summer Chum	Neets Bay	268,800	499,200	768,000
Summer Chum	Anita Bay	311,700	162,300	474,000
Summer Chum	Burnett	189,900	232,100	422,000
Summer Chum	Kendrick Bay	535,500	178,500	714,000
Summer Chum	Nakat Inlet	160,500	160,500	321,000
Summer Chum	Port Asumcion	173,000	173,000	346,000
Fall Chum	Burnett	10,400	5,600	16,000
Fall Chum	Nakat Inlet	3,300	1,800	5,000
Fall Chum	Neets Bay	9,300	21,700	31,000

NORTHERN SOUTHEAST TERMINAL HARVEST AREAS

Southeast Cove Terminal Harvest Area Fishery

The Southeast Cove THA will be open to common property purse seine and troll fisheries beginning Sunday, June 20, 2021. Purse seine openings will occur on Sundays and Thursdays and

troll openings will occur on days not open to purse seining. Currently, there are no plans for cost recovery in 2021. The THA will close to all fisheries on Thursday, August 5, 2021. Details of the 2021 SE Cove THA fishing schedule and area were announced in a separate ADF&G advisory announcement released on April 15, 2021.

NSRAA is expecting a total run of 158,000 chum salmon to Southeast Cove THA. A portion of the run could be harvested in common property fisheries in Chatham Strait. Cost recovery operations are not expected in Southeast Cove in 2021.

Thomas Bay Terminal Harvest Area Fishery

The Thomas Bay THA will be open to common property purse seine and troll fisheries beginning Sunday, June 20, 2021. No cost recovery is planned in 2021. Purse seine openings will occur on Sundays and Thursdays and troll openings will occur on days not open to purse seining through Saturday, August 7, 2021. Details of the 2021 Thomas Bay THA fishing schedule and area were announced in a separate ADF&G advisory announcement released on April 15, 2021.

NSRAA is expecting a total run of 132,000 chum salmon (Table 5). A portion of the run will be harvested in common property fisheries in Chatham Strait and Frederick Sound. Cost recovery operations are not expected in Thomas Bay THA in 2021.

Amalga Harbor Special Harvest Area Fishery

In order to increase the common property share of their hatchery-produced chum salmon production, DIPAC has provided common property purse seine opportunities in the Amalga Harbor SHA. Decisions about these openings will be based on run strength of hatchery-produced chum salmon, progress toward DIPAC cost recovery goals, expected effort levels, and considerations for nontarget species. Openings may occur in Section 11-A and will be limited to a portion of the Amalga Harbor SHA, Subdistrict 111-55. These openings may occur in July, will only be on Thursdays, and will be limited to 9 hours (9:00 a.m.–6:00 p.m.). If there are conservation concerns for nontarget species in nearby systems, the open area or time may be reduced. Details of the open area and times will be included in the normal purse seine advisory announcement at the appropriate time. In 2021, it is unlikely these opportunities will be available as the forecast run size of DIPAC hatchery-produced chum salmon is insufficient to provide for DIPAC's cost recovery needs.

Hidden Falls Terminal Harvest Area Fishery

The Hidden Falls Hatchery, operated by the NSRAA, expects a run of 286,000 chum salmon (Table 5). NSRAA needs 150,000 chum salmon for broodstock, leaving 136,000 chum salmon available for common property harvests. NSRAA does not intend to use a tax assessment on the common property harvest of chum salmon to satisfy cost recovery needs as provided under AS 16.10.455. In 2014, the law was amended to allow NSRAA to recommend either an assessment based on the percentage of value or to assess a fixed amount on a per pound basis of chum salmon landed. In 2021, the NSRAA Board has recommended to the Department of Revenue that no tax be assessed in the Hidden Falls Hatchery THA fishery due to the low chum salmon forecast.

There are no scheduled common property purse seine openings at Hidden Falls for 2021. Due to a low projected run of chum salmon, Hidden Falls will be managed for broodstock. NSRAA will assess the run through a weekly test fishery to determine run strength. In the event that surplus chum salmon are available, common property openings may be announced. Purse seiners are

advised that openings at Hidden Falls during the 2021 season may be announced with a minimum 24-hour notice if necessary in order to maximize fish quality.

The *Hidden Falls Hatchery Terminal Harvest Area Salmon Management Plan* (5AAC 33.374) provides guidelines for allocation of hatchery produced chum and Chinook salmon in the Hidden Falls THA. The management plan describes different management approaches through June 30 and beginning July 1. If it becomes necessary to close the purse seine fishery in June to achieve broodstock goals, then troll retention of chum salmon in the THA is prohibited as long as at least seven days remain until July 1. Also, provided that some trollers are present, in order to allow increased troll access to Chinook salmon, Kasnyku Bay will be closed to purse seining in June west of a line from North Point to the westernmost tip of Round Island and north of the latitude of the westernmost tip of Round Island. Beginning July 1, areas within the THA may be closed to protect chum or Chinook salmon broodstock and trollers may only retain chum salmon in numbers not exceeding the total number of Chinook salmon on board.

The Hidden Falls THA boundary definition has been modified to provide easier enforcement and compliance with the THA boundaries. Rather than the use of range markers at the northern and southern boundaries, these boundaries will be defined by points indicated by markers on the Baranof Island shoreline to offshore coordinates. A line between the two offshore coordinates will also define the outer boundary as a straight line approximately 2.0 nmi offshore of Baranof Island. The new definition will describe the Hidden Falls THA as the waters of Chatham Strait, Kasnyku Bay, and Takatz Bay, within the boundaries of a line from South Point, as indicated by a marker at 57°16.28' N lat, 134°51.78' W long to a point offshore at 57°16.28' N lat, 134°48.00' W long, then running south to a point at 57°06.76' N lat, 134°43.00' W long then due west to a point on the Baranof Island shoreline approximately 1.0 nmi south of Takatz Bay at 57°06.76' N lat, 134°47.50' W long. During some years, the boundary of the Hidden Falls THA has been extended north to include Kelp Bay and the Catherine Island shoreline south of the Point Lull Light when wild chum salmon escapements to Kelp Bay streams have been strong and there are indications of good pink salmon abundance in the Chatham Strait corridor. A contraction of the offshore boundary of the Hidden Falls THA to within 1.0 nmi off the Baranof Island shoreline is likely for the 2021 season to conserve weak Chinook and pink salmon runs destined for systems further inland.

Deep Inlet Terminal Harvest Area Fishery

The terminal hatchery fishery at Deep Inlet will be managed jointly with NSRAA and according to the management plan in regulation. The open purse seine and gillnet fishing times, and any modifications of the terminal fishing area, will be announced by ADF&G advisory announcement prior to and during the fishing season.

NSRAA expects runs of 1,608,000 chum, 17,600 Chinook, and 95,000 coho salmon to the Deep Inlet remote release site and the Medvejie Hatchery in 2021 (Table 5). This season, NSRAA does not anticipate cost recovery operations in the Deep Inlet THA, but will need 130,000 chum salmon for broodstock. A portion of the Deep Inlet THA may be closed in late August to facilitate broodstock collection for the Medvijie facility. Most of the common property harvest can be expected to take place in the Deep Inlet THA by drift gillnet and purse seine gear, but some harvest is likely to occur outside the THA by troll and purse seine gear as well.

The Deep Inlet THA fishery will be managed in accordance with the *District 13: Deep Inlet Terminal Harvest Area Salmon Management Plan* (5AAC 33.376). The plan provides for

distribution of the harvest of hatchery produced salmon between the purse seine and drift gillnet fleets. The time ratio of drift gillnet to purse seine openings for the 2021 season is 1:1.

For the time period of June 1–5, gillnet fishing is scheduled on June 1 and June 2, purse seine fishing is scheduled on June 3 and June 4, and the troll fishery is scheduled for June 6. For the remainder of the 2021 season (June 6 to September 25) purse seine fishing is scheduled on Sunday, Thursday, and Friday of each week and drift gillnet fishing is scheduled on Monday, Tuesday, and Wednesday. The troll fishery will be open on Saturdays of each week and during time periods when net fisheries are closed. The Deep Inlet THA west of 135°20.75' W long will be closed to purse seine and drift gillnet gear beginning with the first emergency order of the season through June 19. Details of the 2021 Deep Inlet THA fishing schedule and are included in an ADF&G advisory announcement published April 12, 2021. When changes are necessary, the revised schedule will be issued in a subsequent advisory announcement.

During the 2021 season, the boundaries of the Deep Inlet THA may be changed by NSRAA and ADF&G to help resolve conflicts between fishermen 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.

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 2021 by emergency order under authority of 5 AAC 39.265 *Full Retention and Utilization of Salmon*. This requires that all salmon harvested in net fisheries are retained, utilized, and reported on fish tickets whether they are sold or retained for personal use.

In early September, the Deep Inlet THA boundaries may be adjusted by ADF&G to reduce harvest 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 historical run timing and inseason observations of abundance. Since voluntary compliance with reporting of coho salmon in the Deep Inlet THA fishery has in the past been poor and the department needs detailed information on coho and sockeye salmon harvest patterns, personnel from ADF&G or Alaska Wildlife Troopers may board some vessels and conduct hold inspections to ensure compliance.

Crawfish Inlet Terminal Harvest Area Fishery

The department, in consultation with NSRAA, shall, by emergency order, open and close the Crawfish Inlet Terminal Harvest Area to provide for the harvest of hatchery produced Chinook and chum salmon by purse seine, drift gillnet, and troll gear. The run of salmon to Crawfish Inlet is being managed with a troll priority.

NSRAA expects a run of 1,920,000 chum salmon to the Crawfish Inlet remote release site (Table 5). NSRAA is planning to conduct cost recovery this season in Crawfish Inlet and no chum salmon are needed for broodstock.

Purse seine openings at Crawfish Inlet will be conducted as needed to maintain fish quality and prevent large buildups. Seine openings may occur inside the boundaries of the SHA depending on abundance of fish and balancing the troll priority. Seine openings will not be scheduled as was done during the 2020 season. Purse seiners are advised that openings at Crawfish Inlet during the

2021 season may be announced with a minimum 24-hour notice, if necessary, to maximize fish quality.

Table 5.—Expected 2021 hatchery salmon runs to Northern SEAK by hatchery organization and release location.

Species	Release Location	Common Property Harvest	Cost Recovery	Broodstock	Total Run
NSRAA					
Chum	Medvejie/Deep Inlet	1,478,000	0	130,000	1,608,000 ^a
Chum	Hidden Falls	136,000	0	150,000	286,000
Chum	Crawfish Inlet	1,020,000	900,000	0	1,920,000
Chum	SE Cove	158,000	0	0	158,000
Chum	Thomas Bay	132,000	0	0	132,000
Chinook	Medvejie/Deep Inlet	10,384	3,216	4,000	17,600
Chinook	Hidden Falls	210	0	500	710
Coho	Hidden Falls	17,600	6,400	10,000	34,000
Coho	Deer Lake (Mist Cove)	27,600	31,400	0	59,000
Coho	Deep Inlet/Medvejie	92,000	0	3,000	95,000
Armstrong Keta, Inc.					
Pink	Port Armstrong	Unavailable	Unavailable	Unavailable	325,000
Chum	Port Armstrong	Unavailable	Unavailable	Unavailable	225,000
Coho	Port Armstrong	Unavailable	Unavailable	Unavailable	109,500
Chinook	Port Armstrong	Unavailable	Unavailable	Unavailable	150
Sitka Sound Science Center					
Pink	Crescent Bay	Unavailable	Unavailable	Unavailable	141,000
Chum	Crescent Bay	Unavailable	Unavailable	Unavailable	26,000
Coho	Crescent Bay	Unavailable	Unavailable	Unavailable	8,000
Gunnuk Creek Hatchery					
Chum	SE Cove	158,000	0	0	158,000
Chum	Kake	77,000	0	Unavailable	77,000
DIPAC					
Chum	Boat Harbor/Amalga	394,800	260,900		655,700
Chum	Gastineau/Limestone	216,200	1,000	190,000	407,200
Sockeye	Port Snettisham	69,500	29,800	6,800	106,100
Coho	Gastineau Channel	28,600	15,500		44,100
Chinook	Gast/FishCr/Auke/Lena	1,500	800	400	2,700

Note: Common property harvest estimates of Chinook and coho salmon include sport harvest.

^a Projections for Medvejie/Deep Inlet includes chum salmon from the Sitka Sound Science Center.

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