

Summary of Pacific Salmon Escapement Goals in Alaska with a Review of Escapements from 2006 to 2014

by

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and

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Divisions of Sport Fish and Commercial Fisheries



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Weights and measures (metric)		General		Mathematics, statistics		
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>		
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	H _A	
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	<i>e</i>	
hectare	ha			catch per unit effort	CPUE	
kilogram	kg	at	@	coefficient of variation	CV	
kilometer	km			common test statistics	(F, t, χ^2 , etc.)	
liter	L	compass directions:		confidence interval	CI	
meter	m	east	E	correlation coefficient (multiple)	R	
milliliter	mL	north	N	correlation coefficient (simple)	r	
millimeter	mm	south	S	covariance	cov	
Weights and measures (English)		west	W	degree (angular)	°	
		copyright	©	degrees of freedom	df	
		corporate suffixes:		expected value	<i>E</i>	
		Company	Co.	greater than	>	
		Corporation	Corp.	greater than or equal to	≥	
		Incorporated	Inc.	harvest per unit effort	HPUE	
		Limited	Ltd.	less than	<	
		District of Columbia	D.C.	less than or equal to	≤	
Time and temperature		et alii (and others)	et al.	logarithm (natural)	ln	
		et cetera (and so forth)	etc.	logarithm (base 10)	log	
		exempli gratia		logarithm (specify base)	log ₂ , etc.	
	day	d	(for example)	e.g.	'	
	degrees Celsius	°C	Federal Information Code	FIC	not significant	NS
	degrees Fahrenheit	°F	id est (that is)	i.e.	null hypothesis	H _O
	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	Var
	direct current	DC	U.S. state	use two-letter abbreviations (e.g., AK, WA)	sample	var
	hertz	Hz				
	horsepower	hp				
	hydrogen ion activity (negative log of)	pH				
	parts per million	ppm				
parts per thousand	ppt, ‰					
vols	V					
watts	W					

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ABSTRACT

This report summarizes statewide Pacific salmon escapement goals in effect in 2014 and documents escapements for all species and stocks with goals from 2006 through 2014. 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.

Key words: escapement, escapement goals, Chinook salmon, sockeye salmon, coho salmon, pink salmon, chum salmon, Alaska Board of Fisheries, 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 Alaska Administrative Code (AAC) 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 295 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 goals, notify the public when goals are established or modified, and notify the BOF of allocative implications associated with escapement goals. The foundation for this effort is regional or area escapement goal review teams assembled every 3 years to review goals, recommend changes, establish new goals, or eliminate goals. The teams encompass broad expertise in biological characteristics of salmon stocks and technical approaches for establishing goals. Scientific staff from headquarters may assist regional teams and 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 tri-annual 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.

While development of regional escapement goals are exhaustively detailed in regional reports and supporting documents, 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 for which goals exist, a numerical description of the goal, type of goal, year the current goal was first implemented, and recent years' escapement data for each stock. In addition, summary statistics documenting performance in achieving goals is presented, including a statewide summary of stocks with yield or management concerns, 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 supersedes data in previous annual statewide escapement reports. This report will be a useful resource for ADF&G staff, stakeholders, and the public.

METHODS

We reviewed ADF&G escapement goal reports and supporting documents to catalog current escapement goals in each region for all 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 2006 through 2014 for each stock with an established escapement goal. The escapement goals listed are those in effect during the 2014 spawning season including escapement goals that were established or updated during the 2013/2014 BOF meeting cycle (Appendix A).

Escapements from 2006 through 2014 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 2006 and 2014 for a stock, we assessed outcomes by comparing escapement estimates with the goal 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.

METHODS OF ESCAPEMENT GOAL DEVELOPMENT

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) developed by Bue and Hasbrouck¹ Contrast of the observed annual escapements (largest escapement divided by smallest escapement) and exploitation rate of the stock are used to select percentiles of observed escapements for estimating lower and upper bounds of the escapement goal.

Spawner–Recruit Analysis (SRA): Analysis of the relationship between escapement (number of spawners) and subsequent production of recruits (i.e., adults) 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, 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.

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

¹ 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.

Theoretical Spawner–Recruit Analysis (Theoretical SRA): Used in situations where there are few or no stock-specific harvest estimates and/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” generally are *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 escapement goals [ADF&G 2004]).

Zooplankton Model: This model estimates the number of sockeye salmon *Oncorhynchus 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 relationship with 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. 2004).

Euphotic Volume (EV) 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).

Conditional Sustained Yield Analysis: Observed escapement indices and harvest are used to estimate if, on average, surplus production (yield) results from a particular goal range (Nelson et al. 2005). Estimated expected yields are conditioned on extreme values of measurement error in the escapement indices.

Brood Interaction Simulation Model: This model simulates production using a spawner–recruit relationship that modifies the simulated production for the year of return using an age-structured submodel, and estimates resulting catches and escapements under user-specified harvest strategies (Carlson et al. 1999). This is a hybrid of a theoretical SRA and yield analysis that has only been used to develop the escapement goal for Kenai River sockeye salmon.

RESULTS AND DISCUSSION

Summaries of estimated escapements and escapement goals for each monitored salmon stock from 2006 to 2014 are presented by region and species in Tables 1–4. While most information was available through regional escapement goal reports, 2014 data were primarily obtained directly from area and regional biologists. Data for 2014 are often preliminary estimates because complete data regarding subsistence and sport harvests are often not available immediately following the season.

During the 2013/2014 BOF meeting cycle, Upper Cook Inlet, Lower Cook Inlet, Chignik, and Kodiak management areas reviewed their escapement goals. Escapement goal changes for Upper Cook Inlet included changing the upper end of the Jim Creek coho salmon goal and elimination of the Crescent River sockeye salmon goal because escapement is no longer assessed. In Lower Cook Inlet, the Mikfik Lake sockeye salmon escapement goal was updated to reflect a change in escapement assessment methodology, and a new goal was established for Dogfish Lagoon Creeks pink salmon. The only change in the Chignik Management Area was an increase in the upper end of Chignik River early-run sockeye salmon. Escapement goal changes for the Kodiak Management Area included an update of the Buskin River coho salmon goal and elimination of the Little River sockeye salmon goal because of the inability to assess escapement regularly.

A summary of escapement goal types for all species by region indicate that the majority of goals in Central, Westward, and AYK regions are sustainable escapement goals (SEGs), including lower-bound SEGs, with biological escapement goals (BEG) making up a smaller proportion of goals (Figure 1a). The reverse is true for Southeast Region, where most goals are BEGs. Escapement goals for sockeye and Chinook salmon comprise about 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 imposed by the BOF, management targets, 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, which include all but 1 pink salmon *O. gorbuscha* goal, and all but 1 Chinook salmon goal, as well as over 60% of the coho salmon goals and 50% of the sockeye salmon goals (Figure 2). This is sharply contrasted with Central Region, where the majority of all goals are SEGs, with 2 sockeye salmon stocks representing the only BEGs (Figure 3). AYK Region has the only BEGs for chum salmon in the state, with additional BEGs for 3 Chinook and 1 sockeye salmon stock (Figure 4). All Chinook salmon stocks in Westward Region are BEGs, but compared to Southeast, a much smaller proportion of coho and sockeye salmon goals are BEGs (Figure 5). These are broad generalizations immediately apparent from our summary. There are many reasons why goal types would be different between regions, including fishery structure, stock assessment capacity, and technical approaches.

Summary comparisons of actual estimated escapements with escapement goals in place at the time are shown in Tables 5–8, highlighting whether the goal was exceeded, met, or not met. Numerous footnotes contain important information about changes in stock assessment methods or goal ranges during that time and are essential for a thorough understanding of the escapement estimates and evaluations of outcomes against goals. Summaries of outcomes in achieving goals are presented by species (Tables 9–12) and region (Tables 13–16; Figures 6–9). In 2006 and 2007, it was typical to observe greater than 85% success in achieving minimum escapement goals for all species within each region (Tables 13–16; Figures 6–9). In recent years, however, the success in achieving minimum escapement has shifted to between 65% and 85% within each region (Tables 13–16; Figures 6–9). Statewide, the percentage of escapement goals within the goal range (or above the lower bound if a lower-bound SEG) has been between 48% and 59% since 2006 (Figure 10a). In recent years (2008–2014) the percentage of goals not achieved has averaged 26% and the percentage of goals exceeded has averaged 21% (Figures 10b and 10c).

Because meeting escapement goals is fundamental to ADF&G efforts to manage for sustainable salmon stock productivity, it is important to document outcomes for meeting these goals. 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* 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 (SET). Methods to develop stock-specific SETs, as defined in the sustainable salmon fisheries policy, are not well developed for Pacific salmon, and no SETs or stocks of conservation concern exist in Alaska. In 2014 there were 14 stocks of concern in the state, with no changes from 2013 (Table 17).

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 in Tables 18–21.

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TABLES

Table 1.–Southeast Region Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2006 to 2014.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
CHINOOK SALMON ^a													
Blossom River	150	300	BEG	2012	339	135	257	123	363	147	205	255	217
Keta River	175	400	BEG	2012	747	311	363	219	475	223	241	493	439
Unuk River	1,800	3,800	BEG	2009	5,645	5,668	3,104	3,157 ^b	3,835 ^b	3,195 ^b	956 ^c	1,135 ^c	1,691 ^c
Chickamin River	450	900	BEG	1997	1,330	893	1,111	611	1,156	853	444	468	652
Andrew Creek	650	1,500	BEG	1998	2,124	1,736	981	628	1,205	936	587	920	1,261
Stikine River	14,000	28,000	BEG	2000	24,405	14,560	18,352	12,803 ^b	15,116 ^b	14,480 ^b	22,327 ^b	16,735 ^b	25,472 ^b
King Salmon River	120	240	BEG	1997	150	181	120	109	158	192	155	94	68
Taku River	19,000	36,000	BEG	2009	42,296	14,749	26,645 ^b	29,797 ^b	28,769 ^b	27,523 ^b	19,429 ^b	18,002 ^b	23,532 ^b
Chilkat River	1,850	3,600	inriver ^d	2003	3,039	1,445	2,905	4,429	1,815	2,688	1,744 ^b	1,730 ^b	1,534 ^b
	1,750	3,500	BEG	2003									
Klukshu (Alsek) River	800	1,200	BEG	2013	566	676	466	1,518	2,259	1,610	693 ^b	1,227 ^b	832 ^b
Alsek River ^e	3,500	5,300	BEG	2013	2,321	2,827	1,885	6,239	9,526	6,850	3,027 ^b	4,992 ^b	3,425 ^b
Situk River	450	1,050	BEG	2003	747	677	413	902	166 ^f	240	322	912	475
CHUM SALMON													
Southern Southeast Summer	54,000		LB SEG	2012	76,000	132,000	13,000	41,000	47,000	157,000	144,000	84,000	42,000
Northern Southeast Inside Summer	119,000		LB SEG	2012	282,000	149,000	99,000	107,000	77,000	125,000	177,000	278,000	93,000
Northern Southeast Outside Summer	19,000		LB SEG	2009	57,000	34,000	46,000	15,000	24,000	23,000	28,000	18,000	22,000
Cholmondeley Sound Fall	30,000	48,000	SEG	2009	54,000	18,000	49,500	39,000	76,000	93,000	54,000	13,000	48,000
Port Camden Fall	2,000	7,000	SEG	2009	2,420	505	1,400	1,711	5,400	1,800	3,750	2,000	4,000
Security Bay Fall	5,000	15,000	SEG	2009	15,000	5,400	11,700	5,100	6,500	5,100	9,800	3,000	6,000
Excursion River Fall	4,000	18,000	SEG	2009	2,203	6,000	8,000	1,400	6,100	3,000	2,000	8,000	11,000
Chilkat River Fall	75,000	170,000	SEG	2009	681,000	320,000	437,000	326,000	88,000	356,000	284,000	165,000	142,000
COHO SALMON													
Hugh Smith Lake	500	1,600	BEG	2009	891	1,244	1,741	2,281	2,878	2,137	1,908	3,048	4,110
Klawock River	4,000	9,000	SEG	2013 ^g	6,800	7,426	6,210	5,415	9,707	5,572	7,507	8,323	7,698
Taku River ^h	70,000		MT	2013	122,384	74,246	95,226 ^b	103,950 ^b	126,830 ^b	70,745 ^b	70,897 ^b	68,118 ^b	124,171 ^b
Auke Creek	200	500	BEG	1994	581	352	600	360	417	517	837	736	1,533
Montana Creek	400	1,200	SEG	2006	1,110	324	405	698	630	709	394	367	911
Peterson Creek	100	250	SEG	2006	439	226	660	123	467	138	190	126	284
Ketchikan Survey Index													
Index	4,250	8,500	BEG	2006	6,901	4,316	16,752	8,710	4,563	5,098	11,960	11,295	16,675
Sitka Survey Index	400	800	BEG	2006	2,647	1,066	1,117	1,156	1,273	2,222	1,157	1,414	2,161

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Table 1.–Page 2 of 3.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
Ford Arm Lake	1,300	2,900	BEG	1994	4,737	2,567	5,173	2,181	1,610	1,908	2,282	1,573	3,025
Berners River	4,000	9,200	BEG	1994	5,470	3,915	6,870	4,230	7,520	6,050	5,480	6,280	15,480
Chilkat River	30,000	70,000	BEG	2006	79,050	24,770	56,369	47,911	84,909	61,099	36,961	51,324	130,200
Lost River	2,200		LB SEG	2009	3,500	2,542	NA	3,581	2,393	1,221	2,200	2,593	3,555
Situk River	3,300	9,800	BEG	1994	7,950	5,763	NA	5,814	11,195	3,652	3,007	14,853	8,226
Tsiu/Tsivat Rivers	10,000	29,000	BEG	1994	14,500	14,000	25,200	28,000	11,000	21,000	10,500	47,000	27,000
PINK SALMON													
Southern Southeast	3,000,000	8,000,000	BEG	2009	4,330,000	10,590,000	6,290,000	7,200,000	5,940,000	5,500,000	6,470,000	14,450,000	9,650,000
Northern Southeast													
Inside	2,500,000	6,000,000	BEG	2009	3,960,000	4,740,000	1,470,000	3,650,000	3,210,000	6,030,000	2,110,000	5,400,000	1,380,000
Northern Southeast													
Outside	750,000	2,500,000	BEG	2009	1,960,000	2,310,000	1,730,000	1,820,000	2,010,000	2,730,000	2,470,000	5,340,000	2,750,000
Situk River (even year)	eliminated			2012	114,779		1,232 ⁱ		89,301 ⁱ				
Situk River (odd year)	eliminated			2012		229,033		62,787		169,908			
Situk River	33,000		LB SEG	2012							30,548	133,656	28,238
SOCKEYE SALMON													
Hugh Smith Lake	8,000	18,000	OEG ^j	2003	42,112	33,743	3,588	9,483	15,646	22,029	13,353	5,946	10,397
	8,000	18,000	BEG	2003									
McDonald Lake	55,000	120,000	SEG	2009	31,357	29,086	20,700	51,000	72,500	113,000	57,000	15,400	43,400
Mainstem Stikine													
River	20,000	40,000	SEG	1987	27,603	20,865	16,178 ^b	17,148 ^b	24,831 ^b	29,393 ^b	33,812 ^b	27,091 ^b	26,513 ^b
Tahltan Lake ^k	18,000	30,000	BEG	1993	53,455	20,874	10,416	30,324	22,702	34,248	13,463	15,828	39,745
Speel Lake	4,000	13,000	BEG	2003	4,165	3,099	1,763	3,689	5,640	4,777	5,681	6,426	5,059
Taku River	71,000	80,000	SEG	1986	146,151	87,763	68,059	71,837	88,367 ^b	115,383 ^b	126,764 ^b	81,177 ^b	92,463 ^b
Redoubt Lake	7,000	25,000	OEG	2003	103,953	66,938	10,064	12,569	17,156	22,720	40,944	49,124	18,694
	10,000	25,000	BEG	2003									
Chilkat Lake	70,000	150,000	BEG	2009	73,000	68,000	71,735	150,033	61,906	63,628	107,723	110,979	70,470
Chilkoot Lake	38,000	86,000	SEG	2009	96,203	72,678	33,117	33,705	71,657	65,915	118,166	46,140	105,467
East Alsek-Doame													
River	13,000	26,000	BEG	2003	29,000	40,100	8,000	12,000	19,500	27,300	21,500	26,500	15,300
Klukshu River	7,500	11,000	BEG	2013	12,890	8,310	2,741	5,528	18,546	20,728	17,176	3,792	12,148
Alsek River ^l	24,000	33,500	BEG	2013									
Lost River	1,000		LB SEG	2009	1,018	180	200	NA	1,525	1,006	453	587	NA
Situk River	30,000	70,000	BEG	2003	90,351	61,799	22,520	83,959	47,865 ^f	89,943	62,500	118,635	102,318

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Table 1.–Page 2 of 3.

Note: LB SEG = lower-bound SEG; NA = data not available.

- ^a Goals are for large (≥ 660 mm MEF, 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 MEF.
- ^b Preliminary data.
- ^c 2012–2014 Unuk River Chinook salmon escapement estimate based on expanded aerial survey index because mark–recapture studies failed.
- ^d Chilkat River Chinook salmon inriver goal accounts for inriver subsistence harvest that average < 100 fish.
- ^e Klukshu River Chinook salmon escapement is the metric used to manage Chinook salmon for the Alsek River system, which includes the Klukshu River. Alsek River Chinook salmon escapement is estimated using: $[(\text{Klukshu River weir count} + \text{sport harvest}) \times 4.0 - \text{all Canadian inriver harvest}]$.
- ^f Incomplete weir count due to inseason problems with weir (e.g., breach of weir).
- ^g Klawock coho salmon escapement goal was officially adopted in 2013, but escapement was managed for this goal beginning in 2007.
- ^h For the Taku River coho salmon, the management intent of the U.S. is to ensure a minimum above border run (i.e., inriver run) of 70,000 fish as detailed in the 2013 Pacific Salmon Treaty management plan (TTC 2014).
- ⁱ Situk River weir was removed well before peak of pink salmon run so adequate assessment was not possible.
- ^j Hugh Smith Lake sockeye salmon OEG includes wild and hatchery fish.
- ^k Tahltan sockeye salmon escapement count includes fish collected for broodstock.
- ^l Alsek River sockeye salmon run is not regularly assessed, so escapement numbers are not available. In 2013 and 2014, Alsek River sockeye salmon were managed to meet Klukshu River escapement goal as per the 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, 2006 to 2014.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
CHINOOK SALMON													
Bristol Bay													
Nushagak River	55,000	120,000	SEG	2013	117,364	50,960	91,364	74,781	56,088	102,258	167,618	107,602 ^a	70,482 ^a
Togiak River	eliminated			2013	NS	NS	NS	NS	NS	NS	NS		
Naknek River	5,000		LB SEG	2007	NS	5,498	6,559	3,305 ^b	NS	NS	NS	NS	NS
Alagnak River	2,700		LB SEG	2007	4,278	3,455	1,825	1,957	NS	NS	NS	NS	NS
Egegik River	eliminated			2013	196	458	162	350 ^c	NS	NS	NS		
Upper Cook Inlet													
Alexander Creek	2,100	6,000	SEG	2002	885	480	150	275	177	343	181	588	911
Campbell Creek	380		LB SEG	2011	1,052	588	439	554	290	260	NS	NS	274
Chuitna River	1,200	2,900	SEG	2002	1,911	1,180	586	1,040	735	719	502	1,690	1,398
Chulitna River	1,800	5,100	SEG	2002	2,862	5,166	2,514	2,093	1,052	1,875	667	1,262	1,011
Clear (Chunilna) Creek	950	3,400	SEG	2002	1,520	3,310	1,795	1,205	903	512	1,177	1,471	1,390
Crooked Creek	650	1,700	SEG	2002	1,516	965	879	617	1,088	654	631	1,103	1,411
Deshka River	13,000	28,000	SEG	2011	31,150	18,714	7,533	11,967	18,594	19,026	14,010	18,531	16,335
Goose Creek	250	650	SEG	2002	306	105	117	65	76	80	57	62	232
Kenai River - Early Run	5,300	9,000	OEG	2005	13,270	9,856	6,570	6,163	6,393	8,448	5,044	2,148	5,311
	3,800	8,500	SEG	2013									
Kenai River - Late Run	15,000	30,000	SEG	2013	48,970	36,950	32,290	21,390	16,210	19,680	27,710	15,395	16,263
Lake Creek	2,500	7,100	SEG	2002	5,300	4,081	2,004	1,394	1,617	2,563	2,366	3,655	3,506
Lewis River	250	800	SEG	2002	341	0 ^d	120	111	56	92	107	61	61
Little Susitna River	900	1,800	SEG	2002	1,855	1,731	1,297	1,028	589	887	1,154	1,651	1,759
Little Willow Creek	450	1,800	SEG	2002	816	1,103	NC	776	468	713	494	858	684
Montana Creek	1,100	3,100	SEG	2002	1,850	1,936	1,357	1,460	755	494	416	1,304	953
Peters Creek	1,000	2,600	SEG	2002	1,114	1,225	NC	1,283	NC	1,103	459	1,643	1,443
Prairie Creek	3,100	9,200	SEG	2002	3,570	5,036	3,039	3,500	3,022	2,038	1,185	3,304	2,812
Sheep Creek	600	1,200	SEG	2002	580	400	NC	500	NC	350	363	NC	262
Talachulitna River	2,200	5,000	SEG	2002	6,152	3,871	2,964	2,608	1,499	1,368	847	2,285	2,256
Theodore River	500	1,700	SEG	2002	958	486	345	352	202	327	179	476	312
Willow Creek	1,600	2,800	SEG	2002	2,193	1,373	1,255	1,133	1,173	1,061	756	1,752	1,335
Lower Cook Inlet													
Anchor River	3,800	10,000	SEG	2011	8,945	9,622	5,806	3,455	4,449	3,545	4,509	4,388 ^a	2,497 ^a
Deep Creek	350	800	SEG	2002	507	553	205	483	387	696	447	475	601
Ninilchik River	550	1,300	SEG	2008	1,013	543	586	528	605	668	555	571 ^a	891 ^a
Prince William Sound													
Copper River	24,000		LB SEG	2003	58,454	34,575	32,487	27,787	16,771	27,994	27,835	29,012	NA ^e

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Table 2.–Page 2 of 6.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
CHUM SALMON													
Bristol Bay													
Nushagak River	200,000 ^f		LB SEG	2013	661,002	161,483	326,300	438,481	273,914	248,278	360,768	602,300	493,821
Upper Cook Inlet													
Clearwater Creek	3,800	8,400	SEG	2002	8,300	NS	4,630	8,300	13,700	11,630	5,300	9,010	3,110
Lower Cook Inlet													
Port Graham River	1,450	4,800	SEG	2002	2,231	1,882	1,802	1,029	1,395	1,764	699	1,944	3,735
Dogfish Lagoon	3,350	9,150	SEG	2002	5,394	4,919	6,200	4,380	12,703	12,936	8,842	9,300	11,205
Rocky River	1,200	5,400	SEG	2002	11,200	1,600	3,763	2,500	1,271	4,480	3,165	8,148	6,863
Port Dick Creek	1,900	4,450	SEG	2002	2,786	2,753	11,774	5,592	2,439	7,087	8,400	4,133	1,829
Island Creek	6,400	15,600	SEG	2002	5,615	3,092	12,935	9,295	3,408	11,755	14,863	8,772	2,699
Big Kamishak River	9,350	24,000	SEG	2002	58,173	14,787	4,495	15,026	NS	5,532	12,400	3,280	5,676
Little Kamishak River	6,550	23,800	SEG	2002	42,929	15,569	21,265	4,213	18,414	19,310	30,250	6,744	15,069
McNeil River	24,000	48,000	SEG	2008	17,403	21,629	10,617	18,766	10,520	30,977	10,388	9,498	17,475
Bruin River	6,000	10,250	SEG	2002	7,000	3,055	17,535	10,071	6,200	3,486	16,795	8,942	3,583
Ursus Cove	6,050	9,850	SEG	2002	15,663	20,897	6,502	12,946	11,765	10,636	2,840	10,339	5,308
Cottonwood Creek	5,750	12,000	SEG	2002	13,243	12,522	11,561	19,405	15,848	4,730	4,111	5,206	7,079
Iniskin Bay	7,850	13,700	SEG	2002	15,640	5,340	20,042	30,821	19,252	16,522	3,049	5,928	13,020
Prince William Sound ^g													
Eastern District	50,000		LB SEG	2006	141,999	144,941	82,068	150,051	146,613	240,321	97,362	140,806	93,491
Northern District	20,000		LB SEG	2006	60,265	54,709	50,666	30,296	59,530	64,743	23,818	41,058	27,680
Coghill District	8,000		LB SEG	2006	23,987	14,738	48,221	8,290	84,840	19,617	14,075	14,414	9,491
Northwestern District	5,000		LB SEG	2006	22,742	12,570	34,107	15,826	34,300	11,951	9,360	4,995	5,041
Southeastern District	8,000		LB SEG	2006	38,091	71,595	20,300	150,974	138,442	112,507	31,029	43,000	30,177
COHO SALMON													
Bristol Bay													
Nushagak River	60,000	120,000	SEG	2013							329,946	207,222	478,198
Upper Cook Inlet													
Fish Creek (Knik)	1,200	4,400	SEG	2011	4,967 ^h	6,868 ^h	4,868 ^h	8,214	6,977	1,428 ^h	1,237	7,593	10,283
Jim Creek	450	1,400	SEG	2014	2,389	725	1,890	1,331	242	229	213	987	122
Little Susitna River	10,100	17,700	SEG	2002	8,786 ⁱ	17,573	18,485	9,523	9,214	4,826 ⁱ	6,779	13,583	24,211
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	89,270	53,820	76,892	41,294	41,077	38,495	37,010	34,680	42,530
Bering River	13,000	33,000	SEG	2003	33,192	33,062	28,932	22,141	21,311	18,890	15,605	18,820	26,475

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Table 2.–Page 3 of 6.

	2014 Goal Range		Type	Initial Year	Escapement								
System	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
PINK SALMON													
Bristol Bay													
Nushagak River	165,000		LB SEG	2013						1,348,606		NA	2,281,831
Upper Cook Inlet													
There are no pink salmon stocks with escapement goals in Upper Cook Inlet.													
Lower Cook Inlet													
Humpy Creek	21,650	85,550	SEG	2002	48,368	53,989	90,870	5,207	70,686	1,670	67,934	6,749	44,369
China Poot Creek	2,900	8,200	SEG	2002	7,242	6,235	5,086	1,120	2,220	3,462	8,392	7,119	1,409
Tutka Creek	6,500	17,000	SEG	2002	25,824	5,664	14,144	3,770	2,141	21,974	10,436	9,541	10,152
Barabara Creek	1,900	8,950	SEG	2002	3,554	25,168	16,557	2,583	13,935	8,186	1,412	17,377	3,558
Seldovia Creek	19,050	38,950	SEG	2002	70,045	69,405	53,484	14,619	25,886	46,231	44,722	36,824	35,895
Port Graham River	7,700	19,850	SEG	2002	31,173	25,595	24,720	13,996	16,586	20,883	34,486	11,893	32,295
Dogfish Lagoon Creeks	1,200	8,400	SEG	2014	8,000	4,100	8,000	9,200	6,300	3,900	11,400	26,448	8,848
Port Chatham	7,800	21,000	SEG	2002	24,210	14,451	16,354	25,291	2,992	15,830	5,430	57,447	10,290
Windy Creek Right	3,350	10,950	SEG	2002	17,146	18,339	12,491	15,012	6,408	1,722	5,823	11,704	5,710
Windy Creek Left	3,650	29,950	SEG	2002	65,155	32,297	64,068	57,263	24,241	12,210	11,691	47,849	10,147
Rocky River	9,350	54,250	SEG	2002	67,840	189,992	90,876	173,583	27,045	22,706	15,684	75,791	17,114
Port Dick Creek	18,550	58,300	SEG	2002	51,500	44,170	34,228	41,681	41,090	16,868	18,057	55,828	48,732
Island Creek	7,200	28,300	SEG	2002	107,683	87,235	49,719	44,527	69,525	10,181	20,079	26,004	50,402
S. Nuka Island Creek	2,700	14,250	SEG	2002	5,100	6,645	12,300	19,934	NS	NS	1,250	8,442	11,000
Desire Lake Creek	1,900	20,200	SEG	2002	74,774	11,820	9,546	73,926	2,978	600	2,260	56,921	443
Bear & Salmon Creeks	eliminated			2011	9,033	NS	NS	NS	NS				
Thumb Cove	eliminated			2011	5,205	NS	NS	NS	NS				
Humpy Cove	eliminated			2011	1,905	NS	NS	NS	NS				
Tonsina Creek	eliminated			2011	6,453	NS	NS	NS	NS				
Bruin River	18,650	155,750	SEG	2002	515,114	350,420	150,717	1,067,351	40,256	4,534	31,800	15,020	121,569
Sunday Creek	4,850	28,850	SEG	2002	70,037	394,797	20,434	106,296	6,607	844	1,348	6,132	7,665
Brown's Peak Creek	2,450	18,800	SEG	2002	35,703	249,383	17,400	63,605	3,092	2,035	2,800	4,061	4,048
Prince William Sound													
All Districts Combined (even year) ^j	eliminated			2012	952,477		860,944		1,910,357				
All Districts Combined (odd year)	eliminated			2012		1,915,040		2,338,923		3,826,378			
Eastern District (even year)	250,000	580,000	SEG	2012							301,709		270,244
Eastern District (odd year)	310,000	640,000	SEG	2012								1,266,783	
Northern District (even year)	140,000	210,000	SEG	2012							106,568		105,333

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Table 2.–Page 4 of 6.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
Northern District (odd year)	90,000	180,000	SEG	2012								329,434	
Coghill District (even year)	60,000	150,000	SEG	2012							172,611		63,290
Coghill District (odd year)	60,000	250,000	SEG	2012								640,414	
Northwestern District (even year)	70,000	140,000	SEG	2012							117,795		67,030
Northwestern District (odd year)	50,000	110,000	SEG	2012								203,444	
Eshamy District (even year)	3,000	11,000	SEG	2012							1,052		12,400
Eshamy District (odd year)	4,000	11,000	SEG	2012								12,145	
Southwestern District (even year)	70,000	160,000	SEG	2012							90,156		83,581
Southwestern District (odd year)	70,000	190,000	SEG	2012								348,012	
Montague District (even year)	50,000	140,000	SEG	2012							77,756		24,917 ^k
Montague District (odd year)	140,000	280,000	SEG	2012								411,373	
Southeastern District (even year)	150,000	310,000	SEG	2012							258,047		185,072
Southeastern District (odd year)	270,000	620,000	SEG	2012								1,472,633	
SOCKEYE SALMON													
<i>Bristol Bay</i>													
Kvichak River ^l	2,000,000	10,000,000	SEG	2010	3,068,226	2,810,208	2,757,912	2,266,140	4,207,410	2,264,352	4,164,444	2,088,576	4,458,540
Alagnak River	320,000		LB SEG	2007	1,773,966	2,466,414	2,180,502	970,818	1,187,730	883,794	861,747 ^m	1,095,950 ^m	NS
Naknek River	800,000	1,400,000	SEG ⁿ	1983	1,953,228	2,945,304	2,472,690	1,169,466	1,463,928	1,177,074	900,312	938,160	1,474,428
Egegik River	800,000	1,400,000	SEG	1995	1,465,158	1,432,500	1,259,568	1,146,276	927,054	961,200	1,233,900	1,113,630	1,382,466
Ugashik River	500,000	1,200,000	SEG	1995	1,003,158	2,599,186	596,332	1,364,338	830,886	1,029,853	670,578	898,110	640,158
Wood River	700,000	1,500,000	SEG	2001	4,008,102	1,528,086	1,724,676	1,319,232	1,804,344	1,098,006	764,202	1,183,348	2,764,614
Igushik River	150,000	300,000	SEG	2001	305,268	415,452	1,054,704	514,188	518,040	421,380	193,770	387,036	340,590
Nushagak River	260,000	760,000	OEG	2012	548,410	518,041	492,546	484,149	468,696	428,191	432,438	894,172	618,477
	370,000	840,000	SEG	2013									
Kulukak Bay	eliminated			2013	NS	NS	NS	NS	NS	NS	NS		
Togiak River	120,000	270,000	SEG	2007	312,126	269,646	205,680	313,946	188,298	190,970	203,148	128,058	151,934
<i>Upper Cook Inlet</i>													
Crescent River	eliminated			2014	92,533	79,406	62,030	NS	86,333	81,952	58,838	NS	
Fish Creek (Knik)	20,000	70,000	SEG	2002	32,562	27,948	19,339	83,480	126,836	66,678	18,813	18,912	43,915 ^a

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Table 2.–Page 5 of 6.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
Kasilof River	160,000	390,000	OEG	2011	387,769	364,261	324,880	324,783	293,765	243,767	372,523	487,700	438,238 ^a
	160,000	340,000	BEG	2011									
Kenai River ^o	700,000	1,400,000	OEG	2011	1,876,180	957,430	703,979	843,255	1,015,106	1,275,369	1,197,518	987,189	1,151,629
	700,000	1,200,000	SEG	2011									
Packers Creek	15,000	30,000	SEG	2008	NS	46,637	25,247	16,473	NS	NS	NS	NA	19,242
Russian River - Early Run	22,000	42,000	BEG	2011	80,524	27,298	30,989	52,178	27,074	29,129	24,115	35,776	44,920
Russian River - Late Run	30,000	110,000	SEG	2005	89,160	53,068	46,638	80,088	38,848	41,529	54,911	31,364	52,277
Yentna River ^p	eliminated			2009	92,045	79,901	90,180						
Chelatna Lake	20,000	65,000	SEG	2009	18,433	41,290	73,469	17,721	37,784	70,353	36,577	70,555	26,212
Judd Lake	25,000	55,000	SEG	2009	40,633	58,134	54,304	44,616	18,361	39,997	18,303	14,088	22,416
Larson Lake	15,000	50,000	SEG	2009	57,411	47,736	35,040	40,933	20,324	12,413	16,708	21,821	12,040
<i>Lower Cook Inlet</i>													
English Bay	6,000	13,500	SEG	2002	16,533	16,487	11,996	18,176	12,253	9,920	3,574	10,891	6,995
Delight Lake	7,550	17,650	SEG	2011	10,929	43,963	23,933	12,700	23,775	20,190	10,887	5,961	22,289
Desire Lake	8,800	15,200	SEG	2002	18,600	10,000	10,700	16,000	6,320	9,630	8,840	8,400	11,480
Bear Lake	700	8,300	SEG	2002	8,338	8,575	9,264	10,364	8,880	9,608	8,031	8,999	9,233
Aialik Lake	3,700	8,000	SEG	2002	4,760	5,370	4,200	3,100	5,315	3,480	2,140	3,530	450 ^o
Mikfik Lake	3,300	14,000	SEG	2014	14,983	10,975	10,000 ^q	20,965	5,221	291	3,131	4,042	18,062
Chenik Lake	3,500	14,000	SEG	2011	8,507	17,417	10,653	15,264	17,312	10,330	16,505	11,333	17,797
Amakdedori Creek	1,250	2,600	SEG	2002	300	3,830	3,200	2,160	1,210	3,412	770	1,540	4,280
<i>Prince William Sound</i>													
Upper Copper River	360,000	750,000	SEG	2012	579,552	612,083	480,597	468,725	502,995	607,657	954,272	860,934	NA ^r
Copper River Delta	55,000	130,000	SEG	2003	98,896	88,285	67,950	68,622	82,835	72,367	66,850	75,705	64,205
Bering River	15,000	33,000	SEG	2012	14,671	21,170	18,196	13,471	4,367	28,530	18,290	23,900	14,985
Coghill Lake	20,000	60,000	SEG	2012	23,479	70,001	29,298	23,186	24,312	102,359	73,978	17,231	21,836
Eshamy Lake ^s	13,000	28,000	BEG	2009	42,473	17,196	18,495	24,025	16,291	24,129	NA	4,500	7,500

Note: NA = data not available; NC = no count; NS = no survey; LB SEG = lower-bound SEG.

^a Preliminary escapement estimates.

^b In 2009, aerial surveys were only flown on Big Creek (2,834 Chinook salmon) and King Salmon River (471 Chinook salmon). Mainstem Naknek River and Paul's Creek were not surveyed in 2009.

^c Aerial surveys were conducted in the Egegik and King Salmon River systems on August 5, 2009, to provide escapement indices for Chinook and chum salmon. Resulting counts were 350 Chinook, and 277 chum salmon. Water conditions were poor; high and turbid conditions prevented observation on most of the surveyed systems. Chinook escapement indices were well below average in streams surveyed, but should be considered minimum counts due to the poor water conditions. Based on carcass distribution and observed presence, the survey was likely conducted after peak spawning.

^d Lewis River diverged into swamp 1/2 mile below bridge. No water in channel.

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- ^e The Copper River Chinook salmon spawning escapement estimate is not available. An inriver estimate is generated from a mark–recapture project run by the Native Village of Eyak and LGL Consulting. The spawning escapement estimate is generated by subtracting the upper Copper River state and federal subsistence, state personal use, and sport fishery harvest estimates from the mark–recapture estimate of the inriver abundance. The estimates for the federal and state subsistence and the state personal use fishery harvests are generally not available for about 6 months after the fishery is closed. Additionally, the sport fishery harvest estimate is based on the mailout survey and is generally available about 12 months after the fishery ends.
- ^f Escapement goal for Nushagak River chum salmon is based on sonar count through July 20.
- ^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 Incomplete counts for Fish Creek (Knik) coho salmon in 2006–2008, and 2011, because weir was pulled in mid-August.
- ⁱ Incomplete counts for Little Susitna River coho salmon in 2006 and 2011 due to breach of weir.
- ^j The estimates for pink salmon (odd year) do not include Unakwik District escapements, due to absence of an escapement goal and an average escapement estimate of a few thousand fish.
- ^k Fewer than 3 surveys were flown in half the index streams in the Montague District in 2014, so they were not used in calculating the area under the curve index.
- ^l Prior to 2010 Kvichak River had a pre-peak/peak-cycle escapement goal of 6–10 million sockeye and an off-peak escapement goal of 2–10 million fish. Between 2001 and 2009 only 1 year (2004) was classified as either a pre-peak or peak year.
- ^m 2012 and 2013 Alagnak River sockeye salmon escapements are expanded aerial surveys.
- ⁿ Naknek River has an OEG of 800,000–2,000,000 sockeye salmon when the Naknek River Special Harvest Area is open to fishing.
- ^o Uses the best estimate of sport harvest upstream of sonar.
- ^p Yentna River sockeye salmon escapement goal was replaced by SEGs on Chelatna, Judd, and Larson lakes in early 2009.
- ^q 2008 Mikfik Lake sockeye salmon escapement includes 1,000 fish estimated by aerial surveys to have escaped to the lake while the remote video system was not operating.
- ^r The 2014 upper Copper River sockeye salmon spawning escapement estimate is preliminary pending the estimates of personal use, subsistence, and sport fishery harvests; and final mark–recapture estimate of upper Copper River Chinook salmon.
- ^s The Eshamy River weir was not operated in 2012–2014. A pilot project to assess the use of video for monitoring in 2013 did not provide 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, 2006 to 2014.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
CHINOOK SALMON													
Kuskokwim Area													
North (Main) Fork Goodnews River	640	3,300	SEG	2005	NS	NS	2,155	NS	NS	853	378	NS	630
Middle Fork Goodnews River	1,500	2,900	BEG	2007	4,572	3,914	2,223	1,669	2,176	2,045	524	1,187	750
Kanektok River	3,500	8,000	SEG	2005	NS	NS	NS	NS	1,208	NS	NS	2,277	1,840
Kuskokwim River (entire area)	65,000	120,000	SEG	2013	214,004	174,943	128,978	118,478	49,073	72,097	76,074	47,315	123,987
Kogruklu River	4,800	8,800	SEG	2013	20,205	NA	9,750	9,528	5,812	6,731	NA	1,819	3,732
Kwethluk River	4,100	7,500	SEG	2013	17,619	12,927	5,275	5,744	1,667	4,079	NA	845	3,187
Tuluksak River	eliminated			2013	1,043	374	701	362	201	284	555		
George River	1,800	3,300	SEG	2013	4,355	4,011	2,563	3,663	1,498	1,547	2,201	1,292	2,993
Kisaralik River	400	1,200	SEG	2005	4,734	692	1,074	NS	235	NS	588	599	622
Aniak River	1,200	2,300	SEG	2005	5,639	3,984	3,222	NS	NS	NS	NS	754	3,201
Salmon River (Aniak R)	330	1,200	SEG	2005	NS	1,458	589	NS	NS	79	49	154	497
Holitna River	970	2,100	SEG	2005	1,866	NS	NS	NS	NS	NS	NS	670	NS
Cheeneetnuk River (Stony R)	340	1,300	SEG	2005	1,015	NS	290	323	NS	249	229	138	340
Gagaryah River (Stony R)	300	830	SEG	2005	531	1,035	177	303	62	96	178	74	359
Salmon River (Pitka Fork)	470	1,600	SEG	2005	862	943	1,033	632	135	767	670	469	1,865
Yukon River													
East Fork Andreafsky River	2,100	4,900	SEG	2010	6,463	4,504	4,242	3,004	2,413	5,213	2,517	1,998	5,949
West Fork Andreafsky River	640	1,600	SEG	2005	824	976	NS	1,678	858	1,173	NS	1,090	1,695
Anvik River	1,100	1,700	SEG	2005	1,876	1,529	992	832	974	642	722	940	1,584
Nulato River (forks combined)	940	1,900	SEG	2005	1,292	2,583	922	2,260	711	1,401	1,373	1,118	NS
Gisasa River	eliminated			2010	843	593	487	515					
Chena River	2,800	5,700	BEG	2001	2,936	3,806	3,208	5,253	2,382	NS	2,200 ^a	1,859	4,358
Salcha River	3,300	6,500	BEG	2001	10,679	6,425	5,415	12,774	6,135	7,200 ^b	7,165	5,465	NS
Canada Mainstem	42,500	55,000	agreement ^c	annual	62,630	34,904	33,883	65,278	32,014	46,307	32,656	28,669	63,331
Norton Sound													
Fish River/Boston Creek	100		LB SEG	2005	NS	NS	NS	NS	NS	NS	NS	44	NS
Kwiniuk River	300	550	SEG	2005	195	258	237	444	135	57	54	15	429
North River (Unalakleet R)	1,200	2,600	SEG	2005	906	1,948	903	2,355	1,256	864	996	564	2328
Shaktoolik River	eliminated			2013	150 ^d	412	NS	NS	NS	106	NS		
Unalakleet/Old Woman River	550	1,100	SEG	2005	NS	821	NS	1,368	NS	105	NS	NS	NS
CHUM SALMON													
Kuskokwim Area													
Middle Fork Goodnews River	12,000		LB SEG	2005	54,689	50,232	39,548	19,236	24,789	19,974	9,065	27,682	11,518

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Table 3.–Page 2 of 4.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
Kanektok River	eliminated			2013	NS	NS	NS	NS	NS	NS	NA		
Kogruklu River	15,000	49,000	SEG	2005	188,003	52,961	44,744	82,483	69,258	76,823	NA	65,644	30,763
Aniak River	220,000	480,000	SEG	2007	1,108,626	696,801	427,911	479,531	429,643	345,630	NA	NA	NA
<i>Yukon River Summer Chum</i>													
East Fork Andreafsky River	40,000		LB SEG	2010	102,260	69,642	57,259	8,770	72,839	100,473	56,680	61,234	37,793
Anvik River	350,000	700,000	BEG	2005	605,485	460,121	374,928	193,099	396,173	642,528	483,972	571,690	399,223
<i>Yukon River Fall Chum</i>													
Yukon River Drainage	300,000	600,000	SEG	2010	890,000	921,000	681,000	483,000	527,000	883,000	573,000	867,000	800,000 ^e
Tanana River ^f	61,000	136,000	BEG	2001	233,000	357,000	264,000	160,000	213,000	271,000	102,000	275,000	217,000
Delta River	6,000	13,000	BEG	2001	14,000	19,000	23,000	13,000	18,000	24,000	9,000	32,000	32,480
Toklat River	eliminated			2010	NA	NA	NA	NA					
Upper Yukon River Tributaries	152,000	312,000	BEG	2001	436,000	327,000	248,000	NA	196,000	406,000	333,000	392,000	297,000
Chandalar River	74,000	152,000	BEG	2001	245,000	228,000	178,000	NA	158,000	295,000	206,000	253,000	226,000
Sheenjek River	50,000	104,000	BEG	2001	160,000	65,000	50,000	54,000	22,000	98,000	105,000	113,000 ^g	56,000 ^g
Fishing Branch River (Canada)	22,000	49,000	agreement	2008 ^h	31,000	32,000	20,000	26,000	16,000	13,000	22,000	33,000 ^h	15,000 ^h
Yukon R. Mainstem (Canada)	70,000	104,000	agreement	2010 ⁱ	221,000	255,000	176,000	94,000	118,000	206,000	138,000	200,000	156,000
<i>Norton Sound</i>													
Subdistrict 1 Aggregate	23,000	35,000	BEG	2001	87,222	76,940	32,177	21,368	97,798	66,122	51,459	108,120	97,234
Sinuk River	eliminated			2010	4,834	16,481	NS	2,232					
Nome River	2,900	4,300	OEG	2001	5,678	7,034	2,607	1,565	5,906	3,582	1,982	4,811	5,589
	2,900	4,300	SEG	2005									
Bonanza River	eliminated			2010	708	8,491	NS	6,744					
Snake River	1,600	2,500	OEG	2001	4,128	8,147	1,244	891	6,973	4,343	651	2,755	3,983
	1,600	2,500	SEG	2005									
Solomon River	eliminated			2010	2,062	3,469	NS	918					
Flambeau River	eliminated			2010	27,828	12,006	11,618	4,075					
Eldorado River	6,000	9,200	OEG	2001	41,985	21,312	6,746	4,943	42,612	16,227	13,393	26,121	27,054
	6,000	9,200	SEG	2005									
Niukluk River	23,000		LB SEG	2010	29,199	50,994	12,078	15,879	48,561	23,607	19,576	NS	NA
Kwiniuk River	11,500	23,000	OEG	2001	39,519	27,756	9,483	8,739	71,388	31,604	5,577	5,631	39,753
	10,000	20,000	BEG	2001									
Tubutulik River	9,200	18,400	OEG	2001	NS	7,045	NS	3,161	16,097	14,127	NS	NS	NS
	8,000	16,000	BEG	2001									
Unalakleet/Old Woman River	2,400	4,800	SEG	2005	NS	1,902	NS	NS	NS	NS	NS	2,496	NS
<i>Kotzebue Sound</i>													
Kotzebue Sound Aggregate	196,000	421,000	BEG	2007									
Noatak and Eli Rivers	42,000	91,000	SEG	2007	39,785	NS	270,747	69,872	NS	NS	NS	NS	453,284
Upper Kobuk w/ Selby River	9,700	21,000	SEG	2007	48,750	NS	42,622	45,155	NS	NS	NS	NS	65,653

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Table 3.–Page 3 of 4.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
Salmon River	3,300	7,200	SEG	2007	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tutuksuk River	1,400	3,000	SEG	2007	NS	NS	NS	NS	NS	NS	NS	NS	NS
Squirrel River	4,900	10,500	SEG	2007	NS	NS	NS	NS	NS	NS	NS	NS	NS
COHO SALMON													
<i>Kuskokwim Area</i>													
Middle Fork Goodnews River	12,000		LB SEG	2005	26,909	19,442	37,690	19,123	26,287	24,668	NA	NA	NA
Kogruklu River	13,000	28,000	SEG	2005	16,268	26,423	29,237	22,289	14,689	21,800	13,421	21,207	52,975
Kwethluk River	19,000		LB SEG	2010	25,667	19,473	48,049	21,911	NA	NA	20,895	NA	43,945
<i>Yukon River</i>													
Delta Clearwater River	5,200	17,000	SEG	2005	16,748	14,650	7,500	16,850	5,867 ^j	8,772	5,230	6,222	4,285
<i>Norton Sound</i>													
Kwiniuk River	650	1,300	SEG	2005	NS	5,174	2,676	NS	2,925	1,331	NS	NS	NS
Niukluk River ^k	2,400	7,200	SEG	2010	11,169	3,498	13,779	6,861	9,042	2,405	1,729	NS	NA
North River (Unalakleet R.)	550	1,100	SEG	2005	NS	2,349	2,744	2,830	NS	898	NS	867	NS
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)	3,200		LB SEG	2005		24,395		16,490		14,403		10,257	
Nome River (even year)	13,000		LB SEG	2005	578,555		1,186,554		171,760		149,119		96,396
Kwiniuk River	8,400		LB SEG	2005	1,347,090	54,255	1,444,213	42,962	634,220	30,913	393,302	13,212	326,522
Niukluk River	10,500		LB SEG	2005	1,371,919	43,617	669,234	24,204	434,205	15,425	249,412	NA	NA
North River	25,000		LB SEG	2005	2,169,890	580,935	240,286	190,291	150,807	123,892	147,674	46,668	143,658
SOCKEYE SALMON													
<i>Kuskokwim Area</i>													
North (Main) Fork Goodnews River	5,500	19,500	SEG	2005	NS	NS	32,500	NS	NS	14,140	16,710	NS	NS
Middle Fork Goodnews River	18,000	40,000	BEG	2007	127,245	73,768	43,879	27,494	36,574	19,643	29,531	23,545	41,473
Kanektok River	14,000	34,000	SEG	2005	NS	NS	NS	NS	16,180	NS	NA	51,517	136,400
Kogruklu River	4,440	17,000	SEG	2010	61,382	17,211	19,675	22,826	17,139	7,974	NA	7,808	6,413
<i>Yukon River</i>													
There are no escapement goals for Sockeye in the Yukon River drainage.													

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Table 3.–Page 4 of 4.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Norton Sound</i>													
Salmon Lake/Grand Central River	4,000	8,000	SEG	2005	41,780	20,612	11,672	322	762	5,144	5,830	6,781	5,303
Glacial Lake	800	1,600	SEG	2005	5,810	1,505	540	169	154	NS	NS	1,366	2,330

Note: NA = data not available; NS = no survey; LB SEG = lower-bound SEG.

^a 2012 Chena River Chinook salmon escapement estimate includes an expansion for missed counting days based on 2 DIDSON sonars used to assess Chinook salmon passage.

^b 2011 Salcha River Chinook escapement is based on an aerial survey because high water prevented tower counting most of the season; therefore, aerial survey represents best estimate of escapement for the year.

^c Canadian Yukon River Mainstem Chinook salmon IMEG (Interim Management Escapement Goal) of 42,500–55,000 was implemented for the 2010–2015 seasons by the United States and Canada Yukon River Panel. Estimates from 2006–2014 represent escapement after subtraction of Canadian harvest.

^d 2006 Shaktoolik River survey is not considered complete as it was conducted well before peak spawn. Survey was rated as acceptable, but the observer noted difficulty enumerating Chinook salmon due to large numbers of pink salmon.

^e Bayesian estimate of drainagewide escapement for Yukon River fall chum salmon. This was the first year of reporting the Bayesian estimate. Bayesian estimates are higher than estimates using the former method because the Kantishna River component is included in the Bayesian analysis.

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

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

^h Fishing Branch River fall chum salmon IMEG of 22,000–49,000 was implemented for 2008–2013 by Yukon River Panel. Weir assessment project no longer operated after 2012; 2013 and 2014 rough estimates based on border sonar estimate minus community harvest assuming most fish migrate to Fishing Branch River.

ⁱ Yukon River Mainstem fall chum salmon IMEG of 70,000–104,000 was implemented for 2010–2015 seasons by Yukon River Panel.

^j Delta Clearwater River coho salmon 2010 escapement index is not a peak count.

^k Niukluk River coho salmon numbers (all years) are actual tower counts, and do not take into consideration upstream harvest.

Table 4.–Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2006 to 2014.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
CHINOOK SALMON													
AK Peninsula													
Nelson River	2,400	4,400	BEG	2004	2,516	2,492	5,012	2,048	2,769	1,704	1,192 ^a	1,421 ^a	3,801 ^a
Chignik													
Chignik River	1,300	2,700	BEG	2002	3,175	1,675	1,620	1,590	3,845	2,490	1,404	1,185	2,895 ^b
Kodiak													
Karluk River	3,000	6,000	BEG	2011	3,673	1,697	752	1,306	2,917	3,420	3,197 ^a	1,824 ^a	1,182 ^a
Ayakulik River	4,000	7,000	BEG	2011	2,937	6,232	3,071	2,615	5,197	4,251	4,556	2,304	789 ^b
CHUM SALMON													
AK Peninsula													
Northern District	119,600	239,200	SEG	2007	382,583	243,334	228,537	154,131	145,310	96,952	140,418	137,251	191,586
Northwestern District	100,000	215,000	SEG	2007	193,460	335,450	241,750	84,460	144,100	151,400	140,000	92,800	54,525
Southeastern District ^c	106,400	212,800	SEG	1992	405,300	201,451	277,450	106,500	62,612	145,300	31,072	184,350	82,300
South Central District	89,800	179,600	SEG	1992	119,600	126,000	140,450	18,600	85,600	169,000	86,190	155,050	95,000
Southwestern District	133,400	266,800	SEG	1992	231,935	398,010	171,250	385,730	142,650	176,425	87,230	163,200	130,745
Unimak District	eliminated			2013	7,915	1,200	2,800	1,400	1,050	7,000	750		
Chignik													
Entire Chignik Area	57,400		LB SEG	2008	93,489	238,216	197,259	214,959	177,220	278,145	210,973	335,907	101,378
Kodiak													
Mainland District	104,000		LB SEG	2008	346,140	82,600	72,000	91,106	124,500	128,700	127,850	107,400	80,961
Kodiak Archipelago Aggregate	151,000		LB SEG	2008	419,000 ^d	166,060 ^d	83,040	177,490	160,290	192,400	159,825	291,250	116,800
COHO SALMON													
AK Peninsula													
Nelson River	18,000		LB SEG	2004	19,000	19,000	24,000	22,000	15,000	21,000	19,160	22,000	25,000
Thin Point Lake	eliminated			2013	9,750	9,000	3,200	900	NA	200	1,500		
Ilulik River	9,000		LB SEG	2010	31,000	22,000	27,000	NA	19,600	22,000	14,800	13,000	33,000
Chignik													
There are no coho salmon stocks with escapement goals in Chignik Area													
Kodiak													
Pasagshak River	1,200		LB SEG	2011	937	1,896	3,875	2,385	1,971	1,083	3,132	1,648	4,934
Buskin River	4,700	9,600	BEG	2014	12,560	8,375	8,176	9,583	6,239	5,298	4,906	4,401	7,546 ^e
Olds River	1,000		LB SEG	2011	1,912	868	656	697	NA	1,003	624	2,145	1,320
American River	400		LB SEG	2011	2,033	307	700	639	NA	1,061	427	841	1,595

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Table 4.–Page 2 of 3.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
PINK SALMON													
AK Peninsula													
Bechevin Bay Section (odd year)	eliminated			2013		16,800		72,000		2,400			
Bechevin Bay Section (even year)	eliminated			2013	116,075		11,900		13,600		7,603		
South Peninsula Total (odd year)	1,637,800	3,275,700	SEG	2007		2,680,213		3,067,000		2,494,950		2,320,790	
South Peninsula Total (even year)	1,864,600	3,729,300	SEG	2007	2,862,250		3,338,370		742,912		478,910		1,340,380
Chignik													
Entire Chignik Area (odd year)	500,000	800,000	SEG	2008		1,237,528		869,063		986,248		863,991	
Entire Chignik Area (even year)	200,000	600,000	SEG	2008	356,425		863,031		330,570		302,699		235,159
Kodiak													
Mainland District	250,000	1,000,000	SEG	2011	778,200	315,300	236,500	430,100	265,650	273,500	413,325	620,480	254,650
Kodiak Archipelago (odd year)	2,000,000	5,000,000	SEG	2011		2,208,678		4,707,894		2,506,714		4,450,711	
Kodiak Archipelago (even year)	3,000,000	7,000,000	SEG	2011	5,086,372		2,924,708		3,378,483		5,111,049		2,733,282
SOCKEYE SALMON													
AK Peninsula													
Cinder River	12,000	48,000	SEG	2007	101,100	142,000	129,800	133,600	108,900	106,000	76,620	95,000	104,500
Ilnik River	40,000	60,000	SEG	1991	88,000	93,000	44,300	66,000	59,000	43,000	61,000	51,000	59,000
Meshik River ^f	25,000	100,000	SEG	2010	138,010	57,400	83,250	88,000	63,700	93,900	50,900	85,400	114,700
Sandy River	34,000	74,000	SEG	2007	48,000	44,700	32,200	36,000	37,000	37,500	27,100	42,000	59,000
Bear River Early Run	176,000	293,000	SEG	2004	262,995	206,233	125,526	216,237	226,534	207,451	173,158	219,074	259,046
Bear River Late Run	117,000	195,000	SEG	2004	182,005	224,767	195,474	133,263	142,966	132,549	116,442	196,926	206,954
Nelson River	97,000	219,000	BEG	2004	215,000	180,000	141,600	157,000	108,000	89,000	103,300	248,000	250,000
Christianson Lagoon	25,000	50,000	SEG	1980s	41,505	48,100	114,000	48,100	27,900	35,200	40,000	16,500	32,600
Swanson Lagoon	6,000	16,000	SEG	2007	376	9,200	5,500	1,000	1,700	1,000	3,500	3,000	1,500
North Creek	4,400	8,800	SEG	late 1980s	7,530	16,800	38,000	8,000	18,500	10,200	18,000	8,500	7,500
Orzinski Lake	15,000	20,000	SEG	1992	18,000	10,643	36,839	21,457	18,039	16,764	17,243	17,386	13,600
Mortensen Lagoon	3,200	6,400	SEG	late 1980s	14,688	6,200	5,600	25,000	6,600	500	5,000	4,000	500
Thin Point Lake	14,000	28,000	SEG	late 1980s	11,510	21,550	18,900	33,500	12,400	14,500	19,000	5,700	8,600
McLees Lake ^g	10,000	60,000	SEG	2010	12,936	21,428	8,661	10,120	32,842	36,602	15,111	15,687	12,424
Chignik													
Chignik River Early Run	350,000	450,000	SEG	2014	366,497	361,091	377,579	391,476	432,535	488,930	353,441	386,782	360,381
Chignik River Late Run ^h	200,000	400,000	SEG	2008	368,996	293,883	328,479	328,586	311,291	264,887	358,948	369,319	291,228

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Table 4.–Page 3 of 3.

System	2014 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2006	2007	2008	2009	2010	2011	2012	2013	2014
Kodiak													
Malina Creek	1,000	10,000	SEG	2005	6,400	1,900	3,690	1,400	4,000	3,800	4,100	3,800	4,900
Afognak (Litnik) River ⁱ	20,000	50,000	BEG	2005	22,933	21,070	26,874	31,358	52,255	49,193	41,553	42,153	34,561
Little River	eliminated			2014	3,500	8,500	2,300	1,500	3,200	3,900	6,300	17,600	
Uganik Lake	24,000		LB SEG	2008	26,700	35,000	64,700	53,700	30,700	37,900	22,200	26,000	14,000
Karluk River Early Run	110,000	250,000	BEG	2008	202,366	294,740	82,191	52,798	71,453	87,049	188,085	234,880	252,097
Karluk River Late Run	170,000	380,000	BEG	2005	288,007	251,835	164,299	277,280	276,649	230,273	314,605	336,479	403,969
Ayakulik River	eliminated			2011	87,780	283,042	162,888	315,184	262,327				
Ayakulik River Early Run	140,000	280,000	SEG	2011	59,315	169,596	96,912	200,648	201,933	177,480	213,501	214,969	210,040
Ayakulik River Late Run	60,000	120,000	SEG	2011	28,465	113,446	65,976	114,536	60,394	83,661	114,753	67,195	87,671
Upper Station River Early Run	25,000		OEG	1999	24,997	31,895	38,800	34,585	42,060	28,759	25,487	27,712	36,823
	43,000	93,000	BEG	2011									
Upper Station River Late Run	120,000	265,000	BEG	2005	153,153	149,709	184,856	161,736	141,139	101,893	149,325	125,573	181,411
Frazer Lake	75,000	170,000	BEG	2008	89,516	120,186	105,363	101,845	94,680	134,642	148,884	136,059	200,296
Saltery Lake ^j	15,000	35,000	BEG	2011	NA ^k	NA ^k	47,467	43,468	24,102	27,803	25,155	35,939	29,047
Pasagshak River	3,000		LB SEG	2011	6,300	14,300	14,900	1,400	4,800	8,100	2,600	9,750	NA
Buskin Lake	5,000	8,000	BEG	2011	17,734	16,502	5,900	7,757	9,800	11,982	8,565	16,189	13,976

Note: NA = data not available; LB SEG = lower-bound SEG.

^a Chinook salmon sport harvest is assumed to be zero as the fishery was closed to retention.

^b 2014 Chinook salmon escapement estimated for Chignik and Ayakulik rivers are preliminary and have not been adjusted for sport harvest because data from surveys and logbooks have not been compiled.

^c Southeastern District chum salmon escapement goal includes Shumagin Islands Section and Southeastern District Mainland.

^d Kodiak chum salmon aggregate goal did not exist prior to 2008 (district goals summed: NW, SW, Alitak, Eastside, NE).

^e Preliminary estimate. 2014 Statewide Harvest Survey data unavailable. Estimate based on Buskin River coho salmon weir count minus estimated sport harvest above weir (20% of average sport harvest from 2004–2013).

^f Meshik escapement includes Meshik River, Red Bluff Creek, and Yellow Bluff Creek. It does not include Highland or Charles creeks.

^g 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.

^h 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 from September 1–15 to ensure inriver harvest opportunities above the weir.

ⁱ Afognak (Litnik) River sockeye salmon escapement does not incorporate egg take removals.

^j Saltery Lake sockeye salmon escapements are weir counts minus fish removed for egg-takes.

^k Saltery Lake weir was not operated in 2006 and 2007. Peak aerial survey indices for those years were 28,000 (2006) and 17,200 (2007) fish.

Table 5.—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	2006	2007	2008	2009	2010	2011	2012	2013	2014
Chinook Salmon	Blossom River	Met	Under	Met	Under	Met	Under	Met ^a	Met	Met
	Keta River	Over	Met	Met	Under	Met	Under	Met ^a	Over	Over
	Unuk River	Met	Met	Met	Met ^b	Over	Met	Under	Under	Under
	Chickamin River	Over	Met	Over	Met	Over	Met	Under	Met	Met
	Andrew Creek	Over	Over	Met	Under	Met	Met	Under	Met	Met
	Stikine River	Met	Met	Met	Under	Met	Met	Met	Met	Met
	King Salmon River	Met	Met	Met	Under	Met	Met	Met	Under	Under
	Taku River	Met	Under	Under	Met ^a	Met	Met	Met	Under	Met
	Chilkat River	Met	Under	Met	Over	Met	Met	Under	Under	Under
	Klukshu (Alsek) River	Under	Under	Under	Met	Met	Met	Under	Over ^a	Met
	Alsek River								Met	Under
	Situk River	Met	Met	Under	Met	Under	Under	Under	Met	Met
Chum Salmon	Southern Southeast Summer				Under	Under	Met	Met ^c	Met	Under
	Northern Southeast Inside Summer				Under	Under	Under	Met ^c	Met	Under
	Northern Southeast Outside Summer				Under	Met	Met	Met	Under	Met
	Cholmondeley Sound Fall				Met	Over	Over	Over	Under	Met
	Port Camden Fall				Under	Met	Under	Met	Met	Met
	Security Bay Fall				Met	Met	Met	Met	Under	Met
	Excursion River Fall				Under	Met	Under	Under	Met	Met
	Chilkat River Fall				Over	Met	Over	Over	Met	Met
Coho Salmon	Hugh Smith Lake	Met	Over	Over	Over ^a	Over	Over	Over	Over	Over
	Klawock								Met	Met
	Taku River	Met	Met	Met	Met	Met	Met	Met	Under ^d	Met
	Auke Creek	Over	Met	Over	Met	Met	Over	Over	Over	Over
	Montana Creek	Met ^a	Under	Met	Met	Met	Met	Under	Under	Met
	Peterson Creek	Over ^a	Met	Over	Met	Over	Met	Met	Met	Over
	Ketchikan Survey Index	Met	Met	Over	Over	Met	Met	Over	Over	Over
	Sitka Survey Index	Over	Over	Over	Over	Over	Over	Over	Over	Over
	Ford Arm Lake	Over	Met	Over	Met	Met	Met	Met	Met	Over
	Berners River	Met	Under	Met	Met	Met	Met	Met	Met	Over
	Chilkat River	Over	Under	Met	Met	Over	Met	Met	Met	Over
	Lost River	Met	Met	NA	Met ^e	Met	Under	Met	Met	Met
	Situk River	Met	Met	NA	Met	Over	Met	Under	Over	Met
	Tsiu/Tsivat Rivers	Met	Met	Met	Met	Met	Met	Met	Over	Met

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Species	System	2006	2007	2008	2009	2010	2011	2012	2013	2014
Pink Salmon	Southern Southeast	Met	Over	Met	Met ^f	Met	Met	Met	Over	Over
	Northern Southeast Inside	Met	Met	Under	Met ^f	Met	Over	Under	Met	Under
	Northern Southeast Outside	Over	Over	Met	Met ^f	Met	Over	Met	Over	Over
	Situk River (even year)	Over		NA ^g		NA ^g				
	Situk River (odd year)		Over		Met		Met			
	Situk River							Under ^h	Met	Under
Sockeye Salmon	Hugh Smith Lake	Over	Over	Under	Met	Met	Over	Met	Under	Met
	McDonald Lake	Under ^a	Under	Under	Under ^a	Met	Met	Met	Under	Under
	Mainstem Stikine River	Met	Met	Under	Under	Met	Met	Met	Met	Met
	Tahltan Lake	Over	Met	Under	Over	Met	Over	Under	Under	Over
	Speel Lake	Met	Under	Under	Under	Met	Met	Met	Met	Met
	Taku River	Over	Over	Under	Met	Over	Over	Over	Met	Over
	Redoubt Lake	Over	Over	Met	Met	Met	Met	Over	Over	Met
	Chilkat Lake	Under	Under	Under	Over ^a	Under	Under	Met	Met	Met
	Chilkoot Lake	Over ^a	Met	Under	Under ^a	Met	Met	Over	Met	Over
	East Alsek-Doame River	Over	Over	Under	Under	Met	Over	Met	Over	Met
	Klukshu River	Met	Met	Under	Under	Over	Over	Over	Under ⁱ	Over
	Alsek River								^j	
	Lost River	Met	Under	Under	NA ^e	Met	Met	Under	Under	NA
	Situk River	Over	Met	Under	Over	Met	Over	Met	Over	Over

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

^a Escapement goal reevaluated, goal range changed.

^b Prior to 2009, goal was based on index count of escapements.

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

^d Management target revised.

^e Escapement goal reevaluated, upper-bound goal eliminated, lower-bound goal remained the same.

^f Expansion factor was removed from escapement estimates and escapement goal was reevaluated.

^g Situk River weir was pulled well before peak of pink salmon run; therefore, a valid assessment of whether the goal was met is not possible.

^h Escapement goal reevaluated, odd and even-year goals replaced by single goal, goal range changed to lower-bound goal.

ⁱ Escapement goal reevaluated, upper-bound goal changed.

^j Alsek River sockeye salmon run is not regularly assessed, so escapement numbers are not available. Alsek River sockeye salmon are managed to meet Klukshu River escapement goal.

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 Central Region (Bristol Bay, Cook Inlet, and Prince William Sound/Copper River).

Species	System	2006	2007	2008	2009	2010	2011	2012	2013	2014
Chinook salmon	<i>Bristol Bay</i>									
	Nushagak River	Over	Met ^a	Over	Met	Met	Met	Over	Met ^b	Met
	Togiak River	NS	NS ^c	NS	NS	NS	NS	NS	eliminated	
	Naknek River	NS	Met ^c	Met	Under	NS	NS	NS	NS	NS
	Alagnak River		Met	Under	Under	NS	NS	NS	NS	NS
	Egegik River		Met	Under	Under	NS	NS	NS	eliminated	
	<i>Upper Cook Inlet</i>									
	Alexander Creek	Under	Under	Under	Under	Under	Under	Under	Under	Under
	Campbell Creek					Met ^d	Met	Met	Under	NS
	Chuitna River	Met	Under	Under	Under	Under	Under	Under	Met	Met
	Chulitna River	Met	Over	Met	Met	Under	Met	Under	Under	Under
	Clear (Chunilna) Creek	Met	Met	Met	Met	Under	Under	Met	Met	Met
	Crooked Creek	Met	Met	Met	Under	Met	Met	Under	Met	Met
	Deshka River	Over	Met	Under	Under	Met	Met	Met	Met	Met
	Goose Creek	Met	Under	Under	Under	Under	Under	Under	Under	Under
	Kenai River - Early Run	Over	Over	Over	Over	NA ^e	NA ^e	NA ^e	Under ^f	Met
	Kenai River - Late Run	Met	Met	Met	Under	NA ^e	NA ^e	NA ^e	Met ^f	Met
	Lake Creek	Met	Met	Under	Under	Under	Met	Under	Met	Met
	Lewis River	Met	Under	Under	Under	Under	Under	Under	Under	Under
	Little Susitna River	Over	Met	Met	Met	Under	Under	Met	Met	Met
	Little Willow Creek	Met	Met	NC	Met	Met	Met	Met	Met	Met
	Montana Creek	Met	Met	Met	Met	Under	Under	Under	Met	Under
	Peters Creek	Met	Met	NC	Met	NC	Met	Under	Met	Met
	Prairie Creek	Met	Met	Under	Met	Under	Under	Under	Met	Under
	Sheep Creek	Under	Under	NC	Under	NC	Under	Under	NC	Under
	Talachulitna River	Over	Met	Met	Met	Under	Under	Under	Met	Met
	Theodore River	Met	Under	Under	Under	Under	Under	Under	Under	Under
	Willow Creek	Met	Under	Under	Under	Under	Under	Under	Met	Under
	<i>Lower Cook Inlet</i>									
	Anchor River					Met	Under	Under	Under ^g	Met
	Deep Creek	Met	Met	Under	Met	Met	Met	Met	Met	Met
	Ninilchik River	Met	Met	Met ^h	Under	Met	Met	Met	Met	Met
	<i>Prince William Sound</i>									
	Copper River	Met	Met	Met	Met	Under	Met	Met	Met	NA
Chum salmon	<i>Bristol Bay</i>									
	Nushagak River		Under	Met	Met	Met	Met	Met	Met ^b	Met

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Table 6.–Page 2 of 5.

Species	System	2006	2007	2008	2009	2010	2011	2012	2013	2014
33	<i>Upper Cook Inlet</i>									
	Clearwater Creek	Met	NS	Met	Met	Over	Over	Met	Over	Under
	<i>Lower Cook Inlet</i>									
	Port Graham River	Met	Met	Met	Under	Under	Met	Under	Met	Met
	Dogfish Lagoon	Met	Met	Met	Met	Over	Over	Met	Over	Over
	Rocky River	Over	Met	Met	Met	Met	Met	Met	Over	Over
	Port Dick Creek	Met	Met	Over	Over	Met	Over	Over	Met	Under
	Island Creek	Under	Under	Met	Met	Under	Met	Met	Met	Under
	Big Kamishak River	Over	Met	Under	Met	NS	Under	Met	Under	Under
	Little Kamishak River	Over	Met	Met	Under	Met	Met	Over	Met	Met
	McNeil River	Met	Met	Under ⁱ	Under	Under	Met	Under	Under	Under
	Bruin River	Met	Under	Over	Met	Met	Under	Over	Met	Under
	Ursus Cove	Over	Over	Met	Over	Over	Over	Under	Over	Under
	Cottonwood Creek	Over	Over	Met	Over	Over	Under	Under	Under	Met
	Iniskin Bay	Over	Under	Over	Over	Over	Under	Under	Under	Met
	<i>Prince William Sound</i>									
	Eastern District	Met ^j	Met	Met	Met	Met	Met	Met	Met	Met
	Northern District	Met ^j	Met	Met	Met	Met	Met	Met	Met	Met
	Coghill District	Met ^j	Met	Met	Met	Met	Met	Met	Met	Met
	Northwestern District	Met ^j	Met	Met	Met	Met	Met	Met	Under	Met
	Southeastern District	Met ^j	Met	Met	Met	Met	Met	Met	Met	Met
Coho salmon	<i>Bristol Bay</i>									
	Nushagak River								Over	Over
	<i>Upper Cook Inlet</i>									
	Fish Creek (Knik)						Met ^d	Met	Over	Over
	Jim Creek	Over	Over	Over	Over	Under	Under	Under	Over	Under ^k
	Little Susitna River	NA	Met	Over	Under	Under	Under	Under	Met	Over
	<i>Prince William Sound</i>									
Pink salmon	Copper River Delta	Over	Met	Over	Met	Met	Met	Met	Met	Met
	Bering River	Over	Over	Met	Met	Met	Met	Met	Met	Met
	<i>Bristol Bay</i>									
	Nushagak River								NA	Met
	<i>Lower Cook Inlet</i>									
	Humpy Creek	Met	Met	Over	Under	Met	Under	Met	Under	Met
	China Poot Creek	Met	Met	Met	Under	Under	Met	Over	Met	Under
	Tutka Creek	Over	Under	Met	Under	Under	Over	Met	Met	Met

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Table 6.–Page 3 of 5.

Species	System	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Barabara Creek	Met	Over	Over	Met	Over	Over	Under	Over	Met
	Seldovia Creek	Over	Over	Over	Under	Met	Over	Over	Met	Met
	Port Graham River	Over	Over	Over	Met	Met	Over	Over	Met	Over
	Dogfish Lagoon Creeks									Over
	Port Chatham	Over	Met	Met	Over	Under	Met	Under	Over	Met
	Windy Creek Right	Over	Over	Over	Over	Met	Under	Met	Over	Met
	Windy Creek Left	Over	Met	Over	Over	Met	Met	Met	Over	Met
	Rocky River	Over	Over	Over	Over	Met	Met	Met	Over	Met
	Port Dick Creek	Met	Met	Met	Met	Met	Under	Under	Met	Met
	Island Creek	Over	Over	Over	Over	Over	Met	Met	Met	Over
	S. Nuka Island Creek	Met	Met	Met	Over	NS	NS	Under	Met	Met
	Desire Lake Creek	Over	Met	Met	Over	Met	Under	Met	Over	Under
	Bear & Salmon Creeks	Met	NS	NS	NS	NS	eliminated			
	Thumb Cove	Met	NS	NS	NS	NS	eliminated			
	Humpy Cove	Met	NS	NS	NS	NS	eliminated			
	Tonsina Creek	Over	NS	NS	NS	NS	eliminated			
	Bruin River	Over	Over	Met	Over	Met	Under	Met	Under	Met
	Sunday Creek	Over	Over	Met	Over	Met	Under	Under	Met	Met
	Brown's Peak Creek	Over	Over	Met	Over	Met	Under	Met	Met	Met
	<i>Prince William Sound</i>									
	All Districts Combined (even year)	Under		Under		Met		eliminated		
	All Districts Combined (odd year)		Met		Met		Over	eliminated		
	Eastern District (even year)							Met		Met
	Eastern District (odd year)								Over	
	Northern District (even year)							Under		Under
	Northern District (odd year)								Over	
	Coghill District (even year)							Over		Met
	Coghill District (odd year)								Over	
	Northwestern District (even year)							Met		Under
	Northwestern District (odd year)								Over	
	Eshamy District (even year)							Under		Over
	Eshamy District (odd year)								Over	
	Southwestern District (even year)							Met		Met
	Southwestern District (odd year)								Over	
	Montague District (even year)							Met		Under
	Montague District (odd year)								Over	
	Southeastern District (even year)							Met		Met
	Southeastern District (odd year)								Over	

-continued-

Table 6.–Page 4 of 5.

Species	System	2006	2007	2008	2009	2010	2011	2012	2013	2014
Sockeye salmon	<i>Bristol Bay</i>									
	Kvichak River	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Alagnak River	Over	Met ^l	Met	Met	Met	Met	Met	Met	NS
	Naknek River	Over	Over	Over	Met	Over	Met	Met	Met	Over
	Egegik River	Over	Over	Met	Met	Met	Met	Met	Met	Met
	Ugashik River	Met	Over	Met	Over	Met	Met	Met	Met	Met
	Wood River	Over	Over	Over	Met	Over	Met	Met	Met	Over
	Igushik River	Over	Over	Over	Over	Over	Over	Met	Over	Over
	Nushagak River	Met	Met	Met	Met	Met	Met	Met	Over ^b	Met
	Kulukak Bay	NS	NS	NS	NS	NS	NS	NS	eliminated	
	Togiak River	Over	Met ^m	Met	Over	Met ⁿ	Met	Met	Met	Met
	<i>Upper Cook Inlet</i>									
	Crescent River	Over	Over	Met	NS	Over	Over	Met	NS	eliminated
	Fish Creek (Knik)	Met	Met	Under	Over	Over	Met	Under	Under	Met
	Kasilof River	Over	Over	Over	Over	Met	Met	Met	Over	Over
	Kenai River	Over	Met	Under	Under	Met	Met	Met	Met	Met
	Packers Creek					Met ^d	Met	NS	NS	NS
	Russian River - Early Run	Over	Met	Met	Over	Met	Met	Met	Met	Over
	Russian River - Late Run	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Yentna River	Met	Under	Met						
	Chelatna Lake				Under	Met	Over	Met	Over	Met
	Judd Lake				Met	Under	Met	Under	Under	Under
	Larson Lake				Met	Met	Under	Met	Met	Under
	<i>Lower Cook Inlet</i>									
	English Bay	Over	Over	Met	Over	Met	Met	Under	Met	Met
	Delight Lake	Met	Over	Over	Over	Over	Over	Met	Under	Over
	Desire Lake	Over	Met	Met	Over	Under	Met	Met	Under	Met
	Bear Lake	Over	Over	Over	Over	Over	Over	Met	Over	Over
	Aialik Lake	Met	Met	Met	Under	Met	Under	Under	Under	NA
	Mikfik Lake	Over	Met	Under	Over	Met	Under	Under	Under	Over ^f
	Chenik Lake	Over	Over	Over	Over	Over	Met	Over	Met	Over
	Amakdedori Creek	Under	Over	Over	Met	Under	Over	Under	Met	Over
	<i>Prince William Sound</i>									
	Upper Copper River	Over	Over	Met	Met	Over	Over	Over ^m	Over	NA
	Copper River Delta	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Bering River	Under	Met	Under	Under	Under	Met	Met ^m	Met	Under
	Coghill Lake	Met ⁿ	Over	Met	Under	Met	Over	Over ^m	Under	Met
	Eshamy Lake	Over	Under	Under	Met ^m	Met	Met	NA	NA	NA

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Table 6.–Page 5 of 5.

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.

^a Escapement goal reevaluated, point goal changed to a range.

^b Escapement goal reevaluated, historic escapements converted from Bendix counts to DIDSON equivalents. Escapements in Table 2 are based on DIDSON counts.

^c Escapement goal reevaluated, point goal changed to a lower-bound goal.

^d Previous escapement goal reinstated.

^e Target strength based escapement estimate deemed unreliable or not available.

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

^g Escapement goal reevaluated, lower-bound goal changed to a range.

^h Escapement goal reevaluated, current goal based on escapement count over longer period during spawning season, escapement numbers in Table 2 are based on longer counting time.

ⁱ Escapement goal reevaluated, escapement goal in place prior to 2002 was reinstated. Escapement goal in place from 2002 to 2007 was based on escapement estimates using a different aerial survey index expansion method (Otis and Szarzi 2007).

^j Escapement goal reevaluated, upper-bound goal eliminated, lower-bound goal remained the same.

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

^l Escapement goal reevaluated, goal range changed to a lower-bound goal.

^m Escapement goal reevaluated, goal range changed.

ⁿ Escapement goal reevaluated, goal type changed but goal range remained the same.

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 Arctic-Yukon-Kuskokwim Region.

Species	System	2006	2007	2008	2009	2010	2011	2012	2013	2014
Chinook salmon	<i>Kuskokwim Area</i>									
	North (Main) Fork Goodnews River	NS	NS	Met	NS	NS	Met	Under	NS	Under
	Middle Fork Goodnews River	Over	Over ^a	Met	Met	Met	Met	Under	Under	Under
	Kanektok River	NS	NS	NS	NS	Under	NS	NS	Under	Under
	Kuskokwim Area (entire area)								Under	Over
	Kogruklu River	Over	NA	Met	Met	Met	Met	NA	Under ^a	Under
	Kwethluk River	NA	Over ^b	Under	Under	Under	Under	NA	Under ^a	Under
	Tuluksak River		Under	Under	Under	Under	Under	Under	eliminated	
	George River		Met	Under	Met	Under	Under	Under	Under ^a	Met
	Kisaralik River	Over	Met	Met	NS	Under	NS	Met	Met	Met
	Aniak River	Over	Over	Over	NS	NS	NS	NS	Under	Over
	Salmon River (Aniak R)	NS	Over	Met	NS	NS	Under	Under	Under	Met
	Holitna River	Over	NS	NS	NS	NS	NS	NS	Under	NS
	Cheeneetnuk River (Stony R)	Met	NS	Under	Under	NS	Under	Under	Under	Met
	Gagaryah River (Stony R)	Met	Over	Under	Met	Under	Under	Under	Under	Met
	Salmon River (Pitka Fork)	Met	Met	Met	Met	Under	Met	Met	Under	Over
	<i>Yukon River</i>									
	East Fork Andreafsky River	Under	Over	Under	Under	Met ^b	Over	Met	Under	Over
	West Fork Andreafsky River	Met	Met	NS	Over	Met	Met	NS	Met	Over
	Anvik River	Over	Met	Under	Under	Under	Under	Under	Under	Met
	Nulato River (forks combined)	Met	Over	Under	Over	Under	Met	Met	Met	NS
	Gisasa River	Met	Met	Met	Met	eliminated				
	Chena River	Met	Met	Met	Met	Under	NS	Under	Under	Met
	Salcha River	Over	Met	Met	Over	Met	Over	Over	Met	NS
	Canada Mainstem	Met	Met ^c	Under ^c	Met	Under ^c	Met	Under	Under	Over
	<i>Norton Sound</i>									
	Fish River/Boston Creek	NS	NS	NS	NS	NS	NS	NS	Under	NS
	Kwiniuk River	Under	Under	Under	Met	Under	Under	Under	Under	Met
	North River (Unalakleet R)	Under	Met	Under	Met	Met	Under	Under	Under	Met
	Shaktoolik River	Under	Met	NS	NS	NS	Under	NS	eliminated	
	Unalakleet/Old Woman River	NS	Met	NS	Over	NS	Under	NS	NS	NS
Chum salmon	<i>Kuskokwim Area</i>									
	Middle Fork Goodnews River	Met	Met	Met	Met	Met	Met	Under	Met	Under
	Kanektok River	NS	NS	NS	NS	NS	NS	NA	eliminated	
	Kogruklu River	Over	Over	Met	Over	Over	Over	NA	Over	Met

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Table 7.–Page 2 of 3.

Species	System	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Aniak River	Over	Over ^d	Met	Met	Met	Met	NS	NA	NA
	<i>Yukon River Summer Chum</i>									
	East Fork Andreafsky River	Met	Met	Under	Under	Met ^c	Met	Met	Met	Under
	Anvik River	Met	Met	Met	Under	Met	Met	Met	Met	Met
	<i>Yukon River Fall Chum</i>									
	Yukon River Drainage	Over	Over	Met	Met	Met ^f	Over	Met	Over	Over
	Tanana River	Over	Over	Over	Over	Over	Over	Met	Over	Over
	Delta River	Over	Over	Over	Met	Over	Over	Met	Over	Over
	Toklat River	NA	NA	NA	NA	eliminated				
	Upper Yukon River Tributaries	Over	Over	Met	NA	Met	Over	Over	Over	Met
	Chandalar River	Over	Over	Over	NA	Over	Over	Over	Over	Over
	Sheenjek River	Over	Met	Met	Met	Under	Met	Over	Over	Met
	Fishing Branch River (Canada)	Under	Under	Under ^c	Met	Under	Under	Met	Met	Under
	Yukon R. Mainstem (Canada)	Met	Met	Met	Met	Over ^c	Over	Over	Over	Over
	<i>Norton Sound</i>									
	Subdistrict 1 Aggregate	Over	Over	Met	Under	Over	Over	Over	Over	Over
	Sinuk River	Met	Over	NS	Under	eliminated				
	Nome River	Over	Over	Under	Under	Over	Met	Under	Over	Over
	Bonanza River	Under	Over	NS	Over	eliminated				
	Snake River	Over	Over	Under	Under	Over	Over	Under	Over	Over
	Solomon River	Over	Over	NS	Under	eliminated				
	Flambeau River	Over	Over	Over	Under	eliminated				
	Eldorado River	Over	Over	Met	Under	Over	Over	Over	Over	Over
	Niukluk River	Under	Met	Under	Under	Met ^a	Met	Under	NS	NA
	Kwiniuk River	Over	Over	Under	Under	Over	Over	Under	Under	Over
	Tubutulik River	NS	Under	NS	Under	Met	Met	NS	NS	NS
	Unalakleet/Old Woman River	NS	Under	NS	NS	NS	NS	NS	Met	NS
	<i>Kotzebue Sound</i>									
	Kotzebue Sound Aggregate									
	Noatak and Eli Rivers	Under	NS ^a	Over	Met	NS	NS	NS	NS	Over
	Upper Kobuk w/ Selby River	Over	NS ^a	Over	Over	NS	NS	NS	NS	Over
	Salmon River	NS	NS ^a	NS	NS	NS	NS	NS	NS	NS
	Tutuksuk River	NS	NS ^a	NS	NS	NS	NS	NS	NS	NS
	Squirrel River	NS	NS ^a	NS	NS	NS	NS	NS	NS	NS
Coho salmon	<i>Kuskokwim Area</i>									
	Middle Fork Goodnews River	Met	Met	Met	Met	Met	Met	NA	NA	NA
	Kogruklu River	Met	Met	Over	Met	Met	Met	Met	Met	Over

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Table 7.–Page 3 of 3.

Species	System	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Kwethluk River					NA	NA	Met	NA	Met
	<i>Yukon River</i>									
	Delta Clearwater River	Met	Met	Met	Met	Met	Met	Met	Met	Under
	<i>Norton Sound</i>									
	Kwiniuk River	NS	Over	Over	NS	Over	Over	NS	NS	NS
	Niukluk River	NS	Met ^g	Over	Over	Over ^a	Met	Under	NS	NA
	North River (Unalakleet R.)	NS	Over	Over	Over	NS	Met	NS	Met	NS
Pink salmon	<i>Norton Sound</i>									
	Nome River (odd year)		Met		Met		Met		Met	
	Nome River (even year)	Met		Met		Met		Met		Met
	Kwiniuk River	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Niukluk River	Met	Met	Met	Met	Met	Met	Met	NA	NA
	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	NS	NS	Met	Met	NS	NS
	Middle Fork Goodnews River	Over	Over ^a	Over	Met	Met	Under	Met	Met	Over
	Kanektok River	NS	NS	NS	NS	Met	NS	NA	Over	Over
	Kogruklu River					Met	Met	NA	Met	Met
	<i>Norton Sound</i>									
	Salmon Lake/Grand Central River	Over	Over	Over	Under	Under	Met	Met	Met	Met
	Glacial Lake	Over	Met	Under	Under	Under	NS	NS	Met	Over

Note: NA = data not available; NS = no survey; ND = not determined yet. There are no escapement goals for pink salmon in Kuskokwim Area and Yukon River and there are no escapement goals for sockeye salmon in Yukon River.

^a Escapement goal reevaluated, goal value changed.

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

^c Escapement goal revised by The United States and Canada Yukon River Panel.

^d Previous escapement goal was based on Bendix and Biosonics sonar counts, replaced with escapement goal based on DIDSON sonar counts. Escapements in Table 3 are in DIDSON units (see Molyneux & Brannan 2006).

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

^f Escapement goal reevaluated, goal type changed but goal value remained the same.

^g Prior to 2007 escapement goal was based on escapements enumerated by aerial surveys of Niukluk and Ophir rivers. Escapements in Table 3 are weir counts.

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 Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas).

Species	System	2006	2007	2008	2009	2010	2011	2012	2013	2014
Chinook salmon	<i>AK Peninsula</i>									
	Nelson River	Met	Met	Over	Under	Met	Under	Under	Under	Met
	<i>Chignik</i>									
	Chignik River	Over	Met	Met	Met	Over	Met	Met	Under	Over
	<i>Kodiak</i>									
	Karluk River	Met	Under	Under	Under	Under	Met ^a	Met	Under	Under
	Ayakulik River	Under	Met	Under	Under	Met	Met ^a	Met	Under	Under
Chum salmon	<i>AK Peninsula</i>									
	Northern District	Over	Over ^b	Met	Met	Met	Under	Met	Met	Met
	Northwestern District	Met	Over ^b	Over	Under	Met	Met	Met	Under	Under
	Southeastern District	Over	Met	Over	Met	Under	Met	Met	Met	Under
	South Central District	Met	Met	Met	Under	Under	Met	Under	Met	Met
	Southwestern District	Met	Over	Met	Over	Met	Met	Under	Met	Under
	Unimak District	Met	Met ^c	Met	Met	Met	Met	Under	eliminated	
	<i>Chignik</i>									
	Entire Chignik Area			Met ^d	Met	Met	Met	Met	Met	Met
	<i>Kodiak</i>									
	Mainland District	Met	Under	Under ^c	Under	Met	Met	Met	Met	Under
	Kodiak Archipelago Aggregate			Under ^d	Met	Met	Met	Met	Met	Under
Coho salmon	<i>AK Peninsula</i>									
	Nelson River	Met	Met	Met	Met	Under	Met	Met	Met	Met
	Thin Point Lake	Met	Met	Met	Under	NA	Under	Under	eliminated	
	Ilnik River					Met ^f	Met	Met	Met	Met
	<i>Kodiak</i>									
	Pasagshak River	Under	Met	Over	Met	Met	Under ^c	Met	Met	Met
	Buskin River	Over	Over	Over	Over	Met	Met	Met	Met	Met ^a
	Olds River	Met	Under	Under	Under	NA	Met ^c	Under	Met	Met
	American River	Over	Under	Met	Met	NA	Met ^c	Met	Met	Met
Pink salmon	<i>AK Peninsula</i>									
	Bechevin Bay Section (odd year)		Met		Met		Met		eliminated	
	Bechevin Bay Section (even year)	Met		Under		Under		Under	eliminated	
	South Peninsula Total (odd year)		Met ^b		Met		Met		Met	
	South Peninsula Total (even year)	Met	^b	Met		Under		Under		Under

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Table 8.–Page 2 of 3.

Species	System	2006	2007	2008	2009	2010	2011	2012	2013	2014
Sockeye salmon	<i>Chignik</i>									
	Entire Chignik Area (odd year)		Over	^a	Over		Over		Over	
	Entire Chignik Area (even year)	Met		Over ^a		Met		Met		Met
	<i>Kodiak</i>									
	Mainland District	Over	Met	Under	Met	Met	Met ^g	Met	Met	Met
	Kodiak Archipelago (odd year)		Met		Met		Met ^h		Met	
	Kodiak Archipelago (even year)	Over		Met		Met	^h	Met		Under
	<i>AK Peninsula</i>									
	Cinder River	Over	Over ^a	Over	Over	Over	Over	Over	Over	Over
	Ilnik River	Over	Over	Met	Over	Met	Met	Over	Met	Met
	Meshik River	Over	Met ^a	Over	Over	Met ^a	Met	Met	Met	Over
	Sandy River	Met	Met ^a	Under	Met	Met	Met	Under	Met	Met
	Bear River Early Run	Met	Met	Under	Met	Met	Met	Under	Met	Met
	Bear River Late Run	Met	Over	Over	Met	Met	Met	Under	Over	Over
	Nelson River	Met	Met	Met	Met	Met	Under	Met	Over	Over
	Christianson Lagoon	Met	Met	Over	Met	Met	Met	Met	Under	Met
	Swanson Lagoon	Under	Met ^a	Under	Under	Under	Under	Met	Under	Under
	North Creek	Met	Over	Over	Met	Over	Over	Over	Met	Met
	Orzinski Lake	Met	Under	Over	Over	Met	Met	Met	Met	Under
	Mortensen Lagoon	Over	Met	Met	Over	Over	Under	Met	Met	Under
	Thin Point Lake	Under	Met	Met	Over	Under	Met	Met	Under	Under
	McLees Lake					Met ^f	Met	Met	Met	Met
	<i>Chignik</i>									
	Chignik River Early Run	Met	Met	Met	Met	Over	Over	Met	Met	Met ⁱ
	Chignik River Late Run	Over	Over	Met ^a	Met	Met	Met	Met	Met	Met
	<i>Kodiak</i>									
	Malina Creek	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Afognak (Litnik) River	Met	Met	Met	Met	Over	Met	Met	Met	Met
	Little River			Under ^j	Under	Met	Met	Met	Met	eliminated
	Uganik Lake			Met ^j	Met	Met	Met	Under	Met	Under
	Karluk River Early Run	Met	Over	Under ^a	Under	Under	Under	Met	Met	Over
	Karluk River Late Run	Met	Met	Under	Met	Met	Met	Met	Met	Over
	Ayakulik River	Under	Met	Under	Met	Met	eliminated			
	Ayakulik River Early Run						Met ^k	Met	Met	Met
	Ayakulik River Late Run						Met ^k	Met	Met	Met
	Upper Station River Early Run	Under	Met	Met	Met	Met	Met	Met	Met	Met
	Upper Station River Late Run	Met	Met	Met	Met	Met	Under	Met	Met	Met

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Table 8.–Page 3 of 3.

Species	System	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Frazer Lake	Met	Met	Met ^a	Met	Met	Met	Met	Met	Over
	Saltery Lake	NA	NA	Over	Over	Met	Met ^g	Met	Over	Met
	Pasagshak River	Met	Over	Over	Under	Met	Met ^c	Met	Met	NA
	Buskin Lake	Over	Over	Under	Under	Met	Over ^l	Over	Over	Over

Note: There are no coho salmon escapement goals in Chignik Area.

^a Escapement goal reevaluated, goal range changed.

^b Escapement goal reevaluated, goal type changed but goal range remained the same.

^c Escapement goal reevaluated, upper-bound goal eliminated, lower-bound goal remained the same.

^d Aggregate goal established to replace individual district level goals.

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

^f Goal reestablished. New analysis.

^g Escapement goal reevaluated, upper-bound goal changed.

^h Single escapement goal was separated into odd- and even-year escapement goals.

^g Escapement goal reevaluated, upper-bound goal changed.

^j Previous escapement goal reestablished.

^k Single escapement goal was changed to separate early- and late-run escapement goals.

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

Table 9.—Southeast Region Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2006 to 2014.

	2006	2007	2008	2009	2010	2011	2012	2013	2014
CHINOOK SALMON									
Number Below	1	4	3	5	1	3	6	4	4
Number Met	7	6	7	5	8	8	5	6	7
Number Above	3	1	1	1	2	0	0	2	1
% Below	9	36	27	45	9	27	55	33	33
% Met	64	55	64	45	73	73	45	50	58
% Above	27	9	9	9	18	0	0	17	8
CHUM SALMON									
Number Below				5	2	3	1	3	2
Number Met				2	5	3	5	5	6
Number Above				1	1	2	2	0	0
% Below				63	25	38	13	38	25
% Met				25	63	38	63	63	75
% Above				13	13	25	25	0	0
COHO SALMON									
Number Below	0	3	0	0	0	1	2	2	0
Number Met	8	8	5	10	8	9	7	6	6
Number Above	5	2	6	3	5	3	4	6	8
% Below	0	23	0	0	0	8	15	14	0
% Met	62	62	45	77	62	69	54	43	43
% Above	38	15	55	23	38	23	31	43	57
PINK SALMON									
Number Below	0	0	1	0	0	0	2	0	2
Number Met	2	1	2	4	3	2	2	2	0
Number Above	2	3	0	0	0	2	0	2	2
% Below	0	0	33	0	0	0	50	0	50
% Met	50	25	67	100	100	50	50	50	0
% Above	50	75	0	0	0	50	0	50	50
SOCKEYE SALMON									
Number Below	2	4	12	6	1	1	2	5	1
Number Met	4	5	1	3	10	6	7	5	6
Number Above	7	4	0	3	2	6	4	3	5
% Below	15	31	92	50	8	8	15	38	8
% Met	31	38	8	25	77	46	54	38	50
% Above	54	31	0	25	15	46	31	23	42

Note: Blank cells indicate that there were no official escapement goals for that species in those particular years.

Table 10.–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 2006 to 2014.

	2006	2007	2008	2009	2010	2011	2012	2013	2014
CHINOOK SALMON									
Number Below	2	7	12	16	15	14	14	6	11
Number Met	17	18	12	12	7	10	8	18	14
Number Above	5	2	2	1	0	0	1	0	0
% Below	8	26	46	55	68	58	61	25	44
% Met	71	67	46	41	32	42	35	75	56
% Above	21	7	8	3	0	0	4	0	0
CHUM SALMON									
Number Below	1	4	2	3	3	4	5	5	7
Number Met	11	12	14	12	10	11	11	10	10
Number Above	6	2	3	4	5	4	3	4	2
% Below	6	22	11	16	17	21	26	26	37
% Met	61	67	74	63	56	58	58	53	53
% Above	33	11	16	21	28	21	16	21	11
COHO SALMON									
Number Below	0	0	0	1	2	2	2	0	1
Number Met	0	2	1	2	2	3	3	3	2
Number Above	3	2	3	1	0	0	0	3	3
% Below	0	0	0	25	50	40	40	0	17
% Met	0	50	25	50	50	60	60	50	33
% Above	100	50	75	25	0	0	0	50	50
PINK SALMON									
Number Below	1	1	1	4	3	7	7	2	5
Number Met	8	8	9	4	12	5	14	9	18
Number Above	13	9	8	10	2	5	4	14	4
% Below	5	6	6	22	18	41	28	8	19
% Met	36	44	50	22	71	29	56	36	67
% Above	59	50	44	56	12	29	16	56	15
SOCKEYE SALMON									
Number Below	2	2	5	5	4	3	6	7	3
Number Met	10	13	17	14	18	20	21	16	14
Number Above	17	14	8	12	9	8	3	6	10
% Below	7	7	17	16	13	10	20	24	11
% Met	34	45	57	45	58	65	70	55	52
% Above	59	48	27	39	29	26	10	21	37

Table 11.—Arctic-Yukon-Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2006 to 2014.

	2006	2007	2008	2009	2010	2011	2012	2013	2014
CHINOOK SALMON									
Number Below	4	2	11	5	12	11	12	19	5
Number Met	8	12	9	10	6	7	4	4	9
Number Above	7	7	1	4	0	2	1	0	6
% Below	21	10	52	26	67	55	71	83	25
% Met	42	57	43	53	33	35	24	17	45
% Above	37	33	5	21	0	10	6	0	30
SUMMER CHUM SALMON									
Number Below	3	2	4	10	0	0	5	1	1
Number Met	2	2	5	3	4	5	0	2	1
Number Above	10	11	3	3	6	5	2	5	7
% Below	20	13	33	63	0	0	71	13	11
% Met	13	13	42	19	40	50	0	25	11
% Above	67	73	25	19	60	50	29	63	78
YUKON RIVER SUMMER CHUM SALMON									
Number Below	0	0	1	2	0	0	0	0	1
Number Met	2	2	1	0	2	2	2	2	1
Number Above	0	0	0	0	0	0	0	0	0
% Below	0	0	50	100	0	0	0	0	50
% Met	100	100	50	0	100	100	100	100	50
% Above	0	0	0	0	0	0	0	0	0
YUKON RIVER FALL CHUM SALMON									
Number Below	1	1	1	0	2	1	0	0	1
Number Met	1	2	4	5	2	1	4	1	2
Number Above	6	5	3	1	4	6	4	7	5
% Below	13	13	13	0	25	13	0	0	13
% Met	13	25	50	83	25	13	50	13	25
% Above	75	63	38	17	50	75	50	88	63
COHO SALMON									
Number Below	0	0	0	0	0	0	1	0	1
Number Met	3	4	2	3	3	5	3	3	1
Number Above	0	2	4	2	2	1	0	0	1
% Below	0	0	0	0	0	0	25	0	33
% Met	100	67	33	60	60	83	75	100	33
% Above	0	33	67	40	40	17	0	0	33

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	2006	2007	2008	2009	2010	2011	2012	2013	2014
PINK SALMON									
Number Below	0	0	0	0	0	0	0	0	0
Number Met	4	4	4	4	4	4	4	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	1	2	2	1	0	0	0
Number Met	0	1	0	1	3	3	3	4	2
Number Above	3	2	3	0	0	0	0	1	3
% Below	0	0	25	67	40	25	0	0	0
% Met	0	33	0	33	60	75	100	80	40
% Above	100	67	75	0	0	0	0	20	60

Table 12.–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 2006 to 2014.

	2006	2007	2008	2009	2010	2011	2012	2013	2014
CHINOOK SALMON									
Number Below	1	1	2	3	1	1	1	4	2
Number Met	2	3	1	1	2	3	3	0	1
Number Above	1	0	1	0	1	0	0	0	1
% Below	25	25	50	75	25	25	25	100	50
% Met	50	75	25	25	50	75	75	0	25
% Above	25	0	25	0	25	0	0	0	25
CHUM SALMON									
Number Below	0	1	2	3	2	1	3	1	5
Number Met	5	3	5	5	7	8	6	7	3
Number Above	2	3	2	1	0	0	0	0	0
% Below	0	14	22	33	22	11	33	13	63
% Met	71	43	56	56	78	89	67	88	38
% Above	29	43	22	11	0	0	0	0	0
COHO SALMON									
Number Below	1	2	1	2	1	2	2	0	0
Number Met	3	3	3	3	3	5	5	6	6
Number Above	2	1	2	1	0	0	0	0	0
% Below	17	33	17	33	25	29	29	0	0
% Met	50	50	50	50	75	71	71	100	100
% Above	33	17	33	17	0	0	0	0	0
PINK SALMON									
Number Below	0	0	2	0	2	0	2	0	2
Number Met	3	4	2	4	3	4	3	3	2
Number Above	2	1	1	1	0	1	0	1	0
% Below	0	0	40	0	40	0	40	0	50
% Met	60	80	40	80	60	80	60	75	50
% Above	40	20	20	20	0	20	0	25	0
SOCKEYE SALMON									
Number Below	4	1	8	5	3	5	4	3	5
Number Met	15	16	12	16	21	21	22	22	15
Number Above	6	8	8	7	5	4	4	5	8
% Below	16	4	29	18	10	17	13	10	18
% Met	60	64	43	57	72	70	73	73	54
% Above	24	32	29	25	17	13	13	17	29

Table 13.–Summary of Southeast Region salmon escapements compared against escapement goals for the years 2006 to 2014.

Southeast Region		2006	2007	2008	2009	2010	2011	2012	2013	2014
Stocks with Escapement Data		41	41	38	48	48	49	49	51	50
Below Lower Goal										
Goal Met	Number	3	11	16	16	4	8	13	14	9
	Percent	7%	27%	42%	33%	8%	16%	27%	27%	18%
Above Upper Goal										
Goal Met	Number	21	20	15	24	34	28	26	24	25
	Percent	51%	49%	39%	50%	71%	57%	53%	47%	50%
Below Lower Goal										
Goal Met	Number	17	10	7	8	10	13	10	13	16
	Percent	41%	24%	18%	17%	21%	27%	20%	25%	32%

Table 14.–Summary of Central Region (Bristol Bay, Cook Inlet, Prince William Sound/Copper River) salmon escapements compared against escapement goals for the years 2006 to 2014.

Central Region		2006	2007	2008	2009	2010	2011	2012	2013	2014
Stocks with Escapement Data		96	96	97	101	92	96	102	103	104
Below Lower Goal										
Goal Met	Number	6	14	20	29	27	30	34	20	27
	Percent	6%	15%	21%	29%	29%	31%	33%	19%	26%
Above Upper Goal										
Goal Met	Number	46	53	53	44	49	49	57	56	58
	Percent	48%	55%	55%	44%	53%	51%	56%	54%	56%
Below Lower Goal										
Goal Met	Number	44	29	24	28	16	17	11	27	19
	Percent	46%	30%	25%	28%	17%	18%	11%	26%	18%

Table 15.—Summary of Arctic-Yukon-Kuskokwim Region salmon escapements compared against escapement goals for the years 2006 to 2014.

AYK Region		2006	2007	2008	2009	2010	2011	2012	2013	2014
Stocks with Escapement Data		54	59	57	55	52	54	45	52	50
Below Lower Goal										
	Number	8	5	18	19	16	13	18	20	9
	Percent	15%	8%	32%	35%	31%	24%	40%	38%	18%
Goal Met										
	Number	20	27	25	26	24	27	20	19	19
	Percent	37%	46%	44%	47%	46%	50%	44%	37%	38%
Above Upper Goal										
	Number	26	27	14	10	12	14	7	13	22
	Percent	48%	46%	25%	18%	23%	26%	16%	25%	44%

Table 16.—Summary of Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) salmon escapements compared against escapement goals for the years 2006 to 2014.

Westward Region		2006	2007	2008	2009	2010	2011	2012	2013	2014
Stocks with Escapement Data		47	47	52	52	51	55	55	52	50
Below Lower Goal										
	Number	6	5	15	13	9	9	12	8	14
	Percent	13%	11%	29%	25%	18%	16%	22%	15%	28%
Goal Met										
	Number	28	29	23	29	36	41	39	38	27
	Percent	60%	62%	44%	56%	71%	75%	71%	73%	54%
Above Upper Goal										
	Number	13	13	14	10	6	5	4	6	9
	Percent	28%	28%	27%	19%	12%	9%	7%	12%	18%

Table 17.—Statewide summary of salmon stocks of concern in Alaska.

Region	System	Species	Year Designated ^a	Level of Concern	Year Last Reviewed ^a
Central	Susitna (Yentna) River	sockeye	2007	Yield	2010
	Chuitna River	Chinook	2010	Management	2010
	Theodore River	Chinook	2010	Management	2010
	Lewis River	Chinook	2010	Management	2010
	Alexander Creek	Chinook	2010	Management	2010
	Willow Creek	Chinook	2010	Yield	2010
	Goose Creek	Chinook	2010	Management	2013
	Sheep Creek	Chinook	2013	Management	2013
Westward	Karluk River	Chinook	2010	Management	2010
	Swanson Lagoon	sockeye	2012	Management	2012
AYK	Yukon River	Chinook	2000	Yield	2012
	Norton Sound Subdistrict 5 & 6	Chinook	2003	Yield	2012
	Norton Sound Subdistrict 2 & 3	chum	2000	Yield	2012
	Norton Sound Subdistrict 1	chum	2006	Yield	2012

^a Indicates start of Board of Fisheries cycle in which stock of concern was designated or last reviewed (e.g. 2011/2012 BOF cycle = 2011).

Table 18.—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 ^a	SRA	Fleischman et al. 2011
Keta River	Peak Aerial Survey	SRA	Fleischman et al. 2011
Unuk River	Mark–Recapture	SRA	Hendrich et al. 2008
Chickamin River	Peak Aerial Survey	SRA	McPherson and Carlile 1997
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	Ericksen and McPherson 2004; inriver: 5AAC 33.384
Klukshu (Alsek) River	Weir Count	SRA	Bernard and Jones 2010
Alsek River	Weir Count	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 Heintl 2011a
Northern Southeast Inside Summer	Peak Aerial Survey	Percentile	Piston and Heintl 2011a
Northern Southeast Outside Summer	Peak Aerial Survey	Percentile	Eggers and Heintl 2008
Cholmondeley Sound Fall	Peak Aerial Survey	Percentile	Eggers and Heintl 2008
Port Camden Fall	Peak Aerial Survey	Risk Analysis	Eggers and Heintl 2008
Security Bay Fall	Peak Aerial Survey	Percentile	Eggers and Heintl 2008
Excursion River Fall	Peak Aerial Survey	Percentile	Eggers and Heintl 2008
Chilkat River Fall	Mark–Recapture, Fish Wheel	SRA	Eggers and Heintl 2008
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	Agreement ^b , SRA	TTC 2014
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
Ford Arm Lake	Weir Count	SRA	Clark et al. 1994

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System	Enumeration Method	Goal Development Method	References
Berners River	Mark–Recapture	SRA	Clark et al. 1994
Chilkat River	Mark–Recapture, Foot Survey	SRA	Ericksen and Fleischman 2006
Lost River	Foot Survey, Boat Survey	SRA	Clark and Clark 1994
Situk River	Boat Survey	SRA	Clark and Clark 1994
Tsiu/Tsivat Rivers	Peak Aerial Survey	SRA	Clark and Clark 1994
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
Situk River	Weir Index	Percentile	Piston and Heinl 2011b
SCKEYE 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 Judgement ^b	TTC 1987; TTC 1990
Tahltan Lake	Weir Count	SRA	Humphreys et al. 1994; TTC 1993
Speel Lake	Weir Count	SRA	Riffe and Clark 2003
Taku River	Mark–Recapture	Professional Judgement ^b	TTC 1986
Redoubt Lake	Weir Count	SRA	Geiger 2003; OEG: 5 AAC 01.760 (a)
Chilkat Lake	Sonar, Mark–Recapture	SRA	Eggers et al. 2010
Chilkoot Lake	Weir Count	SRA	Eggers et al. 2009b
East Alsek-Doame River	Peak Aerial Survey	SRA	Clark et al. 2003
Klukshu River	Weir Count	SRA	Eggers and Bernard 2011
Alsek River	Weir Count	SRA	Eggers and Bernard 2011
Lost River	Foot/Boat Survey	Percentile	Eggers et al. 2008
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 Transboundary Technical Committee, Pacific Salmon Commission.

Table 19.—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
Naknek River	Single Aerial Survey ^a	Risk Analysis	Baker et al. 2006; Fair et al. 2004
Alagnak River	Single Aerial Survey	Risk Analysis	Baker et al. 2006; Fair et al. 2004
<i>Upper Cook Inlet</i>			
Alexander Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Campbell Creek	Single Foot Survey	Risk Analysis	Fair et al. 2010
Chuitna River	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Chulitna River	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Clear (Chunilna) Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Crooked Creek	Weir Count	Percentile	Bue and Hasbrouck, unpublished ^b
Deshka River	Weir Count	SRA	Bue and Hasbrouck, unpublished ^b ; Fair et al. 2010
Goose Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Kenai River - Early Run	Sonar	SRA	McKinley and Fleischman 2013; OEG: 5 AAC 57.160 (b)
Kenai River - Late Run	Sonar	SRA	Fleischman and McKinley 2013
Lake Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Lewis River	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Little Susitna River	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Little Willow Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Montana Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Peters Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Prairie Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Sheep Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Talachulitna River	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Theodore River	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Willow Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
<i>Lower Cook Inlet</i>			
Anchor River	Sonar, Weir Count	SRA	Otis et al. 2010; Szarzi et al. 2007
Deep Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck, unpublished ^b
Ninilchik River	Weir Count	Percentile	Otis and Szarzi 2007
<i>Prince William Sound</i>			
Copper River	Mark–Recapture	Empirical Observation	Bue et al. 2002; Savereide 2001

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System	Enumeration Method	Goal Development Method	References
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 ^c	Percentile	Bue and Hasbrouck, unpublished ^b
<i>Lower Cook Inlet</i>			
Port Graham River	Multiple Foot Surveys ^d	Percentile	Otis 2001
Dogfish Lagoon	Multiple Foot Surveys	Percentile	Otis 2001
Rocky River	Multiple Foot Surveys	Percentile	Otis 2001
Port Dick Creek	Multiple Aerial or Foot Surveys	Percentile	Otis 2001
Island Creek	Multiple Aerial or Foot Surveys	Percentile	Otis 2001
Big Kamishak River	Multiple Aerial Surveys	Percentile	Otis 2001
Little Kamishak River	Multiple Aerial Surveys	Percentile	Otis 2001
McNeil River	Multiple Aerial Surveys	Percentile	Otis and Szarzi 2007
Bruin River	Multiple Aerial Surveys	Percentile	Otis 2001
Ursus Cove	Multiple Aerial Surveys	Percentile	Otis 2001
Cottonwood Creek	Multiple Aerial Surveys	Percentile	Otis 2001
Iniskin Bay	Multiple Aerial Surveys	Percentile	Otis 2001
<i>Prince William Sound</i>			
Eastern District	Multiple Aerial Surveys	Risk Analysis	Evenson et al. 2008
Northern District	Multiple Aerial Surveys	Risk Analysis	Evenson et al. 2008
Coghill District	Multiple Aerial Surveys	Risk Analysis	Evenson et al. 2008
Northwestern District	Multiple Aerial Surveys	Risk Analysis	Evenson et al. 2008
Southeastern District	Multiple Aerial Surveys	Risk Analysis	Evenson et al. 2008
COHO SALMON			
<i>Bristol Bay</i>			
Nushagak River	Sonar	SRA	Fair et al. 2012
<i>Upper Cook Inlet</i>			
Fish Creek (Knik)	Weir Count	Percentile	Bue and Hasbrouck, unpublished ^b ; Fair et al. 2010
Jim Creek	Single Foot Survey	Percentile	Fair et al. 2013
Little Susitna River	Weir Count	Percentile	Bue and Hasbrouck, unpublished ^b
<i>Lower Cook Inlet</i>			
There are no coho salmon stocks with escapement goals in Lower Cook Inlet			

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System	Enumeration Method	Goal Development Method	References
<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
<i>Upper Cook Inlet</i>			
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 2001
China Poot Creek	Multiple Foot Surveys	Percentile	Otis 2001
Tutka Creek	Multiple Foot Surveys	Percentile	Otis 2001
Barabara Creek	Multiple Foot Surveys	Percentile	Otis 2001
Seldovia Creek	Multiple Foot Surveys	Percentile	Otis 2001
Port Graham River	Multiple Foot Surveys	Percentile	Otis 2001
Dogfish Lagoon Creeks	Multiple Aerial or Foot Surveys	Percentile	Otis et al. 2013
Port Chatham	Multiple Foot Surveys	Percentile	Otis 2001
Windy Creek Right	Multiple Foot Surveys	Percentile	Otis 2001
Windy Creek Left	Multiple Foot Surveys	Percentile	Otis 2001
Rocky River	Multiple Foot Surveys	Percentile	Otis 2001
Port Dick Creek	Multiple Aerial or Foot Surveys	Percentile	Otis 2001
Island Creek	Multiple Aerial or Foot Surveys	Percentile	Otis 2001
S. Nuka Island Creek	Multiple Aerial or Foot Surveys	Percentile	Otis 2001
Desire Lake Creek	Multiple Aerial Surveys	Percentile	Otis 2001
Bruin River	Multiple Aerial Surveys	Percentile	Otis 2001
Sunday Creek	Multiple Aerial Surveys	Percentile	Otis 2001
Brown's Peak Creek	Multiple Aerial Surveys	Percentile	Otis 2001
<i>Prince William Sound</i>			
Eastern District (even year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Eastern District (odd year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Northern District (even year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Northern District (odd year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Coghill District (even year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Coghill District (odd year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Northwestern District (even year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011

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System	Enumeration Method	Goal Development Method	References
Northwestern District (odd year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Eshamy District (even year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Eshamy District (odd year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Southwestern District (even year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Southwestern District (odd year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Montague District (even year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Montague District (odd year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Southeastern District (even year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
Southeastern District (odd year)	Multiple Aerial Surveys	Percentile	Fair et al. 2011
SOCKEYE SALMON			
<i>Bristol Bay</i>			
Kvichak River	Tower Count	SRA, Yield Analysis	Baker et al. 2009
Alagnak River	Tower Count	Risk Analysis	Baker et al. 2006
Naknek River	Tower Count	SRA, Yield Analysis	Fried 1984; OEG: 5 AAC 06.360 (f)
Egegik River	Tower Count	SRA, Yield Analysis	Cross 1994
Ugashik River	Tower Count	SRA, Yield Analysis	Cross 1994
Wood River	Tower Count	SRA, Yield Analysis	Baker et al. 2006; Fair 2000
Igushik River	Tower Count	SRA, Yield Analysis	Baker et al. 2006; Fair 2000
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	Bue and Hasbrouck, unpublished ^b
Kasilof River	Sonar	SRA	Fair et al. 2010; OEG: 5 AAC 21.365 (b)
Kenai River	Sonar	Brood Interaction Simulation Model	Carlson et al. 1999; Clark et al. 2007; Fair et al. 2010 OEG: 5 AAC 21.360 (b) (1)
Packers Creek	Weir Count	Percentile	Bue and Hasbrouck, unpublished ^b ; 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	Hasbrouck and Edmundson 2007
Chelatna Lake	Weir Count	Percentile	Fair et al. 2009
Judd Lake	Weir Count	Percentile	Fair et al. 2009
Larson Lake	Weir Count	Percentile	Fair et al. 2009
<i>Lower Cook Inlet</i>			
English Bay	Peak Aerial Survey, Weir Count	Percentile	Otis 2001
Delight Lake	Peak Aerial Survey, Weir Count	Percentile	Otis et al. 2010

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Table 19.–Page 5 of 5.

System	Enumeration Method	Goal Development Method	References
Desire Lake	Peak Aerial Survey	Percentile	Otis 2001
Bear Lake	Weir Count	Percentile	Otis 2001
Aialik Lake	Peak Aerial Survey	Percentile	Otis 2001
Mikfik Lake	Video	Percentile	Otis et al. 2013
Chenik Lake	Peak Aerial Survey, Video	Percentile	Otis et al. 2010
Amakdedori Creek	Peak Aerial Survey	Percentile	Otis 2001
<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 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.

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

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

Table 20.—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	SRA	Brannian et al. 2006; Molyneaux and Brannian 2006
Kanektok River	Single Aerial Survey	Percentile	ADF&G 2004
Kuskokwim River (entire area)	Run Reconstruction ^b	SRA	Hamazaki et al. 2012
Kogruklu 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
Holitna River	Single Aerial Survey	Percentile	ADF&G 2004
Cheeneetuk 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>			
Fish River/Boston Creek	Peak Aerial Survey	Percentile	ADF&G 2004
Kwiniuk River	Tower Count	SRA	ADF&G 2004; Fair et al. 1999, memorandum ^d
North River (Unalakleet R)	Tower Count	Percentile	ADF&G 2004
Unalakleet/Old Woman River	Peak Aerial Survey	Theoretical SRA	ADF&G 2004
CHUM SALMON			
<i>Kuskokwim Area</i>			
Middle Fork Goodnews River	Weir Count	Percentile	ADF&G 2004
Kogruklu River	Weir Count	Percentile	ADF&G 2004

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Table 20.–Page 2 of 4.

System	Enumeration Method	Goal Development Method	References
Aniak River	Sonar	Percentile	Brannian et al. 2006; Molyneaux and Brannian 2006
<i>Yukon River Summer Chum</i>			
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
Tanana River	Mark–Recapture	SRA	ADF&G 2004; Eggers 2001
Delta River	Multiple Foot Surveys	Proportion of Tanana River Goal	ADF&G 2004; Eggers 2001
Upper Yukon River Tributaries	Sonar & Weir Count	SRA	ADF&G 2004; Eggers 2001
Chandalar River	Sonar	Proportion of Upper Yukon River Tributaries Goal	ADF&G 2004; Eggers 2001
Sheenjek River	Sonar	Proportion of Upper Yukon River Tributaries Goal	ADF&G 2004; Eggers 2001
Fishing Branch River (Canada)	Weir Count	Agreement (U.S./Canada Joint Technical Committee) IMEG Percentile	JTC 2008; JTC 2013 ^e
Yukon R. Mainstem (Canada)	Mark–Recapture	Agreement (U.S./Canada Joint Technical Committee) IMEG SRA	JTC 2010; JTC 2015
<i>Norton Sound</i>			
Subdistrict 1 Aggregate	Calculated - Multiple Surveys	SRA	Clark 2001a
Nome River	Weir Count	Proportion of Aggregate Goal	ADF&G 2004; Clark 2001a; OEG: 5 AAC04.358 (a) (2)
Snake River	Tower/Weir Count	Proportion of Aggregate Goal	ADF&G 2004; Clark 2001a; OEG: 5 AAC04.358 (a) (1)
Eldorado River	Peak Aerial Survey (Expanded)	Proportion of Aggregate Goal	ADF&G 2004; Clark 2001a; OEG: 5 AAC04.358 (a) (3)
Niukluk River	Tower Count	Risk Analysis	Volk et al. 2009
Kwiniuk River	Tower Count	SRA	ADF&G 2004; Clark 2001b; OEG: 5 AAC 04.390 (b) (1) (A) (i)
Tubutulik River	Peak Aerial Survey (Expanded)	SRA	ADF&G 2004; Clark 2001b OEG: 5 AAC 04.390 (b) (1) (A) (ii)
Unalakleet/Old Woman River	Peak Aerial Survey	Empirical Observation	ADF&G 2004
<i>Kotzebue Sound</i>			
Kotzebue Sound Aggregate	Peak Aerial Survey (Expanded)	SRA	Brannian et al. 2006; Eggers and Clark 2006
Noatak and Eli Rivers	Peak Aerial Survey	Proportion of Aggregate Goal	Brannian et al. 2006; Eggers and Clark 2006
Upper Kobuk w/ Selby River	Peak Aerial Survey	Proportion of Aggregate Goal	Brannian et al. 2006; Eggers and Clark 2006
Salmon River	Peak Aerial Survey	Proportion of Aggregate Goal	Brannian et al. 2006; Eggers and Clark 2006
Tutuksuk River	Peak Aerial Survey	Proportion of Aggregate Goal	Brannian et al. 2006; Eggers and Clark 2006
Squirrel River	Peak Aerial Survey	Proportion of Aggregate Goal	Brannian et al. 2006; Eggers and Clark 2006

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Table 20.–Page 3 of 4.

System	Enumeration Method	Goal Development Method	References
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
<i>Norton Sound</i>			
Kwiniuk River	Peak Aerial Survey	Theoretical SRA	ADF&G 2004; Fair et al. 1999, memorandum ^d
Niukluk River	Tower Count	Percentile	Volk et al. 2009
North River (Unalakleet R.)	Peak Aerial Survey	Theoretical SRA	ADF&G 2004; Fair et al. 1999, memorandum ^d
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 ^d
Kwiniuk River	Tower Count	Empirical Observation	ADF&G 2004
Niukluk 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	ADF&G 2004
Middle Fork Goodnews River	Weir Count	SRA	Brannian et al. 2006; Molyneaux and Brannian 2006
Kanektok River	Single Aerial Survey	Percentile	ADF&G 2004
Kogruklu 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>			
Salmon Lake/Grand Central River	Peak Aerial Survey	Empirical Observation	ADF&G 2004; Fair et al. 1999, memorandum ^d
Glacial Lake	Peak Aerial Survey	Empirical Observation	ADF&G 2004; Fair et al. 1999, memorandum ^d

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Note: SRA = Spawner–recruit analysis.

^a Typically single survey 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 Fair, L., C. Lean, F. DeCicco, J. Magdanz, and R. McLean, Proposed Salmon BEG's for Norton Sound and Kotzebue Sound. Alaska Department of Fish and Game, Memorandum, March 24, 1999.

^e 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).

Table 21.—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	Spawning Habitat Model, SRA	Nelson et al. 2006
<i>Chignik</i>			
Chignik River	Weir Count	SRA	Hasbrouck and Clark, unpublished ^b ; Witteveen et al. 2005
<i>Kodiak</i>			
Karluk River	Weir Count	SRA	Nemeth et al. 2010
Ayakulik River	Weir Count	SRA	Nemeth et al. 2010
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	Nelson and Lloyd 2001; Nelson et al. 2006
South Central District	Peak Aerial Survey	Percentile	Nelson and Lloyd 2001; Nelson et al. 2006
Southwestern District	Peak Aerial Survey	Percentile	Nelson and Lloyd 2001; Nelson et al. 2006
<i>Chignik</i>			
Entire Chignik Area	Peak Aerial Survey	Risk Analysis	Witteveen et al. 2007
<i>Kodiak</i>			
Mainland District	Peak Aerial Survey	Percentile, Risk Analysis	Honnold et al. 2007a
Kodiak Archipelago Aggregate	Peak Aerial Survey	Percentile	Honnold et al. 2007a
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	Sagalkin et al. 2013a; Schmidt et al. 2014
Olds River	Foot Survey	Theoretical SRA	Nemeth et al. 2010
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 (odd year)	Peak Aerial Survey	SRA	Honnold et al. 2007b, Nelson and Lloyd 2001
South Peninsula Total (even year)	Peak Aerial Survey	SRA	Honnold et al. 2007b, Nelson and Lloyd 2001
<i>Chignik</i>			
Entire Chignik Area (odd year)	Peak Aerial Survey, Weir Count	Yield Analysis	Witteveen et al. 2007
Entire Chignik Area (even year)	Peak Aerial Survey, Weir Count	Yield Analysis	Witteveen et al. 2007
<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	Honnold et al. 2007b
Ilnik River	Weir Count	Percentile, Euphotic Volume Model, Zooplankton Model	Nelson and Lloyd 2001; Nelson et al. 2006
Meshik River	Peak Aerial Survey	Percentile	Witteveen et al. 2009
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
Swanson Lagoon	Peak Aerial Survey	Percentile	Honnold et al. 2007b
North Creek	Peak Aerial Survey	Percentile	Nelson and Lloyd 2001; Nelson et al. 2006
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	Witteveen et al. 2009
<i>Chignik</i>			
Chignik River Early Run	Weir Count	Yield Analysis, Euphotic Volume Model, Zooplankton Model	Sagalkin et al. 2013b
Chignik River Late Run	Weir Count	SRA, Euphotic Volume Model, Zooplankton Model	Witteveen et al. 2007

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Table 21.–Page 3 of 3.

System	Enumeration Method	Goal Development Method	References
<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
Uganik Lake	Peak Aerial Survey	Percentile	Honnold et al. 2007a
Karluk River Early Run	Weir Count	SRA	Honnold et al. 2007a
Karluk River Late Run	Weir Count	SRA	Nelson et al. 2005
Ayakulik River Early Run	Weir Count	Zooplankton Model and historical escapement	Nemeth et al. 2010
Ayakulik River Late Run	Weir Count	Zooplankton Model and historical escapement	Nemeth et al. 2010
Upper Station River Early Run	Weir Count	SRA	Nemeth et al. 2010; OEG: 5 AAC 18.61 (a)(3)
Upper Station River Late Run	Weir Count	SRA	Nelson et al. 2005
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

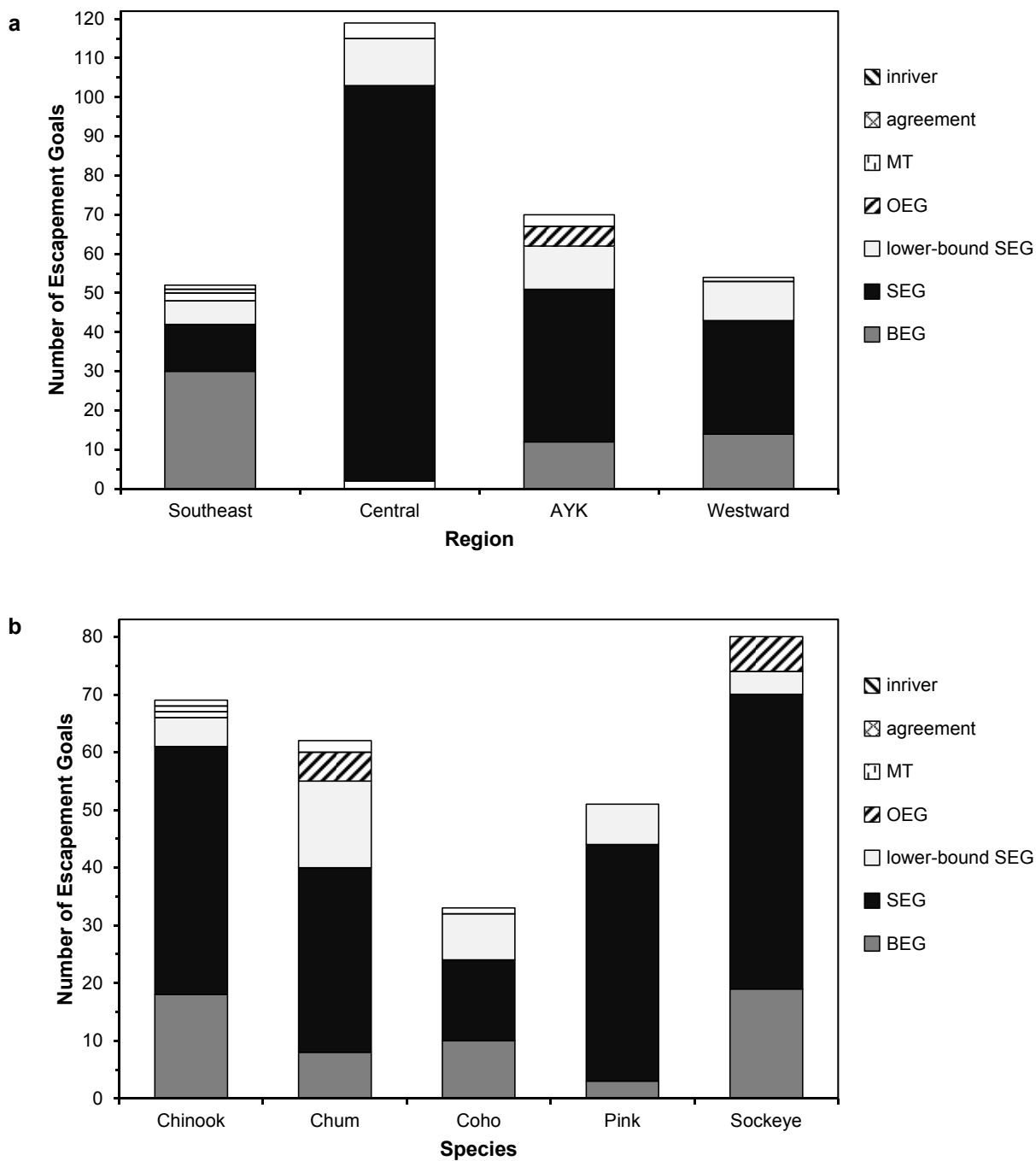


Figure 1.—Statewide summary of the 295 escapement goals in effect during the 2014 spawning season for (a) the 4 Division of Commercial Fisheries regions and (b) by species. BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal (set by the Alaska Board of Fisheries), MT is management target, agreement goals are established through international treaties, and inriver is inriver escapement goal (set by the Alaska Board of Fisheries).

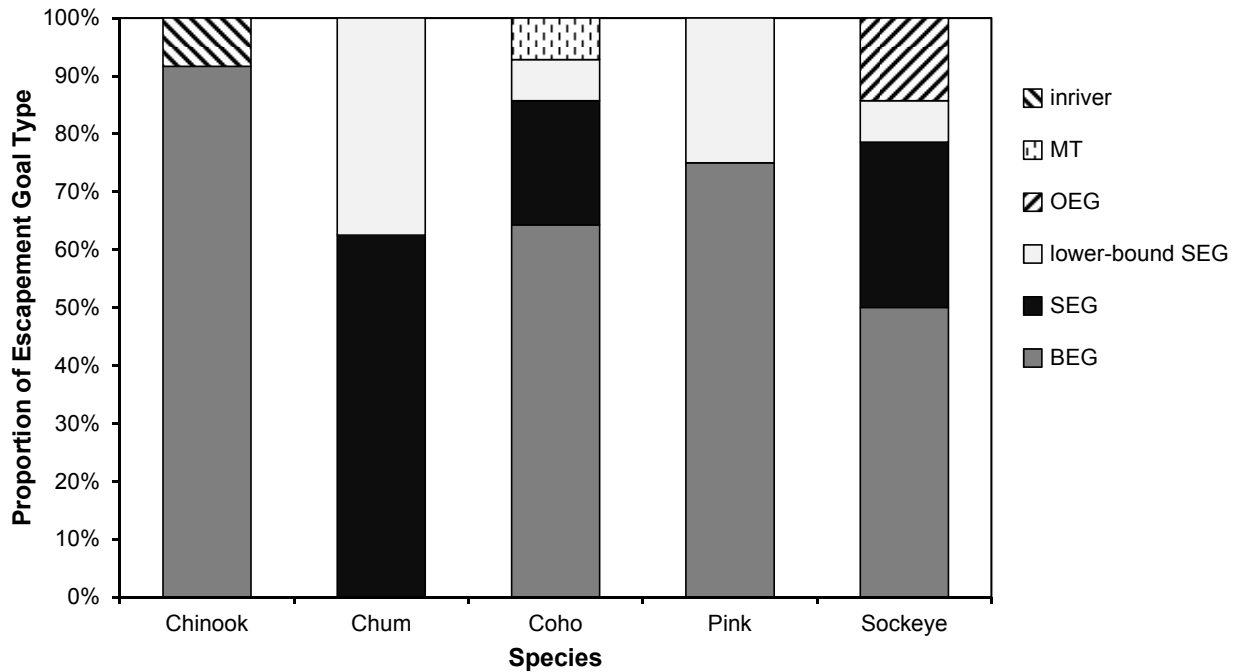


Figure 2.—Proportion of escapement goal types by species for the 52 escapement goals in Southeast Region. BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal (set by the Alaska Board of Fisheries), MT is management target and inriver is an inriver escapement goal (set by the Alaska Board of Fisheries).

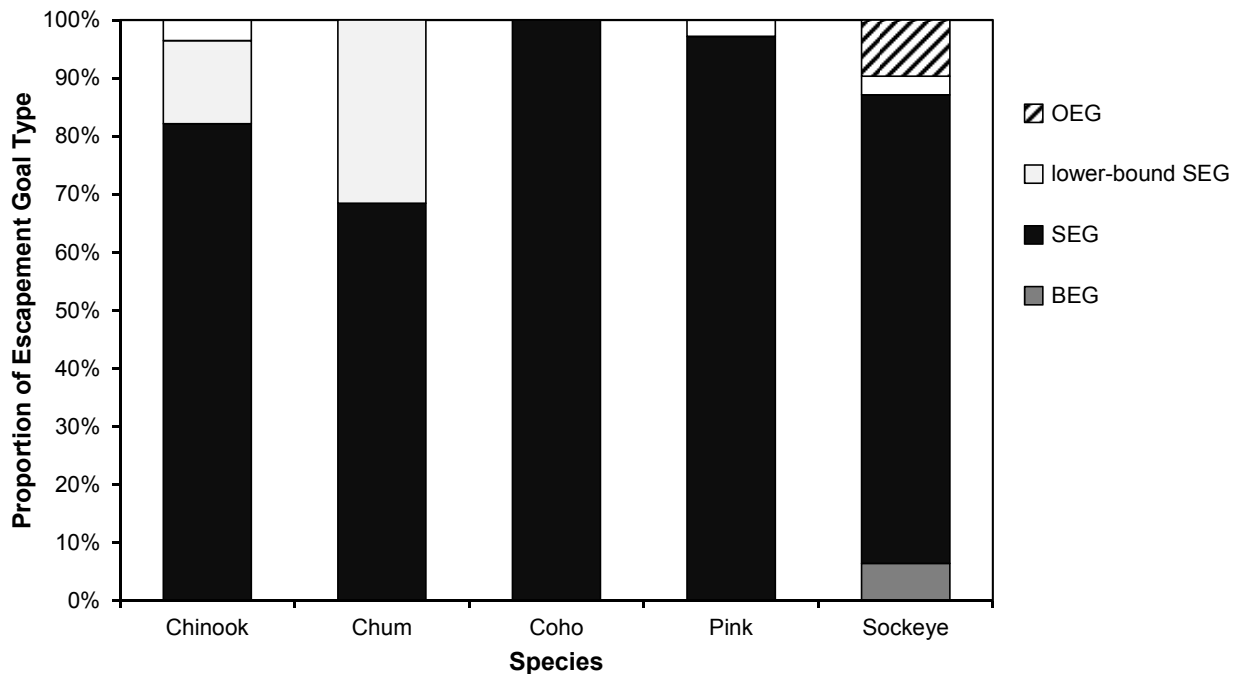


Figure 3.—Proportion of escapement goal types by species for the 119 escapement goals in Central Region (Bristol Bay, Cook Inlet, and Prince William Sound/Copper River). BEG is biological escapement goal, SEG is sustainable escapement goal, and OEG is optimal escapement goal (set by the Alaska Board of Fisheries).

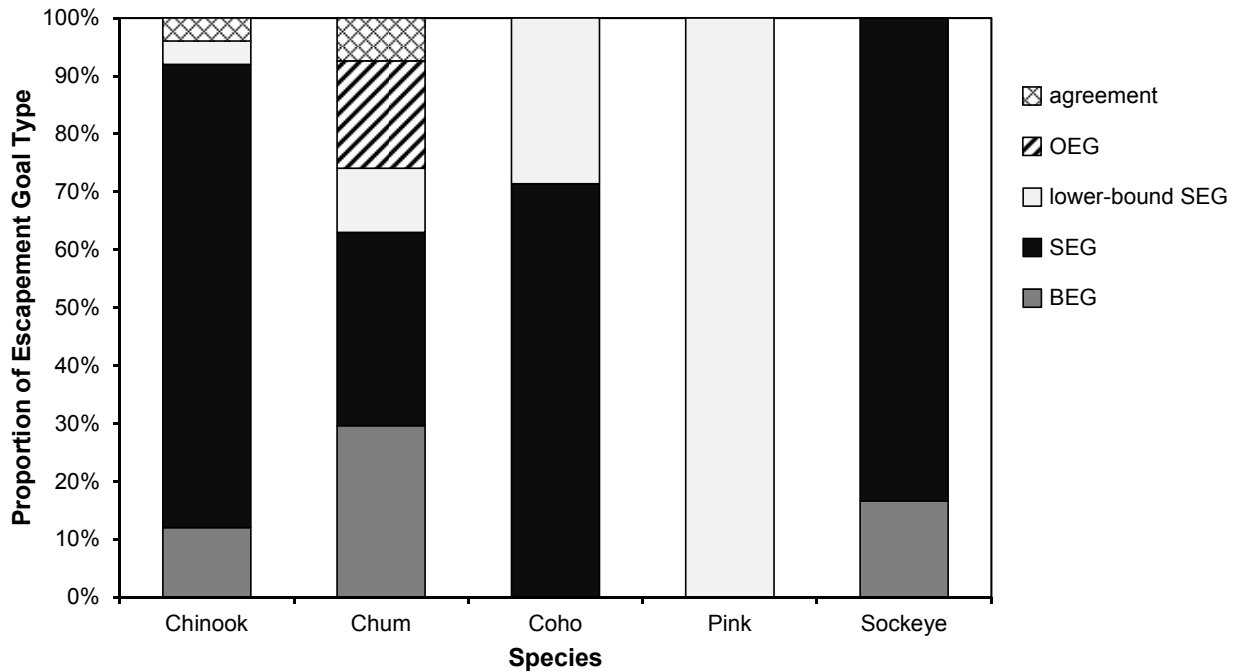


Figure 4.—Proportion of escapement goal types by species for the 70 escapement goals in Arctic-Yukon-Kuskokwim Region. BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal (set by the Alaska Board of Fisheries), and agreement goals are established through international treaties.

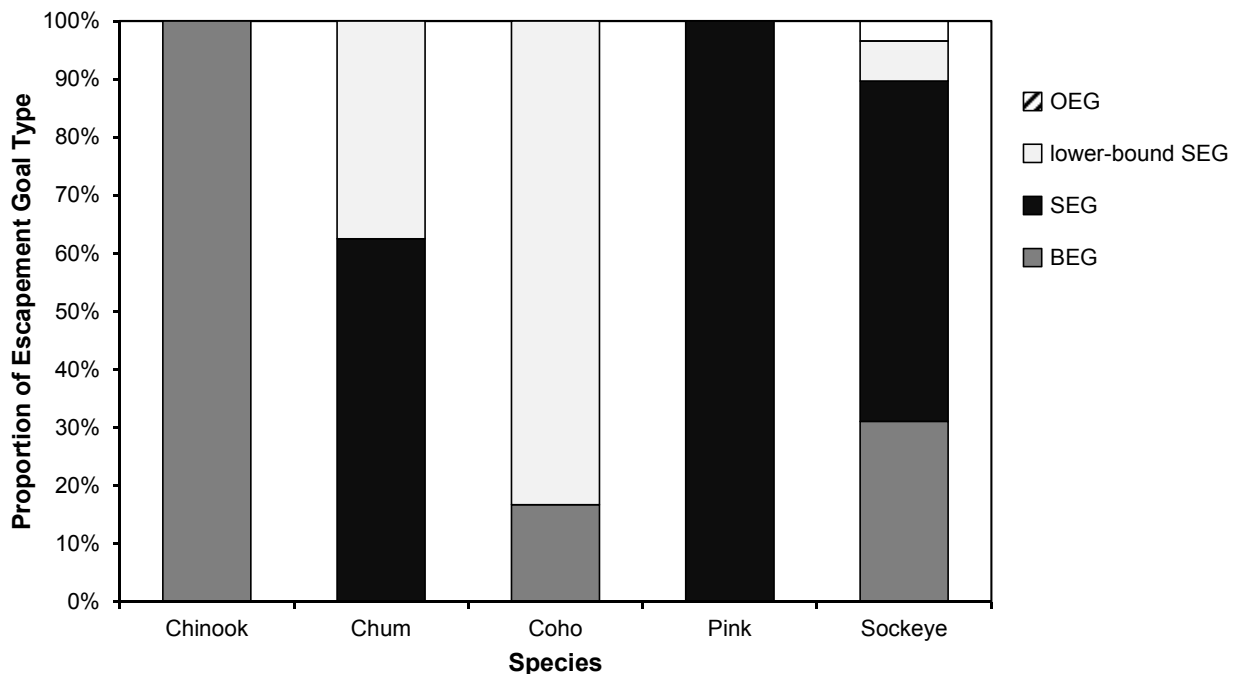


Figure 5.—Proportion of escapement goal types by species for the 54 escapement goals in Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas). BEG is biological escapement goal, SEG is sustainable escapement goal, and OEG is optimal escapement goal (set by the Alaska Board of Fisheries).

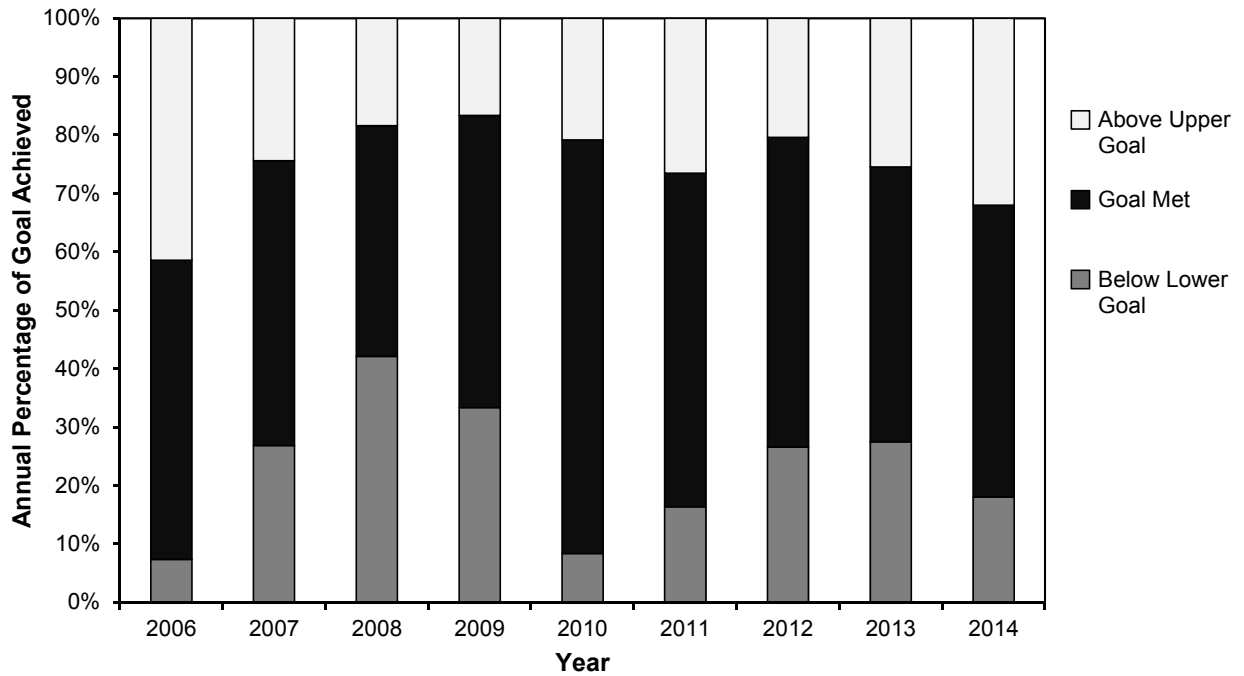


Figure 6.—Southeast Region salmon escapements compared against escapement goals for the years 2006 to 2014.

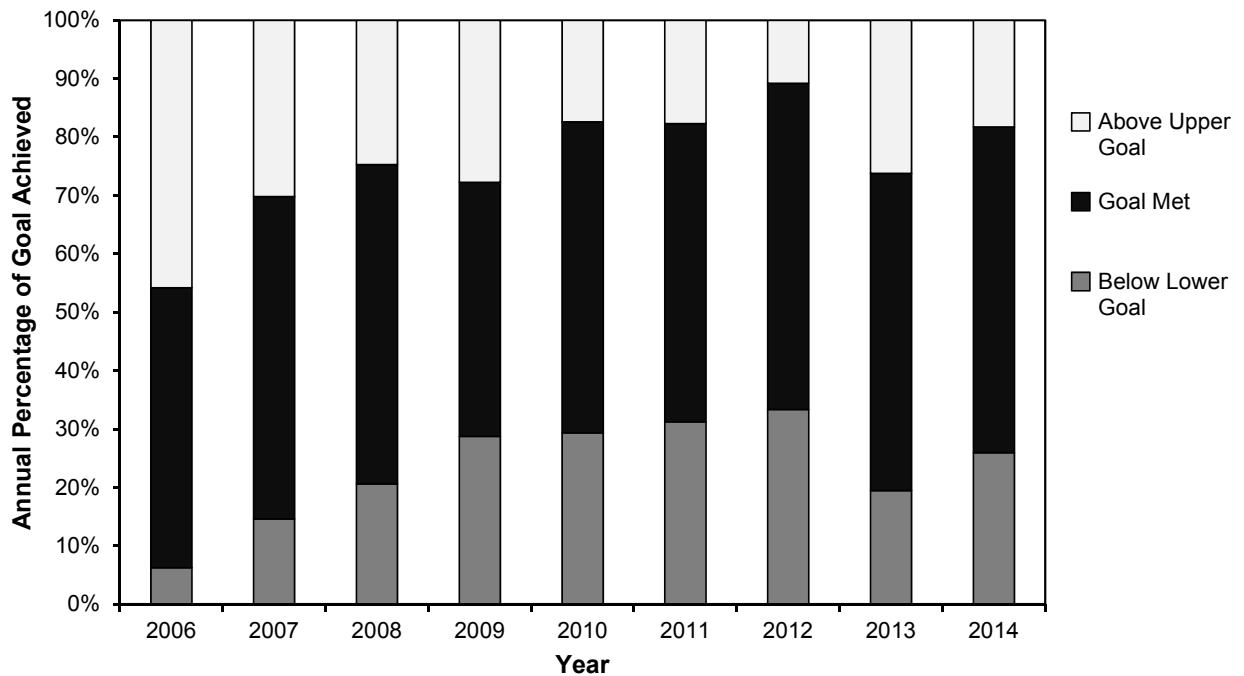


Figure 7.—Central Region (Bristol Bay, Cook Inlet, Prince William Sound/Copper River) salmon escapements compared against escapement goals for the years 2006 to 2014.

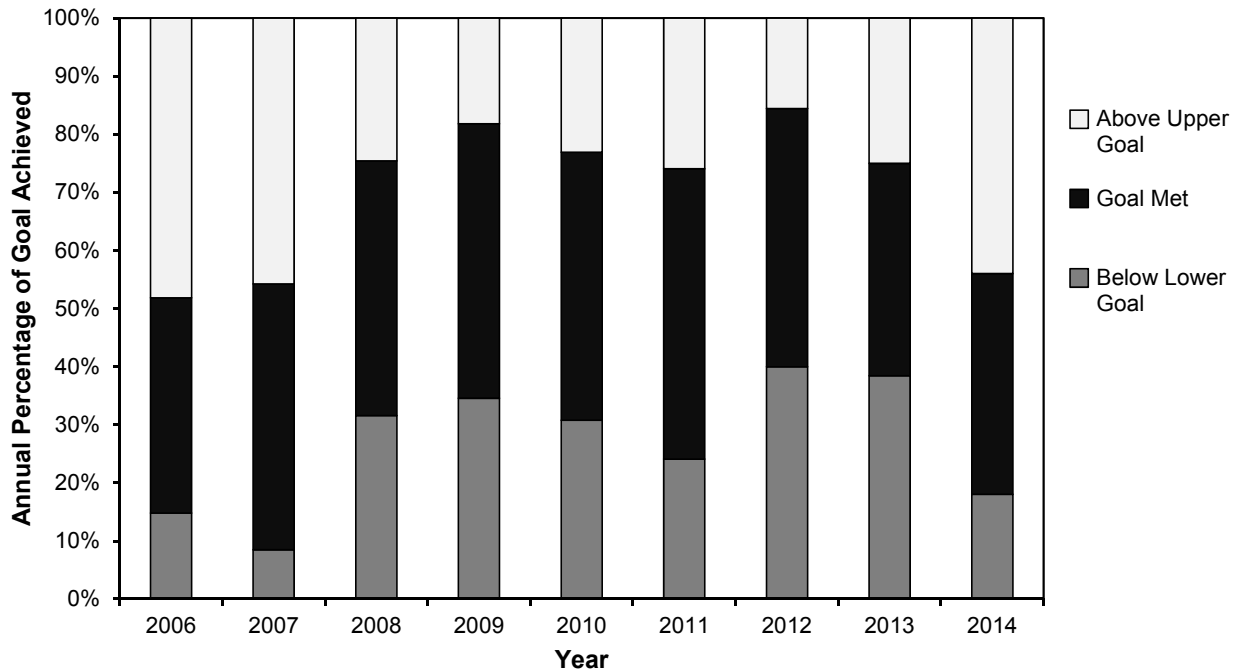


Figure 8.—Arctic-Yukon-Kuskokwim Region salmon escapements compared against escapement goals for the years 2006 to 2014.

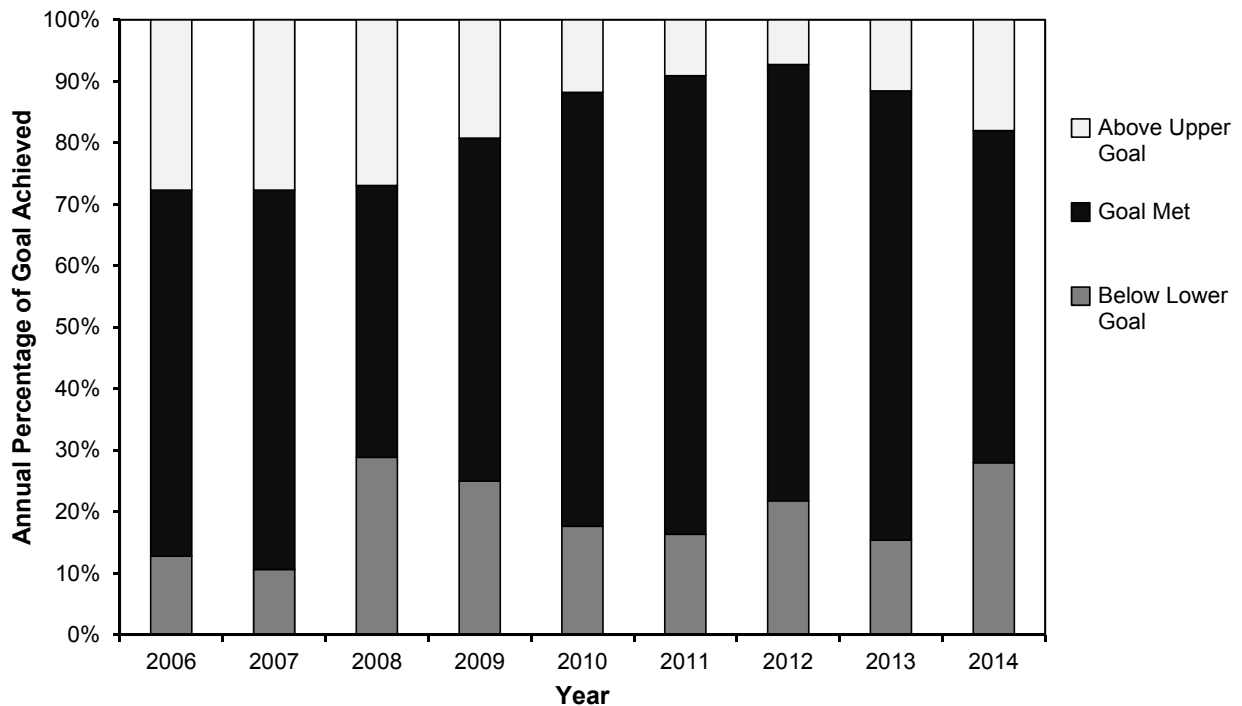


Figure 9.—Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) salmon escapements compared against escapement goals for the years 2006 to 2014.

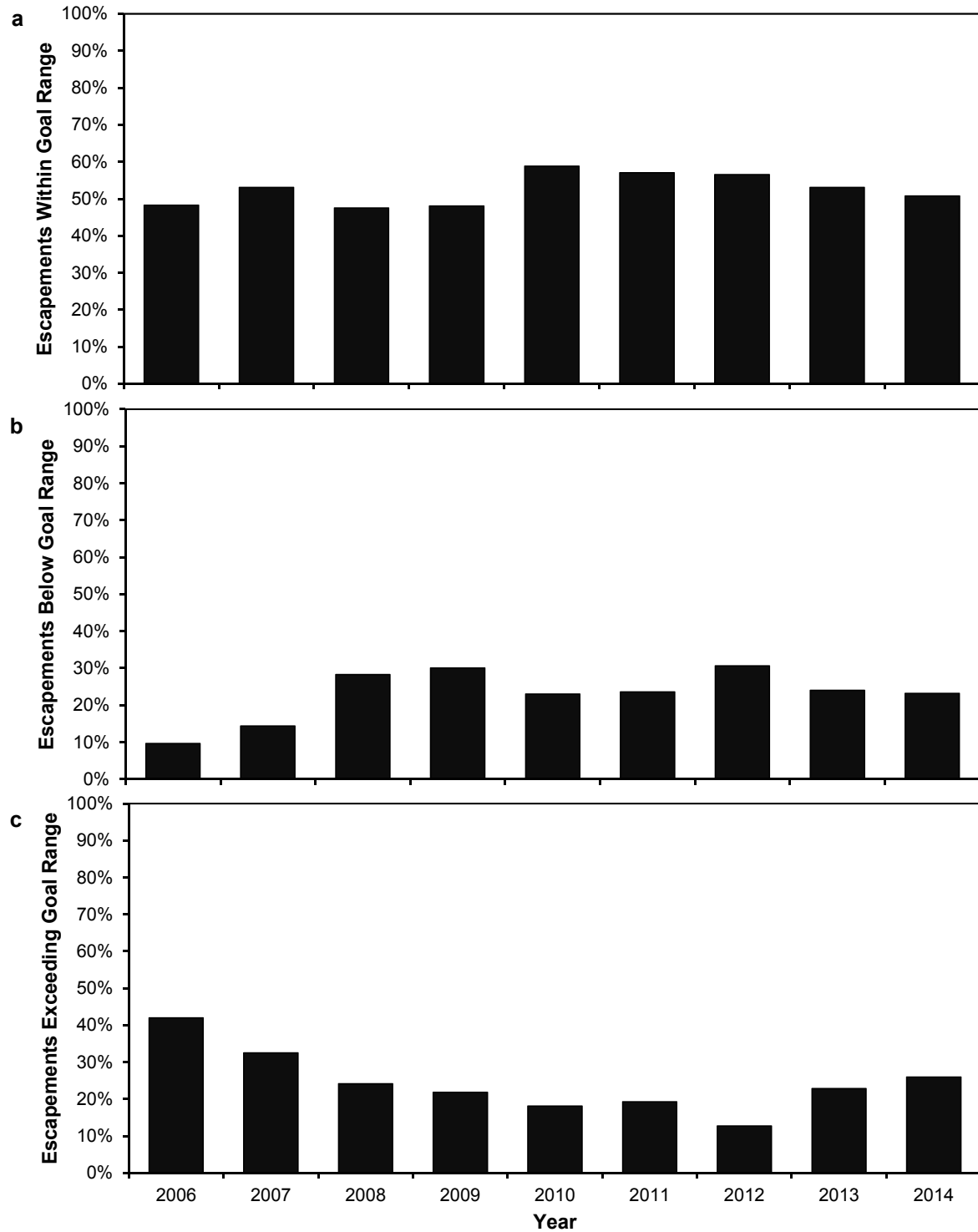


Figure 10.—Statewide summary by year of percentage of escapements that a) met the escapement goal (i.e., within goal range or above lower bound), b) were below lower bound of goal, or c) exceeded upper bound of goal range for the years 2006 to 2014.

APPENDIX A.
ESCAPEMENT GOAL MEMO FOR 2013/2014 BOARD OF
FISHERIES MEETING CYCLE

STATE OF ALASKA

BILL WALKER, GOVERNOR

DEPARTMENT OF FISH AND GAME


Divisions of Commercial Fisheries and Sport Fish

MEMORANDUM


TO: Distribution

DATE: March 1, 2015

PHONE: 267-2350 (Regnart)
267-2150 (Brookover)

FROM: Jeff Regnart, Director 
Division of Commercial Fisheries
Anchorage

FILE: Final Chig_Kod_CI EG
Recommendation-2014

Tom Brookover, Acting Director 
Division of Sport Fish
Anchorage

SUBJECT: Approval of Final
Escapement
Goal Recommendations
For Selected Chignik,
Kodiak, and Cook Inlet
Salmon Stocks

The purpose of this memo is to provide final approval to include the recommendations found in the reports listed below as Alaska Department of Fish and Game (ADF&G) salmon escapement goals for the Chignik, Kodiak, and Cook Inlet areas.

Sagalkin, N. H., A. St. Saviour, J. W. Erickson, and H. Finkle. 2013. Review of salmon escapement goals in the Chignik Management Area, 2013. Alaska Department of Fish and Game, Fishery Manuscript Series No. 13-06, Anchorage.

Otis, E. O., L. F. Fair and J. W. Erickson. 2013. A review of escapement goals for salmon stocks in Lower Cook Inlet, Alaska, 2013. Alaska Department of Fish and Game, Fishery Manuscript No. 13-08, Anchorage.

Sagalkin, N. H., B. Foster, M. B. Loewen, and J. W. Erickson. 2013. Review of salmon escapement goals in the Kodiak Management Area, 2013. Alaska Department of Fish and Game, Fishery Manuscript Series No. 13-11, Anchorage.

Fair, L. F., T. M. Willette, and J. W. Erickson. 2013. Review of salmon escapement goals in Upper Cook Inlet, Alaska, 2013. Alaska Department of Fish and Game, Fishery Manuscript Series No. 13-13, Anchorage.

The *Policy for the Management of Sustainable Salmon Fisheries* (SSFP; 5 AAC 39.222) directs the department to provide the Alaska Board of Fisheries with a review of salmon escapement goals every three years in concert with the regulatory cycle for each management area. Escapement goals were evaluated and recommended based on the SSFP and the *Policy for Statewide Salmon Escapement Goals* (5 AAC 39.223). These recommendations have been reviewed and accepted by the respective Regional Supervisors. Oral and written reports were presented to the Alaska Board of Fisheries regarding these escapement goal recommendations at the respective area meetings during the 2013-2014 cycle.

This memo signifies approval and acceptance of these recommendations as ADF&G established salmon escapement goals.

cc: Volk, Hasbrouck, Bowers, Olson, Taube, Lingnau, Vania, Sagalkin, Erickson, Foster, McKinley