## 2022 Southeast Alaska Drift Gillnet Fishery Management Plan

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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		all standard mathematical	
deciliter	dL	Code	AAC	signs, symbols and	
gram	g	all commonly accepted		abbreviations	
hectare	ha	abbreviations	e.g., Mr., Mrs.,	alternate hypothesis	$H_A$
kilogram	kg		AM, PM, etc.	base of natural logarithm	e
kilometer	km	all commonly accepted		catch per unit effort	CPUE
liter	L	professional titles	e.g., Dr., Ph.D.,	coefficient of variation	CV
meter	m		R.N., etc.	common test statistics	$(F, t, \chi^2, etc.)$
milliliter	mL	at	@	confidence interval	CI
millimeter	mm	compass directions:		correlation coefficient	
		east	E	(multiple)	R
Weights and measures (English)		north	N	correlation coefficient	
cubic feet per second	ft <sup>3</sup> /s	south	S	(simple)	r
foot	ft	west	W	covariance	cov
gallon	gal	copyright	©	degree (angular)	0
inch	in	corporate suffixes:		degrees of freedom	df
mile	mi	Company	Co.	expected value	E
nautical mile	nmi	Corporation	Corp.	greater than	>
ounce	OZ	Incorporated	Inc.	greater than or equal to	≥
pound	lb	Limited	Ltd.	harvest per unit effort	HPUE
quart	qt	District of Columbia	D.C.	less than	<
yard	yd	et alii (and others)	et al.	less than or equal to	≤
,	J	et cetera (and so forth)	etc.	logarithm (natural)	ln
Time and temperature		exempli gratia		logarithm (base 10)	log
day	d	(for example)	e.g.	logarithm (specify base)	log <sub>2</sub> etc.
degrees Celsius	°C	Federal Information		minute (angular)	, 82,
degrees Fahrenheit	°F	Code	FIC	not significant	NS
degrees kelvin	K	id est (that is)	i.e.	null hypothesis	$H_0$
hour	h	latitude or longitude	lat or long	percent	%
minute	min	monetary symbols	-	probability	P
second	S	(U.S.)	\$, ¢	probability of a type I error	
		months (tables and		(rejection of the null	
Physics and chemistry		figures): first three		hypothesis when true)	α
all atomic symbols		letters	Jan,,Dec	probability of a type II error	
alternating current	AC	registered trademark	R	(acceptance of the null	
ampere	A	trademark	TM	hypothesis when false)	β
calorie	cal	United States		second (angular)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
direct current	DC	(adjective)	U.S.	standard deviation	SD
hertz	Hz	United States of		standard error	SE
horsepower	hp	America (noun)	USA	variance	
hydrogen ion activity	рH	U.S.C.	United States	population	Var
(negative log of)	•		Code	sample	var
parts per million	ppm	U.S. state	use two-letter	•	
parts per thousand	ppt,		abbreviations		
	% <sub>0</sub>		(e.g., AK, WA)		
volts	V				
watts	W				

## REGIONAL INFORMATION REPORT NO. 1J22-08

# 2022 SOUTHEAST ALASKA DRIFT GILLNET FISHERY MANAGEMENT PLAN

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## **ABSTRACT**

This management plan provides an overview of the expected salmon run sizes, regulations, management issues, and harvest strategies for the Southeast Alaska drift gillnet fisheries in 2022. Drift gillnet fisheries are planned at Tree Point and Portland Canal (District 1), Prince of Wales Island and Stikine River (Districts 6 and 8), Taku River/Port Snettisham (District 11), Lynn Canal (District 15), and in select hatchery terminal harvest areas.

Keywords: Southeast Alaska, drift gillnet, management plan, Pacific salmon, *Oncorhynchus*, outlook, forecast, terminal harvest area, hatchery, 2022.

#### INTRODUCTION

This management plan provides an overview of the expected salmon run sizes, regulations, management issues, and harvest strategies for the Southeast Alaska (SEAK) drift gillnet fisheries in 2022. Average, unless defined otherwise, refers to the most recent 10-year average (2012–2021). Harvest, escapement, and run forecasts and outlooks, unless otherwise indicated, are in numbers of fish. ADF&G statistical weeks for the 2022 drift gillnet fishing season can be referenced in Table 11.

An average of 474 SEAK drift gillnet limited entry permits were issued annually, of which an average of 90% were actively fished each year (Conrad and Thynes *In Prep*). In 2021, 433 permits were issued, of which 371 (87%) were actively fished (CFEC 2021). A historical low of 348 permits were fished in 2004. Drift gillnet harvests have averaged 4.3 million salmon over the recent 10-year period, and 3.1 million salmon since statehood (1960–2021). In the last ten years, the species composition of the drift gillnet harvest has been 61% chum, 24% pink,89% sockeye, 6% coho, and 1% Chinook salmon. Of the total commercial salmon harvest in SEAK, the average drift gillnet fishery harvests have included 37% sockeye, 28% chum, 12% coho, 10% Chinook, and 4% pink salmon.

The 5 traditional drift gillnet fishing areas in SEAK are shown in Figure 1: Tree Point and Portland Canal (District 1); Prince of Wales (District 6); Stikine (District 8); Taku/Snettisham (District 11); and Lynn Canal (District 15). In addition, drift gillnet fisheries occur in several terminal harvest areas (THA) adjacent to hatchery facilities and at remote release sites throughout the region (Figure 2). Each of these drift gillnet fisheries are discussed separately in this management plan. A summary of drift gillnet harvest for each salmon species by fishery area and type for the 2021 season is presented in Table 1. The most recent 10-year annual and average harvests are presented in Table 2 for Tree Point, Table 3 for Prince of Wales, Table 4 for Stikine River, Table 5 for Taku/Snettisham, and Table 6 for Lynn Canal.

The drift gillnet fishery primarily targets sockeye, pink, and chum salmon during the summer season and coho and chum salmon during the fall season. Directed commercial fisheries harvesting Stikine and Taku Rivers stocks of Chinook salmon began in 2005 after ceasing in the 1970s. District 8 was opened to directed fisheries on Stikine River Chinook salmon from 2005 through 2008, and limited fisheries occurred in 2012 and 2016. In District 11, directed fisheries on Taku River Chinook salmon occurred in 2005, 2006, and 2009, and 2 12-hour openings occurred in 2012. The 2022 Chinook salmon preseason forecasts for the Taku and Stikine Rivers are below their escapement goal ranges resulting in no directed fisheries and conservative actions in the early sockeye salmon fishery openings has occurred the past several seasons.

SEAK Chinook salmon stocks are currently experiencing a cycle of very low abundance. Over the past 5 years (2017–2021), the 11 monitored Chinook salmon index systems did not meet

escapement goals 53% of the time. In 2021, 4 of the 11 monitored Chinook salmon index systems were below their escapement goal ranges. In 2022, 3 of the 5 systems for which forecasts are developed have total run projections below their escapement goal ranges. These systems —Stikine, Taku, and Chilkat Rivers— are within the District 8, District 11, and District 15 drift gillnet fishing areas. Commercial, sport, personal use, and subsistence fisheries will be restricted throughout SEAK to conserve Chinook salmon. More information on Chinook salmon management actions in specific fisheries can be found below.

### STOCKS OF CONCERN

The *Policy for Management of Sustainable Salmon Fisheries* (SSFP; 5 AAC 39.222) directs the Alaska Department of Fish and Game (ADF&G or department) to provide the Alaska Board of Fisheries (board) 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 the 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" and the board adopted these recommendations during their October 2020 work session.

Stock of concern designations 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 outlines potential management actions for the sport, commercial, subsistence, 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 were presented to the board and public in draft form at the 2022 Alaska Board of Fisheries Southeast and Yakutat Finfish and Shellfish meeting. The BOF concurred with the departments preferred management actions for each of these stocks but directed the department to apply more restrictive management measures where and/or when appropriate to relax management measures where and/or when the department determined there was opportunity to do so. The department is currently finalizing plans with board recommended management actions. Final action plans will be published as an ADF&G Regional Informational Report later this year. The recommended actions are included in this management plan.

## SALMON RUN EXPECTATIONS

In SEAK, the department issues a regionwide preseason harvest forecast for pink salmon. The department also produces preseason forecasts for several specific stocks including Chinook salmon from the Chilkat River, Chinook and sockeye salmon from Taku and Stikine Rivers, and coho salmon from the Taku River. Private nonprofit hatchery operators develop preseason forecasts for salmon returning to hatchery release sites throughout SEAK. The projected runs of some sockeye, chum, and coho salmon presented in this management plan are qualitative and should not be considered official department forecasts. These projections are calculated primarily from parent-year harvest and escapement data and are expressed in terms of probable magnitude of run relative to historical levels.

The 2022 Stikine River Chinook salmon terminal run forecast is 7,400 large fish (Chinook salmon  $\geq$  660 mm mid-eye to fork of tail fork length (METF), primarily age 1.3 and older). This forecast is well below the average of 17,600 fish and below the escapement goal range of 14,000 to 28,000 fish and does not provide for directed or assessment fisheries in either the U.S. or Canada. In addition, both countries will be utilizing restrictions during their directed sockeye salmon fisheries. Details of the management strategy will be in the Prince of Wales and Stikine Fisheries section of this plan.

The 2022 preseason terminal run forecast for Taku River large Chinook salmon is 6,600 fish. This forecast is below the escapement goal range of 19,000 to 36,000 fish and does not provide for directed or assessment fisheries in either the U.S. or Canada on Taku River Chinook salmon. In addition, both countries will be utilizing restrictions during early sockeye salmon fishery openings to minimize harvest of Chinook salmon. Details of the management strategy will be in the Taku/Snettisham Fishery section of this plan.

The 2022 preseason total run forecast for Chilkat River Chinook salmon is 1,550 large fish. The forecast is below the average escapement of 1,600 fish and below the escapement goal range of 1,750 to 3,500 fish. Restrictive management measures will be implemented during early sockeye salmon fishery openings to reduce harvest rates of Chilkat River Chinook salmon. Management strategies will be consistent with the strategies used in 2019–2021.

The cumulative regionwide 2022 forecast for hatchery produced Chinook salmon is approximately 62,000 fish. This includes estimated contributions from combined NSRAA facilities of 20,000 fish, estimated contributions of 37,600 fish from combined SSRAA facilities, and an estimated 4,000 fish from DIPAC (Tables 9 and 10). A portion of these runs will be harvested in traditional drift gillnet fisheries in Districts 1, 6, 8, 11, and 15, or in hatchery access terminal harvest area drift gillnet fisheries in Carroll Inlet, Neets Bay, Anita Bay, and Deep Inlet.

For 2022, the preliminary forecast for the Nass River is for a total run of 560,000 sockeye salmon. The preliminary terminal run forecast for Stikine River sockeye salmon is 63,000 fish, which constitutes a well below average run size (99,000 fish). The Taku River wild sockeye terminal run is expected to be 128,000 fish, below the average terminal run size of 150,000 fish. The Taku River enhanced sockeye salmon run is again expected to be minimal and below the average terminal run size of approximately 10,000 fish. Chilkat and Chilkoot Lakes sockeye salmon runs are expected to be average. DIPAC forecasts a Snettisham Hatchery sockeye salmon run of 54,000 fish in 2022.

The cumulative regionwide 2022 forecast of hatchery-produced summer chum salmon runs is 8.1 million fish. This includes 2.1 million fish to 4 DIPAC locations, 3.5 million fish to 6 Northern

Southeast Regional Aquaculture Association (NSRAA) locations, and 2.2 million fish to 6 Southern Southeast Regional Aquaculture Association (SSRAA) locations (Tables 9 and 10). A portion of these runs will be harvested in traditional drift gillnet fisheries in Districts 1, 6, 8, 11, and 15, or in hatchery access terminal harvest area drift gillnet fisheries in Boat Harbor, Deep Inlet, Limestone Inlet, Southeast Cove, Anita Bay, Neets Bay, and Nakat Inlet. Chum salmon harvests in regional drift gillnet fisheries have averaged 2.8 million fish over the recent 10-year period from 2011 to 2020.

Except for the Taku River coho salmon stock, wild coho salmon runs are not forecasted. The 2022 Taku River coho salmon terminal run forecast is 87,000 fish, below the 99,000 fish average. General expectations for regional coho salmon runs are expected to be consistent with recent averages. Total hatchery produced coho salmon run forecasts include 370,000 fish to SSRAA projects (Table 9); 200,000 fish to NSRAA projects (Table 10); and 80,000 fish to AKI, SSSC, and DIPAC projects (Table 10). A portion of these runs will be harvested in traditional drift gillnet fisheries in Districts 1, 6, 8, 11, and 15, or in hatchery access terminal harvest area drift gillnet fisheries in Anita Bay, Nakat Inlet, and Deep Inlet. Alaska hatchery coho salmon contribution to drift gillnet fisheries in 2021 was estimated at 63,000 fish, 33% of total drift gillnet coho salmon harvests. The largest portion of the harvest was from fish returning to the Neets Bay Hatchery with substantial harvest coming from Nakat Inlet and Macaulay Hatchery releases.

The SEAK pink salmon harvest forecast for 2022 is 16 million fish, with a range of 10 to 24 million fish. The majority of the pink salmon harvest for the region is typically taken by purse seine gear.

## MANAGEMENT APPROACH

A flexible management approach is required due to uncertainty in salmon runs. This management plan presents a general outlook of how the season is expected to develop. Specific management approaches may be altered depending on inseason assessments of salmon run strength. Gillnet fishermen are encouraged to contact ADF&G management staff listed at the end of this plan for more detailed information.

Primary management objectives for the 2022 drift gillnet fishery are as follows:

- 1. Achieve overall salmon spawning escapements with the best possible distribution to all systems.
- 2. Provide for orderly fisheries while harvesting those salmon in excess of escapement objectives.
- 3. Promote the harvest and processing of good quality salmon within the constraints dictated by run size.
- 4. Minimize harvest of Chinook salmon using conservation actions outlined in subsequent sections of this management plan.
- 5. Minimize, to the extent possible, the harvest of salmon destined for locations where weak runs are expected.
- 6. Manage Districts 1, 6, 8, and 11 drift gillnet fisheries consistent with the provisions of the U.S./Canada Pacific Salmon Treaty (PST).
- 7. Manage hatchery THAs in accordance with provisions in THA management plans adopted by the Alaska Board of Fisheries (BOF).

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

Experience has demonstrated that management of salmon fisheries based solely on fishery performance, or CPUE, can be misleading, especially for mixed stock fisheries. Therefore, other available run strength indicators, if available, will be used including spawning escapements, stock composition estimates, test fishing, observed salmon concentrations in closed waters, harvests from other fisheries, and salmon run timing models.

The availability of hatchery-produced salmon has become a major factor in the management of SEAK drift gillnet fisheries, including coho and summer chum salmon throughout the region and sockeye salmon in District 11. Where inseason management is based on fishery performance, it may be difficult to gauge wild stock run strength if significant numbers of hatchery fish are present in the harvest. Where possible, the hatchery component of the harvest will be separated when evaluating fishery performance and management decisions outside of terminal areas will be based on wild stocks.

#### WEEKLY FISHING ANNOUNCEMENTS

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

#### WEEKLY FISHING PERIODS

Weekly fishing periods in traditional fishing areas can generally be expected to begin on Sundays at 12:01 p.m. Fishing periods in hatchery THAs, including NSRAA and SSRAA terminal fisheries in Deep Inlet, Anita Bay, and Neets Bay, will be in accordance with rotational harvest management plans for drift gillnet, seine, and troll fisheries adopted by the BOF.

#### **FULL RETENTION**

ADF&G will require full retention (5 AAC 39.265) of all salmon harvested in the Deep Inlet THA net fisheries from the onset of the 2022 season. This regulation may be implemented by emergency order in other areas of SEAK if necessary, after consultation with the Alaska Wildlife Troopers. Further details regarding the implementation of this regulation will be announced at later dates.

#### **USE OF DRONES PROHIBITED**

The use of unmanned aircraft to locate salmon for the commercial taking of salmon or to direct commercial salmon fishing operations during open commercial salmon fishing periods in SEAK is prohibited.

## U.S./CANADA PACIFIC SALMON TREATY

The PST directly influences management of Districts 1, 6, 8, and 11 drift gillnet fisheries (5 AAC 33.361). The management provisions of the PST will be considered separately under the specific

management plan for each fishery. Fishermen are encouraged to contact local ADF&G staff for more detailed information concerning Alaska's PST obligations.

## CHINOOK SALMON

For 2022, the all-gear PST Chinook salmon allocation is 261,300 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 2022 drift gillnet treaty Chinook salmon allocation is 7,600 fish. The need for management measures to ensure drift gillnet harvest complies with the drift gillnet allocation will depend on inseason evaluation of Chinook salmon harvest rates. Nighttime fishing closures will be implemented in certain areas to reduce the incidental catch of immature, "feeder" Chinook salmon. Only historical base level catches in Districts 8 and 11 will be counted towards the PST fish ceiling when directed fisheries occur.

Terminal Chinook salmon fisheries in Districts 8 and 11 are bound by provisions of the Transboundary River (TBR) Annex of the PST. Management actions have been necessary to meet obligations of the PST in recent years and similar actions are expected in 2022. In addition, District 15 is managed under the provisions of the *Lynn Canal and Chilkat River King Salmon Fishery Management Plan* (5 AAC 33.384), and Districts 6, 8, 11, and 15 will be managed under BOF recommend management actions.

The BOF approved action plans for 3 Chinook salmon Stocks of Management Concern (Unuk, King Salmon, and Chilkat Rivers) at the 2018 Southeast and Yakutat Finfish Meeting (Lum and Fair 2018a, Lum and Fair 2018b). These plans outline specific actions to be taken in the Neets Bay THA, District 11, and District 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. At the 2020 BOF October work session, the board adopted the department recommendation to continue the "stock of management concern" designation for these 3 stocks and added the Chickamin, Stikine, and Taku Rivers, and Andrew Creek stocks of Chinook salmon as stocks of management concern. At the March 2022 Southeast Alaska and Yakutat Finfish and Shellfish meeting, the board reviewed and approved 3 separate draft action plans that addressed recommended fishery restrictions in the northern, central, and southern portions of the region. The department is currently in the process of formalizing these action plans based on final board actions. The plans will be published later this summer. The draft plans can be found on the BOF website at:

 $\frac{http://www.adfg.alaska.gov/index.cfm?adfg=fisheriesboard.meetinginfo\&date=03-10-2022\&meeting=anchorage.}$ 

In addition, basic management restrictions for all Southeast commercial fisheries are included in an advisory announcement released April 27 located at:

http://www.adfg.alaska.gov/static/applications/dcfnewsrelease/1370086508.pdf

## TREE POINT AND PORTLAND CANAL FISHERY

#### INTRODUCTION

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

gillnet fishery is subject to provisions of the PST and the *District 1 Pink Salmon Management Plan* (5 AAC 33.360). The Nakat Inlet THA management plan will be discussed within the THA fisheries section.

## **2022 OUTLOOK**

#### Chum Salmon

Summer chum salmon runs were mixed in southern SEAK during the 2021 season and the harvest in the District 1 drift gillnet fishery was below average. The season was characterized by weak hatchery chum salmon runs and highly variable wild runs. Wild chum harvests were below average for most of the season. Escapements to index streams in the subregion ranged from poor to excellent, and the overall index count of 77,000 chum salmon was above the lower bound SEG of 62,000 index fish. The estimated escapement of 9,700 summer chum salmon at Fish Creek near Hyder which was near the median escapement for the last 10 years but well below the long-term median of 16,100 fish. In contrast, the peak aerial survey estimate of 40,000 fish at nearby Tombstone River was the fourth largest since 1960.

## U.S./Canada District 1 Drift Gillnet Fishery Agreement

In the spring of 2018, the United States and Canada renegotiated a 10-year annex, 2019–2028, for the District 1 drift gillnet fishery. There were minor changes to the language in the District 1 drift gillnet portion of the PST which outline management actions Alaska may take if the total run is forecasted below the escapement goal. The management goals remain the same and the agreement continues to require the following:

- 1. Manage the Alaska District 1 drift gillnet fishery to
  - a) achieve an annual catch share of Nass River sockeye salmon of 13.8% of the Annual Allowable Harvest (AAH) of the Nass River sockeye salmon stocks and
  - b) carry forward from year-to-year annual deviations from the prescribed catch share arrangement.
- 2. Based on run size estimates for Nass River sockeye, the parties shall undertake additional management actions as follows:
  - a) If expected total run is forecasted below 200,000 sockeye salmon; there are no Canada commercial marine harvest and the United States shall undertake measures to reduce the impact of District 101 drift gillnet and District 104 purse seine fisheries, which may include delaying the start date and duration of these fisheries.
  - b) If expected total run is below 180,000 sockeye salmon; there are no Canada marine or inriver commercial harvests and the United States shall undertake measures to reduce the impact of District 101 drift gillnet and District 104 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.

## Nass River Sockeye Salmon Annual Allowable Harvest

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

The total run calculation includes the harvest of Nass River sockeye salmon in the principal boundary area fisheries and the spawning escapement to the Nass River watershed. This primarily includes the harvest of Nass River sockeye salmon in Alaska Districts 1, 2, 3, 4, and 6 net fisheries, Canada Areas 1, 3, 4, and 5 net fisheries, and Canada's inriver fisheries.

Although the management intent shall be to harvest salmon at the AAH percentage, it is recognized that overages and underages will occur, and an accounting mechanism is required. The payback mechanism for the fishery is based on the number of fish a country is over or under its AAH.

The management intent for the fishery shall be to return any overages to a neutral or negative balance as soon as possible. After 5 years of consecutive overages, a management plan must be provided to the Northern Panel of the Pacific Salmon Commission (PSC) with specific management actions that will eliminate the overage. The accrual of underages is not intended to allow either Alaska or Canada to modify its fishing behavior in any given year, nor to harvest the accrued underage.

During the PSC meeting in January 2022, the bilateral Northern Panel and the Northern Boundary Technical Committee met and finalized the 2020 Nass River sockeye salmon run reconstruction and calculated a preliminary run reconstruction for 2021. Preliminary reports indicate that the total sockeye salmon run to the Nass River in 2021 was 502,538 fish. That allowed for a District 1 harvest of 41,750 Nass River sockeye salmon for 2021. The 2021 District 1 drift gillnet fishery total sockeye salmon harvest was 21,577 fish and of these, 14,677 were Nass River sockeye salmon. The 1999–2021 performance of the District 1 drift gillnet fishery to the 2019 agreement is shown in Table 7.

Canada's Department of Fisheries and Oceans is forecasting a 2022 total run of 560,000 Nass River sockeye salmon. If the forecast is accurate, then the AAH for the District 1 gillnet fishery will be 49,680 Nass River sockeye salmon.

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

Hatchery runs of summer chum, fall chum, and coho salmon to SSRAA enhancement release sites are expected to contribute substantially to the District 1 drift gillnet fishery in 2022. Information concerning SSRAA run forecasts is included under the THA fisheries section of this plan.

#### **Pink Salmon**

The SEAK pink salmon forecast for 2022 is for a weak run of 16 million pink salmon within a range of 10–24 million fish. The 2022 forecast is just below the average even-year harvest since 2006 (18 million). If the actual runs are as forecasted, the District 1 drift gillnet fishery may receive 2-, 4-, and 5-day fishing periods during weeks of the *District 1 Pink Salmon Management Plan* (PSMP; 5 AAC 33.360).

The PSMP establishes drift gillnet fishing time in Section 1-B in relation to District 1 purse seine fishing time when both gear types are concurrently harvesting the same pink salmon stocks. By regulation, the plan starts on the third Sunday in July (July 17, 2022) with the following fishing time:

- 1. When the purse seine fishery is open for any portion of 1 day during a fishing week, the drift gillnet fishery must be open for 48 hours during the same fishing week.
- 2. When the purse seine fishery is open for any portion of 2 days during a fishing week, the drift gillnet fishery must be open for 96 hours during the same fishing week.

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

#### **MANAGEMENT GOALS**

Management goals specific to the 2022 District 1 drift gillnet fishery are:

- 1. To manage the fishery in accordance with the PSMP (5 AAC 33.360).
- 2. To manage the fishery consistent with the current provisions of the PST (5 AAC 33.361).
- 3. To manage the fishery to achieve even distribution on coho escapements among the Ketchikan index area coho systems.

#### MANAGEMENT PLAN

The District 1 drift gillnet fishery will open by regulation at 12:01 p.m., Sunday, June 19, in Section 1-B for an initial 4-day fishing period. The length of subsequent fishing periods will be based on effort levels and the strength of wild stock sockeye and chum salmon runs to Alaska and Canada waters until July 17 when the PSMP becomes effective.

As in recent years, the harvest of hatchery-produced summer chum salmon will not be included in the evaluation of wild stock fishery performance. The contribution of hatchery-produced salmon will be estimated by inseason analysis of otolith marked fish. Hatchery chum salmon have contributed as much as 90% of the weekly District 1 chum salmon harvest and as much as 70% of the total chum salmon harvest in recent years. The PST requires the harvest of wild chum salmon stocks returning to Portland Canal streams be minimized to ensure adequate escapement of these stocks. As a result, no fishing should be expected in Section 1-A for Portland Canal chum salmon.

Pink salmon management may begin mid-July and continue through the end of August depending on pink salmon run strength and timing. The District 1 drift gillnet fishery can anticipate fishing periods of 2, 4, and 5 days in accordance with the PSMP.

Fall management in District 1 starts after the end of the pink salmon season and varies depending on pink salmon run timing and strength. During the fall season, the District 1 drift gillnet fishery primarily targets fall coho and chum salmon. If the estimated exploitation rate of the Hugh Smith Lake coho salmon stock, which has reached 80% in some years, holds true for adjacent areas, then wild coho salmon stocks in the surrounding area may benefit from a closing date around September 18. Due to the uncertainties of escapement levels of stocks being harvested, the documented high exploitation rate of Hugh Smith Lake coho salmon in some years, and the preponderance of hatchery fish in the harvest, the department will continue to take a conservative approach to the fall season in District 1. However, fishing periods will be allowed after September 18 if fishery performance data and the Hugh Smith weir count indicates above average runs of wild coho salmon. During recent years, approximately 50% of the fall coho salmon and as much as 90% of the fall chum salmon have been hatchery fish.

## **Hugh Smith Lake Sockeye Salmon**

The department 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 actions:

1. In statistical weeks (SW) 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 nautical mile (nmi) south of the latitude of Foggy Point Light.

## PRINCE OF WALES AND STIKINE FISHERIES

#### Introduction

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

## **2022 OUTLOOK**

#### **Chinook Salmon**

The 2022 preseason forecast for Stikine River is for a terminal run of 7,400 large Chinook salmon which is below the level needed for escapement, and therefore will not allow directed fisheries in U.S. and Canada. This forecast is well below the average of 17,600 fish and below the escapement goal range of 14,000–28,000 fish. The expected Anita Bay run of hatchery-produced Chinook salmon is 9,900 fish, below the average run of 15,200 fish.

#### **Sockeye Salmon**

The 2022 preseason forecast for Stikine River sockeye salmon of 63,000 fish is well below average (99,000 fish) and includes 42,000 Tahltan Lake (67%) and 21,000 mainstem (33%) sockeye salmon. Based on the forecast, Tahltan stocks should provide enough fish to meet escapement needs (range of 18,000 to 30,000) with a surplus for an allowable catch, whereas the mainstem forecast will only provide for enough fish to meet the lower end of the escapement goal range of 20,000 to 40,000 sockeye salmon without a surplus for harvest. Fishing periods in District 8, and to a lesser extent in District 6, will be determined initially by the preseason forecast, then by inseason abundance estimates of Stikine River sockeye salmon. Sockeye salmon run timing through District 8 typically peaks for the Tahltan Lake stock in SW 27 and for the mainstem stock in SWs 29 and 30. Sockeye salmon runs to other local area streams are expected to be average based on parent-year escapements. The sockeye salmon run to McDonald Lake is expected to be poor again in 2022.

#### **Pink Salmon**

Pink salmon typically begin entering Districts 6 and 8 near the end of July. Although parent-year escapements to both districts were within target ranges, below average juvenile abundance indices observed in 2021 may result in weaker than average runs to Districts 6 and 8. Pink salmon harvests typically peak during SWs 31–33 in both districts.

#### **Chum Salmon**

Chum salmon are harvested incidentally in the Districts 6 and 8 drift gillnet fisheries while those fisheries are being managed for other species of salmon. Hatchery produced chum salmon runs to Anita Bay, Neets Bay, and Burnett Inlet comprise the majority of chum salmon harvests in Districts 6, while harvests in District 8 consists mostly of Anita Bay fish. The Anita Bay hatchery chum salmon run typically peaks during SWs 30–33 in the terminal area.

#### Coho Salmon

Beginning in SW 36, weekly fishing periods will be determined based on wild coho salmon abundance. The best available measure of wild coho salmon abundance is fishery performance. Wild coho salmon harvest rates have been near average for the past few years and are expected to be average in 2022. However, hatchery coho salmon runs have been below average in recent years and 2022 runs are expected to be below average. Although the Anita Bay hatchery coho salmon run forecast of 11,800 fish is near average, the expected hatchery coho salmon run of 8,900 fish to Neck Lake is well below average.

#### MANAGEMENT GOALS

Management goals for the Districts 6 and 8 drift gillnet fisheries for the 2022 season are as follows:

- 1. Achieve Chinook salmon escapement goals.
- 2. Achieve the Stikine River sockeye salmon escapement goals while harvesting Alaska's share of Stikine River sockeye salmon.
- 3. Achieve sustainable spawning escapements of sockeye salmon in local Alaska systems.
- 4. Achieve pink salmon spawning escapement objectives in Districts 6 and 8.
- 5. Manage the District 6 and District 8 drift gillnet fisheries consistent with the provisions of the PST.
- 6. Manage the directed Stikine River Chinook salmon drift gillnet fishery in accordance with the *District 8 King Salmon Management Plan* (5 AAC 33.368) and associated closed water regulations (5 AAC 33.350 [i][3-9]).

#### MANAGEMENT PLAN

#### Chinook Salmon

2022 forecasts and recent trends in Chinook salmon abundance throughout SEAK indicate very poor survival. During the 2020 BOF work session, the board adopted the department recommendation to designate Stikine River and Andrew Creek Chinook salmon as stocks of management concern. Escapement of Stikine River Chinook salmon has been below goal 5 of the past 5 years and escapement of Andrew Creek Chinook salmon has been below goal 4 of the past 5 years. At the 2022 Board meeting, the board recommended to continue management actions that have been taken during the past several years and to use discretion to increase or decrease actions

when necessary. Due to the poor outlook, restrictions will again be taken in U.S. and Canadian fisheries for Chinook salmon conservation.

If Canada opens a directed sockeye fishery, it will be delayed by 1 week, will have mesh restrictions in place, will have restrictions on the use of set gillnets, and will require the release of Chinook salmon. In addition, Canada will not prosecute an assessment fishery for stock assessment. Inseason assessment will be based solely on the Kakwan Point tagging project. There will be no directed Chinook salmon commercial fishery in either Districts 6 or 8.

## **Sockeye Salmon**

Sockeye salmon fishing in both districts will be managed in accordance with the TBR Annex of the PST. District 6 is managed primarily for local Alaska sockeye salmon stocks and District 8 is managed primarily on Stikine River sockeye salmon abundance as allowed by the sharing provisions of the 2019 TBR Annex. Through the end of 2023, harvest shares are 53% U.S./47% Canada. Based on the forecast in 2022, this results in a U.S. AC of 9,500 Stikine River sockeye salmon and is comprised only of Tahltan Lake fish. Based on the forecast there is no AC for mainstem bound sockeye salmon.

The sockeye salmon season could open by regulation as early as 12:00 noon on Sunday, June 12 (SW 25). However, with an expected poor run of Stikine River Chinook salmon, as well as poor Chinook salmon runs throughout SEAK, conservation measures will be in place for the start of the sockeye salmon fishery. Conservation measures will include implementing a 6-inch maximum mesh size in both districts and delaying the start of the sockeye salmon fishery by 1 week in District 6 and by 2 weeks in District 8. During the first few weeks of the sockeye salmon fishery, any adjustments to fishing time will be based on the preseason forecasts, harvest levels, expected harvest levels, and stock proportion data. Because of concerns for Stikine mainstem sockeye salmon, time and/or area may be limited starting in SW 29 in both districts. Openings in District 8 will be based on an evaluation of sockeye salmon abundance in District 6 and would likely include time and area restrictions. Beginning in SW 29, District 6 will be limited to 2 days a week through SW 31 for McDonald Lake sockeye salmon conservation.

Management actions during the first few weeks of the sockeye salmon fishing season will be based on District 6 drift gillnet harvest information. Inseason stock abundance indicators, along with fishery performance and stock composition data obtained from U.S. fisheries will be incorporated into the Stikine Sockeye Forecast Model (SSFM). Stock composition data will be obtained by department personnel at the Kakwan Point assessment fishery site on the Stikine River and from ongoing genetic stock identification (GSI) sampling from the commercial catch. As the season progresses, the SSFM may become the primary method to estimate available sockeye salmon for harvest once enough data is available. Management actions required for Stikine River sockeye salmon are implemented first in District 8 followed by District 6. Adjustments in fishing time, area, or districtwide closures will be used when necessary.

Stikine River sockeye salmon generally begin to decrease in abundance in mid-July as other stocks, including McDonald Lake sockeye salmon, begin to migrate through the fishery. Escapement of McDonald Lake sockeye salmon has fallen below the lower bound of the escapement goal range in 8 of the past 9 years. In 2018, the board designated the McDonald Lake sockeye salmon as a stock of concern and adopted the McDonald Lake Sockeye Salmon Stock Status and Action Plan (Walker et al. 2018). Given this history and expected poor run, the department recommended McDonald Lake sockeye salmon continue as a stock of concern as defined by the SSFP. Those

actions will remain in effect for 2022 and the District 6 drift gillnet fishery will be limited to 2 days per week during the peak weeks of the McDonald Lake sockeye salmon run in SWs 29, 30, and 31. McDonald Lake Sockeye Salmon Stock Status and Action Plan, 2018, can be found at: <a href="http://www.adfg.alaska.gov/FedAidPDFs/RIR.1J.2018.03.pdf">http://www.adfg.alaska.gov/FedAidPDFs/RIR.1J.2018.03.pdf</a>

During the sockeye salmon management period, announcements of additional fishing time by extensions or midweek openings will be made from the fishing grounds via VHF radio by 10:00 a.m. on the final day of the scheduled opening. Areas opened for any additional fishing time may not be the same as the general weekly opening.

#### **Pink Salmon**

Pink salmon normally begin entering District 6 in late July. Early portions of the pink salmon fishery will be managed primarily on CPUE and parent-year escapement. By mid-August, pink salmon destined for local systems will begin to enter the fishery in greater numbers and management will be based on observed escapements to local streams. The expected run may result in average fishing days during the pink salmon management period.

Changes were made to District 6 regulations and subsections during the 2022. Section 6-D has been amended to be the area east of Section 6-C commonly referred to the "Screen Islands" area. The remainder of Section 6-D, in the Stikine Straits and south of a line drawn between Point Stanhope and Luck Point to the southern district boundary, has been designated as a new section, Section 6-E. Section 6-E is a purse seine only area.

In addition, 5 AAC 33.359 Section 6-D Pink Salmon Management Plan which sunset in 2017 was re-adopted into regulation. The Section 6-D Pink Salmon Management Plan allows drift gillnet fishing in Section 6-D during regular drift gillnet openings between the first Saturday in August through the first Sunday in September if this area has been or will be open to purse seining. During these occasions, Section 6-D will open to gillnetting after the purse seine closes and will close at 11:59 p.m. the day before the next scheduled purse seine opening, or when the regular gillnet opening closes, whichever comes first. Drift gillnetters wanting to fish in Section 6-D during the month of August will need to closely monitor purse seine and subsequent drift gillnet advisory announcements during this period. There will likely be short notice for fishing opportunities.

#### Coho Salmon

Management for coho salmon typically begins in late August or early September and can continue into early October. Management is based on wild coho salmon stock abundance. Crystal Lake Hatchery, facilities in the Ketchikan area, Anita Bay remote release site, and the Neck Lake remote release site at Whale Pass, all contribute coho salmon to Districts 6 and 8 fisheries. Inseason estimates from coded wire tag (CWT) recovery data will be used to identify the hatchery component of the harvest.

## TAKU/SNETTISHAM FISHERY

#### Introduction

The Taku/Snettisham (District 11) drift gillnet fishing area encompasses Section 11-B (Taku Inlet, Port Snettisham, and Stephens Passage north of Midway Island) and Section 11-C (Midway Island south to a line from Point League to Point Hugh). This fishery has historically targeted sockeye

salmon from late June to mid-August and fall chum and coho salmon from mid-August to mid-October. In recent decades, the fishery has harvested substantial numbers of hatchery summer chum and sockeye salmon.

#### 2022 OUTLOOK

#### Chinook Salmon

The 2022 preseason terminal run forecast of 6,600 Taku River large Chinook salmon does not provide any AC for either U.S. or Canada directed fisheries. This is the second smallest forecast ever produced for Taku River large Chinook salmon and more than 12,000 fish below the escapement goal range. DIPAC forecasts runs totaling 4,100 large hatchery Chinook salmon returning to their release sites at Gastineau Channel, Auke Bay, Fish Creek, and Lena Cove.

## **Sockeye Salmon**

The 2022 terminal run of Taku River wild sockeye salmon is forecasted to be 128,000 fish, below the average of 150,000 fish. This is a new sibling model forecast that incorporates recently revised data to account for historical overestimation of run size. Improvements to the Taku River sockeye salmon stock assessment project and run size estimation, recalculation of the historical dataset, and an escapement goal analysis were completed in January of 2020 as part of the recent PST renegotiation. In May of 2020, the Taku Sockeye Working Group recommended S<sub>MSY</sub> based escapement goal range of 40,000 to 75,000 sockeye salmon with a management objective of 58,000 wild sockeye salmon (which TAC and resulting harvest allocations are based) was adopted. The preseason forecast will be used in conjunction with the management objective to calculate ACs until inseason estimates become available. Adult returns to date from the joint U.S./Canada Taku River sockeye salmon enhancement project at Tatsamenie Lake have been minimal. The Tatsamenie and Trapper Lakes enhanced sockeye salmon run is forecasted to be 5,500 fish in 2022 which would result in a 77% U.S. /23% Canada allocation split. The U.S. AC of Taku River sockeye salmon based on the preseason forecast is approximately 54,000 fish.

The Speel Lake escapement goal was revised in 2014 to a SEG of 4,000 to 9,000 sockeye salmon. The 2017 parent-year escapement through the Speel Lake weir was below the SEG at 3,435 fish, while the 2018 parent-year escapement of 4,244 fish was within the SEG. The 2019 escapement of 6,440 and 2021 escapement of 8,643 sockeye salmon were within SEG range. The Speel Lake weir was not operated in 2020 due to the health emergency surrounding the COVID-19 pandemic, but foot surveys conducted approximately every 3 days throughout the historical run timing suggested escapement was below the SEG. Beginning in 2005, DIPAC replaced the Crescent Lake weir with side scan sonar to monitor salmon escapements into the lake. Although all species of salmon enter Crescent Lake, the majority are thought to be sockeye salmon. The 2005–2010 average sonar count was 6,400 fish. Due to technical issues, the sonar monitoring program has been discontinued and Crescent Lake salmon escapements will be monitored by aerial surveys in 2022.

The 2022 DIPAC Port Snettisham (Snettisham Hatchery and Sweetheart Lake) run forecast is 54,000 fish, slightly above the 2021 estimated total run of 44,000 fish.

#### **Chum Salmon**

In 2022, DIPAC is forecasting hatchery-produced summer chum salmon runs of 760,000 fish to Gastineau Channel and Limestone Inlet. The expected contribution to common property fisheries is 400,000 fish. Taku River fall chum salmon runs are expected to be minimal.

#### **Pink Salmon**

District 11 pink salmon runs are expected to be below average in 2022. Parent-year pink salmon escapements to District 11 were below management targets in 2020. The total number of pink salmon counted through the Taku River Canyon Island fish wheels in 2020 was 148% of the recent 5 even-year average (2012–2020) indicating above average even-year escapement to the Taku River.

#### Coho Salmon

The 2022 terminal run forecast of Taku River transboundary coho salmon is 87,000 fish, below the average of 99,000 fish. The forecast is based on a smolt estimate with a 5-year average marine survival applied. Taku River coho salmon harvest sharing provisions, which are part of the current 2019–2028 TBR Annex of the PST, do not allow for any harvest by the U.S. unless the terminal run size exceeds 75,000 fish. The preseason terminal run forecast of Taku River coho salmon provides the U.S. with an AC of approximately 9,000 fish. DIPAC projects a run of 12,000 hatchery-produced coho salmon from their smolt releases into Gastineau Channel in 2022.

#### **MANAGEMENT GOALS**

Management goals for the 2022 Taku/Snettisham drift gillnet fishery are as follows:

- 1. Provide sufficient salmon spawning escapements to Taku River, Port Snettisham, and Stephens Passage streams while harvesting those fish in excess of escapement needs.
- 2. Manage the fishery consistent with current provisions of the PST.
- 3. Maximize the harvest of hatchery-produced chum salmon returning to Limestone Inlet while minimizing the incidental harvest of Port Snettisham wild sockeye salmon.
- 4. Manage Port Snettisham enhanced sockeye salmon run consistent with the *District 11:* Snettisham Hatchery Salmon Management Plan (5 AAC 33.378).
- 5. Manage the Speel Lake sockeye salmon run to achieve an escapement of 4,000 to 9,000 spawners.

#### MANAGEMENT PLAN

The District 11 drift gillnet fishery will be managed in accordance with the TBR Annex of the PST. Harvest sharing arrangements for Chinook, sockeye, and coho salmon through the 2028 fishing season are specified in the annex.

To avoid conflicts with sport fisheries, the District 11 drift gillnet fishery will not be open concurrent with the 2022 Juneau Golden North Salmon Derby (August 12–14). That week's opening will start on Monday, August 15.

#### **Chinook Salmon**

The 2022 preseason Taku River Chinook salmon terminal run forecast is below the escapement goal range and requires a conservative management approach. The forecast does not provide any AC for directed fisheries, no assessment fishery will occur on the Canada side of the border, the

joint U.S./Canada inriver assessment project on the U.S. side of the border will be minimized to reduce the handling of fish, and restrictive management measures will be taken in early openings of U.S. and Canadian fisheries targeting sockeye salmon. Inseason abundance estimates derived from comparisons of inriver tangle net CPUE may be available in mid- to late May. However, inseason assessment may cease if the run does not appear large enough to allow the additional handling of fish. Management actions taken to reduce harvest of Taku River Chinook salmon in the District 11 drift gillnet fishery over the past 5 years have been incorporated into an action plan and were approved by the Board at the March 2022 meeting.

#### **Sockeye Salmon**

The District 11 drift gillnet fishery will begin the third Sunday in June (SW 26) for directed sockeye salmon fishing in Section 11-B with time, area, and mesh size restrictions. The initial opening will be for a 2-day fishing period with an area restriction closing waters in Taku Inlet north of Point Greely and west of a line of longitude running mid-inlet from the latitude of Point Greely to a point where it intersects with the shoreline south of Grand Island. A 6-inch maximum mesh size restriction and night closures will be in effect. Open area in SW 27 will likely be liberalized with waters in Taku Inlet closed north of Cooper Point and open area in SWs 28 and 29 will have increased area with the north line shifted up to Jaw Point. The maximum mesh size restriction and night closures will likely remain in place through SW 27. Taku Inlet will likely only open for 2 days through the SW 28 opening and subsequent openings will be based on inseason fishery performance and stock assessment information.

The District 11 fishery will be managed through mid-August primarily based on sockeye salmon abundance. Run strength will be evaluated using harvest and CPUE data, and weekly inriver run size estimates derived from the Taku River fish wheel mark—recapture project. The inriver run size estimates produced from this project will incorporate a dropout rate which will give more confidence that the run size is not being overestimated and allow managers to consider AC targets more comprehensively on a weekly basis. Contribution of enhanced stocks of sockeye salmon will be estimated inseason by analysis of salmon otoliths sampled from the commercial harvests. The age and stock compositions of the commercial harvest of wild sockeye salmon will be estimated after the fishing season by scale pattern and GSI analysis.

Port Snettisham hatchery produced sockeye salmon runs will be managed according to the *District 11: Snettisham Hatchery Salmon Management Plan* (5 AAC 33.378). The plan provides basic guidelines for managing enhanced sockeye salmon production from Port Snettisham including the following provisions in order of priority:

- 1. Ensure sustainable production of wild sockeye salmon from Crescent and Speel Lakes.
- Manage Port Snettisham enhanced sockeye salmon run in a manner that does not prevent achieving escapement goals or PST harvest sharing agreements for Taku River salmon stocks.
- 3. Assessment programs shall be conducted to estimate Port Snettisham wild sockeye salmon stock escapements and contributions of enhanced sockeye salmon to the District 11 commercial fishery.
- 4. Common property harvests in the Speel Arm SHA shall be conducted by limiting time and area to protect wild sockeye salmon runs.

Management of the fishery in Stephens Passage will focus on conservation of Port Snettisham wild sockeye salmon stocks, particularly in July. The department may implement a 6-inch minimum

mesh size restriction in Section 11-B south of Circle Point to reduce harvest rates of Port Snettisham wild sockeye salmon while allowing harvest of Limestone Inlet remote release site hatchery-produced chum salmon. The mesh size restriction in Section 11-B will be relaxed at the end of July or after the peak migration timing of Port Snettisham wild sockeye salmon stocks through Stephens Passage.

#### **Pink Salmon**

Pink salmon are harvested in Section 11-B incidental to sockeye and hatchery summer chum salmon fisheries. Fishing time for a directed pink salmon fishery in Section 11-C will depend on the strength of pink salmon runs to lower Stephens Passage, Seymour Canal, and the northern portions of District 10. Runs will be closely monitored, but an opening in Section 11-C is unlikely based on poor parent-year escapements to these areas.

#### Coho Salmon

Beginning in mid-August, management of the Taku/Snettisham drift gillnet fishery will be based primarily on the run strength of Taku River coho salmon. In 2015, a Taku River coho salmon escapement goal range of 50,000 to 90,000 fish, with a management objective of 70,000 fish, was adopted by the TBR Panel. Inseason management will be based on evaluation of the fishery harvest, effort, and CPUE relative to historical levels, inriver run size estimates from the Taku River mark—recapture project, and recovery of wild and hatchery coho salmon via CWT analyses in marine fisheries.

## LYNN CANAL FISHERY

#### Introduction

The Lynn Canal (District 15) drift gillnet fishing area encompasses waters north of the latitude of Little Island Light and is divided into 3 regulatory sections: 15-A (upper Lynn Canal), 15-B (Berners Bay), and 15-C (lower Lynn Canal). This fishery has historically targeted sockeye salmon from late June through September and fall chum and coho salmon from mid-August to mid-October. In recent decades, the fishery has harvested substantial numbers of hatchery summer chum salmon in Section 15-C returning to DIPAC release sites at Boat Harbor and Amalga Harbor. Section 15-B targets coho salmon in the fall but this area has been closed since 2010.

#### 2022 OUTLOOK

#### Chinook Salmon

The 2022 Chilkat River Chinook salmon preseason total run forecast is 1,550 large fish (≥age-5). This forecast is slightly higher than the 2021 forecast but below the escapement goal range of 1,750 to 3,500 fish (Table 8). The forecast is based on the sibling relationships using the most recent 9 years of brood year age at return and run data along with 5 years of performance-based hindcasts. There is no directed Chinook salmon fishery in District 15.

#### **Sockeye Salmon**

Chilkat and Chilkoot Lakes wild sockeye salmon runs comprise the majority of sockeye salmon harvest in District 15, with additional contribution from the Chilkat River mainstem stock.

The parent-years sockeye salmon escapements contributing to the 2022 run to Chilkat Lake were 87,600 fish in 2016 and 88,200 fish in 2017. These escapements were within the escapement goal range of 70,000–150,000 fish (Table 8). Five-year old fish (age 1.3 and 2.2) account for an average 62% of the Chilkat Lake sockeye salmon run from the past 10 brood years and will be a major component of the 2022 run. Six-year-old fish (age 2.3) account for an average 32% of the run. Returns of age 1.3 and age 2.2 fish from brood year 2016 were below average in 2021, indicating returns of age 2.3 fish in 2022 may also be below average. Zooplankton prey observations during the lake rearing period (2017 and 2018) for brood years 2016 and 2017 indicated average (2017) and above average (2018) abundances of zooplankton. The parent-year escapements, brood year 2016 returns to date, and zooplankton abundance suggest an average or below average run of sockeye salmon to Chilkat Lake in 2022.

The Chilkoot Lake escapement estimates during the dominant brood year return of 2017 was 43,000 sockeye salmon, withing the SEG range of 38,000 to 86,000 fish (Table 8). Five-year old fish (age 1.3) account for an average 76% of the Chilkoot Lake sockeye salmon run, therefore, escapements from 2017 will be a major component of the 2022 run. Zooplankton biomass estimates during the first summer of lake rearing (2018) for the 2017 brood year was 181% above average and the rearing fry population estimate of 919,000 fish was 14% above average. Parent-year escapements, strong zooplankton estimate, and average presmolt estimates suggest an average run of sockeye salmon to Chilkoot Lake in 2022.

#### **Chum Salmon**

DIPAC is forecasting a total summer chum salmon run of 755,000 to 2.2 million fish to their release sites at Boat Harbor and Amalga Harbor THAs. The common property harvest is expected to be 795,000 chum salmon. The forecast is below recent and long-term averages.

The Chilkat River fall chum salmon SEG is for 75,000 to 250,000 fish (Table 8). Chilkat River fall chum salmon escapements are estimated from expanded Chilkat River fish wheel catches. The 2018 parent-year escapement will contribute to the main age class (4-year old fish) to the 2022 Chilkat River fall chum salmon run; however, the parent-year escapement was not estimated due to extremely low water and the Haines Highway construction project that compromised the fish wheel catches in 2018.

#### Coho Salmon

The Chilkat River followed by the Berners River are the largest contributors of coho salmon to the District 15 drift gillnet harvest. Parent-year escapements for the 2022 coho salmon run to the Chilkat River were 66,000 fish in 2018 and 36,000 fish in 2019; both within the BEG range of 30,000 to 70,000 fish (Table 8). Parent-year escapements for the 2021 coho salmon run to Berners River were 3,550 and 9,400 fish, slightly below and within the BEG range of 3,600 to 8,100 fish (Table 8). Parent-year escapements and ocean conditions for coho salmon growth and survival data from Southeast Alaska Coastal Monitoring (SECM) surveys in 2021 indicate that coho salmon runs to Lynn Canal will likely be average to below average in 2022.

#### **Pink Salmon**

Parent-year pink salmon escapements in 2020 were very poor throughout northern inside waters and the escapement goal was not met. The juvenile pink salmon CPUE from the 2021 SECM surveys in Icy and Chatham Straits was the second lowest index in the 25 years of SECM surveys. If pink salmon runs to northern inside waters are strong enough to achieve escapement

management targets and provide for harvestable surpluses, the department will consider opening areas such as Chilkoot and Lutak Inlets within District 15 to harvest pink salmon.

#### **MANAGEMENT GOALS**

The overall management goal is to achieve desired spawning escapement levels while harvesting the available surplus for long-term maximum sustainable yield of all Lynn Canal salmon stocks. Chinook, chum, and coho salmon escapements to the Chilkat River drainage are observed through fish wheel catches. Additionally, Chilkat River Chinook and coho salmon escapements are estimated through a mark-recapture program. Final sockeye salmon escapements to Chilkat and Chilkoot Lakes are estimated by fish weir counts. Specific goals include:

- 1. Minimize Chinook salmon harvest in the drift gillnet fishery in Lynn Canal to achieve the escapement goal of 1,850–3,600 Chinook salmon in the Chilkat River in accordance with the Lynn Canal and Chilkat River Chinook Salmon Fishery Management Plan (5 AAC 33.384) and the Chilkat River and King Salmon River King Salmon Stock Status and Action Plan, 2018 (Lum and Fair 2018b).
- 2. Achieve sockeye salmon escapement goals to Chilkat and Chilkoot Lakes.
- 3. Achieve chum salmon escapement goals to Chilkat River.
- 4. Achieve coho salmon escapement goals to Chilkat and Berners Rivers.
- 5. Provide for the harvest of DIPAC hatchery-produced chum salmon available in the Boat Harbor THA in accordance with the *District 15 Boat Harbor Terminal Harvest Area Management Plan*, while conserving wild stocks until run strengths can be determined.

## **MANAGEMENT PLAN**

The 2022 commercial drift gillnet fishery will be managed consistent with strategies used in 2019–2021 which were successful in reducing catches and lowering harvest rates of Chilkat River Chinook salmon. These management strategies follow or exceed actions outlined in the *Lynn Canal and Chilkat River King Salmon Fishery Management Plan* (5 AAC 33.384), the *Policy for the management of mixed stock salmon fisheries* (5 AAC 39.220), and the 2018 Chilkat and King Salmon Rivers action plan.

To avoid conflicts with sport fisheries, the Section 15-C drift gillnet fishery will not be open concurrent with the 2022 Juneau Golden North Salmon Derby (August 12–14). That week's opening will start on Monday, August 15.

#### **Chinook Salmon**

In January 2018, the board designated the Chilkat River Chinook salmon stock as a stock of management concern after multiple years (2012–2014 and 2016–2018) of failing to achieve the escapement goal. Subsequently, the department developed the 2018 Chilkat and King Salmon Rivers king salmon action plan (Lum and Fair 2018a). In October 2020, the department recommended to continue to designate Chinook salmon stocks from the Chilkat River as a stock of management concern and the board again adopted Chilkat River Chinook salmon as a stock of concern at the October 2020 work session. The 2018 Chilkat and King Salmon Rivers action plan outlines management measures intended to reduce the harvest rate on Chilkat River Chinook salmon and rebuild the run to consistently achieve escapement. In 2018, management of the District 15 commercial drift gillnet fishery followed the action plan; however, the escapement goal was not achieved. Significant additional management measures beyond those outlined in the 2018

action plan were implemented in subsequent years in efforts to further reduce harvest of Chilkat River Chinook salmon. As a result of these additional restrictions, the 2018 to 2021 harvest rates have been at an all-time low, averaging 7%. Through these efforts, in addition to regionwide Chinook salmon conservation efforts by all gear types, the Chilkat River Chinook salmon BEG was achieved in 2019 through 2021.

The 2022 preseason forecast for Chilkat River Chinook salmon is projected to be below the escapement goal range. Management strategies in 2022 will again focus on minimizing harvests of Chilkat River Chinook salmon stocks by employing a conservative management approach similar to the past 3 years. Management actions to reduce harvest of Chilkat River Chinook salmon will include reduced time and area, night closures, and mesh size restrictions.

#### **Sockeye Salmon**

The District 15 drift gillnet fishery will open for directed sockeye salmon fishing in Lynn Canal on the third Sunday in June with time, area, mesh restrictions, and night closures. Harvest opportunities will be limited during the first 5 weeks of the fishery in Section 15-A, and during the first 3 weeks in Section 15-C due to Chinook salmon conservation measures.

Section 15-A will be limited to 2 days a week through July 23 in those waters south of Eldred Rock Lighthouse and east of a line from Eldred Rock Lighthouse to a point 2.0 nmi from the eastern shoreline. A 6-inch maximum mesh size restriction and night closures will be in effect and likely remain in place through July 23. Lutak Inlet and portions of Chilkoot Inlet may be open for 2 or more days prior to July 23 if sockeye harvest, stock composition data, and Chilkoot weir counts indicate a strong Chilkoot sockeye run

In Section 15-C, open area will be limited to the "Postage Stamp" (waters of Section 15-C south of the latitude of Vanderbilt Reef Light and east of a line from Vanderbilt Reef Light to Little Island Light) to 2 days a week through July 9. A 6-inch maximum mesh size restriction and night closures from 10:00 p.m. through 4:00 p.m. will likely be in effect districtwide through July 16. This includes outside waters of the Boat Harbor THA. Subsequent openings will be based on assessments of run strength based through fishery performance in the District 15 drift gillnet fishery, Chilkat River fish wheel catches, and Chilkat and Chilkoot Lakes fish weir counts through mid-August.

#### **Chum Salmon**

The majority of the summer chum salmon harvest in lower Lynn Canal (Section 15-C) is comprised of hatchery fish returning to the DIPAC release site in the Boat Harbor THA. Openings early in the season are typically designed to harvest large hatchery runs of summer chum salmon, while minimizing the harvest of northbound sockeye salmon and other wild stocks until run strength can be determined. Due to Chilkat River Chinook salmon conservation measures, harvest opportunities will again be limited in the outside waters of the Boat Harbor THA during the first 3 weeks of the fishery. The Chilkat River fall chum salmon run begins in late August. This run will be monitored by evaluation of fishery performance data in the District 15 drift gillnet fishery, and Chilkat River fish wheel catches. If the indications are for a strong run, fishing area may be expanded to include the Chilkat Inlet in Section 15-A.

#### Coho Salmon

The Chilkat River coho salmon run begins in late August. The run will be monitored by evaluation of fishery performance data in the District 15 drift gillnet fishery and by Chilkat River fish wheel catches. If the indications are for a strong run, fishing area may be expanded to include the Chilkat Inlet in Section 15-A.

#### **Pink Salmon**

Pink salmon abundance in Lynn Canal increases around the beginning of July and are harvested incidental to sockeye and hatchery summer chum salmon in Sections 15-A and 15-C. If the pink salmon runs are strong and provide for harvestable surpluses, and there are no biological concerns for sockeye salmon, the department will consider opening additional areas within District 15, such as Lutak Inlet, for directed pink salmon fisheries.

## TERMINAL HARVEST AREA FISHERIES

During the 2022 season, drift gillnet terminal harvest area fisheries can be expected in Boat Harbor, Deep Inlet, Southeast Cove, Anita Bay, Neets Bay, and Carroll Inlet to harvest salmon returning to DIPAC, NSRAA, and SSRAA enhancement facilities. The Nakat Inlet THA will be closed to common property fishing through August 31 for SSRAA to conduct cost recovery operations. Openings in the Speel Arm THA are contingent on meeting the sockeye salmon escapement goal for Speel Lake.

## NORTHERN SOUTHEAST REGIONAL AQUACULTURE ASSOCIATION

#### TERMINAL AREA FISHERIES

The terminal hatchery fisheries at Deep Inlet and Southeast Cove are managed according to regulatory management plans and in consultation with NSRAA. Drift gillnet open fishing times and any modifications of the THA will be announced by ADF&G advisory announcement prior to and during the fishing season.

## **Southeast Cove Terminal Harvest Area Fishery**

Common property fishing in the Southeast Cove THA will be conducted per *District 9: Southeast Cove Terminal Harvest Area Management Plan* (5AAC 33.387). NSRAA is forecasting a run of 174,000 summer chum salmon to the Southeast Cove THA. The THA will be open to common property drift gillnet, purse seine and troll fisheries beginning Sunday, June 19, 2022. The 2022 season will be the first time drift gillnet gear will be included in the fishing rotation. Purse seine openings will occur on Sundays and Thursdays, drift gillnet openings will occur on Tuesdays and Wednesdays, and troll openings will occur on Mondays, Fridays, and Saturdays. Currently, there are no plans for cost recovery in 2022. The THA will close to all fisheries on Wednesday, August 1, 2022. Details of the 2022 season fishing schedule and open area within the Southeast Cove THA can be found in an ADF&G advisory announcement released on April 14.

#### **Deep Inlet Terminal Harvest Area**

NSRAA expects runs of 1,814,000 chum, 20,000 Chinook, and 97,000 coho salmon to the Deep Inlet remote release site and the Medvejie Hatchery in 2022. This season, 122,500 chum salmon are planned to be taken from the Medvejie Hatchery and Deep Inlet THA for broodstock with no anticipated cost recovery operations in the Deep Inlet THA. A portion of the Deep Inlet THA may

be closed in late August to facilitate broodstock collection for the Medvijie facility. 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* (5 AAC 33.376). The plan provides for distribution of the harvest of hatchery-produced salmon between the purse seine and drift gillnet fleets. The BOF, during its March 2022 meeting passed a regulation that set the time ratio for drift gillnet openings to purse seine openings at 1:1.

During the 2022 Deep Inlet THA season (June 1 to September 20), drift gillnet fishing is scheduled to be open on Monday, Tuesday, and Wednesday. Deep Inlet THA purse seine fishing is scheduled for Sunday, Thursday, and Friday, while the troll fishery will be open on Saturday each week, or when net fisheries are closed. The Deep Inlet THA west of 135°20.75′ W long will be closed to drift gillnet and purse seine gear from June 1 through June 18. When changes are necessary, the revised schedule will be issued in a subsequent advisory announcement.

By emergency order issued under 5 AAC 33.376 (b) (4), drift gillnet fishermen fishing in the Deep Inlet THA will be required to fish with a minimum mesh size of 6 inches through June 18 to reduce the harvest of wild sockeye salmon returning to Silver Bay.

By emergency order issued under 5 AAC 39.265, harvesters participating in purse seine and drift gillnet fisheries in the Deep Inlet THA are required to retain and utilize all salmon harvested. This action is being taken in order to promote full utilization of salmon, to prevent waste of salmon, to determine harvest patterns of incidentally harvested coho and sockeye salmon, and to enable the department and NSRAA to have full and accurate reporting of returns. This requires that all sockeye and coho salmon retained for personal use and not sold to be reported on fish tickets. Fishermen are advised that if they have fish on board from other fishing areas, they should keep them separate for reporting and sampling purposes.

In early September, the Deep Inlet THA boundaries may be adjusted by the department 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, department personnel or Alaska Wildlife Troopers may board some vessels and conduct hold inspections to ensure compliance, or department staff may board some vessels to sample marked coho for CWT.

Fishermen are reminded to be respectful of the rights of property owners who reside in the vicinity of the Deep Inlet THA. If complaints occur and are substantiated during the 2022 season, the department in consultation with NSRAA, may respond to complaints by changing scheduled fishing times or fishing boundaries of the Deep Inlet THA.

Further details of the 2022 Deep Inlet THA season, including fishing schedules and times can be found in a separate ADF&G advisory announcement released on April 13.

## SOUTHERN SOUTHEAST REGIONAL AQUACULTURE ASSOCIATION

#### TERMINAL AREA FISHERIES

The terminal hatchery fisheries at Neets Bay, Carroll Inlet, Nakat Inlet, Crystal Lake, and Anita Bay will be managed in accordance with regulatory management plans and in consultation with SSRAA. Open drift gillnet fishing times will be announced by advisory announcement prior to and during the fishing season.

## **Neets Bay Terminal Harvest Area**

In 2022, SSRAA is forecasting total runs of 440,000 summer chum, 6,600 Chinook, 127,300 coho, and 51,000 fall chum salmon to the Neets Bay THA.

The Neets Bay THA will open Wednesday, June 15. Beginning at 12:00 noon, Friday, June 17, through 12:00 noon, Wednesday, 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. The Neets Bay THA will not expand to the longitude of Chin Point in 2022.

For 2022, the net rotation fishing schedule will again be modified during SWs 24–27 allowing additional closures and modified lines to conserve Unuk 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 CWT data. The open fishing area for the Neets Bay THA will be restricted initially to those waters east of the mid bay line that begins on the northern shore of Neets Bay at 55°47.62′ N lat, 131°34.50′ W long, to the southern shore of Neets Bay at 55°46.83′ N lat, 131°34.36′ W long, and then expand to those waters east of the easternmost tip of Bug Island at the longitude of 131°39.14′ W long.

It is anticipated that SSRAA will conduct cost recovery operations beginning Thursday, July 7, 2022, and continuing throughout the summer in the Neets Bay THA. Additional rotational fisheries will not occur until cost recovery and broodstock needs have been met.

Details of the 2022 season fishing schedule and area for the Neets Bay THA were announced in a separate ADF&G advisory announcement released on April 22. Additional fisheries, if warranted, will be announced by advisory announcement, and opened by emergency order in consultation with SSRAA.

## Nakat Inlet Terminal Harvest Area

For 2022, SSRAA is forecasting total hatchery runs of 248,000 summer chum, 21,300 coho, and 50,000 fall chum salmon to the Nakat Inlet THA. Peak chum salmon harvests from these releases are expected between mid- to late July for summer chum and between late August to mid-September for fall chum and coho salmon.

The Nakat Inlet THA opens by regulation (5 AAC 33.372) from June 1 through November 10 concurrently to drift gillnet and troll gear. The 500-yard stream closure regulation (5 AAC 39.290) will remain in effect. In 2022, the Nakat Inlet THA will be closed to commercial salmon fishing from 12:01 a.m., Wednesday, June 1, through 11:59 p.m., Wednesday, August 31, to allow SSRAA to conduct nontraditional cost recovery. If cost recovery goals are met, the Nakat Inlet THA may reopen to drift gillnet prior to August 31 and will be announced on a subsequent advisory announcement.

#### **Carroll Inlet Terminal Harvest Area**

For the 2022 season, SSRAA has forecasted a total Carroll Inlet Chinook salmon run of 6,000 hatchery fish. In accordance with regulation (5 AAC 33.379), Carroll Inlet THA will be open June 1, through June 30, for rotational fisheries to provide harvest for hatchery-produced Chinook salmon. Rotational net fisheries are expected to begin at 12:00 noon, Wednesday, June 15, through 12:00 noon, Thursday, June 30. The 500-yard stream closure (5 AAC 39.290) will not be in effect in the Carroll Inlet THA. Details of the 2022 season fishing schedule and area for the Carroll Inlet THA were announced in a separate ADF&G advisory announcement released on April 22.

## **Crystal Lake Terminal Harvest Area**

SSRAA projected a 3,400 adults Chinook salmon run to Crystal Lake Hatchery in 2022. Of which, 1,800 fish are expected to reach the Wrangell Narrows-Blind Slough (District 6) THA. Under provisions of the *District 6: Wrangell Narrows-Blind Slough Terminal Harvest Area Salmon Management Plan* (5 AAC 33.381) if the projected terminal run is over 4,000 fish, the commercial fishery will be opened to harvest 50% of the projected run over 4,000 fish. Based on the forecast, there is not likely to be surplus available for commercial troll or drift gillnet openings in 2022.

SSRAA is expecting a 3,800 fish Crystal Lake Hatchery coho salmon run. An estimated 1,500 fish are expected to reach the Wrangell Narrows-Blind Slough terminal area. No commercial drift gillnet fishery is anticipated in 2022.

## **Anita Bay Terminal Harvest Area**

For 2022, SSRAA is forecasting total runs of 9,900 Chinook, 291,000 summer chum, and 11,800 coho salmon from releases at Anita Bay. A total of 6,900 Chinook, 113,500 summer chum, and 5,200 coho salmon are expected to be available for harvest in the THA. The The Anita Bay common property fishery is governed as described in the *District 7: Anita Bay Terminal Harvest Area Salmon Management Plan (5 AAC 33.383)*. Initial opening of Anita Bay will be delayed until June 1 to mitigate potential harvest of wild Chinook salmon. Similar to last year, the mouth of the bay will be open exclusively to troll gear through June 16. A rotational fishery will be in place for drift gillnet and purse seine fleets from June 12 through July 6. Additionally, the THA will be closed through August for cost recovery and possibly broodstock collection following the rotational fishery. Details of the 2022 season fishing schedule and open area within the Anita Bay THA can be found in an ADF&G advisory announcement released on April 13.

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

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

DIPAC is projecting a total run of up to 2.2 million chum salmon to their release sites at Boat Harbor THA (BHTHA) and Amalga Harbor SHA in 2022. The total common property harvest is expected to be 795,200 hatchery-produced chum salmon. BHTHA will open by regulation on the third Sunday of June to provide opportunity to harvest DIPAC hatchery-produced chum salmon. Management actions to reduce harvest of Chilkat River Chinook salmon in the District 15 drift gillnet fishery (including Boat Harbor THA) will be similar to those strategies used in 2019–2021 and will include reduced time and area, night closures, and mesh size restrictions. As a result, harvest opportunities for hatchery-produced chum salmon will again be reduced in 2022. Area restrictions will likely include limiting the open outer waters within 1.0 nmi of the shoreline for 2 days per week with a maximum mesh size restriction of 6 inches and night closures through July

9. Depending on aerial survey observations of Endicott River wild chum salmon run strength, the BHTHA northern boundary may be reduced to the latitude of Danger Point. Inside waters of the BHTHA (west of 135°09.57′ W long) will open 7 days a week without gear or time restrictions.

## **Speel Arm Terminal Harvest Area**

The 2022 total run forecast for Snettisham Hatchery sockeye salmon is 54,000 fish, a similar magnitude of the estimated 2021 total run. These fish will be principally harvested in the traditional District 11 commercial drift gillnet fishery. Common property fishery openings may occur during August in the Speel Arm THA, which is in the waters of Speel Arm north of 58°03.42′ N lat. Timing of openings in the THA will depend on sockeye salmon escapement into Speel Lake and DIPAC's progress toward broodstock goals. DIPAC cost recovery efforts in the SHA during July will be limited to waters in the immediate vicinity of the hatchery where wild and hatchery stocks are well segregated. Fishery management decisions for the Speel Arm THA will be made jointly by ADF&G and DIPAC. ADF&G and industry have formalized the notification procedure for any extended fishery openings in Speel Arm. The SEAK Drift Gillnet Task Force agreement specified:

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

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Table 1.—Southeast Alaska commercial drift gillnet salmon harvest in numbers of fish, by area, harvest type and species, 2021.

Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
District 1						
Traditional (Tree Point)	1,892	21,577	47,362	144,365	171,272	386,468
Terminal Harvest Areas	4,210	259	6,210	3,918	55,560	70,157
District 6						
Traditional (Prince of Wales)	965	51,776	74,756	156,483	136,560	420,540
District 7						
Terminal Harvest Area	4,857	45	4,209	130	45,736	54,977
District 8						
Traditional (Stikine)	93	815	12,140	6,482	49,371	68,901
District 11						
Traditional (Taku/Snettisham)	666	45,897	20,643	136,855	185,684	389,745
Terminal Harvest Area	22	3,440	144	464	25	4,095
District 13						
Terminal Harvest Area	3,869	661	1,379	3,463	355,537	364,909
District 15						
Traditional (Lynn Canal)	557	78,611	26,112	159,648	223,713	488,641
Terminal Harvest Area	153	6,038	314	61,364	308,730	376,599
Subtotals						
Traditional	4,173	198,676	181,013	603,833	766,600	1,754,295
Terminal Harvest Areas	13,111	10,443	12,256	69,339	765,588	870,737
Total	17,284	209,119	193,269	673,172	1,532,188	2,625,032

<sup>&</sup>lt;sup>a</sup> Chinook salmon harvest includes jacks.

Table 2.—District 1 traditional and terminal harvest areas (Nakat Inlet, Neets Bay, and Carroll Inlet) drift gillnet annual salmon harvest in numbers of fish, 2011–2021.

Year	Chinooka	Sockeye	Coho	Pink	Chum	Total
2011	4,661	91,825	36,183	357,811	566,508	1,056,988
2012	4,026	64,612	73,576	217,281	757,675	1,117,170
2013	4,483	55,948	111,133	763,434	329,680	1,264,678
2014	4,473	57,192	116,437	763,838	274,351	1,216,291
2015	3,347	29,173	58,004	157,016	820,271	1,067,811
2016	3,110	41,288	50,021	608,351	448,724	1,151,494
2017	3,648	25,997	43,359	240,143	338,617	651,764
2018	4,310	20,812	44,120	124,356	306,100	499,698
2019	5,054	16,209	37,856	212,631	272,273	554,023
2020	6,207	9,596	20,909	194,279	210,970	441,961
2021	6,102	21,836	53,572	148,283	226,832	456,625
Average 2011–2020	4,332	41,265	59,160	363,914	432,517	902,188

<sup>&</sup>lt;sup>a</sup> Chinook salmon harvest includes jacks.

Table 3.-Prince of Wales (District 6) traditional drift gillnet annual salmon harvest in numbers of fish, 2011-2021.

Year	Chinooka	Sockeye	Coho	Pink	Chum	Total
2011	3,008	146,069	117,860	337,169	158,096	762,202
2012	1,853	45,466	121,418	129,646	104,307	402,690
2013	2,202	49,223	160,659	474,551	94,260	780,895
2014	2,092	58,430	286,815	415,392	106,243	868,972
2015	2,723	121,921	112,561	224,816	232,390	694,411
2016	2,094	106,649	122,101	358,309	130,236	719,389
2017	1,521	45,005	49,382	302,033	234,349	632,290
2018	3,247	25,203	112,000	348,277	176,392	665,119
2019	1,073	23,844	59,304	424,495	113,161	621,877
2020	1,182	11,314	43,850	127,583	143,577	327,506
2021	965	51,776	74,756	156,483	136,560	420,540
Average 2011–2020	2,100	63,312	118,595	314,227	149,301	647,535

<sup>&</sup>lt;sup>a</sup> Chinook salmon harvest includes jacks.

Table 4.-Stikine River (District 8) traditional drift gillnet annual salmon harvest in numbers of fish, 2011-2021.

Year	Chinook <sup>a</sup>	Sockeye	Coho	Pink	Chum	Total
2011	5,321	51,478	20,720	65,022	142,526	285,067
2012	8,027	21,997	20,100	16,374	240,569	307,067
2013	10,817	20,609	43,669	116,026	103,365	294,486
2014	8,023	19,808	30,184	33,830	84,771	176,616
2015	13,845	22,896	30,153	35,926	166,009	268,829
2016	10,024	70,143	22,146	35,250	200,653	338,216
2017	3,818	14,282	13,568	49,027	177,119	257,814
2018	2,649	5,731	8,823	15,643	133,812	166,658
2019	4,253	6,591	9,478	10,884	50,653	81,859
2020	2,617	2,781	21,069	11,799	53,678	91,944
2021	93	815	12,140	6,482	49,371	68,901
Average 2011–2020	6,939	23,632	21,993	38,978	135,316	226,858

<sup>&</sup>lt;sup>a</sup> Chinook salmon harvest includes jacks.

Table 5.—Taku/Snettisham (District 11) traditional and terminal harvest area drift gillnet annual salmon harvest in numbers of fish, 2011–2021.

Year	Chinooka	Sockeye	Coho	Pink	Chum	Total
2011	2,510	163,896	28,574	344,766	667,929	1,207,675
2012	1,291	140,898	24,115	193,969	566,741	927,014
2013	1,224	207,231	51,441	127,343	726,849	1,114,088
2014	1,471	126,738	54,186	29,190	291,409	502,994
2015	1,150	83,431	23,572	296,575	475,456	880,184
2016	595	215,049	35,037	46,604	448,284	745,569
2017	1,086	113,818	16,002	230,243	885,694	1,246,843
2018	783	92,889	35,930	24,300	517,812	671,714
2019	1,358	105,026	23,473	71,724	246,600	448,181
2020	1,094	28,233	15,863	65,353	109,516	220,059
2021	688	49,337	20,787	137,319	185,709	393,840
Average 2011–2020	1,256	127,721	30,819	143,007	493,629	796,432

<sup>&</sup>lt;sup>a</sup> Chinook salmon harvest includes jacks.

Table 6.-Lynn Canal (District 15) traditional and terminal harvest area drift gillnet annual salmon harvest in numbers of fish, 2011-2021.

Year	Chinook <sup>a</sup>	Sockeye	Coho	Pink	Chum	Total
2011	1,178	63,788	33,776	508,930	1,115,821	1,723,493
2012	2,736	224,643	23,321	353,271	1,567,227	2,171,198
2013	1,149	122,103	68,009	127,703	1,509,501	1,828,465
2014	1,396	234,682	58,117	90,602	1,303,009	1,687,806
2015	523	131,577	23,456	629,209	836,831	1,621,596
2016	475	188,844	30,534	81,970	931,919	1,233,742
2017	1,205	39,716	29,790	191,251	1,575,039	1,837,001
2018	1,156	81,688	45,655	22,254	1,042,476	1,193,229
2019	1,096	241,533	47,723	143,571	1,176,043	1,609,966
2020	903	50,220	17,495	82,993	319,253	470,864
2021	715	84,649	26,426	221,012	532,443	865,245
Average 2011–2020	1,182	137,880	37,810	217,408	1,137,744	1,532,024

<sup>&</sup>lt;sup>a</sup> Chinook salmon harvest includes jacks.

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

			Allowable	Actual Nass	Cumulative:
Nass River	Nass River	Allowable Nass		River Alaska	+overage /
Total Run	Escapement	River AAH	(13.8%)	Harvest	(-underage)
842,806	200,000	642,806	88,707	129,794	41,087
625,982	200,000	425,983	58,786	46,305	28,606
580,611	167,258	413,358	57,043	55,096	26,659
1,403,976	200,000	1,203,975	166,149	90,553	-48,937
1,177,472	200,000	977,472	134,481	72,942	-110,886
986,095	200,000	786,095	108,482	110,340	-109,027
666,877	200,000	466,877	64,429	55,319	-118,137
775,112	200,000	575,112	79,365	47,948	-149,555
602,210	164,745	437,463	60,370	46,369	-163,555
380,397	200,000	180,397	24,895	24,359	-164,091
575,336	200,000	375,336	51,796	55,270	-160,618
438,941	200,000	238,941	32,974	26,613	-166,979
556,710	200,000	356,710	49,226	55,122	-161,083
476,818	200,000	276,818	38,201	38,983	-160,300
501,428	200,000	301,428	41,597	35,471	-166,426
549,685	200,000	349,685	48,257	29,023	-185,660
868,744	200,000	668,744	92,287	14,867	-263,080
442,420	200,000	242,767	33,454	14,388	-282,147
368,653	200,000	168,653	23,274	12,445	-292,976
315,972	200,000	115,972	16,004	11,303	-297,677
377,745	200,000	177,745	24,528	11,268	-310,937
295,194	200,000	95,194	13,137	7,528	-316,545
502,538	200,000	302,538	41,750	14,677	-343,619
560,000	200,000	360,000	49,680	TBD	TBD
	Total Run  842,806 625,982 580,611 1,403,976 1,177,472 986,095 666,877 775,112 602,210 380,397 575,336 438,941 556,710 476,818 501,428 549,685 868,744 442,420 368,653 315,972 377,745 295,194 502,538 560,000	Total Run         Escapement           842,806         200,000           625,982         200,000           580,611         167,258           1,403,976         200,000           1,177,472         200,000           986,095         200,000           666,877         200,000           775,112         200,000           602,210         164,745           380,397         200,000           575,336         200,000           438,941         200,000           56,710         200,000           549,681         200,000           549,685         200,000           868,744         200,000           368,653         200,000           377,745         200,000           295,194         200,000           502,538         200,000           560,000         200,000	Total Run         Escapement         River AAH           842,806         200,000         642,806           625,982         200,000         425,983           580,611         167,258         413,358           1,403,976         200,000         1,203,975           1,177,472         200,000         977,472           986,095         200,000         786,095           666,877         200,000         575,112           602,210         164,745         437,463           380,397         200,000         375,336           438,941         200,000         375,336           438,941         200,000         356,710           476,818         200,000         376,818           501,428         200,000         349,685           868,744         200,000         349,685           868,744         200,000         242,767           368,653         200,000         168,653           315,972         200,000         177,745           295,194         200,000         95,194           502,538         200,000         302,538           560,000         200,000         360,000	Total Run         Escapement         River AAH         (13.8%)           842,806         200,000         642,806         88,707           625,982         200,000         425,983         58,786           580,611         167,258         413,358         57,043           1,403,976         200,000         1,203,975         166,149           1,177,472         200,000         977,472         134,481           986,095         200,000         786,095         108,482           666,877         200,000         575,112         79,365           602,210         164,745         437,463         60,370           380,397         200,000         375,336         51,796           438,941         200,000         356,710         49,226           476,818         200,000         356,710         49,226           476,818         200,000         301,428         41,597           549,685         200,000         349,685         48,257           868,744         200,000         349,685         48,257           868,744         200,000         242,767         33,454           368,653         200,000         15,972         16,004           3	Nass River Total Run         Nass River Escapement         Allowable Nass Alaska Harvest River AAH         AAH         River AAH         ABA         ABA           605,972         200,000         1,203,975         166,149         90,553         11,77472         200,000         786,095         108,482         110,340         666,877         64,429         55,319         775,112         200,000         575,112         79,365         47,948         602,210         164,745         437,463         60,370         46,369         380,397         200,000 <t< td=""></t<>

<sup>&</sup>lt;sup>a</sup> Preliminary Information
<sup>b</sup> Canada Department of Fisheries and Oceans forecast
TBD = To be determined

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

Species	Stock	Escapement Goal Type	Escapement Goal Range	Escapement Method
Sockeyea	Chilkoot Lake Total	SEG	38,000 to 86,000	Weir Count
Sockeyea	Chilkat Lake Total	BEG	70,000 to 150,000	DIDSON Count
Coho <sup>b</sup>	Berners River	BEG	3,600 to 8,100	Peak Foot Count
Coho <sup>c</sup>	Chilkat River Combined	BEG	30,000 to 70,000	Sum of Peak Foot Index Counts
Chinook <sup>d</sup>	Chilkat River Combined	BEG	1,750 to 3,500	Mark-Recapture Estimate
Fall Chume	Chilkat River Total	SEG	75,000 to 250,000	Fish wheel index

Table 9.-Expected 2022 salmon runs to SSRAA enhancement projects by release location.

Species/Run	Release Location	Common property Harvest	Terminal	Total Run
Coho	Herring Cove/Whitman	7,300	3,300	10,600
Coho	Nakat Inlet	14,600	6,700	21,300
Coho	Anita Bay	6,600	5,200	11,800
Coho	Neets Bay	92,900	34,400	127,300
Coho	Crystal Lake	2,300	1,500	3,800
Coho	Klawock	125,800	53,900	179,700
Summer Coho	Neck Lake	5,300	3,600	8,900
Summer Coho	Herring Cove/Whitman	2,500	2,800	5,300
Chinook	Whitman Lake	2,300	4,600	6,900
Chinook	Anita Bay	3,000	6,900	9,900
Chinook	Carroll Inlet	1,700	4,300	6,000
Chinook	Neets Bay	1,900	4,700	6,600
Chinook	Port St. Nick	1,500	3,300	4,800
Chinook	Crystal Lake	1,600	1,800	3,400
Summer Chum	Neets Bay	145,200	294,800	440,000
Summer Chum	Anita Bay	177,500	113,500	291,000
Summer Chum	Burnett	95,000	155,000	250,000
Summer Chum	Kendrick Bay	454,000	128,000	582,000
Summer Chum	Nakat Inlet	143,800	104,200	248,000
Summer Chum	Port Asumcion	146,800	220,200	367,000
Fall Chum	Burnett	27,400	21,600	49,000
Fall Chum	Nakat Inlet	31,500	18,500	50,000
Fall Chum	Neets Bay	21,900	29,100	51,000

<sup>&</sup>lt;sup>a</sup> Eggers et al. 2009 <sup>b</sup> Shaul and Crabtree 2005 <sup>c</sup> Ericksen and Fleischman 2006

<sup>&</sup>lt;sup>d</sup> Ericksen and McPherson 2004

<sup>&</sup>lt;sup>e</sup> Heinl et al. 2017

Table 10.-Expected 2022 salmon runs to Northern SEAK area enhancement projects by hatchery organization and release location.

Species	Release Location	Common Property Harvest	Cost Recovery	Broodstock	Total Run				
NSRAA									
Chum	Medvejie/Deep Inlet	1,589,000	102,500	122,500	1,814,000a				
Chum	Hidden Falls	104,000	50,000	150,000	304,000				
Chum	Crawfish Inlet	405,000	740,000	0	1,145,000				
Chum	SE Cove	174,000	0	0	174,000				
Chum	Gunnuk Creek Hatchery	0	0	17,000	17,000				
Chum	Thomas Bay	68,000	0	0	68,000				
Chinook	Medvejie/Deep Inlet	12,400	3,000	4,600	20,000				
Chinook	Hidden Falls	100	0	400	500				
Coho	Hidden Falls	15,580	15,420	10,000	41,000				
Coho	Deer Lake (Mist Cove)	25,900	30,100	0	56,000				
Coho	Deep Inlet/Medvejie	94,000	0	3,000	97,000				
Armstrong Keta, Inc.									
Pink	Port Armstrong	Unavailable	Unavailable	Unavailable	328,000				
Chum	Port Armstrong	Unavailable	Unavailable	Unavailable	198,000				
Coho	Port Armstrong	Unavailable	Unavailable	Unavailable	58,000				
Chinook	Port Armstrong	Unavailable	Unavailable	Unavailable	0				
		Sitka Sound Science C	enter						
Pink	Crescent Bay	Unavailable	Unavailable	Unavailable	248,000				
Chum	Crescent Bay	Unavailable	Unavailable	Unavailable	87,000				
Coho	Crescent Bay	Unavailable	Unavailable	Unavailable	7,000				
DIPAC									
Chum	Boat Harbor/Amalga	795,200	558,700		1,354,000				
Chum	Gastineau/Limestone	398,500	172,900	190,000	761,400				
Sockeye	Port Snettisham	31,300	16,300	6,800	54,400				
Coho	Gastineau Channel	7,400	4,600	*	12,000				
			•	400	4,100				
	Gast/FishCr/Auke/Lena	2,600	1,100	400	4,				

<sup>&</sup>lt;sup>a</sup> Projections for Medvejie/Deep Inlet includes chum salmon from the Sitka Sound Science Center. (Note: Common property harvest estimates of Chinook and coho salmon include sport harvest).

Table 11.—Statistical week calendar for 2022 drift gillnet season.

Week	Beginning Date	Ending Date	Week	Beginning Date	Ending Date
23	May-29	Jun-4	33	Aug-7	Aug-13
24	Jun-5	Jun-11	34	Aug-14	Aug-20
25	Jun-12	Jun-18	35	Aug-21	Aug-27
26	Jun-19	Jun-25	36	Aug-28	Sep-3
27	Jun-26	Jul-2	37	Sep-4	Sep-10
28	Jul-3	Jul-9	38	Sep-11	Sep-17
29	Jul-10	Jul-16	39	Sep-18	Sep-24
30	Jul-17	Jul-23	40	Sep-25	Oct-1
31	Jul-24	Jul-30	41	Oct-2	Oct-8
32	Jul-31	Aug-6	42	Oct-9	Oct-15

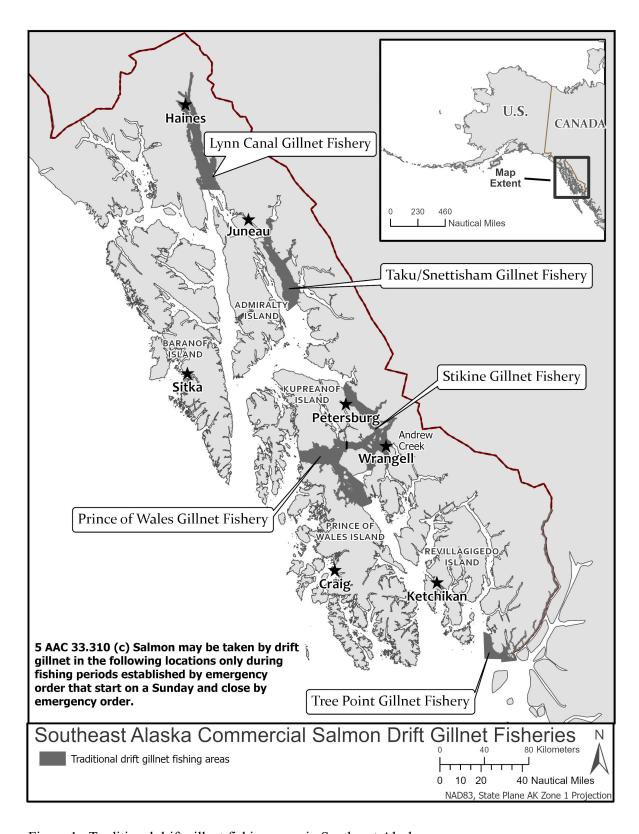


Figure 1.-Traditional drift gillnet fishing areas in Southeast Alaska.

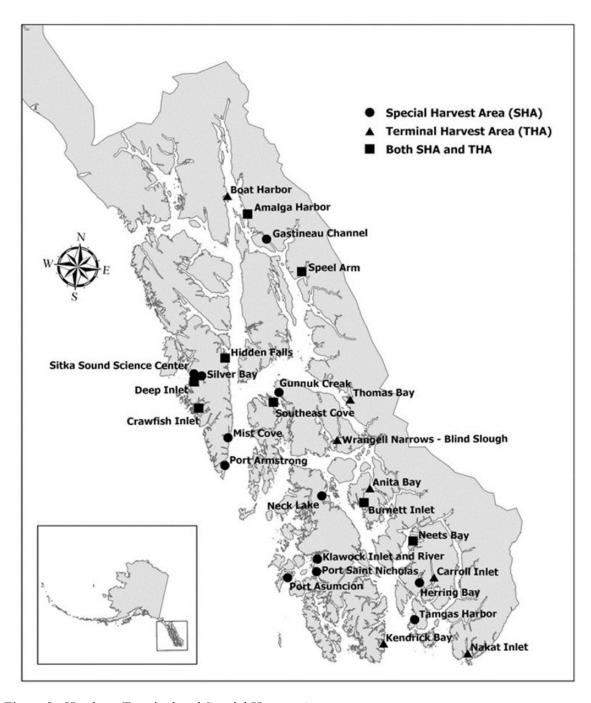


Figure 2.-Hatchery Terminal and Special Harvest Areas.