Regional Information Report No. 1J18-08

2018 Southeast Alaska Purse Seine Fishery Management Plan

by

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April 2018

Alaska Department of Fish and Game **Divisions of Sport Fish and Commercial Fisheries**

Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

Weights and measures (metric)

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

Weights and measures (English)

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

Time and temperature

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

Physics and chemistry

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

General

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

Mathematics, statistics

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

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by

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The Regional Information Report Series was established in 1987 and was redefined in 2007 to meet the Division of Commercial Fisheries regional need for publishing and archiving information such as area management plans, budgetary information, staff comments and opinions to Alaska Board of Fisheries proposals, interim or preliminary data and grant agency reports, special meeting or minor workshop results and other regional information not generally reported elsewhere. Reports in this series may contain raw data and preliminary results. Reports in this series receive varying degrees of regional, biometric and editorial review; information in this series may be subsequently finalized and published in a different department reporting series or in the formal literature. Please contact the author or the Division of Commercial Fisheries if in doubt of the level of review or preliminary nature of the data reported. Regional Information Reports are available through the Alaska State Library and on the Internet at: http://www.adfg.alaska.gov/sf/publications/.

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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 23 million pink salmon for 2018. This forecast for pink salmon, together with historical escapement estimates, fishery performance data, private non-profit hatchery forecasts for chum salmon and other species, are used to determine the management plan. The management plan for the 2018 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 2018 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) 2018 preseason pink salmon forecast, historical escapement data, fishery performance data, private non-profit 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 areas.

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

Since statehood, 77% of the salmon harvested in SEAK commercial fisheries have been caught with purse seine gear. 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 the 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, the species composition of the purse seine harvest has included 89% pink, 9% chum, 1% 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.

2018 PINK SALMON FORECAST

The SEAK pink salmon harvest in 2018 is predicted to be in the *average* range with a point estimate of **23 million fish (80% confidence interval: 3-44 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 57-year period 1960 to 2016:

Category	Range (millions)	Percentile
Poor	Less than 11	Less than 20th
Weak	11 to 19	20th to 40th
Average	19 to 34	40th to 60th
Strong	34 to 51	60th to 80th
Excellent	Greater than 51	Greater than 80th

The 2018 SEAK pink salmon harvest forecast was based on the average of 5 recent even-year harvests (2008, 2010, 2012, 2014, and 2016). We first examined forecasts based on the general methods we have used since 2007: a simple trend forecast of the harvest that was then adjusted using juvenile pink salmon abundance indices provided by the NOAA Fisheries, Alaska Fisheries Science Center, Auke Bay Laboratories. These data were obtained from systematic surveys conducted annually in upper Chatham and Icy straits in conjunction with NOAA's Southeast Coastal Monitoring Project (SECM) and are highly correlated with the harvest of adult pink salmon in the following year (see Wertheimer et al. 2011[1]). Juvenile pink salmon abundance indices obtained in 2017 however, were the lowest in the 21 years that NOAA has been conducting SECM surveys and were well outside of the range of previous observations. Forecasts using these data and forecast models used in the past resulted in extremely low (<10 million fish) or negative predictions for 2018. As a result, we chose to use simpler trend models for the 2018 forecast (Figure 1).

Trend forecast methods examined included exponential smoothing and 5-, 3-, and 2-year running averages of past harvests. Each method was examined for odd and even years combined and for the even-year brood line only. We also produced forecasts for each of the three major subregions of SEAK separately (Northern Southeast Inside, Northern Southeast Outside, and Southern Southeast) and for SEAK as a whole using each method. Most of these methods produced SEAK harvest forecasts in the low-to-mid 20 million fish range. The forecast based on the 5-year average of even-year SEAK pink salmon harvests had the lowest mean percent error, mean absolute percent error, and mean absolute scaled error compared to forecasts based on exponential smoothing and 3-, and 2-year running averages of even-year regionwide pink salmon

[1] We gratefully acknowledge the assistance of Jim Murphy, Joe Orsi (retired) and Alex Wertheimer (retired) and their colleagues at the NOAA Auke Bay Laboratories. However, we accept responsibility for this forecast, and we accept sole responsibility for this use of their data. For a detailed description of these NOAA research activities see: Wertheimer, A. C., J. A. Orsi, E. A. Fergusson, and M. V. Sturdevant. 2011. Forecasting pink salmon harvest in Southeast Alaska from juvenile salmon abundance and associated environmental parameters: 2010 returns and 2011 forecast (NPAFC Doc. 1343) Auke Bay Lab., Alaska Fish. Sci. Cen., Nat. Mar. Fish. Serv., NOAA, 17109 Point Lena Loop Road, Juneau, AK 99801-8626, USA, 20 p.; http://www.npafc.org/new/pub_documents.html.

harvests, and was thus chosen as the best forecast for 2018. The forecast range (3–44 million) is the 80% confidence interval calculated from the mean squared error of the hind-cast predictions.

The 2018 harvest forecast of 23 million pink salmon is below the recent 10-year average harvest of 38 million pink salmon, but is very close to the average even-year harvest since 1960 (25 million pink salmon). The NOAA Auke Bay Lab's 2017 peak June–July juvenile pink salmon index value (0.31) from upper Chatham and Icy straits in northern SEAK ranked 21st out of the 21 years that information has been collected and was approximately 25% of the previous lowest index value. There are no directly comparable values, but pink salmon harvests associated with juvenile indices below a value of 2.0 ranged from 16 to 37 million fish. Although NOAA trawl indices have worked relatively well for forecasting the region-wide pink salmon harvest, the data are more strongly correlated (R^2 = 0.68) with the harvest in the Northern Southeast Inside Subregion of SEAK where the surveys are conducted. The very low 2017 juvenile index value and very poor recent even-year harvests in the Northern Southeast Inside Subregion, strongly suggest harvests in the northern half of the region will be very low in 2018, particularly on inside waters away from the outer coast. Harvests in the Southern Southeast Subregion, however, averaged 19 million over the past five even years (range: 14–33 million pink salmon), and it is at least plausible that the harvest in 2018 will be in line with recent averages for southern SEAK. Escapements of pink salmon in the parent year (2016) of the 2018 return were generally strong in the Southern Southeast and Northern Southeast Outside subregions, but were weak in the Northern Southeast Inside Subregion. Management targets were met for 8 of 15 Districts and 30 of 46 pink salmon stock groups in Southeast Alaska. The formal escapement goal for the Northern Southeast Inside Subregion was not met (Table 1).

One potential source of uncertainty regarding the 2018 pink salmon return is the anomalously warm sea surface temperatures that persisted throughout the Gulf of Alaska from fall 2013 through much of 2016. Pink salmon that went to sea from 2014 to 2016 returned in numbers below expectation and below recent odd- and even-year averages. Although sea surface temperatures moderated in the Gulf of Alaska in 2017, effects on the Gulf ecosystem may persist and pink salmon that went to sea in 2017 (and set to return in 2018) may have experienced reduced survival. In addition, weak even-year returns to northern Southeast inside waters have persisted since 2012 and there may be mechanisms that promote brood line dominance once it is established (Krkosek et al. 2011). The department will manage the 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.

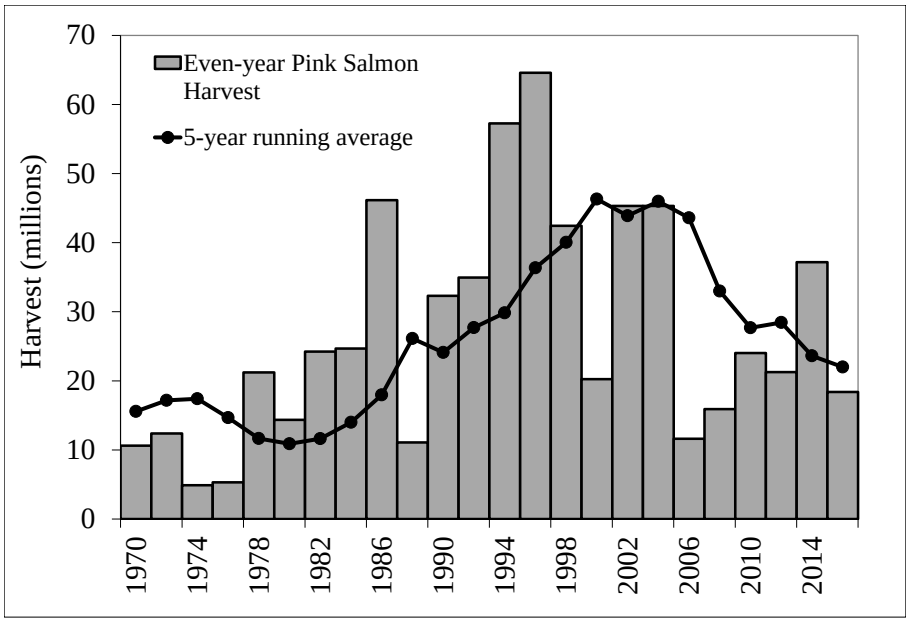

Figure 1.–Comparison of the annual even-year harvest of pink salmon in SEAK and 5-year running average values of the harvest. This method produced a 2018 harvest forecast of 23 million pink salmon.

Table 1.–Southeast Alaska pink salmon escapement indices (in millions) by district and subregion, compared to management target ranges by district, and biological escapement goal ranges by subregion for the 2018 parent-year of 2016.

Subregion	District	2016 Index	Lower Management Target	Upper Management Target
Southern	101	3.34	1.02	2.71
Southern	102	0.87	0.29	0.77
Southern	103	1.56	0.95	2.54
Southern	105	0.19	0.25	0.66
Southern	106	0.31	0.21	0.57
Southern	107	0.29	0.26	0.69
Southern	108	0.03	0.02	0.06
Northern Inside	109	0.58	0.63	1.50
Northern Inside	110	0.43	0.59	1.41
Northern Inside	111	0.08	0.27	0.65
Northern Inside	112	0.26	0.53	1.26
Northern Inside	Inside 113	0.40	0.32	0.76
Northern Inside	114	0.03	0.15	0.35
Northern Inside	115	0.00	0.03	0.07
Northern Outside	Outside 113	1.70	0.75	2.50

Biological Escapement Goals by Subregion	Total 2016 Index	Lower Escapement Goal	Upper Escapement Goal
Southern	6.60	3.00	8.00
Northern Inside	1.78	2.50	6.00
Northern Outside	1.70	0.75	2.50

GENERAL MANAGEMENT GOALS

The primary management goals for the 2018 SEAK purse seine fishery are as follows:

1. Achieve overall pink salmon spawning BEGs by subregion and within subregions; obtain escapements consistent with district and stock group management targets to ensure that spawning escapements are well distributed;
2. Achieve overall adequate chum salmon spawning escapements and ensure that spawning escapements are well distributed;
3. Provide for an orderly fishery while harvesting fish in excess of spawning escapement needs;
4. Minimize, to the extent possible, the 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 U.S./Canada Pacific Salmon Treaty;
7. Minimize harvest of Chinook salmon using conservation actions adopted by the BOF in 2018 including non-retention of Chinook salmon 28 inches or larger for the 2018 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 2018 forecasts indicate a weak to 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-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 Section 13-C and Districts 1, 2, 4, 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 when appropriate to harvest surplus returns. The department may expand 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 as run strength and fleet distribution allows. The department may have to reduce fishing opportunity after initially expanding opportunity depending on how runs develop and the fleet distributes. Specific areas may warrant more or less fishing time than the regional schedule depending on run strength and fleet distribution.

EFFORT LEVELS

The size of the purse seine fleet will have some impact on management decisions as the season progresses. Purse seine effort in 2017 was 269 permits fished and in 2016, 254 permits fished.

Effort levels are generally higher in odd years and lower in even years reflecting the recent odd-year cycle of stronger pink salmon returns; effort in 2018 should be similar to 2016. Since 2007, the number of total permits has decreased from 415 to 315 due to the permit buy-back program. The recent 10-year average effort in the purse seine fishery from 2007–2016 is 251 permits.

DAILY START TIMES

For the 2018 season, the fishery opening and closing times will be as follows:

1. From the start of the purse seine season (June 17) through approximately August 15: 5:00 a.m. to 8:00 p.m.
2. From approximately August 16 through the end of the pink salmon season: 6:00 a.m. to 9:00 p.m.
3. From the start of the fall chum salmon season until the season closes: 7:00 a.m. to 7:00 p.m.

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 meeting of the Alaska Board of Fisheries (BOF) to read:

(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; and
(3) over the beds or channels of streams and rivers of this state during all stages of the tide.

Also in this regulation, the following was adopted:

(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 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;

5 AAC 39.290(b) provides that 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 around every stream and the stream channel at low tide in 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.

NEWS RELEASE INFORMATION

ADF&G will announce each fishery opening by news release. 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 a fishery. 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. News releases will be available at ADF&G offices throughout SEAK, posted on the ADF&G web site, and will be available at fish buying locations or other prominent locations throughout the region. News releases 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 news release. The department is discontinuing the telephone message recording system for purse seine news releases because of the difficulty in providing lengthy and detailed information, typical of purse seine news releases, on a telephone message recording.

News releases 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

In recent years, terminal fisheries have been opened inside normal markers or stream markers at various locations throughout the region. These areas were opened to harvest buildups of pink

salmon in excess of escapement needs, not at the request of processors as prior fisheries were. These fisheries were 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 news releases.

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 Pacific Salmon Treaty [5 AAC 29.060 (b)(1)]. The king salmon all-gear harvest ceiling is driven by the preseason abundance index that is determined by the Chinook Technical Committee. For 2018, the abundance index is 1.07 and the corresponding purse seine Chinook salmon allocation is **5,600 fish**.

The BOF has adopted size limits [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 specific provisions for management of the purse seine fishery harvest of Chinook salmon are as follows:

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

CHINOOK SALMON IMPLEMENTATION PLAN

SEAK Chinook salmon stocks are currently experiencing a cycle of very low abundance. Over the past five years (2012–2016), the eleven monitored Chinook salmon index systems did not meet escapement goals 45% of the time. In 2017, nine of the eleven monitored Chinook salmon index systems were below their escapement goal ranges and three of the six systems for which forecasts are developed are projecting runs below their escapement goal ranges in 2018. In an effort to meet escapement in 2018 in SEAK systems, restrictions will be implemented in gillnet, 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 15 and 11 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. Additionally, the 2018 Chinook salmon forecasts indicate returns to other Southeast Alaska systems, particularly to the Stikine and Taku rivers, will be at an all-time low. Therefore, ADF&G has imposed a 10% reduction to the Pacific Salmon Treaty all-gear Chinook salmon harvest limit for 2018 and as a result, some of the management actions for 2018 will be

more restrictive than those described in the action plans. Management actions taken to conserve Taku and Stikine rivers Chinook salmon, will be highly restrictive in attempts to attain escapement goals and stay within harvest limits outlined in the Pacific Salmon Treaty.

More information about the basis for 2018 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

2018 Southeast Alaska Chinook Salmon All Gear Harvest Limit press release:

http://www.adfg.alaska.gov/index.cfm?adfg=pressreleases.pr&release=2018_04_03_2

Southeast Alaska Net Fisheries Chinook Salmon Management Restrictions News Release:

http://www.adfg.alaska.gov/static/applications/dcfnewsrelease/899583083.pdf

Non-retention of Chinook salmon 28 inches or larger will be in place for the 2018 purse seine season. 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. To ensure small (less than 21 inches) Chinook salmon are not counted against the quota, ADF&G needs the cooperation of the fishing industry. Chinook salmon 21 inches or less should be indicated on fish tickets as species code 411.

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 the initial openings of the Hidden Falls THA until mid–late July when chum harvests in the THA generally decline. Specific retention and non-retention periods will be announced in each purse seine fishery news release. Additional areas may also be announced via news release.

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 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 again occur in 2018. 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. Both of 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 past 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, as a means 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 rates of other species.

USE OF AIRCRAFT PROHIBITED

A regulation (5 AAC 33.398) adopted by the BOF in 2015 and amended by the board in 2018 prohibits the use of unmanned 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 the Southeastern Alaska Area. 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 DISTRICTS PURSE SEINE FISHERY

2016 PINK SALMON RETURNS

The Southern Southeast Alaska Subregion includes all of the area from Sumner Strait south to Dixon Entrance (Districts 1–8). The escapement index value of 6.6 million in 2016 was within the escapement goal range of 3.0 to 8.0 million index fish. Escapement indices were within or exceeded management targets for 6 of 7 districts and for 16 of 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 2017, escapements were below the sustainable escapement goal of 55,000–120,000 fish in 4 of the 5 years and included the lowest escapements ever recorded at McDonald Lake in 2013 (15,400) and 2016 (15,600). 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.

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

- District 1 purse seine—From statistical weeks (SW) 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 SW 29 through 32, the purse seine fishery on the western shore of the Cleveland Peninsula (within 3 nautical miles of the shoreline) will be closed.
- District 5 purse seine—From SW 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 SW 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 SW 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 SW 29 through 31, the District 6 drift gillnet fishery will open for a maximum of two days
- District 7 purse seine—From SW 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 fishery, the fall chum salmon fishery in Cholmondeley Sound, and the THA fisheries.

District 4

The early portion of the District 4 purse seine fishery will be managed to comply with the Pacific Salmon Treaty. The agreement calls for managing the Alaska District 4 purse seine fishery before SW 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.
2. Carry forward from year to year annual deviations from the harvest share arrangement.

The AAH each year will be calculated as the combined total run of adult Nass and Skeena rivers sockeye salmon in that year less the combined Nass and Skeena escapement target of 1.1 million fish. In the event the actual Nass and Skeena spawning escapement for the season is below the target level, the actual spawning escapement will be used in the AAH calculation. For 2018, the department estimates the escapement target will be 800,000 sockeye.

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, and 6 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 February 2018, the NBTC finalized the run reconstruction for 2016 and presented the preliminary run reconstruction for 2017 to the bilateral Northern Panel. Information in Table 2 reflects the performance of the District 4 fishery from 1999 through 2016, preliminary numbers for the 2017 season, and a 2018 forecast.

Fisheries and Oceans, Canada (FOC) has a preseason expectation of approximately 1,128,000 sockeye salmon to the Nass/Skeena rivers in 2018. This is a combined forecast of 645,000 Skeena River sockeye and 483,000 Nass River sockeye. If the 2018 forecast is accurate, and the combined escapement is estimated at 800,000 sockeye, then the AAH for District 4 will be approximately 8,000 Nass/Skeena sockeye salmon (Table 2).

Table 2.–Sockeye salmon allocations for the District 4 purse seine fishery based on Nass and Skeena Rivers allocation calculations, 1999 to 2018.

Year	Nass/Skeena Total Return	Nass/ Skeena Escapement	Allowable Nass/ Skeena AAH	Allowable D4 Harvest (2.45%)	Total Pre-Week 31 Sockeye Harvest	Actual Nass/Skeena Harvest	Overage/ Underage Per Year	Cumulative Overage/ Underage
1999	1,771,048	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	-101,211
2017[1]	1,416,653	1,100,000	316,653	7,758	12,036	6,916	-842	-102,059
2018[2]	1,128,000	800,000	328,000	8,036				

[1] Data for 2017 is preliminary

[2] 2018 is based on forecasted returns.

The forecasted run to the Skeena River is predicted to not reach the escapement goal of 900,000 and FOC has put their commercial net fleet on notice that no commercial fisheries will occur in marine waters in Area 4 in 2018 due to the forecasted disastrous return.

In 2018, due to the annual variation in the calendar, there will be eight potential openings for the District 4 purse seine fishery during the treaty period. Most years there are six potential openings. During the last 10 seasons, the average harvest for an opening during the treaty period has been 8,100 sockeye salmon by 20 vessels. The variation by season ranges from 1,154 sockeye salmon per opening in 2010 to 28,594 sockeye per opening in 2014.

With the low AAH predicted for 2018, in comparison to the average harvest of sockeye salmon during treaty weeks, District 4 cannot be open during all of the potential openings. The department will close District 4 during the first week (SW 27; July 1 and July 5) of purse seine fishing in Southeast Alaska. This closure will allow time to evaluate the Skeena River inseason forecast and have the option to open the district during the later weeks of the treaty period when pink salmon abundance is higher. Opening the district in SW 28, the second week of potential openings in the district, will be decided based on the sockeye abundance in Districts 1 and 2, and the Canadian Tyee test fishery information on the Skeena River.

Foregoing fishing in the first week, SW 27, of the purse seine fishery with potential closures during SW 28, should allow for fishing time in SW 29–30 when pink salmon abundance is higher. If it is determined by the department that the Canadian forecast has underestimated Skeena River returns, then fishing will be initiated to harvest the AAH in District 4 as treaty provisions allow.

The District 4 purse seine fishery will start on either Sunday, July 8, or Sunday, July 15. District 4 will be managed under the Pacific Salmon Treaty annex through July 28 (SW 27–30). It is anticipated that the initial opening will be 10 to 12 hours in length. The duration of following openings will be based on sockeye salmon abundance. The amount of effort in the district will also be closely monitored to stay within Pacific Salmon Treaty sockeye allocations.

ADF&G and FOC have set up an information exchange protocol that will enhance inseason communication between both managing 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 Skeena test fishery can be tracked by Alaska managers on a daily basis from a web-based database. This protocol worked well in 2017 and allowed managers to share information in a timely manner.

Starting on Sunday, July 29 (SW 31) when the majority of Canadian sockeye 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 boat-days of overall effort similar to levels since the signing of the Pacific Salmon Treaty. 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 was opened for the same amount of time as inside waters after the treaty period; however, that may not be the case in 2018.

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 17, 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 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 preseason 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 forcing boats to fish further offshore. For 2018, the department will continue to open a fishing area that includes waters within two nautical miles of the shoreline. The first week (SW 25) will be open for 4 days. The department will monitor effort levels and wild chum, sockeye, and coho salmon harvests to minimize harvest of these species by adjusting fishing time. The department's response may include reduced fishing time in subsequent weeks.

Traditional Fishery Openings

The traditional purse seine fishery will begin on Sunday, July 1 (SW 27). The initial fishing period will be for 15 hours and will be confined to the southeast portion of Section 1-F, the southern portion of District 2, and possibly portions of Section 7-A (Anan).

Fishing time will likely begin with a series of 15-hour openings. If returns are strong enough to 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 and East Behm Canal river systems, and fishing time. Other areas in District 1, such as the Gravina Island shoreline, will also be managed to take into account other user groups, McDonald Lake sockeye salmon action plan, and the need to achieve evenly distributed escapements into the Back Behm and West Behm Canal 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, and Kasaan Bay can be adequately assessed. Additionally, no purse seining should be expected in middle Clarence Strait, along the Ship Island and Tolstoi Bay shorelines, until pink salmon run strength to West Behm Canal, Thorne Bay, District 6, and Section 7-B are determined. Also, in District 2, the fishing pattern along the Ship Island shore and near Thorne Bay will be managed to reflect historical fishing patterns to take into account other user groups and the need to achieve escapement to Thorne River, 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 22 (SW 30). Additional areas will be open based on the strength of pink salmon returns to District 3 rivers. By late July or early August, Section 3-C may also open.

Districts 5, 6, and 7

Pink salmon returns to District 5 are expected to be moderate at best based on parent-year escapements. Purse seine openings will be dependent on observations of pink salmon abundance and would not be expected to occur until the second week of August.

District 6 parent-year escapement was moderate to good throughout the district. Purse seine openings are expected to begin in late July in the Mosman, Burnette, and McHenry inlets area. Openings in the Clarence Strait portion of District 6 will be restricted for McDonald Lake sockeye salmon and will not begin until after SW 31 (July 29–Aug 4).

District 7 purse seine openings will vary by section in 2018. Parent-year escapement to many of the early run systems in section 7-A, including Anan Creek, were below desired escapement levels. Therefore, openings in Section 7-A will be dependent on observations of pink salmon escapement, primarily to Anan Creek, and are not expected to occur before July 8. 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 McDonald Lake sockeye salmon. Section 7-B will not open prior to SW 31 (July 29–Aug 4) and 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 major runs of fall chum salmon at Disappearance and Lagoon creeks, as well as several smaller creeks throughout the sound. No formal forecasts are 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 30,000–48,000 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.

ADF&G will keep Cholmondeley Sound closed to the directed harvest of chum salmon until a determination has been made that the run for 2018 will provide a harvestable surplus.

Chum salmon harvests by purse seine in District 2 during late August pink salmon openings will be closely monitored as an early indication of run strength. Initial aerial surveys of Cholmondeley Sound chum salmon will begin near the end of August.

After the closure of the directed pink salmon purse seine fishery in District 2, ADF&G may provide a purse seine opening for chum salmon in waters of Cholmondeley Sound and waters of Clarence Strait. This initial opening is expected to occur during the first week of September (SW 36), unless aerial observations warrant an earlier opening. The opening is expected to 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 day in length, each week, depending upon the strength of the run and expected effort levels. Waters inside Cholmondeley Sound will be opened provided adequate numbers of chum salmon are observed in the South and West arms of Cholmondeley Sound. When Cholmondeley Sound is opened, 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 Lancaster, Dora Bay, and Kitkun systems, and closure lines may be moved further north than the closures listed in regulations.

If aerial surveys indicate that chum salmon run strength is sufficient to allow continued harvest, additional openings will be allowed.

If troll effort is observed by the department, a fishery rotation will be set up for both troll and seine gear groups. The summer troll fishing season may be extended from September 21 through September 30, based on coho salmon abundance. 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.

Terminal Hatchery Fisheries

For the 2018 season, THA purse seine fisheries will occur at Neets Bay, Anita Bay, and Kendrick Bay to harvest fish returning to Southern Southeast Regional Aquaculture Association (SSRAA) enhancement facilities. These THA fisheries will be managed jointly with SSRAA and in accordance with existing BOF approved management plans. Details regarding the open fishing periods by gear type in each area will be announced via commercial fishery news releases. Table 3 summarizes the expected returns to each SSRAA release location.

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.

Terminal Area–Neets Bay [5 AAC 33.370]

ADF&G, in consultation with SSRAA, will manage Neets Bay to include those waters of Neets Bay from the easternmost point of Bug Island to the closed waters at the head of the bay. Details of the Neets Bay THA fisheries will be provided in an upcoming news release.

In 2018, SSRAA is expecting a total run of 1,347,000 summer chum, 59,000 fall chum, 83,000 coho, and 18,000 Chinook salmon to return to Neets Bay.

Neets Bay will be open continuously to purse seine and drift gillnet from 12:01 a.m., May 1 to 12:00 noon, June 10, unless closed by emergency order. Troll gear will be allowed continuously during this period. There will be a rotational fishery for purse seine, troll, and gillnet gear from June 14 through June 29. From June 30 to November 15, no gillnet or purse seine openings are scheduled so that cost recovery can take place. Troll gear will be allowed continuously from June 11 to July 31. If further openings are warranted, they will be announced by news release.

Neets Bay THA Calendar

May 1–June 10, 2018	Open continuously to purse seine, troll, and drift gillnet unless closed by emergency order.
June 14–June 29, 2018	Rotational fisheries for purse seine and drift gillnet unless closed by emergency order.
June 11–July 31, 2018	Troll open continuously.
June 29–November 15, 2018	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 news release once cost recovery has been completed.

Terminal Area–Anita Bay [5 AAC 33.383]

Anita Bay THA consists of the waters of Anita Bay west of a line from Anita Point at 56°13.68′ N. latitude, 132°22.48′ W. longitude to a point on the northern shore at 56°14.26′ N. latitude, 132°23.93′ W. longitude. From May 15 to June 1, the outer portion of Anita Bay will be closed north and east of a line from 56°12.90′ N. latitude, 132°24.50′ W. longitude to 56°12.75′ N. latitude, 132°23.50′ W. longitude to mitigate potential harvest of wild Chinook salmon.

Closed waters within the THA include:

(1) From June 15 through June 25, waters of the Anita Bay THA that are west of 132°26.22′ W. longitude will be closed to the harvest of salmon;

(2) From June 26 through July 1, waters of the Anita Bay THA that are west of 132°26.98′ W. longitude will be closed to the harvest of salmon;

(3) From July 2 through July 10, waters of the Anita Bay THA that are west of 132°28.00′ W. longitude will be closed to the harvest of salmon.

From 12:01 a.m., Friday, June 15, through 11:59 p.m., Tuesday, July 10, waters within one-quarter mile of the northern shoreline of Anita Bay west of a line from 56°12.31′ N. latitude, 132°26.22′ W. longitude to 56°12.06′ N. latitude, 132°26.22′ W. longitude and east of a line from 56°11.96′ N. latitude, 132°29.58′ W. longitude to 56°11.73′ N. latitude, 132°29.36′ W. longitude will be open.

For 2018, 459,000 summer chum, 15,400 Chinook, and 9,900 coho salmon are predicted to return. The Anita Bay THA will open to harvest salmon by troll, drift gillnet, and purse seine from 12:01 a.m., Tuesday, May 15, through 12:00 noon, Saturday, November 10. 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*. This rotational fishing period will be in place for the duration of the 2018 season. Details of this schedule were developed by SSRAA and are available on their website, ssraa.org, and by ADF&G news release.

The Anita Bay THA in District 7 consists of the waters of Anita Bay west of a line from Anita Point at 56°13.68′ N. latitude, 132°22.48′ W. longitude to 56°14.26′ N. latitude, 132°23.93′ W. longitude.

Anita Bay THA Calendar

May 15–June 12, 2018

Beginning 12:01 a.m., Sunday, May 1 through 12:00 noon, Monday, June 12: open continuously to purse seine, drift gillnet, and troll unless closed by emergency order.

June 13–August 31, 2018

Rotational fisheries for drift gillnet and purse seine.

September 1–November 10, 2018

Beginning 12:01 a.m., Saturday, September 1, the Anita Bay THA will be open to the harvesting of salmon concurrently by drift gillnet, purse seine, and troll gear. The Anita Bay THA will close for the season at 12:00 noon, Saturday, November 10.

Kendrick Bay THA–[5 AAC 33.377]

The Kendrick Bay THA, which includes the waters of Kendrick Bay west of 131°59.00′ W. longitude, and the waters of McLean Arm west of 131°57.80′ W. longitude, will be open on a continual basis beginning June 15 through September 30, 2018. For 2018, SSRAA is expecting a return of 632,000 summer chum salmon. Peak catches are expected to occur during SW 27–29.

Table 3.–Expected 2018 returns to SSRAA enhancement projects by release location.

Species/Run	Release Location	Common property Harvest	Terminal	Total Return
Coho	Herring Cove/Whitman	15,500	5,160	20,650
Coho	Nakat Inlet	19,660	2,180	21,850
Coho	Anita Bay	7,600	2,300	9,900
Coho	Neets Bay	57,900	24,800	82,700
Coho	Crystal Lake	5,300	960	6,260
Coho	Klawock	156,800	67,200	224,000
Summer Coho	Neck Lake	27,550	27,550	55,100
Chinook	Whitman Lake	3,690	8,605	12,300
Chinook	Anita Bay	4,620	10,780	15,400
Chinook	Neets Bay	5,430	12,670	18,100
Chinook	Crystal Lake	1,650	1,650	3,300
Summer Chum	Neets Bay	363,900	983,900	1,347,000
Summer Chum	Anita Bay	229,500	229,500	459,000
Summer Chum	Kendrick Bay	442,700	189,750	632,500
Summer Chum	Nakat Inlet	130,150	130,150	260,300
Fall Chum	Nakat Inlet	19,900	36,900	56,890
Fall Chum	Neets Bay	14,850	44,550	59,400

NORTHERN DISTRICTS PURSE SEINE FISHERY

2016 PINK SALMON RETURNS

For the Northern Southeast Inside Subregion, the pink salmon escapement index value of 1.78 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 14 of 21 pink salmon stock groups within this subregion. For the Northern Southeast Outside Subregion, which includes Sections 13-A and 13-B, the escapement index value of 1.70 million pink salmon fell within the escapement goal range of 0.75 to 2.50 million index fish. Escapement indices were within or exceeded management targets for all 7 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. Meeting escapement goals will continue to be the primary objective of the department. Within that 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 Heinl 2011). 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, the Hidden Falls and Deep Inlet Hatchery THAs, and the Amalga Harbor Special Harvest Area (SHA) fisheries.

Inside Fishing Areas, Early Runs

The 2018 purse seine season will begin on Sunday, June 17, 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 portions of District 12 at the Point Augusta Index area in Chatham Strait. The opening will be in conjunction with the first opening at the Hidden Falls Terminal Harvest Area.

Escapements of summer chum salmon for the 2013 and 2014 parent years in Tenakee Inlet were respectively, above and below average. Although no formal forecasts are made for these stocks, some expectations can be based on parent-year escapements. Escapements in 2013 were much stronger than the main parent year of 2014 and were 127% and 45% of the previous ten-year average, respectively.

The 2016 parent-year pink salmon escapement index for Tenakee Inlet of 0.09 million fish is below the management target range of 0.21- 0.51 million, and below the even-year average index count of 0.10 million fish. In 2018, 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 2016 parent-year escapement index for Section 13-C was 0.38 million, within the management target range of 0.32 million pink salmon. Openings in Section 13-C are not likely to occur in 2018, but if inseason assessment indicates a surplus, openings will occur. Parent-year summer chum salmon escapements (2013–2017) to Saook Bay and Rodman Bay were generally below long-term averages. Chum salmon escapement in 2017 was well above the long-term average. 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 0.43 million pink salmon, below the management target range of 0.59–1.41 million fish. The parent-year escapement index for Seymour Canal (Section 11-D) of 0.06 million pink salmon was well below the management target range of 0.16–0.40 million fish. No openings are expected to occur in District 10 in 2018 due to poor parent-year escapement in District 10 and Section 11-D.

Directed commercial seining on early-run pink salmon will be based on aerial survey and fishery performance assessments of run strength. Aerial surveys to evaluate run strength will begin in late June for the northern inside fishing districts. To provide an additional assessment of incoming run strength of early-run pink salmon, the department will open a one-mile area along the Point Augusta shoreline in District 12 in conjunction with other weekly openings. Test fishing will be conducted at Point Gardner 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 27 and the Kingsmill Point test fishery will start on or about July 4. 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 29 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.

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 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 within the management target range for Peril Strait stocks, and 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 the observed run strength.

In Section 9-A, 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 2016 parent-year pink salmon escapement to Red Bluff Bay was within the management target range. Seine openings in the Red Bluff Bay area of Section 9-A 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 Port Walter (southeast Baranof Island) pink salmon stock group escapement index was within the management target range in 2016. Pink salmon returns to southeast Baranof normally begin after the first week of August and openings will be based on inseason assessment of run strength.

Only limited openings are expected in Section 9-B in 2018. Parent-year escapements of pink salmon were generally poor throughout Section 9-B with only one stock group within management targets. Parent-year escapements were near the lower end of the target range to the Kuiu Island systems and generally poor to the southeast Admiralty Island systems. Openings will be dependent on results from test fisheries and observations of pink salmon abundance. The 2016 escapement index for Section 9-B was 0.41 million fish, below the 0.48–1.13 million management target range.

Pink salmon escapements in District 14 were well below the management target range in 2016. 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 parent-year escapement index of pink salmon to Kelp Bay streams was 73,000 fish, within the management target range. Limited openings may occur in Kelp Bay or on the Catherine Island shoreline in 2018. Any openings to harvest pink salmon will be based on inseason assessment of run strength. 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 2017 which was well above average. If strong returns of chum salmon are observed in Middle Arm, openings directed at chum salmon 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*. The regulation 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 to the *Northern Southeast seine salmon fishery management plans* will sunset after the 2020 season.

During late July and August, openings along the Hawk Inlet shore may extend northward to the latitude 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: Lynn Canal and Stephens Passage escapements were well below their management targets. The 2016 Taku River fish wheel pink salmon catch was also well below the recent even-year average.
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. 2018 pink salmon catches in the department's Taku River fish wheels.
5. 2018 pink salmon marine sport fish catch rates in the Juneau area (lower Lynn Canal and upper Stephens Passage).
6. 2018 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, parent-year pink salmon escapement indices were above the management target range for the Portlock Harbor stock group, and Lisianski, Slocum Arm, and Salisbury Sound stock groups were within the target escapement ranges. 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 for Whale Bay and West Crawfish Inlet were within their management target ranges and within the management target range for the Sitka Sound stock group. Purse seine fisheries can be expected in these areas depending on inseason observations. Purse seine openings 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 openings will also be considered as a management option to 39-hour or continuous openings at intermediate run sizes in order to ensure escapement needs will be met.

Summer chum salmon returns will be monitored to determine run strengths 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 needs and subsistence fishery needs are met. Targeted sockeye salmon openings are also a possibility at Redoubt Bay beginning

around mid-July provided that the inseason forecast, based on historic run timing and inseason enumeration of sockeye salmon through a weir operated by the United States Forest Service, projects an escapement greater than 40,000.

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 below the SEG goal range of 7,500–15,000 chum salmon in 2013 and within the goal range in 2014. In 2013 and 2014, Port Camden fall chum salmon escapements were within the goal range of 2,000–7,000 fish. Fishing opportunities in Excursion Inlet may occur in late August or early September dependent on run strength. Parent-year escapements to Excursion River were within the SEG range of 4,000–18,000 spawners in 2013 and 2014. Admiralty Island streams do not have established goals for fall chum salmon escapements. These systems will be monitored and targeted purse seine fisheries can 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.

Hidden Falls Terminal Hatchery Fishery

The Hidden Falls Hatchery, operated by the Northern Southeast Regional Aquaculture Association (NSRAA), expects a run of 593,000 chum salmon in 2018. NSRAA needs 190,000 chum salmon for broodstock leaving 403,000 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 2018, 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. The *Hidden Falls Hatchery Terminal Harvest Area Salmon Management Plan* (5 AAC 33.374(f)) stipulates that the department may, by emergency order, open a joint common property/cost recovery special assessment fishery for chum salmon as specified in AS 16.10.455 within an area defined as the waters of Section 12-A south of 57°27.00′ N. latitude, north of 57°01.00′ N. latitude, and west of a line from 57°27.00′ N. latitude, 134°45.50′ W. longitude to 57°01.00′ N. latitude, 134°41.50′ W. longitude, from June 15 through July 31. In other words, all chum salmon that are landed by a vessel that reports on a fish ticket, all or a portion of the harvest was from Subsections 112-11, 112-21, or 112-22, between the dates of June 15 and July 31, will be assessed the tax. Fish ticket reporting requirements will be strictly monitored and enforced to ensure compliance with the tax assessment program. NSRAA will deploy observers on the grounds to document participating vessels to further facilitate enforcement.

The first purse seine opening at Hidden Falls is scheduled for June 17, with no mid-week opening followed by an opening on June 24. After the opening on June 24, NSRAA will assess returns to determine if another opening is warranted. In the event that a large abundance of chum salmon develops early, the Hidden Falls THA may open prior to June 17. As usual, purse seiners are advised that openings at Hidden Falls during the 2018 season may be announced with a

minimum 24-hour notice if necessary in order to maximize fish quality. Under the tax assessment plan, mid-week openings can be expected throughout the run unless closures are necessary to meet broodstock requirements.

The *Hidden Falls Hatchery Terminal Harvest Area Salmon Management Plan* 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 a purse seine fishery to chum salmon that is scheduled in this plan 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 two miles 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. latitude, 134°51.78′ W. longitude to a point offshore at 57°16.28′ N. latitude, 134°48.00′ W. longitude, then running south to a point at 57°06.76′ N. latitude, 134°43.00′ W. longitude then due west to a point on the Baranof Island shoreline approximately one mile south of Takatz Bay at 57°06.76′ N. latitude, 134°47.50′ W. longitude. 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 less than two miles off the Baranof Island shoreline may occur if pink salmon escapements to neighboring areas are lacking and unlikely to meet escapement goals. Any boundary expansions or area contractions will be determined based on inseason observations of run strength.

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 news release prior to and during the fishing season.

Terminal Area–Deep Inlet [5 AAC 33.376]

NSRAA expects runs of 1,250,000 chum, 13,000 Chinook, and 54,000 coho salmon to the Deep Inlet remote release site and the Medvejie Hatchery in 2018 (Table 4). This season, 90,000 chum salmon are needed for broodstock, and no chum salmon are needed for cost recovery. NSRAA is not planning to conduct cost recovery this season and no closure of the THA in early August will

be necessary. The majority 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*. The plan provides for distribution of the harvest of hatchery-produced salmon between the purse seine and drift gillnet fleets. For the 2018 season, the time ratio of drift gillnet to purse seine openings is 1:2 and for the 2019-2020 seasons, the time ratio for gillnet to seine openings is 1:1. Trolling can occur when net fisheries are closed.

For the period May 1 to June 2; purse seine fishing is scheduled on Tuesday, May 1 from 12:01 a.m. to 12:00 a.m. drift gillnet fishing is scheduled on Wednesday, May 2 from 12:01 a.m. to 12:00 noon. During the remainder of the season (June 4 to September 30) drift gillnet fishing is scheduled on Tuesdays and Wednesdays, and purse seine fishing is scheduled on Sundays, Thursdays, Fridays, and Saturdays. Details of the rotational fishery schedule for Deep Inlet will be announced in a separate ADF&G news release. When changes are necessary the revised schedule will be issued in a subsequent news release.

The terminal harvest area during the 2018 season will be as follows:

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

During the 2018 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 2018 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.

Southeast Cove and Gunnuk Creek Special Harvest Areas

Chum salmon returns to Gunnuk Creek Hatchery at Kake and Southeast Cove on northeast Kuiu Island in Keku Strait have been generally low in recent years. These returns occur primarily in July and are taken incidentally in purse seine fisheries in Chatham Strait and western Frederick Sound during that time period. Forecasts of hatchery fish returning to Southeast Cove and Gunnuk Creek have generally been unreliable and runs have been much lower than forecasted. Only a partial forecast is available for 2018 since the Kake Non-Profit Hatchery Association ceased operations in 2014. Also, since the Gunnuk Creek Hatchery is no longer operating, 100% of the hatchery produced salmon returning to Southeast Cove and Gunnuk Creek will be harvested for cost recovery. NSRAA has assumed responsibilities for releasing chum salmon at Southeast Cove and is expecting a total run of 143,000 chum salmon from their releases.

Amalga Harbor Special Harvest Area Fishery

In order to increase the common property share of enhanced chum salmon production, Douglas Island Pink and Chum, Inc. (DIPAC) anticipates continuing with common property purse seine opportunities in the Amalga Harbor SHA in 2018. Decisions about these openings will be based on run strength of enhanced chum, 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 news release at the appropriate time.

Table 4.–Expected 2018 returns to Northern SEAK area enhancement projects by hatchery organization and release location.

Species	Release Location	Common Property Harvest	Cost Recovery	Broodstock	Total Return
		NSRAA			
Chum	Medvejie/Deep Inlet	1,160,000	0	90,000	1,250,000[a]
Chum	Hidden Falls	403,000	0	190,000	510,000
Chum	SE Cove	21,000	122,000	0	143,000
Chinook	Medvejie/Deep Inlet	6858	1207	4,000	19,100
Chinook	Hidden Falls	800	0	1,000	3,600
Coho	Hidden Falls	71950	105050	10,000	197,000
Coho	Deer Lake (Mist Cove)	82150	68850	NA	145,000
Coho	Deep Inlet/Medvejie	56520	NA	2,720	51,840
		Armstrong Keta, Inc.			
Pink	Port Armstrong	Unavailable	Unavailable	Unavailable	1,457,000
Chum	Port Armstrong	Unavailable	Unavailable	Unavailable	378,000
Coho	Port Armstrong	Unavailable	Unavailable	Unavailable	153,000
Chinook	Port Armstrong	Unavailable	Unavailable	Unavailable	1,500
		Sitka Sound Science Center			
Pink	Crescent Bay	55300	NA	5,000	56,000
Chum	Crescent Bay	42670	NA	3,600	46,000
Coho	Crescent Bay	1180	NA	110	2,930
		Gunnuk Creek Hatchery			
Chum	SE Cove	Unavailable	Unavailable	0	Unavailable
Chum	Kake	Unavailable	Unavailable	0	Unavailable
		DIPAC			
Chum	Lynn Canal/Amalga	1,454,000	530,000	0	1,984,000
Chum	Taku/Stephens Passage	564,000	336,000	190,000	1,090,000

[a] Projections for Medvejie/Deep Inlet includes 163,000 chum salmon from the Sitka Sound Science Center.

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

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