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Summary of Pacific Salmon Escapement Goals in Alaska with a Review of Escapements from 2013 to 2021

by

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and

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Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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

FISHERY MANUSCRIPT SERIES NO. 22-02

**SUMMARY OF PACIFIC SALMON ESCAPEMENT GOALS IN ALASKA
WITH A REVIEW OF ESCAPEMENTS FROM 2013 TO 2021**

by

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ABSTRACT

This report summarizes statewide Pacific salmon escapement goals in effect in 2021 and documents escapements for all species and stocks with goals from 2013 through 2021. Annual escapements are compared against escapement goals in place at the time to assess outcomes, with summaries by the Division of Commercial Fisheries regions. We list methods used to enumerate escapements and to develop current escapement goals (with brief descriptions) for each monitored stock. Leading up to the 2020–2021 Alaska Board of Fisheries meeting cycle, escapement goals were reviewed for the Southeast Region and Prince William Sound Management Area. However, the Alaska Board of Fisheries area regulatory meetings were postponed because of the COVID-19 pandemic. Therefore, none of the recommended escapement goal changes for the Southeast Region or Prince William Sound Management Area were implemented in 2021, and the number of salmon escapement goals in Alaska remained at 264. In 2021, 70% of the escapement goals were met or exceeded and 30% of the stocks did not meet minimum escapement goals.

Keywords: escapement, escapement goals, Chinook salmon, sockeye salmon, coho salmon, pink salmon, chum salmon, Alaska Board of Fisheries, BOF, statewide, Alaska

INTRODUCTION

Scientifically defensible Pacific salmon escapement goals are a central tenet of fisheries management in Alaska. Escapement goals are founded in the sustained yield principle highlighted in the State of Alaska Constitution (Article VIII, section 4) and in state statute (AS 16.05.020). Several policies in the Alaska Administrative Code also provide guidance for establishing escapement goals, including the policy for the management of sustainable salmon fisheries (5 AAC 39.222), the policy for statewide salmon escapement goals (5 AAC 39.223), and the policy for the management of mixed stock fisheries (5 AAC 39.220). These policies provide detailed definitions of specific escapement goal types, outline the responsibilities of the Alaska Department of Fish and Game (ADF&G) and the Alaska Board of Fisheries (BOF) in establishing goals, and provide general direction for development and application of escapement goals in Alaska. Currently, there are 264 active salmon stock escapement goals throughout the state of Alaska (Figure 1).

It is the responsibility of ADF&G to document, establish, and review escapement goals; prepare scientific analyses in support of escapement goals; notify the public when escapement goals are established or modified; and notify the BOF of allocative implications associated with escapement goals. The foundation for this effort is the regional or area escapement goal review teams that are assembled every 3 years to review goals, recommend changes, establish new goals, or eliminate goals. The teams have broad expertise in biological characteristics of salmon stocks and technical approaches for establishing goals. Scientific staff from headquarters may assist regional teams to address issues of general importance for escapement goal development and application in Alaska. A detailed regional report of escapement goal recommendations is presented to the BOF and the public at triennial BOF meetings for that region or area. Following the BOF meeting, recommended goals are presented to the directors of the Divisions of Commercial Fisheries and Sport Fish for approval.

Although development of escapement goals is exhaustively detailed in regional and area reports and supporting documents (e.g., stock-specific reports), this statewide summary report allows readers to examine the goals and escapements for salmon stocks in a single document. It provides an overview of salmon stocks with escapement goals and includes the following for each: a numerical description of the escapement goal, the type of escapement goal, the year in which the current escapement goal was first implemented, and recent years' escapement data for each stock. In addition, statistics documenting work done to achieve escapement goals is summarized and

presented, and a statewide summary of stocks with yield or management concerns is included, as recommended by ADF&G and established by the BOF. Data presented in this document are the most recently available at the time of publication and supersede data in previous annual statewide escapement reports. This report is intended to be a resource for ADF&G staff, stakeholders, and the public.

METHODS

ADF&G escapement goal reports and supporting documents were reviewed to catalog current escapement goals in each region for 5 species of Pacific salmon, including information on stock name, type of goal, numerical description of the goal, and the year it was implemented (i.e., the first season that the goal was used to manage escapements). Regional and area staff from the Divisions of Commercial Fisheries and Sport Fish provided the most current escapement estimates from 2013 through 2021 for each stock with an established escapement goal. The escapement goals listed are those in effect during the 2021 spawning season.

Escapements from 2013 through 2021 were compared against escapement goals in place at the time of enumeration to assess outcomes in achieving goals. Escapements for a particular stock were classed as *Under* if escapement for a given year was less than the lower bound of the escapement goal. If escapement fell within the escapement goal range or was greater than a lower-bound goal, we considered the goal *Met*. Where escapement exceeded the upper bound of an escapement goal range, it was classed as *Over*. Where escapement goals or enumeration methods changed between 2013 and 2021 for a stock, we assessed outcomes by comparing escapement estimates with the goals and methods in place at the time of the fishery. Information on previous escapement goals and methods came from a detailed review of regional escapement goal reports, supporting documents, and conversations with regional and area biologists.

A variety of methods are used to develop escapement goals in Alaska, and brief descriptions of each are summarized below. The most commonly used methods are listed first, followed by the less common methods.

Percentile Method: A method for establishing sustainable escapement goals (SEG) was originally developed by Bue and Hasbrouck¹ and refined by Clark et al. (2014). Contrast of the observed annual escapements (largest escapement divided by smallest escapement), measurement error in escapements, and estimated exploitation rate of the stock are used to select percentiles of observed escapements that are used to establish lower and upper bounds of the escapement goal.

Spawner–Recruit Analysis (SRA): This method analyzes the relationship between escapement (number of spawners) and subsequent production of recruits (i.e., adult returns) in the next generation. There are several SRA models, but the Ricker production model (Ricker 1954) is almost exclusively used for salmon populations in Alaska.

Risk Analysis: Risks of management error, an unneeded management action, or mistaken inaction in future years are estimated based on a precautionary reference point established using past observations of escapement (Bernard et al. 2009). This method is primarily used to guide establishment of a lower-bound SEG for nontargeted stocks of salmon.

¹ Bue, B. G., and J. J. Hasbrouck. *Unpublished*. Escapement goal review of salmon stocks of Upper Cook Inlet. Report to the Alaska Board of Fisheries November 2001 (and February 2002). Alaska Department of Fish and Game, Anchorage.

Yield Analysis: Graphical or tabular examination of yields produced from observed escapement indices allows identification of the escapement range with the greatest yields (Hilborn and Walters 1992).

Theoretical Spawner–Recruit Analysis (Theoretical SRA): This method is used in situations where there are few or no stock-specific harvest estimates or age data. Information from nearby stocks, or generalizations about the species, are used in a spawner–recruit production model to estimate the number of spawners needed to achieve maximum sustained yield (e.g., Clark 2005).

Empirical Observation: Goal development methods classified as *Empirical Observation* are generally ad hoc methods for stocks with limited or sparse data. Goals are based on observed escapements over time and may be calculated as the average escapement or the value of a low escapement for which there is evidence that the stock is able to recover, e.g., Norton Sound pink salmon *Oncorhynchus gorbuscha* escapement goals (ADF&G 2004).

Zooplankton Model: This model estimates the number of sockeye salmon *O. nerka* smolts of a threshold or optimal size that a lake can support based upon measures of zooplankton biomass and surface area of the lake (Koenings and Kyle 1997). Adult production is then estimated from predicted smolt production by applying marine survival rates for a range of smolt sizes.

Spawning Habitat Model: Estimates of spawning capacity or number of spawners that produce maximum sustained yield are based on the relationship with the watershed area, available spawning habitat in a drainage, or stream length. Spawning habitat models have been developed for sockeye salmon (Burgner et al. 1969), coho salmon *O. kisutch* (Bradford et al. 1999; Bradford et al. 1997), and Chinook salmon *O. tshawytscha* (Parken et al. 2006).

Euphotic Volume Model: Measurement of the volume of a lake where enough light penetrates to support primary production (i.e., euphotic volume) is used to estimate sockeye salmon smolt biomass (Koenings and Burkett 1987), from which adult escapement is then estimated using marine survival rates.

Lake Surface Area: Similar to spawning habitat models, the relationship between the lake surface area and escapement are used to estimate adult sockeye salmon production (Honnold et al. 1996; Nelson et al. 2006).

RESULTS AND DISCUSSION

Summaries of estimated escapements and escapement goals for each monitored salmon stock from 2013 to 2021 are presented by region and species in Tables 1–4. Although most information was available through regional, area, and stock-specific escapement goal reports, 2021 data were primarily obtained directly from area and regional biologists. Data for 2021 should often be considered preliminary estimates because complete data regarding subsistence and sport harvests are frequently not available immediately following the season.

Leading up to the 2020–2021 Alaska Board of Fisheries meeting cycle, escapement goals were reviewed for the Southeast Region and Prince William Sound Management Area. However, the Alaska Board of Fisheries area regulatory meetings were postponed because of the COVID-19 pandemic. Because the area regulatory meetings were postponed, none of the recommended escapement goal changes for the Southeast Region or Prince William Sound Management Area were implemented in 2021 (implementation occurred in 2022), as noted in Table 5.

A summary of escapement goal types for all salmon species by region indicates that the majority of goals in Central, Arctic–Yukon–Kuskokwim, and Westward Regions are SEGs, including lower-bound SEGs, with biological escapement goals (BEGs) making up a smaller proportion of goals (Figure 1a). The reverse is true for Southeast Region, where a little over half of the goals are BEGs. Escapement goals for sockeye and Chinook salmon make up 50% of all escapement goals statewide, with the majority of goals for each species being SEGs (Figure 1b). Optimal escapement goals (OEG) and inriver goals established by the BOF, and goals based upon international agreements, collectively, represent a small proportion of escapement goals in Alaska.

Use of different escapement goal types for each salmon species is summarized by Division of Commercial Fisheries regions (Figures 2–5). Among the 4 regions, there are some distinct differences in the distribution of goal types by salmon species. In Southeast Region, the majority of goals are BEGs, including all pink salmon goals, all but 1 Chinook salmon goal, 62% of the coho salmon goals, and 33% of the sockeye salmon goals (Figure 2). This is in contrast to the Central Region, where the majority of goals are SEGs, with 1 Chinook and 2 sockeye salmon stocks representing the only BEGs (Figure 3). Arctic–Yukon–Kuskokwim Region has the only BEG for chum salmon (*O. keta*) in the state, in addition to BEGs for 2 Chinook salmon stocks (Figure 4). All Chinook salmon stocks in Westward Region are BEGs, but compared to Southeast, a much smaller proportion of coho salmon goals are BEGs (Figure 5). These are broad generalizations that are immediately apparent, but there are many reasons that the distribution of goal types would be different among regions, including fishery structure, stock assessment capacity (e.g., stock-specific data), and technical approaches.

Summary comparisons of estimated escapements with escapement goals in place at the time are presented (Tables 6–9), highlighting whether the goal was exceeded, met, or not met. This report presents important information about changes in stock assessment methods or goal ranges during the specified years that is essential for a thorough understanding of the escapement estimates and evaluations of outcomes in comparison to goals (Tables 1–4 and 6–9). Summaries of outcomes in achieving goals are presented by species (Tables 10–13) and region (Tables 14–17, Figures 6–9). Patterns in achieving escapement goals from year to year have varied within each region (Tables 14–17, Figures 6–9). In 2021, 70% of the stocks assessed had escapements that met or exceeded their escapement goals. The percentage of all stocks assessed in 2021 that were within the goal range (or above the lower bound if a lower-bound SEG) was 40%, which is below the observed range for recent years (42–53%; Figure 10a). In 2021, 30% of the goals were exceeded, which was an increase from 18% in 2020 (Figure 10c). In recent years the percentage of escapement goals that were exceeded ranged from 18% to 41%. The percentage of goals for which minimum escapement was not achieved in 2021 was 30%—a decrease from 35% in 2020—but above the recent average of 25% (2013–2020; Figure 10b).

It is important to document outcomes for escapement goals, which are fundamental to ADF&G efforts to manage for sustainable salmon stock productivity. Where escapements chronically (4–5 years) fail to meet expectations for harvestable yield or spawning escapements, ADF&G may recommend—and the BOF may adopt—a *stock of concern* (SOC) designation for those underperforming salmon stocks. The policy for the management of sustainable salmon fisheries (5 AAC 39.222) provides specific definitions for stocks of concern. *Yield concerns* arise from a chronic inability to maintain expected yields or harvestable surpluses above escapement needs. *Management concerns* are precipitated by a chronic failure to maintain escapements within the bounds, or above the lower bound of the established goal. A *conservation concern* may arise from

a failure to maintain escapements above a sustained escapement threshold. Methods to develop stock-specific sustained escapement thresholds, as defined in the sustainable salmon fisheries policy, are not well developed for Pacific salmon, and no sustained escapement thresholds or stocks of conservation concern exist in Alaska.

In 2021, there were 13 stocks of concern in the state with no changes from 2020. At the October 2020 BOF Work Session, the department submitted SOC memos for Prince William Sound Management Area and Southeast Alaska Region. No stocks were recommended for listing in Prince William Sound, but for Southeast Alaska, the department recommended continuation of SOC designation for stocks already listed as well as 4 new Chinook salmon stocks and 1 sockeye salmon stock for listing. However, because of the delay in BOF area regulatory meetings until 2022, stocks were not officially listed until 2022. For Southeast Alaska, new stocks of concern include Andrew Creek, Stikine, Chickamin, and Taku River Chinook salmon as well as Klukshu River sockeye salmon. In 2022, the BOF also listed early-run Chignik River sockeye salmon (Westward Region) as an SOC. All new SOC were designated stock of management concern (Table 18a). In addition to the current stocks of concern, a list of historical SOC listings are provided for reference (Table 18b).

The array of methods used to enumerate salmon for each of the stocks with escapement goals, as well as methods used to assist ADF&G staff in developing the escapement goal for a given stock, are summarized by region (Tables 19–22).

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TABLES

Table 1.–Southeast Region Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2013 to 2021.

System	2021 Goal range		Type	Initial year	Escapement								
	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
CHINOOK SALMON ^a													
Blossom River	500	1,400	BEG	2018	987	840	642	522	341	1,087	557	515	170
Keta River	550	1,300	BEG	2018	1,484	1,321	915	1,342	903	1,662	1,041	668	707
Unuk River	1,800	3,800	BEG	2009	1,135	1,691	2,623	1,463	1,203	1,971	3,115	1,135	2,666
Chickamin River	2,150	4,300	BEG	2018	2,223	3,097	2,760	964	722	2,052	1,610	2,280	2,404
Andrew Creek	650	1,500	BEG	1998	920	1,261	796	402	349	482	698	470	530
Stikine River	14,000	28,000	BEG	2000	16,784 ^b	24,374 ^b	21,597 ^b	10,554 ^b	7,335 ^b	8,603 ^b	13,817 ^b	9,753 ^b	8,376 ^b
King Salmon River	120	240	BEG	1997	94	68	50	149	85	30	27	100	134
Taku River	19,000	36,000	BEG	2009	18,002 ^b	23,532 ^b	23,567 ^b	9,177 ^b	8,214 ^b	7,271 ^b	11,558 ^b	15,593 ^b	11,341 ^b
Chilkat River	1,850	3,600	inriver ^c	2003	1,730 ^b	1,534 ^b	2,456 ^b	1,386 ^b	1,173 ^b	873 ^b	2,028 ^b	3,180 ^b	2,038 ^b
	1,750	3,500	BEG	2003	1,719 ^b	1,529 ^b	2,452 ^b	1,380 ^b	1,173 ^b	873 ^b	2,028 ^b	3,180 ^b	2,038 ^b
Klukshu (Alsek) River ^d	eliminated			2018	1,227	832	1,388	646	443 ^b				
Alsek River ^d	3,500	5,300	BEG	2013	4,992	3,357	5,697	2,514	1,741	4,348 ^b	6,327 ^b	5,286 ^b	5,616 ^b
Situk River	450	1,050	BEG	2003	923	475	176	337	1,190 ^b	421 ^b	620 ^b	1,197 ^b	1,064 ^b
CHUM SALMON													
Southern Southeast Summer	62,000		LB SEG	2015	86,000	47,000	115,000	90,000	84,000	127,000	105,000	70,000	77,000
Northern Southeast Inside Summer	107,000		LB SEG	2018	278,000	93,000	166,000	66,000	277,000	109,000	123,000	52,000	67,000
Northern Southeast Outside Summer	25,000		LB SEG	2015	22,800	27,600	26,300	26,000	24,800	19,400	25,500	16,100	11,600
Cholmondeley Sound Fall	30,000	48,000	SEG	2009	13,000	48,000	73,000	30,000	52,000	70,000	20,000	30,000	55,000
Port Camden Fall	2,000	7,000	SEG	2009	2,400	4,300	7,300	4,700	4,200	1,000	4,800	1,500	2,200
Security Bay Fall	5,000	15,000	SEG	2009	2,800	6,300	21,500	14,300	15,500	5,600	14,300	11,500	3,000
Excursion River Fall	4,000	18,000	SEG	2009	7,600	10,800	12,000	1,400	14,500	6,200	3,600	200	1,900
Chilkat River Fall	75,000	250,000	SEG	2015	166,000	142,000	207,000	218,000	130,000	NA	224,000	23,000	172,000
COHO SALMON													
Hugh Smith Lake	500	1,600	BEG	2009	3,048	4,110	956	948	1,266	619	1,239	634	903
Klawock River	4,000	9,000	SEG	2013 ^e	8,323	7,698	12,780	24,242	7,412	13,578	5,287	5,783	5,289
Taku River	50,000	90,000	BEG	2015	68,117 ^b	124,171 ^b	60,178 ^b	87,704 ^b	57,868 ^b	51,173 ^b	82,759 ^b	52,063 ^b	75,526 ^b
Auke Creek	200	500	BEG	1994	736	1,533	577	204	283	146	345	173	322
Montana Creek	400	1,200	SEG	2006	367	911	1,204	717	634	1,161	203	495	391
Peterson Creek	100	250	SEG	2006	126	284	202	52	20	172	NC	65	15
Ketchikan Survey Index	4,250	8,500	BEG	2006	11,287	16,795	10,039	13,419	11,563	13,886	7,913	8,610	21,006
Sitka Survey Index	400	800	BEG	2006	1,414	2,161	2,244	2,943	1,305	1,502	1,480	630	1,486
Ford Arm Creek	eliminated			2018	1,573	3,025	3,281	NS	NS				
Berners River	3,600	8,100	BEG	2018	6,280	15,480	9,940	6,733	7,040	3,550	9,405	3,296	5,933
Chilkat River	30,000	70,000	BEG	2006	51,324	130,201	47,930	26,280	33,383	65,749	34,779	28,660	55,220

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Table 1.–Page 2 of 3.

	2021 Goal range			Initial year	Escapement								
System	Lower	Upper	Type		2013	2014	2015	2016	2017	2018	2019	2020	2021
COHO SALMON (cont.)													
Lost River	eliminated			2015	2,593	3,555							
Tawah Creek (Lost River)	1,400	4,200	SEG	2015	2,593	3,555	2,015	746	1,455	2,211	1,866	NS	NS
Situk River	3,300	9,800	BEG	1994	14,853	8,226	7,062	6,177	4,122	6,198	10,381	NS	NS
Tsiu/Tsivat Rivers	10,000	29,000	SEG	2018	47,000	27,000	19,500	31,000	38,000	48,600	NS	56,000	NS
PINK SALMON													
Southern Southeast	3,000,000	8,000,000	BEG	2009	14,450,000	9,650,000	4,300,000	6,600,000	6,390,000	4,870,000	5,630,000	5,660,000	9,810,000
Northern Southeast Inside	2,500,000	6,000,000	BEG	2009	5,370,000	1,370,000	5,210,000	1,780,000	4,650,000	1,370,000	1,650,000	2,290,000	3,910,000
Northern Southeast Outside	750,000	2,500,000	BEG	2009	5,340,000	2,750,000	2,840,000	1,700,000	2,840,000	1,900,000	1,530,000	1,790,000	1,940,000
Situk River	eliminated			2018	150,500	28,238	69,635	24,949	263,830				
SCKEYE SALMON													
Hugh Smith Lake	8,000	18,000	OEG ^f	2003	5,946	10,397	21,296	12,865	14,748	2,039	2,240	3,860	3,235
	8,000	18,000	BEG	2003									
McDonald Lake	55,000	120,000	SEG	2009	15,400	43,400	70,200	15,600	24,000	11,000	24,200	8,200	44,500
Mainstem Stikine River	20,000	40,000	SEG	1987	27,091	19,691	26,432	28,646	11,678	12,159	23,174 ^b	7,126 ^b	30,447 ^b
Tahltan Lake ^g	18,000	30,000	BEG	1993	15,828	39,745	33,159	38,458	19,241	16,350	36,787 ^b	11,158 ^b	42,846 ^b
Speel Lake	4,000	9,000	SEG	2015	6,426	5,062	4,888	5,538	3,435	4,244	6,447	NC	8,643
Taku River (historical) ^h	71,000	80,000	SEG	1986	81,177	92,189	132,523	179,103	108,416	98,465	76,722 ^b		
Taku River (revised) ⁱ	40,000	75,000	BEG		62,062	49,828	82,059	107,183	59,069	65,540	80,205 ^b	99,508 ^b	161,348 ^b
Redoubt Lake	7,000	25,000	OEG	2003	48,355	18,694	12,540	22,553	55,397	72,409	59,106	41,289	60,004
	10,000	25,000	BEG	2003									
Chilkat Lake	70,000	150,000	BEG	2009	115,237	70,470	164,014	87,622	88,197	108,047	136,091	50,746	65,199
Chilkoot Lake	38,000	86,000	SEG	2009	46,329	105,713	71,515	86,721	43,098	85,463	140,378	60,218	98,672
East Alsek-Doame River	eliminated			2018	26,500	15,300	15,000	19,200	22,500				
East Alsek River	9,000	24,000	SEG	2018	24,000	9,800	12,000	19,200	20,500	10,500	27,300	13,670	29,700
Klukshu River	7,500	11,000	BEG	2013	3,792	12,148	11,363	7,391	3,711	7,143	18,749	4,287	25,670
Alsek River ^j	eliminated			2018	83,771	87,093	63,709	58,836	101,533				
Lost River	eliminated			2018	587	NS	373	449	NS				
Situk River	30,000	70,000	BEG	2003	118,767	102,994	95,093	56,738	91,092	26,704	72,530	63,343	119,072

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Table 1.–Page 3 of 3.

Note: BEG = biological escapement goal; SEG = sustainable escapement goal; LB SEG = lower-bound SEG; OEG = optimal escapement goal; NA = data not available; NC = no count; NS = no survey.

- ^a Goals are for large (≥ 660 mm from mid eye to tail fork [METF], or fish age 1.3 and older) Chinook salmon, except the goals for the Klukshu and Alsek Rivers, which are germane to fish age 1.2 and older and can include fish < 660 mm METF.
- ^b Preliminary data.
- ^c Chilkat River Chinook salmon inriver goal accounts for inriver subsistence harvest that average < 100 fish.
- ^d Alsek and Klukshu River Chinook salmon escapement goals were bilaterally agreed upon in 2013 (TTC 2014). Escapement to the Alsek River is calculated through expansion of the Klukshu River inriver run by a factor of 4.0 and subtraction of any inriver harvests above Dry Bay in the lower Alsek River.
- ^e Klawock River coho salmon escapement goal was officially adopted in 2013, but escapement was managed for this goal beginning in 2007.
- ^f Hugh Smith Lake sockeye salmon OEG includes wild and hatchery fish.
- ^g Tahltan Lake sockeye salmon escapement count includes fish collected for broodstock.
- ^h In 2019, a revised “interim” Taku River escapement objective of 55,000–62,000 sockeye salmon was agreed to by the Pacific Salmon Commission Transboundary River Panel for the 2019 fishing season, based on a 22% adjustment of historical mark–recapture abundance estimates (TTC 2019). A new escapement goal of 40,000–75,000 sockeye salmon was adopted by the PSC prior to the 2020 fishing season based on a reanalysis and updating of the mark–recapture data and spawner–recruit analysis (TTC 2020).
- ⁱ A new escapement goal of 40,000–75,000 sockeye salmon was adopted by the PSC prior to the 2020 fishing season based on a reanalysis and updating of the mark–recapture data and spawner–recruit analysis (TTC 2020). This escapement has not been adopted by the State because the Southeast Alaska BOF meeting was postponed due to COVID-19.
- ^j The Alsek River sockeye salmon run is not regularly assessed, so escapement numbers for each year are not available. Since 2013, Alsek River sockeye salmon have been managed to meet the Klukshu River escapement goal as per the 2013 management plan (TTC 2014).

Table 2.—Central Region (Bristol Bay, Cook Inlet, and Prince William Sound/Copper River) Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2013 to 2021.

System	2021 Goal range		Type	Initial year	Escapement								
	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
CHINOOK SALMON													
<i>Bristol Bay</i>													
Nushagak River	55,000	120,000	SEG	2013	104,794	62,679	91,090	118,077	52,297	91,354	41,258	40,313	50,009 ^a
Naknek River	eliminated			2016	NS	NS	3,060						
Alagnak River	eliminated			2019	NS	NS	917	1,283	435	998			
<i>Upper Cook Inlet</i>													
Alexander Creek	1,900	3,700	SEG	2020	588	911	1,117	754	170	296	1,297	596	288
Campbell Creek	380		LB SEG	2011	NS	274	654	544	475	287	393	154	339 ^b
Chuitna River	1,000	1,500	SEG	2020	1,690	1,398	1,965	1,372	235	939	2,115	869	806
Chulitna River	1,200	2,900	SEG	2020	1,262	1,011	3,137	1,151	NC	1,125	2,765	845	1,535
Clear (Chunilna) Creek	eliminated			2020	1,471	1,390	1,205	NS	780	940	1,511		
Crooked Creek	700	1,400	SEG	2020	1,103	1,411	1,459	1,747	911	714	1,444	830	594
Deshka River	eliminated			2020	18,531	16,335	24,316	22,874	11,383	8,548	9,705		
Deshka River	9,000	18,000	BEG	2020								10,638	18,674
Eastside Susitna River	13,000	25,000	SEG	2020								13,815 ^a	15,208 ^a
Goose Creek	eliminated			2020	62	232	NC	NC	148	90	NC		
Kenai R - early run (all fish)	eliminated ^c			2017	2,148	5,311	6,190	9,177					
Kenai R - early run (large fish)	3,900	6,600	OEG	2017					6,725	2,909	4,128	2,439	4,036
	2,800	5,600	SEG	2017									
Kenai R - late run (all fish)	eliminated			2017	15,395	16,263	22,626	18,790					
Kenai R - late run (large fish)	15,000	30,000	OEG	2020								11,909	12,147
	13,500	27,000	SEG	2017					20,615	17,289	11,638		
Lake Creek	eliminated			2020	3,655	3,506	4,686	3,588	1,601	1,767	2,692		
Lewis River	eliminated			2020	61	61	5 ^d	0	0 ^d	0	0		
Little Susitna River (aerial) ^e	700	1,500	SEG	2020	1,651	1,759	1,507	1,622	1,192	530	NC	558	889
Little Susitna River (weir)	2,100	4,300	SEG	2017					2,531	549	3,666	2,445	3,121
Little Willow Creek	eliminated			2020	858	684	788	675	840	280	631		
Montana Creek	eliminated			2020	1,304	953	1,416	692	603	473	789		
Peters Creek	eliminated			2020	1,643	1,443	1,514	1,122	307	1,674	1,209		
Prairie Creek	eliminated			2020	3,304	2,812	3,290	1,853	1,930	1,194	2,371		
Sheep Creek	eliminated			2020	NC	262	NC	NC	NC	334	NC		
Talachulitna River	eliminated			2020	2,285	2,256	2,582	4,295	1,087	1,483	3,225		
Talkeetna River	9,000	17,500	SEG	2020								7,279 ^a	9,107 ^a
Theodore River	500	1,000	SEG	2020	476	312	426	68	21	18	201	111	38

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Table 2.–Page 2 of 6.

System	2021 Goal range		Type	Initial year	Escapement								
	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
CHINOOK SALMON (cont.)													
Upper Cook Inlet (cont.)													
Willow Creek	eliminated			2020	1,752	1,335	2,046	1,814	1,329	411	897		
Yentna River	16,000	22,000	OEG	2020								14,850 ^a	18,890 ^a
	13,000	22,000	SEG	2020									
Lower Cook Inlet													
Anchor River	3,800	7,600	SEG	2017	4,401	2,499	10,241	7,142	5,700	3,129	5,603	3,624	4,300
Deep Creek	350		LB SEG	2017	475	601	535	NS	753	182	751	327	NS
Ninilchik River	750	1,300	SEG	2017	571	891	874	572	855	979	1,092	835	772
Prince William Sound													
Copper River	24,000		LB SEG	2003	29,013	20,689	26,751	12,430	33,644	42,202	35,138	21,587	18,521 ^a
CHUM SALMON													
Bristol Bay													
Nushagak River ^f	200,000		LB SEG	2013	604,540	493,821	288,929	419,810	415,488	735,628	514,339	110,592	124,419
Upper Cook Inlet													
Clearwater Creek	3,500	8,000	SEG	2017	9,010	3,110	10,790	5,056	7,040	1,800	9,600	3,970	9,440
Lower Cook Inlet													
Port Graham River	1,200	2,700	SEG	2017	1,944	3,735	4,030	2,391	5,765	3,725	1,074	660	1,029
Dogfish Lagoon	3,500	8,600	SEG	2017	9,300	11,205	13,312	11,260	13,191	7,615	3,640	1,246	4,030
Rocky River	1,500	4,400	SEG	2017	8,148	6,863	3,138	4,620	6,922	5,620	6,569	5,010	6,542
Port Dick Creek	1,900	4,300	SEG	2017	4,133	1,829	13,230	9,323	2,633	724	2,000	1,040	3,261
Island Creek	5,100	11,900	SEG	2017	8,772	2,699	18,479	8,210	5,522	1,368	5,482	1,399	3,112
Big Kamishak River	6,800	15,600	SEG	2017	3,280	5,676	6,990	9,104	32,290	7,694	51,030	19,391	15,987
Little Kamishak River	8,000	16,800	SEG	2017	6,744	15,069	14,370	11,991	19,275	14,417	22,611	38,591	35,046
McNeil River	24,000	48,000	SEG	2008	9,498	17,475	20,494	26,262	38,679	37,331	9,205	8,850	15,219
Bruin River	5,200	10,000	SEG	2017	8,942	3,583	11,006	26,598	38,536	28,497	25,283	22,206	29,655
Ursus Cove	5,900	10,100	SEG	2017	10,339	5,308	14,783	7,032	22,025	3,718	13,400	4,367	7,500
Cottonwood Creek	5,200	12,200	SEG	2017	5,206	7,079	16,962	1,850	6,150	1,326	3,908	679	5,690
Iniskin Bay	5,900	13,600	SEG	2017	5,928	13,020	7,513	1,089	15,591	9,149	15,294	8,804	15,024
Prince William Sound ^g													
Eastern District	79,000		LB SEG	2018	146,349	90,445	104,437	116,685	76,836	109,598	56,846	103,849	58,965
Northern District	28,000		LB SEG	2018	40,475	27,385	41,253	10,410	33,437	18,407	11,690	23,542	20,404
Coghill District	10,000		LB SEG	2018	14,086	9,491	14,929	976	13,210	13,617	3,437	8,998	2,395
Northwestern District	7,000		LB SEG	2018	4,995	5,041	7,060	3,954	7,118	15,563	3,258	7,405	6,979
Southeastern District	11,000		LB SEG	2018	33,678	29,362	44,095	13,919	26,330	10,164	19,451	26,909	46,391

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Table 2.–Page 3 of 6.

System	2021 Goal range		Type	Initial year	Escapement								
	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
COHO SALMON													
Bristol Bay													
Nushagak River	60,000	120,000	SEG	2013	207,222	478,198	NS	NS	NS	111,455	51,852	NS	NS
Upper Cook Inlet													
Deshka River	10,200	24,100	SEG	2017					36,869	13,072	10,445	NA	NA
Fish Creek (Knik)	1,200	6,000	SEG	2020	7,593 ^b	10,283	7,912	2,484	8,966	5,022	3,025	4,555	6,462
Jim Creek	250	700	SEG	2020	663	122	571	106	607	758	162	735	1,499
Little Susitna River	9,200	17,700	SEG	2020	13,583	24,211 ^b	12,756	10,049	17,781	7,583 ^b	4,229 ^b	10,765	10,923
Lower Cook Inlet													
There are no coho salmon stocks with escapement goals in Lower Cook Inlet													
Prince William Sound													
Copper River Delta	32,000	67,000	SEG	2003	34,630	44,040	42,065	76,200	43,760	53,800	36,420	36,445	45,485
Bering River	13,000	33,000	SEG	2003	18,820	26,475	15,550	26,150	30,650	26,525	10,015	25,825	19,450
PINK SALMON													
Bristol Bay													
Nushagak River	165,000		LB SEG	2013	NA	2,281,831	NS	NS	NS	628,069	NS	NS	NS
Upper Cook Inlet													
There are no pink salmon stocks with escapement goals in Upper Cook Inlet.													
Lower Cook Inlet													
Humpy Creek	17,500	51,400	SEG	2017	6,749	44,369	38,025	89,673	71,073	54,816	25,667	NS	3,125
China Poot Creek	2,500	6,300	SEG	2017	7,119	1,409	7,366	698	2,379	2,280	1,575	235	79
Tutka Creek	6,500	17,000	SEG	2002	9,541	10,152	81,584	33,242	61,369	60,691	53,732	114,986	50,911
Barabara Creek	2,000	5,600	SEG	2017	17,377	3,558	25,203	2,813	25,002	7,236	9,462	6,633	5,451
Seldovia Creek	21,800	37,400	SEG	2017	36,824	35,895	108,793	15,694	27,025	50,827	18,337	39,297	21,849
Port Graham River	7,700	19,700	SEG	2017	11,893	32,295	82,356	14,629	20,642	33,419	29,588	34,784	12,824
Dogfish Lagoon Creeks	800	7,100	SEG	2017	26,448	8,848	50,058	2,307	13,331	8,398	22,043	18,387	29,205
Port Chatham	7,800	18,100	SEG	2017	57,447	10,290	42,613	1,140	44,291	18,122	39,585	17,291	20,673
Windy Creek Right	3,400	11,200	SEG	2017	11,704	5,710	17,009	1,400	5,053	8,925	13,744	16,720	12,400
Windy Creek Left	5,400	27,100	SEG	2017	47,849	10,147	33,640	500	17,381	14,043	25,580	74,944	16,133
Rocky River	11,700	54,800	SEG	2017	75,791	17,114	107,931	4,300	31,189	2,088	75,412	8,310	41,446
Port Dick Creek	17,900	49,800	SEG	2017	55,828	48,732	98,002	4,819	62,098	94,585	93,157	108,219	115,740
Island Creek	9,600	32,500	SEG	2017	26,004	50,402	50,387	1,735	22,579	5,558	63,691	9,888	99,199
S. Nuka Island Creek	2,800	11,200	SEG	2017	8,442	11,000	8,900	10	540	545	2,453	3,943	6,567
Desire Lake Creek	1,500	18,000	SEG	2017	56,921	443	46,290	169	4,364	2,547	12,070	1,357	13,705
Bruin River	17,800	103,000	SEG	2017	15,020	121,569	40,801	86,632	71,100	94,715	43,800	57,320	78,374

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Table 2.–Page 4 of 6.

System	2021 Goal range		Type	Initial year	Escapement								
	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
PINK SALMON (cont.)													
Lower Cook Inlet (cont.)													
Sunday Creek	4,400	24,900	SEG	2017	6,132	7,665	60,385	2,130	22,211	3,400	21,801	4,715	38,976
Brown's Peak Creek	2,600	17,500	SEG	2017	4,061	4,048	29,141	1,378	39,197	1,341	43,420	21,034	74,976
Prince William Sound													
Eastern District (even yr)	203,000	328,000	SEG	2018		250,381		594,778		309,325		206,152	
Eastern District (odd yr)	346,000	863,000	SEG	2018	1,266,630		1,440,254		557,545		445,075		729,369
Northern District (even yr)	96,000	127,000	SEG	2018		95,134		134,460		111,174		105,226	
Northern District (odd yr)	111,000	208,000	SEG	2018	299,054		708,920		395,437		195,169		464,350
Coghill District (even yr)	37,000	110,000	SEG	2018		60,921		63,986		70,881		88,401	
Coghill District (odd yr)	54,000	233,000	SEG	2018	625,991		775,488		181,153		153,129		300,227
Northwestern District (even yr)	52,000	93,000	SEG	2018		66,350		168,272		111,194		77,828	
Northwestern District (odd yr)	64,000	144,000	SEG	2018	201,836		438,944		250,989		91,267		368,406
Eshamy District (even yr)	1,000	4,000	SEG	2018		12,167		NA		16,594		7,250	
Eshamy District (odd yr)	5,000	31,000	SEG	2018	12,145		68,988		2,836		1,402		17,925
Southwestern District (even yr)	62,000	105,000	SEG	2018		73,104		NA		81,100		64,470	
Southwestern District (odd yr)	112,000	231,000	SEG	2018	337,952		644,158		172,930		33,340		339,920
Montague District (even yr)	36,000	72,000	SEG	2018		23,136		NA		135,208		84,238	
Montague District (odd yr)	143,000	330,000	SEG	2018	365,807		559,994		205,252		25,385		242,151
Southeastern District (even yr)	88,000	153,000	SEG	2018		141,845		107,769		293,275		138,330	
Southeastern District (odd yr)	286,000	515,000	SEG	2018	1,137,736		1,529,543		372,960		290,452		544,906
SOCKEYE SALMON													
Bristol Bay													
Kvichak River	2,000,000	10,000,000	SEG	2010	2,088,576	4,458,540	7,348,572	4,462,728	3,163,404	4,398,708	2,371,242	4,030,968	4,703,520
Alagnak River (tower) ^h	210,000		LB SEG	2019	1,095,950	189,452	5,452,026	1,677,769	2,041,824	1,581,426	820,458	2,386,518	3,236,904
Alagnak River (aerial)	eliminated			2019				696,400	629,200	374,000			
Naknek River	800,000	2,000,000	SEG ⁱ	2015	938,160	1,474,428	1,920,954	1,691,910	1,899,972	2,221,152	2,911,470	4,112,160	2,796,534
Egegik River	800,000	2,000,000	SEG	2015	1,113,630	1,382,466	2,160,792	1,837,260	2,600,982	1,608,354	2,340,210	2,389,728	1,832,196
Ugashik River	500,000	1,400,000	SEG	2015	898,110	640,158	1,564,638	1,635,270	1,186,446	1,167,792	1,547,748	1,745,940	2,859,930
Wood River	700,000	1,800,000	SEG	2015	1,183,348	2,764,614	1,941,474	1,309,707	4,274,224	7,507,254	2,073,276	2,243,886	4,410,156
Igushik River	150,000	400,000	SEG	2015	387,036	340,590	651,172	469,230	578,700	770,772	256,074	323,814	878,952
Nushagak River	260,000	760,000	OEG	2012	894,172	618,477	796,684	680,513	2,852,306	1,247,460	709,431	1,228,059	4,697,299
	370,000	900,000	SEG	2015									
Togiak River	120,000	270,000	SEG	2010	128,118	151,934	218,700	200,046	195,330	511,770	351,846	261,126	280,836

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Table 2.–Page 5 of 6.

	2021 Goal range		Type	Initial year	Escapement								
System	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
SOCKEYE SALMON (cont.)													
<i>Upper Cook Inlet</i>													
Crescent River	eliminated			2014	NS								
Fish Creek (Knik)	15,000	45,000	SEG	2017	18,912	43,915	102,309	46,202	61,469	71,180	75,411	64,234	99,324
Kasilof River	140,000	370,000	OEG	2020	489,654	440,192	470,677	239,981	358,724	388,009	374,109	540,872	516,956 ^a
	140,000	320,000	BEG	2020									
Kenai River	OEG eliminated			2017	980,208	1,218,342	1,400,047	1,119,988	1,071,064				
	750,000	1,300,000	SEG		NA				886,761	1,457,031	1,505,940	2,223,538 ^a	1,464,565 ^a
Packers Creek	15,000	30,000	SEG	2008	NA	19,242	28,072	NA	17,164	16,247	7,719 ^b	15,903 ^b	19,975
Russian River - early run	22,000	42,000	BEG	2011	35,776	44,920	50,226	38,739	37,123	44,110	125,942	27,103	49,976
Russian River - late run	44,000	85,000	SEG	2020	31,364	52,277	46,223	37,837	45,012	71,052	64,585	78,816	123,950
Chelatna Lake	20,000	45,000	SEG	2017	70,555	26,374	69,897	60,792	26,986	20,434	26,303	NS	NS
Judd Lake	15,000	40,000	SEG	2017	14,088	22,229	47,934	NA	35,731	30,844	44,145	31,219	49,440
Larson Lake	15,000	35,000	SEG	2017	21,821	12,430	23,184	14,333	31,866	23,632	9,699	12,074	21,993
<i>Lower Cook Inlet</i>													
English Bay	6,000	13,500	SEG	2002	10,891	7,832	6,290	7,673	20,751	18,804	24,044	31,486	6,328
Delight Lake	5,100	10,600	SEG	2017	5,961	22,289	3,220	5,110	5,380	13,428	17,410	12,299	7,496
Desire Lake	4,800	11,900	SEG	2017	8,400	11,480	2,830	6,740	9,450	9,840	9,040	4,710	3,744
Bear Lake	700	8,300	SEG	2002	8,999	9,090	9,560	9,011	9,207	10,568	9,185	8,222	11,318
Aialik Lake	3,200	5,400	SEG	2017	3,530	450	3,182	400	4,900	2,620	5,000	4,020	2,352
Mikfik Lake	3,400	11,000	SEG	2017	4,042	18,062	3,502	10,180	7,495	4,966	2,901	305	2,346
Chenik Lake	2,900	13,700	SEG	2017	11,333	17,797	19,073	19,510	21,468	6,651	12,079	11,686	17,134
Amakdedori Creek	1,200	2,600	SEG	2017	1,540	4,280	2,910	2,240	1,680	1,916	1,620	6,992	4,370
<i>Prince William Sound</i>													
Upper Copper River	360,000	750,000	SEG	2012	860,253	864,169	930,145	513,143	460,295	495,779	719,526	362,574	513,723 ^a
Copper River Delta	55,000	130,000	SEG	2003	75,705	64,205	66,665	51,550	56,950	58,470	61,825	55,620	87,075
Bering River	15,000	33,000	SEG	2012	23,900	14,985	21,705	16,390	19,115	13,300	17,630	15,685	13,774
Coghill Lake	20,000	60,000	SEG	2012	17,231	21,836	13,684	8,708	50,462	62,295	32,247	53,901	101,083
Eshamy Lake ^j	13,000	28,000	BEG	2009	NA	NA	NA	NA	NA	NA	NA	NA	7,001

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Table 2.–Page 6 of 6.

Note: BEG = biological escapement goal; SEG = sustainable escapement goal; LB SEG = lower-bound SEG; OEG = optimal escapement goal; NA = data not available; NC = no count; NS = no survey.

- ^a Preliminary data.
- ^b Incomplete survey or weir count.
- ^c Kenai River early-run Chinook salmon (all fish) SEG was eliminated and OEG was revised by BOF.
- ^d Lewis River mouth naturally obstructed.
- ^e Little Susitna River Chinook salmon aerial survey goal is only used to assess escapement if weir count is not available.
- ^f Escapement goal for Nushagak River chum salmon is based on sonar count through July 20. Fish counts past July 20 are not included in this table.
- ^g No estimates for chum salmon escapements are included for the Unakwik, Eshamy, Southwestern, or Montague Districts because there are no escapement goals for those districts.
- ^h 2012 to 2016 Alagnak River sockeye salmon escapements for Alagnak River (tower) escapement goal are expanded aerial survey estimates.
- ⁱ Naknek River has an OEG of 800,000–2,000,000 sockeye salmon when the Naknek River Special Harvest Area is open to fishing.
- ^j Eshamy River weir was not operated 2012–2016. A pilot project to assess the use of video for monitoring starting in 2013 has not provided a comparable total escapement estimate but did provide a minimum estimate of sockeye salmon.

Table 3.—Arctic–Yukon–Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2013 to 2021.

	2021 Goal range		Type	Initial year	Escapement								
System	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
CHINOOK SALMON													
Kuskokwim Area													
North (Main) Fork Goodnews River	640	3,300	SEG	2005	NS	630	991	1,120	NS	NS	2,462	1,098	2,273
Middle Fork Goodnews River	1,500	3,600	SEG	2019	1,263	750	1,543	1,659	6,775	NS	6,039	NS	NS
Kanektok River	3,900	12,000	SEG	2016	2,277	1,840	4,919	5,631	NS	4,246	7,212	4,405	4,115
Kuskokwim R. (entire area) ^a	65,000	120,000	SEG	2013	41,010	70,367	109,163	99,460	114,973	112,980	187,720	88,339	101,000
Kogruklu River	4,800	8,800	SEG	2013	1,919	3,726	8,333	7,034	7,787	6,292	10,301	5,645	6,969
Kwethluk River	4,100	7,500	SEG	2013	NA	3,191	8,163	NA	7,207	NA	8,505	NS	NS
George River	1,800	3,300	SEG	2013	1,267	2,988	2,301	2,218	3,669	3,322	3,828	2,418	2,920
Kisaralik River	400	1,200	SEG	2005	599	622	709	622	NS	584	1,063	350	NS
Aniak River	1,200	2,300	SEG	2005	754	3,201	NS	718	1,781	1,534	3,160	1,264	NS
Salmon River (Aniak R)	330	1,200	SEG	2005	154	497	810	NS	423	442	950	269	NS
Holitna River	eliminated			2019	532	NS	662	1,157	676	980			
Cheeneetnuk River (Stony River)	340	1,300	SEG	2005	138	340	NS	217	660	565	1,345	419	NS
Gagaryah River (Stony River)	300	830	SEG	2005	74	359	19	135	453	438	760	NS	NS
Salmon River (Pitka Fork)	470	1,600	SEG	2005	469	1,865	2,016	1,578	687	1,399	1,918	1,150	NS
Yukon River													
East Fork Andreafsky River	2,100	4,900	SEG	2010	1,998	5,949	5,474	2,676	2,970	4,114	5,111	NS	1,418
West Fork Andreafsky River	640	1,600	SEG	2005	1,094	1,695	NS	NS	942	455	904	508	NS
Anvik River	1,100	1,700	SEG	2005	940	1,584	2,616	NS	1,101	1,109	1,432	675	NS
Nulato River (forks combined)	940	1,900	SEG	2005	1,118	NS	1,564	NS	943	870	1,141	862	NS
Chena River	2,800	5,700	BEG	2001	1,859	7,192 ^b	6,291 ^b	6,665 ^b	4,949	5,947	2,404	NS	1,416
Salcha River	3,300	6,500	BEG	2001	5,465	NS	6,287	2,675 ^c	4,195	5,021	4,863	NS	2,081
Canada Mainstem	42,500	55,000	agreement	2010 ^d	28,669	63,331	82,674	68,798	68,315	54,474	42,052	30,967	31,452
Norton Sound													
Fish River/Boston Creek	eliminated			2016	34	NS	669						
Kwiniuk River	250		LB SEG	2016	15	438	318	135	63	87	114	417	227
North River (Unalakleet River)	1,200	2,600	SEG	2005	580	3,454	1,950	513	1,045	2,568	3,315	1,068	1,013
Unalakleet/Old Woman River	eliminated			2016	NS	NS	NS						

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Table 3.–Page 2 of 4.

System	2021 Goal range		Type	Initial year	Escapement								
	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
CHUM SALMON													
Kuskokwim Area													
Middle Fork Goodnews River	12,000		LB SEG	2005	27,692	11,518	11,475	33,671	44,876	NS	38,072	NS	NS
Kogrukluk River	15,000	49,000	SEG	2005	65,648	30,697	33,091	45,234	85,793	52,937	71,006	19,020	4,153
Aniak River	eliminated			2016	NA	NA	NA						
Yukon River Summer Chum													
Yukon River Drainage ^a	500,000	1,200,000	BEG	2016				1,866,200	2,997,200	1,432,100	1,398,400	705,880	153,120
East Fork Andreafsky River	40,000		LB SEG	2010	61,234	37,793	48,809	50,362	55,532	36,330	49,881	NS	2,531
Anvik River	350,000	700,000	BEG	2005	571,690	399,796	374,968	337,821	415,139	305,098	249,014	NS	18,819
Yukon River Fall Chum													
Yukon River Drainage ^a	300,000	600,000	SEG	2010	854,000	741,000	541,000	832,000	1,706,000	654,000	528,000	194,000	94,525
Tanana River ^c	eliminated			2019	275,000	217,000	125,000	200,000	516,000	261,000			
Delta River	7,000	20,000	SEG	2019	32,000	32,000	33,000	22,000	49,000	40,000	52,000	9,900	1,613
Upper Yukon River Tributaries	eliminated			2016	392,000	297,000	172,000						
Teedriinjik (Chandalar) River	85,000	234,000	SEG	2019	253,000	221,000	164,000	295,000	509,000	170,000	116,000	NS	21,162
Sheenjek River ^f	eliminated			2016	113,000	56,000	34,000						
Fishing Branch River (Canada) ^g	22,000	49,000	agreement	2008 ^h	25,000	7,000	8,000	29,000	48,000	10,151	18,000	5,000	2,413
Yukon R. Mainstem (Canada)	70,000	104,000	agreement	2010 ⁱ	200,000	156,000	109,000	145,000	401,000	154,000	98,000	23,500	23,170
Norton Sound													
Subdistrict 1 Aggregate	eliminated			2019	108,120	97,234	92,030	60,749	123,794	85,390			
Nome River	OEG repealed			2019									
	1,600	5,300	SEG	2019	4,807	5,589	6,100	7,085	6,321	5,240	3,164	2,822	216
Snake River	OEG repealed			2019									
	2,000	4,200	SEG	2019	2,755	3,982	4,241	3,651	4,759	3,028	2,374	842	2,352
Eldorado River	OEG repealed			2019									
	4,400	14,200	SEG	2019	26,131	27,038	25,549	18,938	73,882	42,361	28,427	11,333	6,283
Niukluk River	eliminated			2016	NS	NS	NS						
Kwiniuk River	OEG repealed			2019									
	9,100	32,600	SEG	2019	5,625	39,597	37,663	8,523	32,541	41,620	18,029	4,953	3,862
Tubutulik River	OEG repealed			2019									
	3,100	9,000	SEG	2019	4,532	NS	9,835	NS	NS	NS	NS	NS	NS

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Table 3.–Page 3 of 4.

	2021 Goal range			Initial	Escapement								
System	Lower	Upper	Type	year	2013	2014	2015	2016	2017	2018	2019	2020	2021
CHUM SALMON (cont.)													
Norton Sound (cont.)													
Unalakleet/Old Woman River	eliminated			2016	2,496	NS	NS						
Kotzebue Sound													
Kotzebue Sound Aggregate	eliminated			2019									
Noatak and Eli Rivers	43,000	121,000	SEG	2019	NS	490,814	NS	NS	NS	NS	NS	NS	NS
Upper Kobuk w/ Selby River	12,000	32,100	SEG	2019	NS	65,653	NS	NS	NS	NS	NS	NS	NS
Salmon River	eliminated			2019	NS	NS	NS	NS	NS	NS			
Tutuksuk River	eliminated			2019	NS	NS	NS	NS	NS	NS			
Squirrel River	eliminated			2019	NS	NS	NS	NS	NS	NS			
COHO SALMON													
Kuskokwim Area													
Middle Fork Goodnews River	12,000		LB SEG	2005	NA	NA	15,084	NS	NS	NS	NS	NS	NS
Kogruklu River	13,000	28,000	SEG	2005	23,800	54,001	32,900	NS	NS	8,169	16,470	NA	14,373
Kwethluk River	19,000		LB SEG	2010	NS	48,478	32,124	38,152	55,722	NS	34,561	NS	NS
Yukon River													
Delta Clearwater River	5,200	17,000	SEG	2005	6,222	4,285	19,553	6,767	9,617	2,884	2,043	2,557	913
Norton Sound													
Kwiniuk River	650	1,300	SEG	2005	NS	NS	NS	1,987	NS	NS	NS	NS	NS
Niukluk River ^k	eliminated			2016	NS	NS	NS						
Niukluk River/Ophir Creek	750	1,600	SEG	2016				976	NS	NS	NS	NS	NS
North River (Unalakleet River)	550	1,100	SEG	2005	867	NS	NS	NS	NS	NS	NS	NS	NS
PINK SALMON													
Kuskokwim Area													
There are no escapement goals for pink salmon in the Kuskokwim Management Area.													
Yukon River													
There are no escapement goals for pink salmon in the Yukon River drainage.													

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Table 3.–Page 4 of 4.

	2021 Goal range		Type	Initial year	Escapement								
System	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
PINK SALMON (cont.)													
Norton Sound													
Nome River (odd-year)	3,200		LB SEG	2005	4,811		75,603		717,770		656,033		4,615
Nome River (even year)	13,000		LB SEG	2005		96,397		1,175,723		3,246,072		2,270,248	
Kwiniuk River	8,400		LB SEG	2005	13,212	322,830	67,295	1,909,949	506,593	1,804,752	808,156	1,767,447	56,685
Niukluk River	eliminated			2016	NS	NS	NS						
North River	25,000		LB SEG	2005	48,097	246,075	465,681	1,045,410	1,530,582	477,429	2,070,267	690,036	372,843
SOCKEYE SALMON													
Kuskokwim Area													
North (Main) Fork Goodnews River	9,600	18,000	SEG	2016	NS	NS	38,390	90,060	NS	NS	162,930	55,110	95,020
Middle Fork Goodnews River	22,000	43,000	SEG	2019	24,117	41,473	54,757	169,544	182,043	NS	162,711	NS	NS
Kanektok River	15,300	41,000	SEG	2016	51,517	136,400	39,970	80,160	NS	326,200	349,073	52,886	53,960
Kogrukluk River	4,440	17,000	SEG	2010	7,793	6,479	6,647	20,108	24,696	21,343	32,116	9,923	13,534
Yukon River													
There are no escapement goals for Sockeye in the Yukon River drainage.													
Norton Sound													
Pilgrim River (Salmon Lake)	6,800	36,000	SEG	2019	11,621	9,178	31,627	12,194	53,830	37,763	27,263	15,298	4,607
Glacial Lake	800	1,600	SEG	2005	1,366	2,330	1,819	1,582	4,250	1,570	5,100	875	NS

Note: BEG = biological escapement goal; SEG = sustainable escapement goal; LB SEG = lower-bound SEG; NA = data not available; NC = no count; NS = no survey.

^a A statistical model is used to estimate escapement. All historical escapement estimates are updated annually based on the most recent model run.

^b 2014–2016 Chena River Chinook salmon escapement estimates include an expansion for missed counting days based on 2 DIDSON sonars used to assess Chinook salmon passage.

^c 2016 Salcha River sonar pulled early due to flooding. Bayesian hierarchical model was used to estimate fish passage for days when the sonar was not running.

^d Canadian Yukon River Mainstem Chinook salmon IMEG (Interim Management Escapement Goal) of 42,500–55,000 was implemented for 2010–2021 seasons by the United States and Canada Yukon River Panel. Estimates represent escapement after subtraction of Canadian harvest.

^e Tanana River fall chum salmon escapement estimated using mark–recapture from 1995 to 2007, then based on relationship to either the Delta River or Mainstem Yukon River escapements from 2008 to present.

^f Sheenjek River sonar project was discontinued in 2013; fall chum estimate is based on a linear regression between earlier Sheenjek 2 bank counts and Fishing Branch River weir counts.

^g Fishing Branch River fall chum salmon weir assessment project was not operated after 2012. Estimates are based on border sonar estimate minus community harvest with additional information from mark–recapture studies assuming most fish migrate to Fishing Branch River.

^h Fishing Branch River fall chum salmon IMEG of 22,000–49,000 was implemented for 2008–2020 by Yukon River Panel.

ⁱ Yukon River Mainstem fall chum salmon IMEG of 70,000–104,000 was implemented for 2010–2021 seasons by Yukon River Panel.

^j Middle Fork Goodnews River coho salmon escapement for 2015 is minimum escapement because weir operations ended early.

Table 4.—Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2013 to 2021.

	2021 Goal range		Type	Initial year	Escapement								
System	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
CHINOOK SALMON													
AK Peninsula													
Nelson River ^a	2,400	5,000	BEG	2019	1,221	3,801	2,890	4,618	1,852	5,022	12,163	2,498	4,539
Chignik													
Chignik River ^b	1,300	2,700	BEG	2002	1,153	2,795	1,954	1,743	1,137	725	1,417	1,178	1,072
Kodiak													
Karluk River	3,000	6,000	BEG	2011	1,824	1,182	2,777	3,434	2,600	3,155	3,898	3,344	2,796
Ayakulik River ^c	4,800	8,400	BEG	2017	2,349	897	2,392	4,574	3,712	2,149	1,948	2,402	2,961
CHUM SALMON													
AK Peninsula													
Northern District	119,600	239,200	SEG	2007	137,251	191,586	189,194	277,674	234,440	236,109	208,397	118,815	94,856
Northwestern District	100,000	215,000	SEG	2007	92,800	54,525	89,800	113,250	195,700	90,705	173,600	62,100	47,550
Southeastern District	62,500	151,900	SEG	2019	NA	74,300	NA	NA	416,845	55,510	111,800	107,600	138,750
South Central District	68,900	99,200	SEG	2019	101,400	91,600	182,000	166,000	566,213	NA	224,000	93,500	142,300
Southwestern District	86,900	159,500	SEG	2019	NA	NA	NA	146,200	NA	NA	12,800	84,550	202,150
Chignik													
Entire Chignik Area	45,000	110,000	SEG	2016	109,900	46,720	123,400	69,900	96,900	33,400	98,000	39,675	122,000
Kodiak													
Mainland District	eliminated			2017	107,400	80,961	126,200	68,700					
Kodiak Archipelago	101,000		LB SEG	2017	NA	84,700	171,800	89,700	184,500	115,100	94,400	64,200	113,300
COHO SALMON													
AK Peninsula													
Nelson River	18,000		LB SEG	2004	19,160	22,000	25,000	45,000	45,000	19,000	44,000	23,000	23,000
Ilnik River	9,000		LB SEG	2010	11,800	17,000	33,000	14,000	28,000	6,000	122,000	24,000	45,000
Chignik													
There are no coho salmon stocks with escapement goals in Chignik Area													

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Table 4.–Page 2 of 4.

	2021 Goal Range		Type	Initial Year	Escapement								
System	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
COHO SALMON (cont.)													
Kodiak													
Pasagshak River ^d	1,200		LB SEG	2011	1,648	4,934	1,790	737	701	3,186	488	2,031	4,721
Buskin River ^e	4,700	9,600	SEG	2020	4,401	6,730	3,363	2,134	5,091	4,218	4,878	NA	7,919
Olds River	500		LB SEG	2020	2,145	1,320	1,357	1,634	1,054	878	NA	794	923
American River	400		LB SEG	2011	841	1,595	530	500	410	78	NA	279	297
PINK SALMON													
AK Peninsula													
South Peninsula Total (odd-year)	eliminated			2016	2,320,790		7,820,800						
South Peninsula Total (even year)	eliminated			2016		1,340,380							
South Peninsula Total	1,750,000	4,000,000	SEG	2016	2,320,790	1,340,380	7,820,800	1,038,160	5,663,637	732,422	4,236,700	3,209,750	4,494,900
Chignik													
Entire Chignik Area (odd-year)	260,000	450,000	SEG	2016	231,800		404,000		586,000		415,300		495,000
Entire Chignik Area (even year)	170,000	280,000	SEG	2016		87,240		68,100		41,900		118,675	
Kodiak													
Mainland District	250,000	1,000,000	SEG	2011	620,680	254,650	754,600	65,305	1,010,100	280,400	904,400	1,484,000	478,250
Kodiak Archipelago (odd-year)	2,000,000	5,000,000	SEG	2011	4,450,711		5,614,531		5,079,016		4,688,688		4,562,998
Kodiak Archipelago (even year)	3,000,000	7,000,000	SEG	2011		2,733,282		1,699,281		4,874,342		9,429,396	
SOCKEYE SALMON													
AK Peninsula													
Cinder River ^f	36,000	94,000	SEG	2016	90,000	96,000	118,000	200,500	222,600	189,000	95,025	106,800	59,400
Ilnik River ^g	40,000	60,000	SEG	1991	51,000	59,000	26,000	124,000	238,000	81,000	75,000	41,000	70,211
Meshik River ^h	48,000	86,000	SEG	2016	123,600	114,700	171,700	131,800	191,525	133,700	103,200	64,550	117,500
Sandy River	34,000	74,000	SEG	2007	42,000	59,000	116,000	170,000	145,000	35,000	71,000	60,000	52,657
Bear River - early run	176,000	293,000	SEG	2004	219,074	259,046	304,356	293,280	570,840	324,093	205,273	299,198	387,240
Bear River - late run	117,000	195,000	SEG	2004	196,926	206,954	210,644	139,720	229,160	232,907	294,727	200,802	192,760
Nelson River	97,000	219,000	BEG	2004	248,000	250,000	257,000	300,000	381,000	221,000	115,000	185,000	110,163
Christianson Lagoon	25,000	50,000	SEG	1980s	16,500	32,600	6,700	111,700	290,600	26,100	39,300	22,800	56,800
Swanson Lagoon	eliminated			2019	3,000	1,500	3,500	3,000	860	400			
North Creek	7,500	10,000	SEG	2019	8,500	7,500	18,000	21,000	5,800	8,300	11,000	8,200	9,100

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Table 4.–Page 3 of 4.

	2021 Goal Range		Type	Initial Year	Escapement								
System	Lower	Upper			2013	2014	2015	2016	2017	2018	2019	2020	2021
SCKEYE SALMON (cont.)													
Ak Peninsula (cont.)													
Orzinski Lake	15,000	20,000	SEG	1992	17,386	13,600	26,534	21,019	20,989	2,817	4,367	6,819	21,839
Mortensen Lagoon	3,200	6,400	SEG	late 1980s	4,000	500	NA	13,000	15,500	1,200	800	800	1,500
Thin Point Lake	14,000	28,000	SEG	late 1980s	5,700	8,600	19,900	36,400	44,300	1,000	9,600	10,450	19,100
McLees Lake ⁱ	10,000		LB SEG	2019	15,687	12,424	20,284	39,892	13,195	No Weir	No Weir	5,037	16,173
Chignik													
Chignik River - early run	350,000	450,000	BEG	2014	386,782	360,381	534,088	418,290	453,257	263,979	345,918	137,213	244,382
Chignik River - late run ^j	200,000	400,000	SEG	2008	369,319	291,228	589,809	348,023	339,303	275,718	336,077	193,765	396,559
Kodiak													
Malina Creek	1,000	10,000	SEG	2005	3,800	4,900	1,000	2,000	1,000	500	100	NA	1,450
Afognak (Litnik) River ^k	20,000	50,000	SEG	2020	42,153	36,345	38,151	33,167	22,121	17,601	26,817	25,383	31,997
Little River	eliminated			2014	17,600								
Uganik Lake	eliminated			2017	26,000	14,000	9,000	34,100					
Karluk River - early run	150,000	250,000	BEG	2017	234,880	252,097	260,758	173,874	242,599	205,054	190,168	158,846	128,373
Karluk River - late run	200,000	450,000	BEG	2017	336,479	543,469	368,896	314,935	385,896	428,225	317,381	293,147	379,611
Ayakulik River	eliminated			2011									
Ayakulik River - early run	140,000	280,000	SEG	2011	214,969	210,040	218,178	182,589	204,497	189,008	162,430	220,935	265,756
Ayakulik River - late run	60,000	120,000	SEG	2011	67,195	87,671	108,257	72,378	120,361	77,325	117,209	81,660	118,418
Upper Station River - early run	OEG repealed ^l			2017	25,487	27,712	36,823	54,473	48,047				
	43,000	93,000	BEG	2011					83,614	61,732	49,517	56,190	108,225
Upper Station River - late run	120,000	265,000	SEG	2020	125,573	181,411	132,864	145,013	209,298	235,669	165,146	195,147	355,507
Frazer Lake	75,000	170,000	BEG	2008	136,059	200,296	219,093	122,585	129,227	201,161	169,627	137,570	186,632
Saltery Lake ^m	15,000	35,000	BEG	2011	35,939	29,047	39,920	54,377	35,218	19,299	20,783	22,637	61,824
Pasagshak River	3,000		LB SEG	2011	9,750	350	600	3,200	4,800	1,100	NA	1,000	700
Buskin Lake	5,000	8,000	BEG	2011	16,189	13,976	8,719	11,584	7,222	4,284	12,297	7,741	2,330

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Note: BEG = biological escapement goal; SEG = sustainable escapement goal; LB SEG = lower-bound SEG; OEG = optimal escapement goal; NA = data not available.

- ^a Chinook salmon sport harvest is assumed to be zero because the fishery was closed to retention.
- ^b Chinook salmon escapement estimated for Chignik includes an estimated 100 fish harvested above the weir because harvest estimates are typically not available for Chignik sport harvest.
- ^c Chinook salmon escapement for Ayakulik includes an estimated 20 fish harvested above the weir when a fishery has occurred because harvest estimates are typically not available for Ayakulik sport harvest. Final escapements include estimated weir counts due to flooding at the weir during the Chinook run.
- ^d Pasagshak River coho salmon escapements were not estimated by peak coho surveys in every year. Estimates in 2019, 2018, 2017, 2013, 2011 are considered partial escapement estimates due to a lack of surveys in November or poor survey conditions due to changes in the lake environment.
- ^e Buskin River coho salmon escapements include estimated weir counts due to flooding. Estimates for 2021 are weir counts only as harvest estimates are unavailable.
- ^f Cinder River sockeye salmon escapement includes Mud Creek.
- ^g Ilnik River sockeye salmon counts in 2012, 2013, and 2016 include Ocean River aerial surveys added as a separate component. In all other years, Ocean River flows into Ilnik Lagoon and is counted at the Ilnik River weir.
- ^h Meshik escapement includes Meshik River, Red Bluff Creek, and Yellow Bluff Creek. It does not include Highland or Charles Creeks.
- ⁱ McLees Lake sockeye salmon SEG will be in effect if a weir is in place; there will be no goal if a weir is not operated.
- ^j The Chignik River late-run sockeye escapement objective includes the late-run sockeye salmon SEG (200,000–400,000) plus an additional 25,000 fish in August and 25,000 fish in September to ensure inriver harvest opportunities above the weir.
- ^k Afognak (Litnik) River sockeye salmon escapement does not incorporate egg-take removals.
- ^l OEG for Upper Station River early-run sockeye salmon was 25,000 from 1999–2013; the OEG was increased to 30,000 from 2014–2016 and was managed only if ADF&G determined that the upper end of the Frazer escapement goal would be exceeded. The OEG was repealed in 2017.
- ^m Saltery Lake sockeye salmon escapements are weir counts minus fish removed for egg takes.

Table 5.—Summary of salmon escapement goal changes in Southeast Alaska Region and Prince William Sound Management Area for 2021. There were no changes to escapement goals for 2021 because BOF area regulatory meetings were postponed until 2022 because of the COVID-19 pandemic.

Management Area	Species	System	Previous escapement goal			Initial Year	New escapement goal			Enum. method	Goal development	Action
			Lower	Upper	Type		Lower	Upper	Type		method	
SEAK CENTRAL REGION		No changes to escapement goals during this cycle because BOF area regulatory meeting was postponed until 2022										
PWS		No changes to escapement goals during this cycle because BOF area regulatory meeting was postponed until 2022										

Table 6.—Assessment of whether escapements met (Met), exceeded (Over), or did not meet (Under) the escapement goal in place at the time of enumeration for salmon stocks in Southeast Region.

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Chinook salmon	Blossom River	Met	Met	Met	Under	Under	Met ^a	Met	Met	Under
	Keta River	Over	Over	Met	Over	Met	Over ^a	Met	Met	Met
	Unuk River	Under	Under	Met	Under	Under	Met	Met	Under	Met
	Chickamin River	Met	Met	Met	Under	Under	Under ^a	Under	Met	Met
	Andrew Creek	Met	Met	Met	Under	Under	Under	Met	Under	Under
	Stikine River	Met	Met	Met	Under	Under	Under	Under	Under	Under
	King Salmon River	Under	Under	Under	Met	Under	Under	Under	Under	Met
	Taku River	Under	Met	Met	Under	Under	Under	Under	Under	Under
	Chilkat River	Under	Under	Met	Under	Under	Under	Met	Met	Met
	Klukshu (Alsek) River	Over ^b	Met	Over	Under	Under	eliminated			
	Alsek River	Met	Under	Over	Under	Under	Met	Over	Over	Over
Chum salmon	Situk River	Met	Met	Under	Under	Over	Under	Met	Over	Over
	Southern Southeast Summer	Met	Under	Met ^c	Met	Met	Met	Met	Met	Met
	Northern Southeast Inside Summer	Met	Under	Met	Under	Met	Met ^c	Met	Under	Under
	Northern Southeast Outside Summer	Under	Met	Met ^c	Met	Under	Under	Met	Under	Under
	Cholmondeley Sound Fall	Under	Met	Over	Met	Over	Over	Under	Met	Over
	Port Camden Fall	Met	Met	Over	Met	Met	Under	Met	Under	Met
	Security Bay Fall	Under	Met	Over	Met	Over	Met	Met	Met	Under
	Excursion River Fall	Met	Met	Met	Under	Met	Met	Under	Under	Under
Coho salmon	Chilkat River Fall	Met	Met	Met ^d	Met	Met	NA	Met	Under	Met
	Hugh Smith Lake	Over	Over	Met	Met	Met	Met	Met	Met	Met
	Klawock	Met	Met	Over	Over	Met	Over	Met	Met	Met
	Taku River	Under ^e	Met	Met ^f	Met	Met	Met	Met	Met	Met
	Auke Creek	Over	Over	Over	Met	Met	Under	Met	Under	Met
	Montana Creek	Under	Met	Over	Met	Met	Met	Under	Met	Under
	Peterson Creek	Met	Over	Met	Under	Under	Met	NC	Under	Under
	Ketchikan Survey Index	Over	Over	Over	Over	Over	Over	Met	Over	Over
	Sitka Survey Index	Over	Over	Over	Over	Over	Over	Over	Met	Over
	Ford Arm Creek	Met	Over	Over	NA	NA	eliminated			
	Berners River	Met	Over	Over	Met	Met	Under ^b	Over	Under	Met
	Chilkat River	Met	Over	Met	Under	Met	Met	Met	Under	Met
	Lost River	Met	Met	eliminated						
	Tawah Creek (Lost River)			Met	Under	Met	Met	Met	NS	NS
	Situk River	Over	Met	Met	Met	Met	Met	Over	NS	NS
	Tsiu/Tsivat Rivers	Over	Met	Met	Over	Over	Over ^g	NS	Over	NS

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Table 6.–Page 2 of 2.

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Pink salmon	Southern Southeast	Over	Over	Met	Met	Met	Met	Met	Met	Over
	Northern Southeast Inside	Met	Under	Met	Under	Met	Under	Under	Under	Met
	Northern Southeast Outside	Over	Over	Over	Met	Over	Met	Met	Met	Met
Sockeye salmon	Situk River	Met	Under	Met	Under	Met	eliminated			
	Hugh Smith Lake	Under	Met	Over	Met	Met	Under	Under	Under	Under
	McDonald Lake	Under	Under	Met	Under	Under	Under	Under	Under	Under
	Mainstem Stikine River	Met	Under	Met	Met	Under	Under	Met	Under	Met
	Tahltan Lake	Under	Over	Over	Over	Met	Under	Over	Under	Over
	Speel Lake	Met	Met	Met ^h	Met	Under	Met	Met	NC	Met
	Taku River	Met	Over	Over	Over	Over	Over	Met	Over ⁱ	Over
	Redoubt Lake	Over	Met	Met	Met	Over	Over	Over	Over	Over
	Chilkat Lake	Met	Met	Met	Met	Met	Met	Met	Under	Under
	Chilkoot Lake	Met	Over	Met	Over	Met	Met	Over	Met	Over
	East Alsek-Doame River	Over	Met	Met	Met	Met	eliminated			
	East Alsek River						Met	Over	Met	Over
	Klukshu River	Under ^d	Over	Over	Under	Under	Under	Over	Under	Over
	Lost River	Under	NA	Under	Under	NS	eliminated			
	Situk River	Over	Over	Over	Met	Over	Under	Over	Met	Over

Note: NA = data not available; NC = no count; NS = no survey. Blank cells indicate that there was no official escapement goal for the stock in that particular year.

^a Prior to 2018, goal was based on index count of escapements.

^b Escapement goal reevaluated; goal range changed.

^c Escapement goal reevaluated; lower-bound goal changed.

^d Escapement goal reevaluated; upper bound of goal changed.

^e Management target revised.

^f Management target changed to a goal range.

^g Escapement goal reevaluated; goal type changed.

^h Escapement goal reevaluated, goal type and goal range changed.

ⁱ Escapement goal reevaluated; new goal range adopted by Pacific Salmon Commission.

Table 7.—Assessment of whether escapements met (Met), exceeded (Over), or did not meet (Under) the escapement goal in place at the time of enumeration for salmon stocks in Central Region (Bristol Bay, Cook Inlet, and Prince William Sound/Copper River).

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Chinook salmon	<i>Bristol Bay</i>									
	Nushagak River	Met ^a	Met	Met	Met	Under	Met	Under	Under	Under
	Naknek River	NS	NS	Under	eliminated					
	Alagnak River	NS	NS	Under	Under	Under	Under	eliminated		
	<i>Upper Cook Inlet</i>									
	Alexander Creek	Under	Under	Under	Under	Under	Under	Under	Under ^b	Under
	Campbell Creek	NS	Under	Met	Met	Met	Under	Met	Under	Under
	Chuitna River	Met	Met	Met	Met	Under	Under	Met	Under ^b	Under
	Chulitna River	Under	Under	Met	Under	NC	Under	Met	Under ^b	Met
	Clear (Chunilna) Creek	Met	Met	Met	NS	Under	Under	Met	eliminated	
	Crooked Creek	Met	Met	Met	Over	Met	Met	Met	Met ^b	Under
	Deshka River	Met	Met	Met	Met	Under	Under	Under	eliminated	
	Deshka River								Met	Over
	Eastside Susitna River								Met	Met
	Goose Creek	Under	Under	NC	NC	Under	Under	NC	eliminated	
	Kenai River - early run (all fish)	Under ^c	Met	Met	NA	eliminated				
	Kenai River - early run (large fish)					Over	Under	Met	Under	Met
	Kenai River - late run (all fish)	Met ^c	Met	Met	NA	eliminated				
	Kenai River - late run (large fish)					Met	Met	Under	Under	Under
	Lake Creek	Met	Met	Met	Met	Under	Under	Met	eliminated	
	Lewis River	Under	Under	NA	Under	NA	Under	Under	eliminated	
	Little Susitna River	Met	Met	Met	Met	Met	Under	Met	Met	Met
	Little Willow Creek	Met	Met	Met	Met	Met	Under	Met	eliminated	
	Montana Creek	Met	Under	Met	Under	Under	Under	Under	eliminated	
	Peters Creek	Met	Met	Met	Met	Under	Met	Met	eliminated	
	Prairie Creek	Met	Under	Met	Under	Under	Under	Under	eliminated	
	Sheep Creek	NC	Under	NC	NC	NC	Under	NC	eliminated	
	Talachulitna River	Met	Met	Met	Met	Under	Under	Met	eliminated	
	Talkeetna River								Under	Met
	Theodore River	Under	Under	Under	Under	Under	Under	Under	Under ^d	Under
	Willow Creek	Met	Under	Met	Met	Under	Under	Under	eliminated	
	Yentna River								Under	Met

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Table 7.–Page 2 of 5.

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Chinook salmon (cont.)	<i>Lower Cook Inlet</i>									
	Anchor River	Met	Under	Over	Met	Met ^d	Under	Met	Under	Met
	Deep Creek	Met	Met	Met	NS	Met ^e	Under	Met	Under	NS
	Ninilchik River	Met	Met	Met	Met	Met ^f	Met	Met	Met	Met
	<i>Prince William Sound</i>									
	Copper River	Met	Under	Met	Under	Met	Met	Met	Under	Under
Chum salmon	<i>Bristol Bay</i>									
	Nushagak River	Met ^a	Met	NS	Met	Met	Met	Met	Under	Under
	<i>Upper Cook Inlet</i>									
	Clearwater Creek	Over	Under	Over	Met	Met ^b	Under	Over	Met	Over
	<i>Lower Cook Inlet</i>									
	Port Graham River	Met	Met	Met	Met	Over ^b	Over	Under	Under	Under
	Dogfish Lagoon	Over	Over	Over	Over	Over ^b	Met	Met	Under	Met
	Rocky River	Over	Over	Met	Met	Over ^b	Over	Over	Over	Over
	Port Dick Creek	Met	Under	Over	Over	Met ^d	Under	Met	Under	Met
	Island Creek	Met	Under	Over	Met	Met ^b	Under	Met	Under	Under
	Big Kamishak River	Under	Under	Under	Under	Over ^b	Met	Over	Over	Over
	Little Kamishak River	Met	Met	Met	Met	Over ^b	Met	Over	Over	Over
	McNeil River	Under	Under	Under	Met	Met	Met	Under	Under	Under
	Bruin River	Met	Under	Over	Over	Over ^b	Over	Over	Over	Over
	Ursus Cove	Over	Under	Over	Met	Over ^b	Under	Over	Under	Met
	Cottonwood Creek	Under	Met	Over	Under	Met ^b	Under	Under	Under	Met
	Iniskin Bay	Under	Met	Under	Under	Over ^b	Met	Over	Met	Over
	<i>Prince William Sound</i>									
	Eastern District	Met	Met	Met	Met	Met	Met ^g	Under	Met	Under
	Northern District	Met	Met	Met	Under	Met	Under ^g	Under	Under	Under
	Coghill District	Met	Met	Met	Met	Met	Met ^g	Under	Under	Under
	Northwestern District	Under	Met	Met	Under	Met	Met ^g	Under	Met	Under
	Southeastern District	Met	Met	Met	Met	Met	Under ^g	Met	Met	Met
Coho salmon	<i>Bristol Bay</i>									
	Nushagak River	Over	Over	NS	NS	NS	Met	Under	NS	NS

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Table 7.–Page 3 of 5.

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Coho salmon (cont.)	<i>Upper Cook Inlet</i>									
	Deshka River					Over	Met	Met	NA	NA
	Fish Creek (Knik)	Over	Over	Over	Met	Over	Over	Met	Met ^d	Over
	Jim Creek	Over	Under ^d	Met	Under	Met	Met	Under	Over ^b	Over
	Little Susitna River	Met	Over	Met	Under	Over	Under	Under	Met ^f	Met
	<i>Prince William Sound</i>									
	Copper River Delta	Met	Met	Met	Over	Met	Met	Met	Met	Met
	Bering River	Met	Met	Met	Met	Met	Met	Under	Met	Met
Pink salmon	<i>Bristol Bay</i>									
	Nushagak River	NA	Met	NS	NS	NS	Met	NS	NS	NS
	<i>Lower Cook Inlet</i>									
	Humpy Creek	Under	Met	Met	Over	Over ^b	Over	Met	NS	Under
	China Poot Creek	Met	Under	Met	Under	Under ^b	Under	Under	Under	Under
	Tutka Creek	Met	Met	Over	Over	Over	Over	Over	Over	Over
	Barabara Creek	Over	Met	Over	Met	Over ^b	Over	Over	Over	Met
	Seldovia Creek	Met	Met	Over	Under	Met ^b	Over	Under	Over	Met
	Port Graham River	Met	Over	Over	Met	Over ^d	Over	Over	Over	Met
	Dogfish Lagoon Creeks		Over	Over	Met	Over ^b	Over	Over	Over	Over
	Port Chatham	Over	Met	Over	Under	Over ^d	Over	Over	Met	Over
	Windy Creek Right	Over	Met	Over	Under	Met ^b	Met	Over	Over	Over
	Windy Creek Left	Over	Met	Over	Under	Met ^b	Met	Met	Over	Met
	Rocky River	Over	Met	Over	Under	Met ^b	Under	Over	Under	Met
	Port Dick Creek	Met	Met	Over	Under	Over ^b	Over	Over	Over	Over
	Island Creek	Met	Over	Over	Under	Met ^b	Under	Over	Met	Over
	S. Nuka Island Creek	Met	Met	Met	Under	Under ^b	Under	Under	Met	Met
	Desire Lake Creek	Over	Under	Over	Under	Met ^b	Met	Met	Under	Met
	Bruin River	Under	Met	Met	Met	Met ^b	Met	Met	Met	Met
	Sunday Creek	Met	Met	Over	Under	Met ^b	Under	Met	Met	Over
	Brown's Peak Creek	Met	Met	Over	Under	Over ^b	Under	Over	Over	Over
	<i>Prince William Sound</i>									
	Eastern District (even year)		Met		Over		Met ^g		Met	
	Eastern District (odd-year)	Over		Over		Met	^g	Met		Met
	Northern District (even year)		Under		Met		Met ^g		Met	
	Northern District (odd-year)	Over		Over		Over	^g	Met		Over

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Table 7.—Page 4 of 5.

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Pink salmon (cont.)	<i>Prince William Sound (cont.)</i>									
	Coghill District (even year)		Met		Met		Met ^g		Met	
	Coghill District (odd-year)	Over		Over		Met	^g	Met		Over
	Northwestern District (even year)		Under		Over		Over ^g		Met	
	Northwestern District (odd-year)	Over		Over		Over	^g	Met		Over
	Eshamy District (even year)		Over		NA		Over ^g		Over	
	Eshamy District (odd-year)	Over		Over		Under	^g	Under		Met
	Southwestern District (even year)		Met		NA		Met ^g		Met	
	Southwestern District (odd-year)	Over		Over		Over	^g	Under		Over
	Montague District (even year)		Under		NA		Over ^g		Over	
	Montague District (odd-year)	Over		Over		Met	^g	Under		Met
	Southeastern District (even year)		Met		Met		Over ^g		Met	
	Southeastern District (odd-year)	Over		Over		Met	^g	Met		Over
Sockeye salmon	<i>Bristol Bay</i>									
	Kvichak River	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Alagnak River	Met	Under	Met	Met	Met	Met	Met ^h	Met	Met
	Naknek River	Met	Over	Met ^d	Met	Met	Over	Over	Over	Over
	Egegik River	Met	Met	Over ^d	Met	Over	Met	Over	Over	Met
	Ugashik River	Met	Met	Over ^d	Over	Met	Met	Over	Over	Over
	Wood River	Met	Over	Over ^d	Met	Over	Over	Over	Over	Over
	Igushik River	Over	Over	Over ^d	Over	Over	Over	Met	Met	Over
	Nushagak River	Over ^a	Met	Over	Met	Over	Over	Met	Over	Over
	Togiak River	Met	Met	Met	Met	Met	Over	Over	Met	Over
	<i>Upper Cook Inlet</i>									
	Crescent River	NS	eliminated							
	Fish Creek (Knik)	Under	Met	Over	Met	Over ^b	Over	Over	Over	Over
	Kasilof River	Over	Over	Over	Met	Met	Met	Met	Over ^b	Over
	Kenai River	Met	Met	Met	Met	Na ⁱ	Met	Over	Over ^b	Over
	Packers Creek	NA	Met	Met	NA	Met	Met	Under	Met	Met
	Russian River - Early Run	Met	Over	Over	Met	Met	Over	Over	Met	Over
	Russian River - Late Run	Met	Met	Met	Met	Met	Met	Met	Met ^b	Over
	Chelatna Lake	Over	Met	Over	Met	Met ^d	Met	Met	NS	NS
	Judd Lake	Under	Under	Met	NA	Met ^b	Met	Over	Met	Over
	Larson Lake	Met	Under	Met	Under	Met ^d	Met	Under	Under	Met

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Table 7.–Page 5 of 5.

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Sockeye salmon (cont.)	<i>Lower Cook Inlet</i>									
	English Bay	Met	Met	Met	Met	Over	Over	Over	Over	Met
	Delight Lake	Under	Over	Under	Under	Met ^b	Over	Over	Over	Met
	Desire Lake	Under	Met	Under	Under	Met ^b	Met	Met	Under	Under
	Bear Lake	Over	Over	Over	Over	Over	Over	Over	Met	Over
	Aialik Lake	Under	Under	Under	Under	Met ^b	Under	Met	Met	Under
	Mikfik Lake	Under	Over ^c	Met	Met	Met ^d	Met	Under	Under	Under
	Chenik Lake	Met	Over	Over	Over	Over ^b	Met	Met	Met	Over
	Amakdedori Creek	Met	Over	Over	Met	Met ^f	Met	Met	Over	Over
	<i>Prince William Sound</i>									
	Upper Copper River	Over	Over	Over	Met	Met	Met	Met	Met	Met
	Copper River Delta	Met	Met	Met	Under	Met	Met	Met	Met	Met
	Bering River	Met	Under	Met	Met	Met	Under	Met	Met	Under
	Coghill Lake	Under	Met	Under	Under	Met	Over	Met	Met	Over
	Eshamy Lake	NA	NA	NA	NA	NA	NA	NA	NA	Under

Note: NA = data not available; NC = no count; NS = no survey. There are no escapement goals for coho salmon in Lower Cook Inlet and there are no pink salmon escapement goals in Upper Cook Inlet. Blank cells indicate that there was no official escapement goal for the stock in that particular year.

^a Escapement goal reevaluated; historical escapements converted from Bendix counts to DIDSON equivalents. Escapements in Table 2 are based on DIDSON counts.

^b Escapement goal reevaluated; goal range changed.

^c Escapements and escapement goal reevaluated; goal range changed. Escapement estimates in Table 2 are based on new methodology.

^d Escapement goal reevaluated; upper bound changed; lower bound remained the same.

^e Escapement goal reevaluated; goal range changed to a lower-bound goal.

^f Escapement goal reevaluated, lower bound changed, upper bound remained the same.

^g Escapement goal reevaluated, number of index streams used to develop escapement goal changed, and escapement goal changed. Escapements in Table 2 are adjusted for new set of index streams for all years.

^h Escapement goal reevaluated; lower-bound goal changed.

ⁱ BOF removed OEG from management plan. Stock managed to meet ADF&G escapement goal.

Table 8.—Assessment of whether escapements met (Met), exceeded (Over), or did not meet (Under) the escapement goal in place at the time of enumeration for salmon stocks in Arctic–Yukon–Kuskokwim Region.

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Chinook salmon	<i>Kuskokwim Area</i>									
	North (Main) Fork Goodnews R	NS	Under	Met	Met	NS	NS	Met	Met	Met
	Middle Fork Goodnews River	Under	Under	Under	Over	Over	NS	Over ^a	NS	NS
	Kanektok River	Under	Under	Met	Met ^b	NS	Met	Met	Met	Met
	Kuskokwim Area (entire area)	Under	Met	Met	Met	Met	Met	Over	Met	Met
	Kogruklu River	Under ^b	Under	Met	Met	Met	Met	Over	Met	Met
	Kwethluk River	NA ^b	Under	Over	NA	Met	NA	Over	NS	NS
	George River	Under ^b	Met	Met	Met	Over	Over	Over	Met	Met
	Kisaralik River	Met	Met	Met	Met	NS	Met	Met	Under	NS
	Aniak River	Under	Over	NS	Under	Met	Met	Over	Met	NS
	Salmon River (Aniak R)	Under	Met	Met	NS	Met	Met	Met	Under	NS
	Holitna River	Under	NS	Under	Met	Under	Met	eliminated		
	Cheeneetnu River (Stony R)	Under	Met	NS	Under	Met	Met	Over	Met	NS
	Gagayah River (Stony R)	Under	Met	Under	Under	Met	Met	Met	NS	NS
	Salmon River (Pitka Fork)	Under	Over	Over	Met	Met	Met	Over	Met	NS
	<i>Yukon River</i>									
	East Fork Andreafsky River	Under	Over	Over	Met	Met	Met	Over	NS	Under
	West Fork Andreafsky River	Met	Over	NS	NS	Met	Under	Met	Under	NS
	Anvik River	Under	Met	Over	NS	Met	Met	Met	Under	NS
	Nulato River (forks combined)	Met	NS	Met	NS	Met	Under	Met	Under	NS
	Chena River	Under	Over	Over	Over	Met	Over	Under	NS	Under
	Salcha River	Met	NS	Met	Under	Met	Met	Met	NS	Under
	Canada Mainstem	Under	Over	Over	Over	Over	Met	Under	Under	Under
	<i>Norton Sound</i>									
	Fish River/Boston Creek	Under	NS	Met	eliminated					
	Kwiniuk River	Under	Met	Met	Under ^c	Under	Under	Under	Met	Under
	North River (Unalakleet R)	Under	Over	Met	Under	Under	Met	Over	Under	Under
	Unalakleet/Old Woman River	NS	NS	NS	eliminated					

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Table 8.–Page 2 of 3.

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Chum salmon	<i>Kuskokwim Area</i>									
	Middle Fork Goodnews River	Met	Under	Under	Met	Met	NS	Met	NA	NS
	Kogruklu River	Over	Met	Met	Met	Over	Over	Over	Met	Under
	Aniak River	NA	NA	NA	eliminated					
	<i>Yukon River Summer Chum</i>									
	Yukon River Drainage				Over	Over	Over	Over	Met	Under
	East Fork Andreafsky River	Met	Under	Met	Met	Met	Under	Met	NS	Under
	Anvik River	Met	Met	Met	Under	Met	Under	Under	NS	Under
	<i>Yukon River Fall Chum</i>									
	Yukon River Drainage	Over	Over	Met	Over	Over	Over	Met	Under	Under
	Tanana River	Over	Over	Met	Over	Over	Over	eliminated		
	Delta River	Over	Over	Over	Over	Over	Over	Over ^b	Met	Under
	Upper Yukon River Tributaries	Over	Met	Met	eliminated					
	Teedriinjik (Chandalar) River	Over	Over	Over	Over	Over	Over	Met ^b	NS	Under
	Sheenjok River	Over	Met	Under	eliminated					
	Fishing Branch River (Canada)	Met	Under	Under	Met	Met	Under	Under	Under	Under
	Yukon R. Mainstem (Canada)	Over	Over	Over	Over	Over	Over	Met	NA	Under
	<i>Norton Sound</i>									
	Subdistrict 1 Aggregate	Over	Over	Over	Over	Over	Over	eliminated		
	Nome River	Over	Over	Over	Over	Over	Over	Met ^b	Met	Under
	Snake River	Over	Over	Over	Over	Over	Over	Met ^b	Under	Met
	Eldorado River	Over	Over	Over	Over	Over	Over	Over ^b	Met	Met
	Niukluk River	NS	NA	NS	eliminated					
	Kwiniuk River	Under	Over	Over	Under	Over	Over	Met ^b	Under	Under
	Tubutulik River	NS	NS	NS	NS	NS	NS	NS ^b	NS	NS
	Unalakleet/Old Woman River	Met	NS	NS	eliminated					
	<i>Kotzebue Sound</i>									
	Kotzebue Sound Aggregate							eliminated		
	Noatak and Eli Rivers	NS	Over	NS	NS	NS	NS	NS ^b	NS	NS
	Upper Kobuk w/Selby River	NS	Over	NS	NS	NS	NS	NS ^b	NS	NS
	Salmon River	NS	NS	NS	NS	NS	NS	eliminated		
	Tutuksuk River	NS	NS	NS	NS	NS	NS	eliminated		
	Squirrel River	NS	NS	NS	NS	NS	NS	eliminated		

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Table 8.–Page 3 of 3.

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Coho salmon	<i>Kuskokwim Area</i>									
	Middle Fork Goodnews River	NA	NA	Met	NS	NS	NS	NS	NS	NS
	Kogrukluk River	Met	Over	Over	NS	NS	Under	Met	NA	Met
	Kwethluk River	NA	Met	Met	Met	Met	NS	Met	NS	NS
	<i>Yukon River</i>									
	Delta Clearwater River	Met	Under	Over	Met	Met	Under	Under	Under	Under
	<i>Norton Sound</i>									
	Kwiniuk River	NS	NS	NS	Over	NS	NS	NS	NS	NS
	Niukluk River	NS	NS	NS	eliminated					
	Niukluk River/Ophir Creek				Met	NS	NS	NS	NS	NS
	North River (Unalakleet R.)	Met	NS	NS	NS	NS	NS	NS	NS	NS
Pink salmon	<i>Norton Sound</i>									
	Nome River (odd-year)	Met		Met		Met		Met		Met
	Nome River (even year)		Met		Met		Met		Met	
	Kwiniuk River	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Niukluk River	NS	NS	NS	eliminated					
	North River	Met	Met	Met	Met	Met	Met	Met	Met	Met
Sockeye salmon	<i>Kuskokwim Area</i>									
	North (Main) Fork Goodnews River	NS	NS	Over	Over ^b	NS	NS	Over	Over	Over
	Middle Fork Goodnews River	Met	Over	Over	Over	Over	NS	Over ^b	Under	NS
	Kanektok River	Over	Over	Over	Over ^b	NS	Over	Over	Over	Over
	Kogrukluk River	Met	Met	Met	Met	Over	Over	Over	Met	Met
	<i>Norton Sound</i>									
	Pilgrim River (Salmon Lake)	Met	Met	Over	Over	Over	Over	Met ^d	Met	Under
	Glacial Lake	Met	Over	Over	Met	Over	Met	Over	Met	NS

Note: NA = data not available; NS = no survey. There are no escapement goals for pink salmon in the Kuskokwim Area and Yukon River and there are no escapement goals for sockeye salmon in the Yukon River. Blank cells indicate that there was no official escapement goal for the stock in that particular year.

^a Escapement goal reevaluated; upper bound of goal changed.

^b Escapement goal reevaluated; goal value changed.

^c Escapement goal reevaluated; goal range changed to a lower-bound goal.

^d Previous escapement goal was based on aerial surveys, replaced with escapement goal based on weir counts. Escapements in Table 3 are weir counts.

Table 9.—Assessment of whether escapements met (Met), exceeded (Over), or did not meet (Under) the escapement goal in place at the time of enumeration for salmon stocks in Westward Region (Alaska Peninsula/Aleutian Islands, Chignik, and Kodiak areas).

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Chinook salmon	<i>AK Peninsula</i>									
	Nelson River	Under	Met	Met	Over	Under	Over	Over ^a	Met	Met
	<i>Chignik</i>									
	Chignik River	Under	Over	Met	Met	Under	Under	Met	Under	Under
	<i>Kodiak</i>									
	Karluk River	Under	Under	Under	Met	Under	Met	Met	Met	Under
	Ayakulik River	Under	Under	Under	Met	Under ^b	Under	Under	Under	Under
Chum salmon	<i>AK Peninsula</i>									
	Northern District	Met	Met	Met	Over	Met	Met	Met	Under	Under
	Northwestern District	Under	Under	Under	Met	Met	Under	Met	Under	Under
	Southeastern District	Met	Under	Over	Met	Over	Under	Met ^c	Met	Met
	South Central District	Met	Met	Over	Over	Over	Over	Over ^c	Met	Over
	Southwestern District	Met	Under	Over	Met	Over	Under	Under ^c	Under	Over
	<i>Chignik</i>									
	Entire Chignik Area	Met	Met	Met	Met ^c	Met	Under	Met	Under	Over
	<i>Kodiak</i>									
	Mainland District	Met	Under	Met	Under	eliminated				
	Kodiak Archipelago Aggregate	Met	Under	Met	Under	Met ^c	Met	Under	Under	Met
Coho salmon	<i>AK Peninsula</i>									
	Nelson River	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Ilnik River	Met	Met	Met	Met	Under	Met	Met	Met	Met
	<i>Kodiak</i>									
	Pasagshak River	Met	Met	Met	Under	Under	Met	Under	Met	Met
	Buskin River	Met	Met ^b	Under	Under	Met	Under	Met	NA ^d	Met
	Olds River	Met	Met	Met	Met	Met	Under	NA	Met ^e	Met
	American River	Met	Met	Met	Met	Met	Under	NA	Under	Under
Pink salmon	<i>AK Peninsula</i>									
	South Peninsula Total (odd-year)	Met		Over	eliminated					
	South Peninsula Total (even year)		Under		eliminated					

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Table 9.–Page 2 of 3.

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Pink salmon (cont.)	<i>AK Peninsula (cont.)</i>									
	South Peninsula Total				Under	Over	Under	Over	Met	Over
	<i>Chignik</i>									
	Entire Chignik Area (odd year)	Over		Over	^c	Over		Met		Over
	Entire Chignik Area (even year)		Met		Under ^c		Under		Under	
	<i>Kodiak</i>									
	Mainland District	Met	Met	Met	Under	Over	Met	Met	Over	Met
	Kodiak Archipelago (odd year)	Met		Over		Over		Met		Met
	Kodiak Archipelago (even year)		Under		Under		Met		Over	
Sockeye salmon	<i>AK Peninsula</i>									
	Cinder River	Over	Over	Over	Over ^b	Over	Over	Over	Over	Met
	Ilnik River	Met	Met	Under	Over	Over	Over	Over	Met	Over
	Meshik River	Met	Over	Over	Over ^b	Over	Over	Over	Met	Over
	Sandy River	Met	Met	Over	Over	Over	Met	Met	Met	Met
	Bear River Early Run	Met	Met	Over	Over	Over	Over	Met	Over	Over
	Bear River Late Run	Over	Over	Over	Met	Over	Over	Over	Over	Met
	Nelson River	Over	Over	Over	Over	Over	Over	Met	Met	Met
	Christianson Lagoon	Under	Met	Under	Over	Over	Met	Met	Under	Over
	Swanson Lagoon	Under	Under	Under	Under	Under	Under	eliminated		
	North Creek	Met	Met	Over	Over	Met	Met	Over ^b	Met	Met
	Orzinski Lake	Met	Under	Over	Over	Over	Under	Under	Under	Over
	Mortensen Lagoon	Met	Under	NA	Over	Over	Under	Under	Under	Under
	Thin Point Lake	Under	Under	Met	Over	Over	Under	Under	Under	Met
	McLees Lake	Met	Met	Met	Met	Met	NA	NA ^f	Under	Met
	<i>Chignik</i>									
	Chignik River Early Run	Met	Met ^a	Over	Met	Over	Under	Under	Under	Under
	Chignik River Late Run	Met	Met	Over	Met	Met	Met	Met	Under	Met
	<i>Kodiak</i>									
	Malina Creek	Met	Met	Met	Met	Met	Under	Under	NA	Met
	Afognak (Litnik) River	Met	Met	Met	Met	Met	Under	Met	Met ^d	Met
	Little River	Met	eliminated							

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Table 9.–Page 3 of 3.

Species	System	2013	2014	2015	2016	2017	2018	2019	2020	2021
Sockeye salmon (cont.)	<i>Kodiak (cont.)</i>									
	Uganik Lake	Met	Under	Under	Met	eliminated				
	Karluk River Early Run	Met	Over	Over	Met	Met ^b	Met	Met	Met	Under
	Karluk River Late Run	Met	Over	Over	Met	Met ^b	Met	Met	Met	Met
	Ayakulik River Early Run	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Ayakulik River Late Run	Met	Met	Met	Met	Over	Met	Met	Met	Met
	Upper Station River Early Run	Met	Met ^g	Met	Met	Met ^g	Met	Met	Met	Over
	Upper Station River Late Run	Met	Met	Met	Met	Met	Met	Met	Met ^d	Over
	Frazer Lake	Met	Over	Over	Met	Met	Over	Met	Met	Over
	Saltery Lake	Over	Met	Over	Over	Over	Met	Met	Met	Over
	Pasagshak River	Met	Under	Under	Met	Met	Under	NA	Met	Under
	Buskin Lake	Over	Over	Over	Over	Met	Under	Over	Met	Under

Note: NA = data not available. There are no coho salmon escapement goals in Chignik Area. Blank cells indicate that there was no official escapement goal for the stock in that particular year.

^a Escapement goal reevaluated; upper bound of goal changed.

^b Escapement goal reevaluated; goal range changed.

^c Escapement goal reevaluated, number of index streams used to develop escapement goal changed, and escapement goal changed. Escapements in Table 4 are adjusted for a new set of index streams for all years.

^d Escapement goal reevaluated; goal type changed.

^e Escapement goal reevaluated; lower-bound goal changed.

^f Escapement goal reevaluated; upper bound eliminated, lower goal bound remained the same.

^g OEG changed from 25,000 fish to 30,000 fish in 2014, and was eliminated in 2017.

Table 10.—Southeast Region Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2013 to 2021.

	2013	2014	2015	2016	2017	2018	2019	2020	2021
CHINOOK SALMON									
Number Below	4	4	2	10	10	7	4	5	4
Number Met	6	7	8	1	1	3	6	4	5
Number Above	2	1	2	1	1	1	1	2	2
% Below	33%	33%	17%	83%	83%	64%	36%	45%	36%
% Met	50%	58%	67%	8%	8%	27%	55%	36%	45%
% Above	17%	8%	17%	8%	8%	9%	9%	18%	18%
CHUM SALMON									
Number Below	3	2	0	2	1	2	2	5	4
Number Met	5	6	5	6	5	4	6	3	3
Number Above	0	0	3	0	2	1	0	0	1
% Below	38%	25%	0%	25%	13%	29%	25%	63%	50%
% Met	63%	75%	63%	75%	63%	57%	75%	38%	38%
% Above	0%	0%	38%	0%	25%	14%	0%	0%	13%
COHO SALMON									
Number Below	2	0	0	3	1	2	1	4	2
Number Met	6	6	7	6	9	7	7	5	6
Number Above	6	8	7	4	3	4	3	2	2
% Below	14%	0%	0%	23%	8%	15%	9%	36%	20%
% Met	43%	43%	50%	46%	69%	54%	64%	45%	60%
% Above	43%	57%	50%	31%	23%	31%	27%	18%	20%
PINK SALMON									
Number Below	0	2	0	2	0	1	1	1	0
Number Met	2	0	3	2	3	2	2	2	2
Number Above	2	2	1	0	1	0	0	0	1
% Below	0%	50%	0%	50%	0%	33%	33%	33%	0%
% Met	50%	0%	75%	50%	75%	67%	67%	67%	67%
% Above	50%	50%	25%	0%	25%	0%	0%	0%	33%
SOCKEYE SALMON									
Number Below	5	2	1	3	4	6	2	6	3
Number Met	5	5	7	7	5	4	4	3	2
Number Above	3	5	5	3	3	2	6	2	7
% Below	38%	17%	8%	23%	33%	50%	17%	55%	25%
% Met	38%	42%	54%	54%	42%	33%	33%	27%	17%
% Above	23%	42%	38%	23%	25%	17%	50%	18%	58%

Table 11.—Central Region (Bristol Bay, Cook Inlet, Prince William Sound/Copper River) Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2013 to 2021.

	2013	2014	2015	2016	2017	2018	2019	2020	2021
CHINOOK SALMON									
Number Below	6	12	4	8	14	21	9	13	8
Number Met	18	14	20	12	9	6	15	5	8
Number Above	0	0	1	1	1	0	0	0	1
% Below	25%	46%	16%	38%	58%	78%	38%	72%	47%
% Met	75%	54%	80%	57%	38%	22%	63%	28%	47%
% Above	0%	0%	4%	5%	4%	0%	0%	0%	6%
CHUM SALMON									
Number Below	5	7	3	5	0	7	7	10	8
Number Met	10	10	8	11	11	9	5	5	5
Number Above	4	2	7	3	8	3	7	4	6
% Below	26%	37%	17%	26%	0%	37%	37%	53%	42%
% Met	53%	53%	44%	58%	58%	47%	26%	26%	26%
% Above	21%	11%	39%	16%	42%	16%	37%	21%	32%
COHO SALMON									
Number Below	0	1	0	2	0	1	4	0	0
Number Met	3	2	4	2	3	5	3	4	3
Number Above	3	3	1	1	3	1	0	1	2
% Below	0%	17%	0%	40%	0%	14%	57%	0%	0%
% Met	50%	33%	80%	40%	50%	71%	43%	80%	60%
% Above	50%	50%	20%	20%	50%	14%	0%	20%	40%
PINK SALMON									
Number Below	2	5	0	12	3	6	6	3	2
Number Met	9	18	4	7	12	9	10	11	11
Number Above	14	4	22	4	11	12	10	11	13
% Below	8%	19%	0%	52%	12%	22%	23%	12%	8%
% Met	36%	67%	15%	30%	46%	33%	38%	44%	42%
% Above	56%	15%	85%	17%	42%	44%	38%	44%	50%
SOCKEYE SALMON									
Number Below	7	5	4	6	0	2	3	3	5
Number Met	16	14	13	18	21	17	15	15	9
Number Above	6	11	13	4	8	11	12	11	16
% Below	24%	17%	13%	21%	0%	7%	10%	10%	17%
% Met	55%	47%	43%	64%	72%	57%	50%	52%	30%
% Above	21%	37%	43%	14%	28%	37%	40%	38%	53%

Table 12.–Arctic–Yukon–Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2013 to 2021.

	2013	2014	2015	2016	2017	2018	2019	2020	2021
CHINOOK SALMON									
Number Below	18	5	3	6	3	3	3	7	6
Number Met	4	8	12	9	14	15	9	9	5
Number Above	0	7	6	3	3	2	10	0	0
% Below	82%	25%	14%	33%	15%	15%	14%	44%	55%
% Met	18%	40%	57%	50%	70%	75%	41%	56%	45%
% Above	0%	35%	29%	17%	15%	10%	45%	0%	0%
SUMMER CHUM SALMON									
Number Below	1	1	1	1	0	0	0	2	3
Number Met	2	1	1	2	1	0	4	3	2
Number Above	5	7	5	4	6	6	2	0	0
% Below	13%	11%	14%	14%	0%	0%	0%	40%	60%
% Met	25%	11%	14%	29%	14%	0%	67%	60%	40%
% Above	63%	78%	71%	57%	86%	100%	33%	0%	0%
YUKON RIVER SUMMER CHUM SALMON									
Number Below	0	1	0	1	0	2	1	0	3
Number Met	2	1	2	1	2	0	1	1	0
Number Above	0	0	0	1	1	1	1	0	0
% Below	0%	50%	0%	33%	0%	67%	33%	0%	100%
% Met	100%	50%	100%	33%	67%	0%	33%	100%	0%
% Above	0%	0%	0%	33%	33%	33%	33%	0%	0%
YUKON RIVER FALL CHUM SALMON									
Number Below	0	1	2	0	0	1	1	2	5
Number Met	1	2	3	1	1	0	3	1	0
Number Above	7	5	3	5	5	5	1	0	0
% Below	0%	13%	25%	0%	0%	17%	20%	67%	100%
% Met	13%	25%	38%	17%	17%	0%	60%	33%	0%
% Above	88%	63%	38%	83%	83%	83%	20%	0%	0%
COHO SALMON									
Number Below	0	1	0	0	0	2	1	1	1
Number Met	3	1	2	3	2	0	2	0	1
Number Above	0	1	2	1	0	0	0	0	0
% Below	0%	33%	0%	0%	0%	100%	33%	100%	50%
% Met	100%	33%	50%	75%	100%	0%	67%	0%	50%
% Above	0%	33%	50%	25%	0%	0%	0%	0%	0%

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	2013	2014	2015	2016	2017	2018	2019	2020	2021
PINK SALMON									
Number Below	0	0	0	0	0	0	0	0	0
Number Met	3	3	3	3	3	3	3	3	3
Number Above	0	0	0	0	0	0	0	0	0
% Below	0%	0%	0%	0%	0%	0%	0%	0%	0%
% Met	100%	100%	100%	100%	100%	100%	100%	100%	100%
% Above	0%	0%	0%	0%	0%	0%	0%	0%	0%
SOCKEYE SALMON									
Number Below	0	0	0	0	0	0	0	1	1
Number Met	4	2	1	2	0	1	1	3	1
Number Above	1	3	5	4	4	3	5	2	2
% Below	0%	0%	0%	0%	0%	0%	0%	17%	25%
% Met	80%	40%	17%	33%	0%	25%	17%	50%	25%
% Above	20%	60%	83%	67%	100%	75%	83%	33%	50%

Table 13.—Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2013 to 2021.

	2013	2014	2015	2016	2017	2018	2019	2020	2021
CHINOOK SALMON									
Number Below	4	2	2	0	4	2	1	2	3
Number Met	0	1	2	3	0	1	2	2	1
Number Above	0	1	0	1	0	1	1	0	0
% Below	100%	50%	50%	0%	100%	50%	25%	50%	75%
% Met	0%	25%	50%	75%	0%	25%	50%	50%	25%
% Above	0%	25%	0%	25%	0%	25%	25%	0%	0%
CHUM SALMON									
Number Below	1	5	1	2	0	4	2	5	2
Number Met	7	3	4	4	4	2	4	2	2
Number Above	0	0	3	2	3	1	1	0	3
% Below	13%	63%	13%	25%	0%	57%	29%	71%	29%
% Met	88%	38%	50%	50%	57%	29%	57%	29%	29%
% Above	0%	0%	38%	25%	43%	14%	14%	0%	43%
COHO SALMON									
Number Below	0	0	1	2	2	3	1	1	1
Number Met	6	6	5	4	4	3	3	4	5
Number Above	0	0	0	0	0	0	0	0	0
% Below	0%	0%	17%	33%	33%	50%	25%	20%	17%
% Met	100%	100%	83%	67%	67%	50%	75%	80%	83%
% Above	0%	0%	0%	0%	0%	0%	0%	0%	0%
PINK SALMON									
Number Below	0	2	0	4	0	2	0	1	0
Number Met	3	2	1	0	0	2	3	1	2
Number Above	1	0	3	0	4	0	1	2	2
% Below	0%	50%	0%	100%	0%	50%	0%	25%	0%
% Met	75%	50%	25%	0%	0%	50%	75%	25%	50%
% Above	25%	0%	75%	0%	100%	0%	25%	50%	50%
SOCKEYE SALMON									
Number Below	3	6	5	1	1	9	5	7	5
Number Met	22	15	8	15	13	11	14	16	13
Number Above	5	8	15	13	14	7	6	3	9
% Below	10%	21%	18%	3%	4%	33%	20%	27%	19%
% Met	73%	52%	29%	52%	46%	41%	56%	62%	48%
% Above	17%	28%	54%	45%	50%	26%	24%	12%	33%

Table 14.—Summary of Southeast Region salmon escapements compared against escapement goals for the years 2013 to 2021.

Southeast Region		2013	2014	2015	2016	2017	2018	2019	2020	2021
Stocks with Escapement Data		51	50	51	50	49	46	45	44	44
Below Lower Goal	Number	14	10	3	20	16	18	10	21	13
	Percent	27%	20%	6%	40%	33%	39%	22%	48%	30%
Goal Met	Number	24	24	30	22	23	20	25	17	18
	Percent	47%	48%	59%	44%	47%	43%	56%	39%	41%
Above Upper Goal	Number	13	16	18	8	10	8	10	6	13
	Percent	25%	32%	35%	16%	20%	17%	22%	14%	30%

Table 15.—Summary of Central Region (Bristol Bay, Cook Inlet, Prince William Sound/Copper River) salmon escapements compared against escapement goals for the years 2013 to 2021.

Central Region		2013	2014	2015	2016	2017	2018	2019	2020	2021
Stocks with Escapement Data		103	108	104	96	104	110	106	96	97
Below Lower Goal	Number	20	30	11	33	17	37	29	29	23
	Percent	19%	28%	11%	34%	16%	34%	27%	30%	24%
Goal Met	Number	56	58	49	50	56	46	48	40	36
	Percent	54%	54%	47%	52%	54%	42%	45%	42%	38%
Above Upper Goal	Number	27	20	44	13	31	27	29	27	38
	Percent	26%	19%	42%	14%	30%	25%	27%	28%	39%

Table 16.—Summary of Arctic–Yukon–Kuskokwim Region salmon escapements compared against escapement goals for the years 2013 to 2021.

AYK Region		2013	2014	2015	2016	2017	2018	2019	2020	2021
Stocks with Escapement Data		51	50	51	47	45	44	48	35	33
Below Lower Goal	Number	19	9	6	8	3	8	6	13	19
	Percent	37%	18%	12%	17%	7%	18%	13%	37%	58%
Goal Met	Number	19	18	24	21	23	19	23	20	12
	Percent	37%	36%	47%	45%	51%	43%	48%	57%	36%
Above Upper Goal	Number	13	23	21	18	19	17	19	2	2
	Percent	25%	46%	41%	38%	42%	39%	40%	6%	6%

Table 17.—Summary of Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) salmon escapements compared against escapement goals for the years 2013 to 2021.

Westward Region		2013	2014	2015	2016	2017	2018	2019	2020	2021
Stocks with Escapement Data		52	51	50	51	49	48	44	46	48
Below Lower Goal	Number	8	15	9	9	7	20	9	16	11
	Percent	15%	29%	18%	18%	14%	42%	20%	35%	23%
Goal Met	Number	38	27	20	26	21	19	26	25	23
	Percent	73%	53%	40%	51%	43%	40%	59%	54%	48%
Above Upper Goal	Number	6	9	21	16	21	9	9	5	14
	Percent	12%	18%	42%	31%	43%	19%	20%	11%	29%

Table 18.—Salmon stocks of concern in Alaska. (A) Current stocks of concerns, and (B) stocks previously designated a stock of concern and later removed because they no longer fit the criteria for listing.

(A) Region	Stock	Species	Listing Date	Level of Concern	Year Last Reviewed ^a
Southeast	Chilkat River	Chinook	Jan-2018	Management	2020
	King Salmon River	Chinook	Jan-2018	Management	2020
	Unuk River	Chinook	Jan-2018	Management	2020
	Stikine River	Chinook	Mar-2022	Management	2020
	Andrew Creek	Chinook	Mar-2022	Management	2020
	Chickamin River	Chinook	Mar-2022	Management	2020
	Taku River	Chinook	Mar-2022	Management	2020
	McDonald Lake	Sockeye	Jan-2018	Management	2020
	Klukshu River	Sockeye	Mar-2022	Management	2020
Central	McNeil River	Chum	Dec-2016	Management	2019
	Chuitna River	Chinook	Feb-2011	Management	2019
	Theodore River	Chinook	Feb-2011	Management	2019
	Alexander Creek	Chinook	Feb-2011	Management	2019
	Eastside Susitna River	Chinook	Feb-2020	Management	2019
AYK	Yukon River	Chinook	Sep-2000	Yield	2018
	Norton Sound Subdistrict 5 & 6	Chinook	Jan-2004	Yield	2018
Westward	Karluk River	Chinook	Jan-2011	Management	2019
	Ayakulik River	Chinook	Jan-2020	Management	2019
-	Chignik River (early run)	Sockeye	Mar-2022	Management	2018

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(B)	Region	Area	Stock	Species	Listing Date	Delisting Date
Management Concern						
	Southeast	Southeast	Hugh Smith Lake	Sockeye	Feb-2003	Jan-2006
		Southeast	McDonald Lake	Sockeye	Feb-2009	Feb-2012
	Central	Cook Inlet	Anchor River	Chinook	Nov-2001	Nov-2004
		Cook Inlet	Lewis River	Chinook	Feb-2011	Oct-2019
		Cook Inlet	Sheep Creek	Chinook	Jan-2014	Feb-2020
		Cook Inlet	Goose Creek	Chinook	Jan-2014	Feb-2020
		Bristol Bay	Kvichak River	Sockeye	Dec-2003	Oct-2009
	AYK	Norton Sound	Norton Sound SD 1	Chum	Sep-2000	Jan-2007
		Yukon	Toklat River	Chum	Sep-2000	Jan-2004
		Yukon	Fishing Branch	Chum	Sep-2000	Jan-2004
		Yukon	Yukon River	Summer chum	Sep-2000	Jan-2007
	Westward	Aleutian Islands	Swanson Lagoon	Sockeye	Feb-2013	Feb-2019
Yield Concern						
	Central	Cook Inlet	Fish Creek	Sockeye	2002	Jan-2005
		Cook Inlet	Susitna (Yentna) River	Sockeye	Feb-2008	Feb-2020
		Cook Inlet	Willow Creek	Chinook	Feb-2011	Feb-2020
		Cook Inlet	Goose Creek	Chinook	Feb-2011	Jan-2014
		Bristol Bay	Kvichak River	Sockeye	Sep-2000	Dec-2003
					Oct-2009	Dec-2012
	AYK	Kuskokwim	Kuskokwim River	Chum	Sep-2000	Jan-2007
		Kuskokwim	Kuskokwim River	Chinook	Sep-2000	Jan-2007
		Yukon	Yukon River	Fall chum	Sep-2000	Jan-2007
		Norton Sound	Norton Sound SD 2/3	Chum	Sep-2000	Jan-2019
		Norton Sound	Norton Sound SD 1	Chum	Jan-2007	Jan-2016

Note: Sheep, Goose, and Willow Creeks included in current Eastside Susitna River Chinook salmon designation.

^a Indicates start of BOF cycle in which stock of concern status was most recently reviewed by department (e.g., 2020–2021 BOF cycle = 2020).

Table 19.—Methods used to enumerate and develop escapement goals for Southeast Region Chinook, chum, coho, pink, and sockeye salmon stocks.

System	Enumeration method	Goal development method	References
CHINOOK SALMON			
Blossom River	Peak aerial survey (expanded) ^a	SRA	Fleischman et al. 2011; Heint et al. 2017
Keta River	Peak aerial survey (expanded)	SRA	Fleischman et al. 2011; Heint et al. 2017
Unuk River	Peak aerial survey (expanded)	SRA	Hendrich et al. 2008
Chickamin River	Peak aerial survey (expanded)	SRA	McPherson and Carlile 1997; Heint et al. 2017
Andrew Creek	Peak aerial survey (expanded)	SRA	Clark et al. 1998
Stikine River	Mark–recapture	SRA	Bernard et al. 2000
King Salmon River	Peak aerial survey (expanded)	SRA	McPherson and Clark 2001
Taku River	Mark–recapture	SRA	McPherson et al. 2010
Chilkat River	Mark–recapture	Theoretical SRA	Erickson and McPherson 2004; inriver: 5AAC 33.384
Alsek River	Weir count (expanded)	SRA	Bernard and Jones 2010
Situk River	Weir count	SRA	McPherson et al. 2005
CHUM SALMON			
Southern Southeast Summer	Peak aerial survey	Percentile	Piston and Heint 2014
Northern Southeast Inside Summer	Peak aerial survey	Percentile	Heint et al. 2017
Northern Southeast Outside Summer	Peak aerial survey	Percentile	Piston and Heint 2014
Cholmondeley Sound Fall	Peak aerial survey	Percentile	Eggers and Heint 2008
Port Camden Fall	Peak aerial survey	Risk analysis	Eggers and Heint 2008
Security Bay Fall	Peak aerial survey	Percentile	Eggers and Heint 2008
Excursion River Fall	Peak aerial survey	Percentile	Eggers and Heint 2008
Chilkat River Fall	Fish wheel (expanded)	SRA	Piston and Heint 2014
COHO SALMON			
Hugh Smith Lake	Weir count	SRA	Shaul et al. 2009
Klawock River	Weir count	Theoretical SRA	Der Hovanisian 2013
Taku River	Mark–recapture	SRA	Pestal and Johnson 2015
Auke Creek	Weir count	SRA	Clark et al. 1994
Montana Creek	Foot survey	Theoretical SRA	Clark 2005
Peterson Creek	Foot survey	Theoretical SRA	Clark 2005
Ketchikan Survey Index	Peak aerial survey	Theoretical SRA	Shaul and Tydingco 2006
Sitka Survey Index	Foot survey	Theoretical SRA	Shaul and Tydingco 2006
Berners River	Peak aerial survey, foot survey	SRA	Shaul et al. 2017

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System	Enumeration method	Goal development method	References
COHO SALMON (cont.)			
Chilkat River	Mark–recapture, foot survey	SRA	Ericksen and Fleischman 2006
Tawah Creek (Lost River)	Boat survey	Percentile	Heinl et al. 2014a
Situk River	Boat survey	SRA	Clark and Clark 1994
Tsiu/Tsivat Rivers	Peak aerial survey	SRA	Heinl et al. 2017
PINK SALMON			
Southern Southeast	Peak aerial survey	Yield analysis	Heinl et al. 2008
Northern Southeast Inside	Peak aerial survey	Yield analysis	Heinl et al. 2008
Northern Southeast Outside	Peak aerial survey	Yield analysis	Heinl et al. 2008
SOCKEYE SALMON			
Hugh Smith Lake	Weir count	Risk analysis, Theoretical SRA	Geiger et al. 2003; OEG: 5 AAC 33.390
McDonald Lake	Expanded foot survey	SRA	Eggers et al. 2009a
Mainstem Stikine River	Run reconstruction	Professional judgment	TTC 1987; TTC 1990
Tahltan Lake	Weir count	SRA	Humphreys et al. 1994; TTC 1993
Speel Lake	Weir count	SRA	Heinl et al. 2014b
Taku River ^b	Mark–recapture	Professional judgment (2020: SRA)	TTC 1986; Miller and Pestal 2020
Redoubt Lake	Weir count	SRA	Geiger 2003; OEG: 5 AAC 01.760(a)
Chilkat Lake	Sonar	SRA	Eggers et al. 2010
Chilkoot Lake	Weir count	SRA	Eggers et al. 2009b; Brenner et al. 2018
East Alsek	Peak aerial survey	Percentile	Heinl et al. 2017
Klukshu River	Weir count	SRA	Eggers and Bernard 2011
Situk River	Weir count	SRA	Clark et al. 2002

Note: SRA = spawner–recruit analysis.

^a One or more aerial surveys are attempted during the peak of the run. Peak count is used to index the escapement.

^b Taku River sockeye salmon escapement goal was revised and approved by the Pacific Salmon Commission for management of the stock in 2020. The Southeast Area BOF meeting was postponed until March 2022 due to COVID-19 so the new escapement goal was not formally adopted by the State until 2022.

Table 20.—Methods used to enumerate and develop escapement goals for Central Region (Bristol Bay, Cook Inlet, and Prince William Sound/Copper River) Chinook, chum, coho, pink, and sockeye salmon stocks.

System	Enumeration method	Goal development method	References
CHINOOK SALMON			
<i>Bristol Bay</i>			
Nushagak River	Sonar	SRA, Yield analysis	Fair et al. 2012
<i>Upper Cook Inlet</i>			
Alexander Creek	Single aerial survey ^a	Percentile	McKinley et al. 2020
Campbell Creek	Single foot survey	Risk analysis	Fair et al. 2010
Chuitna River	Single aerial survey	Percentile	McKinley et al. 2020
Chulitna River	Single aerial survey	Percentile	McKinley et al. 2020
Crooked Creek	Weir count	Percentile	McKinley et al. 2020
Deshka River	Run reconstruction	SRA	McKinley et al. 2020; Reimer and DeCovich 2020
Eastside Susitna River	Run reconstruction	SRA	McKinley et al. 2020; Reimer and DeCovich 2020
Kenai R - early run (large fish)	Sonar	SRA	Erickson et al. 2017; Fleischman and Reimer 2017; OEG: 5 AAC 57.160 (b)
Kenai R - late run (large fish)	Sonar	SRA	Erickson et al. 2017; Fleischman and Reimer 2017
Little Susitna River (aerial)	Single aerial survey	Percentile	McKinley et al. 2020
Little Susitna River (weir)	Weir count	Percentile	Erickson et al. 2017
Talkeetna River	Run reconstruction	SRA	McKinley et al. 2020; Reimer and DeCovich 2020
Theodore River	Single aerial survey	Percentile	McKinley et al. 2020
Yentna River	Run reconstruction	SRA	McKinley et al. 2020; Reimer and DeCovich 2020; OEG: 5 AAC 61.165 (b)
<i>Lower Cook Inlet</i>			
Anchor River	Sonar, weir count	SRA	Otis et al. 2016
Deep Creek	Single aerial survey	Percentile	Otis et al. 2016
Ninilchik River	Weir count	Percentile	Otis et al. 2016
<i>Prince William Sound</i>			
Copper River	Mark–recapture	Empirical observation	Bue et al. 2002; Savereide 2001
CHUM SALMON			
<i>Bristol Bay</i>			
Nushagak River	Sonar	Risk analysis	Fair et al. 2012
<i>Upper Cook Inlet</i>			
Clearwater Creek	Peak aerial survey ^b	Percentile	Erickson et al. 2017
<i>Lower Cook Inlet</i>			
Port Graham River	Multiple foot surveys ^c	Percentile	Otis et al. 2016
Dogfish Lagoon	Multiple foot surveys	Percentile	Otis et al. 2016
Rocky River	Multiple aerial or foot surveys	Percentile	Otis et al. 2016

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System	Enumeration method	Goal development method	References
CHUM SALMON (cont.)			
<i>Lower Cook Inlet</i> (cont.)			
Port Dick Creek	Multiple aerial or foot surveys	Percentile	Otis et al. 2016
Island Creek	Multiple aerial or foot surveys	Percentile	Otis et al. 2016
Big Kamishak River	Multiple aerial surveys	Percentile	Otis et al. 2016
Little Kamishak River	Multiple aerial surveys	Percentile	Otis et al. 2016
McNeil River	Multiple aerial surveys	Percentile	Otis and Szarzi 2007
Bruin River	Multiple aerial surveys	Percentile	Otis et al. 2016
Ursus Cove	Multiple aerial surveys	Percentile	Otis et al. 2016
Cottonwood Creek	Multiple aerial surveys	Percentile	Otis et al. 2016
Iniskin Bay	Multiple aerial surveys	Percentile	Otis et al. 2016
<i>Prince William Sound</i>			
Eastern District	Multiple aerial surveys	Percentile	Haught et al. 2017
Northern District	Multiple aerial surveys	Percentile	Haught et al. 2017
Coghill District	Multiple aerial surveys	Percentile	Haught et al. 2017
Northwestern District	Multiple aerial surveys	Percentile	Haught et al. 2017
Southeastern District	Multiple aerial surveys	Percentile	Haught et al. 2017
COHO SALMON			
<i>Bristol Bay</i>			
Nushagak River	Sonar	SRA	Fair et al. 2012
<i>Upper Cook Inlet</i>			
Deshka River	Weir count	Percentile	Erickson et al. 2017
Fish Creek (Knik)	Weir count	Percentile	McKinley et al. 2020
Jim Creek	Single foot survey	Percentile	McKinley et al. 2020
Little Susitna River	Weir count	Percentile	McKinley et al. 2020
<i>Lower Cook Inlet</i>			
There are no coho salmon stocks with escapement goals in Lower Cook Inlet			
<i>Prince William Sound</i>			
Copper River Delta	Peak aerial survey	Percentile	Bue et al. 2002
Bering River	Peak aerial survey	Percentile	Bue et al. 2002
PINK SALMON			
<i>Bristol Bay</i>			
Nushagak River	Sonar	Percentile	Fair et al. 2012

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System	Enumeration method	Goal development method	References
PINK SALMON (cont.)			
<i>Upper Cook Inlet</i> (cont.)			
There are no pink salmon stocks with escapement goals in Upper Cook Inlet			
<i>Lower Cook Inlet</i>			
Humpy Creek	Multiple foot surveys	Percentile	Otis et al. 2016
China Poot Creek	Multiple foot surveys	Percentile	Otis et al. 2016
Tutka Creek	Multiple foot surveys	Percentile	Otis 2001
Barabara Creek	Multiple foot surveys	Percentile	Otis et al. 2016
Seldovia Creek	Multiple foot surveys	Percentile	Otis et al. 2016
Port Graham River	Multiple foot surveys	Percentile	Otis et al. 2016
Dogfish Lagoon Creeks	Multiple aerial or foot surveys	Percentile	Otis et al. 2016
Port Chatham	Multiple foot surveys	Percentile	Otis et al. 2016
Windy Creek Right	Multiple foot surveys	Percentile	Otis et al. 2016
Windy Creek Left	Multiple foot surveys	Percentile	Otis et al. 2016
Rocky River	Multiple foot surveys	Percentile	Otis et al. 2016
Port Dick Creek	Multiple aerial or foot surveys	Percentile	Otis et al. 2016
Island Creek	Multiple aerial or foot surveys	Percentile	Otis et al. 2016
S. Nuka Island Creek	Multiple aerial or foot surveys	Percentile	Otis et al. 2016
Desire Lake Creek	Multiple aerial surveys	Percentile	Otis et al. 2016
Bruin River	Multiple aerial surveys	Percentile	Otis et al. 2016
Sunday Creek	Multiple aerial surveys	Percentile	Otis et al. 2016
Brown's Peak Creek	Multiple aerial surveys	Percentile	Otis et al. 2016
<i>Prince William Sound</i>			
Eastern District (even year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Eastern District (odd-year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Northern District (even year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Northern District (odd-year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Coghill District (even year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Coghill District (odd-year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Northwestern District (even year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Northwestern District (odd-year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Eshamy District (even year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Eshamy District (odd-year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Southwestern District (even year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Southwestern District (odd-year)	Multiple aerial surveys	Percentile	Haught et al. 2017

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Table 20.—Page 4 of 5.

System	Enumeration Method	Goal Development Method	References
PINK SALMON (cont.)			
<i>Prince William Sound (cont.)</i>			
Montague District (even year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Montague District (odd-year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Southeastern District (even year)	Multiple aerial surveys	Percentile	Haught et al. 2017
Southeastern District (odd-year)	Multiple aerial surveys	Percentile	Haught et al. 2017
SOCKEYE SALMON			
<i>Bristol Bay</i>			
Kvichak River	Tower count	SRA, Yield analysis	Baker et al. 2009
Alagnak River	Tower count	Risk analysis	Erickson et al. 2018
Naknek River	Tower count	SRA, Yield analysis	Fair et al. 2012; Erickson et al. 2015, Appendices F2 and F3; OEG: 5 AAC 06.360 (f)
Egegik River	Tower count	SRA, Yield analysis	Fair et al. 2012; Erickson et al. 2015, Appendices F2 and F3
Ugashik River	Tower count	SRA, Yield analysis	Fair et al. 2012; Erickson et al. 2015, Appendices F2 and F3
Wood River	Tower count	SRA, Yield analysis	Fair et al. 2012; Erickson et al. 2015, Appendices F2 and F3
Igushik River	Tower count	SRA, Yield analysis	Fair et al. 2012; Erickson et al. 2015, Appendices F2 and F3
Nushagak River	Sonar	SRA, Yield analysis	Fair et al. 2012; OEG: 5 AAC 06.358 (c) (1) (B)
Togiak River	Tower count	SRA, Yield analysis	Baker et al. 2009; Fair et al. 2004
<i>Upper Cook Inlet</i>			
Fish Creek (Knik)	Weir count	Percentile	Erickson et al. 2017
Kasilof River	Sonar	SRA	McKinley et al. 2020; OEG: 5 AAC 21.365 (b)
Kenai River	Sonar	SRA	McKinley et al. 2020; Hasbrouck et al. <i>unpublished</i> ^d
Packers Creek	Weir count	Percentile	Bue and Hasbrouck <i>unpublished</i> ^e ; Fair et al. 2007; Hasbrouck and Edmundson 2007
Russian River - early run	Weir count	SRA	Fair et al. 2010
Russian River - late run	Weir count	Percentile	McKinley et al. 2020
Chelatna Lake	Weir count	Percentile	Erickson et al. 2017
Judd Lake	Weir count	Percentile	Erickson et al. 2017
Larson Lake	Weir count	Percentile	Erickson et al. 2017
<i>Lower Cook Inlet</i>			
English Bay	Peak aerial survey, weir count	Percentile	Otis 2001
Delight Lake	Peak aerial survey	Percentile	Otis et al. 2016
Desire Lake	Peak aerial survey	Percentile	Otis et al. 2016
Bear Lake	Weir count	Percentile	Otis 2001
Aialik Lake	Peak aerial survey	Percentile	Otis et al. 2016
Mikfik Lake	Video	Percentile	Otis et al. 2016

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Table 20.–Page 5 of 5.

System	Enumeration Method	Goal Development Method	References
SOCKEYE SALMON (cont.)			
<i>Lower Cook Inlet (cont.)</i>			
Chenik Lake	Video, Weir count	Percentile	Otis et al. 2016
Amakdedori Creek	Peak aerial survey	Percentile	Otis et al. 2016
<i>Prince William Sound</i>			
Upper Copper River	Sonar	Percentile	Fair et al. 2011
Copper River Delta	Peak aerial survey	Percentile	Bue et al. 2002
Bering River	Peak aerial survey	Percentile	Fair et al. 2011
Coghill Lake	Weir count	SRA	Fair et al. 2011
Eshamy Lake	Weir count	SRA	Fair et al. 2008

Note: SRA = spawner–recruit analysis.

^a Single survey done around time of presumed peak of the run with no expansion of counts.

^b Multiple aerial surveys are attempted throughout the run. Peak count is used to index the escapement.

^c Multiple surveys throughout run (at least 1 per week). Area-under-the-curve method used to estimate annual escapement.

^d Hasbrouck, J. J., W. D. Templin, A. R. Munro, K. G. Howard, and T. Hamazaki. Spawner–recruit analyses and escapement goal recommendation for Kenai River late-run sockeye salmon. Alaska Department of Fish and Game, Report to the Alaska Board of Fisheries, January 2020, Anchorage, unpublished document.

^e Bue, B. G., and J. J. Hasbrouck. Escapement goal review of salmon stocks of Upper Cook Inlet. Alaska Department of Fish and Game, Report to the Alaska Board of Fisheries, November 2001 (and February 2002), Anchorage, unpublished document.

Table 21.—Methods used to enumerate and develop escapement goals for Arctic–Yukon–Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon stocks.

System	Enumeration method	Goal development method	References
CHINOOK SALMON			
<i>Kuskokwim Area</i>			
North (Main) Fork Goodnews River	Single aerial survey ^a	Percentile	ADF&G 2004
Middle Fork Goodnews River	Weir count	Percentile	Liller and Savereide 2018
Kanektok River	Single aerial survey	Percentile	Conitz et al. 2015
Kuskokwim River (entire area)	Run reconstruction ^b	SRA	Hamazaki et al. 2012; Liller et al. 2018; Liller and Savereide 2018
Kogrukluk River	Weir count	Proportion of Kuskokwim River goal	Hamazaki et al. 2012
Kwethluk River	Weir count	Proportion of Kuskokwim River goal	Hamazaki et al. 2012
George River	Weir count	Proportion of Kuskokwim River goal	Hamazaki et al. 2012
Kisaralik River	Single aerial survey	Percentile	ADF&G 2004
Aniak River	Single aerial survey	Percentile	ADF&G 2004
Salmon River (Aniak R)	Single aerial survey	Percentile	ADF&G 2004
Cheeneetnuk River (Stony R)	Single aerial survey	Percentile	ADF&G 2004
Gagarayah River (Stony R)	Single aerial survey	Percentile	ADF&G 2004
Salmon River (Pitka Fork)	Single aerial survey	Percentile	ADF&G 2004
<i>Yukon River</i>			
East Fork Andreafsky River	Weir count	Percentile	Volk et al. 2009
West Fork Andreafsky River	Peak aerial survey ^c	Percentile	ADF&G 2004
Anvik River	Peak aerial survey	Percentile	ADF&G 2004
Nulato River (forks combined)	Peak aerial survey	Percentile	ADF&G 2004
Chena River	Tower, mark–recapture	SRA	Evenson 2002
Salcha River	Tower, mark–recapture	SRA	Evenson 2002
Canada Mainstem	Sonar	Agreement (U.S./Canada Joint Technical Committee)	JTC 2010; JTC 2013
<i>Norton Sound</i>			
Kwiniuk River	Tower count	Percentile	Conitz et al. 2015
North River (Unalakleet R)	Tower count	Percentile	ADF&G 2004
CHUM SALMON			
<i>Kuskokwim Area</i>			
Middle Fork Goodnews River	Weir count	Percentile	ADF&G 2004
Kogrukluk River	Weir count	Percentile	ADF&G 2004

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System	Enumeration Method	Goal Development Method	References
CHUM SALMON (cont.)			
<i>Yukon River Summer Chum</i>			
Yukon River Drainage	Sonar, weir count, tower count, aerial survey	SRA	Conitz et al. 2015; Hamazaki and Conitz 2015
East Fork Andreafsky River	Weir count	SRA	Fleischman and Evenson 2010; Volk et al. 2009
Anvik River	Sonar	SRA	ADF&G 2004
<i>Yukon River Fall Chum</i>			
Yukon River Drainage	Calculated - multiple surveys	SRA	Fleischman and Borba 2009; Volk et al. 2009
Delta River	Multiple foot surveys	Percentile	Liller and Savereide 2018
Teedriinjik (Chandalar) River	Sonar	Percentile	Liller and Savereide 2018
Fishing Branch River (Canada)	Weir count	Agreement (U.S./Canada Joint Technical Committee) Interim Management Escapement Goal, Percentile	JTC 2008; JTC 2013 ^d
Yukon R. Mainstem (Canada)	Mark–recapture	Agreement (U.S./Canada Joint Technical Committee) Interim Management Escapement Goal, SRA	JTC 2010; JTC 2015
<i>Norton Sound</i>			
Nome River	Weir count	Percentile	Liller and Savereide 2018
Snake River	Tower/Weir count	Percentile	Liller and Savereide 2018
Eldorado River	Peak aerial survey (expanded)	Percentile	Liller and Savereide 2018
Kwiniuk River	Tower count	Percentile	Liller and Savereide 2018
Tubutulik River	Peak aerial survey (expanded)	Percentile	Liller and Savereide 2018
<i>Kotzebue Sound</i>			
Noatak and Eli Rivers	Peak aerial survey	Percentile	Liller and Savereide 2018
Upper Kobuk w/Selby River	Peak aerial survey	Percentile	Liller and Savereide 2018
COHO SALMON			
<i>Kuskokwim Area</i>			
Middle Fork Goodnews River	Weir count	Percentile	ADF&G 2004
Kogruklu River	Weir count	Percentile	ADF&G 2004
Kwethluk River	Weir count	Empirical observation	Volk et al. 2009
<i>Yukon River</i>			
Delta Clearwater River	Boat survey	Percentile	ADF&G 2004

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System	Enumeration method	Goal development method	References
COHO SALMON (cont.)			
<i>Norton Sound</i>			
Kwiniuk River	Peak aerial survey	Theoretical SRA	ADF&G 2004; Fair et al. 1999, memorandum ^e
Niukluk River/Ophir Creek	Peak aerial survey	Percentile	Conitz et al. 2015
North River (Unalakleet R.)	Peak aerial survey	Theoretical SRA	ADF&G 2004; Fair et al. 1999, memorandum ^e
PINK SALMON			
<i>Kuskokwim Area</i>			
There are no escapement goals for pink salmon in the Kuskokwim Management Area.			
<i>Yukon River</i>			
There are no escapement goals for pink salmon in the Yukon River drainage.			
<i>Norton Sound</i>			
Nome River (odd-year)	Weir count	Empirical observation	ADF&G 2004
Nome River (even year)	Weir count	Empirical observation	ADF&G 2004; Fair et al. 1999, memorandum ^e
Kwiniuk River	Tower count	Empirical observation	ADF&G 2004
North River	Tower count	Empirical observation	ADF&G 2004
SOCKEYE SALMON			
<i>Kuskokwim Area</i>			
North (Main) Fork Goodnews River	Single aerial survey	Percentile	Conitz et al. 2015
Middle Fork Goodnews River	Weir count	Percentile	Liller and Savereide 2018
Kanektok River	Single aerial survey	Percentile	Conitz et al. 2015
Kogrukluk River	Weir count	Percentile	Volk et al. 2009
<i>Yukon River</i>			
There are no escapement goals for Sockeye in the Yukon River drainage.			
<i>Norton Sound</i>			
Pilgrim River (Salmon Lake)	Weir	Percentile	Liller and Savereide 2018
Glacial Lake	Peak aerial survey	Empirical observation	ADF&G 2004; Fair et al. 1999, memorandum ^e

Note: SRA = spawner–recruit analysis.

^a Typically, single surveys are done around time of presumed peak of the run with no expansion of counts.

^b Bue et al. (2012).

^c One or more aerial surveys are attempted during the peak of the run. Peak count is used to index the escapement.

^d Assessment project at Fishing Branch weir no longer operated, and JTC has not reached consensus on future of this goal. Will remain same as 2013 by default (JTC 2015).

^e Fair, L., C. Lean, F. DeCicco, J. Magdanz, and R. McLean. Proposed Salmon BEGs for Norton Sound and Kotzebue Sound. ADF&G Memorandum, March 24, 1999.

Table 22.—Methods used to enumerate and develop escapement goals for Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) Chinook, chum, coho, pink, and sockeye salmon stocks.

System	Enumeration method	Goal development method	References
CHINOOK SALMON			
<i>AK Peninsula</i>			
Nelson River	Weir, peak aerial survey ^a	SRA	Schaberg et al. 2019a
<i>Chignik</i>			
Chignik River	Weir count	SRA	Hasbrouck and Clark <i>unpublished</i> ^b ; Witteveen et al. 2005
<i>Kodiak</i>			
Karluk River	Weir count	SRA	Nemeth et al. 2010
Ayakulik River	Weir count	SRA	Schaberg et al. 2016
CHUM SALMON			
<i>AK Peninsula</i>			
Northern District	Peak aerial survey	SRA	Honnold et al. 2007b; Nelson and Lloyd 2001; Nelson et al. 2006
Northwestern District	Peak aerial survey	SRA	Honnold et al. 2007b; Nelson et al. 2006
Southeastern District	Peak aerial survey	Percentile	Schaberg et al. 2019a
South Central District	Peak aerial survey	Percentile	Schaberg et al. 2019a
Southwestern District	Peak aerial survey	Percentile	Schaberg et al. 2019a
<i>Chignik</i>			
Entire Chignik Area	Peak aerial survey	Percentile	Schaberg et al. 2015b
<i>Kodiak</i>			
Kodiak Archipelago Aggregate	Peak aerial survey	Percentile	Schaberg et al. 2016
COHO SALMON			
<i>AK Peninsula</i>			
Nelson River	Peak aerial survey	Risk analysis	Nelson et al. 2006
Ilnik River	Peak aerial survey	Risk analysis	Witteveen et al. 2009
<i>Chignik</i>			
There are no coho salmon stocks with escapement goals in Chignik Area			
<i>Kodiak</i>			
Pasagshak River	Foot survey	Theoretical SRA	Nemeth et al. 2010
Buskin River	Weir count	SRA, Percentile	Sagalkin et al. 2013a; Schmidt et al. 2014; McKinley et al. 2019
Olds River	Foot survey	Percentile	McKinley et al. 2019
American River	Foot survey	Theoretical SRA	Nemeth et al. 2010

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System	Enumeration method	Goal development method	References
PINK SALMON			
<i>AK Peninsula</i>			
South Peninsula Total	Peak aerial survey	SRA	Schaberg et al. 2015a
<i>Chignik</i>			
Entire Chignik Area (odd-year)	Peak aerial survey	Percentile	Schaberg et al. 2015b
Entire Chignik Area (even year)	Peak aerial survey	Percentile	Schaberg et al. 2015b
<i>Kodiak</i>			
Mainland District	Peak aerial survey	SRA	Nemeth et al. 2010
Kodiak Archipelago (odd-year)	Peak aerial survey	SRA	Nemeth et al. 2010
Kodiak Archipelago (even year)	Peak aerial survey	SRA	Nemeth et al. 2010
SOCKEYE SALMON			
<i>AK Peninsula</i>			
Cinder River	Peak aerial survey	Percentile	Schaberg et al. 2015a
Ilnik River	Weir count	Percentile, euphotic volume model, zooplankton model	Nelson and Lloyd 2001; Nelson et al. 2006
Meshik River	Peak aerial survey	Percentile	Schaberg et al. 2015a
Sandy River	Weir count	Percentile	Honnold et al. 2007b
Bear River - early run	Weir count	Spawning habitat model, percentile, euphotic volume model, zooplankton model, lake surface area	Nelson et al. 2006
Bear River - late run	Weir count	Spawning habitat model, percentile, euphotic volume model, zooplankton model, lake surface area	Nelson et al. 2006
Nelson River	Weir count	SRA	Nelson et al. 2006
Christianson Lagoon	Peak aerial survey	Spawning habitat model	Nelson and Lloyd 2001; Nelson et al. 2006
North Creek	Peak aerial survey	Percentile	Schaberg et al. 2019a
Orzinski Lake	Weir count	Percentile	Nelson and Lloyd 2001; Nelson et al. 2006
Mortensen Lagoon	Peak aerial survey	Spawning habitat model, percentile, euphotic volume model, zooplankton model, lake surface area	Nelson and Lloyd 2001; Nelson et al. 2006
Thin Point Lake	Peak aerial survey	Spawning habitat model, percentile, euphotic volume model, zooplankton model, lake surface area	Nelson and Lloyd 2001; Nelson et al. 2006
McLees Lake	Weir count	Percentile	Schaberg et al. 2019a
<i>Chignik</i>			
Chignik River - early run	Weir count	SRA, yield analysis	Sagalkin et al. 2013b
Chignik River - late run	Weir count	SRA, euphotic volume model, zooplankton model	Witteveen et al. 2007

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System	Enumeration method	Goal development method	References
SOCKEYE SALMON (cont.)			
<i>Kodiak</i>			
Malina Creek	Peak aerial survey	Percentile, zooplankton model	Nelson et al. 2005
Afognak (Litnik) River	Weir count	SRA	Nelson et al. 2005; McKinley et al. 2019
Karluk River - early run	Weir count	SRA	Schaberg et al. 2016
Karluk River - late run	Weir count	SRA	Schaberg et al. 2016
Ayakulik River - early run	Weir count	Zooplankton model, empirical observation	Nemeth et al. 2010
Ayakulik River - late run	Weir count	Zooplankton model, empirical observation	Nemeth et al. 2010
Upper Station River - early run	Weir count	SRA	Nemeth et al. 2010
Upper Station River - late run	Weir count	SRA	Nelson et al. 2005; McKinley et al. 2019
Frazer Lake	Weir count	SRA	Honnold et al. 2007a
Saltery Lake	Weir count	SRA, zooplankton model	Nemeth et al. 2010
Pasagshak River	Peak aerial survey	Percentile	Nemeth et al. 2010
Buskin Lake	Weir count	SRA	Nemeth et al. 2010

Note: SRA = spawner–recruit analysis.

^a One or more aerial surveys are attempted during the peak of the run. Peak count is used to index the escapement.

^b Hasbrouck, J. J., and R. A. Clark. *Unpublished*. Escapement goal review of Chinook salmon in the Ayakulik, Chignik, and Karluk Rivers. Alaska Department of Fish and Game, Report to the Alaska Board of Fisheries, December 2001, Anchorage.

FIGURES

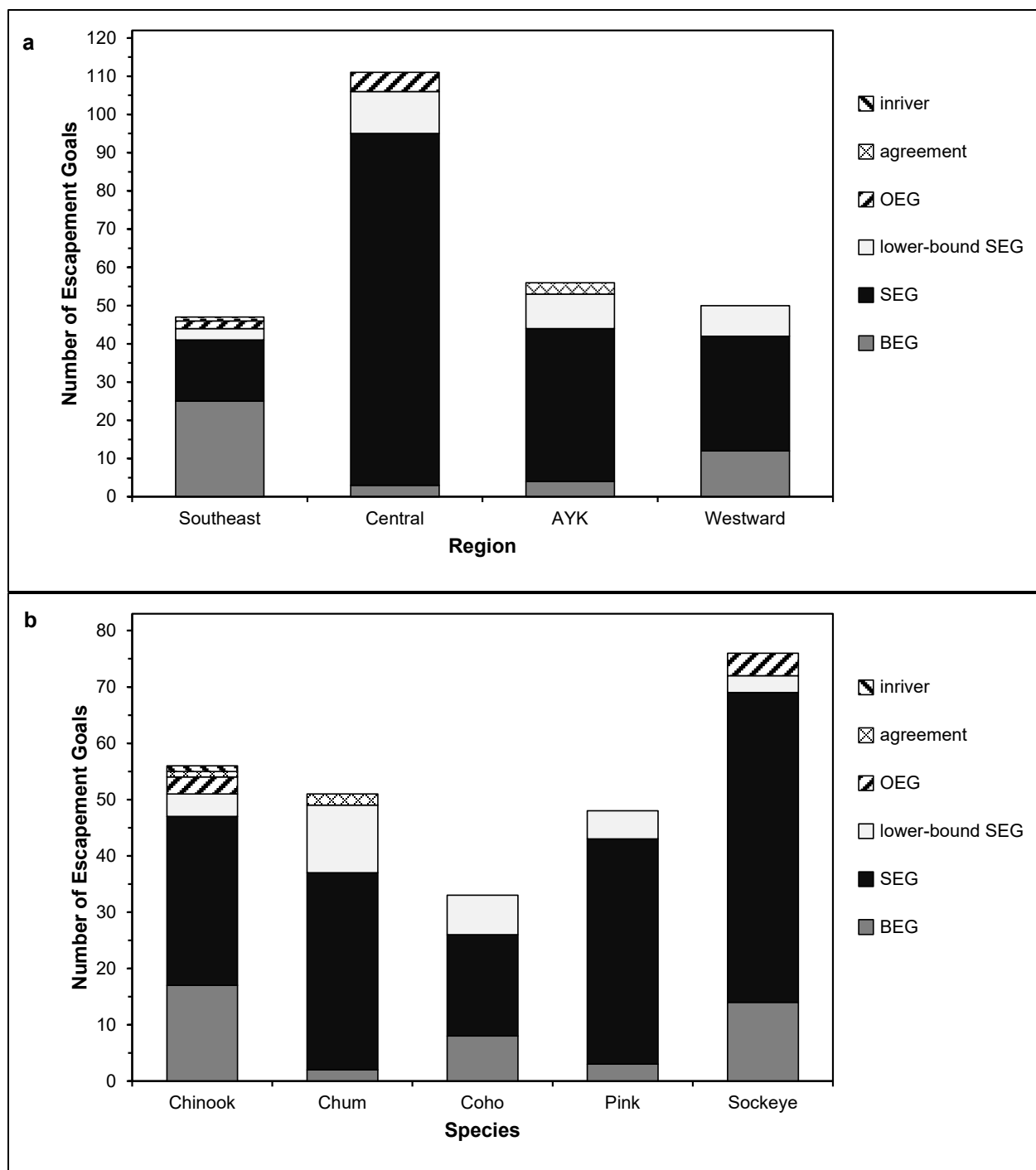


Figure 1.—Statewide summary of the 264 escapement goals in effect during the 2021 spawning season for the Division of Commercial Fisheries by region (a) and by species (b).

Note: BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal (set by the Alaska Board of Fisheries), and “inriver” is an inriver escapement goal (set by the Alaska Board of Fisheries). Agreement goals are established through international treaties.

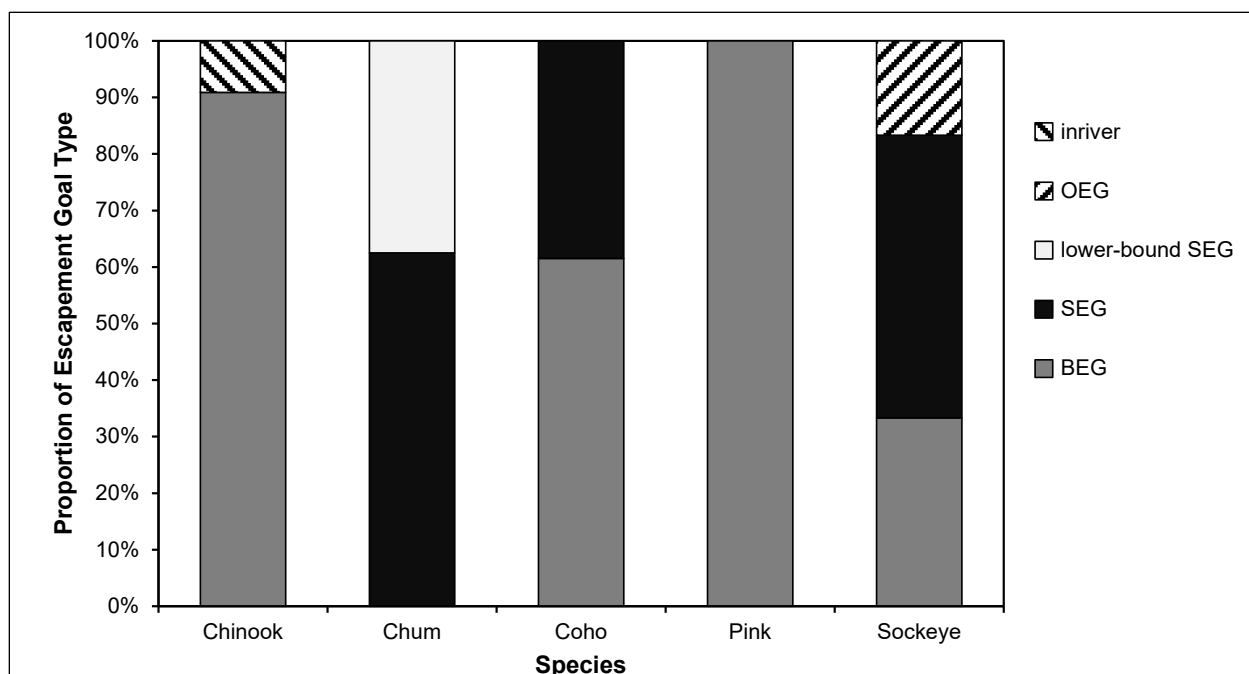


Figure 2.—Proportion of escapement goal types by species for the 47 escapement goals in Southeast Region.

Note: BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal (set by the Alaska Board of Fisheries), and “inriver” is an inriver escapement goal (set by the Alaska Board of Fisheries).

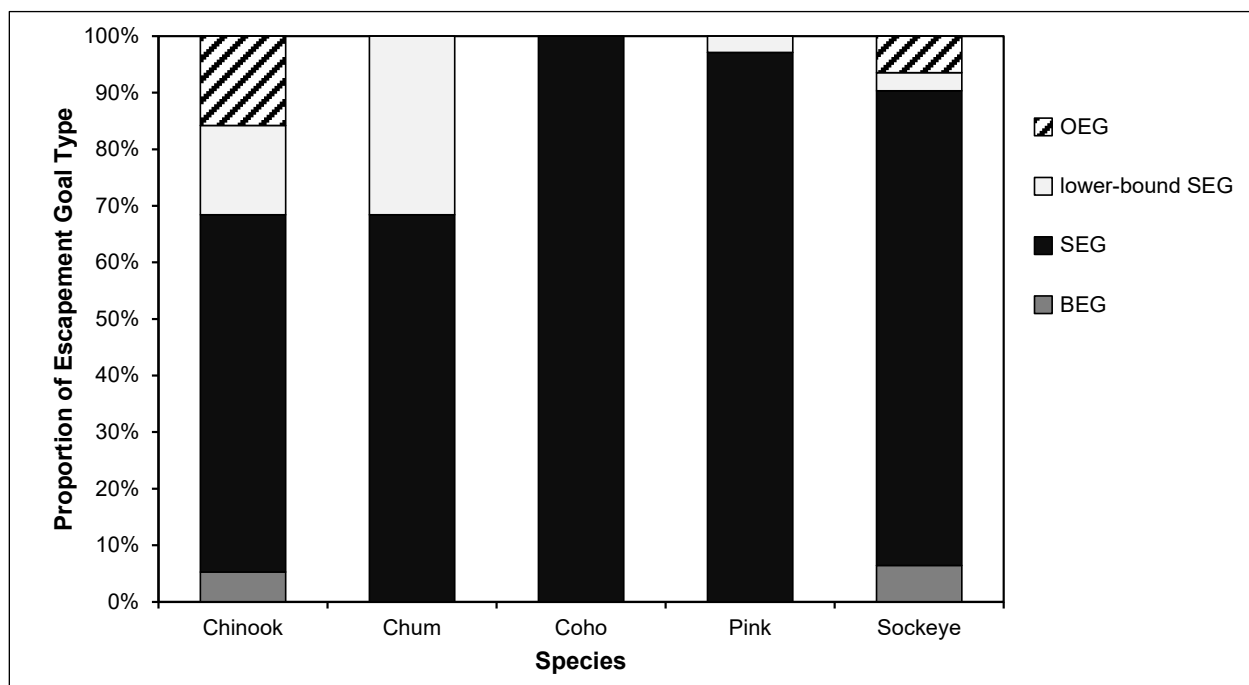


Figure 3.—Proportion of escapement goal types by species for the 111 escapement goals in Central Region (Bristol Bay, Cook Inlet, and Prince William Sound/Copper River).

Note: BEG is biological escapement goal, SEG is sustainable escapement goal, and OEG is optimal escapement goal (set by the Alaska Board of Fisheries).

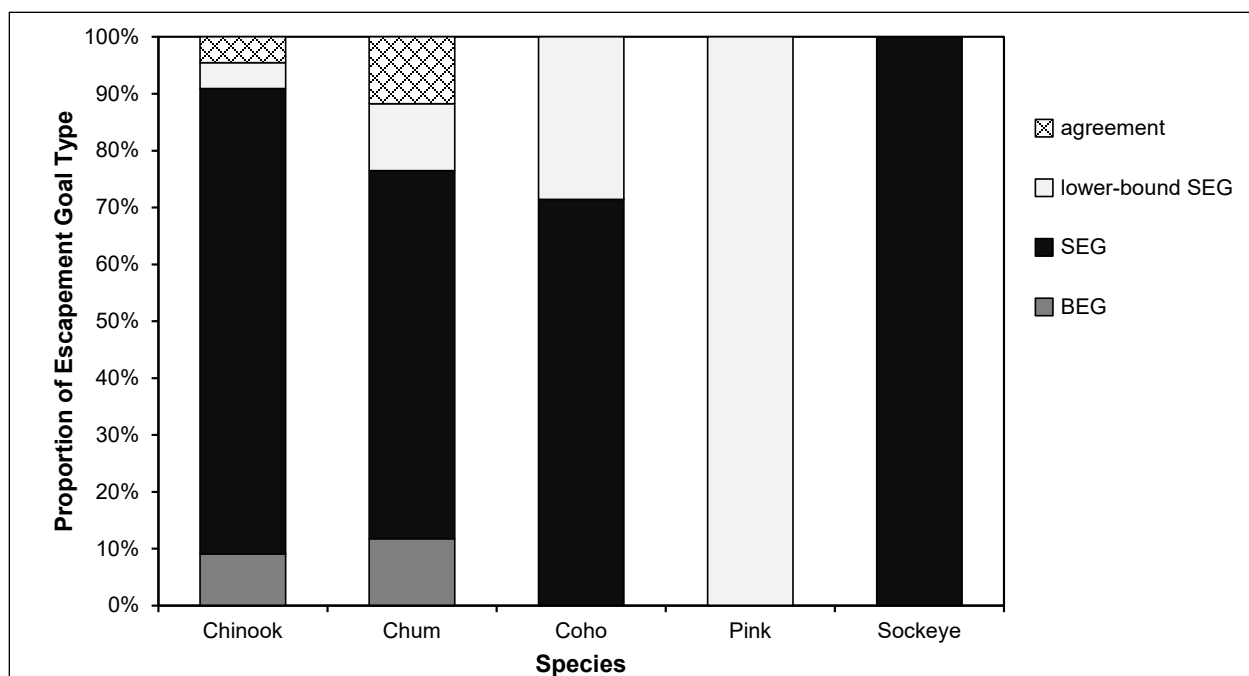


Figure 4.—Proportion of escapement goal types by species for the 56 escapement goals in Arctic–Yukon–Kuskokwim Region.

Note: BEG is biological escapement goal, SEG is sustainable escapement goal, and OEG is optimal escapement goal (set by the Alaska Board of Fisheries). Agreement goals are established through international treaties.

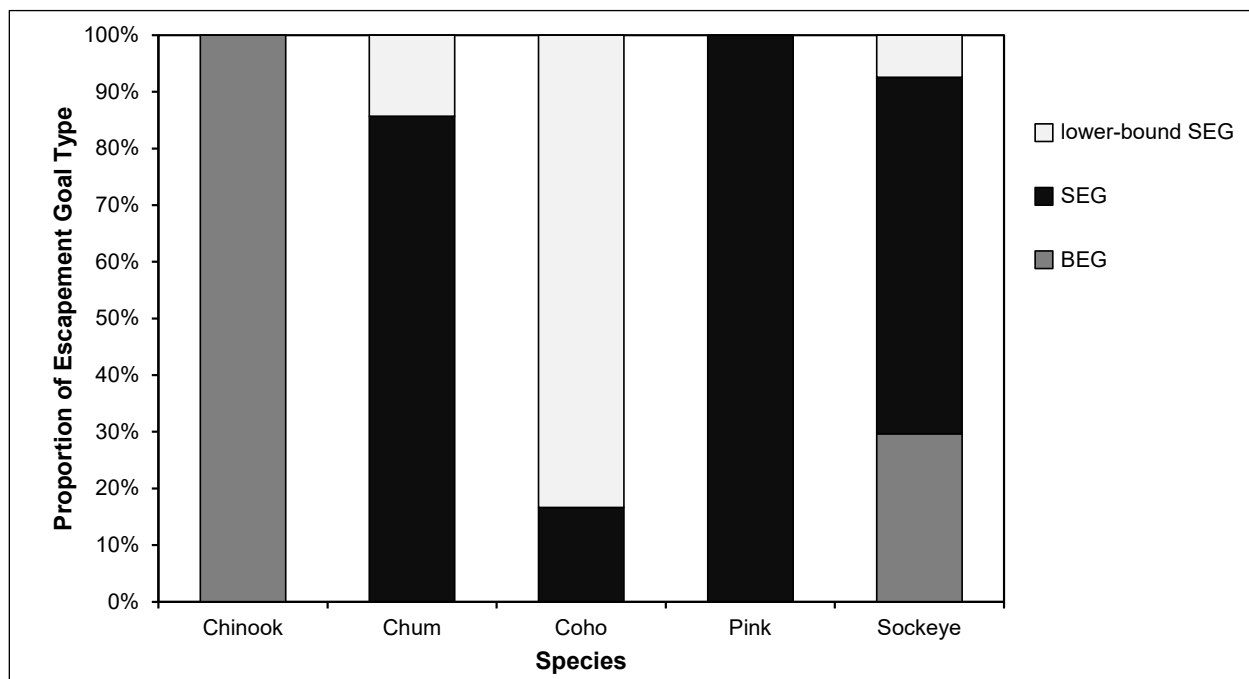


Figure 5.—Proportion of escapement goal types by species for the 50 escapement goals in Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas).

Note: BEG is biological escapement goal; SEG is sustainable escapement goal.

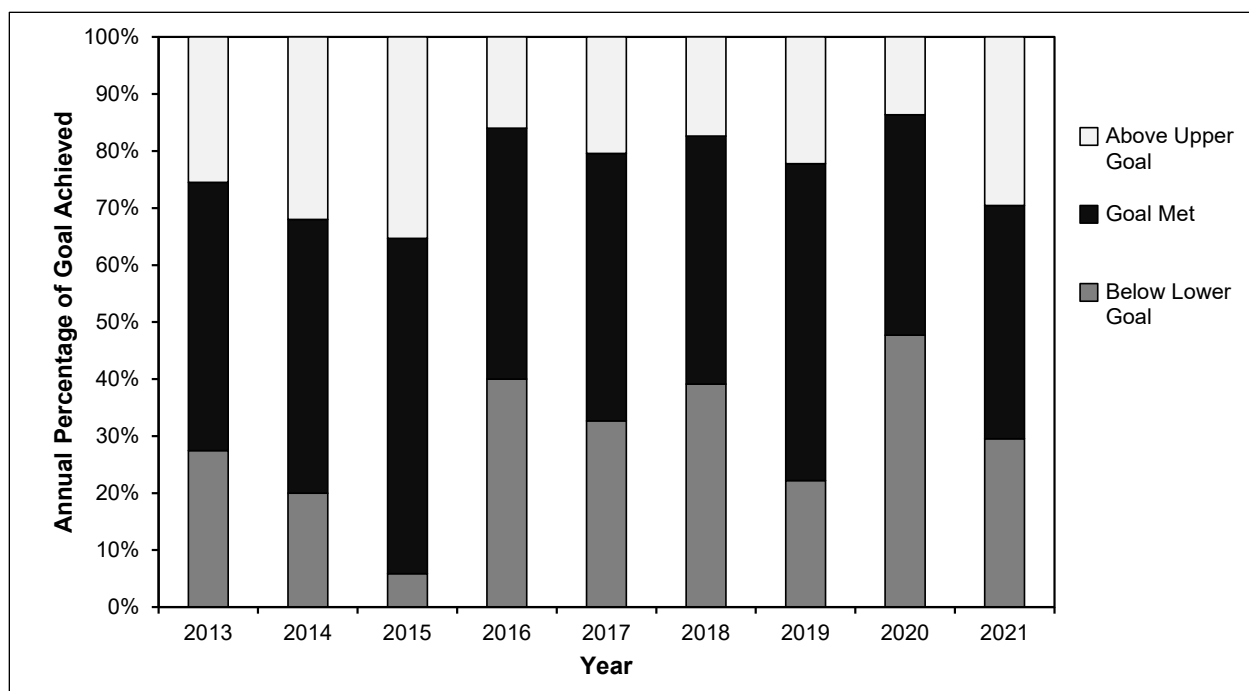


Figure 6.—Southeast Region salmon escapements compared against escapement goals for the years 2013 to 2021.

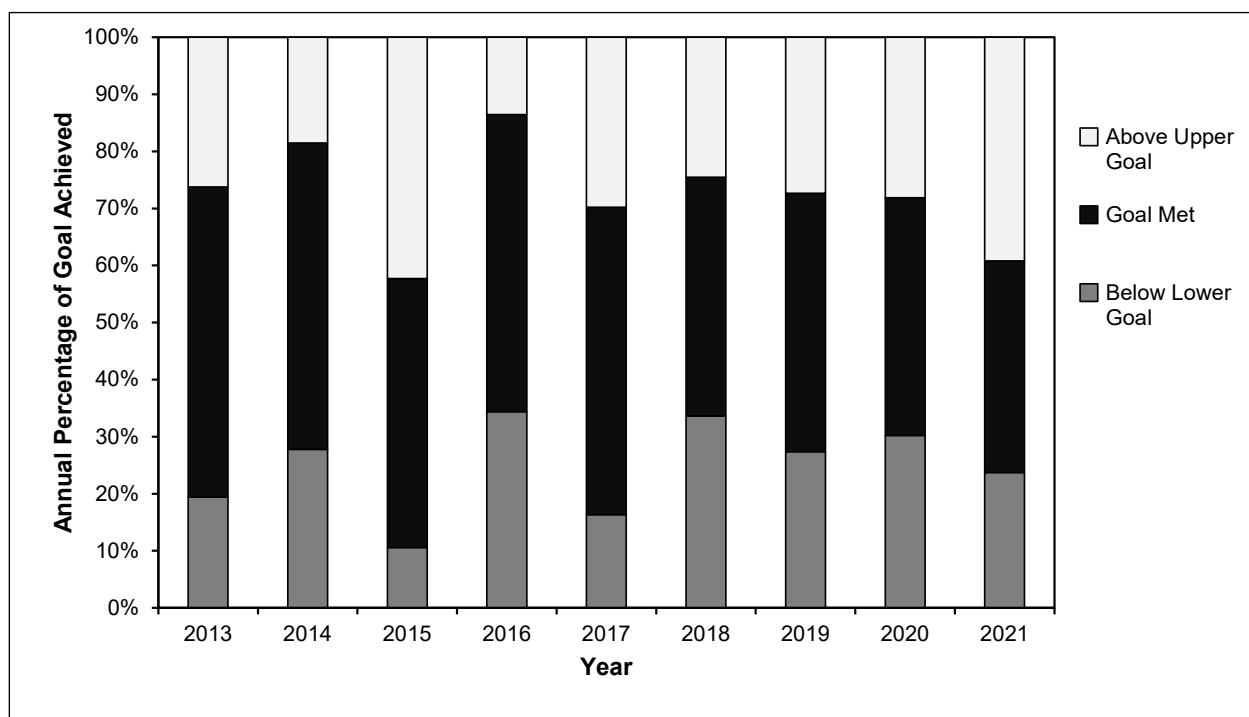


Figure 7.—Central Region (Bristol Bay, Cook Inlet, Prince William Sound/Copper River) salmon escapements compared against escapement goals for the years 2013 to 2021.

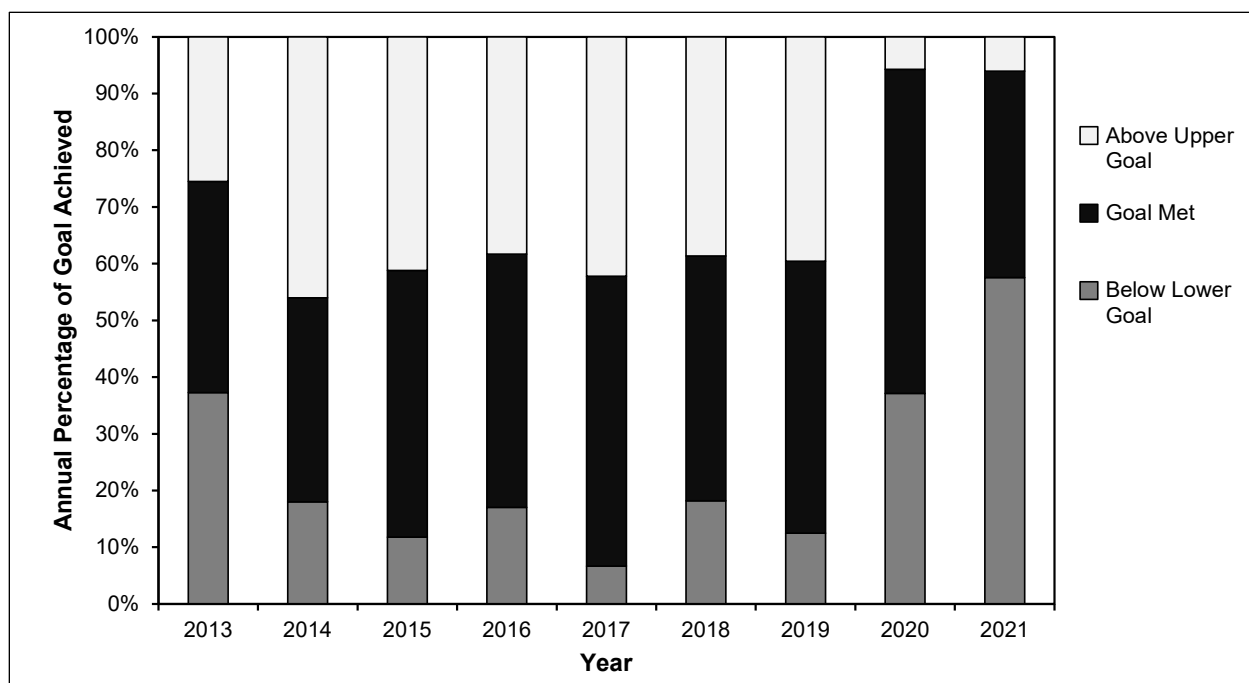


Figure 8.—Arctic-Yukon-Kuskokwim Region salmon escapements compared against escapement goals for the years 2013 to 2021.

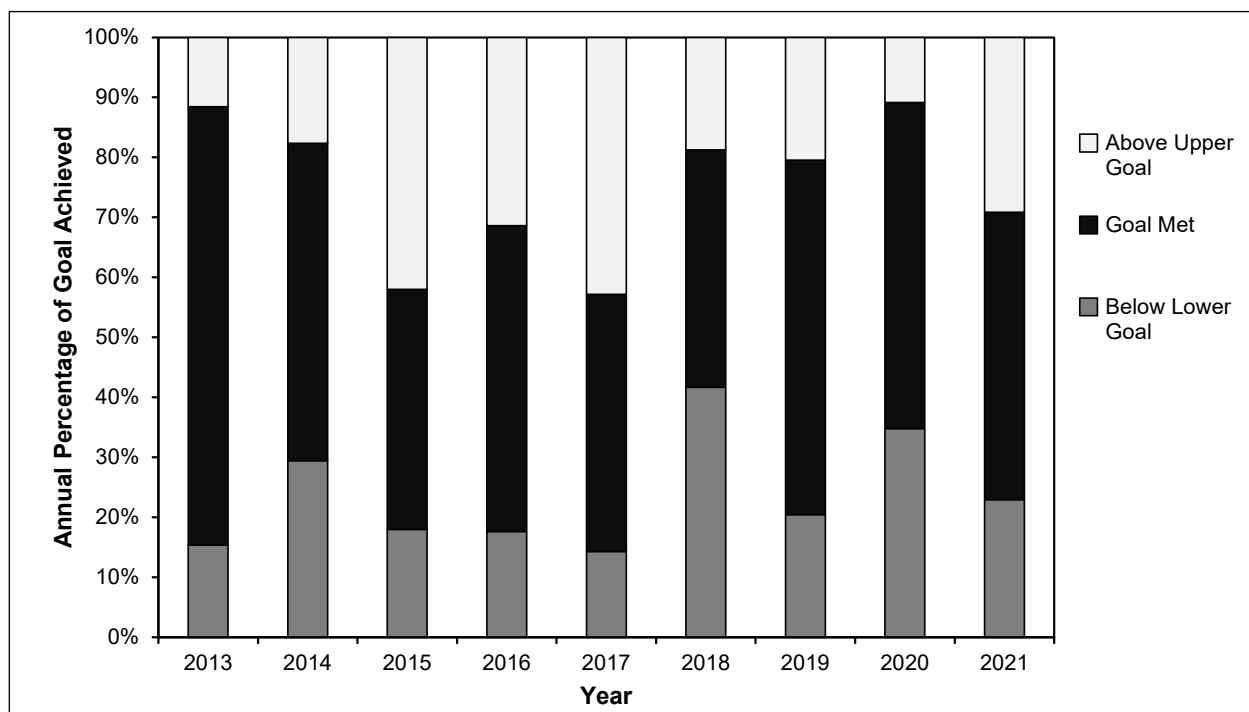


Figure 9.—Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) salmon escapements compared against escapement goals for the years 2013 to 2021.

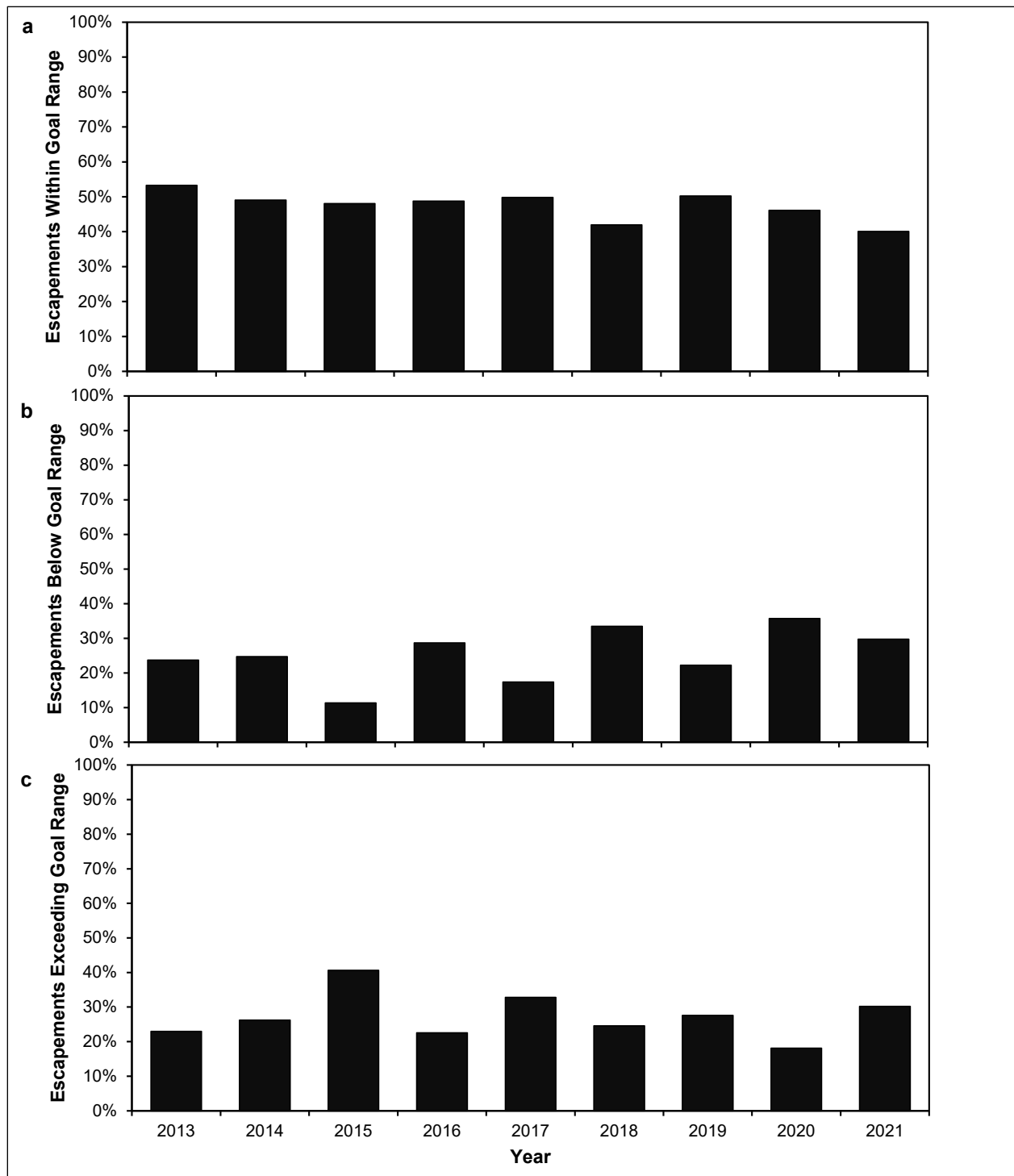


Figure 10.—Statewide summary by year of percentage of escapements that (a) met the escapement goal (i.e., within goal range or above lower bound), (b) were below lower bound of goal, or (c) exceeded upper bound of goal range for the years 2013 to 2021.