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**Summary of Pacific Salmon Escapement Goals in
Alaska with a Review of Escapements from 2004 to
2012**

by

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and

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July 2013

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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

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TABLE OF CONTENTS

	Page
LIST OF TABLES.....	ii
LIST OF FIGURES.....	iii
LIST OF APPENDICES.....	iii
ABSTRACT.....	1
INTRODUCTION.....	1
METHODS.....	2
Methods of Escapement Goal Development.....	2
RESULTS AND DISCUSSION.....	3
ACKNOWLEDGEMENTS.....	5
REFERENCES CITED.....	6
TABLES.....	13
FIGURES.....	65
APPENDIX A. ESCAPEMENT GOAL MEMO FOR THE PRINCE WILLIAM SOUND MANAGEMENT AREA MEETING OF THE 2011/2012 BOARD OF FISHERIES MEETING CYCLE.....	73
APPENDIX B. ESCAPEMENT GOAL MEMO FOR THE SOUTHEAST ALASKA MANAGEMENT AREA MEETING OF THE 2011/2012 BOARD OF FISHERIES MEETING CYCLE.....	79

LIST OF TABLES

Table	Page
1. Southeast Region Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2004 to 2012.....	14
2. Central Region Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2004 to 2012.....	16
3. Arctic-Yukon-Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2004 to 2012.....	22
4. Westward Region Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2004 to 2012.....	26
5. Assessment of whether escapements met, exceeded, or did not meet the escapement goal in place at the time of enumeration for salmon stocks in Southeast Region.....	29
6. Assessment of whether escapements met, exceeded, or did not meet the escapement goal in place at the time of enumeration for salmon stocks in Central Region.....	31
7. Assessment of whether escapements met, exceeded, or did not meet the escapement goal in place at the time of enumeration for salmon stocks in Arctic-Yukon-Kuskokwim Region.....	36
8. Assessment of whether escapements met, exceeded, or did not meet the escapement goal in place at the time of enumeration for salmon stocks in Westward Region.....	40
9. Southeast Region Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2004 to 2012.....	43
10. Central Region Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2004 to 2012.....	44
11. Arctic-Yukon-Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2004 to 2012.....	45
12. Westward Region Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2004 to 2012.....	47
13. Summary of Southeast Region salmon escapements compared against escapement goals for the years 2004 to 2012.....	48
14. Summary of Central Region salmon escapements compared against escapement goals for the years 2004 to 2012.....	48
15. Summary of Arctic-Yukon-Kuskokwim Region salmon escapements compared against escapement goals for the years 2004 to 2012.....	49
16. Summary of Westward Region salmon escapements compared against escapement goals for the years 2004 to 2012.....	49
17. Statewide summary of salmon stocks of concern in Alaska.....	50
18. Methods used to enumerate and develop escapement goals for Southeast Region Chinook, chum, coho, pink, and sockeye salmon stocks.....	51
19. Methods used to enumerate and develop escapement goals for Central Region Chinook, chum, coho, pink, and sockeye salmon stocks.....	53
20. Methods used to enumerate and develop escapement goals for Arctic-Yukon-Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon stocks.....	58
21. Methods used to enumerate and develop escapement goals for Westward Region Chinook, chum, coho, pink, and sockeye salmon stocks.....	62

LIST OF FIGURES

Figure	Page
1. Statewide summary of the 300 escapement goals in effect during the 2012 spawning season for the four Division of Commercial Fisheries regions and by species..	66
2. Proportion of escapement goal types by species for the 49 escapement goals in Southeast Region. BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal, MT is management target and inriver is an inriver escapement goal	67
3. Proportion of escapement goal types by species for the 120 escapement goals in Central Region.....	67
4. Proportion of escapement goal types by species for the 72 escapement goals in Arctic-Yukon-Kuskokwim Region.....	68
5. Proportion of escapement goal types by species for the 59 escapement goals in Westward Region	68
6. Southeast Region salmon escapements compared against escapement goals for the years 2004 to 2012.....	69
7. Central Region salmon escapements compared against escapement goals for the years 2004 to 2012.....	69
8. Arctic-Yukon-Kuskokwim Region salmon escapements compared against escapement goals for the years 2004 to 2012.	70
9. Westward Region salmon escapements compared against escapement goals for the years 2004 to 2012. ...	70
10. Statewide summary by year of percentage of escapements that a) met the escapement goal, b) were below lower bound of goal, or c) exceeded upper bound of goal range for the years 2004 to 2012.	71

LIST OF APPENDICES

Appendix	Page
A1. Escapement goal memo for the Prince William Sound management area meeting of the 2011/2012 Board of Fisheries Meeting Cycle.....	74
B1. Escapement goal memo for the Southeast Alaska Management Area meeting of the 2011/2012 Board of Fisheries meeting cycle.....	80

ABSTRACT

This report summarizes statewide Pacific salmon escapement goals in effect in 2012 and documents escapements for all species and stocks with goals from 2004 through 2012. 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 Constitution (Article VIII, section 4) and in state statute (AS 16.05.020). Several policies in Alaska Administrative Code also provide guidance for establishing escapement goals including the policy for the management of sustainable salmon fisheries (5 AAC 39.222), the policy for statewide salmon escapement goals (5 AAC 39.223) and the policy for the management of mixed stock fisheries (5 AAC 39.220). These policies provide detailed definitions of specific escapement goal types, outline the responsibilities of the Alaska Department of Fish and Game (department) and the Alaska Board of Fisheries (board) in establishing goals, and provide general direction for development and application of escapement goals in Alaska. Currently, there are 300 active salmon stock escapement goals throughout the state of Alaska (Figure 1).

It is the responsibility of the department 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 board of allocative implications associated with escapement goals. The foundation for this effort is regional or area escapement goal review teams assembled every three 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 board and the public at tri-annual board meetings for that region or area. Following the board 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 the department and established by the board. Data presented in this document is 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 department staff, stakeholders, and the public.

METHODS

We reviewed department escapement goal reports and supporting documents to catalog current escapement goals in each region for all five 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 2004 through 2012 for each stock with an established escapement goal. The escapement goals listed are those in effect during the 2012 spawning season including escapement goals that were established, or updated during the 2011/2012 board meeting cycle (Appendices A and B).

Escapements from 2004 through 2012 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 2004 and 2012 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 Hasbrouck.¹ 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 sub-model, 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 2004 to 2012 are presented by region and species in Tables 1–4. While most information was available through regional escapement goal reports, 2012 data were often obtained directly from area and regional biologists. Data for 2012 are often preliminary estimates because complete data regarding subsistence and sport harvests are often not available immediately following the season.

A summary of escapement goal types for all species by region indicate that the majority of goals in Central, Westward, and Arctic-Yukon-Kuskokwim (AYK) regions are 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 over 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 board, 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 four 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 one pink salmon *O. gorbuscha* goals, and all but one Chinook salmon goal, as well as over 65% of the coho salmon goals and over 45% of the sockeye salmon goals (Figure 2). This is sharply contrasted with Central Region, where the majority of all goals are SEGs, with three sockeye stocks representing the only BEGs (Figure 3). AYK Region has the only BEGs for chum salmon in the state, with additional BEGs for three Chinook and one 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). Between 2004 and 2006, it was typical to observe greater than 80% success in achieving minimum escapement goals for all species in all regions except AYK (Figures 6–9; Tables 9–12). In recent years, the proportion of escapements falling below the lower bound of goals has increased in all regions (Figures 6–9; Tables 9–12). Statewide, the percentage of escapement goals within the goal range (or above the lower bound if a lower-bound SEG) has been between 40% and 59% since 2004 (Figure 10a). In recent years there has been a decrease in the percentage of goals exceeded, and an increase in the percentage of goals not achieved, when compared to previous years (Figures 10b and 10c). Because meeting escapement goals is fundamental to department 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, the department may recommend, and the board 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 2012 there were 13 stocks of concern in the state (Table 17). Changes from 2011 include the listing of Swanson Lagoon sockeye salmon as a stock of management concern for the first time and delisting of McDonald Lake sockeye salmon, which had been on the list as a stock of management concern since 2008.

The array of methods used to enumerate salmon for each of the stocks with escapement goals, as well as methods used to assist department 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, 2004 to 2012.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
CHINOOK SALMON^a													
Blossom River	150	300	BEG	2012	333	445	339	135	257	123	363	147	205
Keta River	175	400	BEG	2012	376	497	747	311	363	219	475	223	241
Unuk River	1,800	3,800	BEG	2009	3,963	4,742	5,645	5,668	3,104	3,157 ^b	3,835 ^b	3,195 ^b	956 ^c
Chickamin River	450	900	BEG	1997	798	924	1,330	893	1,111	611	1,156	852	444
Andrew Creek	650	1,500	BEG	1998	2,991	1,979	2,124	1,736	981	628	1,205	936	587
Stikine River	14,000	28,000	BEG	2000	48,900	39,833	24,405	14,560	18,352	12,810 ^b	15,180 ^b	14,469 ^b	22,671 ^b
King Salmon River	120	240	BEG	1997	135	143	150	181	120	109	158	192	155
Taku River	19,000	36,000	BEG	2009	75,032	38,725	42,296	14,854	27,383 ^b	22,801 ^b	29,302 ^b	27,523 ^b	19,429 ^b
Chilkat River	1,850	3,600	inriver ^d		3,422	3,366	3,039	1,445	2,905	4,429 ^b	1,815 ^b	2,688 ^b	1,627 ^b
	1,750	3,500	BEG	2003									
Klukshu (Alek) River	1,100	2,300	BEG	1998	2,451	1,034	568	676	466	1,466	2,159	1,667	693
Situk River	450	1,050	BEG	2003	698	599	695	677	413	902	166 ^c	240	322
CHUM SALMON													
Southern Southeast Summer	54,000		lower-bound SEG	2012	74,000	66,000	76,000	132,000	13,000	41,000	47,000	157,000	144,000
Northern Southeast Inside Summer	119,000		lower-bound SEG	2012	242,000	185,000	282,000	149,000	99,000	107,000	77,000	125,000	177,000
Northern Southeast Outside Summer	19,000		lower-bound SEG	2009	86,000	77,000	57,000	34,000	46,000	15,000	24,000	23,000	28,000
Cholmondeley Sound Fall	30,000	48,000	SEG	2009	60,000	15,000	54,000	18,000	49,500	39,000	76,000	93,000	54,000
Port Camden Fall	2,000	7,000	SEG	2009	3,300	2,110	2,420	505	1,400	1,711	5,400	1,800	3,750
Security Bay Fall	5,000	15,000	SEG	2009	13,100	2,750	15,000	5,400	11,700	5,100	6,500	5,100	9,800
Excursion River Fall	4,000	18,000	SEG	2009	5,200	1,100	2,203	6,000	8,000	1,400	6,100	3,000	2,000
Chilkat River Fall	75,000	170,000	SEG	2009	310,000	202,000	704,000	331,000	451,000	337,000	91,000	368,000	284,000
COHO SALMON													
Hugh Smith Lake	500	1,600	BEG	2009	840	1,732	891	1,244	1,741	2,281	2,878	2,137	1,908
Taku River ^f	35,000		MT	1995	129,327	135,558	122,384	74,369	95,360 ^b	103,950 ^b	126,830 ^b	70,745 ^b	70,742 ^b
Auke Creek	200	500	BEG	1994	416	450	581	352	600	360	417	517	837
Montana Creek	400	1,200	SEG	2006	364	351	1,110	324	405	698	630	709	394
Peterson Creek	100	250	SEG	2006	284	139	439	226	660	123	467	138	190
Ketchikan Survey Index	4,250	8,500	BEG	2006	9,904	14,840	6,912	4,488	16,680	8,226	4,656	5,202	11,950
Sitka Survey Index	400	800	BEG	2006	1,124	1,668	2,647	1,066	1,117	1,156	1,273	2,222	1,157
Ford Arm Lake	1,300	2,900	BEG	1994	3,539	4,257	4,737	2,567	5,173	2,181	1,610	1,908	2,282
Berners River	4,000	9,200	BEG	1994	14,450	5,220	5,470	3,915	6,870	4,230	7,520	6,050	5,480
Chilkat River	30,000	70,000	BEG	2006	67,465	38,589	80,683	25,493	57,376	48,867	89,124	66,557	38,677

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Table 1.–Page 2 of 2.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
Lost River	2,200		lower-bound SEG	2009	5,047	1,241	3,500	2,542	NA	3,581	2,393	1,221	2,200
Situk River	3,300	9,800	BEG	1994	10,284	2,514	7,950	5,763	NA	5,814	11,195	3,652	3,007
Tsiu/Tsivat Rivers	10,000	29,000	BEG	1994	NA	16,600	14,500	14,000	25,200	28,000	11,000	21,000	11,000
PINK SALMON													
Southern Southeast	3,000,000	8,000,000	BEG	2009	8,260,000	9,400,000	4,330,000	10,590,000	6,290,000	7,200,000	5,940,000	5,500,000	6,470,000
Northern Southeast Inside	2,500,000	6,000,000	BEG	2009	5,210,000	6,680,000	3,960,000	4,740,000	1,470,000	3,650,000	3,210,000	6,030,000	2,110,000
Northern Southeast Outside	750,000	2,500,000	BEG	2009	2,190,000	3,840,000	1,960,000	2,310,000	1,730,000	1,820,000	2,010,000	2,730,000	2,470,000
Situk River (even-year)	eliminated			2012	144,938		114,779		1,232 ^e		89,301 ^e		
Situk River (odd-year)	eliminated			2012		281,135		229,033		62,787		169,908	
Situk River	33,000		lower-bound SEG	2012									30,548
SOCKEYE SALMON													
Hugh Smith Lake	8,000	18,000	OEG ^h	2003	19,734	23,872	42,112	33,743	3,588	9,483	15,646	22,029	13,353
	8,000	18,000	BEG	2003									
McDonald Lake	55,000	120,000	SEG	2009	28,759	61,043	31,357	29,086	20,700	51,000	72,500	113,000	57,000
Mainstem Stikine River	20,000	40,000	SEG	1987	36,725	34,788	27,603	20,865	16,178 ^b	23,045 ^b	25,185 ^b	33,659 ^b	30,668 ^b
Tahltan Lake ⁱ	18,000	30,000	BEG	1993	62,952	43,046	53,455	20,874	10,416	30,323	22,702	34,248	13,463
Speel Lake	4,000	13,000	BEG	2003	7,813	7,549	4,165	3,099	1,763	3,689	5,640	4,777	5,681
Taku River	71,000	80,000	SEG	1986	106,688	120,053	146,151	87,763	68,059 ^b	71,811 ^b	87,259 ^b	112,187 ^b	112,564 ^b
Redoubt Lake	7,000	25,000	OEG	2003	77,263	65,653	103,953	66,938	10,146	12,851	17,119	21,806	40,903
	10,000	25,000	BEG	2003									
Chilkat Lake	70,000	150,000	BEG	2009	119,000	84,000	73,000	68,000	71,735	150,033	61,906	63,628	107,723
Chilkoot Lake	38,000	86,000	SEG	2009	77,660	51,178	96,203	72,678	33,117	33,705	71,657	65,915	118,166
East Alsek-Doame River	13,000	26,000	BEG	2003	33,300	50,000	29,000	40,100	8,000	12,000	19,500	27,300	21,500
Klukshu River	7,500	15,000	BEG	2000	13,721	3,167	12,890	8,310	2,741	5,509	18,546	20,904	17,267
Lost River	1,000		lower-bound SEG	2009	1,123	1,476	1,018	180	200	NA	1,525	1,006	453
Situk River	30,000	70,000	BEG	2003	43,278	66,476	90,351	61,799	22,520	83,959	47,865 ^c	89,943	62,476

Note: NA = data not available.

^a Goals are for large (≥660 mm MEF, or fish age 1.3 and older) Chinook salmon, except the Alsek River goal, which is germane to fish age 1.2 and older and can include fish <660 mm MEF.

^b Preliminary data.

^c 2012 Unuk River Chinook salmon escapement estimate based on expanded aerial survey index because mark–recapture experiment failed.

^d Chilkat River Chinook salmon inriver goal accounts for inriver subsistence harvest, which averages <100 fish.

^e Incomplete weir count due to inseason problems with weir (e.g., breach of weir).

^f 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 38,000 fish as detailed in the Pacific Salmon Treaty. The management threshold for escapement is the inriver run minus the allowed Canadian inriver harvest of 3,000 at runs of less than 50,000.

^g Situk River weir was pulled well before peak of pink salmon run so adequate assessment was not possible.

^h Hugh Smith Lake sockeye salmon OEG includes wild and hatchery fish.

ⁱ Tahltan sockeye salmon escapement count includes fish collected for broodstock.

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, 2004 to 2012.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
CHINOOK SALMON													
<i>Bristol Bay</i>													
Nushagak River	40,000	80,000	SEG	2007	107,591	163,506	117,364	50,960	91,364	74,781	27,526	44,749	102,000
Togiak River	9,300		lower-bound SEG	2007	NS	NS	NS	NS	NS	NS	NS	NS	NS
Naknek River	5,000		lower-bound SEG	2007	12,878	NS	NS	5,498	6,559	3,305 ^a	NS	NS	NS
Alagnak River	2,700		lower-bound SEG	2007	6,755	5,084	4,278	3,455	1,825	1,957	NS	NS	NS
Egegik River	450		lower-bound SEG	2007	579	335	196	458	162	350 ^b	NS	NS	NS
<i>Upper Cook Inlet</i>													
Alexander Creek	2,100	6,000	SEG	2002	2,215	2,140	885	480	150	275	177	343	181
Campbell Creek	380		lower-bound SEG	2011	964	1,097	1,052	588	439	554	290	260	NS
Chuitna River	1,200	2,900	SEG	2002	2,938	1,307	1,911	1,180	586	1,040	735	719	502
Chulitna River	1,800	5,100	SEG	2002	2,162	2,838	2,862	5,166	2,514	2,093	1,052	1,875	667
Clear (Chunilna) Creek	950	3,400	SEG	2002	3,417	1,924	1,520	3,310	1,795	1,205	903	512	1,177
Crooked Creek	650	1,700	SEG	2002	2,196	1,903	1,516	964	881	617	1,088	654	631
Deshka River	13,000	28,000	SEG	2011	57,934	37,725	31,150	18,714	7,533	11,967	18,594	19,026	14,010
Goose Creek	250	650	SEG	2002	417	468	306	105	117	65	76	80	57
Kenai River - Early Run	5,300	9,000	OEG	2005	11,855	16,387	18,428	12,504	11,732	9,771	NA ^c	NA ^c	NA ^c
	4,000	9,000	SEG	2011									
Kenai River - Late Run	17,800	35,700	SEG	2011	40,198	26,046	24,423	32,618	24,144	17,158	NA ^d	NA ^d	NA ^d
Lake Creek	2,500	7,100	SEG	2002	7,598	6,345	5,300	4,081	2,004	1,394	1,617	2,563	2,366
Lewis River	250	800	SEG	2002	1,000	441	341	0 ^c	120	111	56	92	107
Little Susitna River	900	1,800	SEG	2002	1,694	2,095	1,855	1,731	1,297	1,028	589	887	1,154
Little Willow Creek	450	1,800	SEG	2002	2,227	1,784	816	1,103	NC	776	468	713	494
Montana Creek	1,100	3,100	SEG	2002	2,117	2,600	1,850	1,936	1,357	1,460	755	494	416
Peters Creek	1,000	2,600	SEG	2002	3,757	1,508	1,114	1,225	NC	1,283	NC	1,103	459
Prairie Creek	3,100	9,200	SEG	2002	5,570	3,862	3,570	5,036	3,039	3,500	3,022	2,038	1,185
Sheep Creek	600	1,200	SEG	2002	285	760	580	400	NC	500	NC	350	363
Talachulitna River	2,200	5,000	SEG	2002	8,352	4,406	6,152	3,871	2,964	2,608	1,499	1,368	847
Theodore River	500	1,700	SEG	2002	491	478	958	486	345	352	202	327	179
Willow Creek	1,600	2,800	SEG	2002	2,840	2,411	2,193	1,373	1,255	1,133	1,173	1,061	756
<i>Lower Cook Inlet</i>													
Anchor River	3,800	10,000	SEG	2011	12,016	11,156	8,945	9,622	5,806	3,455	4,449	3,547	4,509 ^f
Deep Creek	350	800	SEG	2002	1,075	1,076	507	553	205	483	387	696	447
Nililchik River	550	1,300	SEG	2008	679	1,259	1,013	543	586	528	605	668	555 ^f

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Table 2.–Page 2 of 6.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
Prince William Sound													
Copper River	24,000		lower-bound SEG	2003	30,628	21,528	58,454	34,565	32,487	27,787	16,771	27,994	29,600 ^g
CHUM SALMON													
Bristol Bay													
Nushagak River	190,000		lower-bound SEG	2007	283,811	456,025	661,002	161,483	326,300	438,481	273,914	248,278	395,162
Upper Cook Inlet													
Clearwater Creek	3,800	8,400	SEG	2002	3,900	530	500	5,590	12,960	8,300	13,700	11,630	5,300
Lower Cook Inlet													
Port Graham River	1,450	4,800	SEG	2002	1,177	743	2,231	1,882	1,802	1,029	1,395	1,764	699
Dogfish Lagoon	3,350	9,150	SEG	2002	3,617	2,746	5,394	4,919	6,200	4,380	12,703	12,936	8,842
Rocky River	1,200	5,400	SEG	2002	17,159	6,060	11,200	1,600	3,763	2,500	1,271	4,480	3,165
Port Dick Creek	1,900	4,450	SEG	2002	8,620	4,848	2,786	2,753	11,774	5,592	2,439	7,087	8,400
Island Creek	6,400	15,600	SEG	2002	15,135	20,666	5,615	3,092	12,935	9,295	3,408	11,755	14,863
Big Kamishak River	9,350	24,000	SEG	2002	57,897	25,717	58,173	14,787	4,495	15,026	NS	5,532	12,400
Little Kamishak River	6,550	23,800	SEG	2002	45,342	12,066	42,929	15,569	21,265	4,213	18,414	19,310	30,250
McNeil River	24,000	48,000	SEG	2008	14,613	22,496	17,403	21,629	10,617	18,766	10,520	30,977	10,388
Bruin River	6,000	10,250	SEG	2002	15,886	21,208	7,000	3,055	17,535	10,071	6,200	3,486	16,795
Ursus Cove	6,050	9,850	SEG	2002	15,988	12,176	15,663	20,897	6,502	12,946	11,765	10,636	2,840
Cottonwood Creek	5,750	12,000	SEG	2002	16,277	17,914	13,243	12,522	11,561	19,405	15,848	4,730	4,111
Iniskin Bay	7,850	13,700	SEG	2002	22,044	16,461	15,640	5,340	20,042	30,821	19,252	16,522	3,049
Prince William Sound^h													
Eastern District	50,000		lower-bound SEG	2006	108,833	113,135	109,403	123,814	74,740	55,219	91,514	196,933	61,969
Northern District	20,000		lower-bound SEG	2006	42,456	30,657	52,039	49,669	38,791	37,358	38,207	52,474	14,680
Coghill District	8,000		lower-bound SEG	2006	9,685	11,979	15,900	14,052	39,660	36,724	51,589	16,368	10,281
Northwestern District	5,000		lower-bound SEG	2006	10,371	12,696	25,860	10,778	28,051	34,290	30,074	11,447	7,072
Southeastern District	8,000		lower-bound SEG	2006	42,344	25,547	26,739	60,464	21,614	16,453	85,138	91,218	20,467
COHO SALMON													
Bristol Bay													
There are no coho salmon stocks with escapement goals in Bristol Bay.													
Upper Cook Inlet													
Fish Creek (Knik)	1,200	4,400	SEG	2011	1,415 ⁱ	3,011 ⁱ	4,967 ⁱ	6,868 ⁱ	4,868 ⁱ	8,214	6,977	1,428 ⁱ	1,237
Jim Creek	450	700	SEG	2002	4,652	1,464	2,389	725	1,890	1,331	242	229	213

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Table 2.–Page 3 of 6.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
Little Susitna River	10,100	17,700	SEG	2002	40,199	16,839 ^j	8,786 ^j	17,573	18,485	9,523	9,214	4,826 ^j	6,779
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	99,980	101,082	89,270	53,820	76,892	41,294	41,077	38,495	37,010
Bering River	13,000	33,000	SEG	2003	30,185	44,542	33,192	33,062	28,932	22,141	21,311	18,890	15,605
PINK SALMON													
Bristol Bay													
There are no pink salmon stocks with escapement goals in Bristol Bay.													
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	28,945	93,756	48,368	53,989	90,870	5,207	70,686	1,670	67,934
China Poot Creek	2,900	8,200	SEG	2002	3,335	9,223	7,242	6,235	5,086	1,120	2,220	3,462	8,392
Tutka Creek	6,500	17,000	SEG	2002	17,846	133,600	25,824	5,664	14,144	3,770	2,141	21,974	10,436
Barabara Creek	1,900	8,950	SEG	2002	5,395	14,440	3,554	25,168	16,557	2,583	13,935	21,974	1,412
Seldovia Creek	19,050	38,950	SEG	2002	56,763	98,602	70,045	69,405	53,484	14,619	25,886	46,231	44,722
Port Graham River	7,700	19,850	SEG	2002	44,010	69,095	31,173	25,595	24,720	13,996	16,586	20,883	34,486
Port Chatham	7,800	21,000	SEG	2002	26,375	44,389	24,210	14,451	16,354	25,291	2,992	15,830	5,430
Windy Creek Right	3,350	10,950	SEG	2002	11,974	22,174	17,146	32,297	12,491	15,012	6,408	1,722	5,823
Windy Creek Left	3,650	29,950	SEG	2002	23,286	72,031	65,155	18,339	64,068	57,263	24,241	12,210	11,691
Rocky River	9,350	54,250	SEG	2002	53,760	198,671	67,840	189,992	90,876	173,583	27,045	22,706	15,684
Port Dick Creek	18,550	58,300	SEG	2002	13,323	122,236	51,500	44,170	34,228	41,681	41,090	16,868	18,057
Island Creek	7,200	28,300	SEG	2002	33,573	26,404	107,683	87,235	49,719	44,527	69,525	10,181	20,079
S. Nuka Island Creek	2,700	14,250	SEG	2002	6,432	11,199	5,100	6,645	12,300	19,934	NS	NS	1,250
Desire Lake Creek	1,900	20,200	SEG	2002	24,258	45,980	74,774	11,820	9,546	73,926	2,978	600	2,260
Bear & Salmon Creeks	eliminated			2011	1,236	34,452	9,033	NS	NS	NS	NS		
Thumb Cove	eliminated			2011	4,250	8,668	5,205	NS	NS	NS	NS		
Humpy Cove	eliminated			2011	990	14,586	1,905	NS	NS	NS	NS		
Tonsina Creek	eliminated			2011	3,450	9,922	6,453	NS	NS	NS	NS		
Bruin River	18,650	155,750	SEG	2002	66,494	98,346	515,114	350,420	150,717	1,067,351	40,256	4,534	31,800
Sunday Creek	4,850	28,850	SEG	2002	31,497	116,170	70,037	394,797	20,434	106,296	6,607	844	1,348
Brown's Peak Creek	2,450	18,800	SEG	2002	18,100	60,983	35,703	249,383	17,400	63,605	3,092	2,035	2,800
Prince William Sound													
All districts combined													
(even year) ^k	eliminated			2012	1,996,223		1,187,595		862,419		1,916,910		

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Table 2.–Page 4 of 6.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
All districts combined (odd year)	eliminated			2012		4,669,168		1,509,133		1,828,801		3,921,761	
Eastern District (even year)	250,000	580,000	SEG	2012									301,709
Eastern District (odd year)	310,000	640,000	SEG	2012									
Northern District (even year)	140,000	210,000	SEG	2012									106,544
Northern District (odd year)	90,000	180,000	SEG	2012									
Coghill District (even year)	60,000	150,000	SEG	2012									172,611
Coghill District (odd year)	60,000	250,000	SEG	2012									
Northwestern District (even year)	70,000	140,000	SEG	2012									117,795
Northwestern District (odd year)	50,000	110,000	SEG	2012									
Eshamy District (even year)	3,000	11,000	SEG	2012									1,052
Eshamy District (odd year)	4,000	11,000	SEG	2012									
Southwestern District (even year)	70,000	160,000	SEG	2012									90,156
Southwestern District (odd year)	70,000	190,000	SEG	2012									
Montague District (even year)	50,000	140,000	SEG	2012									77,756
Montague District (odd year)	140,000	280,000	SEG	2012									
Southeastern District (even year)	150,000	310,000	SEG	2012									258,047
Southeastern District (odd year)	270,000	620,000	SEG	2012									
SOCKEYE SALMON													
<i>Bristol Bay</i>													
Kvichak River ¹	2,000,000	10,000,000	SEG	2010	5,500,134	2,320,332	3,068,226	2,810,208	2,757,912	2,266,140	4,207,410	2,264,352	4,164,444
			lower-bound										
Alagnak River	320,000		SEG	2007	5,396,592	4,218,990	1,773,966	2,466,414	2,180,502	970,818	1,187,730	883,794	861,747
Naknek River	800,000	1,400,000	SEG ^m	1983	1,939,674	2,744,622	1,953,228	2,945,304	2,472,690	1,169,466	1,463,928	1,177,074	900,312
Egegik River	800,000	1,400,000	SEG	1995	1,290,144	1,621,734	1,465,158	1,432,500	1,259,568	1,146,276	927,054	961,200	1,233,900
Ugashik River	500,000	1,200,000	SEG	1995	815,104	799,612	1,003,158	2,599,186	596,332	1,364,338	830,886	1,029,853	670,578
Wood River	700,000	1,500,000	SEG	2001	1,543,392	1,496,550	4,008,102	1,528,086	1,724,676	1,319,232	1,804,344	1,098,006	764,202
Igushik River	150,000	300,000	SEG	2001	109,650	365,712	305,268	415,452	1,054,704	514,188	518,040	421,380	193,770
Nushagak River	235,000	760,000	OEG	1997	491,730	1,049,246	548,410	518,041	492,546	484,149	468,696	428,191	432,438
	340,000	760,000	SEG	1997									
			lower-bound										
Kulukak Bay	8,000		SEG	2007	NS	NS	NS	NS	NS	NS	NS	NS	NS

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Table 2.–Page 5 of 6.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
Togiak River	120,000	270,000	SEG	2007	129,462	149,178	312,126	269,646	205,680	313,946	188,298	190,970	203,148
Upper Cook Inlet													
Crescent River	30,000	70,000	BEG	2005	103,201	125,623	92,533	79,406	62,029	NS	86,333	81,952	58,838
Fish Creek (Knik)	20,000	70,000	SEG	2002	22,157	14,215	32,562	27,948	19,339	83,480	126,836	66,678	18,813
Kasilof River	160,000	390,000	OEG	2011	575,721	346,516	366,216	335,943	299,601	295,434	265,513	244,221	372,523
Kenai River ^a	160,000	360,000	BEG	2011									
	700,000	1,400,000	OEG	2011	1,120,076	1,114,618	1,311,144	595,355	402,264	498,592	732,790	1,333,217	1,261,455
	700,000	1,200,000	SEG	2011									
Packers Creek	15,000	30,000	SEG	2008	NS	22,000	NS	46,637	25,247	16,473	NS	NA	NA
Russian River - Early Run	22,000	42,000	BEG	2011	56,582	52,903	80,524	27,298	30,989	52,178	27,074	29,129	24,115
Russian River - Late Run	30,000	110,000	SEG	2005	110,244	59,473	89,160	53,068	46,638	80,088	38,848	41,529	54,911
Yentna River ^b	eliminated			2009	71,281	36,921	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
Judd Lake	25,000	55,000	SEG	2009			40,633	58,134	54,304	44,616	18,361	39,997	18,303
Larson Lake	15,000	50,000	SEG	2009		9,751	57,411	47,736	35,040	40,933	20,324	12,413	16,708
Lower Cook Inlet													
English Bay	6,000	13,500	SEG	2002	15,310	8,188	15,454	16,487	11,996	18,176	12,253	9,920	3,985
Delight Lake	7,550	17,650	SEG	2011	7,262	15,200	10,929	43,963	23,933	12,700	23,775	20,190	10,887
Desire Lake	8,800	15,200	SEG	2002	10,700	4,820	18,600	10,000	10,700	16,000	6,320	9,630	8,840
Bear Lake	700	8,300	SEG	2002	8,061	10,285	8,338	8,421	9,000	9,977	7,964	8,620	7,865 ^p
Aialik Lake	3,700	8,000	SEG	2002	10,100	5,250	4,760	5,370	4,200	3,100	5,315	3,480	2,140
Mikfik Lake	6,300	12,150	SEG	2002	14,020	5,970	17,700	11,190	5,560	15,130	11,330	345	3,141
Chenik Lake	3,500	14,000	SEG	2011	17,006	14,507	13,868	18,288	11,284	15,200	17,312	10,330	16,505
Amakdedori Creek	1,250	2,600	SEG	2002	7,200	1,710	300	3,830	3,200	2,160	1,210	3,412	770
Prince William Sound													
Upper Copper River	360,000	750,000	SEG	2012	438,482	541,247	605,874	638,029	496,451	477,905	504,549	600,018	987,000 ^q
Copper River Delta	55,000	130,000	SEG	2003	69,385	58,406	98,896	88,285	67,950	69,292	82,835	76,507	66,850
Bering River	15,000	33,000	SEG	2012	25,135	30,890	14,671	21,471	18,396	17,022	4,367	28,530	17,890
Coghill Lake	20,000	60,000	SEG	2012	30,569	30,313	24,157	70,001	29,298	19,293	24,312 ^f	102,359	72,678 ^f
Eshamy Lake	13,000	28,000	BEG	2009	13,443	23,523	41,823	16,646	18,495	24,025	16,291	20,565	NA ^s

Note: NA = data not available; NC = no count; NS = no survey.

- ^a 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.
- ^b 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.
- ^c Target strength based escapement estimate deemed unreliable or not available. Refer to McKinley and Fleischman (2013) for recent escapement estimates.
- ^d Target strength based escapement estimate deemed unreliable or not available. Refer to Fleischman and McKinley (2013) for recent escapement estimates.
- ^e Lewis River diverged into swamp 1/2 mi. below bridge. No water in channel.
- ^f Preliminary escapement estimates.

Table 2. Page 6 of 6.

- ^g The Copper River Chinook salmon spawning escapement estimate is preliminary. The 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 mail-out survey and is generally available about 12 months after the fishery ends.
- ^h 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.
- ⁱ Incomplete counts for Fish Creek (Knik) in 2004–2008, and 2011 because weir was pulled in mid-August.
- ^j Incomplete counts for Little Susitna River in 2005, 2006, and 2011 due to breach of weir.
- ^k 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.
- ^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 one year (2004) was classified as either a prepeak or peak year.
- ^m Naknek River has an OEG of 800,000–2,000,000 sockeye salmon when the Naknek River Special Harvest Area is open to fishing.
- ⁿ Uses the best estimate of sport harvest upstream of sonar.
- ^o Yentna River sockeye salmon escapement goal was replaced by SEGs on Chelatna, Judd and Larson lakes in early 2009.
- ^p Bear Lake sockeye salmon escapement does not include the 4,428 fish that were harvested from the lake for brood stock.
- ^q The 2012 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.
- ^r The 2012 Coghill River weir count includes an estimated 700 sockeye salmon below the weir when removed on 27 July.
- ^s The Eshamy River weir was not operated in 2012. A pilot project to access the use of video for monitoring did not provide a comparable estimate.

Table 3.—Arctic-Yukon-Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2004 to 2012.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
CHINOOK SALMON													
<u>Kuskokwim Area</u>													
North (Main) Fork Goodnews River	640	3,300	SEG	2005	7,462	NS	4,159	NS	2,155	NS	NS	853	NS
Middle Fork Goodnews River	1,500	2,900	BEG	2007	4,388	4,633	4,559	3,852	2,161	1,630	2,244	1,861	513
Kanektok River	3,500	8,000	SEG	2005	28,375	14,202	8,433	NS	3,659	NS	1,228	NS	NA
Kogrukluk River	5,300	14,000	SEG	2005	19,651	22,000	19,414	13,029	9,730	9,702	5,690	6,891	NA
Kwethluk River	6,000	11,000	SEG	2007	28,604	NA	17,618	12,927	5,275	5,744	1,669	4,076	NA
Tuluksak River	1,000	2,100	SEG	2007	1,475	2,653	1,043	374	701	362	201	286	560
George River	3,100	7,900	SEG	2007	5,207	3,845	4,357	4,883	2,698	3,663	1,500	1,571	2,267
Kisaralik River	400	1,200	SEG	2005	5,157	2,206	4,734	692	1,074	NS	235	NS	610
Aniak River	1,200	2,300	SEG	2005	5,362	NS	5,639	3,984	3,222	NS	NS	NS	NS
Salmon River (Aniak R)	330	1,200	SEG	2005	2,177	4,097	NS	1,458	589	NS	NS	79	49
Holitna River	970	2,100	SEG	2005	4,051	1,760	1,866	NS	NS	NS	587	NS	NS
Cheeneetuk River (Stony R)	340	1,300	SEG	2005	918	1,155	1,015	NS	290	323	NS	249	229
Gagaryah River (Stony R)	300	830	SEG	2005	670	788	531	1,035	177	303	62	96	178
Salmon River (Pitka Fork)	470	1,600	SEG	2005	1,138	1,801	862	943	1,305	632	135	767	670
<u>Yukon River</u>													
East Fork Andreafsky River	2,100	4,900	SEG	2010	8,045	2,239	6,463	4,504	4,242	3,004	2,413	5,213	2,517
West Fork Andreafsky River	640	1,600	SEG	2005	1,317	1,492	824	976	NS	1,678	858	1,173	NS
Anvik River	1,100	1,700	SEG	2005	3,679	2,421	1,876	1,529	992	832	974	642	722
Nulato River (forks combined)	940	1,900	SEG	2005	1,321	553	1,292	2,583	922	2,260	711	1,401	1,374
Gisasa River	eliminated			2010	731	958	843	593	487	515	264		
Chena River	2,800	5,700	BEG	2001	9,645	NS	2,936	3,806	3,208	5,253	2,382	NS	2,200 ^a
Salcha River	3,300	6,500	BEG	2001	15,761	5,988	10,679	6,425	5,415	12,774	6,135	7,200 ^b	7,165
Canada Mainstem	42,500	55,000	agreement ^c	annual	48,469	67,985	62,630	34,904	33,883	65,278	31,818	46,017	32,456 ^d
<u>Norton Sound</u>													
Fish River/Boston Creek	100		lower-bound SEG	2005	112	46	NS	NS	NS	NS	NS	NS	NS
Kwiniuk River	300	550	SEG	2005	663	342	195	258	237	444	135	57	54
North River (Unalakleet R)	1,200	2,600	SEG	2005	1,125	1,015	906	1,948	903	2,355	1,256	864	996
Shaktoolik River	400	800	SEG	2005	91 ^e	74 ^f	150 ^e	412	NS	NS	NS	106	NS
Unalakleet/Old Woman River	550	1,100	SEG	2005	398 ^e	510 ^f	NS	821	NS	1,368	NS	105	NA
CHUM SALMON													
<u>Kuskokwim Area</u>													
Middle Fork Goodnews River	12,000		lower-bound SEG	2005	31,616	26,690	54,699	49,285	44,699	19,715	26,687	19,974	10,723

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Table 3.–Page 2 of 4.

System	2012 Goal Range		Type	Initial Year	Escapement									
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012	
Kanektok River	5,200		lower-bound SEG	2005	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA
Kogruklu River	15,000	49,000	SEG	2005	24,201	197,723	180,594	49,505	44,978	84,940	63,583	76,384		NA
Aniak River	220,000	480,000	SEG	2007	672,931	1,151,505	1,108,626	696,801	427,911	479,531	429,643	345,630		NS
<u>Yukon River Summer Chum</u>														
East Fork Andreafsky River	40,000		lower-bound SEG	2010	64,883	20,127	102,260	69,642	57,259	8,770	72,839	100,473		56,680
Anvik River	350,000	700,000	BEG	2005	365,353	525,391	605,485	459,038	374,928	193,098	396,173	642,527		483,972
<u>Yukon River Fall Chum</u>														
Yukon River Drainage	300,000	600,000	SEG	2010	536,000	1,990,000	881,000	911,000	687,000	482,000	526,000	881,000		573,000
Tanana River	61,000	136,000	BEG	2001	187,000	373,000	233,000	357,000	264,000	160,000	213,000	271,000		102,000
Delta River	6,000	13,000	BEG	2001	25,000	28,000	14,055	19,000	23,000	13,000	18,000	24,000		9,377
Toklat River	eliminated			2010	35,000	NA	NA	NA	NA	NA	NA	NA		
Upper Yukon River Tributaries	152,000	312,000	BEG	2001	195,000	1,179,000	435,000	327,000	248,000	NA	196,000	406,000		333,000
Chandalar River	74,000	152,000	BEG	2001	137,000	497,000	245,000	228,000	178,000	NA	158,000	295,000		206,000
Sheenjok River	50,000	104,000	BEG	2001	38,000	561,000	160,000	65,000	50,000	54,000	22,000	98,000		105,000
Fishing Branch River (Canada)	22,000	49,000	agreement	2008 ^e	20,000	121,000	30,000	34,000	20,000	26,000	16,000	13,000		22,000
Yukon R. Mainstem (Canada)	70,000	104,000	agreement	2010 ^h	154,000	438,000	211,000	227,000	174,000	93,000	118,000	204,000		138,000
<u>Norton Sound</u>														
Subdistrict 1 Aggregate	23,000	35,000	BEG	2001	23,787	38,808	87,222	76,940	32,177	21,368	97,798	66,122		52,076
Sinuk River	eliminated			2010	3,197	4,710	4,834	16,481	NS	2,232	NA			
Nome River	2,900	4,300	OEG	2001	3,903	5,584	5,678	7,034	2,607	1,565	5,906	3,582		2,015
	2,900	4,300	SEG	2005										
Bonanza River	eliminated			2010	2,166	5,534	708	8,491	NS	6,744	NA			
Snake River	1,600	2,500	OEG	2001	2,145	2,948	4,128	8,147	1,244	891	6,973	4,343		1,235
	1,600	2,500	SEG	2005										
Solomon River	eliminated			2010	1,436	1,914	2,062	3,469	NS	918	NA			
Flambeau River	eliminated			2010	7,667	7,692	27,828	12,006	11,618	4,075	NA			
Eldorado River	6,000	9,200	OEG	2001	3,273	10,426	41,985	21,312	6,746	4,943	42,612	16,227		13,393
	6,000	9,200	SEG	2005										
			lower-bound											
Niukluk River	23,000		SEG	2010	10,770	25,598	29,199	50,994	12,078	15,879	48,561	23,607		19,576
Kwiniuk River	11,500	23,000	OEG	2001	10,362	12,083	39,519	27,756	9,483	8,739	71,388	31,604		5,577
	10,000	20,000	BEG	2001										
Tubutulik River	9,200	18,400	OEG	2001	NS	1,336	NS	7,045	NS	3,161	16,097	14,127		NS
	8,000	16,000	BEG	2001										
Unalakleet/Old Woman River	2,400	4,800	SEG	2005	NS	1,530	NS	1,902	NS	NS	NS	NS		NS
<u>Kotzebue Sound</u>														
Kotzebue Sound Aggregate	196,000	421,000	BEG	2007										
Noatak and Eli Rivers	42,000	91,000	SEG	2007	53,058	NS	39,785	NS	270,747	69,872	NS	NS		NS

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Table 3.–Page 3 of 4.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
Upper Kobuk w/ Selby River	9,700	21,000	SEG	2007	26,018	NS	48,750	NS	42,622	45,155	NS	NS	NS
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	1,736	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													
<u>Kuskokwim Area</u>													
Middle Fork Goodnews River	12,000		lower-bound SEG	2005	47,916	15,683	15,969	20,975	36,630	20,000	23,839	23,826	13,679
Kogrukluk River	13,000	28,000	SEG	2005	27,041	24,116	17,011	27,033	29,661	22,981	13,971	24,174	13,698
Kwethluk River	19,000		lower-bound SEG	2010	64,216	NS	25,664	19,473	49,973	21,911	NA	NA	19,960
<u>Yukon River</u>													
Delta Clearwater River	5,200	17,000	SEG	2005	38,000	34,000	17,000	15,000	7,500	17,000	5,867 ⁱ	6,000	5,230
<u>Norton Sound</u>													
Kwiniuk River	650	1,300	SEG	2005	1,237	NS	NS	5,174	2,676	NS	2,925	1,331	NS
Niukluk River ^d	2,400	7,200	SEG	2010	2,064	2,727	11,169	3,498	13,779	6,861	9,042	2,405	1,729
North River (Unalakleet R.)	550	1,100	SEG	2005	1,386	1,963	NS	2,349	2,744k	2,830 ^k	NS	898	NS
PINK SALMON													
<u>Kuskokwim Area</u>													
There are no escapement goals for pink salmon in the Kuskokwim Management Area.													
<u>Yukon River</u>													
There are no escapement goals for pink salmon in the Yukon River drainage.													
<u>Norton Sound</u>													
Nome River (odd year)	3,200		lower-bound SEG	2005		285,759		24,395		16,490		14,403	
Nome River (even year)	13,000		lower-bound SEG	2005	1,051,146		578,555		1,186,554		171,760		149,119
Kwiniuk River	8,400		lower-bound SEG	2005	3,054,684	341,048	1,347,090	54,255	1,444,213	42,962	634,220	30,023	393,302
Niukluk River	10,500		lower-bound SEG	2005	975,895	270,424	1,371,919	43,617	669,234	24,204	434,205	15,425	249,412
North River	25,000		lower-bound SEG	2005	1,162,978	1,670,934	2,169,890	580,935	240,286	190,291	150,807	123,892	137,006
SOCKEYE SALMON													
<u>Kuskokwim Area</u>													
North (Main) Fork Goodnews River	5,500	19,500	SEG	2005	31,695	NS	78,100	NS	32,500	NS	NS	14,140	16,700
Middle Fork Goodnews River	18,000	40,000	BEG	2007	55,926	113,809	126,772	72,282	50,459	25,465	35,762	17,946	30,472
Kanektok River	14,000	34,000	SEG	2005	78,380	110,730	382,800	NS	38,900	NS	16,950	NS	NA

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Table 3.–Page 4 of 4.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
Kogruklu River	4,440	17,000	SEG	2010	6,775	37,939	60,807	16,525	19,675	23,785	13,995	8,132	NA
<u>Yukon River</u>													
There are no escapement goals for Sockeye in the Yukon River drainage.													
<u>Norton Sound</u>													
Salmon Lake/Grand Central River	4,000	8,000	SEG	2005	25,860	42,250	41,780	20,612	11,672	322	762	5,144	5,830
Glacial Lake	800	1,600	SEG	2005	970	3,730	5,810	1,505	540	169	154	NS	NS

Note: NA = data not available; NS = no survey.

- ^a 2012 Chena River Chinook salmon escapement estimate includes an expansion for missed counting days based on two DIDSON sonars used to assess Chinook salmon passage.
- ^b 2011 Slacha 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 2010, 2011, and 2012 seasons by the United States and Canada Yukon River Joint Technical Committee (JTC). Estimates from 2005–2012 represent escapement after subtraction of Canadian harvest.
- ^d Preliminary data.
- ^e 2004 and 2006 Shaktoolik River surveys and combined Unalakleet and Old Woman rivers surveys (2004) are not considered complete as they were conducted well before peak spawn. Surveys during these years were rated as acceptable, but the observer noted difficulty enumerating Chinook salmon due to large numbers of pink salmon.
- ^f 2005 Shaktoolik and Unalakleet River drainage surveys were conducted during peak spawning periods but Chinook salmon counts are thought to be underestimated due to large numbers of pink salmon.
- ^g Fishing Branch River fall chum salmon IMEG of 22,000–49,000 was implemented in 2008 by JTC and will continue through 2013.
- ^h Yukon River Mainstem fall chum salmon IMEG of 70,000–104,000 was implemented for 2010, 2011, and 2012 seasons by JTC.
- ⁱ Delta Clearwater River coho salmon 2010 escapement index is not a peak count.
- ^j Niukluk River coho salmon numbers (all years) are actual tower counts, and do not take into consideration upstream harvest.
- ^k North River (Unalakleet R.) coho salmon 2008 and 2009 escapement indices are not peak counts.

Table 4.–Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2004 to 2012.

System	2012 Goal Range		Initial		Escapement								
	Lower	Upper	Type	Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
CHINOOK SALMON													
<u>AK Peninsula</u>													
Nelson River	2,400	4,400	BEG	2004	6,959	4,993	2,516	2,492	5,012	2,048	2,767 ^a	1,704 ^a	992 ^a
<u>Chignik</u>													
Chignik River	1,300	2,700	BEG	2002	7,633	6,037	3,175	1,675	1,620	1,590	3,515 ^b	2,482 ^b	1,449 ^b
<u>Kodiak</u>													
Karluk River	3,000	6,000	BEG	2011	7,228	4,684	3,673	1,697	752	1,306	2,917	3,420	3,197 ^c
Ayakulik River	4,000	7,000	BEG	2011	24,425	8,175	2,937	6,232	3,071	2,615	5,197	4,252 ^d	4,760 ^d
CHUM SALMON													
<u>AK Peninsula</u>													
Northern District	119,600	239,200	SEG	2007	139,350	103,675	382,583	243,334	228,537	154,131	145,310	96,952	140,418
Northwestern District	100,000	215,000	SEG	2007	295,600	192,965	193,460	335,450	241,750	84,460	144,100	151,400	140,000
Southeastern District ^e	106,400	212,800	SEG	1992	367,200	412,500	405,300	201,451	277,450	106,500	62,612	145,300	31,072
South Central District	89,800	179,600	SEG	1992	184,800	235,700	119,600	126,000	140,450	18,600	85,600	169,000	86,190
Southwestern District	133,400	266,800	SEG	1992	180,000	317,910	231,935	398,010	171,250	385,730	142,650	176,425	87,230
Unimak District	800		lower-bound SEG	2007	400	4,200	7,915	1,200	2,800	1,400	1,050	7,000	750
<u>Chignik</u>													
Entire Chignik Area	57,400		lower-bound SEG	2008	349,518	308,700	93,489	238,216	197,259	214,959	177,220	278,145	106,950
<u>Kodiak</u>													
Mainland District	104,000		lower-bound SEG	2008	241,645	22,500	346,140	82,600	72,000	91,106	124,500	128,700	127,850
Kodiak Archipelago Aggregate	151,000		lower-bound SEG	2008	127,755 ^f	141,850 ^f	419,000 ^f	166,060 ^f	83,040	177,490	160,290	192,400	159,825
COHO SALMON													
<u>AK Peninsula</u>													
Nelson River	18,000		lower-bound SEG	2004	52,500	24,000	19,000	19,000	24,000	22,000	15,000	21,000	19,160
Thin Point Lake	3,000		lower-bound SEG	2004	9,600	17,500	9,750	9,000	3,200	900	NA ^g	200	1,500
Ilnik River	9,000		lower-bound SEG	2010	40,000	NA	31,000	22,000	27,000	NA	19,600	22,000	14,800
<u>Chignik</u>													
There are no coho salmon stocks with escapement goals in Chignik Area													
<u>Kodiak</u>													
Pasagshak River	1,200		lower-bound SEG	2011	3,402	3,773	937	1,896	3,875	2,385	1,971	1,083	3,132

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Table 4.–Page 2 of 3.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
Buskin River	3,200	7,200	BEG lower-bound SEG	2005	8,384	15,844	11,706	7,697	7,963	9,351	6,096	5,116 ^h	5,291 ^h
Olds River	1,000		BEG lower-bound SEG	2011	1,860	2,495	1,912	868	656	697	NA	1,003	624
American River	400		BEG lower-bound SEG	2011	753	339	2,033	307	700	639	NA	1,061	427
PINK SALMON													
<u>AK Peninsula</u>													
Bechevin Bay Section (odd year)	1,600		lower-bound SEG	2004		8,720		16,800		72,000		2,400	
Bechevin Bay Section (even year)	31,000		lower-bound SEG	2004	84,300		116,075		11,900		13,600		7,603
South Peninsula Total (odd year)	1,637,800	3,275,700	SEG	2007		6,165,634		2,680,213		3,067,000		2,494,950	
South Peninsula Total (even year)	1,864,600	3,729,300	SEG	2007	8,311,410		2,862,250		3,338,370		742,912		478,910
<u>Chignik</u>													
Entire Chignik Area (odd year)	500,000	800,000	SEG	2008		1,591,850		1,217,064		869,063		986,248	
Entire Chignik Area (even year)	200,000	600,000	SEG	2008	1,114,860		374,826		863,031		330,570		292,850
<u>Kodiak</u>													
Mainland District	250,000	1,000,000	SEG	2011	711,555	268,050	778,200	315,300	236,500	430,100	265,650	273,500	413,325
Kodiak Archipelago (odd year)	2,000,000	5,000,000	SEG	2011		3,688,158		2,208,678		4,707,894		2,506,714	
Kodiak Archipelago (even year)	3,000,000	7,000,000	SEG	2011	8,074,963		5,086,372		2,924,708		3,378,483		5,111,049
SOCKEYE SALMON													
<u>AK Peninsula</u>													
Cinder River	12,000	48,000	SEG	2007	58,050	141,000	101,100	142,000	129,800	133,600	108,900	106,000	76,620
Ilnik River	40,000	60,000	SEG	1991	82,000	154,000	88,000	93,000	44,300	66,000	59,000	43,000	61,000
Meshik River	25,000	100,000	SEG	2010	102,200	111,100	138,010	56,900	83,250	88,000	63,700	93,900	50,900
Sandy River	34,000	74,000	SEG	2007	32,000	101,000	48,000	44,700	32,200	36,000	37,000	37,500	27,100
Bear River Early Run	176,000	293,000	SEG	2004	354,565	332,248	262,995	206,233	125,526	216,237	226,534	207,451	173,158
Bear River Late Run	117,000	195,000	SEG	2004	80,435	221,752	182,005	224,767	195,474	133,263	142,966	132,549	116,442
Nelson River	97,000	219,000	BEG	2004	480,097	303,000	215,000	180,000	141,600	157,000	108,000	89,000	103,300
Christianson Lagoon	25,000	50,000	SEG	1980s	75,400	54,500	41,505	48,100	114,000	48,100	27,900	35,200	40,000
Swanson Lagoon	6,000	16,000	SEG	2007 late	24,300	2,400	376	9,200	5,500	1,000	1,700	1,000	3,500
North Creek	4,400	8,800	SEG	1980s	15,000	45,000	7,530	16,800	38,000	8,000	18,500	10,200	18,000
Orzinski Lake	15,000	20,000	SEG	1992 late	75,450	44,797	18,000	10,643	36,839	21,457	18,039	16,764	17,243
Mortensen Lagoon	3,200	6,400	SEG	1980s late	7,215	21,703	14,688	6,200	5,600	25,000	6,600	500	5,000
Thin Point Lake	14,000	28,000	SEG	1980s	34,500	21,000	11,510	21,550	18,900	33,500	12,400	14,500	19,000
McLees Lake ⁱ	10,000	60,000	SEG	2010	40,283	12,097	12,936	21,428	8,661	10,120	32,842	36,602	15,111

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Table 4.–Page 3 of 3.

System	2012 Goal Range		Type	Initial Year	Escapement								
	Lower	Upper			2004	2005	2006	2007	2008	2009	2010	2011	2012
<i>Chignik</i>													
Chignik River Early Run	350,000	400,000	SEG	2005	363,800	355,091	366,497	361,091	377,579	391,476	432,535	488,930	353,441
Chignik River Late Run ^l	200,000	400,000	SEG	2008	214,459	225,366	368,996	293,883	328,479	328,586	311,291	264,887	358,948
<i>Kodiak</i>													
Malina Creek	1,000	10,000	SEG	2005	9,636 ^k	3,180 ^k	6,400	1,900	3,690	1,400	4,000	3,800	4,100
Afognak (Litnik) River	20,000	50,000	BEG	2005	15,181	21,577	22,933	21,070	26,874	31,358	52,255	49,193	41,553
Little River	3,000		lower-bound SEG	2008	16,000	3,000	3,500	8,500	2,300	1,500	3,200	3,900	6,300
Uganik Lake	24,000		lower-bound SEG	2008	83,600	7,500	26,700	35,000	64,700	53,700	30,700	37,900	22,200
Karluk River Early Run	110,000	250,000	BEG	2008	393,468	283,860	202,366	294,740	82,191	52,466	70,544	87,049	188,085
Karluk River Late Run	170,000	380,000	BEG	2005	326,466	498,102	288,007	267,185	164,419	277,611	277,558	230,273	314,605
Ayakulik River	eliminated			2005	275,238	251,906	87,780	283,042	162,888	315,184	262,327	NA	NA
Ayakulik River Early Run	140,000	280,000	SEG	2011	245,123	139,246	59,315	169,596	96,912	200,648	201,933	177,480	213,501
Ayakulik River Late Run	60,000	120,000	SEG	2011	30,115	112,660	28,465	113,446	65,976	114,536	60,394	83,661	114,753
Upper Station River Early Run	25,000		OEG	1999	78,487	60,349	24,997	31,895	38,800	34,585	42,060	28,759	25,487
	43,000	93,000	BEG	2011									
Upper Station River Late Run	120,000	265,000	BEG	2005	177,108	156,401	153,153	149,709	184,856	161,736	141,139	101,893	149,325
Frazer Lake	75,000	170,000	BEG	2008	120,664	136,948	89,516	120,186	105,363	101,845	94,680	134,642	148,884
Saltery Lake	15,000	35,000	BEG	2011	54,800 ^l	28,500 ^l	28,000 ^l	17,200 ^l	49,266	46,591	26,809	30,768	27,188
			lower-bound SEG	2011									
Pasagshak River	3,000		bound SEG	2011	46,400	22,000	6,300	14,300	14,900	1,400	4,800 ^m	13,402 ^m	4,585 ^m
Buskin Lake	5,000	8,000	BEG	2011	22,023	15,468	17,734	16,502	5,900	7,757	9,800	11,982	8,565

Note: NA = data not available.

^a Nelson River Chinook salmon logbook data used to estimate sport harvest above weir 2010–2011. Angler effort not reported in statewide harvest survey. 2012 data only escapement counts.

^b Chignik River Chinook salmon logbook data used to estimate sport harvest above weir 2010–2011. Angler effort not reported in statewide harvest survey. 2012 data only escapement counts.

^c 2012 Karluk River Chinook salmon escapement is the weir count; no upriver harvest due to fishery closure.

^d Ayakulik River Chinook salmon logbook data used to estimate sport harvest above weir 2011. Angler effort not reported in statewide harvest survey. 2012 data only escapement counts.

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

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

^g Poor survey conditions contributed to the zero aerial survey escapement index for Thin Point Lake coho salmon.

^h Buskin River coho salmon 2011 and 2012 escapements are weir counts only as statewide harvest survey data are not available yet.

ⁱ McLees Lake sockeye salmon SEG will be in effect if a weir is in place; there will be no goal if a weir is not operated.

^j The Chignik late-run sockeye escapement objective (July 5 to September 15) includes the late-run sockeye salmon sustainable escapement goal (SEG; 200,000–400,000) plus an additional 50,000 sockeye salmon inriver run goal (25,000 in August and 25,000 in September) to meet late season subsistence needs.

^k 2004, and 2005 Malina Creek sockeye salmon escapements are weir counts. All other escapements are peak aerial survey indices.

^l 2004–2007 Saltery Lake sockeye salmon escapements are peak aerial survey indices. All other escapements are weir counts.

^m 2010–2011 Pasagshak River sockeye salmon escapement is a weir count. All other escapements are peak aerial survey indices.

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	2004	2005	2006	2007	2008	2009	2010	2011	2012
Chinook Salmon	Blossom River	Met	Met	Met	Under	Met	Under	Met	Under	Met ^a
	Keta River	Met	Met	Over	Met	Met	Under	Met	Under	Met ^a
	Unuk River	Met	Met	Met	Met	Met	Met ^b	Over	Met	Under
	Chickamin River	Met	Over	Over	Met	Over	Met	Over	Met	Under
	Andrew Creek	Over	Over	Over	Over	Met	Under	Met	Met	Under
	Stikine River	Over	Over	Met	Met	Met	Under	Met	Met	Met
	King Salmon River	Met	Met	Met	Met	Met	Under	Met	Met	Met
	Taku River	Over	Met	Met	Under	Under	Met ^a	Met	Met	Met
	Chilkat River	Met	Met	Met	Under	Met	Over	Met	Met	Under
	Klukshu (Alsek) River	Over	Under	Under	Under	Under	Met	Met	Met	Under
	Situk River	Met	Met	Met	Met	Under	Met	Under	Under	Under
Chum Salmon	Southern Southeast Summer						Under	Under	Met	Met ^c
	Northern Southeast Inside Summer						Under	Under	Under	Met ^c
	Northern Southeast Outside Summer						Under	Met	Met	Met
	Cholmondeley Sound Fall						Met	Over	Over	Over
	Port Camden Fall						Under	Met	Under	Met
	Security Bay Fall						Met	Met	Met	Met
	Excursion River Fall						Under	Met	Under	Under
	Chilkat River Fall						Over	Met	Over	Over
Coho Salmon	Hugh Smith Lake	Met	Over	Met	Over	Over	Over ^a	Over	Over	Over
	Taku River	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Auke Creek	Met	Met	Over	Met	Over	Met	Met	Over	Over
	Montana Creek	Met	Met	Met ^a	Under	Met	Met	Met	Met	Under
	Peterson Creek	Met	Met	Over ^a	Met	Over	Met	Over	Met	Met
	Ketchikan Survey Index			Met	Met	Over	Met	Met	Met	Over
	Sitka Survey Index			Over	Over	Over	Over	Over	Over	Over
	Ford Arm Lake	Over	Over	Over	Met	Over	Met	Met	Met	Met
	Berners River	Over	Met	Met	Under	Met	Met	Met	Met	Met
	Chilkat River			Over	Under	Met	Met	Over	Met	Met
	Lost River	Met	Under	Met	Met	NA	Met ^d	Met	Under	Met
	Situk River	Over	Under	Met	Met	NA	Met	Over	Met	Under
	Tsiu/Tsivat Rivers	NA	Met	Met	Met	Met	Met	Met	Met	Met

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Table 5.–Page 2 of 2.

Species	System	2004	2005	2006	2007	2008	2009	2010	2011	2012
Pink Salmon	Southern Southeast	Met	Over	Met	Over	Met	Met ^e	Met	Met	Met
	Northern Southeast Inside	Under	Met	Met	Met	Under	Met ^e	Met	Over	Under
	Northern Southeast Outside	Over	Over	Over	Over	Met	Met ^e	Met	Over	Met
	Situk River (even-year)	Over		Over		NA ^f		NA ^f		
	Situk River (odd-year)		Over		Over		Met		Met	
	Situk River									Under ^g
Sockeye Salmon	Hugh Smith Lake	Over	Over	Over	Over	Under	Met	Met	Over	Met
	McDonald Lake	Under	Under	Under ^a	Under	Under	Under ^a	Met	Met	Met
	Mainstem Stikine River	Met	Met	Met	Met	Under	Met	Met	Met	Met
	Tahltan Lake	Over	Over	Over	Met	Under	Over	Met	Over	Under
	Speel Lake	Met	Met	Met	Under	Under	Under	Met	Met	Met
	Taku River	Over	Over	Over	Over	Under	Met	Over	Over	Over
	Redoubt Lake	Over	Over	Over	Over	Met	Met	Met	Met	Over
	Chilkat Lake	Over	Met	Under ^h	Under	Under	Over ^a	Under	Under	Met
	Chilkoot Lake	Met	Met	Over ^a	Met	Under	Under ^a	Met	Met	Over
	East Alsek-Doame River	Over	Over	Over	Over	Under	Under	Met	Over	Met
	Klukshu River	Met	Under	Met	Met	Under	Under	Over	Over	Over
	Lost River	Met	Met	Met	Under	Under	NA ^d	Met	Met	Under
	Situk River	Met	Met	Over	Met	Under	Over	Met	Over	Met

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 changed.

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

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

^f 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.

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

^h Prior to 2005, escapement goal was based on weir counts. After 2005, escapements and escapement goal were based on mark–recapture estimates (see Der Hovanisian and Geiger 2005).

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	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Chinook salmon	<u>Bristol Bay</u>										
	Nushagak River	Over	Over	Over	Met ^a	Over	Met	Met	Met	Over	
	Togiak River	NS	NS	NS	NS ^b	NS	NS	NS	NS	NS	
	Naknek River	Over	NS	NS	Met ^b	Met	Under	NS	NS	NS	
	Alagnak River				Met	Under	Under	NS	NS	NS	
	Egegik River				Met	Under	Under	NS	NS	NS	
	<u>Upper Cook Inlet</u>										
	Alexander Creek	Met	Met	Under	Under	Under	Under	Under	Under	Under	
	Campbell Creek	Over	eliminated			Met ^c	Met	Met	Under	NA	
	Chuitna River	Over	Met	Met	Under	Under	Under	Under	Under	Under	
	Chulitna River	Met	Met	Met	Over	Met	Met	Under	Met	Under	
	Clear (Chunilna) Creek	Over	Met	Met	Met	Met	Met	Under	Under	Met	
	Crooked Creek	Over	Over	Met	Met	Met	Under	Met	Met	Under	
	Deshka River	Over	Over	Over	Met	Under	Under	Met	Met	Met	
	Goose Creek	Met	Met	Met	Under	Under	Under	Under	Under	Under	
	Kenai River - Early Run	Met	Over ^d	Over	Over	Over	Over	NA	NA	NA	
	Kenai River - Late Run	Over	Met	Met	Met	Met	Under	NA	NA	NA	
	Lake Creek	Over	Met	Met	Met	Under	Under	Under	Met	Under	
	Lewis River	Over	Met	Met	Under	Under	Under	Under	Under	Under	
	Little Susitna River	Met	Over	Over	Met	Met	Met	Under	Under	Met	
	Little Willow Creek	Over	Met	Met	Met	NC	Met	Met	Met	Met	
	Montana Creek	Met	Met	Met	Met	Met	Met	Under	Under	Under	
	Peters Creek	Over	Met	Met	Met	NC	Met	NC	Met	Under	
	Prairie Creek	Met	Met	Met	Met	Under	Met	Under	Under	Under	
	Sheep Creek	Under	Met	Under	Under	NC	Under	NC	Under	Under	
	Talachulitna River	Over	Met	Over	Met	Met	Met	Under	Under	Under	
	Theodore River	Under	Under	Met	Under	Under	Under	Under	Under	Under	
	Willow Creek	Over	Met	Met	Under	Under	Under	Under	Under	Under	
	<u>Lower Cook Inlet</u>										
	Anchor River	Over	eliminated				Met ^e	Under	Under	Under ^f	Met
	Deep Creek	Over	Over	Met	Met	Under	Met	Met	Met	Met	
Ninilchik River	Met	Met	Met	Met	Met ^g	Under	Met	Met	Met		
<u>Prince William Sound</u>											
Copper River	Met	Under	Met	Met	Met	Met	Met	Under	Met	Met	

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Table 6.--Page 2 of 5.

Species	System	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Chum salmon	<u>Bristol Bay</u>										
	Nushagak River				Under	Met	Met	Met	Met	Met	
	<u>Upper Cook Inlet</u>										
	Clearwater Creek	Met	Under	Under	Met	Over	Met	Over	Over	Met	
	<u>Lower Cook Inlet</u>										
	Port Graham River	Under	Under	Met	Met	Met	Under	Under	Met	Under	
	Dogfish Lagoon	Met	Under	Met	Met	Met	Met	Over	Over	Met	
	Rocky River	Over	Over	Over	Met	Met	Met	Met	Met	Met	
	Port Dick Creek	Over	Over	Met	Met	Over	Over	Met	Over	Over	
	Island Creek	Met	Over	Under	Under	Met	Met	Under	Met	Met	
	Big Kamishak River	Over	Over	Over	Met	Under	Met	NS	Under	Met	
	Little Kamishak River	Over	Met	Over	Met	Met	Under	Met	Met	Over	
	McNeil River	Met	Met	Met	Met	Under ^h	Under	Under	Met	Under	
	Bruin River	Over	Over	Met	Under	Over	Met	Met	Under	Over	
	Ursus Cove	Over	Over	Over	Over	Met	Over	Over	Over	Under	
	Cottonwood Creek	Over	Over	Over	Over	Met	Over	Over	Under	Under	
	Iniskin Bay	Over	Over	Over	Under	Over	Over	Over	Under	Under	
	<u>Prince William Sound</u>										
	Eastern District	Met	Met	Met ⁱ	Met	Met	Met	Met	Met	Met	Met
	Northern District	Met	Met	Met ⁱ	Met	Met	Met	Met	Met	Met	Under
Coghill District	Met	Met	Met ⁱ	Met	Met	Met	Met	Met	Met	Met	
Northwestern District	Met	Met	Met ⁱ	Met	Met	Met	Met	Met	Met	Met	
Southeastern District	Over	Over	Met ⁱ	Met	Met	Met	Met	Met	Met	Met	
Coho salmon	<u>Upper Cook Inlet</u>										
	Fish Creek (Knik)	Met	eliminated						Met ^c	Met	
	Jim Creek	Over	Over	Over	Over	Over	Over	Under	Under	Under	
	Little Susitna River	Over	Met	NA	Met	Over	Under	Under	Under	Under	
	<u>Prince William Sound</u>										
	Copper River Delta	Over	Over	Over	Met	Over	Met	Met	Met	Met	
Bering River	Met	Over	Over	Over	Met	Met	Met	Met	Met		
Pink salmon	<u>Lower Cook Inlet</u>										
	Humpy Creek	Met	Over	Met	Met	Over	Under	Met	Under	Met	
	China Poot Creek	Met	Over	Met	Met	Met	Under	Under	Met	Over	

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Table 6.–Page 3 of 5.

Species	System	2004	2005	2006	2007	2008	2009	2010	2011	2012
Tutka Creek		Over	Over	Over	Under	Met	Under	Under	Over	Met
Barabara Creek		Met	Over	Met	Over	Over	Met	Over	Over	Under
Seldovia Creek		Over	Over	Over	Over	Over	Under	Met	Over	Over
Port Graham River		Over	Over	Over	Over	Over	Met	Met	Over	Over
Port Chatham		Over	Over	Over	Met	Met	Over	Under	Met	Under
Windy Creek Right		Over	Over	Over	Over	Over	Over	Met	Under	Met
Windy Creek Left		Met	Over	Over	Met	Over	Over	Met	Met	Met
Rocky River		Met	Over	Over	Over	Over	Over	Met	Met	Met
Port Dick Creek		Under	Over	Met	Met	Met	Met	Met	Under	Under
Island Creek		Over	Met	Over	Over	Over	Over	Over	Met	Met
S. Nuka Island Creek		Met	Met	Met	Met	Met	Over	NS	NS	Under
Desire Lake Creek		Over	Over	Over	Met	Met	Over	Met	Under	Met
Bear & Salmon Creeks			Over	Met	NS	NS	NS	NS		
Thumb Cove		Met	Met	Met	NS	NS	NS	NS		
Humpy Cove		Met	Over	Met	NS	NS	NS	NS		
Tonsina Creek		Met	Over	Over	NS	NS	NS	NS		
Bruin River		Met	Met	Over	Over	Met	Over	Met	Under	Met
Sunday Creek		Over	Over	Over	Over	Met	Over	Met	Under	Under
Brown's Peak Creek		Met	Over	Over	Over	Met	Over	Met	Under	Met
<u>Prince William Sound</u>										
All districts combined (even year)		Met		Under		Under		Met		
All districts combined (odd year)			Over		Met		Met		Over	
Eastern District (even year)										Met
Eastern District (odd year)										
Northern District (even year)										Under
Northern District (odd year)										
Coghill District (even year)										Over
Coghill District (odd year)										
Northwestern District (even year)										Met
Northwestern District (odd year)										
Eshamy District (even year)										Under
Eshamy District (odd year)										
Southwestern District (even year)										Met
Southwestern District (odd year)										
Montague District (even year)										Met
Montague District (odd year)										

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Table 6.--Page 4 of 5.

Species	System	2004	2005	2006	2007	2008	2009	2010	2011	2012
	Southeastern District (even year)									Met
	Southeastern District (odd year)									
Sockeye salmon	<u>Bristol Bay</u>									
	Kvichak River	Under ^j	Met	Met	Met	Met	Met	Met	Met	Met
	Alagnak River	Over	Over	Over	Met ^k	Met	Met	Met	Met	Met
	Naknek River	Over	Over	Over	Over	Over	Met	Over	Met	Met
	Egegik River	Met	Over	Over	Over	Met	Met	Met	Met	Met
	Ugashik River	Met	Met	Met	Over	Met	Over	Met	Met	Met
	Wood River	Over	Met	Over	Over	Over	Met	Over	Met	Met
	Igushik River	Under	Over	Over	Over	Over	Over	Over	Over	Met
	Nushagak River	Met	Over	Met	Met	Met	Met	Met	Met	Met
	Kulukak Bay	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Togiak River	Met	Met	Over	Met ^d	Met	Over	Met ^l	Met	Met
	<u>Upper Cook Inlet</u>									
	Crescent River	Over	Over ^d	Over	Over	Met	NS	Over	Over	Met
	Fish Creek (Knik)	Met	Under	Met	Met	Under	Over	Over	Met	Under
	Kasilof River	Over	Over	Over	Over	Met	Met	Met	Met	Met
	Kenai River	Over	Over	Over	Met	Under	Under	Met	Met	Met
	Packers Creek	NS	eliminated			Met ^c	Met	NS	NA	NA
	Russian River - Early Run	Over	Over ^l	Over	Met	Met	Over	Met	Met	Met
	Russian River - Late Run	Met	Met ^d	Met	Met	Met	Met	Met	Met	Met
	Yentna River	Under	Under	Met	Under	Met				
	Chelatna Lake						Under	Met	Over	Met
	Judd Lake						Met	Under	Met	Under
	Larson Lake						Met	Met	Under	Met
	<u>Lower Cook Inlet</u>									
	English Bay	Over	Met	Over	Over	Met	Over	Met	Met	Under
	Delight Lake	Met	Over	Met	Over	Over	Over	Over	Over	Met
	Desire Lake	Met	Under	Over	Met	Met	Over	Under	Met	Met
	Bear Lake	Met	Over	Over	Over	Over	Over	Met	Over	Met
	Aialik Lake	Over	Met	Met	Met	Met	Under	Met	Under	Under
	Mikfik Lake	Over	Under	Over	Met	Under	Over	Met	Under	Under
	Chenik Lake	Over	Over	Over	Over	Over	Over	Over	Met	Over
	Amakdedori Creek	Over	Met	Under	Over	Over	Met	Under	Over	Under

-continued-

Table 6.–Page 5 of 5.

Species	System	2004	2005	2006	2007	2008	2009	2010	2011	2012
	<i>Prince William Sound</i>									
	Upper Copper River	Met	Over	Over	Over	Met	Met	Over	Over	Over ^d
	Copper River Delta	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Bering River	Met	Met	Under	Met	Under	Under	Under	Met	Met ^d
	Coghill Lake	Met	Met	Met ^l	Over	Met	Under	Met	Over	Over ^d
	Eshamy Lake	Under	Met	Over	Under	Under	Met ^d	Met	Met	NA

Note: NA = data not available; NC = no count; NS = no survey. There are no escapement goals for coho salmon in Bristol Bay or Lower Cook Inlet and there are no pink salmon escapement goals in Bristol Bay or Upper Cook Inlet.

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

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

^c Previous escapement goal reinstated.

^d Escapement goal reevaluated, goal range changed.

^e Escapement goal from 2001–2004 based on aerial surveys, escapement numbers in Table 2 are not comparable.

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

^g 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.

^h 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 (see Otis and Szarzi 2007).

ⁱ Escapement goal reevaluated, upper bound eliminated, lower bound remained the same.

^j 2004 and 2009 were identified as pre-peak/peak escapement years for Kvichak River sockeye salmon and evaluated against the 6–10 million escapement goal.

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

^l 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	2004	2005	2006	2007	2008	2009	2010	2011	2012
Chinook salmon	<u>Kuskokwim Area</u>									
	North (Main) Fork Goodnews River	Met	NS ^a	Over	NS	Met	NS	NS	Met	NS
	Middle Fork Goodnews River	Met	Over ^a	Over	Over ^b	Met	Met	Met	Met	Under
	Kanektok River	Met	Over ^a	Over	NS	Met	NS	Under	NS	NA
	Kogruklu River	Met	Over ^a	Over	Met	Met	Met	Met	Met	NA
	Kwethluk River	Over	Over	NA	Over ^c	Under	Under	Under	Under	NA
	Tuluksak River				Under	Under	Under	Under	Under	Under
	George River				Met	Under	Met	Under	Under	Under
	Kisaralik River	Met	Over ^a	Over	Met	Met	NS	Under	NS	Met
	Aniak River	Met	NS ^a	Over	Over	Over	NS	NS	NS	NS
	Salmon River (Aniak R)	Met	Over ^a	NS	Over	Met	NS	NS	Under	Under
	Holitna River	Met	Over ^a	Over	NS	Under	NS	Under	NS	NS
	Cheeneetnuk River (Stony R)		Met	Met	NS	Under	Under	NS	Under	Under
	Gagaryah River (Stony R)		Met	Met	Over	Under	Met	Under	Under	Under
	Salmon River (Pitka Fork)	Under	Over ^a	Met	Met	Met	Met	Under	Met	Met
	<u>Yukon River</u>									
	East Fork Andreafsky River	Met	Over ^a	Under	Over	Under	Under	Met ^c	Over	Met
	West Fork Andreafsky River	Under	Met ^a	Met	Met	NS	Over	Met	Met	NS
	Anvik River	Met	Over ^a	Over	Met	Under	Under	Under	Under	Under
	Nulato River (forks combined)	Met	Under ^a	Met	Over	Under	Over	Under	Met	Met
	Gisasa River	Met	Met ^a	Met	Met	Met	Met	eliminated		
	Chena River	Over	NS	Met	Met	Met	Met	Under	NS	Under
	Salcha River	Over	Met	Over	Met	Met	Over	Met	Over	Over
	Canada Mainstem	Met	Met	Met	Met ^d	Under ^d	Met	Under ^d	Met	Under
	<u>Norton Sound</u>									
	Fish River/Boston Creek	Met	Under ^e	NS	NS	NS	NS	NS	NS	NS
	Kwiniuk River	Over	Met ^f	Under	Under	Under	Met	Under	Under	Under
	North River (Unalakleet R)	Under	Under ^b	Under	Met	Under	Met	Met	Under	Under
	Shaktoolik River	Under	Under ^f	Under	Met	NS	NS	NS	Under	NS
	Unalakleet/Old Woman River	Under	Under ^f	NS	Met	NS	Over	Met	Over	NA

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Table 7.--Page 2 of 4.

Species	System	2004	2005	2006	2007	2008	2009	2010	2011	2012
Chum salmon	<u>Kuskokwim Area</u>									
	Middle Fork Goodnews River	Met	Met ^b	Met	Met	Met	Met	Met	Met	Under
	Kanektok River	NS	NS ^b	NS	NS	NS	NS	NS	NS	NA
	Kogruklu River	Under	Over ^a	Over	Over	Met	Over	Over	Over	NA
	Aniak River	Met	Over ^a	Over	Over ^g	Met	Met	Met	Met	NS
	<u>Yukon River Summer Chum</u>									
	East Fork Andreafsky River	Under	Under	Met	Met	Under	Under	Met ^e	Met	Met
	Anvik River	Under	Met ^b	Met	Met	Met	Under	Met	Met	Met
	<u>Yukon River Fall Chum</u>									
	Yukon River Drainage	Met	Over	Over	Over	Met	Met	Met ^f	Over	Met
	Tanana River	Over	Over	Over	Over	Over	Over	Over	Over	Met
	Delta River	Over	Over	Over	Over	Over	Met	Over	Over	Met
	Toklat River	Over	NA	NA	NA	NA	NA	eliminated		
	Upper Yukon River Tributaries	Met	Over	Over	Over	Met	NA	Met	Over	Over
	Chandalar River	Met	Over	Over	Over	Over	NA	Over	Over	Over
	Sheenjok River	Under	Over	Over	Met	Met	Met	Under	Met	Over
	Fishing Branch River (Canada)	Under	Over	Under	Under	Under ^d	Met	Under	Under	Met
	Yukon R. Mainstem (Canada)	Met	Met	Met	Met	Met	Met	Over ^d	Over	Over
	<u>Norton Sound</u>									
	Subdistrict 1 Aggregate	Met	Over	Over	Over	Met	Under	Over	Over	Over
	Sinuk River	Under	Met ^f	Met	Over	NS	Under	eliminated		
Nome River	Met	Over ^f	Over	Over	Under	Under	Over	Met	Under	
Bonanza River	Under	Over ^f	Under	Over	NS	Over	eliminated			
Snake River	Met	Over ^f	Over	Over	Under	Under	Over	Over	Under	
Solomon River	Met	Over ^f	Over	Over	NS	Under	eliminated			
Flambeau River	Over	Over ^f	Over	Over	Over	Under	eliminated			
Eldorado River	Under	Over ^f	Over	Over	Met	Under	Over	Over	Over	
Niukluk River		Under	Under	Met	Under	Under	Met ^b	Met	Under	
Kwiniuk River	Under	Met	Over	Over	Under	Under	Over	Over	Under	
Tubutulik River	NS	Under	NS	Under	NS	Under	Met	Met	NS	
Unalakleet/Old Woman River	NS	Under ^f	NS	Under	NS	NS	NS	NS	NS	

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Table 7.–Page 3 of 4.

Species	System	2004	2005	2006	2007	2008	2009	2010	2011	2012
	<u>Kotzebue Sound</u>									
	Kotzebue Sound Aggregate									
	Noatak and Eli Rivers	Under	NS ^f	Under	NS ^b	Over	Met	NS	NS	NS
	Upper Kobuk w/ Selby River	Over	NS ^f	Over	NS ^b	Over	Over	NS	NS	NS
	Salmon River	NS	NS ^f	NS	NS ^b	NS	NS	NS	NS	NS
	Tutuksuk River	NS	Met ^f	NS	NS ^b	NS	NS	NS	NS	NS
	Squirrel River	NS	NS ^f	NS	NS ^b	NS	NS	NS	NS	NS
Coho salmon	<u>Kuskokwim Area</u>									
	Middle Fork Goodnews River		Met	Met	Met	Met	Met	Met	Met	Met
	Kogruklu River	Met	Met ^a	Met	Met	Over	Met	Met	Met	Met
	Kwethluk River							NA	NA	Met
	<u>Yukon River</u>									
	Delta Clearwater River	Met	Over ^a	Met	Met	Met	Met	Met	Met	Met
	<u>Norton Sound</u>									
	Kwiniuk River	Met	NS ^f	NS	Over	Over	NS	Over	Over	NS
	Niukluk River	Met	NS	NS	Met ^h	Over	Over	Over ^b	Met	Under
	North River (Unalakleet R.)	Over	Over ^f	NS	Over	Over	Over	NS	Met	NS
Pink salmon	<u>Norton Sound</u>									
	Nome River (odd year)		Met		Met		Met		Met	
	Nome River (even year)	Over	ⁱ	Met		Met		Met		Met
	Kwiniuk River	Over	Met ⁱ	Met	Met	Met	Met	Met	Met	Met
	Niukluk River	Over	Met ⁱ	Met	Met	Met	Met	Met	Met	Met
	North River	Over	Met ⁱ	Met	Met	Met	Met	Met	Met	Met
Sockeye salmon	<u>Kuskokwim Area</u>									
	North (Main) Fork Goodnews River	Met	NS ^a	Over	NS	Over	NS	NS	Met	Met
	Middle Fork Goodnews River	Met	Over ^a	Over	Over ^b	Over	Met	Met	Under	Met
	Kanektok River	Met	Over ^a	Over	NS	Over	NS	Met	NS	NA
	Kogruklu River							Met	Met	NA

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Table 7.--Page 4 of 4.

Species	System	2004	2005	2006	2007	2008	2009	2010	2011	2012
<u>Norton Sound</u>										
	Salmon Lake/Grand Central River	Over	Over ^f	Over	Over	Over	Under	Under	Met	Met
	Glacial Lake	Met	Over ^f	Over	Met	Under	Under	Under	NS	NS

Note: NA = data not available; NS = no survey.. 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, lower-bound goal changed to a range.

^b Escapement goal reevaluated, goal value changed.

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

^d Escapement goal revised by The United States and Canada Yukon River Joint Technical Committee (JTC).

^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 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 Molyneaux and Brannian 2006).

^h 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.

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

Table 8.—Assessment of whether escapements met (Met), exceeded (Over), or did not meet (Under) the escapement goal in place at the time of enumeration for salmon stocks in Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas).

Species	System	2004	2005	2006	2007	2008	2009	2010	2011	2012
Chinook salmon	<u>AK Peninsula</u>									
	Nelson River	Over ^a	Over	Met	Met	Over	Under	Met	Under	Under
	<u>Chignik</u>									
	Chignik River	Over	Over	Over	Met	Met	Met	Over	Met	Met
	<u>Kodiak</u>									
	Karluk River	Met	Met	Met	Under	Under	Under	Under	Met ^d	Met
	Ayakulik River	Over	Met	Under	Met	Under	Under	Met	Met ^d	Met
Chum salmon	<u>AK Peninsula</u>									
	Northern District	Met	Under	Over	Over ^b	Met	Met	Met	Under	Met
	Northwestern District	Over ^a	Met	Met	Over ^b	Over	Under	Met	Met	Met
	Southeastern District	Over	Over	Over	Met	Over	Met	Under	Met	Met
	South Central District	Over	Over	Met	Met	Met	Under	Under	Met	Under
	Southwestern District	Met	Over	Met	Over	Met	Over	Met	Met	Under
	Unimak District	Under ^b	Met	Met	Met ^c	Met	Met	Met	Met	Under
	<u>Chignik</u>									
	Entire Chignik Area					Met ^d	Met	Met	Met	Met
	<u>Kodiak</u>									
Mainland District	Met	Under ^c	Met	Under	Under ^f	Under	Met	Met	Met	
Kodiak Archipelago Aggregate					Under ^d	Met	Met	Met	Met	
Coho salmon	<u>AK Peninsula</u>									
	Nelson River	Met ^c	Met	Met	Met	Met	Met	Under	Met	Met
	Thin Point Lake	Met ^c	Met	Met	Met	Met	Under	NA	Under	Under
	Ilnik River	eliminated						Met ^g	Met	Met
	<u>Kodiak</u>									
	Pasagshak River	Over	Over ^a	Under	Met	Over	Met	Met	Under ^c	Met
	Buskin River	Met	Over ^a	Over	Over	Over	Over	Met	Met	Met
Olds River	Over	Over ^a	Met	Under	Under	Under	NA	Met ^c	Under	
American River	Over	Under ^a	Over	Under	Met	Met	NA	Met ^c	Met	

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Table 8.--Page 2 of 3.

Species	System	2004	2005	2006	2007	2008	2009	2010	2011	2012		
Pink salmon	<u>AK Peninsula</u>											
		Bechevin Bay Section (odd year)	^e	Met		Met		Met		Met		
		Bechevin Bay Section (even year)	Met ^c		Met		Under		Under		Under	
		South Peninsula Total (odd year)	^d	Over		Met ^b		Met		Met		
		South Peninsula Total (even year)	Over ^d		Met	^b	Met		Under		Under	
		<u>Chignik</u>										
		Entire Chignik Area (odd year)		Over ^d		Over	^a	Over		Over		
		Entire Chignik Area (even year)		^d	Met		Over ^a		Met		Met	
		<u>Kodiak</u>										
		Mainland District	Met	Met ^h	Over	Met	Under	Met	Met	Met ⁱ	Met	
		Kodiak Archipelago (odd year)		Met ^d		Met		Met		Met ^j		
		Kodiak Archipelago (even year)			Over		Met		Met	^j	Met	
Sockeye salmon	<u>AK Peninsula</u>											
		Cinder River	Over	Over	Over	Over ^a	Over	Over	Over	Over	Over	
		Ilnik River	Over	Over	Over	Over	Met	Over	Met	Met	Over	
		Meshik River	Over	Over	Over	Met ^a	Over	Over	Met ^a	Met	Met	
		Sandy River	Under	Over	Met	Met ^a	Under	Met	Met	Met	Under	
		Bear River Early Run	Over ^a	Over	Met	Met	Under	Met	Met	Met	Under	
		Bear River Late Run	Under ^a	Over	Met	Over	Over	Met	Met	Met	Under	
		Nelson River	Over ^a	Over	Met	Met	Met	Met	Met	Under	Met	
		Christianson Lagoon	Over	Over	Met	Met	Over	Met	Met	Met	Met	
		Swanson Lagoon	Over	Under	Under	Met ^a	Under	Under	Under	Under	Met	
		North Creek	Over	Over	Met	Over	Over	Met	Over	Over	Over	
		Orzinski Lake	Over	Over	Met	Under	Over	Over	Met	Met	Met	
		Mortensen Lagoon	Over	Over	Over	Met	Met	Over	Over	Under	Met	
		Thin Point Lake	Over	Met	Under	Met	Met	Over	Under	Met	Met	
		McLees Lake	eliminated ^k							Met ^g	Met	Met
		<u>Chignik</u>										
		Chignik River Early Run	Met	Met ^b	Met	Met	Met	Met	Over	Over	Met	
		Chignik River Late Run	Met	Met	Over	Over	Met ^a	Met	Met	Met	Met	

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Table 8.—Page 3 of 3.

Species	System	2004	2005	2006	2007	2008	2009	2010	2011	2012
<i>Kodiak</i>										
	Malina Creek	Met	Met ^a	Met	Met	Met	Met	Met	Met	Met
	Afognak (Litnik) River	Under	Met ^a	Met	Met	Met	Met	Over	Met	Met
	Little River	Met	eliminated			Under ^l	Under	Met	Met	Met
	Uganik Lake	Over	eliminated			Met ^l	Met	Met	Met	Under
	Karluk River Early Run	Over	Over ^a	Met	Over	Under ^a	Under	Under	Under	Met
	Karluk River Late Run	Under	Over ^a	Met	Met	Under	Met	Met	Met	Met
	Ayakulik River	Met	Met	Under	Met	Under	Met	Met		
	Ayakulik River Early Run								Met ^m	Met
	Ayakulik River Late Run								Met ^m	Met
	Upper Station River Early Run	Met	Met ^a	Under	Met	Met	Met	Met	Met	Met
	Upper Station River Late Run	Met	Met ^a	Met	Met	Met	Met	Met	Under	Met
	Frazer Lake	Under	Met ^a	Met	Met	Met ^a	Met	Met	Met	Met
	Saltery Lake	Over	Met	Met	Met	Over	Over	Met	Under ⁱ	Met
	Pasagshak River	Over	Over ^a	Met	Over	Over	Under	Met	Met ^c	Met
	Buskin Lake	Over	Over	Over	Over	Under	Under	Met	Over ⁿ	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 eliminated, lower bound remained the same.
- ^d Aggregate goal established to replace individual district level goals.
- ^e Escapement goal reevaluated, goal range changed to a lower bound goal.
- ^f Escapement goal reevaluated, lower bound goal changed.
- ^g Goal reestablished. New analysis.
- ^h Separate odd and even year goals were discontinued and a single goal established.
- ⁱ Escapement goal reevaluated, upper bound of goal changed.
- ^j Single escapement goal was separated into odd- and even-year escapement goals.
- ^k Escapement goal prior to elimination in 2004 was based on escapement indices enumerated by peak aerial surveys, escapements on Table 4 are weir counts.
- ^l Previous escapement goal reestablished.
- ^m Single escapement goal was changed to separate early- and late-run escapement goals.
- ⁿ 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 2004 to 2012.

	2004	2005	2006	2007	2008	2009	2010	2011	2012
CHINOOK SALMON									
Number Below	0	1	1	4	3	5	1	3	6
Number Met	7	7	7	6	7	5	8	8	5
Number Above	4	3	3	1	1	1	2	0	0
% Below	0	9	9	36	27	45	9	27	55
% Met	64	64	64	55	64	45	73	73	45
% Above	36	27	27	9	9	9	18	0	0
CHUM SALMON									
Number Below						5	2	3	1
Number Met						2	5	3	5
Number Above						1	1	2	2
% Below						63	25	38	13
% Met						25	63	38	63
% Above						13	13	25	25
COHO SALMON									
Number Below	0	2	0	3	0	0	0	1	2
Number Met	6	6	8	8	5	11	8	9	7
Number Above	3	2	5	2	6	2	5	3	4
% Below	0	20	0	23	0	0	0	8	15
% Met	67	60	62	62	45	85	62	69	54
% Above	33	20	38	15	55	15	38	23	31
PINK SALMON									
Number Below	1	0	0	0	1	0	0	0	2
Number Met	1	1	2	1	2	4	3	2	2
Number Above	2	3	2	3	0	0	0	2	0
% Below	25	0	0	0	33	0	0	0	50
% Met	25	25	50	25	67	100	100	50	50
% Above	50	75	50	75	0	0	0	50	0
SOCKEYE SALMON									
Number Below	1	2	2	4	12	5	1	1	2
Number Met	6	6	4	5	1	4	10	6	7
Number Above	6	5	7	4	0	3	2	6	4
% Below	8	15	15	31	92	42	8	8	15
% Met	46	46	31	38	8	33	77	46	54
% Above	46	38	54	31	0	25	15	46	31

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 2004 to 2012.

	2004	2005	2006	2007	2008	2009	2010	2011	2012
CHINOOK SALMON									
Number Below	2	2	2	7	12	16	15	14	14
Number Met	9	16	17	18	12	12	7	10	8
Number Above	16	6	5	2	2	1	0	0	1
% Below	7	8	8	26	46	55	68	58	61
% Met	33	67	71	67	46	41	32	42	35
% Above	59	25	21	7	8	3	0	0	4
CHUM SALMON									
Number Below	1	3	2	4	2	3	3	4	6
Number Met	8	6	10	13	13	12	10	11	10
Number Above	9	9	6	2	4	4	5	4	3
% Below	6	17	11	21	11	16	17	21	32
% Met	44	33	56	68	68	63	56	58	53
% Above	50	50	33	11	21	21	28	21	16
COHO SALMON									
Number Below	0	0	0	0	0	1	2	2	2
Number Met	2	1	0	2	1	2	2	3	3
Number Above	3	3	3	2	3	1	0	0	0
% Below	0	0	0	0	0	25	50	40	40
% Met	40	25	0	50	25	50	50	60	60
% Above	60	75	100	50	75	25	0	0	0
PINK SALMON									
Number Below	1	0	1	1	1	4	3	7	7
Number Met	12	4	8	8	9	4	12	5	14
Number Above	8	18	13	9	8	10	2	5	4
% Below	5	0	5	6	6	22	18	41	28
% Met	57	18	36	44	50	22	71	29	56
% Above	38	82	59	50	44	56	12	29	16
SOCKEYE SALMON									
Number Below	4	4	2	2	5	5	4	3	6
Number Met	13	12	10	13	18	15	19	20	21
Number Above	12	13	17	14	7	11	8	8	3
% Below	14	14	7	7	17	16	13	10	20
% Met	45	41	34	45	60	48	61	65	70
% Above	41	45	59	48	23	35	26	26	10

Table 11.—Arctic-Yukon-Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2004 to 2012.

	2004	2005	2006	2007	2008	2009	2010	2011	2012
CHINOOK SALMON									
Number Below	5	5	4	2	12	5	13	10	11
Number Met	14	7	8	13	10	10	7	7	4
Number Above	4	10	9	7	1	4	0	3	1
% Below	22	23	19	9	52	26	65	50	69
% Met	61	32	38	59	43	53	35	35	25
% Above	17	45	43	32	4	21	0	15	6
SUMMER CHUM SALMON									
Number Below	6	3	3	2	4	10	0	0	1
Number Met	6	4	2	2	5	3	4	5	4
Number Above	2	9	10	11	3	3	6	5	4
% Below	43	19	20	13	33	63	0	0	11
% Met	43	25	13	13	42	19	40	50	44
% Above	14	56	67	73	25	19	60	50	44
YUKON RIVER SUMMER CHUM SALMON									
Number Below	2	1	0	0	1	2	0	0	0
Number Met	0	1	2	2	1	0	2	2	2
Number Above	0	0	0	0	0	0	0	0	0
% Below	100	50	0	0	50	100	0	0	0
% Met	0	50	100	100	50	0	100	100	100
% Above	0	0	0	0	0	0	0	0	0
YUKON RIVER FALL CHUM SALMON									
Number Below	2	0	1	1	1	0	2	1	0
Number Met	4	1	1	2	4	5	2	1	4
Number Above	3	7	6	5	3	1	4	6	4
% Below	22	0	13	13	13	0	25	13	0
% Met	44	13	13	25	50	83	25	13	50
% Above	33	88	75	63	38	17	50	75	50
COHO SALMON									
Number Below	0	0	0	0	0	0	0	0	1
Number Met	4	2	3	4	2	3	3	5	4
Number Above	1	2	0	2	4	2	2	1	0
% Below	0	0	0	0	0	0	0	0	20
% Met	80	50	100	67	33	60	60	83	80
% Above	20	50	0	33	67	40	40	17	0

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Table 11.–Page 2 of 2.

	2004	2005	2006	2007	2008	2009	2010	2011	2012
PINK SALMON									
Number Below	0	0	0	0	0	0	0	0	0
Number Met	0	4	4	4	4	4	4	4	4
Number Above	4	0	0	0	0	0	0	0	0
% Below	0	0	0	0	0	0	0	0	0
% Met	0	100	100	100	100	100	100	100	100
% Above	100	0	0	0	0	0	0	0	0
SOCKEYE SALMON									
Number Below	0	0	0	0	1	2	2	1	0
Number Met	4	0	0	1	0	1	3	3	3
Number Above	1	4	5	2	4	0	0	0	0
% Below	0	0	0	0	20	67	40	25	0
% Met	80	0	0	33	0	33	60	75	100
% Above	20	100	100	67	80	0	0	0	0

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 2004 to 2012.

	2004	2005	2006	2007	2008	2009	2010	2011	2012
CHINOOK SALMON									
Number Below	0	0	1	1	2	3	1	1	1
Number Met	1	2	2	3	1	1	2	3	3
Number Above	3	2	1	0	1	0	1	0	0
% Below	0	0	25	25	50	75	25	25	25
% Met	25	50	50	75	25	25	50	75	75
% Above	75	50	25	0	25	0	25	0	0
CHUM SALMON									
Number Below	1	2	0	1	1	3	2	1	3
Number Met	3	2	5	3	6	5	7	8	6
Number Above	3	3	2	3	2	1	0	0	0
% Below	14	29	0	14	11	33	22	11	33
% Met	43	29	71	43	67	56	78	89	67
% Above	43	43	29	43	22	11	0	0	0
COHO SALMON									
Number Below	0	1	1	2	1	2	1	2	2
Number Met	3	2	3	3	3	3	3	5	5
Number Above	3	3	2	1	2	1	0	0	0
% Below	0	17	17	33	17	33	25	29	29
% Met	50	33	50	50	50	50	75	71	71
% Above	50	50	33	17	33	17	0	0	0
PINK SALMON									
Number Below	0	0	0	0	2	0	2	0	2
Number Met	2	3	3	4	2	4	3	4	3
Number Above	1	2	2	1	1	1	0	1	0
% Below	0	0	0	0	40	0	40	0	40
% Met	67	60	60	80	40	80	60	80	60
% Above	33	40	40	20	20	20	0	20	0
SOCKEYE SALMON									
Number Below	5	1	4	1	8	5	3	6	4
Number Met	7	10	16	17	12	16	21	20	22
Number Above	16	15	6	8	8	7	5	4	4
% Below	18	4	15	4	29	18	10	20	13
% Met	25	38	62	65	43	57	72	67	73
% Above	57	58	23	31	29	25	17	13	13

Table 13.—Summary of Southeast Region salmon escapements compared against escapement goals for the years 2004 to 2012.

Southeast Region	2004	2005	2006	2007	2008	2009	2010	2011	2012
Stocks with Escapement Data	37	38	41	41	38	48	48	49	49
Below Lower Goal									
Number	2	5	3	11	16	15	4	8	13
Percent	5%	13%	7%	27%	42%	31%	8%	16%	27%
Goal Met									
Number	20	20	21	20	15	26	34	28	26
Percent	54%	53%	51%	49%	39%	54%	71%	57%	53%
Above Upper Goal									
Number	15	13	17	10	7	7	10	13	10
Percent	41%	34%	41%	24%	18%	15%	21%	27%	20%

Table 14.—Summary of Central Region (Bristol Bay, Cook Inlet, Prince William Sound/Copper River) salmon escapements compared against escapement goals for the years 2004 to 2012.

Central Region	2004	2005	2006	2007	2008	2009	2010	2011	2012
Stocks with Escapement Data	100	97	96	97	97	101	92	96	102
Below Lower Goal									
Number	8	9	7	14	20	29	27	30	35
Percent	8%	9%	7%	14%	21%	29%	29%	31%	34%
Goal Met									
Number	44	39	45	54	53	45	50	49	56
Percent	44%	40%	47%	56%	55%	45%	54%	51%	55%
Above Upper Goal									
Number	48	49	44	29	24	27	15	17	11
Percent	48%	51%	46%	30%	25%	27%	16%	18%	11%

Table 15.—Summary of Arctic-Yukon-Kuskokwim Region salmon escapements compared against escapement goals for the years 2004 to 2012.

AYK Region	2004	2005	2006	2007	2008	2009	2010	2011	2012
Stocks with Escapement Data	62	60	58	60	60	55	54	54	47
Below Lower Goal									
Number	15	9	8	5	19	19	17	12	13
Percent	24%	15%	14%	8%	32%	35%	31%	22%	28%
Goal Met									
Number	32	19	20	28	26	26	25	27	25
Percent	52%	32%	34%	47%	43%	47%	46%	50%	53%
Above Upper Goal									
Number	15	32	30	27	15	10	12	15	9
Percent	24%	53%	52%	45%	25%	18%	22%	28%	19%

Table 16.—Summary of Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) salmon escapements compared against escapement goals for the years 2004 to 2012.

Westward Region	2004	2005	2006	2007	2008	2009	2010	2011	2012
Stocks with Escapement Data	48	48	48	48	52	52	51	55	55
Below Lower Goal									
Number	6	4	6	5	14	13	9	10	12
Percent	13%	8%	13%	10%	27%	25%	18%	18%	22%
Goal Met									
Number	16	19	29	30	24	29	36	40	39
Percent	33%	40%	60%	63%	46%	56%	71%	73%	71%
Above Upper Goal									
Number	26	25	13	13	14	10	6	5	4
Percent	54%	52%	27%	27%	27%	19%	12%	9%	7%

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	Yield	2010
Westward	Karluk River	Chinook	2010	Management	2010
	Swanson Lagoon	sockeye	2012	Management	2012 ^b
AYK	Yukon River	Chinook	2000	Yield	2012
	Norton Sound Sub-district 5 & 6	Chinook	2003	Yield	2012
	Norton Sound Sub-district 2 & 3	chum	2000	Yield	2012
	Norton Sound Sub-district 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).

^b The stock of concern designation for Swanson Lagoon sockeye salmon was designated as a stock of concern at the February 2013 Alaska Peninsula/Aleutian Islands Board of Fisheries meeting.

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
Klukshu (Alsek) River	Weir Count	SRA	McPherson et al. 1998
Situk River	Weir Count	SRA	McPherson et al. 2005
CHUM SALMON			
Southern Southeast Summer	Peak Aerial Survey	Percentile	Piston and Heintz 2011a
Northern Southeast Inside Summer	Peak Aerial Survey	Percentile	Piston and Heintz 2011a
Northern Southeast Outside Summer	Peak Aerial Survey	Percentile	Eggers and Heintz 2008
Cholmondeley Sound Fall	Peak Aerial Survey	Percentile	Eggers and Heintz 2008
Port Camden Fall	Peak Aerial Survey	Risk Analysis	Eggers and Heintz 2008
Security Bay Fall	Peak Aerial Survey	Percentile	Eggers and Heintz 2008
Excursion River Fall	Peak Aerial Survey	Percentile	Eggers and Heintz 2008
Chilkat River Fall	Mark–Recapture, Fish Wheel	SRA	Eggers and Heintz 2008
COHO SALMON			
Hugh Smith Lake	Weir Count	SRA	Shaul et al. 2009
Taku River	Mark–Recapture	Agreement ^b , SRA	PSC 2013
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
Berners River	Mark–Recapture	SRA	Clark et al. 1994

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Table 18.–Page 2 of 2.

System	Enumeration Method	Goal Development Method	References
Chilkat River	Mark–Recapture, Foot Survey	SRA	Ericksen and Fleischman 2006
Lost River	Foot Survey	SRA	Clark and Clark 1994
Situk River	Peak Aerial 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
SOCKEYE SALMON			
Hugh Smith Lake	Weir Count	Risk Analysis, Theoretical SRA	Geiger et al. 2003; OEG: 5 AAC 33.390
McDonald Lake	Expanded Foot Survey	SRA	Eggers et al. 2009a
Mainstem Stikine River	Run Reconstruction	Professional 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	Clark and Etherton 2000
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	Baker et al. 2006; Fair et al. 2004
Togiak River	Single Aerial Survey ^a	Risk Analysis	Baker et al. 2006; Fair et al. 2004
Naknek River	Single Aerial Survey	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
Egegik 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 ^b
Campbell Creek	Single Foot Survey	Risk Analysis	Fair et al. 2010
Chuitna River	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Chulitna River	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Clear (Chunilna) Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Crooked Creek	Weir Count	Percentile	Bue and Hasbrouck ^b
Deshka River	Weir Count	SRA	Bue and Hasbrouck ^b ; Fair et al. 2010
Goose Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Kenai River - Early Run	Sonar	SRA	Fair et al. 2010; McKinley and Fleischman 2010; OEG: 5 AAC 57.160 (b)
Kenai River - Late Run	Sonar	SRA	Fried 1999; Bue and Hasbrouck ^b ; Fair et al. 2010
Lake Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Lewis River	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Little Susitna River	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Little Willow Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Montana Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Peters Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Prairie Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Sheep Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Talachulitna River	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Theodore River	Single Aerial Survey	Percentile	Bue and Hasbrouck ^b
Willow Creek	Single Aerial Survey	Percentile	Bue and Hasbrouck ^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	Otis 2001
Ninilchik River	Weir Count	Percentile	Otis and Szarzi 2007

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Table 19.–Page 2 of 5.

System	Enumeration Method	Goal Development Method	References
<u>Prince William Sound</u>			
Copper River	Mark–Recapture	Empirical Observation	Savereide 2001;Bue et al. 2002
CHUM SALMON			
<u>Bristol Bay</u>			
Nushagak River	Sonar	Risk Analysis	Baker et al. 2006; Fair et al. 2004
<u>Upper Cook Inlet</u>			
Clearwater Creek	Peak Aerial Survey ^c	Percentile	Bue and Hasbrouck ^b
<u>Lower Cook Inlet</u>			
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 2001
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
<u>Prince William Sound</u>			
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			
<u>Bristol Bay</u>			
There are no coho salmon stocks with escapement goals in Bristol Bay			
<u>Upper Cook Inlet</u>			
Fish Creek (Knik)	Weir Count	Percentile	Bue and Hasbrouck ^b ; Fair et al. 2010
Jim Creek	Single Foot Survey	Percentile	Bue and Hasbrouck ^b
Little Susitna River	Weir Count	Percentile	Bue and Hasbrouck ^b

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Table 19.–Page 3 of 5.

System	Enumeration Method	Goal Development Method	References
<u>Lower Cook Inlet</u>			
There are no coho salmon stocks with escapement goals in Lower Cook Inlet			
<u>Prince William Sound</u>			
Copper River Delta	Peak Aerial Survey	Percentile	Bue et al. 2002
Bering River	Peak Aerial Survey	Percentile	Bue et al. 2002
PINK SALMON			
<u>Bristol Bay</u>			
There are no pink salmon stocks with escapement goals in Bristol Bay			
<u>Upper Cook Inlet</u>			
There are no pink salmon stocks with escapement goals in Upper Cook Inlet			
<u>Lower Cook Inlet</u>			
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
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
<u>Prince William Sound</u>			
Eastern District (even year)		Percentile	Fair et al. 2011
Eastern District (odd year)		Percentile	Fair et al. 2011
Northern District (even year)		Percentile	Fair et al. 2011
Northern District (odd year)		Percentile	Fair et al. 2011
Coghill District (even year)		Percentile	Fair et al. 2011
Coghill District (odd year)		Percentile	Fair et al. 2011

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Table 19.–Page 4 of 5.

System	Enumeration Method	Goal Development Method	References
Northwestern District (even year)		Percentile	Fair et al. 2011
Northwestern District (odd year)		Percentile	Fair et al. 2011
Eshamy District (even year)		Percentile	Fair et al. 2011
Eshamy District (odd year)		Percentile	Fair et al. 2011
Southwestern District (even year)		Percentile	Fair et al. 2011
Southwestern District (odd year)		Percentile	Fair et al. 2011
Montague District (even year)		Percentile	Fair et al. 2011
Montague District (odd year)		Percentile	Fair et al. 2011
Southeastern District (even year)		Percentile	Fair et al. 2011
Southeastern District (odd year)		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	Cross et al. 1997; OEG: 5 AAC 06.358 (c) (1) (B)
Kulukak Bay	Single Aerial Survey	Risk Analysis	Fair et al. 2004
Togiak River	Tower Count	SRA, Yield Analysis	Baker et al. 2009; Fair et al. 2004
<i>Upper Cook Inlet</i>			
Crescent River	Sonar	SRA	Hasbrouck and Edmundson 2007
Fish Creek (Knik)	Weir Count	Percentile	Bue and Hasbrouck ^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	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

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Table 19.–Page 5 of 5.

System	Enumeration Method	Goal Development Method	References
<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
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	Peak Aerial Survey, Video	Percentile	Otis 2001
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
Kogruklu River	Weir Count	Percentile	ADF&G 2004
Kwethluk River	Weir Count	Percentile	Brannian et al. 2006; Molyneaux and Brannian 2006
Tuluksak River	Weir Count	Percentile	Brannian et al. 2006; Molyneaux and Brannian 2006
George River	Weir Count	Percentile	Brannian et al. 2006; Molyneaux and Brannian 2006
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
Cheeneetnuk River (Stony R)	Single Aerial Survey	Percentile	ADF&G 2004
Gagarayah River (Stony R)	Single Aerial Survey	Percentile	ADF&G 2004
Salmon River (Pitka Fork)	Single Aerial Survey	Percentile	ADF&G 2004
<i>Yukon River</i>			
East Fork Andreafsky River	Weir Count	Percentile	Volk et al. 2009
West Fork Andreafsky River	Peak Aerial Survey ^b	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; last updated JTC 2012
<i>Norton Sound</i>			
Fish River/Boston Creek	Peak Aerial Survey	Percentile	ADF&G 2004
Kwiniuk River	Tower Count	SRA	Fair et al. 1999 ^c ; ADF&G 2004
North River (Unalakleet R)	Tower Count	Percentile	ADF&G 2004
Shaktoolik River	Peak Aerial Survey	Theoretical SRA	Fair et al. 1999 ^c ; ADF&G 2004
Unalakleet/Old Woman River	Peak Aerial Survey	Theoretical SRA	ADF&G 2004

-continued-

Table 20.–Page 2 of 4.

System	Enumeration Method	Goal Development Method	References
CHUM SALMON			
<u>Kuskokwim Area</u>			
Middle Fork Goodnews River	Weir Count	Percentile	ADF&G 2004
Kanektok River	Single Aerial Survey	Percentile	ADF&G 2004
Kogruklu River	Weir Count	Percentile	ADF&G 2004
Aniak River	Sonar	Percentile	Brannian et al. 2006; Molyneaux and Brannian 2006
<u>Yukon River Summer Chum</u>			
East Fork Andreafsky River	Weir Count	SRA	Volk et al. 2009; Fleischman and Evenson 2010
Anvik River	Sonar	SRA	ADF&G 2004
<u>Yukon River Fall Chum</u>			
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; last updated JTC 2012
Yukon R. Mainstem (Canada)	Mark–Recapture	Agreement (U.S./Canada Joint Technical Committee) IMEG SRA	JTC 2010; last updated JTC 2012
<u>Norton Sound</u>			
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
<u>Kotzebue Sound</u>			
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

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Table 20.–Page 3 of 4.

System	Enumeration Method	Goal Development Method	References
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
COHO SALMON			
<u>Kuskokwim Area</u>			
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
<u>Yukon River</u>			
Delta Clearwater River	Boat Survey	Percentile	ADF&G 2004
<u>Norton Sound</u>			
Kwiniuk River	Peak Aerial Survey	Theoretical SRA	Fair et al. 1999 ^c ; ADF&G 2004
Niukluk River	Tower Count	Percentile	Volk et al. 2009
North River (Unalakleet R.)	Peak Aerial Survey	Theoretical SRA	Fair et al. 1999 ^c ; ADF&G 2004
PINK SALMON			
<u>Kuskokwim Area</u>			
There are no escapement goals for pink salmon in the Kuskokwim Management Area.			
<u>Yukon River</u>			
There are no escapement goals for pink salmon in the Yukon River drainage.			
<u>Norton Sound</u>			
Nome River (odd year)	Weir Count	Empirical Observation	ADF&G 2004
Nome River (even year)	Weir Count	Empirical Observation	Fair et al. 1999 ^c ; ADF&G 2004
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			
<u>Kuskokwim Area</u>			
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

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Table 20.–Page 4 of 4.

System	Enumeration Method	Goal Development Method	References
Kogrukluk River	Weir Count	Percentile	Volk et al. 2009
<i>Yukon River</i>			
There are no escapement goals for Sockeye in the Yukon River drainage.			
<i>Norton Sound</i>			
Salmon Lake/Grand Central River	Peak Aerial Survey	Empirical Observation	Fair et al. 1999 ^c ; ADF&G 2004
Glacial Lake	Peak Aerial Survey	Empirical Observation	Fair et al. 1999 ^c ; ADF&G 2004

Note: SRA = Spawner-recruit analysis.

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

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

^c 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.

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			
<u>AK Peninsula</u>			
Nelson River	Weir, Peak Aerial Survey ^a	Spawning Habitat Model, SRA	Nelson et al. 2006
<u>Chignik</u>			
Chignik River	Weir Count	SRA	Witteveen et al. 2005; Hasbrouck and Clark ^b
<u>Kodiak</u>			
Karluk River	Weir Count	SRA	Nemeth et al. 2010
Ayakulik River	Weir Count	SRA	Nemeth et al. 2010
CHUM SALMON			
<u>AK Peninsula</u>			
Northern District	Peak Aerial Survey	SRA	Honnold et al. 2007b; Nelson et al. 2006; Nelson and Lloyd 2001
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
Unimak District	Peak Aerial Survey	Risk Analysis	Nelson and Lloyd 2001; Honnold et al. 2007b
<u>Chignik</u>			
Entire Chignik Area	Peak Aerial Survey	Risk Analysis	Witteveen et al. 2007
<u>Kodiak</u>			
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			
<u>AK Peninsula</u>			
Nelson River	Peak Aerial Survey	Risk Analysis	Nelson et al. 2006
Thin Point Lake	Peak Aerial Survey	Empirical Observation	Nelson et al. 2006
Ilnik River	Peak Aerial Survey	Risk Analysis	Witteveen et al. 2009
<u>Chignik</u>			
There are no coho salmon stocks with escapement goals in Chignik Area			

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Table 21.–Page 2 of 3.

System	Enumeration Method	Goal Development Method	References
<i>Kodiak</i>			
Pasagshak River	Foot Survey	Theoretical SRA	Nemeth et al. 2010
Buskin River	Weir Count	SRA	Nelson et al. 2005
Olds River	Foot Survey	Theoretical SRA	Nemeth et al. 2010
American River	Foot Survey	Theoretical SRA	Nemeth et al. 2010
PINK SALMON			
<i>AK Peninsula</i>			
Bechevin Bay Section (odd year)	Peak Aerial Survey	Risk Analysis	Nelson et al. 2006
Bechevin Bay Section (even year)	Peak Aerial Survey	Risk Analysis	Nelson et al. 2006
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

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Table 21.–Page 3 of 3.

System	Enumeration Method	Goal Development Method	References
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
<u>Chignik</u> Chignik River Early Run	Weir Count	Yield Analysis, Euphotic Volume Model, Zooplankton Model	Witteveen et al. 2005
Chignik River Late Run	Weir Count	SRA, Euphotic Volume Model, Zooplankton Model	Witteveen et al. 2007
<u>Kodiak</u> Malina Creek	Peak Aerial Survey	Percentile, Zooplankton Model	Nelson et al. 2005
Afognak (Litnik) River	Weir Count	SRA	Nelson et al. 2005
Little River	Peak Aerial Survey	Risk Analysis	Honnold et al. 2007a
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 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, Anchorage, unpublished document.

FIGURES

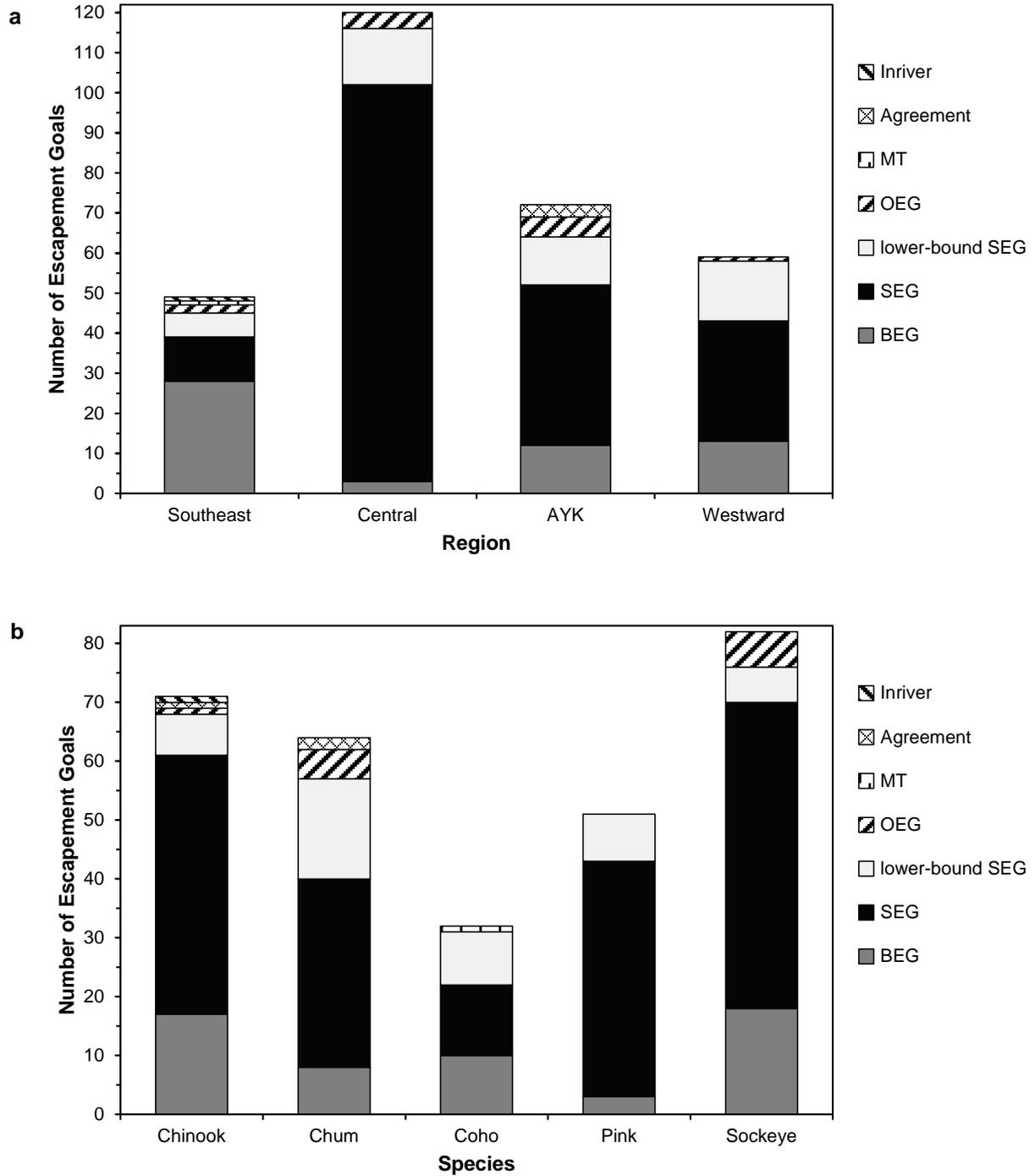


Figure 1.—Statewide summary of the 300 escapement goals in effect during the 2012 spawning season for (a) the four Division of Commercial Fisheries regions and (b) by species. BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal (set by the Alaska Board 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).

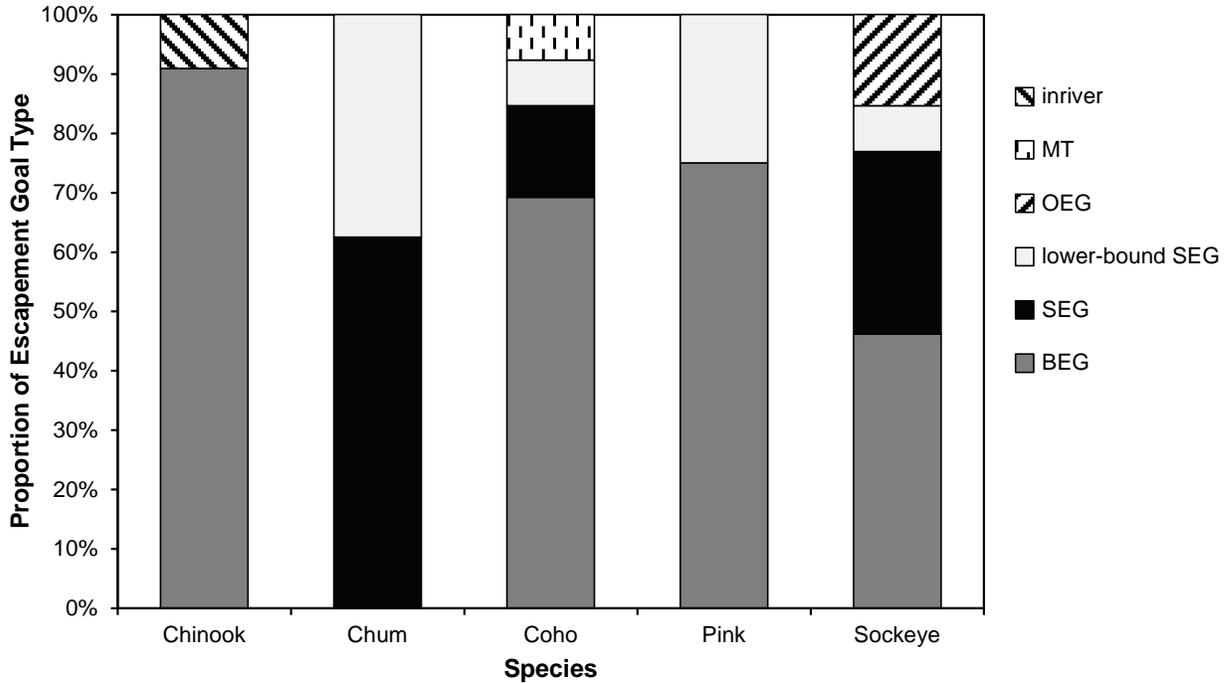


Figure 2.—Proportion of escapement goal types by species for the 49 escapement goals in Southeast Region. BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal (set by the Alaska Board of Fisheries), MT is management target and inriver is an inriver escapement goal (set by the Alaska Board of Fisheries).

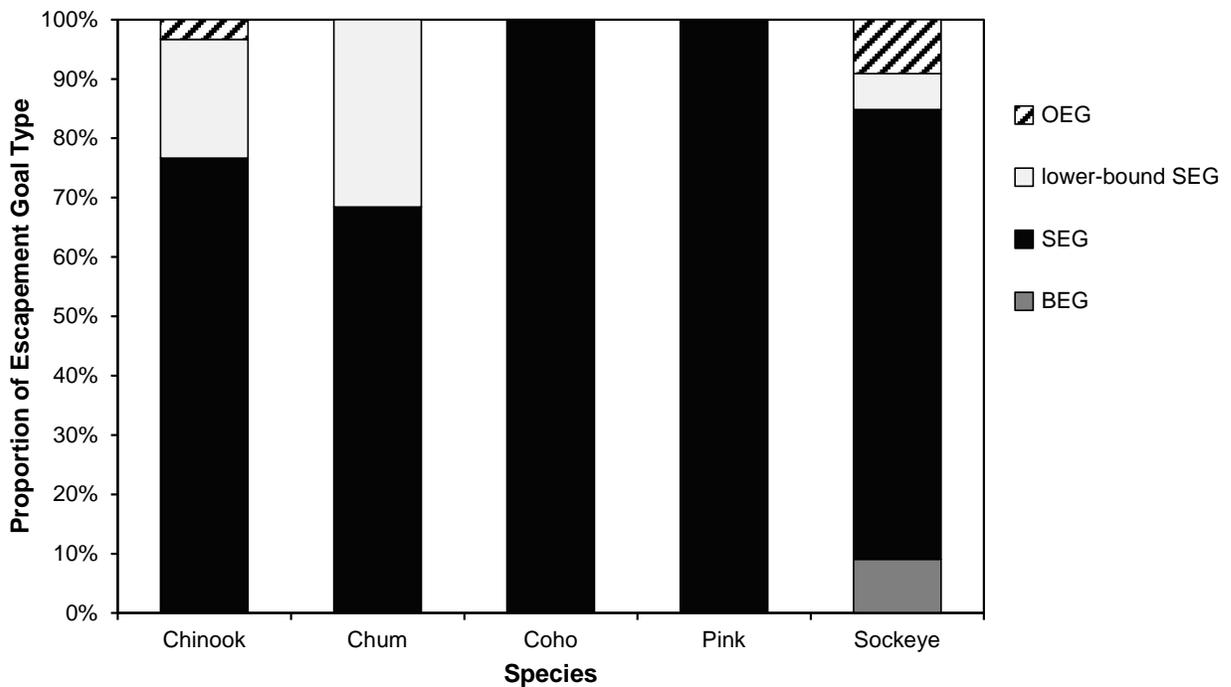


Figure 3.—Proportion of escapement goal types by species for the 120 escapement goals in Central Region (Bristol Bay, Cook Inlet, and Prince William Sound/Copper River). BEG is biological escapement goal, SEG is sustainable escapement goal, and OEG is optimal escapement goal (set by the Alaska Board of Fisheries).

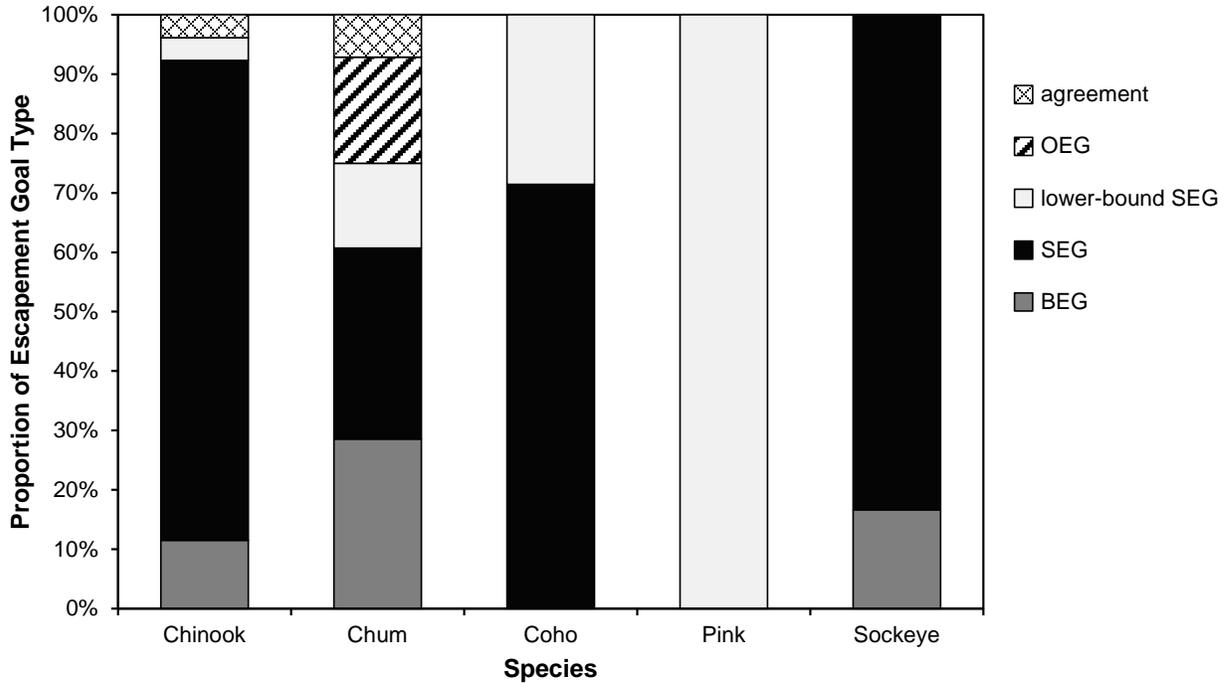


Figure 4.—Proportion of escapement goal types by species for the 72 escapement goals in Arctic-Yukon-Kuskokwim Region. BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal (set by the Alaska Board of Fisheries), and agreement goals are established through international treaties.

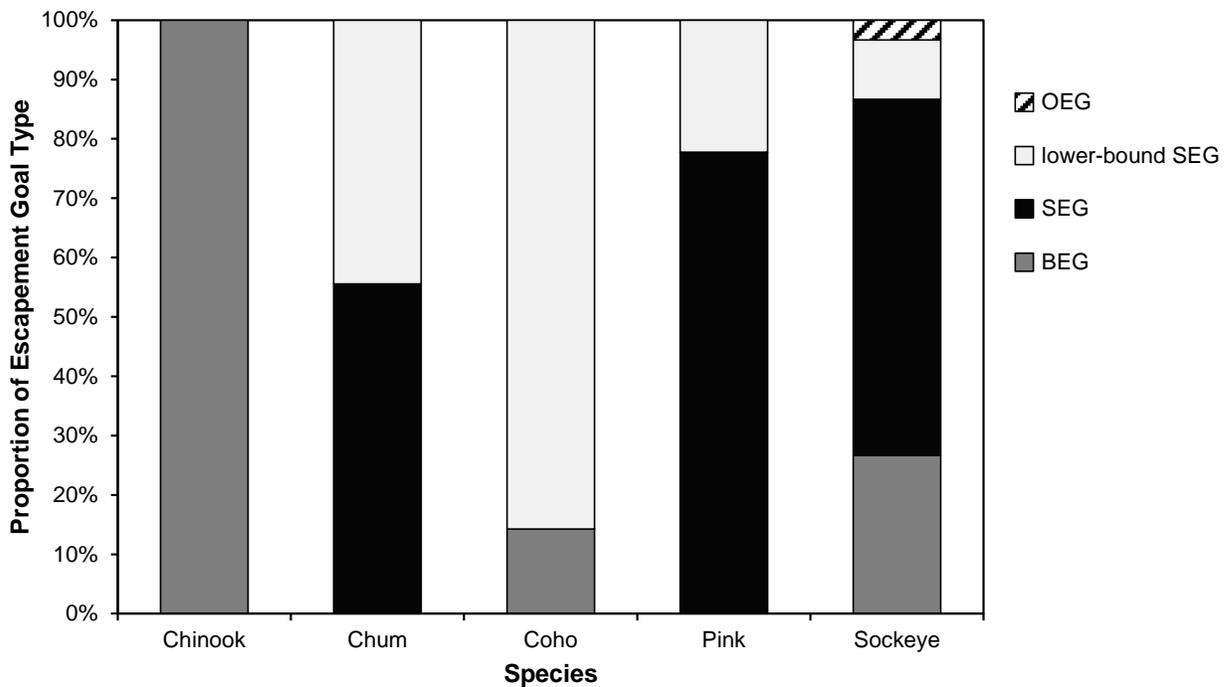


Figure 5.—Proportion of escapement goal types by species for the 59 escapement goals in Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas). BEG is biological escapement goal, SEG is sustainable escapement goal, and OEG is optimal escapement goal (set by the Alaska Board of Fisheries).

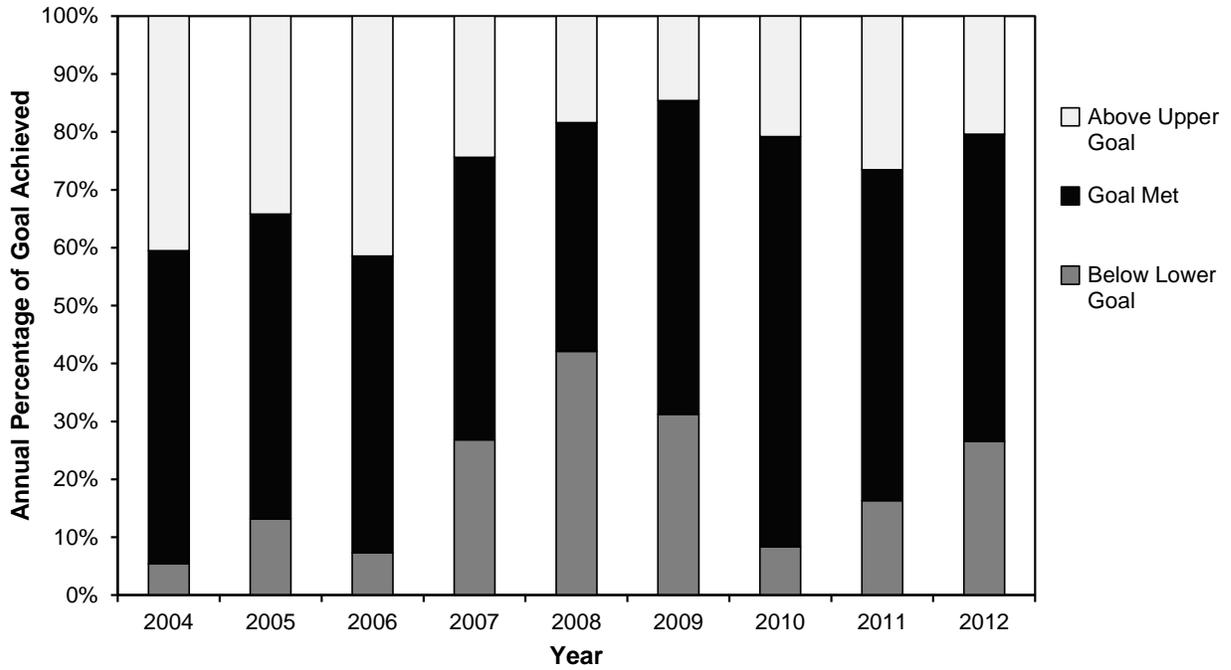


Figure 6.—Southeast Region salmon escapements compared against escapement goals for the years 2004 to 2012.

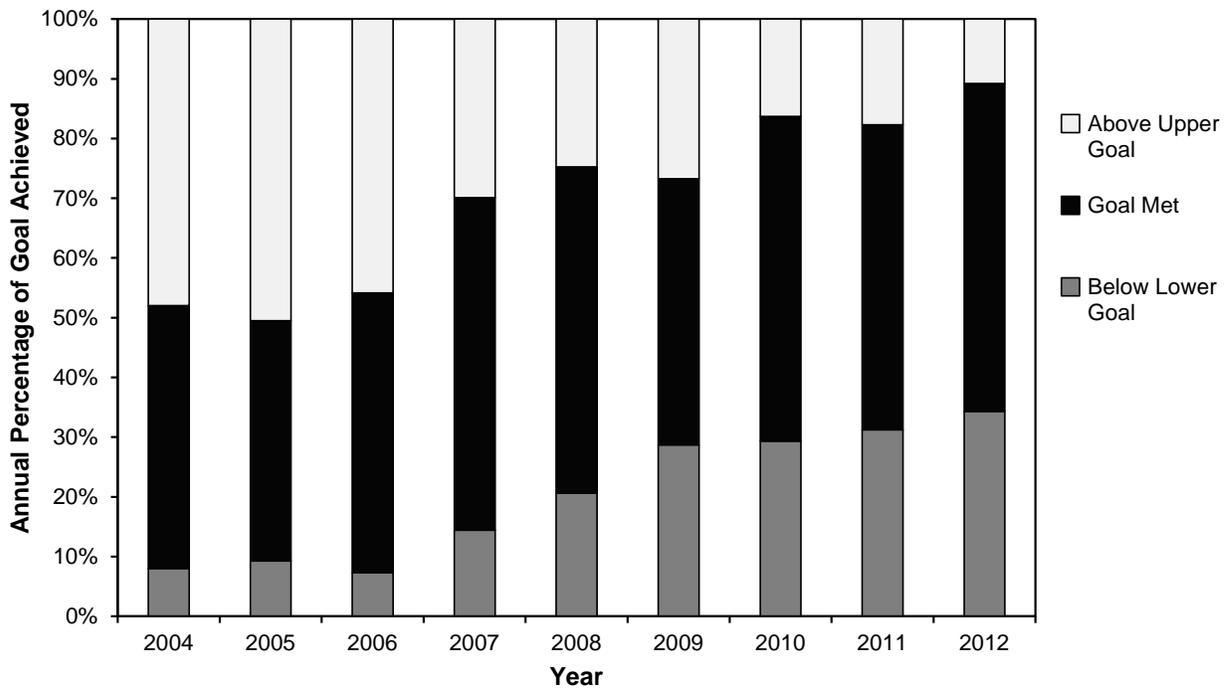


Figure 7.—Central Region (Bristol Bay, Cook Inlet, Prince William Sound/Copper River) salmon escapements compared against escapement goals for the years 2004 to 2012.

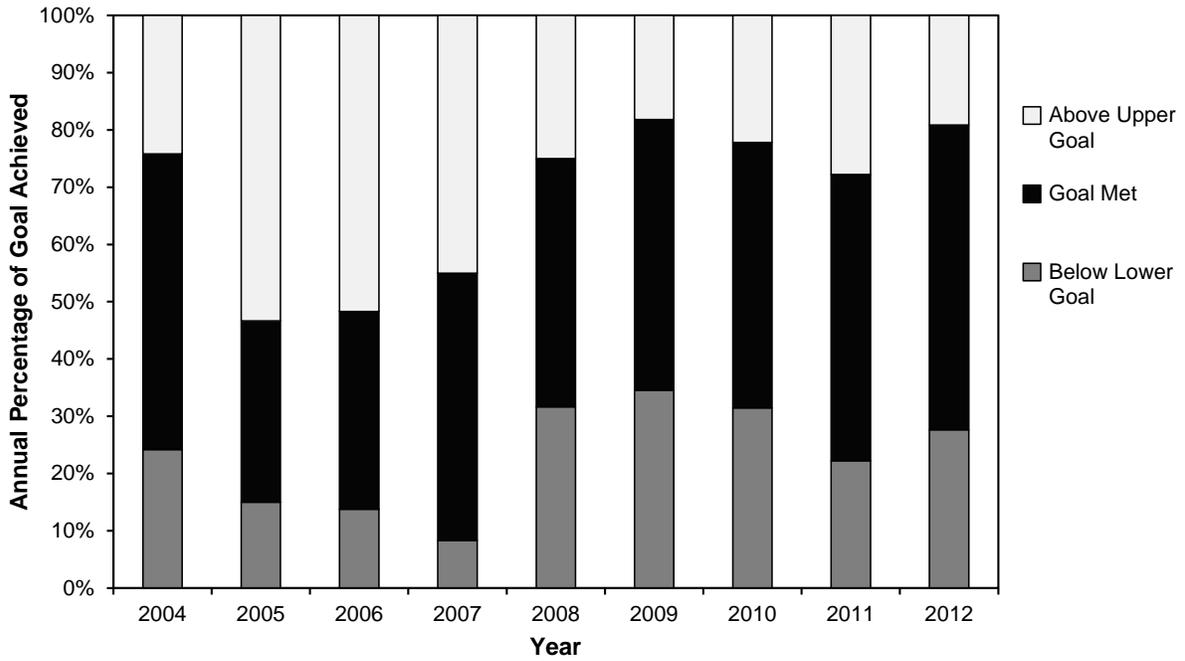


Figure 8.—Arctic-Yukon-Kuskokwim Region salmon escapements compared against escapement goals for the years 2004 to 2012.

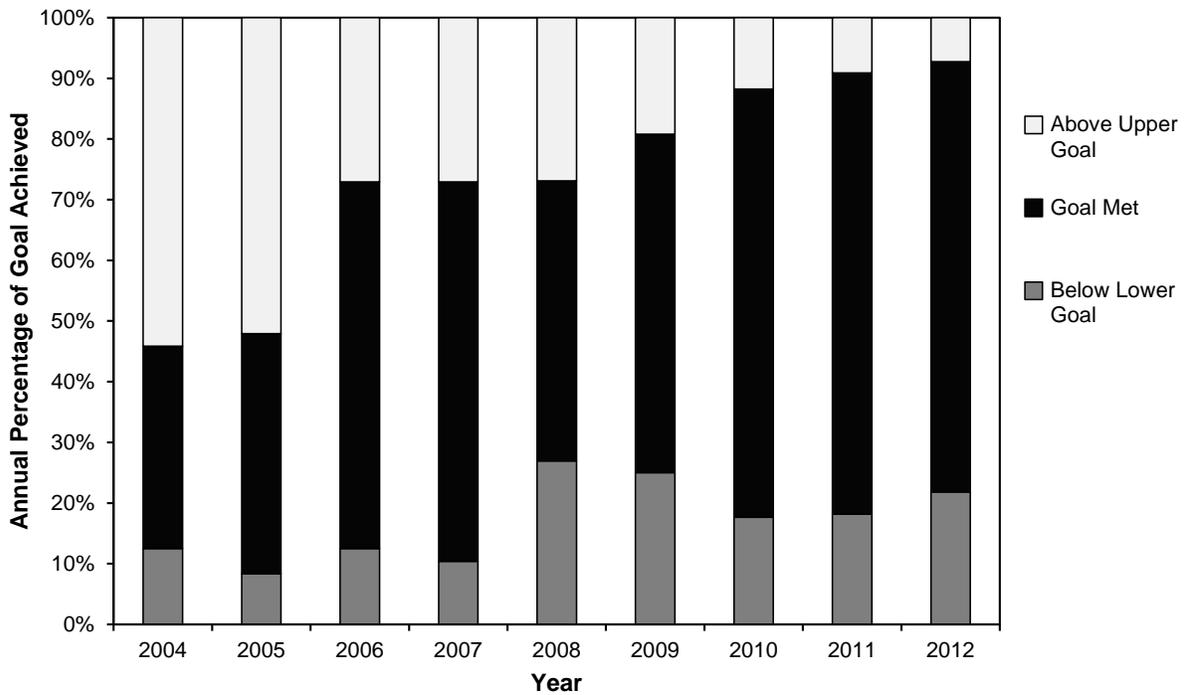


Figure 9.—Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) salmon escapements compared against escapement goals for the years 2004 to 2012.

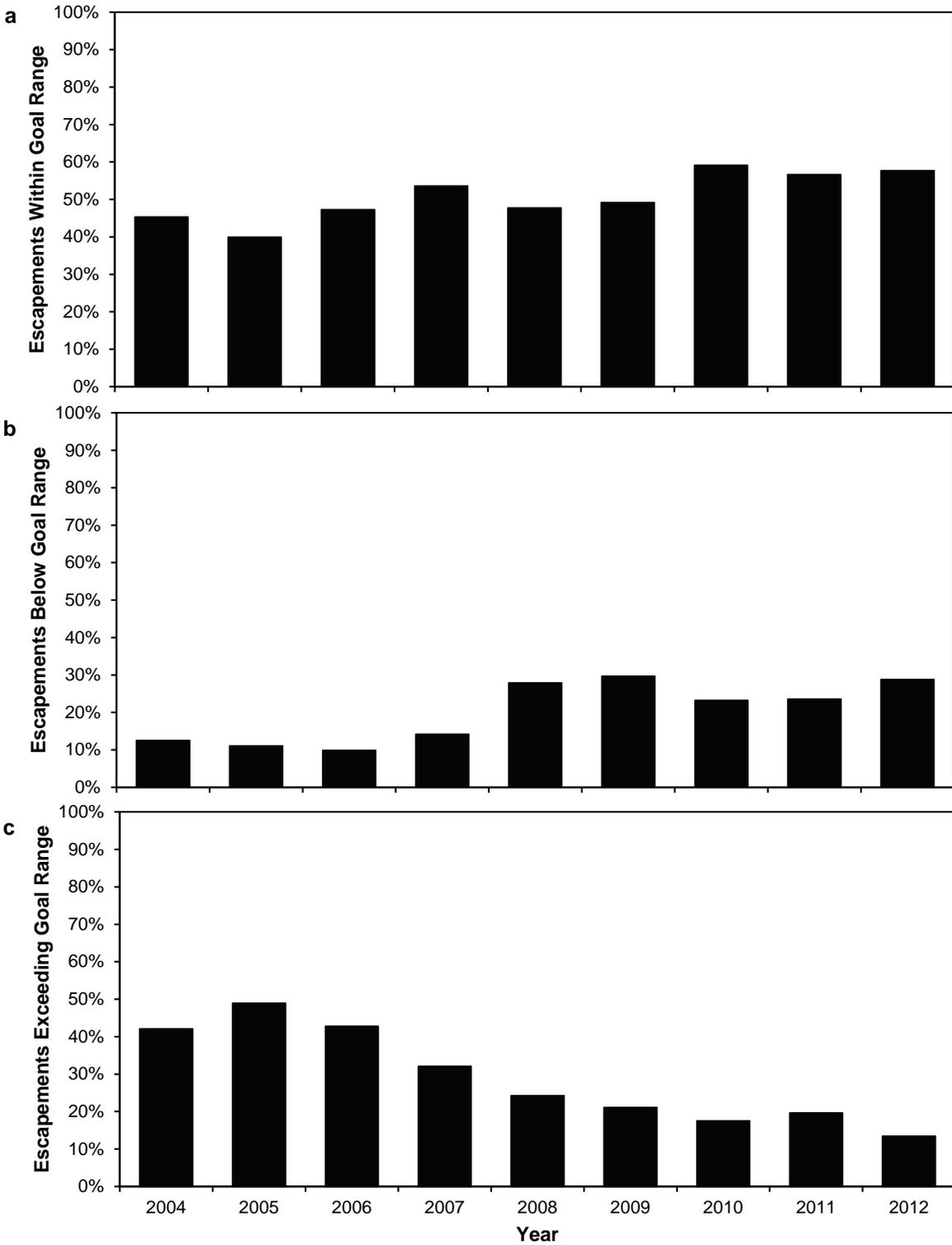


Figure 10.—Statewide summary by year of percentage of escapements that a) met the escapement goal (i.e., within goal range or above lower bound), b) were below lower bound of goal, or c) exceeded upper bound of goal range for the years 2004 to 2012.

APPENDIX A.
ESCAPEMENT GOAL MEMO FOR THE PRINCE WILLIAM
SOUND MANAGEMENT AREA MEETING OF THE 2011/2012
BOARD OF FISHERIES MEETING CYCLE

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

*Division of Commercial Fisheries
Division of Sport Fish*

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MEMORANDUM

TO: Jeff Regnart, Director 
Division of Commercial Fisheries

DATE: September 20, 2011

Charles Swanton, Director 
Division of Sport Fish

THRU: Tracy Lingnau, Regional Supervisor
Division of Commercial Fisheries, Region II

SUBJECT: Prince William Sound
Management Area
Escapement Goal and
Stock of Concern
Recommendation Memo

Don Roach, Regional Supervisor
Division of Sport Fish, Region III

James Hasbrouck, Regional Supervisor
Division of Sport Fish, Region II

FROM: Lowell Fair, Regional Research Coordinator
Division of Commercial Fisheries, Region II

Matt Evenson, Regional Research Coordinator
Division of Sport Fish, Region III

Jack Erickson, Regional Research Coordinator
Division of Sport Fish, Region II

Escapement Goal Recommendations to the Directors of the Divisions of Sport Fish and Commercial Fisheries

The purpose of this memo is to inform you of our progress reviewing and recommending escapement goals for the Prince William Sound Management Area (PWSMA), which includes Bering River, Copper River, and Prince William Sound. Escapement goals for this area have been set and evaluated at regular intervals since statehood. Because of this effort, many of the stocks have long-term historical databases. PWSMA escapement goals were last reviewed, changes recommended, and subsequently implemented by the department (Fair et al. 2008) during the 2008–2009 Alaska Board of Fisheries (board) cycle.

In March 2011, an interdivisional salmon escapement goal review committee, including staff from the divisions of Commercial Fisheries and Sport Fish, was formed to review existing salmon escapement goals in PWSMA. The review was based on the *Policy for the Management of Sustainable Salmon Fisheries* (5 AAC 39.222) and the *Policy for Statewide Salmon Escapement Goals* (5 AAC 39.223). Two important terms are:

5 AAC 39.222 (f)(3) “*Biological Escapement Goal* (BEG): the escapement that provides the greatest potential for maximum sustained yield (MSY);” and

5 AAC 39.222 (f)(36) “*Sustainable Escapement Goal* (SEG): a level of escapement, indicated by an index or an escapement estimate, that is known to provide for sustained yield over a 5 to 10 year period, used in situations where a BEG cannot be estimated or managed for.”

The committee determined the appropriate goal type (BEG or SEG) for each salmon stock with an existing goal and other monitored, exploited stocks without an existing goal. Using available data, we determined the most appropriate methods to evaluate the escapement goal. Due to the comprehensive previous analyses in Bue et al. (2002), Evenson et al. (2008), and Fair et al. (2008), this review only reanalyzed goals with recent (2008–2010) data that might result in a substantially different escapement goal from the last review, or those that should be eliminated or established. For most PWSMA stocks (except Eshamy Lake sockeye salmon), the available data were most appropriate for SEG-type goals.

The department estimated most system escapements through multiple aerial and/or foot surveys of stream reaches that can be monitored. However, one PWSMA stock’s escapement was measured using sonar, one used mark–recapture techniques, and two used weirs. The committee evaluated escapement goals with various methods: (1) stock-recruitment analyses, (2) yield analyses, and (3) escapement variability information (Bue and Hasbrouck *Unpublished*). Following these analyses, the committee estimated escapement goals for each stock, compared these estimates with the current goal, and agreed on a recommendation to keep the current goal, change the goal, eliminate the goal, or to establish other goals.

There were 15 existing escapement goals evaluated in PWSMA (Table 1). The committee recommends, to the directors of the divisions of Sport Fish and Commercial Fisheries, changes to five existing escapement goals in PWSMA:

- Change the Coghill Lake sockeye salmon SEG range of 20,000 to 40,000 to an SEG range of 20,000 to 60,000. This is based on the integration of escapement, yield, recruitment, and limnological data.
- Change the Bering River sockeye salmon SEG from a range of 20,000 to 35,000 to an SEG range of 15,000 to 33,000 based on corrections to the historical escapement data and additional years of data.
- Change the Upper Copper River sockeye salmon SEG from a range of 300,000 to 500,000 to an SEG range of 360,000 to 750,000. This change is recommended as a result of shortening the historical escapement data set (dropped 1978) because of concerns about data quality, converting Bendix sonar estimates to comparable DIDSON (dual-frequency identification sonar) estimates, and incorporating recent escapement information.

- Change pink salmon soundwide SEGs for even- and odd-year stocks to district-specific SEGs, currently defined as management targets in Bue et al. (2002). This conversion is necessary because we actively manage pink salmon in PWSMA by district and not on a soundwide basis.

In summary, this comprehensive review of the 15 existing salmon escapement goals in PWSMA resulted in five modifications. Three goals had a change in range and two were modified from soundwide goals to district goals. An oral and written report (Fair et al. *In prep*) concerning escapement goals and specific recommendations for numerous stocks in PWSMA will be presented to the board in December 2011. These reports will list all current and recommended escapement goals for PWSMA, as well as detailed descriptions of the methods used to reach these recommendations.

Stock of Concern Status

The *Policy for the Management of Sustainable Salmon Fisheries* (5 AAC 39.222) directs the department to report to the board on the status of salmon stocks and identify any stocks that present a concern related to yield, management, or conservation during regular board meetings. None of the PWSMA stocks have failed to achieve the lower range of the goal for three consecutive years since the previous board cycle (Munro and Volk 2011). Without a chronic inability to achieve their escapement goals, we recommend that no stocks of concern be established.

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- Munro, A. R., and E. C. Volk. 2011. Summary of Pacific salmon escapement goals in Alaska with a review of escapements from 2002 to 2010. Alaska Department of Fish and Game, Fishery Manuscript Series No. 11-06, Anchorage.

Appendix A1,

Table 1. –Summary of current escapement goals and recommended escapement goals for salmon stocks in Prince William Sound Management Area.

System	Current Escapement Goal			Recommended Escapement Goal		
	Goal	Type	Year Adopted	Range	Escapement Data	Action
King Salmon						
Copper River	> 24,000	SEG	2002	> 24,000	Mark-Recapture	No Change
Coho Salmon						
Bering River	13,000 – 33,000	SEG	2002	13,000 – 33,000	Aerial Survey	No Change
Copper River Delta	32,000 – 67,000	SEG	2002	32,000 – 67,000	Aerial Survey	No Change
Sockeye Salmon						
Eshamy Lake	13,000 – 28,000	BEG	2002	13,000 – 28,000	Weir	No Change
Coghill Lake	20,000 – 40,000	SEG	2005	20,000 – 60,000	Weir	Change in Range
Bering River	20,000 – 35,000	SEG	2002	15,000 – 33,000	Aerial Survey	Change in Range
Copper River Delta	55,000 – 130,000	SEG	2002	55,000 – 130,000	Aerial Survey	No Change
Upper Copper River	300,000 – 500,000	SEG	2002	360,000 – 750,000	Sonar	Change in Range
Pink Salmon						
Even-Year Broodline (All Districts Combined)						
	1,250,000 – 2,750,000	SEG	2002	discontinued	Aerial Survey	Change to District Goals ^a
Odd-Year Broodline (All Districts Combined)						
	1,250,000 – 2,750,000	SEG	2002	discontinued	Aerial Survey	Change to District Goals ^b
Chum Salmon (by District)						
Coghill	> 8,000	SEG	2005	> 8,000	Aerial Survey	No Change
Eastern	> 50,000	SEG	2005	> 50,000	Aerial Survey	No Change
Northern/Unakwik	> 20,000	SEG	2005	> 20,000	Aerial Survey	No Change
Northwestern	> 5,000	SEG	2005	> 5,000	Aerial Survey	No Change
Southeastern	> 8,000	SEG	2005	> 8,000	Aerial Survey	No Change

^a Recommended district SEGs for even years: Eastern – 250,000 to 580,000; Northern – 140,000 to 210,000; Coghill – 60,000 to 150,000; Northwestern – 70,000 to 140,000; Eshamy – 3,000 to 11,000; Southwestern – 70,000 to 160,000; Montague – 50,000 to 140,000; Southeastern – 150,000 to 310,000.

^b Recommended district SEGs for odd years: Eastern – 310,000 to 640,000; Northern – 90,000 to 180,000; Coghill – 60,000 to 250,000; Northwestern – 50,000 to 110,000; Eshamy – 4,000 to 11,000; Southwestern – 70,000 to 190,000; Montague – 140,000 to 280,000; Southeastern – 270,000 to 620,000.

APPENDIX B.
ESCAPEMENT GOAL MEMO FOR THE SOUTHEAST
ALASKA MANAGEMENT AREA MEETING OF THE
2011/2012 BOARD OF FISHERIES MEETING CYCLE

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

Division of Commercial Fisheries
Division of Sport Fish

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MEMORANDUM

TO: Jeff Regnart, Director 
Division of Commercial Fisheries

DATE: September 16, 2011

Charles O. Swanton, Director 
Division of Sport Fish

THRU: Scott Kelley, Regional Supervisor
Division of Commercial Fisheries, Region I

SUBJECT: SE Alaska Salmon
Escapement Goal
Memo

Brian Frenette, Regional Supervisor
Division of Sport Fish, Region I

FROM: Steve Heintz, Regional Research Biologist
Division of Commercial Fisheries, Region I

John Der Hovanisian, Regional Research Coordinator
Division of Sport Fish, Region I

The purpose of this memorandum is to inform you of our progress reviewing and recommending escapement goals for Southeast Alaska. Southeast Region escapement goals were last reviewed by the department during the 2008–2009 Alaska Board of Fisheries (board) cycle (Eggers and Heintz 2008; Eggers et al. 2009a, 2009b; Eggers et al. 2010; Heintz et al. 2008; Hendrich et al. 2008; McPherson et al. 2010; Shaul et al. 2009). Escapement goals for Blossom and Keta rivers king salmon (Fleischman et al. 2011) were reviewed out of cycle in 2009–2010.

In February 2011, an interdivisional salmon escapement goal review committee consisting of regional staff from the divisions of Commercial Fisheries and Sport Fish, as well as statewide representatives, met to review existing escapement goals in Southeast Alaska. These reviews were based on the *Policy for the Management of Sustainable Salmon Fisheries* (5 AAC 39.222) and the *Policy for Statewide Salmon Escapement Goals* (5 AAC 39.223). Two important terms are:

5 AAC 39.222 (f)(3) “*Biological Escapement Goal (BEG)*: the escapement that provides the greatest potential for maximum sustained yield (MSY);” and

5 AAC 39.222 (f)(36) “*Sustainable Escapement Goal (SEG)*: a level of escapement, indicated by an index or an escapement estimate, that is known to provide for sustained yield over a 5 to 10 year period, used in situations where a BEG cannot be estimated or managed for.”

A total of 51 existing escapement goals were evaluated in the Southeast Region. The committee determined the appropriate goal type (BEG or SEG) for each salmon stock with an existing goal. The committee also considered other monitored, exploited stocks without an existing goal. Based on the quality and quantity of available data, the committee determined the most appropriate methods to evaluate the escapement goals. Due to the comprehensive previous analyses (cited above), the committee reanalyzed only those goals with recent (2008–2010) data that could potentially result in a substantially different escapement goal from the last review, and assessed others that should be eliminated or established.

The committee recommends, to the directors of Commercial Fisheries and Sport Fish, changes to 6 existing goals:

- Change the Blossom River king salmon goal from a current BEG range of 250–500 large (≥ 660 mm MEF) fish, as counted in aerial surveys, to a BEG range of 150–300;
- Change the Keta River king salmon goal from a current BEG range of 250–500 large fish, as counted in aerial surveys, to a BEG range of 175–400;
- Change the odd- and even-year Situk River pink salmon goals from current BEG ranges of 54,000–200,000 and 42,000–105,000 fish, to a lower bound SEG of 33,000 counted through the Situk River weir by 5 August, for both brood lines;
- Change the Southern Southeast summer-run chum salmon goal from a current lower bound SEG of 68,000 fish, as counted in aerial surveys, to a lower bound SEG of 54,000; and
- Change the Northern Southeast Inside summer-run chum salmon goal from a current lower bound SEG of 149,000 fish, as counted in aerial surveys, to a lower bound SEG of 119,000.

In addition, the committee determined that the escapement goals for Stikine River and Chilkat River king salmon should be reviewed after the 2012 season.

A summary of the region’s salmon escapement goals and recommended changes are presented in Tables 1–5. Note that due to the timing of this memo relative to the timing of escapements for some systems and species, some information needed to determine if goals were met is unavailable for 2011. Oral and written reports concerning Southeast Alaska escapement goals and specific recommendations will be presented to the board in February 2012. These reports will list all current and recommended goals for Southeast Alaska and provide details on the methods used to reach these recommendations.

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Appendix B1,

Table 1.—Estimated king salmon escapements for systems with formal escapement goals in Southeast Alaska, 2006–2011.

System	Escapement data	Goal type	Escapement goal	Year established	Escapement ^a						2011 EG Team recommendation
					2006	2007	2008	2009	2010	2011	
Blossom River	AS, IE	BEG	250–500 ^b	1997	339	135	257	123	180	NA	Change to BEG of 150–300 index count
Keta River	AS, IE	BEG	250–500 ^b	1997	747	311	363	172	475	MET	Change to BEG of 175–400 index count
Unuk River	M-R, AS	BEG	1,800–3,800 ^c	2008	5,645	5,668	3,104	3,157 ^d	4,290 ^d	NA	NC
Chickamin River	AS, IE	BEG	450–900 ^b	1997	1,330	893	1,111	611	1,156	MET	NC
Andrew Creek	AS,	BEG	650–1,500 ^c	1998	2,124	1,736	981	628	1,205	936	NC
Stikine River	M-R, weir	BEG	14,000–28,000 ^c	2000	24,405	14,560	18,352	11,086 ^d	15,180 ^d	MET	NC
King Salmon River	AS	BEG	120–240 ^c	1997	150	181	120	109	158	192	NC
Taku River	MR, AS	BEG	19,000–36,000 ^c	2009	42,296	14,854	27,383 ^d	20,762 ^d	29,307 ^d	NA	NC
Chilkat River	MR	BEG	1,750–3,500 ^c	2003	3,039 ^e	1,445 ^c	2,905 ^{d, c}	4,429 ^{d, e}	1,852 ^{d, e}	MET	NC
Klukshu River (Aisek River)	Weir	BEG	1,100–2,300 ^{f, g}	1998	568	676	466	1,466	2,159	1,667 ^d	NC
Situk River	Weir	BEG	450–1,050 ^c	2003	695	677	413	900	167 ^h	240 ^d	NC

^a Escapements are germane to king salmon ≥ 660 mm MEF, with the exception of the Klukshu River (Aisek River).

^b The goal is germane to king salmon ≥ 660 mm MEF as counted in peak survey counts. Reported escapements are survey counts.

^c The goal is germane to total escapement.

^d Preliminary pending biometric and/or peer review.

^e Inriver run. Spawning escapement is equal to the inriver run minus the inriver subsistence harvest, which averages <100 fish.

^f The goal is germane to age-1.2+ fish.

^g Klukshu River escapement = (Klukshu weir count + sport harvest below the weir in the Klukshu River) – Canadian harvest, where Canadian harvest = sport harvest (Dalton Post + Blanchard + Takhanne) + Aboriginal harvest (above and below the weir in the Klukshu River).

^h Weir compromised, partial count.

AS = peak aerial survey, IE = index escapement, M-R = mark-recapture, NC = no change, NA = not available

Appendix B1,

Table 2.—Estimated sockeye salmon escapements for systems with formal escapement goals in Southeast Alaska, 2006–2011.

System	Escapement data	Goal type	Escapement goal	Year established	Escapement						2011 EG Team recommendation
					2006	2007	2008	2009	2010	2011	
Hugh Smith Lake	Weir, MR	OEG	8,000–18,000	2003	42,112	33,743	3,588	9,483	15,646	MET	NC
McDonald Lake ^a	FS,MR	SEG	55,000–120,000	2009	31,357	29,086	20,700	51,000	72,500	MET	NC
Mainstem Stikine River	MR	SEG	20,000–40,000	1987	27,603	20,865	16,802	24,575	25,164	MET	NC
Tahltan Lake	Weir	BEG	18,000–30,000	1993	53,455	20,874	10,416	30,323	22,702	MET	NC
Speel Lake	Weir	BEG	4,000–13,000	2003	4,165	3,099	1,763	3,689	5,640	MET	NC
Taku River	MR	SEG	71,000–80,000	1986	146,151	87,764	70,442	71,200	87,899	MET	NC
Redoubt Lake	Weir	OEG	7,000–25,000	2003	103,953	66,938	10,146	12,851	17,119	MET	NC
Chilkat Lake ^b	Sonar, MR	BEG	70,000–150,000	2009	73,000	68,000	71,735	150,033	61,906	NA	NC
Chilkoot Lake	Weir, MR	SEG	38,000–86,000	2009	96,203	72,561	32,957	33,545	71,657	MET	NC
East Alsek-Doame River	AS, IE	BEG	13,000–26,000	2003	29,000	40,100	8,000	12,000	19,500	MET	NC
Klukshu River (Alsek River)	Weir	BEG	7,500–15,000	2000	12,890	8,479	2,741	5,509	18,546	MET	NC
Lost River	BS, IE	Lower bound SEG	1,000	2009	1,018	180	200	NA	1,525	MET	NC
Situk River	Weir	BEG	30,000–70,000	2003	90,351	61,799	22,520	83,959	47,865 ^c	MET	NC

^a McDonald Lake total escapement based on mark-recapture estimates (2006–2007) or calibrated peak foot survey count (2008–2011).

^b Chilkat Lake total escapement based on mark-recapture estimates (2006–2007) or DIDSON sonar (2008–2011).

^c Situk River weir compromised in 2010; partial count.

AS = peak aerial survey, FS = foot survey, BS = boat survey, IE = index escapement, MR = mark-recapture, NC = no change, NA = not available

Appendix B1,

Table 3.—Estimated coho salmon escapements for systems with formal escapement goals in Southeast Alaska, 2006–2011.

System	Escapement data	Goal type	Escapement goal	Year established	Escapement						2011 EG Team recommendation	
					2006	2007	2008	2009	2010	2011		
Hugh Smith Lake	Weir	BEG	500–1,600	2009	891	1,244	1,741	2,281	2,878	MET	NC	
Taku River ^a	MR	manage. threshold	>35,000	1995	121,778	74,326	95,360 ^b	104,321 ^b	103,992 ^b	NA	NC	
Auke Creek	Weir	BEG	200–500	1994	581	352	600	360	417	NA	NC	
Juneau Roadside Index	Montana Creek	FS, IE	SEG	400–1,200	2006	1,110	324	405	698	630	NA	NC
	Peterson Creek	FS, IE	SEG	100–250	2006	439	226	660	123	467	NA	NC
Ketchikan Survey Index	AS, IE	BEG	4,250–8,500	2006	6,912	4,488	16,680	8,226	4,657	NA	NC	
Sitka Survey Index	FS, IE	BEG	400–800	2006	2,647	1,066	1,117	1,156	1,273	NA	NC	
Ford Arm Lake	Weir	BEG	1,300–2,900	1994	4,737	2,567	5,173	2,181	1,610	NA	NC	
Berners River	MR	BEG	4,000–9,200	1994	5,470	3,915	6,870	4,230	7,520	NA	NC	
Chilkat River	AS/FS-IE, MR	BEG	30,000–70,000	2006	80,683	25,493	57,376	47,548	87,381 ^b	NA	NC	
Lost River	FS, IE	SEG	2,200	2009	3,500	2,542	NA	3,581	2,393	NA	NC	
Situk River	BS, IE	BEG	3,300–9,800	1994	8,533	5,763	NA	5,814	11,195	NA	NC	
Tsiu/Tsivat Rivers	AS, IE	BEG	10,000–29,000	1994	14,500	14,000	25,200	28,000	11,000	NA	NC	

^a For the Taku River stock of coho salmon, the management intent of the U.S. is to ensure a minimum above border run (i.e., inriver run) of 38,000 fish as specified in the Pacific Salmon Treaty. The management threshold for escapement is the inriver run minus the allowed Canadian inriver harvest of 3,000 at runs less than 50,000.

^b Preliminary pending biometric and/or peer review.

AS = peak aerial survey, FS = foot survey, BS = boat survey, FS = foot survey, IE = index escapement, MR = mark-recapture, NC = no change, NA = not available

Appendix B1,
 Table 4.—Estimated pink salmon escapements for systems with formal escapement goals in Southeast Alaska, 2006–2011.

System	Escapement data	Goal type	Escapement goal	Year established	Escapement						2011 EG Team recommendation
					2006	2007	2008	2009	2010	2011	
Southern Southeast	AS, IE	BEG	3.0–8.0 million	2009	4.3 million	10.6 million	6.3 million	7.2 million	5.9 million	MET	NC
Northern Southeast Inside	AS, IE	BEG	2.5–6.0 million	2009	4.0 million	4.7 million	1.5 million	3.7 million	3.2 million	MET	NC
Northern Southeast Outside	AS, IE	BEG	0.75–2.5 million	2009	2.0 million	2.3 million	1.7 million	1.8 million	2.0 million	MET	NC
Situk River (odd-year)	Weir	BEG	54,000–200,000	1995		229,033		62,787		MET	Change to lower bound SEG 33,000
Situk River (even-year)	Weir	BEG	42,000–105,000	1995	114,779		1,232		89,301		Change to lower bound SEG 33,000

* Recommended Lower Bound SEG for Situk River even- and odd-year runs combined based on weir count through 5 August.

AS = peak aerial survey, IE = index escapement, NC = no change.

98

Appendix B1,

Table 5.—Estimated chum salmon escapements for systems with formal escapement goals in Southeast Alaska, 2006–2011.

System	Escapement data	Goal type	Escapement goal	Year established	Escapement						2011 EG Team recommendation
					2006	2007	2008	2009	2010	2011	
Southern Southeast Summer-Run	AS, IE	Lower bound SEG	68,000	2009	76,000	132,000	13,000	41,000	47,000	MET	Change to lower bound SEG of 54,000
Northern Southeast Inside Summer-Run	AS, IE	Lower bound SEG	149,000	2009	282,000	149,000	99,000	107,000	77,000	NA	Change to lower bound SEG of 119,000
Northern Southeast Outside Summer-Run	AS, IE	Lower bound SEG	19,000	2009	57,000	34,000	46,000	15,000	24,000	MET	NC
Cholmondeley Sound Fall-Run	AS, IE	SEG	30,000–48,000	2009	54,000	18,000	49,500	39,000	76,000	NA	NC
Port Camden Fall-Run	AS, IE	SEG	2,000–7,000	2009	2,420	505	1,400	1,711	5,400	NA	NC
Security Bay Fall-Run	AS, IE	SEG	5,000–15,000	2009	15,000	5,400	11,700	5,100	6,500	NA	NC
Excursion River Fall-Run	AS, IE	SEG	4,000–18,000	2009	2,203	6,000	8,000	1,400	6,100	NA	NC
Chilkat River Fall-Run	MR, FW	SEG	75,000–170,000	2009	704,000	331,000	451,000	337,000	91,000	NA	NC

AS = peak aerial survey, IE = index escapement, MR = mark-recapture, FW = fish wheel, NC = no change; NA = not available

87