# Reanalysis of Upper Cook Inlet Coho Salmon Harvest from 2013 to 2016 Using an Updated Genetic Baseline

by

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**Divisions of Commercial Fisheries** 



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

#### REGIONAL INFORMATION REPORT 5J19-06

## REANALYSIS OF UPPER COOK INLET COHO SALMON HARVEST FROM 2013 TO 2016 USING AN UPDATED GENETIC BASELINE

by

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#### INTRODUCTION

This report is an update to the Cook Inlet coho salmon *Oncorhynchus kisutch* genetic baseline reported in Barclay and Habicht (2019) and mixed stock analysis (MSA) of Upper Cook Inlet (UCI) commercial harvest and offshore test fishery from 2013–2016 (Barclay et al. 2017, 2018). All background information for the genetic baseline and commercial harvest and offshore test fishery MSAs can be found in the previous reports: (1) baseline background information in Barclay and Habicht (2019) includes a summary of previous genetic diversity and baseline studies and the impetus for increasing baseline representation for Cook Inlet coho salmon; and (2) MSA background information in Barclay et al. (2017, 2018) includes summaries of previous MSA studies, UCI commercial fishery management strategy, and fishery highlights for the UCI commercial fishery in 2013–2016.

Updates to the genetic baseline since the last MSA, inclusive of this report, include additional baseline representation of Northern Cook Inlet coho salmon populations in the Yentna (11 populations), Susitna (4 populations), and Deshka (additional samples) rivers; in Jim Creek (2 populations), Knik Arm (2 populations), and Turnagain Arm (2 populations); and new baseline evaluation tests for the 11 mixed stock analysis reporting groups identified in Barclay and Habicht (2019):

- (1) *Southwest CI* (West side populations south of Little Jack Creek)
- (2) *Northwest CI* (West side populations from Little Jack Creek north to the Susitna River and Alexander Creek)
- (3) Susitna (Susitna River mainstem tributary populations, excluding Deshka River)
- (4) Deshka (Deshka River population)
- (5) *Yentna* (Yentna River populations)
- (6) Knik (Knik Arm, Little Susitna River, and Campbell Creek populations)
- (7) *Jim* (Jim Creek populations)
- (8) Turnagain/Northeast CI (Turnagain Arm and northeast Cook Inlet populations)
- (9) *Kenai* (Kenai River populations)
- (10) *Kasilof* (Kasilof River populations)
- (11) Southeast CI (Kenai Peninsula populations south of the Kasilof River)

MSA updates in this report include new analysis methods and updated estimates for the 2013–2016 UCI commercial harvest and offshore test fishery using the 11 reporting groups above.

This report was produced to provide the most up-to-date baseline information and MSA estimates for Cook Inlet coho salmon. The results in this report should be considered the best information available and replacements for estimates in the Barclay et al. (2017, 2018) MSA reports. Because the baseline has been updated with additional populations since the previous MSA analyses (Barclay et al. 2017, 2018) and up-to-date harvest numbers were used in this MSA, estimates in this report may differ from what was previously reported for the same reporting groups. Additionally, estimates for groups that were combined into single reporting groups in the original MSAs (i.e., *Northwest CI* and *Yentna*, *Susitna* and *Deshka*, *Knik* and *Jim*, and *Kenai* and *Kasilof*) may not sum what was previously reported.

#### **METHODS**

#### **BASELINE**

Tissue sampling and laboratory methods follow those reported for the previous baseline (Barclay and Habicht 2019). Statistical analysis methods also follow those reported for the previous baseline except for methods used to evaluate the baseline for MSA reporting groups.

Baseline evaluation tests were performed to assess the identifiability of reporting groups in mixtures of fish. Test mixtures of 380 individuals were constructed by randomly sampling from the baseline without replacement predetermined mixture compositions. These mixtures were analyzed against the reduced baseline (full baseline minus the 380 individuals removed for the test mixture). To explore a range of stock compositions, up to 100 test mixtures were constructed for each reporting group with compositions varying from 1% to 100% (in 1% increments) of that group and the composition randomly split among the remaining groups. Because the removal of individuals from the baseline can reduce the accuracy of population allele frequency estimates and, consequently, the identifiability of reporting groups for MSA, test mixture compositions were limited to remove no more than half of the total number of fish in a reporting group. Therefore, the range of test mixture compositions was reduced for reporting groups represented by fewer than 760 fish. For example, if a reporting group was represented by 300 fish, the largest stock composition tested for that reporting group was 39% (150 fish of the 380 fish mixture).

The stock composition of the test mixtures was estimated using the *R* package *rubias* (Moran and Anderson 2019). The *rubias* package is a Bayesian approach to the conditional genetic stock identification model based upon computationally efficient C code implemented in *R*. It uses cross-validation and simulation to quantify and correct for biases in reporting group estimates. Each mixture was analyzed for 1 Markov Chain Monte Carlo chain with 25,000 iterations, and the first 5,000 iterations were discarded to remove the influence of starting values. The prior parameters for each reporting group were defined to be equal (i.e., a flat prior). Within each reporting group, the population prior parameters were divided equally among the populations within that reporting group. Stock proportion estimates and the 90% credibility intervals for each test mixture were calculated by taking the mean and 5% and 95% quantiles of the posterior distribution from the single chain output. After the Markov Chain Monte Carlo analysis, 100 parametric bootstrap simulations were performed to correct for biases in the stock proportion estimates.

The performance of each reporting group was assessed by calculating the proportion of tests with correct allocations within 10% of the true test mixture proportion and overall bias among tests. As a guideline, we considered a reporting group's performance to be adequate for MSA if at least 90% of tests were within 10% of the true test mixture proportion and overall bias did not exceed  $\pm 5\%$ . However, deviations from this guideline are permitted if there is a willingness to accept higher levels of MSA uncertainty to include specific reporting groups to support improved information to meet a management need. These tests provided an indication of the power of the baseline for MSA under the assumption that all populations from a reporting group were represented in the baseline.

#### MIXED STOCK ANALYSIS

Tissue sampling and laboratory methods follow those reported for the previous MSA analyses (Barclay et al. 2017, 2018). Statistical analysis methods for data retrieval, quality control, and

estimating total stock-specific harvest and index points of sampled strata follow those reported for the previous MSAs. Methods for producing stock composition estimates follow the *rubias* protocol described above for the baseline evaluation tests.

#### RESULTS AND DISCUSSION

#### **BASELINE**

A total of 7 new populations were added to the baseline since the Barclay and Habicht (2019) update: (1) Home Lake, (2) Kashwitna River, (3) Willow Creek, (4) Cache Creek, (5) Moose Creek (Yentna River drainage), (6) Eagle River, and (7) Twentymile River. Information on baseline collections and their reporting groups assignment can be found in Table 1 and Figure 1. A visualization of baseline population genetic structure can be found on Figure 2.

Baseline evaluation test mixtures were constructed with proportions ranged from 1% to 100% (in increments of 1%) for *Southwest CI*, *Northwest CI*, *Susitna*, *Yentna*, *Knik*, *Turnagain/Northeast CI*, and *Kenai* (100 mixtures each), from 1% to 69% for *Southeast CI* (69 mixtures), from 1% to 49% for *Deshka* and *Jim* (49 mixtures each), and from 1% to 39% for *Kasilof* (39 mixtures; Table 2; Figure 3).

In the baseline evaluation tests, all but one reporting group (*Northwest CI*) performed adequately for MSA (Table 2; Figure 3). Ninety percent of the test estimates were within 2.0% to 10.0% (mean: 5.4%) of the true value for all reporting groups except *Northwest CI*, where were 90% of the test estimates were within 13.7% of the true value. Overall bias for all reporting groups was adequate and ranged from -3.3% to 0.8% (mean: -0.4%).

We retained the *Northwest CI* reporting group despite missing the MSA guidelines for reporting group performance because 1) a management need required separation of Yentna River fish from northwest Cook Inlet fish and 2) reporting group performance for proportions observed in Cook Inlet fisheries was acceptable. One management need was to estimate the total run size for the Susitna River drainage (Yentna, Deshka, and Susitna rivers). This management need could only be accomplished by using reporting groups that accounted for all the fish within the Susitna River, but excluded all fish from outside this drainage. Using a better performing reporting group, by combining *Northwest CI* and *Yentna* reporting groups, would have likely yielded a reporting group that met our guidelines, but would not allow for the management need. Finally, in the analysis of the 2013–2016 commercial fishery and offshore test fish mixtures, the stock composition estimates for *Northwest CI* were always less than 50%. The baseline evaluation tests performed adequately for *Northwest CI* when it composed between 1% and 50% of the test mixtures (Figure 3).

#### MIXED STOCK ANALYSIS

 $Collection\ information\ for\ offshore\ test\ and\ commercial\ fisheries\ can\ be\ found\ in\ Appendix\ A1-A4.$ 

For offshore test fish information and results see the following:

- Mixture information (Table 3)
- Maps of offshore test fishery transects (Figures 4–6)
- CPUE by date and station (Appendix B1–B6)
- Spatial mixture stock composition and stock-specific index point estimates (Tables 4–9; Figures 7–10)

- Temporal mixture stock composition and stock-specific index point estimates (Tables 10–15; Figures 11–14)
- Overall annual stock-specific index point estimates (Tables 16–19; Figure 15)

For commercial fishery information and results see the following:

- Mixtures information (Tables 20 and 21)
- Maps of UCI commercial fishery statistical areas (Figures 16–19)
- Commercial harvest by date and statistical area (Appendix C1–C4)
- Central District drift gillnet temporal mixtures stock composition and stock-specific harvest estimates (Appendix D1–D6; Figure 20)
- Northern District set gillnet temporal mixtures stock composition estimates (Appendix E1; Figure 21)
- Northern District set gillnet spatial mixtures stock composition and stock-specific harvest estimates (Appendix F1–F3; Figure 22)
- Upper Subdistrict set gillnet mixtures stock composition and stock-specific harvest estimates (Appendix G1)
- Overall annual UCI commercial fishery stock composition and stock-specific harvest estimates (Table 22; Figure 23)
- Overall annual stock composition and stock-specific harvest estimates by fishery (Tables 23–26; Figures 24–31)

Stock-specific harvest estimates differed from previously reported estimates in Barclay et al. (2017, 2018) by small proportions and were concentrated in reporting groups proximate to where new populations were added to the baseline (Northern Cook Inlet). For example, combined annual stock-specific harvest estimates for *Susitna* and *Deshka* were generally lower than the previous estimates and differed by 10,069 (2013), 5,121 (2014), 11,349 (2015), and 11 (2016) fish (a change of 0.0–6.1%). In contrast, the combined annual stock-specific harvest estimates for *Northwest CI* and *Yentna* were generally higher than the previous estimates and differed by 1,595 (2013), 5,021 (2014), 6,688 (2015), and 2,568 (2016) fish (a change of 0.8–4.8%). Populations added to the baseline in the *Yentna* reporting group that have genetic affinity to the *Deshka* reporting group population might explain this pattern.

Changes between the original reports of stock-specific harvest estimates compared to the new estimates for all other reporting groups were below 3%. For example, annual UCI commercial stock-specific harvest estimates for *Turnagain/Northeast CI* were generally higher and differed by 5,254 (2013), 1,788 (2014), 3,260 (2015), and 2,080 (2016) fish (a change of 1.7–2.3%). The combined annual stock-specific harvest estimates for *Knik* and *Jim* were generally higher than previous estimates and differed by 6,007 (2013), 1,656 (2014), 1,811 (2015), and 956 (2016) fish (a change of 0.8–2.6%). The combined annual stock-specific harvest estimates for *Kenai* and *Kasilof* were generally lower and differed by 413 (2013), 333 (2014), 665 (2015), and 419 (2016) fish (a change of 0.2–0.4%). Finally, the annual stock-specific harvest estimates for *Southwest CI* and *Southeast CI* were generally higher and differed by up to 323 (2013), 189 (2014), 540 (2015), and 536 (2016) fish (a change of 0.0–0.4%).

This updated analysis represents the most accurate MSA analysis of coho salmon harvested in Upper commercial and offshore test fisheries to date. The updated baseline provides better representation of coho salmon populations, especially in Northern Cook Inlet, and the reporting

groups provide information useful for management needs—specifically for run reconstructions of the Susitna River.

#### ACKNOWLEDGEMENTS

The Matanuska-Susitna Borough Fish and Wildlife Commission was instrumental in identifying and prioritizing the information gap that lead to this project. Updating the genetic baseline and producing the 4 years of MSA estimates in this report required the efforts of a large number of dedicated people. The authors acknowledge the work of the people in the ADF&G's Gene Conservation Laboratory for producing the genetic data used in the baseline and MSAs. The authors would like to thank the multiple agencies and organizations that contributed samples to genetic baseline. The authors would also like to thank the people with Soldotna commercial fishery sampling crews who collected the thousands of samples required for producing harvest-proportional samples of fish for the MSAs. Baseline field collections from 2016 to 2018 and laboratory and statistical analyses were funded by the State of Alaska and Matanuska-Susitna Borough.

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**TABLES AND FIGURES** 

Table 1.—Tissue collections of coho salmon throughout Upper Cook Inlet, including the years collected, number of samples collected ( $N_c$ ), the number of individuals genotyped ( $N_g$ ), and the number of individuals analyzed from each collection included in the baseline ( $N_b$ ). Unique population numbers represent all the analyzed collections that contribute to a single population and correspond to population numbers on Figures 1 and 2. Baseline evaluation tests for MSA were performed on the 11 groups.

	Pop.		Collection			
Reporting group	No.	Location	Year	$N_c$	$N_{\rm g}$	$N_b$
Southwest CI	1	Douglas River	2013	106	95	92
	2	Douglas Reef River	2013	113	95	94
	3	Kamishak River	2013	110	95	92
	4	Little Kamishak River	2013	96	95	90
	5	McNeil River	2013	41	41	41
	5		2014	12	12	12
	6	Knoll's Head Creek	2014	200	150	150
	7	Silver Salmon Creek	2013	160	95	93
	8	Tuxedni River	2012	86	81	81
	9	Crescent Lake	1998	99	95	93
	10	Crescent River	2013	227	95	91
	11	Harriet Creek	2012	1	1	1
	11		2014	63	63	63
Northwest CI	12	Little Jack Creek	2013	104	95	95
	13	Montana Bill Creek	2012	101	95	95
	14	Kustatan River	2013	119	95	95
	15	McArthur River (unnamed stream)	2014	100	95	95
	16	Farro Creek	2013	17	17	17
	16		2014	111	78	78
	17	Chuitna River	1992	54	54	53
	18	Coal Creek	2013	41	41	39
	18		2014	46	46	46
	19	Theodore River	2012	19	19	17
	19		2013	60	60	60
	20	Lewis River	2013	57	57	56
	21	Alexander Creek <sup>a</sup>	2014	101	95	92
	21		2015	100	48	47
Susitna	22	Portage Creek	2014	63	61	59
	23	Indian River	2013	105	95	94
	24	Whiskers Creek	2013	79	79	79
	24		2014	2	2	1
	25	Spink Creek	2008	38	33	32
	25	-	2014	62	62	62
	26	Byers Creek	2014	57	56	55
	27	Home Lake	2018	105	105	97

Table 1.–Page 2 of 5.

	Pop.		Collection			
Reporting group	No.	Location	Year	N <sub>c</sub>	$N_{\mathrm{g}}$	N <sub>b</sub>
Susitna (cont.)	28	Bunco Creek	2013	9	9	9
	28		2014	56	56	55
	29	Troublesome Creek	2013	92	90	88
	30	Prairie Creek	2014	53	53	51
	31	Sheep River	2013	115	95	95
	32	Larson Lake outlet	2011	84	84	84
	32		2014	48	48	48
	33	Chunilna Creek	2013	66	66	64
	33		2014	70	30	30
	34	Fish Creek (Chunilna Cr drainage)	2014	65	65	65
	35	Question Creek	2013	77	77	76
	35		2014	76	57	50
	36	Montana Creek	2013	200	87	87
	37	Sheep Creek	2014	47	47	47
	37		2018	8	8	8
	38	Kashwitna River	2014	24	24	24
	38		2018	91	91	91
	39	Willow Creek	2014	27	27	27
	39		2018	75	75	75
Deshka	40	Deshka River	2015	300	190	190
	40		2016	300	190	190
Yentna	41	West Fork Yentna River - no name A	2017	73	73	68
	41	West Fork Yentna River - no name B	2017	105	95	95
	42	Clearwater Creek	2017	81	81	80
	43	Kichatna River	2017	107	94	91
	44	Nakochna River (upper)	2017	36	33	33
	44	Nakochna River (lower)	2014	8	8	8
	44		2015	3	3	3
	44		2016	6	6	6
	44		2017	11	11	11
	45	Red Creek	2014	26	26	26
	45		2015	46	44	44
	45		2017	62	30	29
	46	Red Salmon Creek	2017	89	88	79
	47	Hayes River	2014	87	84	84
	48	Canyon Creek	2013	55	55	55
	48	-	2014	105	50	50

Table 1.–Page 3 of 5.

	Pop.		Collection			
Reporting group	No.	Location	Year	$N_c$	$N_{\mathrm{g}}$	$N_b$
Yentna (cont.)	49	Talachulitna River	2013	74	73	72
	49		2014	50	50	50
	50	Sunflower Creek	2014	8	8	8
	50		2015	3	3	3
	50		2016	9	9	9
	50		2017	37	37	36
	50		2018	46	46	42
	51	Camp Creek	2016	51	51	50
	51		2017	53	50	47
	52	Cache Creek	2018	60	60	59
	53	Martin Creek	2013	36	35	35
	53		2016	4	4	4
	53	Peters Creek	2017	108	95	93
	54	Moose Creek	2018	114	96	90
Jim	55	Jim Creek (upper)	2009	68	68	68
	55	-	2014	140	50	49
	55		2016	106	101	101
	56	McRoberts Creek	2016	71	71	69
	56		2017	108	108	107
Knik	57	Little Susitna River	2013	97	95	94
	57		2014	100	50	50
	58	Fish Creek	2009	203	95	93
	58		2013	94	94	92
	59	Cottonwood Creek	2014	94	76	73
	60	Wasilla Creek	2013	9	9	9
	60		2014	91	91	91
	61	Rabbit Slough	2011	95	95	95
	62	Matanuska River	2009	194	95	94
	63	Eska Creek	2013	61	61	59
	63		2014	65	35	35
	64	Hunter Creek	2016	9	9	9
	64		2017	96	96	92
	65	Eagle River	2014	24	24	24
	65		2015	11	11	10
	65		2018	23	23	22
	66	Sixmile Creek	2015	125	95	94
	67	Ship Creek	2012	400	95	93
	68	Chester Creek	2011	54	54	53
	68		2013	2	2	2

Table 1.–Page 4 of 5.

	Pop.		Collection			
Reporting group	No.	Location	Year	N <sub>c</sub>	$N_{g}$	$N_b$
Knik (cont.)	68		2014	24	24	22
	69	Campbell Creek <sup>b</sup>	2009	125	95	94
Turnagain/Northeast	70	Rabbit Creek	2011	54	54	53
	70		2013	2	2	2
	70		2014	7	7	7
	71	Twentymile River	2018	123	100	95
	72	Placer Creek	2014	75	73	71
	73	Williwaw Creek	2013	22	22	22
	73		2014	50	50	49
	73		2017	35	33	30
	74	Explorer Creek	2013	95	95	91
	74	•	2014	69	50	48
	75	East Fork Sixmile Creek	2018	66	66	65
	76	Resurrection Creek	2010	96	95	93
	77	Chickaloon River	2010	82	82	80
	77	Mystery Creek	2010	22	22	20
	78	Sucker Creek	1997	94	94	91
	79	Gruska Creek	2013	53	53	53
	79		2014	55	50	50
	80	Bishop Creek	2014	62	62	57
Kenai	81	Trail Creek	2006	134	108	108
	82	Grant Creek	2013	100	95	95
	83	South Fork Snow River	1998	73	73	71
	83		2002	50	24	24
	84	Summit Creek	2002	50	50	50
	85	Tern Lake	2002	96	95	95
	86	Quartz Creek	1998	75	74	73
	87	Kenai Lake outlet	2014	117	95	95
	88	Russian River	2013	101	95	93
	88		2014	100	50	47
	89	Skilak River	2003	100	95	94
	90	Skilak Lake outlet	1999	80	80	78
	90		2014	95	95	95
	91	Killey River	2000	68	70	67
	91	E . E 1 W . 5'	2002	49	25	25
	92	East Fork Moose River	2002	100	94	93
	93	Funny River	2006	150	92	92
	94	Slikok Creek	2008	67	66	65

Table 1.–Page 5 of 5.

	Pop.		Collection			
Reporting group	No.	Location	Year	$N_c$	$N_{\rm g}$	$N_b$
Kasilof	95	Glacier Creek	2009	68	65	65
	96	Indian Creek	2009	55	55	55
	97	Nikolai Creek	2009	92	92	88
	98	Tustumena Lake outlet	2009	100	95	90
Southeast CI	99	Ninilchik River	2013	108	95	94
	100	Deep Creek	2013	101	95	89
	101	Stariski Creek	2013	61	61	53
	101		2014	100	34	34
	102	Anchor River	2006	164	55	55
	102		2009	40	40	40
	103	Fox River	2013	117	117	109
	104	Port Graham River	2014	114	95	95
Sample Total				12,567	10,275	10,069

Alexander Creek is genetically more similar to Northwest CI Cook Inlet populations than Susitna River populations, so it was included in the Northwest CI reporting group.
 Campbell Creek is genetically similar to Ship Creek stock, so it was grouped with Knik Arm populations.

Table 2.—Baseline evaluation test correct allocation (%) summary results calculated using the R package *rubias* for 11 reporting groups: the number of test mixtures (*N*), range of compositions tested (Range), root mean square error (RMSE), the maximum percentage points from the true proportion where 90% of point estimates occurred (Within), mean bias (Bias), and the proportion of 90% credibility intervals containing the true proportion (PCI) for each reporting group.

Reporting group	N	Range	RMSE	Within	Bias	PCI
Southwest CI	100	1-100%	2.3	3.4	0.2	91.0
Northwest CI	100	1-100%	8.4	13.7	-3.3	67.0
Susitna	100	1-100%	5.4	9.0	-0.9	83.0
Deshka	49	1-49%	3.0	4.8	-0.1	90.0
Yentna	100	1-100%	6.3	10.0	-0.4	77.0
Knik	100	1-100%	4.7	7.6	-1.3	81.0
Jim	49	1-49%	1.6	2.6	0.0	98.0
Turnagain/Northeast CI	100	1-100%	4.9	7.7	0.8	75.0
Kenai	100	1-100%	1.1	2.0	0.0	100.0
Kasilof	39	1-39%	1.6	2.9	0.0	100.0
Southeast CI	69	1-69%	2.3	3.8	0.3	94.3

Table 3.—Offshore test fishery spatial and temporal mixtures for estimating stock compositions and stock-specific catch per unit effort for 2013–2016, including fishery, test fish stations represented, year and date sampled, and number of fish genotyped and used in the mix stock analysis.

			Dates	Number of	of fish
Fishery	Station	Year	sampled	Genotyped	Used
	Spatial mix	ktures			
Northern offshore test	Stations 1–4	2013	7/3–7/30	197	196
	Station 5	2013	7/5–7/30	160	153
	Stations 6 & 7	2013	7/2-7/30	138	136
	Stations 2–4 & 9–11	2014	7/6–7/30	212	205
	Stations 5 & 8	2014	7/2-7/30	175	173
Southern offshore test	Stations 4 & 5	2013	7/1-7/30	114	112
	Station 6	2013	7/4-7/29	224	221
	Station 6.5	2013	7/2-7/29	152	144
	Stations 7 & 8	2013	7/2-7/28	260	249
	Stations 4 & 5	2014	7/5-8/1	129	128
	Station 6	2014	7/4-8/1	145	144
	Station 6.5	2014	7/4-8/1	221	218
	Station 7 & 8	2014	7/3-8/1	261	259
	Stations 4–6.5	2015	7/1-7/30	233	232
	Stations 7 & 8	2015	7/8–7/30	169	168
	Stations 4–6	2016	7/1-7/29	180	174
	Station 6.5	2016	7/3-7/29	157	156
	Stations 7 & 8	2016	7/1-7/29	102	101
	Temporal m	ixtures			
Northern offshore test	All stations	2013	7/2-7/14	132	132
		2013	7/15–7/22	156	151
		2013	7/23-7/30	207	202
		2014	7/2-7/22	158	150
		2014	7/23-7/30	230	228
Southern offshore test	All stations	2013	7/1-7/13	108	104
		2013	7/15-7/22	268	262
		2013	7/23-7/30	374	361
		2014	7/3-7/22	284	279
		2014	7/23–7/26	206	204
		2014	7/27-8/1	266	266
		2015	7/1-7/22	256	254
		2015	7/23-7/30	146	145
		2016	7/1-7/22	244	241
		2016	7/23-7/29	195	190

Note: Temporal and spatial mixtures were formed from the same set of genotyped fish.

Table 4.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (*n*), and the percentage of the total index points for spatially grouped mixtures (Stations) of coho salmon captured in the northern offshore test fishery in 2013.

			Sto	ck comp	osition			Stock-s	pecific i	ndex p	oints	
				Vithin st				Within sta	tion			Within year
					90%	CI				909	6 CI	
Station	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
1,2, 3, and 4	196	Southwest CI	0.1	0.6	0.0	1.1		0	1	0	2	0.0
		Northwest CI	33.6	8.0	20.7	46.9		47	11	29	65	13.8
		Susitna	19.5	8.4	5.9	33.1		27	12	8	46	8.0
		Deshka	5.3	4.6	0.9	13.6		7	6	1	19	2.2
		Yentna	24.8	9.5	10.5	41.1		35	13	15	57	10.2
		Knik	9.7	4.0	4.1	17.4		13	6	6	24	4.0
		Jim	2.7	2.9	0.0	8.1		4	4	0	11	1.1
		Turnagain/Northeast CI	3.6	4.0	0.0	11.2		5	6	0	16	1.5
		Kenai	0.0	0.7	0.0	1.3		0	1	0	2	0.0
		Kasilof	0.7	0.8	0.2	2.3		1	1	0	3	0.3
		Southeast CI	0.0	0.4	0.0	0.5		0	1	0	1	0.0
							Index points	139				
5	153	Southwest CI	0.7	1.0	0.3	3.0		1	1	0	3	0.2
		Northwest CI	1.4	4.3	0.0	10.6		1	4	0	10	0.4
		Susitna	21.4	7.4	10.1	34.7		20	7	10	33	6.0
		Deshka	0.0	0.4	0.0	0.0		0	0	0	0	0.0
		Yentna	62.9	8.4	48.8	76.6		60	8	46	73	17.6
		Knik	13.5	5.6	5.2	23.2		13	5	5	22	3.8
		Jim	0.0	1.3	0.0	2.0		0	1	0	2	0.0
		Turnagain/Northeast CI	0.0	1.1	0.0	2.2		0	1	0	2	0.0
		Kenai	0.0	0.3	0.0	0.5		0	0	0	0	0.0
		Kasilof	0.0	0.3	0.0	0.2		0	0	0	0	0.0
		Southeast CI	0.1	0.5	0.0	1.0		0	0	0	1	0.0
							Index points	95				

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			Sto	ck comp	osition			Stock-speci	fic index	points		
			7	Within st	ation			Within static	on			Within year
					90%	CI				90%	CI	
Station	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
6 and 7	136	Southwest CI	0.1	0.5	0.0	0.9		0	0	0	1	0.0
		Northwest CI	33.8	7.1	22.9	46.2		35	8	24	49	10.5
		Susitna	26.0	8.0	13.5	39.5		27	8	14	42	8.1
		Deshka	0.0	0.6	0.0	0.0		0	1	0	0	0.0
		Yentna	36.0	8.6	21.0	49.7		38	9	22	52	11.2
		Knik	2.2	2.7	0.1	7.7		2	3	0	8	0.7
		Jim	1.2	2.2	0.0	5.9		1	2	0	6	0.4
		Turnagain/Northeast CI	0.7	3.5	0.0	7.3		1	4	0	8	0.2
		Kenai	0.0	0.6	0.0	1.1		0	1	0	1	0.0
		Kasilof	0.0	0.2	0.0	0.1		0	0	0	0	0.0
		Southeast CI	0.0	0.3	0.0	0.5		0	0	0	0	0.0
	·		·				Index points	105				
							Total index points	339				

Table 5.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (*n*), and the percentage of the total index points for spatially grouped mixtures (Stations) of coho salmon captured in the northern offshore test fishery in 2014.

			St	ock comp	osition		S	tock-spec	ific inc	lex poi	nts	
				Within st	tation		Wit	thin statio	n			Within year
					90%	CI				90%	6 CI	
Station	n	Reporting group	Estimate	SD	5%	95%	l	Estimate	SD	5%	95%	Percentage
2, 3, 4, 9,	205	Southwest CI	0.0	0.2	0.0	0.3		0	0	0	0	0.0
10 and 11		Northwest CI	7.1	3.8	1.6	14.2		11	6	3	22	3.7
		Susitna	38.7	6.9	27.8	50.3		60	11	43	78	20.2
		Deshka	7.9	4.0	0.0	14.5		12	6	0	22	4.2
		Yentna	12.0	5.1	4.2	20.9		19	8	7	32	6.3
		Knik	33.8	4.9	25.8	42.1		52	8	40	65	17.7
		Jim	0.0	1.4	0.0	3.0		0	2	0	5	0.0
		Turnagain/Northeast CI	0.0	1.8	0.0	3.8		0	3	0	6	0.0
		Kenai	0.5	0.5	0.0	1.5		1	1	0	2	0.2
		Kasilof	0.0	0.1	0.0	0.1		0	0	0	0	0.0
		Southeast CI	0.0	0.2	0.0	0.3		0	0	0	1	0.0
							Index points	155				
5 and 8	173	Southwest CI	0.1	0.4	0.0	0.8		0	1	0	1	0.1
		Northwest CI	1.0	5.9	0.0	12.9		1	8	0	18	0.5
		Susitna	21.1	7.5	8.9	34.0		30	11	13	48	10.1
		Deshka	0.8	2.5	0.0	6.8		1	4	0	10	0.4
		Yentna	35.9	7.3	24.0	48.2		51	10	34	68	17.1
		Knik	26.9	7.1	14.9	38.6		38	10	21	55	12.8
		Jim	12.3	4.0	6.3	19.1		17	6	9	27	5.9
		Turnagain/Northeast CI	1.5	4.6	0.0	12.0		2	6	0	17	0.7
		Kenai	0.0	0.5	0.0	1.0		0	1	0	1	0.0
		Kasilof	0.6	1.0	0.2	2.9		1	1	0	4	0.3
		Southeast CI	0.0	0.2	0.0	0.3		0	0	0	0	0.0
							Index points Total index points	142 297				

Table 6.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (n), and the percentage of the total index points for spatially grouped mixtures (Stations) of coho salmon captured in the southern offshore test fishery in 2013.

			Sto	ock comj	position			Stock	k-specifi	c index po	oints	
			V	Within s	tation			Within s	tation			Within year
					90%	CI				90%	i CI	-
Station	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
4 and	112	Southwest CI	2.9	2.1	0.1	6.6		2	2	0	6	0.5
5		Northwest CI	5.7	6.3	0.0	16.6		5	5	0	14	1.0
		Susitna	36.9	8.9	22.3	51.6		32	8	19	45	6.5
		Deshka	0.0	0.8	0.0	0.0		0	1	0	0	0.0
		Yentna	35.6	9.1	20.5	50.6		31	8	18	44	6.2
		Knik	12.6	6.0	2.8	23.2		11	5	2	20	2.2
		Jim	1.9	3.0	0.0	7.9		2	3	0	7	0.3
		Turnagain/Northeast CI Kenai		3.5	0.0	8.1		0	3	0	7	0.0
		Kenai	2.5	1.7	0.4	5.6		2	1	0	5	0.4
		Kasilof	1.0	1.9	0.3	5.3		1	2	0	5	0.2
		Southeast CI	1.0	1.8	0.0	4.8		1	2	0	4	0.2
							Index points	87				
6	221	Southwest CI	1.0	0.9	0.3	2.9		1	1	0	4	0.3
		Northwest CI	13.1	5.6	2.8	21.9		18	8	4	31	3.7
		Susitna	16.9	7.4	4.9	28.9		24	10	7	40	4.8
		Deshka	7.8	4.8	1.9	15.3		11	7	3	21	2.2
		Yentna	47.8	6.5	37.4	58.3		67	9	52	82	13.5
		Knik	3.6	3.5	0.1	10.5		5	5	0	15	1.0
		Jim	5.6	3.0	0.7	10.8		8	4	1	15	1.6
		Turnagain/Northeast CI	2.9	3.8	0.0	10.3		4	5	0	14	0.8
		Kenai	0.6	1.0	0.0	2.8		1	1	0	4	0.2
		Kasilof	0.0	0.4	0.0	0.4		0	1	0	1	0.0
		Southeast CI	0.8	1.1	0.1	3.2		1	2	0	4	0.2
							Index points	140				

Table 6.–Page 2 of 2.

			Sto	ck com	position			Stock-speci	ific index	points		
				Within s	tation			Within station	1			Within year
					90%	CI				90%	CI	
Station	n	Reporting group	Estimate	SD	0.1	1.0		Estimate	SD	5%	95%	Percentage
6.5	144	Southwest CI	1.4	1.1	0.1	3.5		1	1	0	3	0.3
		Northwest CI	8.9	6.3	1.4	20.0		8	6	1	18	1.6
		Susitna	43.0	9.1	27.6	57.6		39	8	25	52	7.9
		Deshka	0.0	1.1	0.0	0.5		0	1	0	0	0.0
		Yentna	35.1	9.4	20.5	51.1		32	9	19	46	6.4
		Knik	10.9	6.3	1.7	22.2		10	6	2	20	2.0
		Jim	0.4	2.3	0.0	5.4		0	2	0	5	0.1
		Turnagain/Northeast CI	0.0	1.2	0.0	2.0		0	1	0	2	0.0
		Kenai	0.4	0.8	0.0	1.9		0	1	0	2	0.
		Kasilof	0.0	0.2	0.0	0.1		0	0	0	0	0.0
		Southeast CI	0.0	0.7	0.0	1.3		0	1	0	1	0.0
							Index points	91				
7 and	249	Southwest CI	0.7	0.6	0.2	1.9		1	1	0	3	0.3
8		Northwest CI	16.0	5.8	6.7	26.0		28	10	12	46	5.3
		Susitna	8.4	6.3	0.0	19.3		15	11	0	34	3.0
		Deshka	7.5	4.1	2.1	14.2		13	7	4	25	2.7
		Yentna	51.4	7.6	38.9	63.9		91	14	69	114	18.5
		Knik	9.9	3.2	4.9	15.4		18	6	9	27	3.5
		Jim	6.1	2.8	1.7	10.7		11	5	3	19	2.2
		Turnagain/Northeast CI	0.0	1.0	0.0	2.2		0	2	0	4	0.0
		Kenai	0.0	0.5	0.0	1.0		0	1	0	2	0.0
		Kasilof	0.0	0.1	0.0	0.2		0	0	0	0	0.0
		Southeast CI	0.0	0.2	0.0	0.2		0	0	0	0	0.0
							Index points	178				
							Total index points	495				

Table 7.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (n), and the percentage of the total index points for spatially grouped mixtures (Stations) of coho salmon captured in the southern offshore test fishery in 2014.

		_	St	ock comp	osition			Stock-s	specific	index po	oints	
				Within sta	ation			Within sta	ation			Within year
		- -			90%	CI				90%	CI	
Station	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
4 and	128	Southwest CI	0.0	0.5	0.0	0.8		0	1	0	1	0.0
5		Northwest CI	9.8	5.5	1.3	19.5		10	6	1	20	1.6
		Susitna	5.2	7.9	0.0	19.7		5	8	0	21	0.8
		Deshka	0.2	1.8	0.0	4.2		0	2	0	4	0.0
		Yentna	46.8	8.2	33.2	60.3		49	9	35	63	7.4
		Knik	36.6	6.0	27.3	46.8		38	6	28	49	5.8
		Jim	0.6	1.2	0.1	3.2		1	1	0	3	0.1
		Turnagain/Northeast CI	0.3	3.3	0.0	7.9		0	3	0	8	0.1
		Kenai	0.4	0.9	0.0	2.1		0	1	0	2	0.1
		Kasilof	0.0	0.2	0.0	0.1		0	0	0	0	0.0
		Southeast CI	0.0	0.6	0.0	0.7		0	1	0	1	0.0
							Index points	104				
6	144	Southwest CI	2.9	1.4	0.9	5.7		3	2	1	7	0.5
		Northwest CI	6.9	7.0	0.7	20.6		8	8	1	24	1.2
		Susitna	35.5	7.9	22.1	48.2		42	9	26	57	6.4
		Deshka	5.0	5.1	1.8	16.1		6	6	2	19	0.9
		Yentna	12.3	6.2	1.8	23.0		14	7	2	27	2.2
		Knik	22.8	5.2	15.0	31.3		27	6	18	37	4.1
		Jim	0.6	1.0	0.2	3.0		1	1	0	3	0.1
		Turnagain/Northeast CI	13.9	5.6	3.3	23.1		16	7	4	27	2.5
		Kenai	0.0	0.4	0.0	0.7		0	0	0	1	0.0
		Kasilof	0.0	0.4	0.0	0.5		0	0	0	1	0.0
		Southeast CI	0.0	0.7	0.0	1.2		0	1	0	1	0.0
							Index points	117				

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			St	ock comp	osition			Stock-spe	cific in	dex poi	nts	
				Within st	ation		V	Vithin static	n			Within year
		•			90%	CI				90%	6 CI	
Station	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
6.5	218	Southwest CI	2.2	1.1	0.8	4.3	•	4	2	1	8	0.6
		Northwest CI	12.0	4.5	5.1	20.4		22	8	9	37	3.3
		Susitna	40.8	7.0	29.8	52.7		75	13	55	96	11.4
		Deshka	5.3	3.6	1.9	11.7		10	7	3	21	1.5
		Yentna	10.9	5.4	2.6	19.9		20	10	5	36	3.0
		Knik	25.5	4.5	18.2	33.1		47	8	33	61	7.1
		Jim	0.0	0.7	0.0	0.4		0	1	0	1	0.0
		Turnagain/Northeast CI	2.8	3.9	0.0	10.1		5	7	0	18	0.8
		Kenai	0.4	0.6	0.0	1.6		1	1	0	3	0.1
		Kasilof	0.0	0.1	0.0	0.1		0	0	0	0	0.0
		Southeast CI	0.0	0.4	0.0	0.7		0	1	0	1	0.0
							Index points	183				
7 and 8	259	Southwest CI	1.9	1.0	0.7	3.8		5	2	2	9	0.7
		Northwest CI	16.7	5.1	9.5	26.0		42	13	24	65	6.4
		Susitna	35.6	5.7	26.5	45.2		89	14	66	113	13.6
		Deshka	10.7	3.8	4.7	17.1		27	10	12	43	4.1
		Yentna	12.0	5.8	3.3	22.6		30	15	8	57	4.6
		Knik	16.0	3.6	10.4	22.3		40	9	26	56	6.1
		Jim	0.1	0.8	0.0	1.8		0	2	0	4	0.0
		Turnagain/Northeast CI	6.1	3.0	1.7	11.7		15	7	4	29	2.3
		Kenai	0.9	0.7	0.0	2.3		2	2	0	6	0.3
		Kasilof	0.0	0.1	0.0	0.1		0	0	0	0	0.0
		Southeast CI	0.0	0.3	0.0	0.4		0	1	0	1	0.0
							Index points	251				
							Total index points	655				

Table 8.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (n), and the percentage of the total index points for spatially grouped mixtures (Stations) of coho salmon captured in the southern offshore test fishery in 2015.

			St	ock com	position			Stock-specif	ic inde	x point	S	
				Within s	tation		V	Vithin station	1			Within year
					90% (	CI				90%	CI	
Station	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
4, 5, 6, and 6.5	232	Southwest CI	3.1	1.3	1.2	5.6		5	2	2	8	1.6
		Northwest CI	23.3	5.2	14.4	31.7		34	8	21	47	12.4
		Susitna	17.5	6.4	7.4	28.2		26	9	11	42	9.3
		Deshka	9.3	4.0	2.6	15.9		14	6	4	23	5.0
		Yentna	20.4	5.6	11.6	30.2		30	8	17	45	10.9
		Knik	24.8	4.2	17.9	32.1		37	6	26	47	13.2
		Jim	0.7	1.6	0.0	4.4		1	2	0	6	0.4
		Turnagain/Northeast CI	0.0	2.5	0.0	5.7		0	4	0	8	0.0
		Kenai	0.0	0.2	0.0	0.4		0	0	0	1	0.0
		Kasilof	0.0	0.1	0.0	0.1		0	0	0	0	0.0
		Southeast CI	0.9	1.0	0.0	3.1		1	1	0	5	0.5
							Index points	148				
7 and 8	168	Southwest CI	4.0	1.7	1.7	7.2		5	2	2	9	1.9
		Northwest CI	9.8	6.3	0.6	21.9		13	8	1	28	4.6
		Susitna	34.3	7.5	21.9	46.6		44	10	28	60	16.0
		Deshka	1.7	3.2	0.4	9.6		2	4	1	12	0.8
		Yentna	27.6	6.7	16.7	38.7		36	9	22	50	12.9
		Knik	21.3	4.9	13.7	29.8		28	6	18	39	10.0
		Jim	0.0	0.9	0.0	1.1		0	1	0	1	0.0
		Turnagain/Northeast CI	1.2	3.9	0.0	9.5		2	5	0	12	0.6
		Kenai	0.0	0.3	0.0	0.5		0	0	0	1	0.0
		Kasilof	0.0	0.2	0.0	0.2		0	0	0	0	0.0
		Southeast CI	0.1	0.8	0.0	1.7		0	1	0	2	0.0
							Index points	130				
							Total index points	277				

Table 9.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (n), and the percentage of the total index points for spatially grouped mixtures (Stations) of coho salmon captured in the southern offshore test fishery in 2016.

			S	tock com	position			Stock-spec	cific ind	ex poin	ts	
				Within s	tation			Within stati	on			Within year
					90% (	CI				90%	CI	
Station	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
4, 5, and 6	174	Southwest CI	1.7	1.0	0.5	3.7		2	1	1	5	0.7
		Northwest CI	17.2	6.3	5.8	27.3		23	8	8	37	7.0
		Susitna	27.8	7.3	15.8	40.5		37	10	21	55	11.3
		Deshka	1.3	2.4	0.4	7.2		2	3	1	10	0.5
		Yentna	22.9	6.9	12.5	34.9		31	9	17	47	9.3
		Knik	14.1	5.1	6.6	23.1		19	7	9	31	5.7
		Jim	6.9	4.4	1.0	14.5		9	6	1	20	2.8
		Turnagain/Northeast CI	5.6	4.6	0.1	13.6		8	6	0	18	2.3
		Kenai	1.3	1.1	0.0	3.5		2	2	0	5	0.5
		Kasilof	1.0	1.1	0.2	3.3		1	2	0	4	0.4
		Southeast CI	0.1	0.7	0.0	1.6		0	1	0	2	0.1
							Index points	135				
6.5	156	Southwest CI	0.8	1.0	0.0	2.8		1	1	0	3	0.3
		Northwest CI	12.9	7.0	2.1	25.2		15	8	2	29	4.6
		Susitna	27.3	8.5	13.3	41.6		32	10	16	49	9.7
		Deshka	0.3	1.2	0.0	0.6		0	1	0	1	0.1
		Yentna	22.7	8.8	8.1	37.5		27	10	9	44	8.0
		Knik	22.0	6.1	13.0	32.5		26	7	15	38	7.8
		Jim	9.8	3.8	4.2	16.5		12	4	5	19	3.5
		Turnagain/Northeast CI	0.0	3.0	0.0	6.4		0	3	0	7	0.0
		Kenai	1.0	1.0	0.1	3.0		1	1	0	3	0.3
		Kasilof	1.6	1.8	0.4	5.3		2	2	0	6	0.6
		Southeast CI	1.6	1.8	0.3	5.3		2	2	0	6	0.6
							Index points	117				

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			Sto	ock compo	sition			Stock-specifi	c index	points		
		<del>-</del>	,	Within stat	tion			Within station	ì			Within year
		<del>-</del>			90% (	CI				90%	CI	
Station	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
7 and 8	101	Southwest CI	3.1	2.0	0.3	6.8		2	2	0	5	0.7
		Northwest CI	24.5	10.1	8.8	42.1		19	8	7	33	5.8
		Susitna	5.1	9.8	0.0	22.4		4	8	0	18	1.2
		Deshka	0.1	1.5	0.0	2.2		0	1	0	2	0.0
		Yentna	43.0	9.3	27.5	58.4		34	7	22	46	10.3
		Knik	10.7	6.8	0.4	22.5		8	5	0	18	2.5
		Jim	0.0	1.1	0.0	1.8		0	1	0	1	0.0
		Turnagain/Northeast CI	12.7	9.1	2.2	29.7		10	7	2	23	3.0
		Kenai	0.0	0.5	0.0	0.9		0	0	0	1	0.0
		Kasilof	0.2	0.6	0.0	1.4		0	0	0	1	0.0
		Southeast CI	0.6	1.1	0.0	2.8		0	1	0	2	0.1
							Index points	79				
							Total index points	331				

Table 10.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (n), and the percentage of the total index points for temporally grouped mixtures (date ranges) of coho salmon captured in the northern offshore test fishery in 2013.

	Stock composition					Stock-specific index points						
		_	Within date range			Within date range					Within year	
Date	_				90% CI					90% CI		
range	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
7/2–14	132	Southwest CI	1.8	1.9	0.6	5.9	•	2	2	0	5	0.5
		Northwest CI	12.1	6.6	0.0	23.0		10	6	0	19	3.0
		Susitna	29.7	8.5	15.7	43.6		25	7	13	37	7.4
		Deshka	1.7	2.8	0.6	8.9		1	2	1	7	0.4
		Yentna	32.8	9.3	19.3	49.8		28	8	16	42	8.2
		Knik	18.4	7.1	8.5	31.3		16	6	7	26	4.6
		Jim	3.1	4.2	0.0	11.5		3	4	0	10	0.8
		Turnagain/Northeast CI	0.3	2.8	0.0	6.5		0	2	0	5	0.1
		Kenai	0.0	0.3	0.0	0.5		0	0	0	0	0.0
		Kasilof	0.0	0.2	0.0	0.2		0	0	0	0	0.0
		Southeast CI	0.0	0.6	0.0	0.8		0	1	0	1	0.0
							Index points	84				
7/15–22	151	Southwest CI	0.1	0.6	0.0	1.0		0	1	0	1	0.0
		Northwest CI	9.4	6.6	0.5	21.9		9	6	0	21	2.7
		Susitna	27.3	8.4	13.4	41.0		27	8	13	40	7.8
		Deshka	0.3	1.9	0.0	4.7		0	2	0	5	0.1
		Yentna	49.5	10.3	32.4	66.4		48	10	32	65	14.2
		Knik	8.2	3.4	3.4	13.8		8	3	3	13	2.4
		Jim	3.0	3.4	0.5	9.8		3	3	1	10	0.9
		Turnagain/Northeast CI	0.0	1.1	0.0	2.5		0	1	0	2	0.0
		Kenai	0.0	0.7	0.0	1.5		0	1	0	1	0.0
		Kasilof	2.1	1.8	0.4	5.7		2	2	0	6	0.6
		Southeast CI	0.0	0.3	0.0	0.4		0	0	0	0	0.0
							Index points	97	_			

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			Stock composition				Stock-specific index points					
		_	Within date range			Within date range					Within year	
Date		_		90% CI					90% CI			
range	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
7/23–30	202	Southwest CI	0.2	0.4	0.0	1.1		0	1	0	2	0.1
		Northwest CI	12.6	6.0	1.8	23.2		20	9	3	37	5.9
		Susitna	12.4	6.5	1.0	23.2		19	10	2	36	5.7
		Deshka	0.0	0.3	0.0	0.0		0	0	0	0	0.0
		Yentna	49.0	6.7	37.6	60.1		77	11	59	94	22.7
		Knik	22.2	5.1	13.9	30.5		35	8	22	48	10.3
		Jim	0.0	1.1	0.0	2.7		0	2	0	4	0.0
		Turnagain/Northeast CI	3.5	3.8	0.0	10.0		6	6	0	16	1.6
		Kenai	0.0	0.4	0.0	0.7		0	1	0	1	0.0
		Kasilof	0.0	0.1	0.0	0.1		0	0	0	0	0.0
		Southeast CI	0.0	0.4	0.0	0.7		0	1	0	1	0.0
							Index points	157				
							Total index points	339				

Table 11.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (n), and the percentage of the total index points for temporally grouped mixtures (date ranges) of coho salmon captured in the northern offshore test fishery in 2014.

			Stoo	ck comp	osition			Stock-speci	fic index	x points	S	
		- -	Wit	hin date	range		W	ithin date rang	ge			Within year
Date		- -			90% (	CI				90%	CI	
range	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
7/2–22	150	Southwest CI	0.2	0.7	0.0	1.5		0	1	0	2	0.1
		Northwest CI	15.3	8.3	1.5	28.4		17	9	2	31	5.6
		Susitna	21.6	8.4	7.7	36.4		24	9	8	40	8.0
		Deshka	3.5	5.6	0.0	15.1		4	6	0	17	1.3
		Yentna	24.1	8.7	9.7	38.3		26	10	11	42	8.9
		Knik	32.8	7.3	21.1	45.2		36	8	23	49	12.1
		Jim	2.4	3.9	0.0	10.8		3	4	0	12	0.9
		Turnagain/Northeast CI	0.0	1.5	0.0	2.8		0	2	0	3	0.0
		Kenai	0.0	0.2	0.0	0.4		0	0	0	0	0.0
		Kasilof	0.0	0.3	0.0	0.2		0	0	0	0	0.0
		Southeast CI	0.0	0.2	0.0	0.3		0	0	0	0	0.0
							Index points	110				
7/23-30	228	Southwest CI	0.0	0.2	0.0	0.3		0	0	0	1	0.0
		Northwest CI	11.5	6.0	1.9	22.3		22	11	3	42	7.3
		Susitna	40.9	7.0	29.0	52.2		77	13	54	98	25.8
		Deshka	1.7	2.7	0.3	7.9		3	5	1	15	1.1
		Yentna	16.9	5.4	9.1	26.7		32	10	17	50	10.7
		Knik	17.3	4.8	10.0	25.9		32	9	19	49	10.9
		Jim	8.4	3.4	2.6	13.9		16	6	5	26	5.3
		Turnagain/Northeast CI	2.4	4.2	0.0	11.0		5	8	0	21	1.5
		Kenai	0.8	0.7	0.0	2.1		1	1	0	4	0.5
		Kasilof	0.0	0.2	0.0	0.2		0	0	0	0	0.0
		Southeast CI	0.0	0.3	0.0	0.3		0	0	0	1	0.0
- <del></del>							Index points	187				
							Total index points	297				

Table 12.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (n), and the percentage of the total index points for temporally grouped mixtures (date ranges) of coho salmon captured in the southern offshore test fishery in 2013.

			Sto	ck comp	osition			Stock-speci	fic index	points		
		•	W	ithin date	range			Within date ran	ige			Within year
Date		•			90% (	CI				90%	CI	
range	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
7/1–13	104	Southwest CI	0.5	1.2	0.0	2.8		0	1	0	2	0.1
		Northwest CI	0.0	2.9	0.0	5.8		0	2	0	4	0.0
		Susitna	28.6	10.5	12.7	47.3		21	8	9	35	4.3
		Deshka	4.4	6.0	0.5	17.3		3	4	0	13	0.7
		Yentna	45.6	10.2	28.3	61.6		34	8	21	46	6.8
		Knik	15.0	6.1	4.7	26.0		11	4	3	19	2.2
		Jim	4.2	2.4	0.7	8.6		3	2	0	6	0.6
		Turnagain/Northeast CI	0.0	1.4	0.0	2.6		0	1	0	2	0.0
		Kenai	0.0	0.4	0.0	0.7		0	0	0	1	0.0
		Kasilof	0.0	0.4	0.0	0.2		0	0	0	0	0.0
		Southeast CI	1.8	1.8	0.0	5.3		1	1	0	4	0.3
							Index points	74				
7/15–22	262	Southwest CI	3.2	1.3	1.4	5.8		6	2	3	10	1.2
		Northwest CI	4.6	4.2	0.7	12.6		8	7	1	22	1.7
		Susitna	25.2	6.6	14.3	36.0		45	12	25	64	9.0
		Deshka	0.0	0.3	0.0	0.0		0	1	0	0	0.0
		Yentna	47.9	6.5	37.7	59.1		85	11	67	105	17.1
		Knik	5.6	3.4	1.0	11.9		10	6	2	21	2.0
		Jim	4.4	2.3	1.2	8.5		8	4	2	15	1.6
		Turnagain/Northeast CI	7.3	4.5	1.1	15.2		13	8	2	27	2.6
		Kenai	1.1	1.3	0.0	3.5		2	2	0	6	0.4
		Kasilof	0.0	0.1	0.0	0.1		0	0	0	0	0.0
		Southeast CI	0.7	1.1	0.0	3.1		1	2	0	5	0.2
	·					_	Index points	177		·		

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			Sto	ck comp	osition			Stock-specif	fic index	points		
			Wi	thin date	range		V	Vithin date ran	ge			Within year
Date		-			90% (	CI				90%	CI	
range	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
7/23-30	361	Southwest CI	0.1	0.3	0.0	0.7	_	0	1	0	2	0.1
		Northwest CI	14.8	5.2	6.7	23.7		36	13	16	58	7.3
		Susitna	28.1	6.1	17.9	37.9		69	15	44	93	13.8
		Deshka	8.9	3.2	3.7	14.1		22	8	9	34	4.4
		Yentna	32.6	6.5	22.6	44.0		80	16	55	107	16.1
		Knik	12.0	3.4	6.7	17.8		29	8	16	43	5.9
		Jim	0.9	1.8	0.0	4.8		2	4	0	12	0.4
		Turnagain/Northeast CI	0.0	1.2	0.0	2.6		0	3	0	6	0.0
		Kenai	1.3	0.7	0.4	2.6		3	2	1	6	0.6
		Kasilof	0.5	0.7	0.2	2.4		1	2	0	6	0.2
		Southeast CI	0.7	0.6	0.1	1.8		2	1	0	4	0.3
					•		Index points	244	•	•		
							Total index points	495				

Table 13.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (n), and the percentage of the total index points for temporally grouped mixtures (date ranges) of coho salmon captured in the southern offshore test fishery in 2014.

		Stoo	ck comp	osition			Stock-speci	ific index	points		
		Wit	thin date	range			Within date ra	inge			Within year
Date				90%	CI				90% (	CI	
range n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
7/3–22 279	Southwest CI	2.5	1.1	1.0	4.5	·	6	3	3	11	0.9
	Northwest CI	15.1	4.8	7.7	23.5		37	12	19	57	5.6
	Susitna	23.9	6.7	13.5	35.1		58	16	33	85	8.8
	Deshka	6.7	3.8	0.0	12.9		16	9	0	31	2.5
	Yentna	25.1	6.1	15.2	35.4		61	15	37	86	9.3
	Knik	23.2	4.1	16.9	30.3		56	10	41	73	8.6
	Jim	0.4	0.9	0.0	2.4		1	2	0	6	0.1
	Turnagain/Northeast CI	3.2	2.4	0.0	7.4		8	6	0	18	1.2
	Kenai	0.0	0.2	0.0	0.2		0	0	0	1	0.0
	Kasilof	0.0	0.1	0.0	0.1		0	0	0	0	0.0
	Southeast CI	0.0	0.3	0.0	0.7		0	1	0	2	0.0
						Index points	242				
7/23–26 204	Southwest CI	1.9	1.1	0.5	4.0		4	2	1	8	0.6
	Northwest CI	16.4	6.1	7.5	27.4		32	12	15	54	4.9
	Susitna	38.9	7.4	26.9	51.1		76	15	53	100	11.6
	Deshka	10.0	4.7	2.1	17.7		20	9	4	35	3.0
	Yentna	10.2	5.7	2.0	20.7		20	11	4	40	3.0
	Knik	19.5	4.3	12.8	26.9		38	8	25	52	5.8
	Jim	0.0	1.0	0.0	2.2		0	2	0	4	0.0
	Turnagain/Northeast CI	2.4	3.4	0.0	9.1		5	7	0	18	0.7
	Kenai	0.7	0.8	0.0	2.2		1	1	0	4	0.2
	Kasilof	0.0	0.1	0.0	0.1		0	0	0	0	0.0
	Southeast CI	0.0	0.3	0.0	0.3		0	1	0	1	0.0
						Index points	195				

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			Stoo	ck comp	osition			Stock-special	fic index	points		
		- -	Wit	thin date	range		V	Vithin date rang	ge			Within year
Date		- -			90%	CI				90%	CI	
range	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
7/27-8/1	266	Southwest CI	1.0	0.8	0.2	2.6		2	2	0	6	0.3
		Northwest CI	10.8	4.7	4.4	19.5		24	10	10	42	3.6
		Susitna	28.9	5.8	19.3	38.4		63	13	42	84	9.6
		Deshka	5.1	3.2	1.4	10.9		11	7	3	24	1.7
		Yentna	16.2	5.1	8.5	24.8		35	11	18	54	5.4
		Knik	19.3	3.6	13.6	25.5		42	8	30	55	6.4
		Jim	0.0	0.3	0.0	0.1		0	1	0	0	0.0
		Turnagain/Northeast CI	16.7	4.2	10.3	23.7		36	9	22	52	5.5
		Kenai	1.2	0.7	0.3	2.6		3	2	1	6	0.4
		Kasilof	0.0	0.1	0.0	0.1		0	0	0	0	0.0
		Southeast CI	0.7	1.1	0.1	3.0		2	2	0	7	0.2
	•			•			Index points	218	•	•	•	_
							Total index points	655				

Table 14.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (n), and the percentage of the total index points for temporally grouped mixtures (date ranges) of coho salmon captured in the southern offshore test fishery in 2015.

Date range	10		W	7'41. ' 1 . 4 .								
range	10			itnin date	range		W	ithin date r	ange			Within year
	10				90% C	I			_	90%	CI	
	n	Reporting group	Estimate	SD	5%	95%	J	Estimate	SD	5%	95%	Percentage
7/1–22	254	Southwest CI	1.8	1.3	0.5	4.4		3	2	1	8	1.1
		Northwest CI	16.4	5.2	7.4	24.7		28	9	13	42	10.2
		Susitna	28.5	5.3	20.1	37.3		49	9	35	64	17.7
		Deshka	9.2	3.8	3.4	15.8		16	6	6	27	5.7
		Yentna	20.3	5.0	12.9	29.0		35	9	22	50	12.6
		Knik	22.0	3.9	16.0	28.8		38	7	27	50	13.7
		Jim	0.0	0.6	0.0	0.5		0	1	0	1	0.0
		Turnagain/Northeast CI	1.2	3.4	0.0	8.0		2	6	0	14	0.7
		Kenai	0.0	0.2	0.0	0.3		0	0	0	1	0.0
		Kasilof	0.0	0.1	0.0	0.1		0	0	0	0	0.0
		Southeast CI	0.6	1.0	0.0	2.8		1	2	0	5	0.4
							Index points	172				
7/23–30	145	Southwest CI	5.2	1.9	2.5	8.6		5	2	3	9	2.0
		Northwest CI	10.9	6.1	1.8	21.9		11	6	2	23	4.1
		Susitna	40.9	8.6	27.1	55.3		43	9	28	58	15.5
		Deshka	0.0	1.1	0.0	0.0		0	1	0	0	0.0
		Yentna	19.5	7.2	8.2	31.3		21	8	9	33	7.4
		Knik	21.9	5.6	12.7	31.5		23	6	13	33	8.3
		Jim	0.0	0.9	0.0	0.5		0	1	0	0	0.0
		Turnagain/Northeast CI	0.0	4.7	0.0	9.8		0	5	0	10	0.0
		Kenai	0.1	0.5	0.0	1.1		0	1	0	1	0.0
		Kasilof	0.0	0.2	0.0	0.1		0	0	0	0	0.0
		Southeast CI	1.6	1.4	0.2	4.4		2	1	0	5	0.6
							Index points Total index points	105 277				

Table 15.—Stock composition (%) and stock-specific index point estimates, including mean, standard deviations (SD), 90% credibility intervals (CI), sample size (n), and the percentage of the total index points for temporally grouped mixtures (date ranges) of coho salmon captured in the southern offshore test fishery in 2016.

			Sto	ck comp	osition		Sto	ock-specific	e index	points	S	
			Wi	ithin date	range		Withi	n date rang	ge			Within year
Date					90% (	CI		_		90%	CI	
range	n	Reporting group	Estimate	SD	5%	95%		Estimate	SD	5%	95%	Percentage
7/1–22	241	Southwest CI	3.1	1.3	1.1	5.4		6	2	2	10	1.7
		Northwest CI	26.7	5.1	18.6	35.6		49	9	34	65	14.8
		Susitna	24.0	6.4	13.7	34.8		44	12	25	64	13.2
		Deshka	3.1	3.6	0.7	10.4		6	7	1	19	1.7
		Yentna	26.1	7.4	14.2	38.2		48	13	26	70	14.4
		Knik	15.7	3.4	10.5	21.8		29	6	19	40	8.7
		Jim	0.0	0.2	0.0	0.1		0	0	0	0	0.0
		Turnagain/Northeast CI	0.0	1.6	0.0	3.7		0	3	0	7	0.0
		Kenai	0.0	0.3	0.0	0.5		0	1	0	1	0.0
		Kasilof	0.4	0.7	0.0	1.8		1	1	0	3	0.2
		Southeast CI	0.9	1.0	0.1	3.0		2	2	0	6	0.5
							Index points	183				
7/23–29	190	Southwest CI	0.3	0.5	0.0	1.3		0	1	0	2	0.1
		Northwest CI	16.6	6.3	7.0	27.6		25	9	10	41	7.4
		Susitna	11.4	7.5	0.0	23.5		17	11	0	35	5.1
		Deshka	0.2	0.9	0.0	1.3		0	1	0	2	0.1
		Yentna	22.7	6.2	13.1	33.3		34	9	19	49	10.2
		Knik	10.5	4.8	4.0	20.0		16	7	6	30	4.7
		Jim	16.3	3.8	10.2	22.7		24	6	15	34	7.3
		Turnagain/Northeast CI	18.4	4.9	10.8	26.7		27	7	16	40	8.2
		Kenai	1.8	1.3	0.3	4.4		3	2	1	7	0.0
		Kasilof	1.8	1.7	0.6	5.4		3	3	1	8	0.0
		Southeast CI	0.0	0.4	0.0	0.5		0	1	0	1	0.0
							Index points	148				
							Total index points	331				

Table 16.—Stock-specific index points, standard deviation (SD), and 90% credibility intervals calculated using a stratified estimator (see text) for combined temporal strata in the northern (3 strata) and southern (3 strata) offshore test fisheries and based on genetic analysis of mixtures of coho salmon harvested in the Upper Cook Inlet in 2013.

				90% CI	
Area strata	Reporting group	Index points	5%	95%	SD
North offshore	e test fishery				
	Southwest CI	1	0	3	1
	Northwest CI	88	67	112	14
	Susitna	77	52	105	16
	Deshka	6	0	17	6
	Yentna	127	97	156	18
	Knik	23	11	38	8
	Jim	9	3	16	4
	Turnagain/Northeast CI	6	0	20	7
	Kenai	0	0	2	1
	Kasilof	1	0	4	1
	Southeast CI	0	0	2	1
	Total index points	339			
South offshore	e test fishery				
	Southwest CI	6	2	11	3
	Northwest CI	55	28	85	17
	Susitna	106	79	134	17
	Deshka	25	12	40	9
	Yentna	226	193	260	20
	Knik	57	39	77	11
	Jim	10	3	17	4
	Turnagain/Northeast CI	3	0	16	6
	Kenai	3	0	7	2
	Kasilof	2	0	7	2
	Southeast CI	3	0	7	2
	Total index points	495			

Note: Stock-specific index point numbers may not sum to the total harvest due to rounding error.

Table 17.—Stock-specific index points, standard deviation (SD), and 90% credibility intervals calculated using a stratified estimator (see text) for combined temporal strata in the northern (2 strata) and southern (3 strata) offshore test fisheries and based on genetic analysis of mixtures of coho salmon harvested in the Upper Cook Inlet in 2014.

				90% CI	
Area strata	Reporting group	Index points	5%	95%	SD
North offshore	e test fishery				
	Southwest CI	0	0	1	1
	Northwest CI	10	0	29	10
	Susitna	88	63	113	15
	Deshka	17	4	31	8
	Yentna	72	52	94	13
	Knik	104	82	126	13
	Jim	1	0	6	3
	Turnagain/Northeast CI	2	0	21	8
	Kenai	1	0	2	1
	Kasilof	2	0	6	2
	Southeast CI	0	0	1	1
	Total index points	297			
South offshore	e test fishery				
	Southwest CI	13	7	20	4
	Northwest CI	83	54	116	19
	Susitna	206	169	247	24
	Deshka	50	29	73	13
	Yentna	113	78	149	21
	Knik	143	119	168	15
	Jim	5	1	11	3
	Turnagain/Northeast CI	38	19	60	12
	Kenai	4	1	8	2
	Kasilof	0	0	2	1
	Southeast CI	0_	0	4	2
	Total index points	655			

Note: Stock-specific index point numbers may not sum to the total harvest due to rounding error.

Table 18.—Stock-specific index points, standard deviation (SD), and 90% credibility intervals calculated using a stratified estimator (see text) for combined temporal strata in the southern offshore test fishery (2 strata) and based on genetic analysis of mixtures of coho salmon harvested in the Upper Cook Inlet in 2015.

		909	% CI	
Reporting group	Index points	5%	95%	SD
Southwest CI	10	6	15	3
Northwest CI	47	30	66	11
Susitna	72	48	94	14
Deshka	18	5	34	9
Yentna	64	44	84	13
Knik	54	40	69	9
Jim	9	2	16	4
Turnagain/Northeast CI	1	0	13	6
Kenai	0	0	1	0
Kasilof	0	0	1	0
Southeast CI	2	0	6	2
Total index points	277			

Note: Stock-specific index point numbers may not sum to the total harvest due to rounding error.

Table 19.—Stock-specific index points, standard deviation (SD), and 90% credibility intervals calculated using a stratified estimator (see text) for combined temporal strata in the southern offshore test fishery (2 strata) and based on genetic analysis of mixtures of coho salmon harvested in the Upper Cook Inlet in 2016.

		90%	% CI	
Reporting group	Index points	5%	95%	SD
Southwest CI	5	2	9	2
Northwest CI	55	32	78	14
Susitna	75	50	103	16
Deshka	7	0	20	7
Yentna	84	59	112	16
Knik	71	52	91	12
Jim	3	0	8	3
Turnagain/Northeast CI	21	4	39	10
Kenai	3	0	6	2
Kasilof	4	1	10	3
Southeast CI	3	0	8	3
Total index points	331			

Note: Stock-specific index point numbers may not sum to the total harvest due to rounding error.

Table 20.—Commercial fishery strata (mixtures) for estimating stock compositions and stock-specific harvests for 2013–2016, including fishery, fishing area represented, sampling dates, mixture dates, and number of fish genotyped, selected for analysis, and used in the mixed stock analysis.

					Numl	er of fish	
Year	Fishery	Area	Dates sampled	Mixture dates	Genotyped	Selected	Used
2013	Central District drift	Districtwide	7/4–7/15	6/27-7/15	400	400	400
			7/18, 7/22	7/17-7/23	400	400	400
			7/25, 7/29	7/24-7/30	400	400	392
			8/1, 8/5	8/1-8/5	400	400	399
			8/8-8/22	8/8-8/26	400	400	400
	Northern District set	Eastern Subdistrict	7/4-8/26	6/27-9/2	505 <sup>a</sup>	380	374
		General Subdistrict (north)	7/15-8/19	7/8-8/26	429 <sup>a</sup>	375	369
		General Subdistrict (south)	7/8-8/29	7/1-8/29	666ª	400	393
2014	Central District drift	Districtwide	7/3-7/14	6/26-7/15	400	400	398
			7/17, 7/21	7/17–7/23	400	400	396
			7/24, 7/28	7/24–7/28	400	400	392
			7/31-8/7	7/31-8/7	400	400	391
			8/11-8/18	8/11-8/25	375	375	368
	Northern District set	Eastern Subdistrict	7/14-8/21	7/7-8/28	434 <sup>a</sup>	400	392
		General Subdistrict (north)	7/14-8/18	7/7-8/25	558a	400	393
		General Subdistrict (south)	7/7-8/25	6/30-9/1	545a	400	390
2015	Central District drift	Districtwide	7/6–7/13	6/29-7/13	500	500	494
			7/20, 7/27	7/20-8/1	500	500	488
			8/3-8/20	8/3-8/24	547	547	536
	Central District drift	Expanded Corridor	7/16–7/30	7/11-8/5	668	668	646
	Northern District set	Eastern Subdistrict	7/13-8/24	7/6-8/27	564ª	400	392
		General Subdistrict (north)	7/9-8/17	7/6-8/24	446 <sup>a</sup>	350	339
		General Subdistrict (south)	7/6-8/20	7/2-8/27	841 <sup>a</sup>	400	393
	Central District set	Upper Subdistrict	7/20-8/10	7/14-8/12	400	400	391
2016	Central District drift	Districtwide	7/7–7/18	6/30-7/18	380	380	373
			7/25-8/18	7/25-8/25	380	380	377
	Central District drift	Expanded Corridor & Anchor Point Section	7/9–7/28	7/9-8/3	500	500	489
	Northern District set	Eastern Subdistrict	7/18-8/29	7/11–9/5	$428^{a}$	380	371
		General Subdistrict (north)	7/11-8/15	7/4-8/15	381a	379	373
		General Subdistrict (south)	7/11-8/25	7/4-8/25	$550^{\mathrm{a}}$	380	372
	Central District set	Upper Subdistrict	7/21-8/9	7/14-8/9	305	305	296

Table 20.—Page 2 of 2.

					Nu	mber of fish	
Year	Fishery	Area	Dates sampled	Mixture dates	Genotyped	Selected	Used
2015	Central District drift	Districtwide	7/6–7/13	6/29-7/13	500	500	494
			7/20, 7/27	7/20-8/1	500	500	488
			8/3-8/20	8/3-8/24	547	547	536
	Central District drift	Expanded Corridor	7/16–7/30	7/11-8/5	668	668	646
	Northern District set	Eastern Subdistrict	7/13-8/24	7/6-8/27	564 <sup>a</sup>	400	392
		General Subdistrict (north)	7/9-8/17	7/6-8/24	446 <sup>a</sup>	350	339
		General Subdistrict (south)	7/6-8/20	7/2-8/27	841ª	400	393
	Central District set	Upper Subdistrict	7/20-8/10	7/14-8/12	400	400	391
2016	Central District drift	District-wide	7/7–7/18	6/30-7/18	380	380	373
			7/25-8/18	7/25-8/25	380	380	377
	Central District drift	Expanded Corridor & Anchor Point Section	7/9-7/28	7/9-8/3	500	500	489
	Northern District set	Eastern Subdistrict	7/18-8/29	7/11–9/5	428a	380	371
		General Subdistrict (north)	7/11-8/15	7/4-8/15	381 <sup>a</sup>	379	373
		General Subdistrict (south)	7/11-8/25	7/4-8/25	550 <sup>a</sup>	380	372
	Central District set	Upper Subdistrict	7/21-8/9	7/14-8/9	305	305	296

<sup>&</sup>lt;sup>a</sup> Includes fish genotyped for Northern District temporal mixtures (Table 21).

Table 21.–Northern District Set gillnet temporal mixtures for 2013–2016 for estimating stock compositions, including mixture dates, and number of fish selected and used in the analysis.

		Number	of fish
Year	Mixture dates	Selected	Used
2013	7/15–7/22	399	398
	7/25–8/1	401	395
	8/5-8/12	400	385
	8/15-8/26	376	373
2014	7/14–7/21	340	337
	7/24–7/31	400	394
	8/4-8/11	399	384
	8/14-8/25	341	337
2015	7/9–7/20	350	341
	7/23–7/30	401	393
	8/3-8/10	500	491
	8/13-8/20	501	484
2016	7/11–7/25	380	376
	7/28–8/4	380	365
	8/8-8/22	379	371

Table 22.—Stock-specific harvest, standard deviation (SD), coefficient of variation (CV), and 90% credibility intervals calculated using a stratified estimator for combined temporal strata in all fishing area strata and based on genetic analysis of mixtures of coho salmon harvested in the Upper Cook Inlet, 2013–2016.

			90%	CI		
Year	Reporting group	Harvest	5%	95%	SD	CV
2013	Southwest CI	1,651	1,089	2,349	393	24%
	Northwest CI	42,764	36,614	49,336	3,879	9%
	Susitna	42,919	35,940	49,962	4,237	10%
	Deshka	11,543	8,001	15,632	2,352	20%
	Yentna	65,607	57,889	73,603	4,842	7%
	Knik	39,366	33,776	45,264	3,456	9%
	Jim	2,919	1,555	4,475	902	31%
	Turnagain/Northeast CI	14,172	9,808	18,917	2,725	19%
	Kenai	2,103	1,275	3,068	551	26%
	Kasilof	237	0	725	257	108%
	Southeast CI	782	134	1,612	453	58%
	Harvest represented	224,064				
	Harvest unrepresented	36,879				
	Total harvest	260,943				
2014	Southwest CI	334	·	144	43%	
	Northwest CI	17,812	15,452	20,400	1,525	9%
	Susitna	21,440	17,784	25,283	2,299	11%
	Deshka	3,163	1,373	4,947	1,108	35%
	Yentna	19,629	16,240	22,897	2,025	10%
	Knik	23,654	21,224	26,184	1,500	6%
	Jim	1,219	523	1,999	437	36%
	Turnagain/Northeast CI	16,106	13,508	18,863	1,681	10%
	Kenai	1,778	1,228	2,410	359	20%
	Kasilof	6	0	142	73	1259%
	Southeast CI	49	0	241	94	191%
	Harvest represented	105,191				
	Harvest unrepresented	32,153				
	Total harvest	137,344				

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			90%	CI		
Year	Reporting group	Harvest	5%	95%	SD	CV
2015	Southwest CI	683	163	1,445	396	58%
	Northwest CI	40,964	36,526	45,622	2,792	7%
	Susitna	26,210	20,644	31,649	3,332	13%
	Deshka       4,049       1         Yentna       38,224       33         Knik       42,292       38         Jim       3,318       2	1,742	6,490	1,435	35%	
	Yentna	38,224	33,074	43,544	3,167	8%
	Knik	42,292	38,458	46,109	2,328	6%
	Jim	3,318	2,379	4,369	605	18%
	Turnagain/Northeast CI	19,929	16,818	23,118	1,908	10%
	Kenai	7,782	6,611	9,004	725	9%
	Kasilof	595	204	1,124	281	47%
	Southeast CI	584	24	1,272	383	66%
	Harvest represented	184,631				
	Harvest unrepresented	31,288				
	Total harvest	215,919				
2016	Southwest CI	1,488	875	2,261	432	29%
	Northwest CI	21,246	16,632	26,134	2,951	14%
	Susitna	22,156	17,353	27,070	2,959	13%
	Deshka	7,205	5,004	9,559	1,364	19%
	Yentna	22,022	18,151	26,024	2,420	11%
	Knik	19,023	15,571	22,990	2,317	12%
	Jim	1,446	709	2,348	502	35%
	Turnagain/Northeast CI	19,727	16,175	23,507	2,255	11%
	Kenai	7,947	6,934	9,059	640	8%
	Kasilof	592	69	1,519	478	81%
	Southeast CI	1,278	541	2,362	565	44%
	Harvest represented	124,131				
	Harvest unrepresented	23,337				
	Total harvest	147,468				

Table 23.—Stock-specific harvest, standard deviation (SD), and 90% credibility intervals calculated using a stratified estimator for combined strata in the Central District drift gillnet (5 temporal strata) and Northern District set gillnet (3 spatial strata) fisheries and based on genetic analysis of mixtures of coho salmon harvested in the Upper Cook Inlet in 2013.

			90% C		
Area strata	Reporting group	Harvest	5%	95%	SD
Central Distric	ct drift gillnet				
	Southwest CI	1,621	1,066	2,295	389
	Northwest CI	35,981	29,874	42,448	3,731
	Susitna	37,207	30,437	44,197	4,108
	Deshka	10,094	6,640	14,125	2,267
	Yentna	53,940	46,388	61,868	4,745
	Knik	31,681	26,175	37,435	3,380
	Jim	2,444	1,142	3,985	876
	Turnagain/Northeast CI	6,240	2,045	10,771	2,619
	Kenai	1,590	823	2,472	513
	Kasilof	237	0	723	255
	Southeast CI	782	144	1,607	453
	Harvest represented	181,818			
	Harvest unrepresented	2,953			
	Total harvest	184,771			
Northern Dist	rict, Eastern and General subdistricts s	et gillnet			
	Southwest CI	30	0	152	59
	Northwest CI	6,783	5,042	8,694	1,100
	Susitna	5,712	3,875	7,634	1,141
	Deshka	1,449	471	2,539	626
	Yentna	11,667	9,791	13,658	1,149
	Knik	7,685	6,527	8,934	726
	Jim	475	175	855	207
	Turnagain/Northeast CI	7,932	6,670	9,225	777
	Kenai	513	224	829	187
	Kasilof	0	0	64	34
	Southeast CI	0	0	77	39
	Harvest represented	42,246			
	Harvest unrepresented	147			
	Total harvest	42,393			

Table 24.—Stock-specific harvest, standard deviation (SD), and 90% credibility intervals calculated using a stratified estimator for combined strata in the Central District drift gillnet (5 temporal strata) and Northern District set gillnet (3 spatial strata) fisheries and based on genetic analysis of mixtures of coho salmon harvested in the Upper Cook Inlet in 2014.

			90% (	CI	
Area strata	Reporting group	Harvest	5%	95%	SD
Central Distric	et drift gillnet				
	Southwest CI	334	144	601	141
	Northwest CI	11,717	9,742	14,022	1,316
	Susitna	16,593	13,201	20,262	2,168
	Deshka	3,163	1,467	4,920	1,053
	Yentna	14,752	11,651	17,781	1,884
	Knik	14,654	12,425	17,061	1,397
	Jim	696	54	1,387	400
	Turnagain/Northeast CI	7,937	5,544	10,596	1,541
	Kenai	1,589	1,078	2,178	335
	Kasilof	3	0	118	63
	Southeast CI	3	0	141	67
	Harvest represented	71,441			
	Harvest unrepresented	5,491			
	Total harvest	76,932			
Northern Distr	rict, Eastern and General subdistricts set gillnet				
	Southwest CI	0	0	60	28
	Northwest CI	6,095	4,799	7,456	820
	Susitna	4,847	3,462	6,290	863
	Deshka	0	0	807	386
	Yentna	4,877	3,687	6,085	747
	Knik	9,000	7,980	10,041	629
	Jim	523	262	827	175
	Turnagain/Northeast CI	8,169	7,135	9,380	704
	Kenai	189	36	393	115
	Kasilof	3	0	78	36
	Southeast CI	46	1	191	66
	Harvest represented	33,750			
	Harvest unrepresented	1,375			
	Total harvest	35,125			

Table 25.—Stock-specific harvest, standard deviation (SD), and 90% credibility intervals calculated using a stratified estimator for combined strata in the Central District drift gillnet excluding corridor-only periods (5 temporal strata), drift gillnet corridor-only periods (1 temporal stratum) and Upper Subdistrict set gillnet (1 temporal stratum) and Northern District set gillnet (3 spatial strata) fisheries and based on genetic analysis of mixtures of coho salmon harvested in the Upper Cook Inlet in 2015.

			90% (	CI	
Area strata	Reporting group	Harvest	5%	95%	SI
Central Dist	rict drift gillnet (excluding corridor-only periods)				
	Southwest CI	649	151	1,414	380
	Northwest CI	26,843	23,316	30,473	2,21
	Susitna	16,044	11,650	20,426	2,67
	Deshka	2,448	886	4,153	1,00
	Yentna	20,478	16,481	24,625	2,49
	Knik	18,522	15,768	21,311	1,70
	Jim	1,844	1,110	2,709	48
	Turnagain/Northeast CI	6,675	4,217	9,231	1,53
	Kenai	2,590	1,760	3,496	52
	Kasilof	28	0	345	14
	Southeast CI	572	52	1,188	36
	Harvest represented	96,694			
	Harvest unrepresented	6,007			
	Total harvest	102,701			
Central Dist	rict drift gillnet (corridor-only periods)				
	Southwest CI	0	0	74	5
	Northwest CI	4,498	2,864	6,338	1,06
	Susitna	3,972	2,013	6,154	1,25
	Deshka	507	0	1,660	69
	Yentna	7,545	5,279	9,808	1,36
	Knik	7,334	5,762	9,106	1,02
	Jim	706	303	1,235	28
	Turnagain/Northeast CI	2,531	1,358	3,967	79
	Kenai	313	0	754	24
	Kasilof	0	0	69	4
	Southeast CI	0	0	58	3
	Harvest represented	27,405			
	Harvest unrepresented	614			
	Total harvest	28,019			

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			90% (		
Area strata	Reporting group	Harvest	5%	95%	SD
Central Dist	rict, Upper Subdistrict set gillnet				
	Southwest CI	29	0	201	76
	Northwest CI	2,233	1,167	3,337	649
	Susitna	1,923	576	3,267	808
	Deshka	20	0	495	20
	Yentna	1,659	577	2,859	690
	Knik	3,998	2,879	5,246	728
	Jim	395	167	671	150
	Turnagain/Northeast CI	2,205	1,449	3,007	480
	Kenai	4,576	3,833	5,331	450
	Kasilof	467	161	843	209
	Southeast CI	12	0	212	9
	Harvest represented	17,517			
	Harvest unrepresented	431			
	Total harvest	17,948			
Northern Dia	strict, Eastern and General subdistricts set gilln	net			
	Southwest CI	6	0	74	4
	Northwest CI	7,390	5,434	9,456	1,20
	Susitna	4,271	2,492	6,163	1,12
	Deshka	1,074	0	2,230	68
	Yentna	8,542	6,875	10,234	1,02
	Knik	12,438	10,712	14,215	1,08
	Jim	372	117	705	18
	Turnagain/Northeast CI	8,519	7,371	9,873	76
	Kenai	303	120	550	13
	Kasilof	100	0	288	9
	Southeast CI	0	0	131	6
	Harvest represented	43,015			
	Harvest unrepresented	3,488			
	Total harvest	46,503			

Table 26.—Stock-specific harvest, standard deviation (SD), and 90% credibility intervals calculated using a stratified estimator (see text) for combined strata in the Central District drift gillnet excluding corridor-only periods (2 temporal strata), drift gillnet corridor-only periods (1 temporal stratum) and Upper Subdistrict set gillnet (1 temporal stratum) and Northern District set gillnet (3 spatial strata) fisheries and based on genetic analysis of mixtures of coho salmon harvested in the Upper Cook Inlet in 2016.

			90% (		
Area strata	Reporting group	Harvest	5%	95%	SD
Central Dist	rict drift gillnet (excluding corridor-only per	riods)			
	Southwest CI	667	194	1,346	367
	Northwest CI	17,072	12,729	21,569	2,701
	Susitna	14,762	10,739	19,072	2,545
	Deshka	4,291	2,385	6,294	1,191
	Yentna	11,136	7,803	14,669	2,081
	Knik	8,101	4,888	11,883	2,185
	Jim	1,230	531	2,050	471
	Turnagain/Northeast CI	6,053	2,742	9,471	2,036
	Kenai	1,721	1,016	2,578	466
	Kasilof	549	82	1,470	473
	Southeast CI	501	52	1,508	480
	Harvest represented	66,083			
	Harvest unrepresented	5,984			
	Total harvest	72,067			
Central Dist	rict drift gillnet (corridor-only periods)				
	Southwest CI	696	393	1,041	199
	Northwest CI	0	0	337	159
	Susitna	2,503	1,408	3,601	670
	Deshka	1,196	567	1,864	387
	Yentna	5,101	4,051	6,185	637
	Knik	4,918	3,903	5,991	634
	Jim	28	0	285	117
	Turnagain/Northeast CI	1,757	852	2,747	578
	Kenai	533	299	837	166
	Kasilof	0	0	80	42
	Southeast CI	418	95	824	223
	Harvest represented	17,151			
	Harvest unrepresented	1,024			
	Total harvest	18,175			

Table 26.—Page 2 of 2.

			90% C		
Area strata	Reporting group	Harvest	5%	95%	SD
Central Distr	rict, Upper Subdistrict set gillnet				
	Southwest CI	120	29	314	101
	Northwest CI	0	0	350	157
	Susitna	553	0	1,230	413
	Deshka	140	0	602	230
	Yentna	771	100	1,444	39:
	Knik	417	0	942	308
	Jim	0	0	34	22
	Turnagain/Northeast CI	3,469	2,542	4,467	583
	Kenai	5,395	4,746	6,039	393
	Kasilof	21	0	143	5′
	Southeast CI	343	74	654	174
	Harvest represented	11,228			
	Harvest unrepresented	378			
	Total harvest	11,606			
Northern Dis	strict, Eastern and General subdistricts ser	t gillnet			
	Southwest CI	4	0	82	3
	Northwest CI	4,175	2,985	5,622	78
	Susitna	4,338	2,755	5,801	93
	Deshka	1,578	859	2,361	45
	Yentna	5,014	3,701	6,281	78
	Knik	5,587	4,816	6,405	49
	Jim	188	58	367	10
	Turnagain/Northeast CI	8,448	7,619	9,280	51
	Kenai	298	140	507	11
	Kasilof	22	0	111	4
	Southeast CI	17	0	159	7
	Harvest represented	29,669			
	Harvest unrepresented	780			
	Total harvest	30,449			

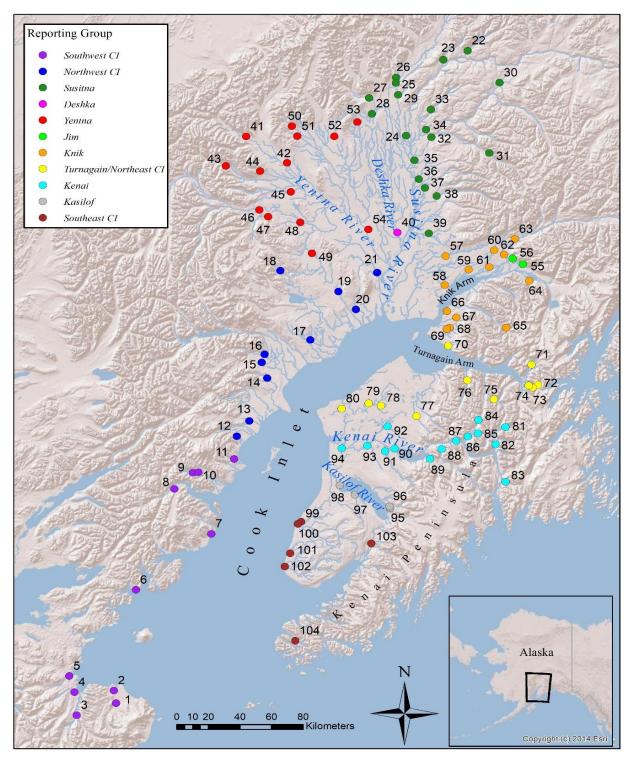


Figure 1.—Map of Cook Inlet showing locations of baseline populations and reporting assignment for genetic mixed stock analysis of coho salmon harvest samples.

*Note*: Colors denote reporting groups as in Figures 2, 3, 7–15, and 20–31. Unique population numbers correspond to population numbers on Table 1.

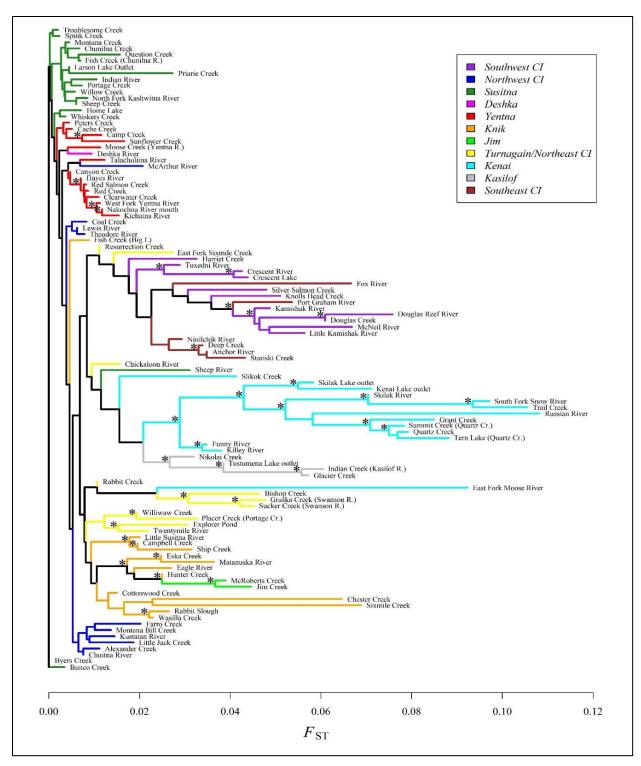


Figure 2.—Consensus neighbor-joining (NJ) tree based on pairwise  $F_{ST}$  between coho salmon populations sampled from spawning areas in drainages of Cook Inlet, Alaska (see Table 1 for collection details).

*Note*: Colors denote reporting groups as in Figures 1, 3, 7-15, 20-31. Bootstrap consensus nodes occurring in >50% of trees are marked with an asterisk.

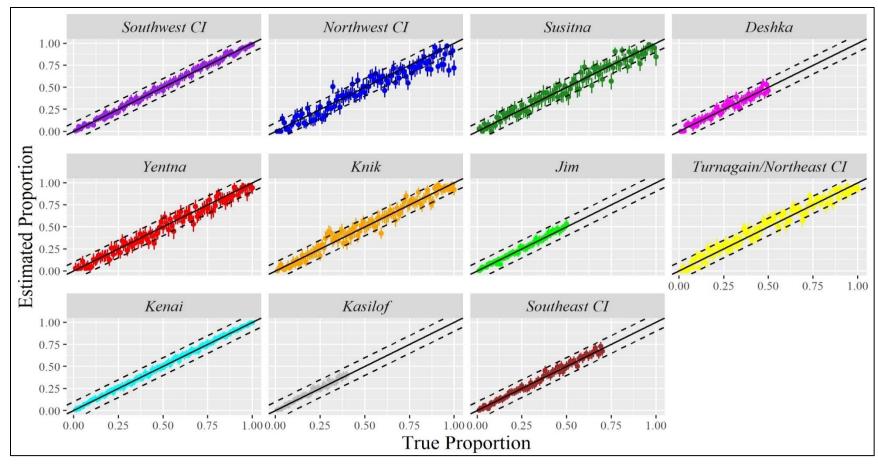


Figure 3.—Results of baseline evaluation test mixtures for 11 reporting groups.

Note: Baseline evaluation tests were conducted using the R package *rubias* Moran and Anderson 2019. Each test mixture contained 380 fish with true proportions ranging from 1% to 100% for the 11 reporting groups (Table 1). The points represent the mean correct allocation (y-axis) for each scenario (x-axis) with 90% credibility intervals for each point. The solid diagonal line indicates where the estimated proportion equals the true proportion. A reporting group is considered sufficiently identifiable for mixed stock analysis if 90% of point estimates are within +/- 0.10 of the true proportion (dotted lines). See Table 2 for proof test summary statistics. Proof tests were not performed for scenarios where Deshka and Jim comprised over 49%, Kasilof comprised over 39%, and Southeast CI comprised over 69% of the mixture sample to avoid removing more than 50% of baseline samples from those groups (see proof test methods in text).

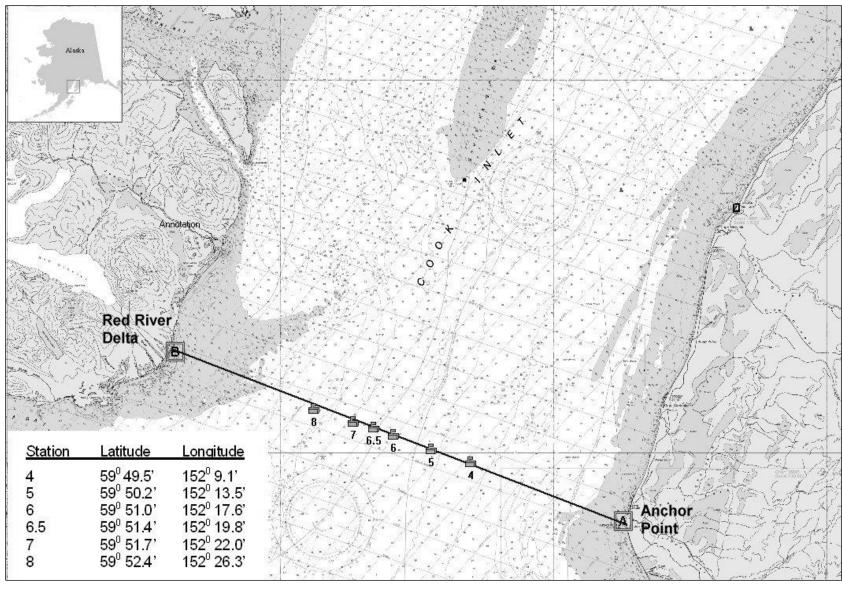


Figure 4.—Map of the southern offshore test fishery transect and fishing stations in Cook Inlet, Alaska, 2013–2016.

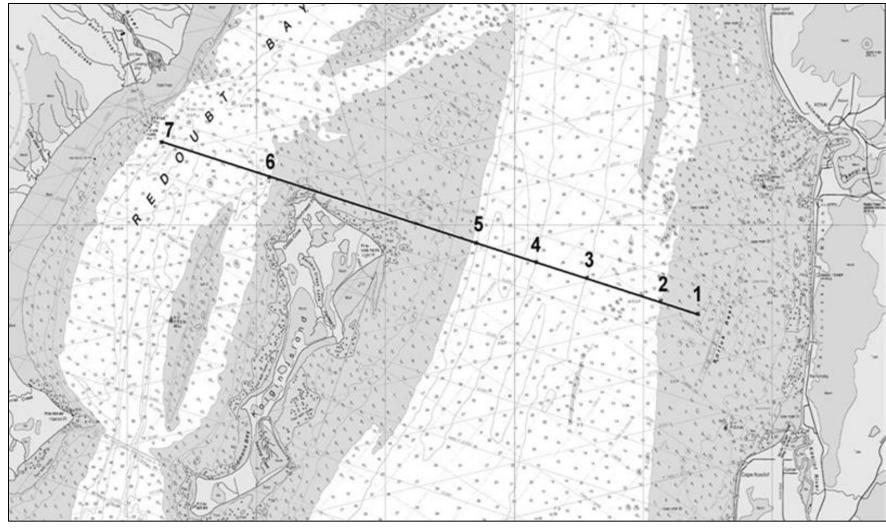


Figure 5.—Map of the northern offshore test fishery transect and fishing stations in Upper Cook Inlet, Alaska, 2013.

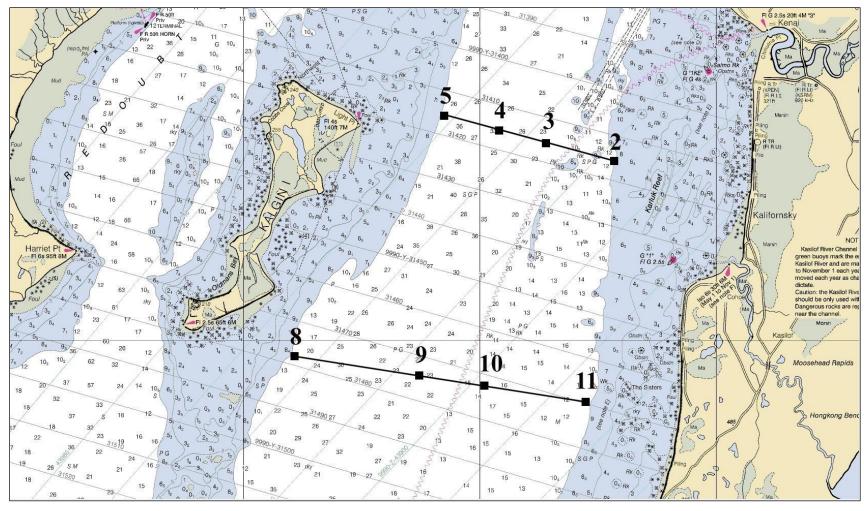


Figure 6.-Map of the northern offshore test fish transects and fishing stations in Upper Cook Inlet, Alaska, 2014.

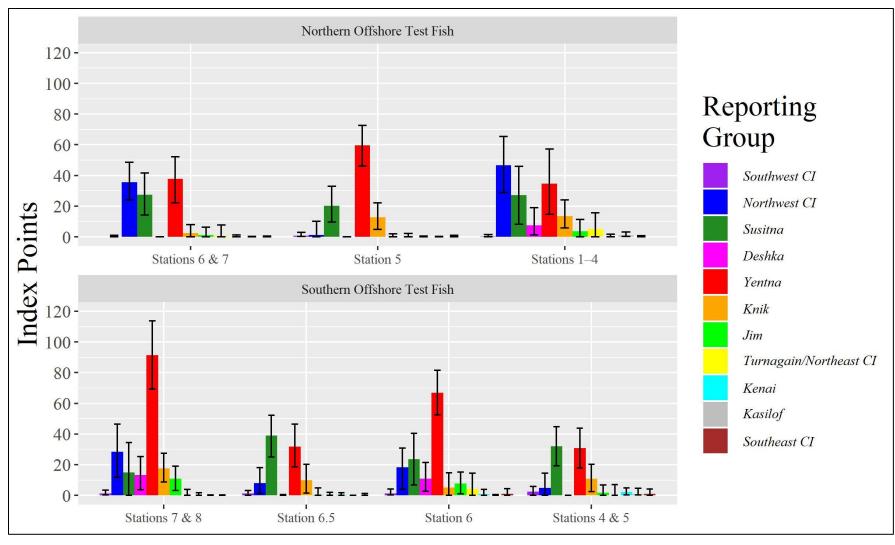


Figure 7.—Offshore test fishery by test fish station in 2013, index point estimates for coho salmon by stock and 90% credibility intervals. Estimates are ordered from west (left) to east (right) Cook Inlet.

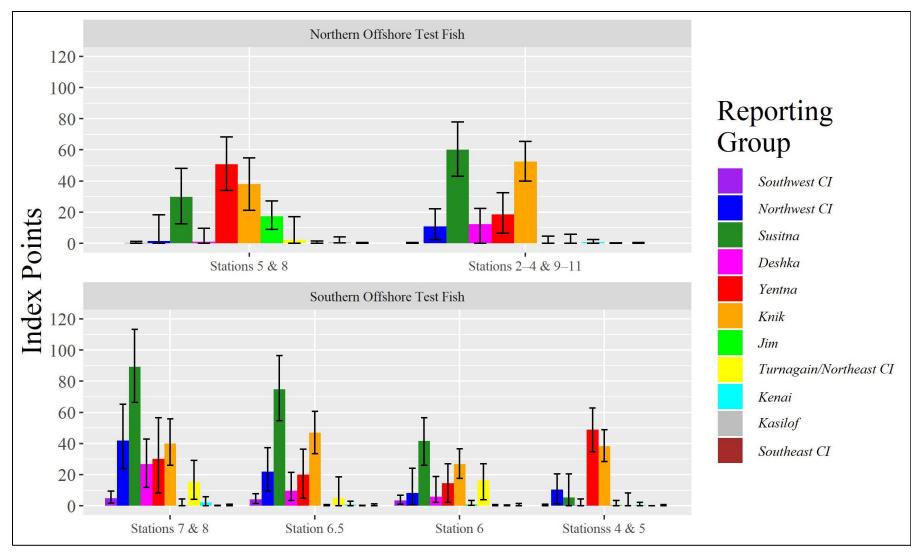


Figure 8.—Offshore test fishery by test fish station in 2014, index point estimates for coho salmon by stock and 90% credibility intervals. Estimates are ordered from west (left) to east (right) Cook Inlet.

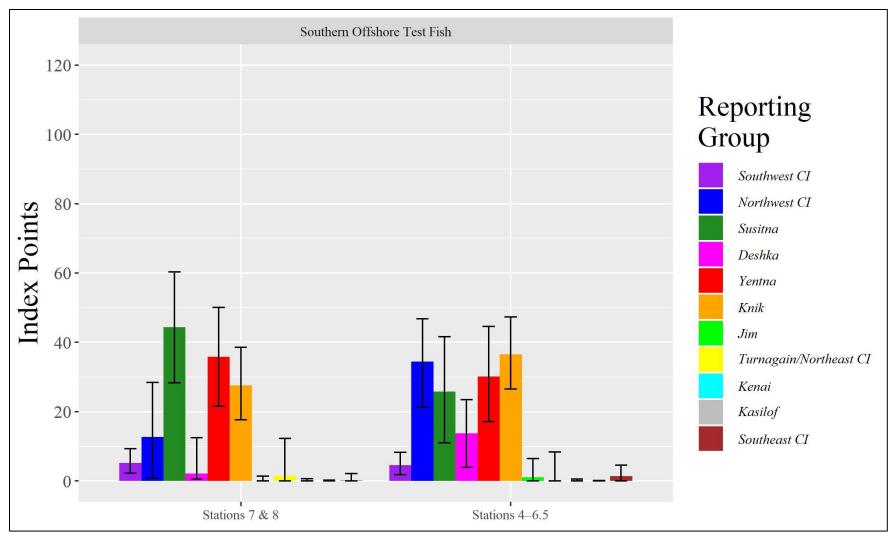


Figure 9.—Offshore test fishery by test fish station in 2015, index point estimates for coho salmon by stock and 90% credibility intervals. Estimates are ordered from west (left) to east (right) Cook Inlet.

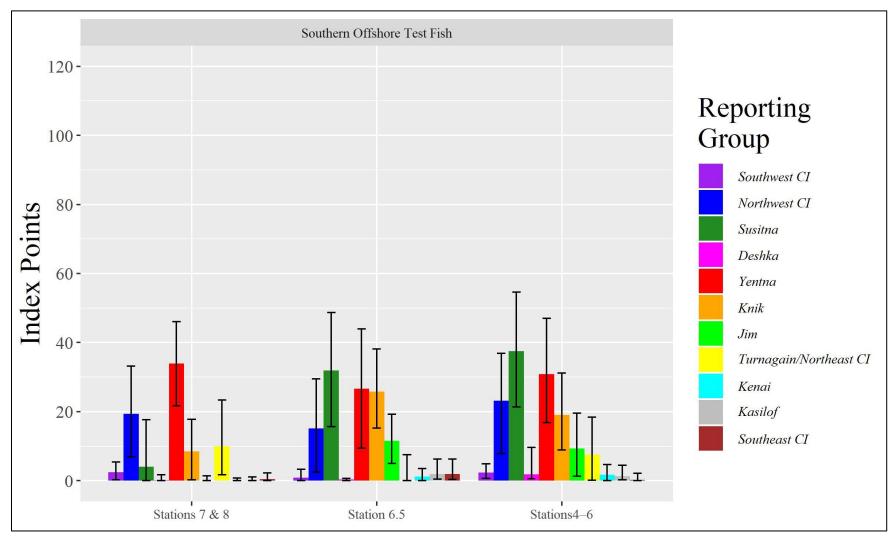


Figure 10.—Offshore test fishery by test fish station in 2016, index point estimates for coho salmon by stock and 90% credibility intervals. Estimates are ordered from west (left) to east (right) Cook Inlet.

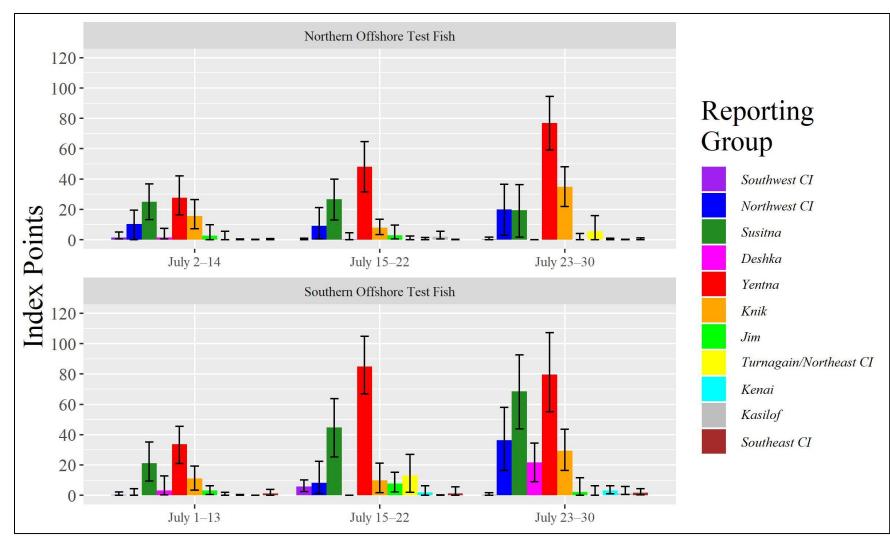


Figure 11.—Offshore test fishery by date in 2013; index point estimates for coho salmon by stock and 90% credibility intervals.

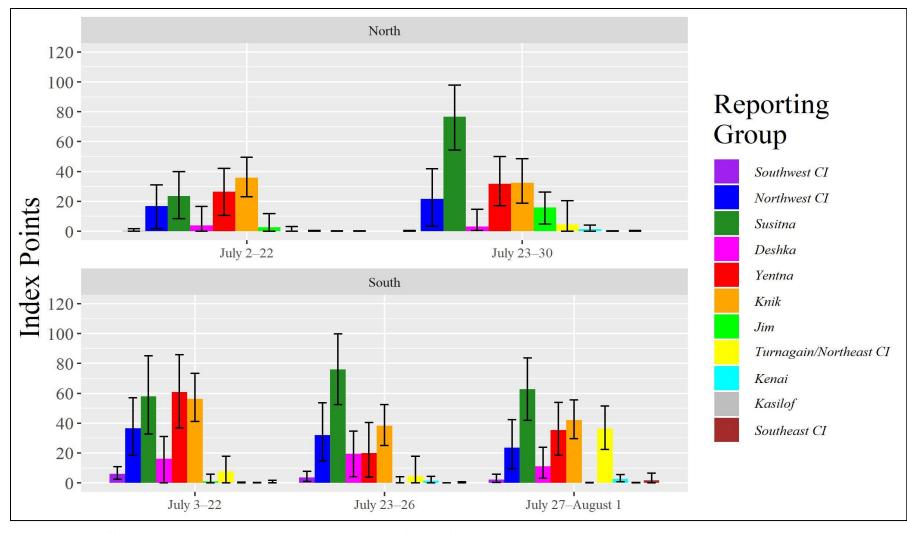


Figure 12.—Offshore test fishery by date in 2014; index point estimates for coho salmon by stock and 90% credibility intervals.

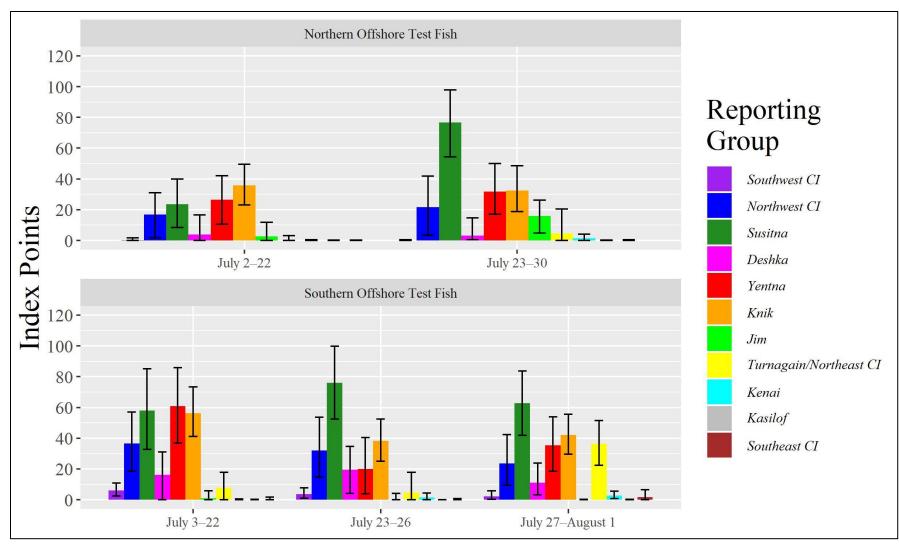


Figure 13.—Offshore test fishery by date in 2015; index point estimates for coho salmon by stock and 90% credibility intervals.

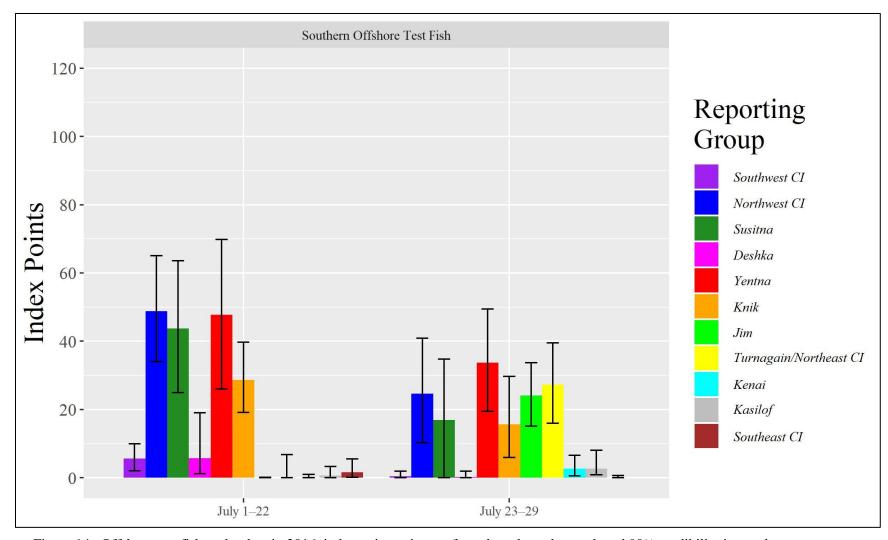


Figure 14.—Offshore test fishery by date in 2016; index point estimates for coho salmon by stock and 90% credibility intervals.

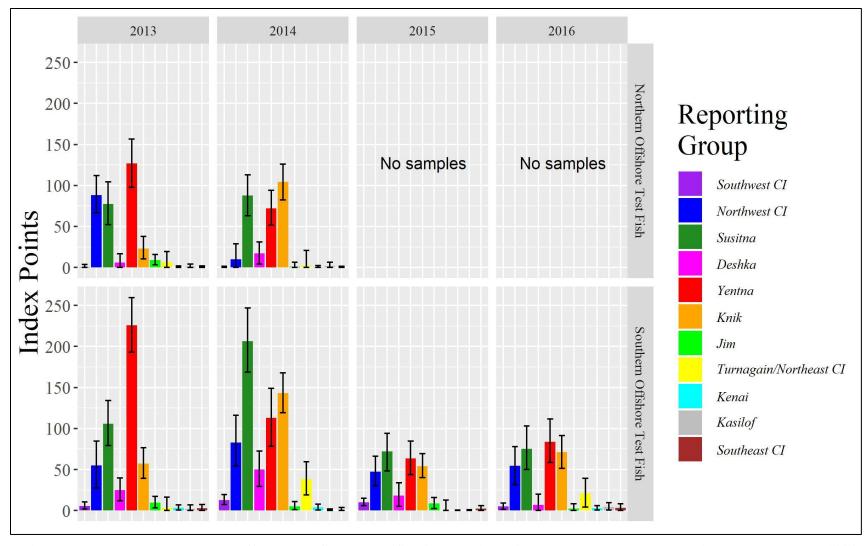


Figure 15.—Northern and Southern offshore test fishery stratified index point estimates 2013–2016; harvest estimates and 90% credibility intervals for coho salmon by stock.

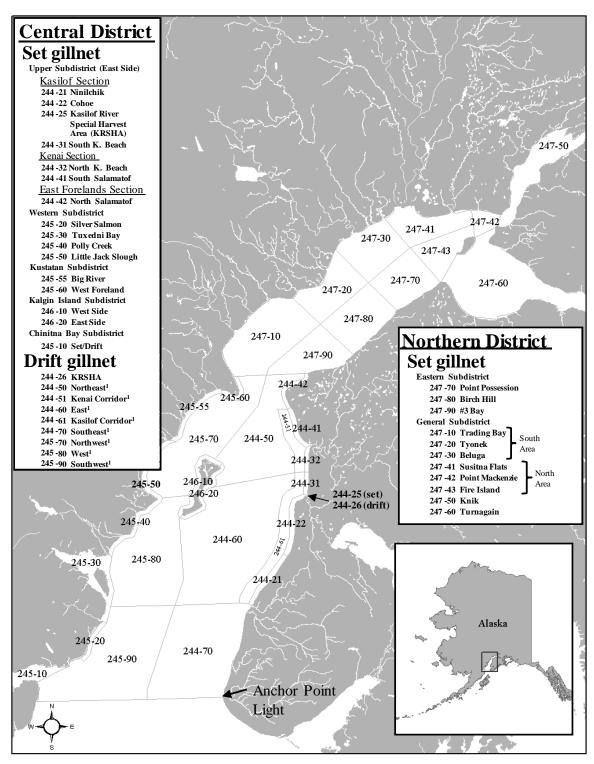


Figure 16.—Map of Upper Cook Inlet showing commercial fishing boundaries (statistical areas) for subdistricts and selected sections within the Northern and Central districts for both set and drift gillnet fisheries.

Note: Districts, subdistricts, and sections are defined in Alaska Administrative Code (5 AAC 21.200).

<sup>&</sup>lt;sup>1</sup> These stat areas are grouped into one stat area (244-60) in Figure 19 and Appendices A3 and C1–C4 to represent all Central District drift gillnet areas excluding Chinitna Bay.

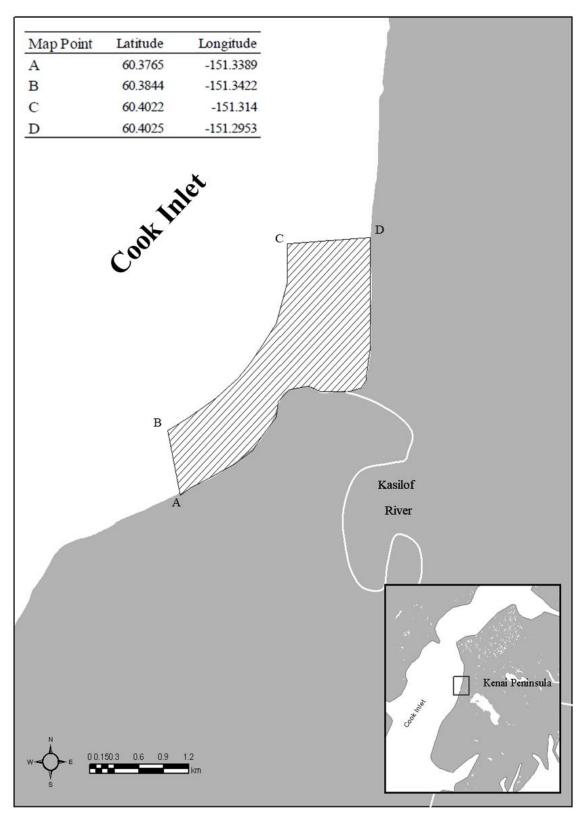


Figure 17.—Map of the mouth of the Kasilof River showing management fishing boundaries for the Kasilof River Special Harvest Area (Central District, Upper Subdistrict).

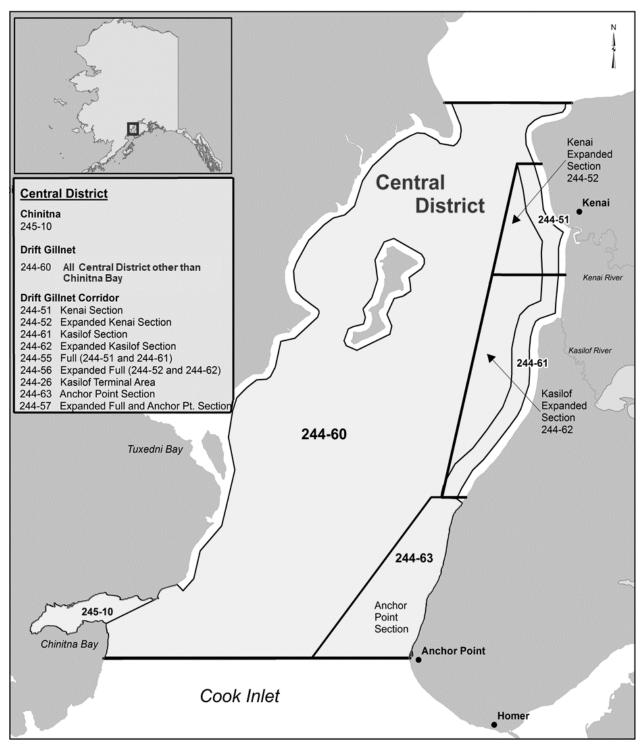


Figure 18.—Map of Upper Cook Inlet showing commercial fishing boundaries (statistical areas) within the Central district drift gillnet fishery, including the Kenai and Kasilof sections and expanded sections (see text).

Note: Districts, subdistricts, and sections are defined in Alaska Administrative Code (5 AAC 21.200).

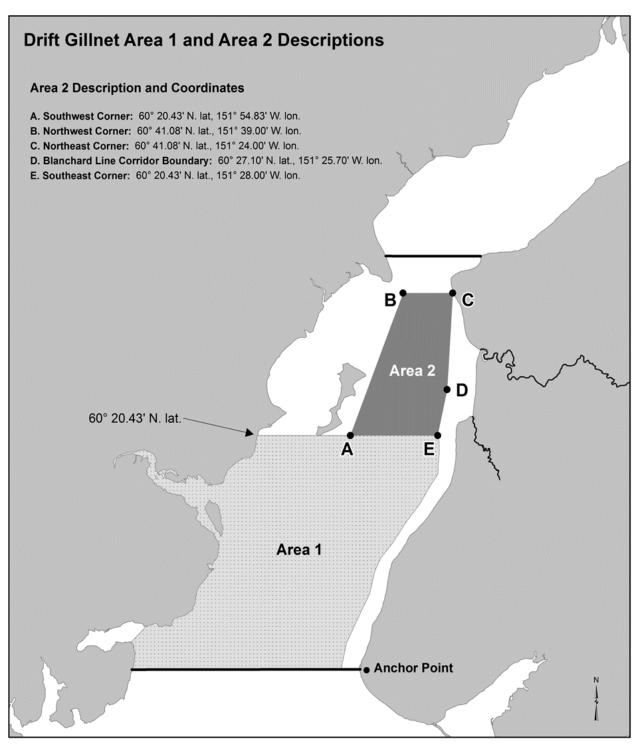


Figure 19.—Map of Upper Cook Inlet showing commercial fishing boundaries (statistical areas) within the Central district drift gillnet fishery, including the areas 1 and 2 (see text).

Note: Districts, subdistricts, and sections are defined in Alaska Administrative Code (5 AAC 21.200).

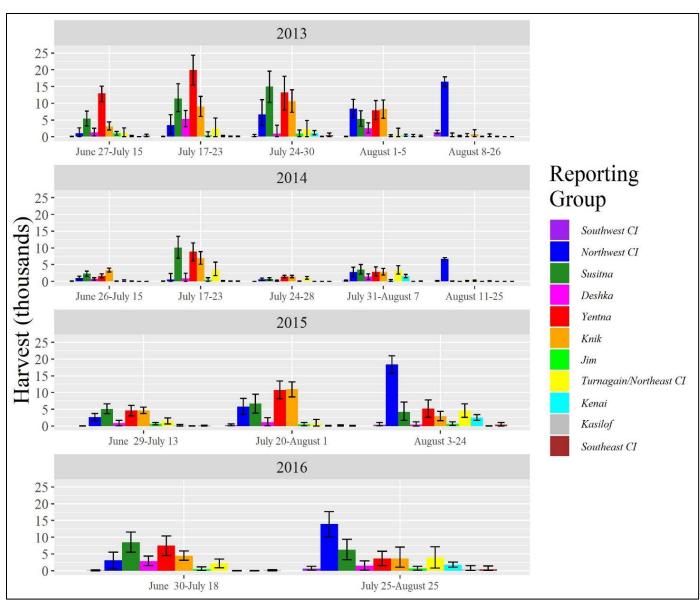


Figure 20.—Central District drift gillnet fishery by date 2013–2016; harvest estimates and 90% credibility intervals for coho salmon by stock.

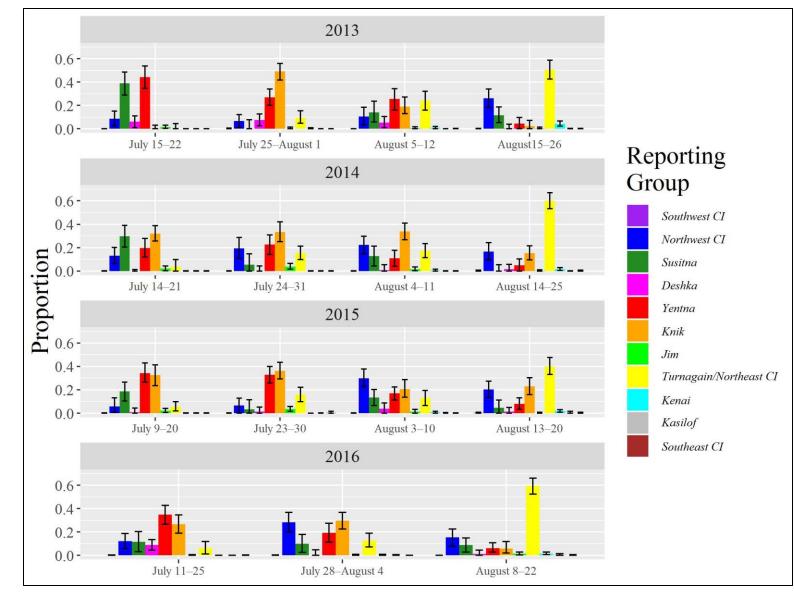


Figure 21.—Northern District set gillnet fishery by date 2013–2016; stock composition estimates and 90% credibility intervals for coho salmon by stock.

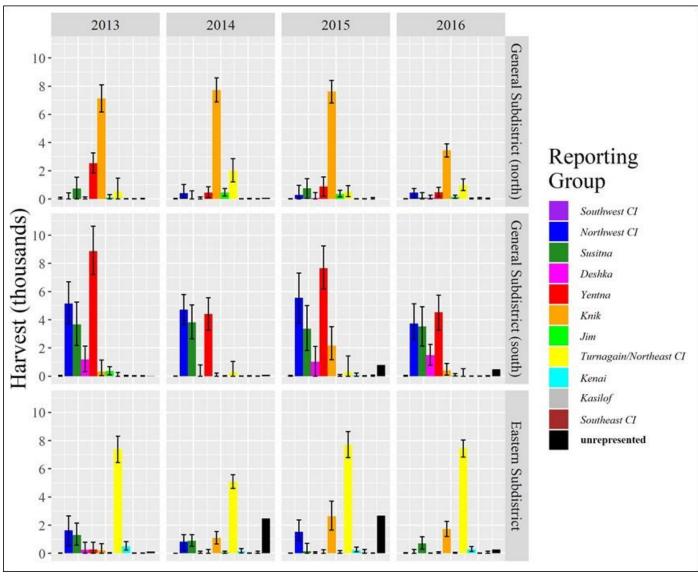


Figure 22.—Northern District set gillnet fishery by area, 2013–2016; harvest estimates and 90% credibility intervals for coho salmon by stock.

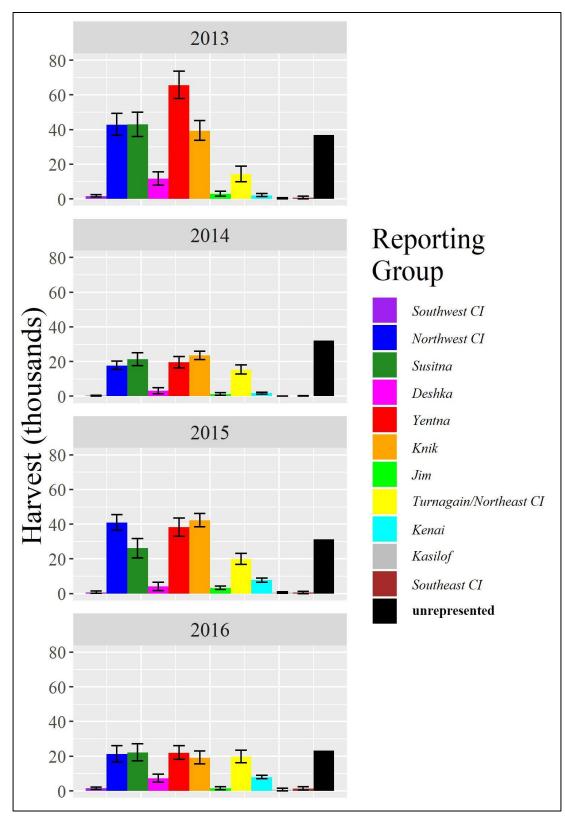


Figure 23.—Overall Cook Inlet commercial fishery stratified harvest estimates for coho salmon by stock for 2013–2016.

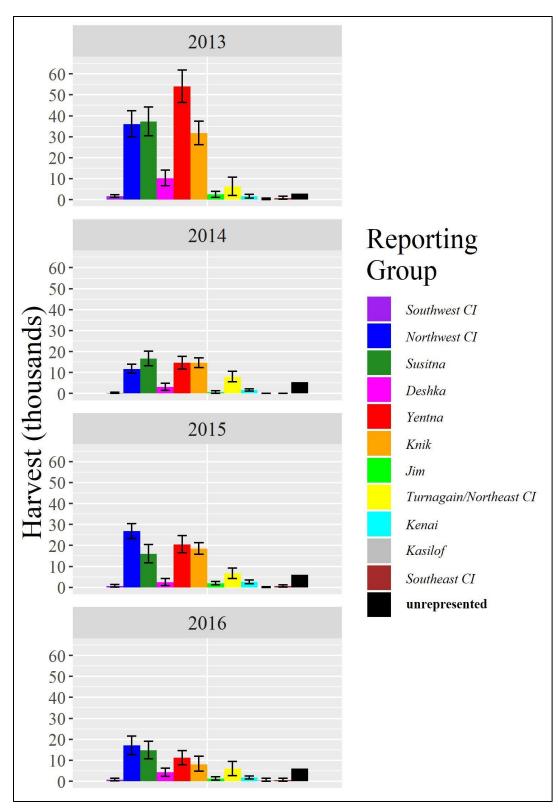


Figure 24.—Central District drift gillnet fishery (excluding corridor-only periods); stratified harvest estimates and credibility intervals for coho salmon by stock 2013–2016.

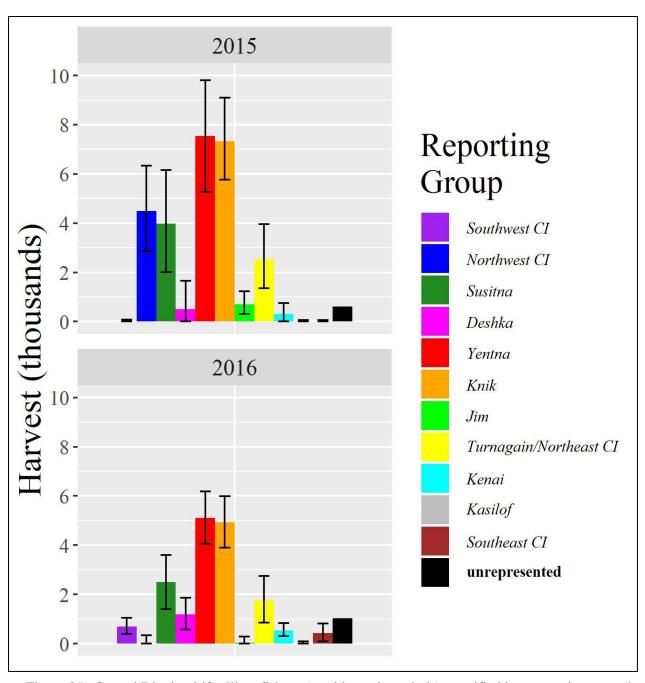


Figure 25.—Central District drift gillnet fishery (corridor-only periods); stratified harvest estimates and credibility intervals for coho salmon by stock 2015–2016.

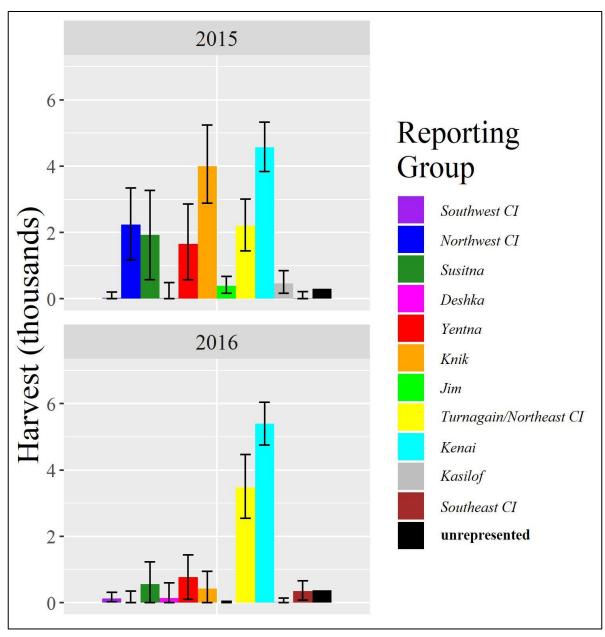


Figure 26.–Upper Subdistrict (Central District) set gillnet fishery 2015–2016; harvest estimates and 90% credibility intervals for coho salmon by stock.

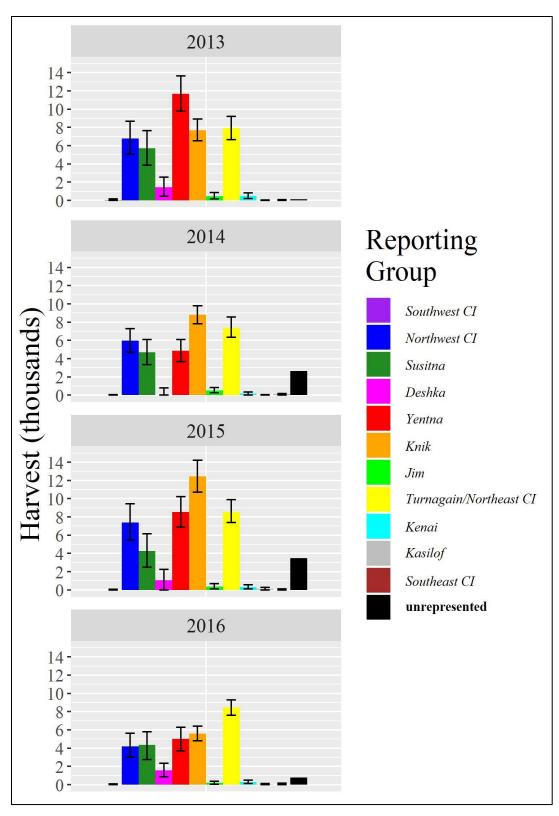


Figure 27.–Northern District set gillnet fishery by area, 2013–2016; harvest estimates and 90% credibility intervals for coho salmon by stock.

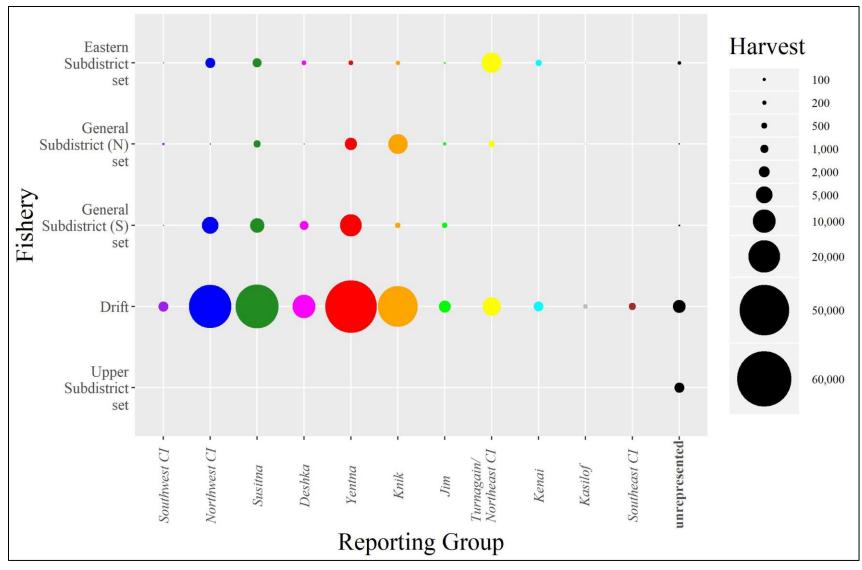


Figure 28.—Coho salmon harvest estimates and harvest not included in the analysis (unrepresented) by stock (reporting group) in the Upper Cook Inlet commercial fishery in 2013. Gray circles indicate the portion of the total harvest from each fishery not included in the analysis (unrepresented).

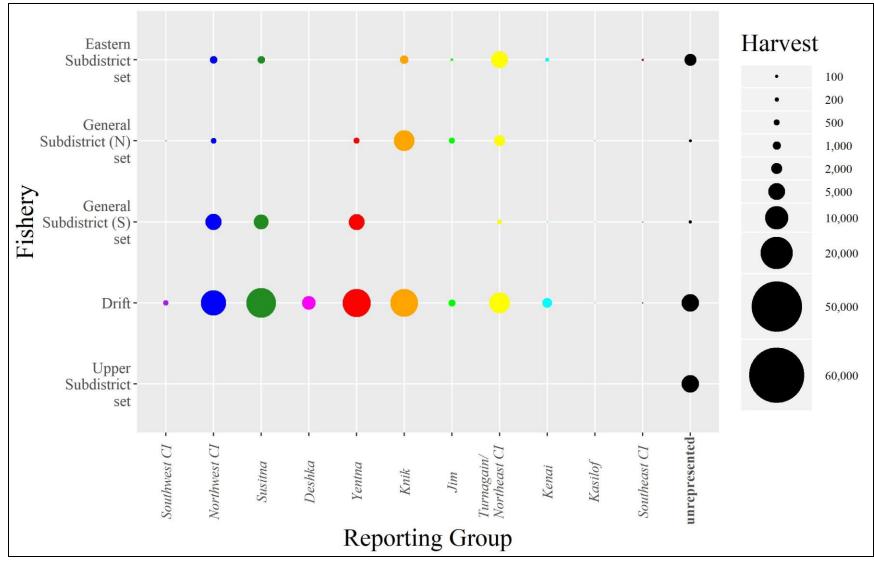


Figure 29.—Coho salmon harvest estimates and harvest not included in the analysis (unrepresented) by stock (reporting group) in the Upper Cook Inlet commercial fishery in 2014. Gray circles indicate the portion of the total harvest from each fishery not included in the analysis (unrepresented).

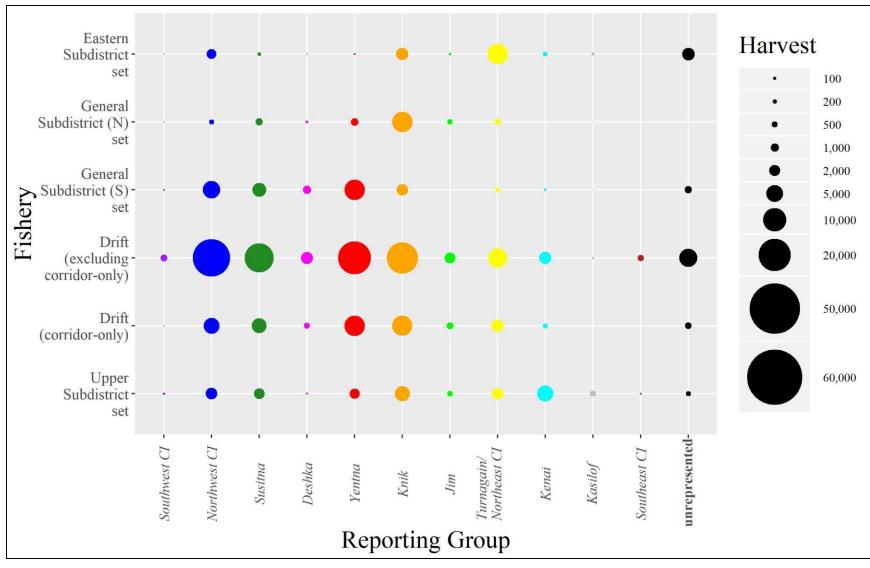


Figure 30.—Coho salmon harvest estimates and harvest not included in the analysis (unrepresented) by stock (reporting group) in the Upper Cook Inlet commercial fishery in 2015. Gray circles indicate the portion of the total harvest from each fishery not included in the analysis (unrepresented).

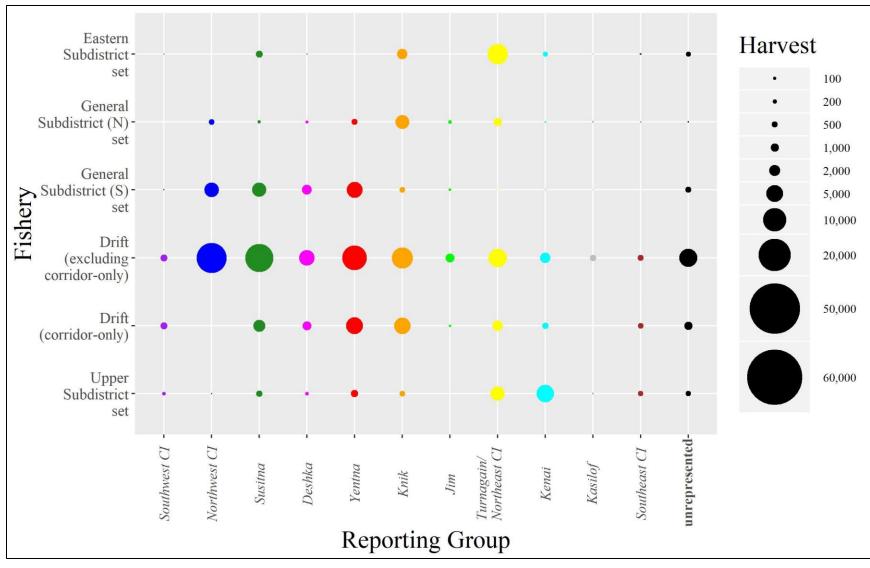


Figure 31.—Coho salmon harvest estimates and harvest not included in the analysis (unrepresented) by stock (reporting group) in the Upper Cook Inlet commercial fishery in 2016. Gray circles indicate the portion of the total harvest from each fishery not included in the analysis (unrepresented).

## APPENDIX A: SAMPLE COLLECTION INFORMATION 2013–2016

Appendix A1.—Number of samples collected and genotyped by date and station for Cook Inlet southern offshore test fishery, 2013-2016.

_				Station n	number			
Year	Sample date	4	5	6	6.5	7	8	Total
2013	7/1	2						2
	7/2		1		4	1		6
	7/3				3	6		9
	7/4		2	1	6			9
	7/5		2	1		1		4
	7/6			5				5
	7/7				9	2		11
	7/8				4	1		5
	7/9		9		3			12
	7/10		19					19
	7/11	2	3	8	5			18
	7/12						1	1
	7/13		3	4				7
	7/15	1	1		5	1	1	9
	7/16		14	22	10	23	7	76
	7/20	5	13	22				40
	7/21	2		14		5		21
	7/22		1	56	21	44		122
	7/23		2	3	1		2	8
	7/24		22	50	1			73
	7/25		6	13	49	150		218
	7/26	1		1	1	8	1	12
	7/27			3	1	1	2	7
	7/28			5	1	1	2	9
	7/29			16	28			44
	7/30	2	1					3
	Total	15	99	224	152	244	16	750

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				Station nu	ımber			
Year	Sample date	4	5	6	6.5	7	8	Total
2014	7/3					1		1
	7/4			1	4	1		6
	7/5	1		4	7		1	13
	7/6	1	2		2	2	1	8
	7/7		2	1	1			4
	7/8				1	1		2
	7/9		3		1	1		5
	7/10		1	1				2
	7/11			1				1
	7/12	2					1	3
	7/13		7		1			8
	7/15			8	1		1	10
	7/16		1	6	16	22	2	47
	7/17	2	15	7	1	1	3	29
	7/18		8	8	13	4	4	37
	7/19		2	11	2	2		17
	7/20	1	14	4		12	1	32
	7/21		5		1	24	1	31
	7/22			1	4	21	2	28
	7/23		1	10	26	72		109
	7/24		4	13	25		12	54
	7/25	3	1	1	22	2	1	30
	7/26				1	7	5	13
	7/27			10	23	4		37
	7/28		38					38
	7/29		1		10	3	18	32
	7/30			41	33	18	7	99
	7/31		3	12	4			19
	8/1		11	5	22	2	1	41
	Total	10	119	145	221	200	61	756

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				Station	number			
Year	Sample date	4	5	6	6.5	7	8	Total
2015	7/1	1						1
	7/3				1			1
	7/4			3	1			4
	7/5		1	1	1			3
	7/6			6				6
	7/7		1		1			2
	7/8			1			1	2
	7/9		1		1			2
	7/10		1	17	4	3		25
	7/11				6	4		10
	7/12		2	9	1	13	5	30
	7/13		2	2		2	1	7
	7/14		4		12	3	2	21
	7/15			2	2	3		7
	7/19		2	2	2	6	1	13
	7/20		3	1	10	6	3	23
	7/21			4	1			5
	7/22		5	24	28	34	3	94
	7/23	1	2	3	6	2		14
	7/24				1	5	1	7
	7/25	1	1	1	2	10	22	37
	7/26	1	2	3	7	5	6	24
	7/27				1	2	7	10
	7/28					1		1
	7/29	1	6	6	2	9	8	32
	7/30		5	12	3		1	21
	Total	5	38	97	93	108	61	402

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				Station nu	ımber			
Year	Sample date	4	5	6	6.5	7	8	Total
2016	7/1		1	1		1		3
	7/3	1		1	5	1		8
	7/5			2				2
	7/6		2	1				3
	7/7			2	2		1	5
	7/8		1				1	2
	7/9		1	4		1		6
	7/10			2	3	2		7
	7/12			2	3			5
	7/13	1		1	2	5		9
	7/14		3	2	6			11
	7/15	2	2	6	3	2	2	17
	7/16			9				9
	7/17	1	5	2	14			22
	7/18		1	14	9			24
	7/20		2	12	29	21	1	65
	7/21			1		4		5
	7/22	1	7	12	7	7	7	41
	7/23			45	6	14	3	68
	7/24			13	17	5		35
	7/25	2			4			6
	7/26		2	1	23		6	32
	7/28			1	6	12		19
	7/29			11	18	6		35
	Total	8	27	145	157	81	21	439

Appendix A2.—Number of samples collected and genotyped by date and station for Cook Inlet northern offshore test fishery in 2013 and 2014.

				St	ation numl	oer			
Year	Sample date	1	2	3	4	5	6	7	Total
2013	7/2						2		2
	7/3	1							1
	7/5					1			1
	7/8	1		3	4	2	1		11
	7/9		1	1		2		2	6
	7/11				3	1			4
	7/12		1						1
	7/13			2	31	38		2	73
	7/14	1	1	1	7	16	5	2	33
	7/15	1		12	13	55	1	2	84
	7/16			4	3		1	3	11
	7/17			2	1	1			4
	7/18			5	10	4	1	3	23
	7/19		1	2			2	3	8
	7/20	1		5	5	1	4	1	17
	7/21			1			1	1	3
	7/22			5			1		6
	7/23	3	1		3	1	1		9
	7/24			1	5	1	1	3	11
	7/25	1	2	1	19	2	1	1	27
	7/26		1	4	4	13	16	54	92
	7/27		4	4	6	3	3	5	25
	7/28			1	1	3	1	3	9
	7/29		1			12	1	1	15
	7/30				6	4		9	19
	Total	9	13	54	121	160	43	95	495

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				St	tation nu	mber				
Year	Sample date	2	3	4	5	8	9	10	11	Total
2014	7/2				1					1
	7/5		1							1
	7/6		1						1	2
	7/9						2			2
	7/11			2				1		3
	7/14					1				1
	7/16	3		2	1		1	1	1	9
	7/17		3		1			1		5
	7/18		2	1	26		3			32
	7/20		2	15	2	9	2	1		31
	7/21		3	16	16	1	17	3	2	58
	7/22		4	3	6					13
	7/23		7	11	9	14	6			47
	7/24		4	8	30	21	5			68
	7/25		3		7	3		2		15
	7/26		2	3	2	3			1	11
	7/27			1	2	1	1			5
	7/28	2	3	6	2	11				24
	7/29		1		2		4	1		8
	7/30	5	1	37		4	5			52
	Total	10	37	105	107	68	46	10	5	388

Appendix A3.—Harvest location, sampling dates, numbers of samples collected, and number of samples genotyped for mixtures of coho salmon harvested in the Upper Cook Inlet commercial fishery, 2013–2016.

		Harvest locati	on	_ Sample	Numb	er of fish	
Year	District	Subdistrict/Fishery	Statistical area(s)	date	Sampled	Genotyped	Mixture
2013	Central	Drift	244-60	7/4/2013	54	54	6/27-7/15
	Central	Drift	244-60	7/8/2013	199	117	6/27-7/15
	Central	Drift	244-56	7/11/2013	44	38	6/27-7/15
	Central	Drift	244-60	7/15/2013	192	191	6/27-7/15
	Central	Drift	244-60	7/18/2013	240	160	7/17-7/23
	Central	Drift	244-60	7/22/2013	240	240	7/17-7/23
	Central	Drift	244-60	7/25/2013	336	295	7/24–7/30
	Central	Drift	244-60	7/29/2013	283	105	7/24–7/30
	Central	Drift	244-60	8/1/2013	519	325	8/1-8/5
	Central	Drift	244-60	8/5/2013	528	75	8/1-8/5
	Central	Drift	244-60	8/8/2013	408	137	8/8-8/26
	Central	Drift	244-60	8/12/2013	240	179	8/8-8/26
	Central	Drift	244-60	8/15/2013	48	48	8/8-8/26
	Central	Drift	244-60	8/22/2013	48	36	8/8-8/26
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/4/2013	42	3	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/8/2013	21	3	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/15/2013	48	8	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/18/2013	48	12	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/22/2013	48	7	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/25/2013	48	5	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/29/2013	96	22	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/1/2013	91	28	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/5/2013	139	42	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/8/2013	139	18	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/12/2013	144	53	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/15/2013	144	66	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/19/2013	96	54	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/22/2013	48	36	6/27-9/2
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/26/2013	89	22	6/27-9/2
	Northern	General Subdistrict	247-41, 42, & 43	7/15/2013	92	32	7/8-8/26
	Northern	General Subdistrict	247-41, 42, & 43	7/18/2013	139	16	7/8-8/26
	Northern	General Subdistrict	247-41, 42, & 43	7/22/2013	288	16	7/8-8/26
	Northern	General Subdistrict	247-41, 42, & 43	7/25/2013	144	18	7/8-8/26
	Northern	General Subdistrict	247-41, 42, & 43	7/29/2013	177	66	7/8-8/26
	Northern	General Subdistrict	247-41, 42, & 43	8/1/2013	288	78	7/8-8/26
	Northern	General Subdistrict	247-41, 42, & 43	8/5/2013	129	27	7/8-8/26
	Northern	General Subdistrict	247-41, 42, & 43	8/8/2013	260	44	7/8-8/26
	Northern	General Subdistrict	247-41, 42, & 43	8/12/2013	192	48	7/8–8/26

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		Harvest locati	on	_ Sample	Numb	er of fish	
Year	District	Subdistrict/Fishery	Statistical area(s)	date	Sampled	Genotyped	Mixture
2013	Northern	General Subdistrict	247-41, 42, & 43	8/15/2013	144	29	7/8-8/26
(cont.)	Northern	General Subdistrict	247-42 & 43	8/19/2013	19	1	7/8-8/26
	Southern	General Subdistrict	247-10, 20, & 30	7/8/2013	28	11	7/1-8/29
	Southern	General Subdistrict	247-10, 20, & 30	7/15/2013	61	59	7/1-8/29
	Southern	General Subdistrict	247-20 & 30	7/18/2013	137	26	7/1-8/29
	Southern	General Subdistrict	247-10, 20, & 30	7/22/2013	155	56	7/1-8/29
	Southern	General Subdistrict	247-10, 20, & 30	7/25/2013	264	24	7/1-8/29
	Southern	General Subdistrict	247-10, 20, & 30	7/29/2013	240	43	7/1-8/29
	Southern	General Subdistrict	247-10, 20, & 30	8/1/2013	217	62	7/1-8/29
	Southern	General Subdistrict	247-10, 20, & 30	8/5/2013	336	61	7/1-8/29
	Southern	General Subdistrict	247-10 & 20	8/8/2013	130	16	7/1-8/29
	Southern	General Subdistrict	247-10 & 20	8/12/2013	262	27	7/1-8/29
	Southern	General Subdistrict	247-10 & 20	8/15/2013	126	12	7/1-8/29
	Southern	General Subdistrict	247-20	8/19/2013	78	2	7/1-8/29
	Southern	General Subdistrict	247-20	8/29/2013	87	2	7/1-8/29
2014	Central	Drift	244-60	7/3/2014	93	62	6/26-7/15
	Central	Drift	244-60	7/7/2014	60	60	6/26-7/15
	Central	Drift	244-60	7/10/2014	38	38	6/26-7/15
	Central	Drift	244-60	7/14/2014	240	240	6/26-7/15
	Central	Drift	244-60	7/17/2014	234	193	7/17–7/23
	Central	Drift	244-60	7/21/2014	288	207	7/17–7/23
	Central	Drift	244-57	7/24/2014	197	197	7/24–7/28
	Central	Drift	244-57	7/28/2014	365	203	7/24–7/28
	Central	Drift	244-57	7/31/2014	309	86	7/31-8/7
	Central	Drift	244-60	8/4/2014	192	192	7/31-8/7
	Central	Drift	244-60	8/7/2014	169	122	7/31-8/7
	Central	Drift	244-60	8/11/2014	192	180	8/11-8/25
	Central	Drift	244-60	8/14/2014	117	117	8/11-8/25
	Central	Drift	244-60	8/18/2014	78	78	8/11-8/25
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/14/2014	28	3	7/7-8/28
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/17/2014	27	5	7/7-8/28
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/21/2014	48	17	7/7-8/28
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/24/2014	29	29	7/7-8/28
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/28/2014	96	22	7/7-8/28
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/31/2014	96	31	7/7-8/28
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/4/2014	96	42	7/7-8/28
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/7/2014	96	57	7/7-8/28
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/11/2014	96	28	7/7-8/28
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/18/2014	96	90	7/7-8/28
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/21/2014	96	76	7/7-8/28

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		Harvest locati	on	Sample	Numbe	er of fish	
Year	District	Subdistrict/Fishery	Statistical area(s)	date	Sampled	Genotyped	Mixture
2014	Northern	General Subdistrict	247-41, 42, & 43	7/14/2014	44	6	7/7-8/25
(cont.)	Northern	General Subdistrict	247-41, 42, & 43	7/17/2014	38	15	7/7-8/25
	Northern	General Subdistrict	247-41, 42, & 43	7/21/2014	48	48	7/7-8/25
	Northern	General Subdistrict	247-41, 42, & 43	7/24/2014	48	29	7/7-8/25
	Northern	General Subdistrict	247-41, 42, & 43	7/28/2014	96	35	7/7-8/25
	Northern	General Subdistrict	247-41, 42, & 43	7/31/2014	96	90	7/7-8/25
	Northern	General Subdistrict	247-41, 42, & 43	8/4/2014	48	48	7/7-8/25
	Northern	General Subdistrict	247-41, 42, & 43	8/7/2014	96	74	7/7-8/25
	Northern	General Subdistrict	247-41, 42, & 43	8/11/2014	93	24	7/7-8/25
	Northern	General Subdistrict	247-41, 42, & 43	8/14/2014	37	15	7/7-8/25
	Northern	General Subdistrict	247-42 & 43	8/18/2014	47	16	7/7-8/25
	Southern	General Subdistrict	247-20 & 30	7/7/2014	71	7	6/30-9/1
	Southern	General Subdistrict	247-10, 20, & 30	7/10/2014	48	6	6/30-9/1
	Southern	General Subdistrict	247-10, 20, & 30	7/14/2014	16	10	6/30-9/1
	Southern	General Subdistrict	247-10, 20, & 30	7/17/2014	55	39	6/30-9/1
	Southern	General Subdistrict	247-10, 20, & 30	7/21/2014	192	62	6/30-9/1
	Southern	General Subdistrict	247-10, 20, & 30	7/28/2014	118	31	6/30-9/1
	Southern	General Subdistrict	247-10, 20, & 30	7/31/2014	144	101	6/30-9/1
	Southern	General Subdistrict	247-10, 20, & 30	8/4/2014	96	36	6/30-9/1
	Southern	General Subdistrict	247-10 & 20	8/7/2014	96	36	6/30-9/1
	Southern	General Subdistrict	247-10 & 20	8/11/2014	96	18	6/30-9/1
	Southern	General Subdistrict	247-10 & 20	8/18/2014	144	14	6/30-9/1
	Southern	General Subdistrict	247-10 & 20	8/21/2014	96	36	6/30-9/1
	Southern	General Subdistrict	247-10 & 20	8/25/2014	96	4	6/30-9/1
2015	Central	Drift	244-60	7/6/2015	76	69	6/29-7/13
	Central	Drift	244-60	7/9/2015	192	191	6/29-7/13
	Central	Drift	244-60	7/13/2015	240	240	6/29-7/13
	Central	Drift	244-60	7/20/2015	288	212	7/20-8/1
	Central	Drift	244-60	7/27/2015	288	288	7/20-8/1
	Central	Drift	244-60	8/3/2015	192	192	8/3-8/24
	Central	Drift	244-60	8/6/2015	192	108	8/3-8/24
	Central	Drift	244-60	8/10/2015	288	111	8/3-8/24
	Central	Drift	244-60	8/13/2015	144	44	8/3-8/24
	Central	Drift	244-60	8/17/2015	144	38	8/3-8/24
	Central	Drift	244-60	8/20/2015	96	54	8/3-8/24
	Central	Drift	244-57	7/16/2015	240	142	7/11-8/5
	Central	Drift	244-57	7/23/2015	288	288	7/11-8/5
	Central	Drift	244-57	7/30/2015	240	238	7/11-8/5
	Central	Upper Subdistrict	244-21 & 22	7/20/2015	11	11	7/14-8/12
	Central	Upper Subdistrict	244-21 & 22	7/23/2015	20	20	7/14-8/12

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		Harvest locati	on	_ Sample	Numb	er of fish	
Year	District	Subdistrict/Fishery	Statistical area(s)	date	Sampled	Genotyped	Mixture
2015	Central	Upper Subdistrict	244-21 & 22	7/27/2015	24	24	7/14-8/12
(cont.)	Central	Upper Subdistrict	244-21 & 22	7/30/2015	6	6	7/14-8/12
	Central	Upper Subdistrict	244-21 & 22	8/3/2015	19	19	7/14-8/12
	Central	Upper Subdistrict	244-21 & 22	8/6/2015	20	20	7/14-8/12
	Central	Upper Subdistrict	244-21 & 22	8/10/2015	24	24	7/14-8/12
	Central	Upper Subdistrict	244-31	7/20/2015	1	1	7/14-8/12
	Central	Upper Subdistrict	244-31	7/23/2015	1	1	7/14-8/12
	Central	Upper Subdistrict	244-31	7/27/2015	2	2	7/14-8/12
	Central	Upper Subdistrict	244-31	8/3/2015	11	11	7/14-8/12
	Central	Upper Subdistrict	244-31	8/6/2015	2	2	7/14-8/12
	Central	Upper Subdistrict	244-31	8/10/2015	11	6	7/14-8/12
	Central	Upper Subdistrict	244-32	7/20/2015	4	4	7/14-8/12
	Central	Upper Subdistrict	244-32	7/27/2015	2	2	7/14-8/12
	Central	Upper Subdistrict	244-32	7/30/2015	2	2	7/14-8/12
	Central	Upper Subdistrict	244-32	8/3/2015	8	8	7/14-8/12
	Central	Upper Subdistrict	244-32	8/6/2015	10	10	7/14-8/12
	Central	Upper Subdistrict	244-32	8/10/2015	10	10	7/14-8/12
	Central	Upper Subdistrict	244-41 & 42	7/20/2015	20	20	7/14-8/12
	Central	Upper Subdistrict	244-41 & 42	7/23/2015	20	20	7/14-8/12
	Central	Upper Subdistrict	244-41 & 42	7/27/2015	20	20	7/14-8/12
	Central	Upper Subdistrict	244-41 & 42	7/30/2015	20	20	7/14-8/12
	Central	Upper Subdistrict	244-41 & 42	8/3/2015	141	50	7/14-8/12
	Central	Upper Subdistrict	244-41 & 42	8/6/2015	144	52	7/14-8/12
	Central	Upper Subdistrict	244-41 & 42	8/10/2015	144	35	7/14-8/12
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/13/2015	48	13	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/16/2015	32	6	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/20/2015	48	30	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/23/2015	96	38	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/27/2015	96	32	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/30/2015	96	15	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/3/2015	96	10	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/6/2015	96	19	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/10/2015	96	31	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/13/2015	96	31	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/17/2015	96	31	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/20/2015	96	82	7/6-8/27
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/24/2015	96	62	7/6-8/27
	Northern	General Subdistrict	247-41, 42, & 43	7/9/2015	96	14	7/6-8/24
	Northern	General Subdistrict	247-41, 42, & 43	7/16/2015	48	11	7/6-8/24
	Northern	General Subdistrict	247-41, 42, & 43	7/20/2015	48	48	7/6-8/24
	Northern	General Subdistrict	247-41, 42, & 43	7/23/2015	48	37	7/6-8/24

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		Harvest locati	on	Sample	Numb	er of fish	
Year	District	Subdistrict/Fishery	Statistical area(s)	date	Sampled	Genotyped	Mixture
2015	Northern	General Subdistrict	247-41, 42, & 43	7/27/2015	96	96	7/6-8/24
(cont.)	Northern	General Subdistrict	247-41, 42, & 43	8/3/2015	96	31	7/6-8/24
	Northern	General Subdistrict	247-41, 42, & 43	8/6/2015	96	35	7/6-8/24
	Northern	General Subdistrict	247-41, 42, & 43	8/10/2015	96	33	7/6-8/24
	Northern	General Subdistrict	247-41, 42, & 43	8/13/2015	48	36	7/6-8/24
	Northern	General Subdistrict	247-42 & 43	8/17/2015	48	9	7/6-8/24
	Southern	General Subdistrict	247-10 & 20	7/6/2015	8	1	7/2-8/27
	Southern	General Subdistrict	247-10, 20, & 30	7/9/2015	48	22	7/2-8/27
	Southern	General Subdistrict	247-10, 20, & 30	7/13/2015	96	25	7/2-8/27
	Southern	General Subdistrict	247-10, 20, & 30	7/16/2015	96	9	7/2-8/27
	Southern	General Subdistrict	247-10, 20, & 30	7/20/2015	96	29	7/2-8/27
	Southern	General Subdistrict	247-10, 20, & 30	7/23/2015	50	50	7/2-8/27
	Southern	General Subdistrict	247-10, 20, & 30	7/27/2015	223	60	7/2-8/27
	Southern	General Subdistrict	247-10, 20, & 30	8/3/2015	144	63	7/2-8/27
	Southern	General Subdistrict	247-10, 20, & 30	8/6/2015	58	52	7/2-8/27
	Southern	General Subdistrict	247-10, 20, & 30	8/10/2015	192	31	7/2-8/27
	Southern	General Subdistrict	247-10 & 20	8/13/2015	96	15	7/2-8/27
	Southern	General Subdistrict	247-10, 20, & 30	8/17/2015	96	17	7/2-8/27
-	Southern	General Subdistrict	247-10, 20, & 30	8/20/2015	96	26	7/2-8/27
2016	Central	Drift	244-60	7/7/2016	96	35	6/30-7/18
	Central	Drift	244-60	7/11/2016	144	65	6/30-7/18
	Central	Drift	244-60	7/14/2016	240	137	6/30–7/18
	Central	Drift	244-60	7/18/2016	240	143	6/30–7/18
	Central	Drift	244-60	7/25/2016	288	140	7/25-8/25
	Central	Drift	244-60	8/1/2016	327	56	7/25-8/25
	Central	Drift	244-60	8/4/2016	249	55	7/25-8/25
	Central	Drift	244-60	8/8/2016	240	83	7/25-8/25
	Central	Drift	244-60	8/11/2016	30	18	7/25-8/25
	Central	Drift	244-60	8/15/2016	219	18	7/25-8/25
	Central	Drift	244-60	8/18/2016	96	10	7/25-8/25
	Central	Drift	244-52 & 62	7/9/2016	48	27	7/9–8/3
	Central	Drift	244-52 & 62	7/13/2016	96	96	7/9–8/3
	Central	Drift	244-52, 62, & 63	7/21/2016	288	213	7/9–8/3
	Central	Drift	244-52, 62, & 63	7/28/2016	192	164	7/9–8/3
	Central	Upper Subdistrict	244-21 & 22	7/21/2016	24	23	7/14–8/9
	Central	Upper Subdistrict	244-21 & 22	7/28/2016	26	26	7/14–8/9
	Central	Upper Subdistrict	244-21 & 22	8/1/2016	20	20	7/14–8/9
	Central	Upper Subdistrict	244-21 & 22	8/5/2016	48	48	7/14–8/9
	Central	Upper Subdistrict	244-31	7/21/2016	11	11	7/14–8/9

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		Harvest locati	on	_ Sample	Numb	er of fish	
Year	District	Subdistrict/Fishery	Statistical area(s)	date	Sampled	Genotyped	Mixture
2016	Central	Upper Subdistrict	244-31	7/28/2016	1	1	7/14-8/9
(cont.)	Central	Upper Subdistrict	244-31	8/1/2016	3	3	7/14-8/9
	Central	Upper Subdistrict	244-31	8/5/2016	8	8	7/14-8/9
	Central	Upper Subdistrict	244-31	8/9/2016	41	41	7/14-8/9
	Central	Upper Subdistrict	244-32	7/21/2016	10	10	7/14-8/9
	Central	Upper Subdistrict	244-32	7/25/2016	2	2	7/14-8/9
	Central	Upper Subdistrict	244-32	7/28/2016	3	3	7/14-8/9
	Central	Upper Subdistrict	244-32	8/1/2016	7	7	7/14-8/9
	Central	Upper Subdistrict	244-32	8/5/2016	18	18	7/14-8/9
	Central	Upper Subdistrict	244-32	8/9/2016	24	24	7/14-8/9
	Central	Upper Subdistrict	244-41 & 42	7/21/2016	10	10	7/14-8/9
	Central	Upper Subdistrict	244-41 & 42	7/28/2016	20	20	7/14-8/9
	Central	Upper Subdistrict	244-41 & 42	8/1/2016	10	10	7/14-8/9
	Central	Upper Subdistrict	244-41 & 42	8/9/2016	20	20	7/14-8/9
	Northern	Eastern Subdistrict	247-70 & 80	7/18/2016	41	17	7/11–9/5
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/25/2016	96	18	7/11–9/5
	Northern	Eastern Subdistrict	247-70, 80, & 90	7/28/2016	96	11	7/11–9/5
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/1/2016	96	44	7/11–9/5
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/4/2016	192	30	7/11–9/5
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/8/2016	96	32	7/11–9/5
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/11/2016	96	57	7/11–9/5
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/15/2016	96	43	7/11–9/5
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/18/2016	96	54	7/11–9/5
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/22/2016	96	54	7/11–9/5
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/25/2016	48	32	7/11–9/5
	Northern	Eastern Subdistrict	247-70, 80, & 90	8/29/2016	48	36	7/11–9/5
	Northern	General Subdistrict	247-41, 42, & 43	7/11/2016	19	10	7/4-8/15
	Northern	General Subdistrict	247-41, 42, & 43	7/14/2016	26	26	7/4-8/15
	Northern	General Subdistrict	247-41 & 42	7/21/2016	10	10	7/4-8/15
	Northern	General Subdistrict	247-41, 42, & 43	7/25/2016	39	38	7/4-8/15
	Northern	General Subdistrict	247-41, 42, & 43	7/28/2016	48	48	7/4-8/15
	Northern	General Subdistrict	247-41, 42, & 43	8/1/2016	120	120	7/4-8/15
	Northern	General Subdistrict	247-41, 42, & 43	8/4/2016	96	43	7/4-8/15
	Northern	General Subdistrict	247-41, 42, & 43	8/11/2016	96	59	7/4-8/15
	Northern	General Subdistrict	247-41, 42, & 43	8/15/2016	48	27	7/4-8/15
	Southern	General Subdistrict	247-10, 20, & 30	7/11/2016	29	29	7/4-8/25
	Southern	General Subdistrict	247-10, 20, & 30	7/14/2016	26	26	7/4-8/25
	Southern	General Subdistrict	247-10, 20, & 30	7/18/2016	43	43	7/4-8/25
	Southern	General Subdistrict	247-10, 20, & 30	7/21/2016	28	28	7/4-8/25
	Southern	General Subdistrict	247-10, 20, & 30	7/25/2016	211	137	7/4-8/25

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		Harvest locati	on	_ Sample	Numb	er of fish	_
Year	District	Subdistrict/Fishery	Statistical area(s)	date	Sampled	Genotyped	Mixture
2016	Southern	General Subdistrict	247-10, 20, & 30	7/28/2016	311	89	7/4-8/25
(cont.)	Southern	General Subdistrict	247-10, 20, & 30	8/1/2016	96	61	7/4-8/25
	Southern	General Subdistrict	247-10, 20, & 30	8/4/2016	96	60	7/4-8/25
	Southern	General Subdistrict	247-10, 20, & 30	8/8/2016	48	25	7/4-8/25
	Southern	General Subdistrict	247-10, 20, & 30	8/11/2016	48	28	7/4-8/25
	Southern	General Subdistrict	247-10, 20, & 30	8/15/2016	48	5	7/4-8/25
	Southern	General Subdistrict	247-10 & 20	8/18/2016	48	19	7/4-8/25
	Southern	General Subdistrict	247-10, 20, & 30	8/22/2016	48	0	7/4-8/25
	Southern	General Subdistrict	247-10, 20, & 30	8/25/2016	24	0	7/4-8/25

Appendix A4.—Date when samples were collected, numbers of samples collected, number of samples genotyped for temporal mixtures of coho salmon harvested in the Northern District (Statistical areas include 247-10, 20, 30, 41, 42, 43, 70, 80, and 90) of Upper Cook Inlet, 2013–2016.

		Numbe		
Year	Sample date	Sampled	Genotyped	Mixture
2013	7/15/2013	201	116	7/15–7/22
	7/18/2013	323	142	7/15-7/22
	7/22/2013	491	141	7/15-7/22
	7/25/2013	455	56	7/25-8/1
	7/29/2013	513	150	7/25-8/1
	8/1/2013	596	195	7/25-8/1
	8/5/2013	602	165	8/5-8/12
	8/8/2013	529	89	8/5-8/12
	8/12/2013	591	146	8/5-8/12
	8/15/2013	407	201	8/15-8/26
	8/19/2013	192	110	8/15-8/26
	8/22/2013	48	48	8/15-8/26
	8/26/2013	88	17	8/15-8/26
2014	7/14/2014	88	61	7/14–7/21
	7/17/2014	120	100	7/14-7/21
	7/21/2014	288	179	7/14-7/21
	7/24/2014	77	57	7/24-7/31
	7/28/2014	310	131	7/24-7/31
	7/31/2014	336	212	7/24-7/31
	8/4/2014	240	126	8/4-8/11
	8/7/2014	288	184	8/4-8/11
	8/11/2014	285	89	8/4-8/11
	8/14/2014	37	30	8/14-8/25
	8/18/2014	287	162	8/14-8/25
	8/21/2014	192	143	8/14-8/25
	8/25/2014	96	6	8/14-8/25
2015	7/9/2015	144	46	7/9–7/20
	7/13/2015	144	85	7/9-7/20
	7/16/2015	192	48	7/9–7/20
	7/20/2015	192	171	7/9-7/20
	7/23/2015	240	119	7/23-7/30
	7/27/2015	432	270	7/23-7/30
	7/30/2015	96	12	7/23-7/30
	8/3/2015	336	181	8/3-8/10
	8/6/2015	288	127	8/3-8/10
	8/10/2015	384	192	8/3-8/10
	8/13/2015	240	155	8/13-8/20
	8/17/2015	240	179	8/13-8/20
	8/20/2015	192	167	8/13-8/20

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		Numb	er of fish	Mixture	
Year	Sample date	Sampled	Genotyped		
2016	7/11/2016	48	38	7/11–7/25	
	7/14/2016	52	52	7/11–7/25	
	7/18/2016	84	60	7/11–7/25	
	7/21/2016	38	38	7/11–7/25	
	7/25/2016	346	192	7/11–7/25	
	7/28/2016	455	126	7/28-8/4	
	8/1/2016	312	147	7/28-8/4	
	8/4/2016	384	107	7/28-8/4	
	8/8/2016	144	57	8/8-8/22	
	8/11/2016	240	133	8/8-8/22	
	8/15/2016	192	62	8/8-8/22	
	8/18/2016	144	73	8/8-8/22	
	8/22/2016	144	54	8/8-8/22	
	8/25/2016	72	0		
	8/29/2016	48	0		

## APPENDIX B: COOK INLET OFFSHORE TEST FISHERY CATCH PER UNIT EFFORT BY STATION AND DATE, 2013–2016

Appendix B1.—Estimated coho salmon catch per unit effort (CPUE) by date and station for Cook Inlet northern offshore test fishery in 2013.

			S	tation numb	er			_
Date	1	2	3	4	5	6	7	Total
1 July	0.0	0.0	0.0	_	_	_	_	0.0
2 July	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.6
3 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 July	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
6 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8 July	0.8	0.0	2.1	3.2	1.6	0.8	0.0	8.5
9 July	0.0	0.8	0.7	0.0	1.6	0.0	1.6	4.7
10 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 July	0.0	0.0	0.0	1.8	0.9	0.0	0.0	2.7
12 July	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.8
13 July	0.0	0.0	1.6	16.6	22.8	0.0	1.6	42.6
14 July	0.7	0.6	1.2	4.9	9.6	4.0	1.8	22.8
15 July	1.3	0.0	8.4	9.1	27.5	0.8	1.6	48.7
16 July	0.0	0.0	2.1	2.1	0.0	0.8	2.4	7.4
17 July	0.0	0.0	1.4	0.8	0.8	0.0	0.0	3.0
18 July	0.0	0.0	4.0	6.0	0.0	0.8	2.4	13.2
19 July	0.0	0.7	1.4	0.0	0.0	1.6	2.4	6.1
20 July	0.8	0.0	3.0	4.0	0.8	3.2	0.0	11.8
21 July	0.0	0.0	0.8	0.0	0.0	0.8	0.8	2.4
22 July	0.0	0.0	4.0	0.0	0.0	0.8	0.0	4.8
23 July	2.7	0.8	0.0	2.4	0.8	0.8	0.0	7.5
24 July	0.0	0.0	0.8	4.0	0.9	0.9	2.4	9.0
25 July	0.8	1.6	0.8	13.3	1.6	0.8	0.8	19.7
26 July	0.0	0.8	3.2	3.2	10.4	12.8	37.8	68.2
27 July	0.0	3.2	3.6	4.8	2.4	2.7	4.0	20.7
28 July	0.0	0.0	0.9	0.9	2.7	0.8	2.7	8.0
29 July	0.0	0.9	0.0	0.0	6.4	0.8	0.8	8.9
30 July	0.0	0.0	0.0	4.8	3.2	0.0	7.2	15.2
Total	7.1	10.2	40.0	81.9	94.8	34.8	70.3	339.1
Percent	2.1%	3.0%	11.8%	24.2%	28.0%	10.3%	20.7%	100.0%

Source: CPUE numbers are from Dupuis et al. (2015).

*Note*: CPUE is defined as the number of fish captured at each station on each day and standardized to the number of fish caught in 100 fathoms of gear in one hour of fishing time.

Note: Dashes indicate days/stations that were not fished.

Appendix B2.—Estimated coho salmon catch per unit effort (CPUE) by date and station for Cook Inlet northern offshore test fishery in 2014.

				Station	number				_
Date	2	3	4	5	8	9	10	11	Total
1 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 July	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8
4 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 July	_	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6
6 July	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.9	1.5
7 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9 July	0.0	0.9	0.0	0.0	0.0	0.8	0.0	0.0	1.7
10 July	_	_	_	_	_	_	_	_	0.0
11 July	0.0	0.0	1.7	0.0	0.0	0.0	0.8	0.0	2.5
12 July	0.0	_	_	_	_	_	_	_	0.0
13 July	_	_	_	_	_	_	_	0.0	0.0
14 July	0.0	0.0	0.0	0.0	0.8	0.0	_	_	0.8
15 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 July	2.5	0.0	1.7	0.9	0.0	0.9	0.9	0.8	7.7
17 July	0.0	2.3	0.0	0.8	0.0	0.0	0.8	0.0	3.9
18 July	0.0	1.4	0.8	18.8	_	2.3	1.4	0.0	24.7
19 July	_	_	_	_	_	_	_	_	0.0
20 July	0.0	1.5	8.9	0.0	6.4	1.6	0.7	0.0	19.1
21 July	0.0	2.2	8.4	10.3	0.8	11.9	2.3	1.5	37.4
22 July	0.0	2.4	2.3	4.1	0.0	0.0	0.0	0.0	8.8
23 July	_	6.6	8.2	7.1	11.2	4.5	0.0	0.0	37.6
24 July	_	4.0	5.7	32.0	13.8	4.6	0.0	0.0	60.1
25 July	0.0	2.4	0.0	5.1	2.4	0.0	1.6	0.0	11.5
26 July	7.9	1.4	2.3	1.5	2.1	0.0	0.0	0.0	15.2
27 July	0.6	0.0	0.7	1.6	0.8	0.8	0.0	0.0	4.5
28 July	2.3	2.3	0.0	1.6	14.0	_	0.0	0.0	20.2
29 July	0.0	0.8	0.0	1.6	0.0	2.4	0.8	0.0	5.6
30 July	3.7	0.8	21.1	0.0	3.2	3.8	0.0	0.0	32.6
Total	17.0	30.2	61.8	86.2	55.5	33.6	9.3	3.2	296.8
Percent	6%	10%	21%	29%	19%	11%	3%	1%	100%

Source: CPUE numbers are from Dupuis et al. (2016).

*Note*: CPUE is defined as the number of fish captured at each station on each day and standardized to the number of fish caught in 100 fathoms of gear in one hour of fishing time.

Note: Dashes indicate days/stations that were not fished.

Appendix B3.—Estimated coho salmon catch per unit effort (CPUE) by date and station for Cook Inlet southern offshore test fishery in 2013.

			Station	number			
Date	4	5	6	6.5	7	8	Total
1 July	0.0	0.0	1.4	0.0	0.0	0.0	1.4
2 July	0.0	0.7	0.0	0.0	0.8	0.0	1.5
3 July	0.0	0.8	0.0	3.0	4.3	0.0	8.1
4 July	0.0	0.8	0.8	3.7	_	_	5.3
5 July	0.0	1.6	0.8	0.0	0.7	0.0	3.1
6 July	0.0	0.0	3.6	0.0	0.0	0.0	3.6
7 July	0.0	0.0	0.0	7.8	1.3	0.0	9.1
8 July	0.0	_	_	2.6	0.7	0.0	3.3
9 July	0.0	5.4	0.0	2.1	0.0	0.0	7.5
10 July	0.0	13.3	0.0	0.0	0.0	0.0	13.3
11 July	1.6	1.8	5.7	3.0	0.0	0.0	12.1
12 July	0.0	0.0	0.0	0.0	0.0	0.6	0.6
13 July	0.0	2.2	2.9	_	_	_	5.1
14 July	_	_	_	_	_	_	0.0
15 July	0.7	0.7	0.0	3.7	0.8	0.8	6.7
16 July	0.0	22.4	14.3	0.0	13.1	5.1	54.9
17 July	_	_	0.0	_	_	_	0.0
18 July	_	_	_	_	_	_	0.0
19 July	_	_	_	_	_	_	0.0
20 July	3.6	8.9	11.9	_	_	_	24.4
21 July	1.6	0.0	9.7	0.0	3.9	0.0	15.2
22 July	0.0	0.7	36.9	12.2	26.4	0.0	76.2
23 July	0.0	1.5	2.1	0.7	0.0	1.5	5.8
24 July	0.0	13.6	33.0	0.0	0.0	0.0	46.6
25 July	0.0	4.0	0.0	33.3	107.0	_	144.3
26 July	0.8	0.0	0.8	0.5	5.5	0.8	8.4
27 July	0.0	0.0	0.0	0.6	0.8	1.5	2.9
28 July	0.0	0.0	3.8	0.7	0.8	1.6	6.9
29 July	0.0	0.0	12.3	16.8	_	_	29.1
30 July	0.0	0.0					0.0
Total	8.3	78.4	140.0	90.7	166.1	11.9	495.4
Percent	2%	16%	28%	18%	34%	2%	100%

Source: CPUE numbers are from Dupuis et al. (2015).

Note: Dashes indicate days/stations that were not fished.

*Note*: CPUE is defined as the number of fish captured at each station on each day and standardized to the number of fish caught in 100 fathoms of gear in one hour of fishing time.

Appendix B4.—Estimated coho salmon catch per unit effort (CPUE) by date and station for Cook Inlet southern offshore test fishery in 2014.

Station number							
Date	4	5	6	6.5	7	8	Total
1 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 July	0.0	0.0	0.0	0.0	0.8	0.0	0.8
4 July	0.0	0.0	0.8	2.6	0.8	0.0	4.2
5 July	0.8	0.0	2.4	5.7	0.0	0.8	9.7
6 July	0.8	1.6	0.0	1.5	1.5	0.7	6.1
7 July	0.0	1.1	0.6	0.8	0.0	0.0	2.5
8 July	0.0	0.0	0.8	0.0	0.8	0.0	1.6
9 July	0.0	2.3	0.0	0.8	0.8	0.0	3.9
10 July	0.0	0.8	0.7	0.0	0.0	0.0	1.5
11 July	0.0	0.0	0.6	0.0	0.0	0.0	0.6
12 July	0.0	0.0	0.0	0.0	0.0	0.8	0.8
13 July	0.0	8.9	0.0	0.7	0.0	0.0	9.6
14 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 July	0.0	0.0	4.8	0.8	0.0	0.7	6.3
16 July	0.0	0.7	4.5	10.7	14.5	1.5	31.9
17 July	1.4	7.3	5.5	0.8	0.9	2.3	18.2
18 July	0.0	5.9	4.8	7.9	32.0	2.8	53.4
19 July	0.0	2.0	7.4	2.2	1.1	0.0	12.7
20 July	0.6	11.1	3.2	0.0	8.6	0.8	24.3
21 July	0.0	0.7	0.0	0.8	15.5	0.8	17.8
22 July	0.0	0.0	1.6	5.6	26.8	2.5	36.5
23 July	0.0	1.1	7.2	20.0	48.0	0.0	76.3
24 July	0.0	5.7	20.7	37.3	18.3	1.7	83.7
25 July	3.0	3.5	0.8	15.5	1.6	0.8	25.2
26 July	0.0	0.0	0.0	0.8	5.6	3.7	10.1
27 July	0.0	0.0	8.2	18.1	3.2	0.0	29.5
28 July	0.0	35.6	0.0	0.0	0.0	0.0	35.6
29 July	0.0	0.8	0.0	7.8	2.5	27.0	38.1
30 July	0.0	0.0	29.6	23.3	13.7	5.0	71.6
31 July	0.0	2.3	9.4	3.0	0.0	0.0	14.7
1 August	0.0	6.3	3.7	16.5	0.8	0.8	28.1
Total	6.6	97.7	117.3	183.2	197.8	52.7	655.3
Percent	1%	15%	18%	28%	30%	8%	100%

Source: CPUE numbers are from Dupuis et al. (2016).

*Note*: CPUE is defined as the number of fish captured at each station on each day and standardized to the number of fish caught in 100 fathoms of gear in one hour of fishing time.

Appendix B5.—Estimated coho salmon catch per unit effort (CPUE) by date and station for Cook Inlet southern offshore test fishery in 2015.

			Station r	number			
Date	4	5	6	6.5	7	8	Total
1 July <sup>a</sup>	0.6	0.0	0.0	0.0	0.0	0.0	0.6
2 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 July	0.0	0.0	0.0	0.8	0.0	0.0	0.8
4 July	0.0	0.0	2.1	0.7	0.0	0.0	2.8
5 July	0.0	0.8	0.8	0.8	0.0	0.0	2.4
6 July	0.0	0.0	4.4	0.0	0.0	0.0	4.4
7 July	0.0	0.8	0.0	0.8	0.0	0.0	1.6
8 July	0.0	0.0	0.8	0.0	0.0	0.8	1.6
9 July	0.0	0.8	0.0	0.8	0.0	0.0	1.6
10 July	0.0	0.7	8.3	2.6	2.4	0.0	14.0
11 July	0.0	0.0	0.0	2.9	3.0	0.0	5.9
12 July	0.0	1.5	7.0	0.8	9.6	3.8	22.7
13 July	0.0	1.5	1.4	0.0	1.5	0.8	5.2
14 July	0.0	2.7	0.0	0.9	2.3	1.5	7.4
15 July	0.0	0.0	1.4	1.6	2.4	0.0	5.4
16 July <sup>a</sup>	0.0	0.4	1.5	0.0	3.0	1.4	6.3
17 July <sup>a</sup>	0.0	0.8	1.5	0.4	3.5	1.2	7.4
18 July <sup>a</sup>	0.0	1.2	0.5	0.5	4.1	1.0	7.3
19 July	0.0	1.6	1.6	0.7	4.6	0.8	9.3
20 July	0.0	2.0	0.7	0.0	3.9	2.4	9.0
21 July	0.0	0.0	3.2	0.8	0.0	0.0	4.0
22 July	0.0	2.9	13.2	15.0	19.0	2.3	52.4
23 July	0.8	1.7	2.3	4.3	1.4	0.0	10.5
24 July	0.0	0.0	0.0	0.8	3.4	0.8	5.0
25 July	0.8	0.8	0.8	1.5	6.7	12.6	23.2
26 July	1.0	1.5	1.9	4.7	3.5	4.6	17.2
27 July	0.0	0.0	0.0	0.8	1.6	5.3	7.7
28 July	0.0	0.0	0.0	0.0	0.8	0.0	0.8
29 July	0.8	4.0	4.5	1.6	6.4	6.3	23.6
30 July	0.0	3.4	10.3	2.5	0.0	0.8	17.0
Total	4.0	29.1	68.2	46.3	83.1	46.4	277.1
Percent	1%	11%	25%	17%	30%	17%	100%

Source: CPUE numbers are from Dupuis and Willette (2016).

*Note*: CPUE is defined as the number of fish captured at each station on each day and standardized to the number of fish caught in 100 fathoms of gear in one hour of fishing time.

<sup>&</sup>lt;sup>a</sup> Not all stations fished due to weather; the data for missing stations were interpolated.

Appendix B6.—Estimated coho salmon catch per unit effort (CPUE) by date and station for Cook Inlet southern offshore test fishery in 2016.

_			Station	number			
Date	4	5	6	6.5	7	8	Total
1 July	0.0	0.8	0.7	0.0	0.8	0.0	2.3
2 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 July	0.8	0.0	0.7	3.6	0.8	0.8	6.7
4 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 July	0.0	0.0	1.6	0.0	0.0	0.0	1.6
6 July	0.0	1.7	1.4	0.0	0.0	0.0	3.1
7 July	0.0	0.0	1.6	1.6	0.0	0.8	4.0
8 July	0.0	0.8	0.0	0.0	0.0	0.8	1.6
9 July	0.0	0.8	2.9	0.0	0.8	0.0	4.5
10 July	0.0	0.0	0.0	2.3	1.6	0.0	3.9
11 July	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 July	0.0	0.0	1.6	2.4	0.0	0.0	4.0
13 July	0.9	0.0	1.6	1.6	4.1	0.0	8.2
14 July	0.0	2.1	1.6	4.4	0.0	0.0	8.1
15 July	1.4	1.1	4.1	2.3	1.5	1.7	12.1
16 July <sup>a</sup>	0.0	0.0	6.8	0.0	_	0.0	6.8
17 July	0.8	3.6	1.6	9.4	0.0	0.0	15.4
18 July	0.0	0.8	11.2	7.4	0.0	0.0	19.4
19 July <sup>a</sup>	_	_	_	_	_	_	_
20 July	0.0	2.5	8.4	19.1	13.8	0.9	44.7
21 July <sup>a</sup>	_	_	_	0.9	3.2	0.0	4.1
22 July	0.8	5.6	9.0	5.5	5.3	5.9	32.1
23 July	0.0	0.0	32.6	4.6	10.9	2.5	50.6
21 July <sup>a</sup>	_	0.0	11.0	14.6	4.2	_	29.8
25 July	1.7	0.0	0.0	3.4	0.0	0.0	5.1
26 July	0.0	1.7	0.8	17.7	0.0	5.1	25.3
27 July <sup>a</sup>	_	_	_	_	_	_	_
28 July	0.0	0.0	0.8	4.0	8.9	0.0	13.7
29 July <sup>a</sup>			6.9	12.3	4.5	0.0	23.7
Total	6.4	21.5	106.9	117.1	60.4	18.5	330.8
Percent	2%	6%	32%	35%	18%	6%	100%

Source: CPUE numbers are from Dupuis and Willette (2018).

*Note*: CPUE is defined as the number of fish captured at each station on each day and standardized to the number of fish caught in 100 fathoms of gear in one hour of fishing time.

<sup>&</sup>lt;sup>a</sup> Not all stations fished due to weather.

## APPENDIX C: UPPER COOK INLET COHO SALMON HARVEST BY STATISTICAL AREA, AND DATE, 2013–2016

Appendix C1.—Commercial coho salmon harvest by area and date in Upper Cook Inlet, 2013. The harvest represented for each genetic mixed stock analysis stratum (mixture; Table 20) is indicated with black outlines. Represented harvest is shaded in dark gray if sampled, and light gray if unsampled.

Upper Sub	district set gillr	net					
_			St	atistical area			
Date	244-21	244-22	244-25	244-31	244-32	244-41	244-42
06/27	1	1		1			
06/30	1	2		2			
07/01	1						
07/04	10	8					
07/06	5	5		2			
07/08	3	5		3	2	36	34
07/10	6	5					
07/11	6	3		2	4	54	49
07/15	11	16		10	7	176	250
07/17			9				
07/18	26	33	2	8	3	102	47
07/20	27	38		11	11	103	90
07/21			14				
07/22			14				
07/23	43	42	11	13	29	137	149
07/24			13				
07/25			19				
07/26			34				
07/27			56				
07/28			127				
07/29			22				
07/30			48				
08/01			82				
08/02			182				

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Central	Central District-West Side set gillnet								
<u>-</u>				Statis	stical area				
Date	245-10	245-20	245-30	245-40	245-50	245-55	245-60	246-10	246-20
06/24			1						
07/01			5					43	
07/04			20					113	16
07/06			44						
07/08			38		4			224	19
07/11			76		6			325	36
07/13			70						
07/15			63		5	17		1,088	54
07/18			136		26			1,689	278
07/20			101						
07/22			232		73	21	105	2,723	334
07/25			542		72			1,731	351
07/27			559						
07/29			398		221			1,814	191
08/01	45		1,423		145			1,992	795
08/03			220						
08/05			262		569			4,295	659
08/08			42		221			2,455	1,093
08/12	116				213			1,208	267
08/15	160							737	190
08/19	386							52	
08/23	24								
08/26									80

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Norther	n District se	et gillnet							
				Sta	atistical are	a			
Date	247-10	247-20	247-30	247-41	247-42	247-43	247-70	247-80	247-90
06/24						_			1
06/27	9								1
07/01	24	17					5		2
07/04	24	232			1		49	6	21
07/08	28	413	26		5	25	20	1	6
07/11	21	433	132	12	21	68	57	5	6
07/15	14	1,903	639	532	61	333	194	44	20
07/18		659	565	240	171	63	269	59	12
07/22	215	771	1,360	289	175	33	128	24	55
07/25	19	842	515	151	165	194	80	17	57
07/29	180	1,550	428	463	518	911	428	119	89
08/01	558	1,641	571	732	711	818	488	119	150
08/05	585	1,410	575	143	362	289	324	369	539
08/08	442	742		160	325	785	283	62	184
08/12	235	976		295	243	823	717	391	450
08/15	8	475		98	336	399	593	628	718
08/19		77			35	33	366	330	903
08/22	5	111			12		106	329	632
08/26	13	46	18			17	91	147	422
08/29		86							41
09/02							133	93	234
09/05						_		29	84
09/09									23

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Central District drift	t giiniet	Curtistical and		
	244.26	Statistical are		245.10
Date	244-26	244-56	244-60	245-10
06/24			1	
06/27			72	
07/01			901	
07/04			4,221	
07/08		2.50	5,997	
07/11		360		
07/13		447		
07/15			14,034	
07/17	7	1,835		
07/18			12,679	
07/19		1,198		
07/20		1,804		
07/21	1	1,644		
07/22	4		31,828	
07/23		1,084		
07/24		677		
07/25			37,024	
07/26	8	624		
07/27		1,225		
07/28	6	236		
07/29			11,193	
07/30		204		
08/01	4		21,790	
08/02	1		,	
08/05			11,882	
08/08			7,816	
08/12			3,782	
08/15			3,069	
08/19			2,360	409
08/21			2,500	234
08/22			843	
08/23			0.10	449
08/26			989	599
08/30			707	1,079
09/02				73
09/02				52
09/11			26	32

*Note*: See Figures 16–19 for statistical area names and locations.

Note: Harvest numbers were obtained from the fish ticket database on 8/19/19.

Appendix C2.—Commercial coho salmon harvest by area and date in Upper Cook Inlet, 2014. The harvest represented for each genetic mixed stock analysis stratum (mixture; Table 20) is indicated with black outlines. Represented harvest is shaded in dark gray if sampled, and light gray if unsampled.

Upper Sub	district set gillne	et					
			St	atistical area			
Date	244-21	244-22	244-25	244-31	244-32	244-41	244-42
06/23		1					
06/26		1					
06/28	1						
06/30				1			
07/03	3	2		1			
07/05	1						
07/07	9	6		2			
07/09	4	5		1	3	10	28
07/12	18	6		5			
07/15	9	35		3			
07/16			2				
07/17	9	10	8	8	22	141	106
07/18			3				
07/19			42				
07/20			11				
07/21			17				
07/22			16				
07/23	50	69	3	7	20	74	91
07/24			6				
07/25			34				
07/26			26				
07/27			16				
07/28			36				
07/29			31				
07/30			41				
08/01			43				
08/02	135	54	10	41	78	343	197
08/04	316	96		115	95	503	315
08/06					406	1,362	745

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Central	District-We	st Side set	gillnet						
				Sta	atistical are	a			
Date	245-10	245-20	245-30	245-40	245-50	245-55	245-60	246-10	246-20
06/26								4	
06/30			2					19	3
07/03			16					89	5
07/05			21						
07/07			18					83	45
07/10			19						
07/12			111						
07/14			80		6			118	17
07/17			132		8			602	249
07/19			284						
07/21			573		54		63	2,061	640
07/24			496		32		103	2,172	923
07/26			625						
07/28			454		90		214	1,285	252
07/31			737		83			1,047	73
08/02			547						
08/04			372		269			1,085	500
08/07			336		69			404	353
08/11					173			627	47
08/13								299	
08/14			35					3	
08/18								106	37
08/21								152	
08/25								57	

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Norther	Northern District set gillnet								
				Sta	atistical are	a			
Date	247-10	247-20	247-30	247-41	247-42	247-43	247-70	247-80	247-90
06/23		1			1				
06/26	5	1					2	1	
06/30	11	12	1	3			6	1	1
07/03	8	57	10				13	1	2
07/07		144	30	1	3	8	55	61	1
07/10	1	91	26	29	22		12	13	
07/14	36	124	74	48	59	46	41	6	7
07/17	59	712	287	134	53	98	64	30	36
07/21	90	602	909	687	244	440	225	61	88
07/24	88	1,056	466	285	204	336	461	187	30
07/28	170	361	180	130	465	372	156	112	27
07/31	415	1,624	808	985	505	529	231	237	140
08/04	267	714	164	397	439	715	478	269	70
08/07	235	651		519	542	568	479	637	207
08/11	316	111		233	276	225	381		152
08/14	128	210		7	183	225	192	24	
08/18	305	557			140	309	410	1,031	257
08/21	29	327		155	52	278	282	867	270
08/25	315	148		25	31	57	242	579	280
08/28	131	43		26	34		65		
09/01	53	82			12		192	497	319
09/04		70					13	144	
09/08		30							

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Central District	t drift gillnet		tatistical area		
_					
Date	244-26	244-56	244-57	244-60	245-10
06/19				3	
06/23				18	
06/26				222	
06/30				459	
07/03				1,137	
07/07				901	
07/09		167			
07/10				846	
07/11		313			
07/12				1,739	
07/13		82		• 000	
07/14				2,899	
07/15		246			
07/16	2	_			
07/17	1			12,934	
07/18	11		1,234		
07/19	3		1,189		
07/20	0		1,002		
07/21	0			12,547	
07/22	5		910		
07/23			1,462		
07/24			1,567		
07/25	2		1,547		
07/26			287		
07/27			123		
07/28	1		1,888		
07/29	11				
07/30	11				
07/31			1,678		
08/01	9				
08/02	5				
08/04				11,142	
08/07				5,816	
08/11				2,878	

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Central Distric	ct drift gillnet									
		Statistical area								
Date	244-26	244-56	244-57	244-60	245-10					
08/14				1,468						
08/18				961						
08/21				1,003						
08/25				794						
08/28				138						
08/29					519					
09/01				1,936						
09/02					1,361					
09/04				903						
09/05					375					
09/08				140						
09/09					37					

*Note*: See Figures 16–19 for statistical area names and locations.

Note: Harvest numbers were obtained from the fish ticket database on 8/19/19.

Appendix C3.—Commercial coho salmon harvest by area and date in Upper Cook Inlet, 2015. The harvest represented for each genetic mixed stock analysis stratum (mixture; Table 20) is indicated with black outlines. Represented harvest is shaded in dark gray if sampled, and light gray if unsampled.

Upper Subd	istrict set gillnet	t					
			Sta	atistical area			
Date	244-25	244-21	244-22	244-31	244-32	244-41	244-42
06/24		1					
06/29		1					
07/02		5	4	2			
07/04		1		2			
07/06		13	9	1			
07/07	1						
07/08	3						
07/09		12	16	2	5	66	61
07/11	1	14	6	8	2	27	47
07/13	12						
07/14		39	33	7	4	77	162
07/15		19	15	1			
07/16		39	40	14	21	179	391
07/17	12						
07/18	3	66	80	75			
07/19		56	31	13			
07/20		44	26	8	35	108	138
07/21	1	26	12	2			
07/22	7	38	53	4	_		
07/23		176	201	17	13	384	692
07/24	12						
07/25	2	110	93	22	18	226	192
07/26		273	152	33	16	466	145
07/27		109	80	18	21	124	241
07/28	3	68	32	4			
07/29		116	90	11 _	16	122	232
07/30		46	34	17	17	109	206
07/31	15	72	21	8			
08/01	8	79	83	27	16	184	197
08/02	46				55	261	229
08/03		279	131	68	117	303	260
08/05		304	239	100	130	403	261
08/06		315	119	105	143	247	190
08/08		362	268	43	183	546	332
08/09		456	171	56	111	370	305
08/10		412	160	43	184	385	380
08/12					207	468	331

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Central I	District-Wes	t Side set g	illnet						
				Sta	atistical are	ea			
Date	245-10	245-20	245-30	245-40	245-50	245-55	245-60	246-10	246-20
06/25									1
06/29			4					19	
07/02			7					60	7
07/06			24	1	1			203	32
07/09			64		2			568	65
07/13			269		1			876	59
07/16			150					497	56
07/18			149						
07/20			268	2	36		121	960	211
07/23			432		13		245	1,341	243
07/25			387						
07/27			326		64		306	904	345
07/30			269		109		166	1,182	402
08/01			308					1,579	267
08/03			297		122			1,311	158
08/06			216		126			1,009	33
08/08			16					894	49
08/10					189			364	70
08/13	12				88			484	82
08/15								425	59
08/17	10		23		145			773	83
08/20			32		77				

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Northern	District set	gillnet							
				Sta	atistical are	ea			
Date	247-10	247-20	247-30	247-41	247-42	247-43	247-70	247-80	247-90
06/25							1		
06/29	1	1							
07/02	6	11					7	1	
07/06	19	48			2		11	5	19
07/09	191	498	137	139	22	100	111	51	7
07/13	328	433	273	134	32	89	128	93	131
07/16	71	241	96	183	69	17	143	110	12
07/20	101	870	323	368	489	541	515	184	102
07/23	71	1474	594	383	252	235	283	409	286
07/27	125	998	1233	1,218	416	768	566	278	33
07/30	181	971	761	519	388	188	264	128	11
08/03	316	1714	647	210	476	172	239	20	23
08/06	269	1932	297	373	344	119	274	188	55
08/10	101	1197	28	173	190	424	466	242	133
08/13	207	440		392	312	190	428	262	228
08/17	146	566	54		75	80	392	300	139
08/20	103	689	26		127	36	523	669	858
08/24	155	803		112	108		368	762	649
08/27	109	299					150	833	317
08/31	31	102							
09/03	46	36					152	400	127
09/07	83	238					212	485	163
09/10	47	51					502		254
09/14	15	36					47		65
09/21		104					187		
09/24								84	
09/28		10							

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Central District	drift gillnet				
		S	tatistical area		
Date	244-26	244-56	244-57	244-60	245-10
06/22				51	
06/25				71_	
06/29				362	
07/02				645	
07/06				1,777	
07/07	1				
07/08	9				
07/09			_	3,217	
07/10	1				
07/11		327			
07/12	4				
07/13	58			14,226	
07/14		792			
07/16			1,512		
07/17	102				
07/18	15				
07/20				13,718	
07/21	6				
07/22	30				
07/23			6,826		
07/24	51				
07/25			5,523		
07/26			2,405		
07/27				5,697	
07/28			1,504		
07/29			1,856		
07/30	10		1,319		
07/31			1,911		
08/01				17,578	
08/02	24		1,379		
08/03				15,145	
08/05			2,051		
08/06				7,294	

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Central District	drift gillnet				
		St	tatistical area		
Date	244-26	244-56	244-57	244-60	245-10
08/07			392		
08/08				4,764	
08/09			52		
08/10				2,926	
08/12			170		
08/13			_	3,013	
08/17				2,617	
08/18					426
08/20				2,316	
08/21					449
08/24				1,399	
08/25					358
08/28					332
08/31				24	
09/01					380
09/03			1	,051	
09/04					928
09/07				730	
09/08					374
09/11					113
09/15					107
09/17				302	

*Note*: See Figures 16–19 for statistical area names and locations.

*Note*: Harvest numbers were obtained from the fish ticket database on 8/19/19.

Appendix C4.—Commercial coho salmon harvest by area and date in Upper Cook Inlet, 2016. The harvest represented for each genetic mixed stock analysis stratum (mixture; Table 20) is indicated with black outlines. Represented harvest is shaded in dark gray if sampled, and light gray if unsampled.

Upper Subdi	strict set gillnet					
			Statistical	area		
Date	244-21	244-22	244-31	244-32	244-41	244-42
06/23		1				
06/25	1		1			
06/27		1	1			
06/29		2				
06/30	1					
07/02		2	1			
07/04	4	1				
07/06	6	6	3			
07/07	2	2				
07/09	9	5	6			
07/11	18	17	7	15	98	93
07/13	10	6	3	3	30	23
07/14	15	9	1	1	39	30
07/16	16	20	5	7	34	24
07/17	16	20	12	9	29	27
07/18	20	48	10	10	29	52
07/19	27	23	11	3	59	22
07/21	41	72	30	70	185	149
07/23	33	22	3	7	27	22
07/24	52	39	4	17	47	18
07/25	54	61	9	13	109	111
07/28	95	108	19	19	181	105
08/01	274	165	26	55	346	140
08/03	402	397	63	49	300	125
08/05	798	226	58	137	278	212
08/07	693	375	97	311	500	151
08/09	390	303	138	346	954	569

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Central Di	strict-West S	ide set gillne	et					
				Statistic	al area			
Date	245-10	245-30	245-40	245-50	245-55	245-60	246-10	246-20
06/20		1						
06/23		1						
06/24							2	
06/27							3	
06/30							14	
07/04		1		1			25	3
07/07		30					60	4
07/09		27						
07/11		50		11			432	94
07/14		50	3	6			96	18
07/16		56						
07/18		26		124		10	491	37
07/21		68	36	37	200	64	1,202	243
07/23		102						
07/25		244	7	13	215	135	1,640	351
07/28		506	85	48	228	66	987	268
07/30		222						
08/01		477	215	163			880	113
08/04		450	164	48			1,109	122
08/06		217						
08/08		43	124				1,054	78
08/11	180	37	71	48			250	70
08/15		129		279			187	20

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Northern	District set	gillnet							
				St	atistical are	a			
Date	247-10	247-20	247-30	247-41	247-42	247-43	247-70	247-80	247-90
06/27						3			1
06/30	2	7	1				3		1
07/04	16	75	5			1	15		3
07/07	11	82		7		11	43		2
07/11	67	976	137	33	23	55	118	11	15
07/14	81	967	528	86	58	76	107	3	3
07/18	58	760	600	260	55	101	87	32	
07/21	9	35	112	113	41		80	17	4
07/25	104	1,174	444	487	148	354	199	106	3
07/28	53	1,446	711	270	225	195	245	41	5
08/01	165	1,087	241	388	278	366	947	72	71
08/04	343	1,061	254	78	153	289	435	296	61
08/08	134	364	6	48	186	143	311	224	148
08/11	33	557	23	227	159	353	446	314	371
08/15	89	215	7	16	149	279	300	498	219
08/18	84	185					302	377	416
08/22	52	130					283	553	253
08/25	133	145					192	273	282
08/29	41	74					38	463	331
09/01	47	36					88	277	94
09/05	105	26					72	78	38
09/08	62	40					121		
09/12	35						84		
09/15							9		
09/19		9							
09/26		10							

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Central District dri	irt gilinet	Statistical are	20	
Date	244-56	244-57	244-60	245-10
06/20	21130	21137	6	213 10
06/23			14	
06/27			51	
06/29				
06/30			229	
07/02				
07/04			903	
07/07			1,789	
07/09	885		,	
07/11			4,951	
07/13	1,062		7	
07/14	,		5,381	
07/15			5,242	
07/16		1,597	,	
07/17		751		
07/18			10,751	
07/19		1,490	, , , , , , , , , , , , , , , , , , ,	
07/21		3,228		
07/22		1,414		
07/23		1,017		
07/24		437		
07/25			11,210	
07/28		2,686	,	
08/01			4,941	
08/03		2,584	·	
08/04			9,290	
08/06		679	,	
08/07		193		
08/08			6,635	
08/09		152		
08/11			1,427	
08/15			1,535	
08/18			854	
08/22			66	
08/25			879	
08/26				1,900
08/29			476	
08/30				1,107
09/01			502	

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Central District dri	ft gillnet			
		Statistical are	ea	
Date	244-56	244-57	244-60	245-10
09/02				661
09/05			467	
09/06				225
09/08			249	
09/09				217
09/16				109

*Note*: See Figures 16–19 for statistical area names and locations.

Note: Harvest numbers were obtained from the fish ticket database on 8/19/19.

## APPENDIX D: CENTRAL DISTRICT DRIFT GILLNET STOCK COMPOSITION AND STOCK-SPECIFIC HARVEST BY DATE, 2013–2016

Appendix D1.—Central District drift gillnet fishery (excluding corridor-only), 2013: Temporal strata stock composition (%) and stock-specific harvest estimates, including mean, 90% credibility interval (CI), sample size (*n*), and standard deviation (SD).

Dates: 6/27–7/15	Stock composition ( $n = 400$ )			00)	Harvest = $26,032$
	_	90%	CI		90% CI
Reporting group	Mean	5%	95%	SD	Mean 5% 95% SD
Southwest CI	0.1	0.0	0.6	0.0	21 0 146 63
Northwest CI	3.7	0.0	10.1	0.0	976 0 2,627 992
Susitna	20.7	12.4	29.4	0.1	5,378 3,239 7,657 1,352
Deshka	5.0	0.6	9.6	0.0	1,292 161 2,506 700
Yentna	49.6	40.4	57.8	0.1	12,906 10,508 15,054 1,370
Knik	11.9	7.7	16.9	0.0	3,098 2,004 4,388 727
Jim	3.8	1.8	6.1	0.0	977 473 1,586 336
Turnagain/Northeast CI	4.2	0.0	10.1	0.0	1,099 11 2,633 839
Kenai	0.1	0.0	1.4	0.0	35 0 363 166
Kasilof	0.0	0.0	0.2	0.0	0 0 41 32
Southeast CI	1.0	0.0	2.7	0.0	251 3 713 238

Dates: 7/17–7/23	Stock composition ( $n = 400$ )				Harvest = 52,072			
	90% CI					90% CI		
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.2	0.0	14	0	110	73
Northwest CI	6.7	1.8	12.7	0.0	3,474	914	6,602	1,736
Susitna	22.0	14.4	30.3	0.0	11,439	7,498	15,768	2,513
Deshka	10.2	5.7	15.0	0.0	5,295	2,955	7,808	1,463
Yentna	38.2	29.6	46.8	0.1	19,905	15,433	24,365	2,706
Knik	17.3	11.7	23.1	0.0	9,010	6,074	12,014	1,843
Jim	0.9	0.0	2.8	0.0	446	0	1,439	516
Turnagain/Northeast CI	4.7	0.0	10.8	0.0	2,435	0	5,601	1,754
Kenai	0.1	0.0	0.8	0.0	49	0	396	154
Kasilof	0.0	0.0	0.3	0.0	0	0	180	92
Southeast CI	0.0	0.0	0.3	0.0	5	0	160	84

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Dates: 7/24–7/30	Stock	compositi	on $(n = 39)$	92)	Harvest = 51,183					
	_	90%	CI			90%	6 CI			
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD		
Southwest CI	0.3	0.0	1.2	0.0	170	15	612	218		
Northwest CI	13.1	6.4	21.5	0.0	6,704	3,299	11,022	2,300		
Susitna	29.2	20.1	38.2	0.1	14,956	10,274	19,569	2,841		
Deshka	1.7	0.0	6.7	0.0	884	0	3,447	1,361		
Yentna	25.8	15.6	35.3	0.1	13,222	7,963	18,078	3,109		
Knik	20.7	14.2	27.4	0.0	10,577	7,263	14,018	2,035		
Jim	1.8	0.0	3.8	0.0	907	3	1,964	595		
Turnagain/Northeast CI	4.3	0.0	9.6	0.0	2,211	0	4,895	1,461		
Kenai	2.2	1.0	3.6	0.0	1,119	519	1,831	410		
Kasilof	0.0	0.0	0.3	0.0	0	0	153	90		
Southeast CI	0.8	0.1	2.1	0.0	433	30	1,062	331		

Dates: 8/1-8/5	Stock	compositi	on $(n = 39)$	99)	Harvest = 33,672
		90% CI			90% CI
Reporting group	Mean	5%	95%	SD	Mean 5% 95% SD
Southwest CI	0.0	0.0	0.4	0.0	9 0 138 62
Northwest CI	24.9	16.9	33.2	0.0	8,396 5,674 11,182 1,663
Susitna	15.7	9.3	23.1	0.0	5,299 3,125 7,767 1,403
Deshka	7.6	3.4	12.3	0.0	2,549 1,137 4,152 903
Yentna	23.4	15.3	32.0	0.1	7,885 5,157 10,778 1,704
Knik	24.5	16.2	32.6	0.1	8,238 5,459 10,991 1,726
Jim	0.3	0.0	1.8	0.0	106 0 598 233
Turnagain/Northeast CI	1.5	0.0	7.4	0.0	496 0 2,499 998
Kenai	1.1	0.3	2.2	0.0	362 92 725 198
Kasilof	0.7	0.1	2.0	0.0	237 40 689 220
Southeast CI	0.3	0.0	1.4	0.0	94 2 471 167

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Dates: 8/8–8/26	Stock	compositi	on $(n = 40)$	00)		Harvest	= 18,859	
	_	90%	CI			909	6 CI	
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	7.5	5.0	10.2	0.0	1,407	951	1,915	301
Northwest CI	87.1	79.5	94.6	0.0	16,430	15,001	17,837	864
Susitna	0.7	0.0	6.0	0.0	134	0	1,134	583
Deshka	0.4	0.0	2.2	0.0	73	0	419	161
Yentna	0.1	0.0	4.7	0.0	22	0	895	482
Knik	4.0	0.0	11.2	0.0	759	0	2,112	804
Jim	0.0	0.0	0.4	0.0	9	0	72	36
Turnagain/Northeast CI	0.0	0.0	4.5	0.0	0	0	841	359
Kenai	0.1	0.0	0.6	0.0	25	7	116	44
Kasilof	0.0	0.0	0.3	0.0	0	0	55	38
Southeast CI	0.0	0.0	0.2	0.0	0	0	36	27

*Note*: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

Appendix D2.—Central District drift gillnet fisher (excluding corridor-only), 2014: Temporal strata stock composition (%) and stock-specific harvest estimates, including mean, 90% credibility interval (CI), sample size (*n*), and standard deviation (SD).

Dates: 6/26–7/15	Stock co	mposition	n = 398	)	Harvest = 9,011
		90%	CI		90% CI
Reporting group	Mean	5%	95%	SD	Mean 5% 95% SD
Southwest CI	0.1	0.0	0.6	0.0	8 0 52 21
Northwest CI	10.8	4.8	17.4	0.0	976 433 1,569 349
Susitna	25.5	17.0	34.1	0.1	2,296 1,532 3,072 472
Deshka	7.8	3.8	11.9	0.0	700 343 1,076 223
Yentna	17.8	10.8	25.1	0.0	1,602 974 2,260 391
Knik	37.3	31.3	43.4	0.0	3,363 2,822 3,914 332
Jim	0.0	0.0	0.6	0.0	0 0 57 28
Turnagain/Northeast CI	0.5	0.0	4.7	0.0	47 0 428 220
Kenai	0.2	0.0	0.7	0.0	16 0 64 26
Kasilof	0.0	0.0	0.5	0.0	3 0 47 25
Southeast CI	0.0	0.0	0.4	0.0	0 0 36 21

Dates: 7/17–7/23	Stock co	mposition	(n = 396)	)		Harvest = 31,278					
	_	90%	CI		<u>-</u>	90%	6 CI				
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD			
Southwest CI	0.0	0.0	0.2	0.0	3	0	71	45			
Northwest CI	1.7	0.0	7.4	0.0	543	0	2,315	856			
Susitna	32.1	22.0	43.1	0.1	10,030	6,891	13,471	1,972			
Deshka	2.9	0.0	7.7	0.0	901	0	2,398	876			
Yentna	28.4	19.5	36.7	0.1	8,897	6,115	11,465	1,624			
Knik	22.0	16.5	28.4	0.0	6,874	5,159	8,873	1,153			
Jim	1.5	0.0	3.5	0.0	478	0	1,082	340			
Turnagain/Northeast CI	11.2	5.4	18.4	0.0	3,515	1,691	5,767	1,275			
Kenai	0.1	0.0	0.8	0.0	36	0	238	103			
Kasilof	0.0	0.0	0.2	0.0	0	0	60	44			
Southeast CI	0.0	0.0	0.2	0.0	0	0	64	41			

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Dates: 7/24–7/28	Stock co	2)		Harvest = 5,412						
	<u>_</u>	90% CI				90% CI				
Reporting group	Mean	5%	95%	SD	M	ean	5%	95%	SD	
Southwest CI	0.0	0.0	0.2	0.0		0	0	13	11	
Northwest CI	11.9	3.5	18.9	0.0	(	642	189	1,020	232	
Susitna	13.4	6.6	20.3	0.0	,	724	357	1,096	227	
Deshka	2.9	0.0	7.2	0.0		157	0	387	130	
Yentna	26.3	19.7	32.9	0.0	1,	421	1,065	1,781	219	
Knik	26.3	20.1	32.9	0.0	1,	425	1,086	1,779	211	
Jim	0.0	0.0	1.8	0.0		0	0	96	43	
Turnagain/Northeast CI	19.1	12.3	26.8	0.0	1,0	036	667	1,450	238	
Kenai	0.1	0.0	0.9	0.0		4	0	49	22	
Kasilof	0.0	0.0	0.3	0.0		0	0	18	10	
Southeast CI	0.1	0.0	0.6	0.0		3	0	31	14	

Dates: 7/31–8/7	Stock co	mposition	n (n = 391)	1)		Harvest =	18,636	
	<u> </u>	90%	CI		_	90% CI		
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	1.0	0.3	2.1	0.0	186	63	385	105
Northwest CI	14.9	7.8	22.6	0.0	2,785	1,453	4,206	842
Susitna	19.0	11.5	27.0	0.0	3,543	2,147	5,036	882
Deshka	7.5	3.1	12.2	0.0	1,405	579	2,273	528
Yentna	15.2	8.5	23.1	0.0	2,832	1,591	4,307	819
Knik	15.0	9.9	20.9	0.0	2,800	1,851	3,888	632
Jim	1.2	0.0	3.0	0.0	218	0	565	192
Turnagain/Northeast CI	17.9	11.4	25.0	0.0	3,340	2,125	4,663	769
Kenai	8.2	5.6	11.1	0.0	1,528	1,040	2,073	316
Kasilof	0.0	0.0	0.2	0.0	0	0	45	34
Southeast CI	0.0	0.0	0.4	0.0	0	0	67	42

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Dates: 8/11–8/25	Stock co	mposition	n (n = 368)	3)		$\underline{\hspace{1cm}} Harvest = 7,104$				
	_	90% CI			_	90% CI				
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD		
Southwest CI	1.9	0.5	4.1	0.0	136	39	294	82		
Northwest CI	95.3	90.4	99.3	0.0	6,771	6,419	7,056	193		
Susitna	0.0	0.0	0.8	0.0	0	0	54	30		
Deshka	0.0	0.0	0.5	0.0	0	0	39	20		
Yentna	0.0	0.0	3.7	0.0	0	0	263	114		
Knik	2.7	0.0	5.5	0.0	192	0	391	117		
Jim	0.0	0.0	0.2	0.0	0	0	14	9		
Turnagain/Northeast CI	0.0	0.0	2.4	0.0	0	0	168	79		
Kenai	0.1	0.0	0.5	0.0	5	0	33	16		
Kasilof	0.0	0.0	0.3	0.0	0	0	20	12		
Southeast CI	0.0	0.0	0.5	0.0	0	0	34	19		

*Note*: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

Appendix D3.—Central District drift gillnet fishery (excluding corridor-only periods), 2015: Temporal strata stock composition (%) and stock-specific harvest estimates, including mean, 90% credibility interval (CI), sample size (*n*), and standard deviation (SD).

Dates: 6/29–7/13	Stock composition $(n = 494)$				Harvest = 20,227	Harvest = 20,227				
	_	90% CI			90% CI	<u></u>				
Reporting group	Mean	5%	95%	SD	Mean 5% 95%	SD SD				
Southwest CI	0.0	0.0	0.3	0.0	1 0 68	36				
Northwest CI	13.1	7.5	18.8	0.0	2,644 1,513 3,795	681				
Susitna	25.3	18.1	32.8	0.0	5,115 3,668 6,639	905				
Deshka	4.5	0.5	8.5	0.0	910 107 1,719	475				
Yentna	22.8	14.9	30.5	0.0	4,605 3,013 6,169	941				
Knik	22.9	18.5	27.7	0.0	4,627 3,745 5,609	583				
Jim	3.4	1.7	5.4	0.0	685 342 1,096	231				
Turnagain/Northeast CI	7.1	2.8	11.9	0.0	1,431 574 2,416	558				
Kenai	0.5	0.0	1.9	0.0	109 9 390	139				
Kasilof	0.0	0.0	0.4	0.0	0 0 84	46				
Southeast CI	0.5	0.0	1.3	0.0	101 3 265	5 83				

Dates: 7/20–8/1	Stock composition $(n = 488)$				Harvest = 36,993
	_	90%	CI		90% CI
Reporting group	Mean	5%	95%	SD	Mean 5% 95% SD
Southwest CI	0.8	0.2	1.7	0.0	284 58 621 181
Northwest CI	15.8	9.4	22.2	0.0	5,856 3,477 8,216 1,459
Susitna	18.2	10.4	25.8	0.0	6,723 3,860 9,534 1,741
Deshka	3.1	0.2	6.8	0.0	1,149 90 2,509 775
Yentna	29.0	22.0	36.4	0.0	10,714 8,140 13,448 1,643
Knik	29.7	23.6	35.7	0.0	10,992 8,728 13,189 1,344
Jim	1.4	0.2	2.9	0.0	523 68 1,068 295
Turnagain/Northeast CI	1.9	0.0	5.3	0.0	716 0 1,969 737
Kenai	0.0	0.0	0.4	0.0	9 0 145 90
Kasilof	0.1	0.0	0.9	0.0	28 0 331 135
Southeast CI	0.0	0.0	0.4	0.0	0 0 145 88

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Dates: 8/3-8/24	Stock co	mpositio	on $(n=5)$	36)		Harvest	= 39,474		
	_	90% CI				909	90% CI		
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	
Southwest CI	0.9	0.2	2.7	0.0	364	72	1,051	336	
Northwest CI	46.5	39.9	53.1	0.0	18,344	15,760	20,966	1,554	
Susitna	10.7	4.3	18.1	0.0	4,206	1,679	7,129	1,665	
Deshka	1.0	0.0	3.2	0.0	389	0	1,252	456	
Yentna	13.1	6.6	19.7	0.0	5,159	2,606	7,763	1,546	
Knik	7.4	4.0	11.2	0.0	2,903	1,580	4,408	890	
Jim	1.6	0.4	3.0	0.0	636	167	1,200	319	
Turnagain/Northeast CI	11.5	6.6	16.9	0.0	4,528	2,598	6,659	1,245	
Kenai	6.3	4.3	8.5	0.0	2,473	1,690	3,353	498	
Kasilof	0.0	0.0	0.1	0.0	0	0	47	33	
Southeast CI	1.2	0.1	2.7	0.0	472	29	1,085	345	

Note: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

Appendix D4.—Central District drift gillnet fishery (corridor-only periods), 2015: Stock composition (%) and stock-specific harvest estimates, including mean, 90% credibility interval (CI), sample size (n), and standard deviation (SD).

Dates: 7/11–8/5	Stock co	mposition (	n = 646)		Harvest = 27,405				
		90%	CI			90	% CI		
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	
Southwest CI	0.0	0.0	0.3	0.0	0	0	74	50	
Northwest CI	16.4	10.5	23.1	0.0	4,498	2,864	6,338	1,062	
Susitna	14.5	7.3	22.5	0.0	3,972	2,013	6,154	1,255	
Deshka	1.8	0.0	6.1	0.0	507	0	1,660	696	
Yentna	27.5	19.3	35.8	0.0	7,545	5,279	9,808	1,365	
Knik	26.8	21.0	33.2	0.0	7,334	5,762	9,106	1,022	
Jim	2.6	1.1	4.5	0.0	706	303	1,235	284	
Turnagain/Northeast CI	9.2	5.0	14.5	0.0	2,531	1,358	3,967	797	
Kenai	1.1	0.0	2.8	0.0	313	0	754	245	
Kasilof	0.0	0.0	0.3	0.0	0	0	69	45	
Southeast CI	0.0	0.0	0.2	0.0	0	0	58	35	

Note: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

Appendix D5.—Central District drift gillnet fishery (excluding corridor-only periods), 2016: Temporal strata stock composition (%) and stock-specific harvest estimates, including mean, 90% credibility interval (CI), sample size (*n*), and standard deviation (SD).

Dates: 6/30–7/18	Stock composition ( $n = 373$ )					Harvest = 29,246			
	90% CI					90% CI			
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	
Southwest CI	0.1	0.0	0.8	0.0	34	0	241	99	
Northwest CI	10.6	1.7	18.9	0.0	3,115	483	5,518	1,434	
Susitna	29.1	18.8	39.4	0.1	8,515	5,496	11,527	1,849	
Deshka	9.7	5.0	14.9	0.0	2,842	1,454	4,357	866	
Yentna	25.6	15.6	35.5	0.1	7,487	4,571	10,389	1,734	
Knik	15.2	10.7	20.2	0.0	4,454	3,118	5,907	868	
Jim	1.8	0.3	3.8	0.0	530	99	1,122	308	
Turnagain/Northeast CI	7.4	3.0	12.0	0.0	2,176	869	3,498	789	
Kenai	0.0	0.0	0.1	0.0	0	0	43	27	
Kasilof	0.0	0.0	0.2	0.0	0	0	55	44	
Southeast CI	0.3	0.0	1.2	0.0	93	0	354	132	

Dates: 7/25–8/25	Stock composition $(n = 377)$					Harvest = 36,837				
		90% CI				909				
Reporting group	Mean	0.1	1.0	SD	Mean	5%	95%	SD		
Southwest CI	1.7	0.5	3.5	0.0	633	185	1,284	354		
Northwest CI	37.9	27.5	47.9	0.1	13,957	10,135	17,654	2,350		
Susitna	17.0	9.0	25.4	0.1	6,247	3,319	9,346	1,863		
Deshka	3.9	0.3	7.9	0.0	1,449	111	2,916	841		
Yentna	9.9	4.0	15.8	0.0	3,649	1,481	5,834	1,327		
Knik	9.9	2.7	19.2	0.1	3,646	998	7,066	1,940		
Jim	1.9	0.5	3.7	0.0	700	181	1,352	358		
Turnagain/Northeast CI	10.5	2.0	19.4	0.1	3,877	739	7,157	1,905		
Kenai	4.7	2.8	7.0	0.0	1,721	1,017	2,575	465		
Kasilof	1.5	0.3	3.9	0.0	549	95	1,454	471		
Southeast CI	1.1	0.2	3.7	0.0	408	67	1,364	461		

Note: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

Appendix D6.—Central District drift gillnet fishery (corridor-only periods), 2016: stock composition (%) and stock-specific harvest estimates, including mean, 90% credibility interval (CI), sample size (n), and standard deviation (SD).

Dates: 7/9–8/3	Stock composition $(n = 489)$					Harvest = 17,151			
		90% CI				90	0% CI		
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	
Southwest CI	4.1	2.3	6.1	0.0	696	393	1,041	199	
Northwest CI	0.0	0.0	2.0	0.0	0	0	337	159	
Susitna	14.6	8.2	21.0	0.0	2,503	1,408	3,601	670	
Deshka	7.0	3.3	10.9	0.0	1,196	567	1,864	387	
Yentna	29.7	23.6	36.1	0.0	5,101	4,051	6,185	637	
Knik	28.7	22.8	34.9	0.0	4,918	3,903	5,991	634	
Jim	0.2	0.0	1.7	0.0	28	0	285	117	
Turnagain/Northeast CI	10.2	5.0	16.0	0.0	1,757	852	2,747	578	
Kenai	3.1	1.7	4.9	0.0	533	299	837	166	
Kasilof	0.0	0.0	0.5	0.0	0	0	80	42	
Southeast CI	2.4	0.6	4.8	0.0	418	95	824	223	

*Note*: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

## APPENDIX E: NORTHERN DISTRICT SET GILL NET STOCK COMPOSITION ESTIMATES BY DATE, 2013–2016

Appendix E1.–Northern District set gillnet fishery, 2013–2016: Temporal strata stock composition (%), including mean, 90% credibility interval (CI), sample size (*n*), and standard deviation (SD).

2013

	(7/15	5–7/22;	n = 39	8)	(7/2	25-8/1;	n = 395	5)	(8/:	5-8/12;	n = 385	5)	(8/1:	5-8/26;	n = 37	3)
		90%	6 CI	_		90%	6 CI	_		90%	6 CI	_		90%	6 CI	_
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.2	0.1	0.1	0.0	0.6	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.3	0.2
Northwest CI	8.6	2.5	15.2	3.8	6.8	1.3	12.2	3.2	10.5	3.4	18.5	4.6	26.0	18.2	34.2	4.7
Susitna	39.0	28.8	48.7	6.0	0.0	0.0	7.8	4.1	14.0	5.9	23.7	5.5	11.6	5.4	18.7	4.0
Deshka	6.1	1.0	11.0	2.8	7.6	2.5	12.6	3.1	5.2	0.8	10.4	2.9	0.3	0.0	3.9	1.5
Yentna	44.1	34.5	53.9	5.8	27.0	20.0	34.2	4.3	25.5	16.1	34.4	5.5	4.5	0.0	9.6	2.9
Knik	0.4	0.0	3.1	1.3	49.0	41.7	56.1	4.4	19.1	12.9	27.1	4.4	2.4	0.2	7.1	2.3
Jim	1.6	0.5	3.1	0.8	0.0	0.0	1.5	0.7	0.7	0.0	1.9	0.6	0.3	0.0	1.6	0.6
Turnagain/Northeast CI	0.1	0.0	4.6	2.0	9.4	4.7	15.4	3.2	24.2	16.1	32.2	4.9	50.6	42.5	58.8	5.0
Kenai	0.0	0.0	0.2	0.1	0.1	0.0	0.8	0.3	0.8	0.1	2.1	0.6	4.3	2.2	6.8	1.4
Kasilof	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.2	0.0	0.0	0.3	0.2
Southeast CI	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.4	0.3	0.0	0.0	0.4	0.3
						2014										
	(7/14	1–7/21;	n = 33	7)	(7/2	4–7/31;	n = 39	4)	(8/4	4-8/11;	n = 384	1)	(8/14	4-8/25;	n = 33	7)
		90%	6 CI	_		90%	6 CI	_		90%	6 CI	_		90%	6 CI	_
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.3	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.7	0.3
Northwest CI	13.1	6.6	20.1	4.2	19.4	11.0	28.7	5.5	22.3	14.6	29.7	4.6	16.6	9.5	24.2	4.5
Susitna	29.7	20.5	38.9	5.6	5.5	0.0	14.8	5.2	12.9	4.4	21.2	5.1	0.0	0.0	5.4	2.3
Deshka	0.0	0.0	1.2	0.7	0.0	0.0	4.2	1.9	0.8	0.0	5.5	2.5	1.5	0.0	5.6	2.3
Yentna	19.5	11.9	27.7	4.8	22.6	14.1	31.0	5.2	10.9	4.0	17.8	4.2	4.8	0.0	10.4	3.3
Knik	32.0	25.6	38.9	4.0	33.3	25.0	42.2	5.2	33.7	26.7	40.9	4.3	15.4	9.4	21.6	3.7
Jim	2.1	0.2	4.4	1.3	3.9	1.7	6.4	1.4	1.6	0.3	3.6	1.0	0.3	0.0	1.2	0.4
Turnagain/Northeast CI	3.6	0.0	9.9	3.5	15.3	9.7	21.4	3.6	17.2	11.5	23.5	3.5	60.0	53.2	66.8	4.1
Kenai	0.0	0.0	0.2	0.2	0.0	0.0	0.3	0.2	0.6	0.0	1.6	0.5	1.5	0.3	3.0	0.8
Kasilof	0.0	0.0	0.2	0.2	0.0	0.0	0.3	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.2	0.1
Southeast CI	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.7	0.3

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						2015										
	(7/9	-7/20;	n = 341	)	(7/2	3–7/30;	n = 39	3)	(8/3	8–8/10;	n = 491	1)	(8/1)	3-8/20;	n = 48	4)
		90%	6 CI	_		90%	6 CI	_		90%	6 CI	_		90%	6 CI	_
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.2	0.1	0.0	0.0	0.4	0.2	0.0	0.0	0.2	0.1	0.2	0.0	1.0	0.3
Northwest CI	5.9	0.5	13.1	4.3	6.5	0.0	12.9	4.0	29.9	22.8	37.7	4.5	20.3	13.4	27.4	4.3
Susitna	18.5	10.5	26.6	4.9	3.4	0.0	11.6	4.6	13.3	6.6	20.3	4.2	4.6	0.0	11.2	4.0
Deshka	0.8	0.0	4.3	1.4	1.3	0.0	5.3	1.9	3.9	0.0	8.7	2.8	1.4	0.0	4.9	1.7
Yentna	34.3	26.6	43.0	5.1	32.8	25.6	40.1	4.5	16.9	11.3	22.5	3.4	8.1	3.3	13.2	3.1
Knik	32.7	23.4	41.4	5.4	36.1	29.2	43.5	4.4	20.6	13.6	28.8	4.7	23.0	16.0	30.4	4.4
Jim	2.2	0.6	4.2	1.1	3.6	1.8	5.6	1.2	1.4	0.0	3.2	1.1	0.0	0.0	0.9	0.4
Turnagain/Northeast CI	5.5	2.0	10.0	2.5	15.9	9.8	22.3	3.7	13.1	6.6	19.5	3.9	40.1	33.2	47.5	4.4
Kenai	0.0	0.0	0.3	0.2	0.0	0.0	0.1	0.1	0.7	0.1	1.7	0.5	1.9	1.0	3.1	0.7
Kasilof	0.0	0.0	0.2	0.2	0.0	0.0	0.2	0.1	0.1	0.0	0.6	0.3	0.3	0.0	1.8	0.6
Southeast CI	0.0	0.0	0.2	0.1	0.4	0.0	1.7	0.7	0.0	0.0	0.4	0.2	0.0	0.0	0.7	0.4

				2016								
	(7/1	1–7/25;	n = 376		(7/2	28–8/4; <i>r</i>	a = 365		(8/8	8–8/22; <i>r</i>	a = 371	
		90%	CI			90%	6 CI			90%	6 CI	
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.1
Northwest CI	12.0	5.8	18.7	4.0	28.2	20.0	36.7	5.1	15.5	7.6	22.6	4.5
Susitna	11.7	3.2	20.2	5.2	10.0	2.5	17.9	4.6	8.7	2.8	15.0	3.8
Deshka	8.8	4.5	13.4	2.7	0.0	0.0	4.7	2.2	1.2	0.0	4.4	1.8
Yentna	34.8	26.8	42.7	4.9	19.1	11.3	27.4	5.0	6.2	2.7	10.9	2.6
Knik	26.5	19.0	34.5	4.8	29.6	22.6	36.8	4.3	5.7	1.9	12.0	3.1
Jim	0.0	0.0	0.8	0.4	0.2	0.0	1.0	0.4	1.5	0.5	2.9	0.8
Turnagain/Northeast CI	6.2	1.1	11.9	3.4	12.6	7.1	18.9	3.6	59.4	52.4	66.1	4.2
Kenai	0.0	0.0	0.2	0.2	0.2	0.0	0.9	0.4	1.5	0.5	2.8	0.7
Kasilof	0.0	0.0	0.2	0.1	0.1	0.0	0.7	0.3	0.3	0.0	1.4	0.5
Southeast CI	0.0	0.0	0.3	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.6	0.3

*Note*: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

## APPENDIX F: NORTHERN DISTRICT SET GILL NET STOCK COMPOSITION AND STOCK-SPECIFIC HARVEST ESTIMATES BY AREA, 2013–2016

Appendix F1.—South portion of the General Subdistrict (Northern District) set gillnet fishery, 2013—2016: Stock composition (%) and stock-specific harvest estimates, including mean, 90% credibility interval (CI), sample size (*n*), and standard deviation (SD).

Year: 2013	Stock co	mposition	n (n = 393)	)		Harve	est = 19,584	
Dates: 7/1-8/29	_	90%	CI			90	0% CI	
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.3	0.0	0	0	61	36
Northwest CI	26.3	19.1	34.1	0.0	5,159	3,736	6,688	900
Susitna	18.8	11.1	26.9	0.0	3,675	2,175	5,260	961
Deshka	6.0	1.6	10.8	0.0	1,183	317	2,124	553
Yentna	45.3	36.8	54.3	0.1	8,873	7,203	10,641	1,051
Knik	1.7	0.2	5.8	0.0	333	42	1,144	383
Jim	1.8	0.5	3.5	0.0	361	107	676	174
Turnagain/Northeast CI	0.0	0.0	1.3	0.0	0	0	255	117
Kenai	0.0	0.0	0.3	0.0	0	0	58	30
Kasilof	0.0	0.0	0.1	0.0	0	0	26	19
Southeast CI	0.0	0.0	0.2	0.0	0	0	31	22

Year: 2014	Stock co	mposition	(n = 390)	)	<u></u>	Harves	st = 13,238	
Dates: 6/30–9/1	_	90%	CI			90	% CI	
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.2	0.0	0	0	20	16
Northwest CI	35.6	27.4	43.8	0.1	4,718	3,626	5,798	662
Susitna	28.9	20.0	38.1	0.1	3,825	2,641	5,044	736
Deshka	0.0	0.0	6.0	0.0	0	0	796	368
Yentna	33.4	24.7	42.0	0.1	4,418	3,267	5,559	700
Knik	0.0	0.0	1.7	0.0	0	0	229	116
Jim	0.0	0.0	0.3	0.0	0	0	46	30
Turnagain/Northeast CI	2.1	0.0	7.9	0.0	278	0	1,049	384
Kenai	0.0	0.0	0.1	0.0	0	0	20	13
Kasilof	0.0	0.0	0.3	0.0	0	0	37	21
Southeast CI	0.0	0.0	0.2	0.0	0	0	20	12

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Year: 2015	Stock co	mposition	n = 393	)		Harve	est = 20,152	
Dates: 7/2-8/27		90%	CI			9(	)% CI	
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.3	0.0	6	0	52	32
Northwest CI	27.6	18.6	36.3	0.1	5,563	3,755	7,306	1,066
Susitna	16.7	9.0	24.9	0.0	3,369	1,823	5,015	984
Deshka	5.1	0.0	10.5	0.0	1,018	0	2,118	666
Yentna	38.0	30.7	45.8	0.0	7,659	6,179	9,232	939
Knik	10.8	5.8	17.4	0.0	2,169	1,163	3,507	730
Jim	0.0	0.0	0.5	0.0	0	0	108	55
Turnagain/Northeast CI	1.5	0.0	7.1	0.0	306	0	1,438	490
Kenai	0.3	0.0	1.1	0.0	62	0	228	83
Kasilof	0.0	0.0	0.2	0.0	0	0	46	31
Southeast CI	0.0	0.0	0.4	0.0	0	0	84	44

Year: 2016	Stock c	ompositio	n (n = 372)	)		Harve	est = 13,759	
Dates: 7/4-8/25	<u>-</u>	90%	CI			90	0% CI	
Reporting group	Mean	5%	95%	SD	 Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.3	0.0	4	0	46	26
Northwest CI	27.1	19.0	37.3	0.1	3,731	2,618	5,134	754
Susitna	25.7	15.5	35.7	0.1	3,533	2,136	4,916	849
Deshka	10.9	5.7	16.4	0.0	1,498	782	2,255	441
Yentna	33.0	23.7	41.7	0.1	4,534	3,255	5,741	752
Knik	3.0	0.6	6.5	0.0	414	82	901	259
Jim	0.3	0.0	1.3	0.0	44	7	186	67
Turnagain/Northeast CI	0.0	0.0	3.9	0.0	0	0	536	280
Kenai	0.0	0.0	0.2	0.0	0	0	22	15
Kasilof	0.0	0.0	0.1	0.0	0	0	20	15
Southeast CI	0.0	0.0	0.2	0.0	0	0	32	22

*Note*: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

Appendix F2.—North portion of the General Subdistrict (Northern District) set gillnet fishery, 2013—2016: Stock composition (%) and stock-specific harvest estimates, including mean, 90% credibility interval (CI), sample size (*n*), and standard deviation (SD).

Year: 2013	Stock co	mposition	n (n = 369)	)	_		Harve	est = 11,046	
Dates: 7/8-8/26		90%	CI				90	)% CI	
Reporting group	Mean	5%	95%	SD	_	Mean	5%	95%	SD
Southwest CI	0.3	0.1	1.2	0.0		30	9	129	44
Northwest CI	0.0	0.0	4.0	0.0		0	0	437	196
Susitna	6.6	0.0	14.0	0.0		732	0	1,548	535
Deshka	0.0	0.0	1.4	0.0		0	0	151	75
Yentna	22.8	16.7	29.6	0.0		2,520	1,849	3,273	427
Knik	64.5	55.9	73.2	0.1		7,129	6,172	8,087	579
Jim	1.0	0.0	2.8	0.0		108	0	310	109
Turnagain/Northeast CI	4.8	0.0	13.3	0.0		526	0	1,475	537
Kenai	0.0	0.0	0.2	0.0		0	0	17	12
Kasilof	0.0	0.0	0.2	0.0		0	0	18	13
Southeast CI	0.0	0.0	0.3	0.0		0	0	32	20

Year: 2014	Stock co	mposition	n = 393	)		Harve	est = 11,059	
Dates: 7/7-8/25	_	90%	CI			90	)% CI	
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.3	0.0	0	0	31	19
Northwest CI	3.8	0.5	9.3	0.0	417	60	1,023	328
Susitna	0.0	0.0	5.2	0.0	0	0	579	337
Deshka	0.0	0.0	1.2	0.0	0	0	137	70
Yentna	4.2	0.9	7.7	0.0	459	102	855	227
Knik	69.9	62.3	77.6	0.0	7,729	6,887	8,582	515
Jim	4.1	1.9	6.8	0.0	451	210	749	165
Turnagain/Northeast CI	18.1	10.9	25.8	0.0	2,000	1,209	2,853	493
Kenai	0.0	0.0	0.2	0.0	0	0	20	11
Kasilof	0.0	0.0	0.4	0.0	3	0	46	22
Southeast CI	0.0	0.0	0.2	0.0	0	0	17	12

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Year: 2015	Stock	compositio	n (n = 339)	))		Harve	st = 10,465	
Dates: 7/6-8/24		90% (	CI			90	% CI	
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.3	0.0	0	0	28	17
Northwest CI	2.8	0.0	9.2	0.0	292	0	966	369
Susitna	7.2	0.4	13.7	0.0	755	40	1,435	419
Deshka	0.5	0.0	4.3	0.0	56	0	453	173
Yentna	8.4	1.9	14.8	0.0	878	201	1,554	397
Knik	72.8	65.0	80.4	0.0	7,622	6,806	8,410	486
Jim	3.2	1.3	5.8	0.0	340	135	607	146
Turnagain/Northeast CI	5.0	1.6	9.0	0.0	522	162	942	250
Kenai	0.0	0.0	0.2	0.0	0	0	18	13
Kasilof	0.0	0.0	0.2	0.0	0	0	17	12
Southeast CI	0.0	0.0	0.9	0.0	0	0	98	45

Year: 2016	Stock	composition	on $(n = 37)$	3)		Harve	est = 5,711	
Dates: 7/4–8/15	_	90%	CI			90	% CI	
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.00	0.21	0.00	0	0	12	9
Northwest CI	7.8	1.84	12.81	0.03	444	105	732	175
Susitna	1.8	0.00	8.03	0.04	105	0	459	206
Deshka	1.4	0.00	4.62	0.02	80	0	264	101
Yentna	8.4	2.91	14.33	0.03	479	166	819	196
Knik	60.3	52.16	68.33	0.05	3,445	2,979	3,902	277
Jim	2.5	0.81	4.56	0.01	144	46	261	67
Turnagain/Northeast CI	17.2	10.52	24.81	0.04	982	601	1,417	250
Kenai	0.2	0.00	1.08	0.00	9	0	62	27
Kasilof	0.4	0.09	1.64	0.01	22	5	94	34
Southeast CI	0.0	0.00	0.91	0.00	0	0	52	24

Note: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

Appendix F3.—Eastern Subdistrict (Northern District) set gillnet fishery, 2013–2016: Stock composition (%) and stock-specific harvest estimates, including mean, 90% credibility interval (CI), sample size (*n*), and standard deviation (SD).

Year: 2013	Stock co	mposition	n = 374	)		Harve	est = 11,616	
Dates: 6/27–9/2	_	90%	CI			9	0% CI	
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD
Southwest CI	0.0	0.0	0.2	0.0	0	0	27	14
Northwest CI	14.0	4.5	22.8	0.1	1,624	520	2,654	608
Susitna	11.2	5.1	18.5	0.0	1,304	594	2,154	477
Deshka	2.3	0.0	6.8	0.0	266	0	795	301
Yentna	2.4	0.0	6.7	0.0	274	0	784	280
Knik	1.9	0.1	6.0	0.0	223	10	694	251
Jim	0.1	0.0	0.5	0.0	6	0	61	24
Turnagain/Northeast CI	63.8	55.5	71.5	0.0	7,406	6,444	8,305	567
Kenai	4.4	2.0	7.1	0.0	513	233	827	183
Kasilof	0.0	0.0	0.3	0.0	0	0	35	26
Southeast CI	0.0	0.0	0.3	0.0	0	0	34	26

Year: 2014	Stock composition ( $n = 392$ )					Harvest = 9,453			
Dates: 7/7-8/28	90% CI					90% CI			
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	
Southwest CI	0.0	0.0	0.2	0.0	0	0	23	15	
Northwest CI	10.2	2.4	16.2	0.0	960	230	1,532	363	
Susitna	10.8	6.2	16.3	0.0	1,022	582	1,542	295	
Deshka	0.0	0.0	2.0	0.0	0	0	189	82	
Yentna	0.0	0.0	3.5	0.0	0	0	328	156	
Knik	13.5	8.2	19.0	0.0	1,272	776	1,799	313	
Jim	0.8	0.1	1.8	0.0	72	8	169	51	
Turnagain/Northeast CI	62.3	56.4	68.3	0.0	5,891	5,328	6,457	349	
Kenai	2.0	0.4	4.1	0.0	189	36	391	114	
Kasilof	0.0	0.0	0.3	0.0	0	0	28	18	
Southeast CI	0.5	0.1	2.0	0.0	46	9	189	63	

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Year: 2015	Stock composition $(n = 392)$					Harvest = 12,398			
Dates: 7/6-8/27	90% CI					90% CI			
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	
Southwest CI	0.0	0.0	0.2	0.0	0	0	23	16	
Northwest CI	12.4	7.2	19.1	0.0	1,535	896	2,374	451	
Susitna	1.2	0.0	5.8	0.0	147	0	714	298	
Deshka	0.0	0.0	1.0	0.0	0	0	121	60	
Yentna	0.0	0.0	2.1	0.0	6	0	266	120	
Knik	21.3	13.4	29.9	0.1	2,647	1,661	3,709	625	
Jim	0.3	0.0	1.6	0.0	32	0	203	88	
Turnagain/Northeast CI	62.0	54.7	69.7	0.0	7,691	6,787	8,643	566	
Kenai	1.9	0.8	3.5	0.0	241	103	432	102	
Kasilof	0.8	0.0	2.2	0.0	100	0	274	94	
Southeast CI	0.0	0.0	0.3	0.0	0	0	40	24	

Year: 2016	Stock composition $(n = 371)$					Harvest = 10,199				
Dates: 7/11–9/5	90% CI				90% CI					
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD		
Southwest CI	0.0	0.0	0.5	0.0	0	0	50	28		
Northwest CI	0.0	0.0	2.7	0.0	0	0	275	124		
Susitna	6.9	2.9	11.6	0.0	700	297	1,178	265		
Deshka	0.0	0.0	0.3	0.0	0	0	29	20		
Yentna	0.0	0.0	1.1	0.0	0	0	113	55		
Knik	16.9	11.9	22.4	0.0	1,728	1,210	2,280	330		
Jim	0.0	0.0	0.7	0.0	0	0	70	33		
Turnagain/Northeast CI	73.2	67.0	79.0	0.0	7,466	6,838	8,054	369		
Kenai	2.8	1.3	4.8	0.0	289	136	490	107		
Kasilof	0.0	0.0	0.3	0.0	0	0	28	20		
Southeast CI	0.2	0.0	1.6	0.0	16	0	163	63		

Note: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

## APPENDIX G: UPPER SUBDISTRICT (CENTRAL DISTRICT) SET GILL NET STOCK COMPOSITION AND STOCK-SPECIFIC HARVEST ESTIMATES BY AREA, 2015–2016

Appendix G1.—Upper Subdistrict (Central District) set gillnet fishery, 2015 and 2016: Stock composition (%) and stock-specific harvest estimates, including mean, 90% credibility interval (CI), sample size (*n*), and standard deviation (SD).

Year: 2015	Stock	compositi	ion (n = 39)	1)		Harvest = 17,517			
Dates: 7/14-8/12	90% CI					90% CI			
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	
Southwest CI	0.2	0.0	1.1	0.0	29	0	201	76	
Northwest CI	12.7	6.7	19.1	0.0	2,233	1,167	3,337	649	
Susitna	11.0	3.3	18.6	0.0	1,923	576	3,267	808	
Deshka	0.1	0.0	2.8	0.0	20	0	495	206	
Yentna	9.5	3.3	16.3	0.0	1,659	577	2,859	690	
Knik	22.8	16.4	29.9	0.0	3,998	2,879	5,246	728	
Jim	2.3	1.0	3.8	0.0	395	167	671	156	
Turnagain/Northeast CI	12.6	8.3	17.2	0.0	2,205	1,449	3,007	480	
Kenai	26.1	21.9	30.4	0.0	4,576	3,833	5,331	450	
Kasilof	2.7	0.9	4.8	0.0	467	161	843	209	
Southeast CI	0.1	0.0	1.2	0.0	12	0	212	91	

Year: 2016	Stock	compositi	ion $(n=29)$	6)	Harvest = 11,228				
Dates: 7/14-8/9	<u>-</u>	90%	CI			90% CI			
Reporting group	Mean	5%	95%	SD	Mean	5%	95%	SD	
Southwest CI	1.1	0.3	2.8	0.0	120	29	314	101	
Northwest CI	0.0	0.0	3.1	0.0	0	0	350	157	
Susitna	4.9	0.0	11.0	0.0	553	0	1,230	413	
Deshka	1.2	0.0	5.4	0.0	140	0	602	230	
Yentna	6.9	0.9	12.9	0.0	771	100	1,444	395	
Knik	3.7	0.0	8.4	0.0	417	0	942	308	
Jim	0.0	0.0	0.3	0.0	0	0	34	22	
Turnagain/Northeast CI	30.9	22.6	39.8	0.1	3,469	2,542	4,467	583	
Kenai	48.0	42.3	53.8	0.0	5,395	4,746	6,039	393	
Kasilof	0.2	0.0	1.3	0.0	21	0	143	57	
Southeast CI	3.1	0.7	5.8	0.0	343	74	654	174	

Note: Stock composition and harvest estimates may not sum to 100% due to rounding errors.