

Fishery Management Report No. 23-04

**2022 Lower Cook Inlet Area Salmon Annual
Management Report**

by

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and

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Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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

FISHERY MANAGEMENT REPORT NO. 23-04

**2022 LOWER COOK INLET AREA SALMON ANNUAL MANAGEMENT
REPORT**

by

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TABLE OF CONTENTS

	Page
LIST OF TABLES.....	ii
LIST OF FIGURES.....	ii
LIST OF APPENDICES	ii
ABSTRACT	1
INTRODUCTION.....	1
Lower Cook Inlet Management Area Commercial Salmon and Fisheries.....	1
Overview of Areawide Salmon Fisheries	1
SALMON SEASON SUMMARY BY DISTRICT.....	2
Southern District.....	2
Preseason Outlook and Harvest Strategy	2
Season Summary	2
Outer District.....	3
Preseason Outlook and Harvest Strategy	4
Season Summary	4
Eastern District	5
Preseason Outlook and Harvest Strategy	5
Season Summary	5
Kamishak Bay District.....	6
Preseason Outlook and Harvest Strategy	6
Season Summary	6
LOWER COOK INLET PERSONAL USE FISHERIES AND COMMERCIAL FISHERIES HOMEPACK	7
ACKNOWLEDGMENTS	8
REFERENCES CITED	9
FIGURES AND TABLES.....	11
APPENDIX A: SOUTHERN DISTRICT	21
APPENDIX B: OUTER DISTRICT.....	27
APPENDIX C: EASTERN DISTRICT.....	35
APPENDIX D: KAMISHAK BAY DISTRICT.....	43
APPENDIX E: PERSONAL USE, AND HOMEPACK HARVEST.....	53
APPENDIX F: 2022 OUTLOOK.....	55

LIST OF TABLES

Table	Page
1. Lower Cook Inlet Management Area commercial salmon harvest by gear and district, 2022.	14
2. Average price and estimated exvessel value of the total hatchery and commercial salmon harvest by gear type, Lower Cook Inlet Management Area, 2022.	15
3. Average price per pound paid to permit holders for salmon, Lower Cook Inlet Management Area, 2012–2022.	16
4. Estimated exvessel value of commercial salmon harvest by gear type with 10-year average, Lower Cook Inlet Management Area, 2012–2022.	17
5. Emergency orders issued for the commercial, personal use, and subsistence salmon fisheries in Lower Cook Inlet Management Area, 2022.	18
6. Escapements relative to escapement goals and methods used to monitor escapements in 2022 for chum, pink, and sockeye salmon stocks in Lower Cook Inlet Management Area, Alaska.	19

LIST OF FIGURES

Figure	Page
1. Lower Cook Inlet Management Area commercial fishing districts, commercial set gillnet areas, salmon hatcheries, weir and fish ladder locations, and remote video salmon monitoring sites.	12
2. Lower Cook Inlet Management Area commercial fishing districts and reporting subdistricts.	13

LIST OF APPENDICES

Appendix	Page
A1. Southern District commercial set gillnet salmon harvest by fishing period, 2022.	22
A2. Southern District commercial purse seine salmon harvest by period, 2022.	23
A3. Total commercial common property salmon harvest in the Southern District, 2012–2022.	24
A4. Estimated sockeye, pink, and chum salmon escapements for the major spawning systems in the Southern District of the Lower Cook Inlet Area, 2012–2022.	25
B1. Outer District commercial purse seine salmon harvest by period, 2022.	28
B2. Total commercial common property salmon harvest in Outer District, 2012–2022.	30
B3. Daily and cumulative sockeye salmon escapement objectives derived from weir-based sustainable escapement goal apportioned using historical run timing versus actual escapement through the Delight Lake weir, 2022.	31
B4. Sockeye salmon escapement past Delight Lake weir, 2009–2022.	32
B5. Estimated pink, chum, and sockeye salmon escapements for the major spawning systems in the Outer District of the Lower Cook Inlet Management Area, 2012–2022.	33
C1. Eastern District common property commercial purse seine salmon harvest by period, 2022.	36
C2. Historical commercial common property and derby commercial sales harvest by species in the Eastern District, 2012–2022.	37
C3. Daily and cumulative sockeye salmon escapement objectives compared to actual escapement through the Bear Creek weir, 2022.	38
C4. Coho salmon escapement through the Bear Creek weir, 2022.	40
C5. Adult sockeye and coho salmon escapement, and Dolly Varden char and smolt outmigration past Bear Creek weir, 2012–2022.	41
C6. Estimated sockeye and pink salmon escapements for the major spawning systems in the Eastern District of the Lower Cook Inlet Management Area, 2012–2022.	42
D1. Kamishak Bay District commercial salmon harvest by period, 2022.	44
D2. Total commercial common property harvest by species in the Kamishak Bay District, 2012–2022.	45
D3. Daily and cumulative sockeye salmon escapement objectives compared to actual escapement past the video monitoring site at Chenik Lake, 2022.	46

LIST OF APPENDICES (Continued)

Appendix	Page
D4. Daily and cumulative sockeye salmon escapement objectives compared to actual escapement past the video monitoring site at Mikfik Lake, 2022.	48
D5. Sockeye salmon escapement into Chenik Lake and Mikfik Lake, 2012–2022.	50
D6. Estimated pink, chum, and sockeye salmon escapements in thousands of fish for the major spawning systems in the Kamishak Bay District of the Lower Cook Inlet Management Area, 2012–2022.	51
E1. Personal use set gillnet salmon harvest in numbers of fish by species and effort, Southern District Lower Cook Inlet, 2012–2022.	54
E2. Salmon retained from the commercial harvest for personal use by species and gear type from Lower Cook Inlet districts, 2012–2022.	54
F1. Lower Cook Inlet Management Area salmon fishery outlook, 2022.	56

ABSTRACT

The Lower Cook Inlet Management Area consists of all coastal waters and inland drainages entering waters north of Cape Douglas, west of Cape Fairfield, and south of Anchor Point. In 2022, commercial harvest was approximately 751 thousand salmon and was composed of 403,035 pink *Oncorhynchus gorbuscha*, 292,845 sockeye *O. nerka*, 53,793 chum *O. keta*, 1,000 coho *O. kisutch*, and 275 Chinook salmon *O. tshawytscha*. Approximately 74.4% of the harvest (555,953 salmon) was sold as common property harvest, and 191,169 salmon were sold for hatchery cost recovery, including carcass sales. Homepack and donated fish (3,826 salmon) accounted for less than 1% of the harvest. Based on fish ticket reporting, the preliminary value of the commercial salmon harvest was \$3.7 million, including hatchery sales. During the 2022 season, 15 set gillnet and 11 purse seine permit holders reported commercial deliveries. An additional 3 set gillnet permit holders harvested salmon as home pack and did not report any commercial deliveries. Set gillnet harvest value was an estimated \$333,816, with average permit earnings of \$22,254. Purse seine fishery exvessel harvest value was an estimated \$2.1 million, with average permit earnings of \$187,868. Revenue generated by cost recovery for hatchery operations was approximately \$1.3 million. A total of 1,531 salmon were harvested in the Kachemak Bay personal use set gillnet fishery.

Keywords: Sockeye salmon, *Oncorhynchus nerka*, pink salmon, *O. gorbuscha*, chum salmon, *O. keta*, Chinook salmon, *O. tshawytscha*, coho salmon, *O. kisutch*, Annual Management Report, Lower Cook Inlet

INTRODUCTION

LOWER COOK INLET MANAGEMENT AREA COMMERCIAL SALMON AND FISHERIES

The Lower Cook Inlet Management Area (LCI) consists of waters of the Cook Inlet Management Area (Area H) south of the latitude of Anchor Point, including the western shore of Cook Inlet south to Cape Douglas, and the eastern shore of Cook Inlet along the Kenai Peninsula to Cape Fairfield (Figures 1 and 2).

LCI is divided into 5 districts that correspond to local geography and distribution of the 5 species of Pacific salmon (*Oncorhynchus* spp.) harvested by commercial fisheries (Figure 1). These districts are further divided into subdistricts and sections for management and harvest reporting purposes (Figure 2). The primary management objective for all districts is to achieve spawning escapement goals for major salmon stocks and allow orderly fisheries to harvest fish surplus to spawning requirements.

Four hatcheries currently contribute to the LCI salmon fisheries. These facilities and their annual production are presented in detail in Alaska Salmon Fisheries Enhancement Annual Report 2021 (Wilson 2022).

Gear utilized in commercial salmon fisheries includes purse seine and set gillnet. Purse seine gear is permitted to fish in the Southern, Outer, Eastern, and Kamishak Bay districts (Figure 1). Set gillnet gear is permitted to fish in designated portions of the Southern District. The Barren Islands District is closed by regulation to salmon harvest.

OVERVIEW OF AREAWIDE SALMON FISHERIES

In 2022, the LCI commercial harvest of 751,000 salmon included 275 Chinook *O. tshawytscha*, 292,845 sockeye *O. nerka*, 1,000 coho *O. kisutch*, 403,035 pink *O. gorbuscha*, and 53,793 chum salmon *O. keta* (Table 1). Approximately 74% of the harvest (555,953 fish) was attributed to the common property fishery, and 26% (191,169 fish) came from hatchery cost recovery. Homepack harvest (908 fish) accounted for less than 1% of the harvest from LCI (Table 1). The 2022 preliminary exvessel value estimates by gear group from the common property fishery were

\$2.1 million (86.1%) for purse seine and \$333,816 (13.9%) for set gillnet (Table 2). The average price per pound paid to permit holders was above the 10-year average for all salmon species except coho salmon and sockeye salmon sold by set gillnet permit holders (Table 3). Hatchery harvest in 2022 was estimated at \$1.3 million (Table 2), which was lower than the recent 10-year average for hatchery sales (Table 4). Approximately \$1.2 million (90%) of the 2022 hatchery harvest was from sockeye salmon sales and most of the remainder was from pink salmon sales.

SALMON SEASON SUMMARY BY DISTRICT

SOUTHERN DISTRICT

The Southern District includes the waters of eastern Cook Inlet south of Anchor Point and north of a line from Cape Elizabeth to Cape Douglas, excluding waters east of a line from Point Adam to the tip of Cape Elizabeth (Figure 1). Commercial fishing in this district is restricted by regulation to waters primarily along the south shore of Kachemak Bay from Chugachik Island near the terminus of Kachemak Bay to Point Bede approximately 4 miles south of the village of Nanwalek (English Bay; Figures 1 and 2). Purse seine gear is permitted in all open waters of this district during periods established by emergency order (EO). Commercial set gillnet harvest is restricted to approximately 15 miles of shoreline in 5 subdistricts within the Southern District (Figure 1). An Area H Commercial Fisheries Entry Commission (CFEC) permit is required in all areas of Cook Inlet for commercial set gillnet fishing, but the area fished must be registered at the onset of fishing each year. Although any Area H commercial set gillnet permit holder may register to fish in the Southern District areas as part of the “Greater Cook Inlet” registration area, registering a permit there precludes that permit holder from fishing in the Northern District of Upper Cook Inlet Management Area (UCI), or in the Upper Subdistrict of the Central District of UCI, for the remainder of that calendar year, as defined in 5 AAC 21.345. Other areas in the Greater Cook Inlet Area may be fished by set gillnet permit holders registered to fish in the Southern District. The primary salmon species harvested in the Southern District for both purse seine and set gillnet permit holders are sockeye and pink salmon, although modest numbers of chum and coho salmon are also harvested. The major producer of wild sockeye salmon in this district is the English Bay Lakes system. Pink salmon historically have returned in large numbers to Humpy Creek and Seldovia River, as well as numerous smaller streams in the Southern District.

Preseason Outlook and Harvest Strategy

The 2022 commercial wild stock salmon harvest forecast for the Southern District was 398,000 pink and 76,800 sockeye salmon (Appendix F1). The enhanced sockeye salmon run to hatchery release sites in the Southern District was forecast to be 114,800 fish. A total of 2.7 million hatchery-produced pink salmon were forecast to return to the LCI in 2022 (Appendix F1).

As specified in regulation (5 AAC 21.310(b)(4)(B)), the set gillnet fishing season in the Southern District opens on or after June 1 with two 48-hour periods per week unless modified by EO. The seine fishing season and fishing periods are opened and closed by EO, depending on the availability of the harvestable surplus of salmon.

Season Summary

The Southern District set gillnet commercial salmon fishing season was opened by EO on June 1 with the first fishing period at 6:00 AM on Thursday, June 2, 2022 (Table 5). This and all following commercial set gillnet fishing periods were 48 hours in duration as specified in regulation.

The commercial set gillnet salmon season in the Southern District was closed by regulation on October 1. The Southern District commercial purse seine season was opened by EO on Monday, June 13, with a fishing schedule of 3 weekly 16-hour periods (6:00 AM to 10:00 PM) on Mondays, Wednesdays, and Fridays in portions of the district east of McDonald Spit (Table 5). The seine fishery in the early portion of the season, prior to mid-July, targets enhanced sockeye salmon runs to hatchery release sites in the Southern District. Pink salmon runs to wild stocks in the Southern District were lower relative to the strong runs in the Outer District where much of the fleet fished from late July through August.

The 2022 Southern District total sockeye salmon commercial common property harvest, excluding homepack, was 108,377 fish, including 26,667 (24.6%) harvested by the set gillnet fleet and 81,710 harvested by seine permit holders (Table 1, Appendices A1–A3). Total common property pink salmon harvest was 14,425 fish, including 8,661 fish (60.0%) harvested by the set gillnet permit holders and 5,764 harvested by the purse seine fleet. A total of 246 Chinook salmon were harvested by the common property fishery in the Southern District, including 182 harvested by set gillnet permit holders and the remaining by seine permit holders. A total of 3,282 chum salmon were harvested, with 2,974 (90.6%) by set gillnet and 308 by seine permit holders. In addition, 810 coho salmon were harvested, including 643 by set gillnet and 167 by seine permit holders (Appendices A1 and A2, Table 1). The total 2022 Southern District commercial harvest of 108,377 sockeye salmon was well above the 10-year average harvest of 71,132 (Appendix A3) and above the forecasted harvest of 76,800 (Appendix F1). The pink salmon commercial harvest of 14,425 was below the forecasted natural production harvest of 398,000 (Appendix F1), and the 10-year average harvest of 168,407 (Appendix A3).

The English Bay River has the only sockeye salmon sustainable escapement goal (SEG) in the Southern District. The SEG for this system is 6,000–13,500 fish (Table 6), which was assessed this year by a picket weir. The final spawning escapement for the English Bay River as measured by a picket weir was 11,452 sockeye salmon, which was within the SEG range of 6,000–13,500 (Table 6). The 10-year average spawning escapement was 13,600 sockeye salmon for this system (Appendix A4). Of the 6 pink salmon index streams in the Southern District, only Tutka Creek had a final escapement estimate that was above the SEG range. Two index streams were within SEG ranges, (Barabara Creek and Port Graham River), and 3 fell below the lower bound of the SEG range (China Poot, Humpy, and Seldovia Creeks; Table 6). The only chum salmon SEG in the Southern District is for the Port Graham River. The final chum salmon escapement in this system was 606 fish which was below the SEG range of 1,200–2,700 fish (Table 6) and was below the previous 10-year average escapement of 2,500 chum salmon (Appendix A4).

OUTER DISTRICT

The Outer District includes the waters of LCI along the Kenai Peninsula south and east of a line from Point Adam to Cape Elizabeth, and east of the longitude of Cape Elizabeth to the longitude of Aligo Point, which is 35 miles southwest of Seward (Figures 1 and 2). Purse seine gear is permitted in all open waters of this district during periods established by EO. Historically, the primary target species have been sockeye and pink salmon. The major producers of wild sockeye salmon in this district are Delight, Desire, and Delusion Lakes in East Nuka Bay (Figure 2). Pink salmon return in large numbers to Rocky, Port Dick, and Windy Bays, as well as several smaller streams (Figure 2). In addition, chum salmon are regularly harvested from Dogfish Lagoon and Port Dick (Figure 2).

Preseason Outlook and Harvest Strategy

The 2022 commercial wild stock harvest forecast for the Outer District was 4,400 sockeye and 726,500 pink salmon (Appendix F1). As specified in regulation, the seine fishing season and periods are opened and closed by EO depending on the available harvestable surplus of wild stock salmon returning to spawning systems in the Outer District.

Historically, management of commercial sockeye, pink, and chum salmon fisheries in the Outer District have relied heavily on aerial and ground surveys of major spawning systems for those species. From 1997 to 2014, daily monitoring of sockeye salmon returning to Delight Lake was conducted using a picket weir staffed by Alaska Department of Fish and Game (ADF&G) field personnel. Funding for the weir was discontinued in 2015, and escapement monitoring through 2017 was conducted using aerial surveys. However, since 2018, Cook Inlet Aquaculture Association (CIAA) has staffed the weir and provided daily inseason escapement counts to ADF&G fishery managers in Homer. Typically, sockeye salmon returns to this lake, as well as to nearby Desire and Delusion Lakes, peak in late July. Escapement pulses into these lakes are frequently driven by rain events, with weeks of limited passage followed by a spike in escapement as the result of increased water volume in the lake outflow. By early August, chum and pink salmon run timing to this district may result in harvestable levels of fish.

Season Summary

In 2022, the western portions of the Outer District opened on Friday, July 15, on a schedule of daily 6:00 AM to 10:00PM fishing periods (Table 5) and remained on this schedule. On Monday, July 18, portions of the Outer District west of Nuka Island were opened on this schedule of daily 6:00 AM to 10:00 PM fishing periods. Total harvest from the Outer District was 12 Chinook, 16,442 sockeye, 40 coho, 324,836 pink, and 48,970 chum salmon (Table 1, Appendices B1 and B2). The total 2022 Outer District commercial harvest of 324,836 pink salmon was below the previous 10-year average harvest of 1.2 million fish (Appendix B2) and below the forecast harvest of 726,500 fish (Appendix F1). The chum salmon commercial harvest of 48,970 was above the forecasted wild-only harvest of 23,900 (Appendix F1), but below the 10-year average harvest of 55,604 (Appendix B2).

In 2022, the weir at Delight Lake was installed on July 7. An aerial survey of the lake prior to weir installation (June 27) counted 60 sockeye salmon in the lake. The current SEG for this system of 5,100–10,600 fish was established at the 2016 Alaska Board of Fisheries (BOF) meeting using the 3-tier Percentile Approach (Clark et al. 2014; Otis et al. 2016a) and was calibrated to aerial surveys. The SEG previously used when the weir was in place was 7,550–17,650 fish. That goal was calibrated to weir counts and it is a more appropriate escapement goal during years when the weir is used to monitor escapement (Otis et al. 2010), so the weir-based goal was used to manage the Delight Lake fishery in 2022. If the weir continues to be operated, this weir-based goal may need to be updated to be consistent with other LCI goals (Otis et al. 2016a). Shortly after weir installation, sockeye salmon began to pass daily and continued through July. The weir was removed on July 25. At that time, 2,000 sockeye salmon were counted below the weir site. These were added to the last days passage. Total weir passage including those fish was 22,717 fish. Adding the 60 fish counted prior to weir installation brings total escapement to 22,777 sockeye salmon. This is above the weir-based SEG of 7,550–17,650 fish (Table 6, Appendices B3 and B4).

Of the 9 pink salmon index streams in the Outer District monitored for escapement, 3 were within SEG ranges (Rocky River, Port Dick, and Desire Creeks), 3 of the remaining 6 systems exceeded

their goals (Dogfish Lagoon, Windy Creek Left, and Windy Creek Right), with South Nuka Island, Port Chatham, and Island Creeks all falling short of their minimum SEGs. There are 4 chum salmon index streams with SEGs in the Outer District. Of these, 1 was above its SEG range (Rocky River), 1 was within its SEG range (Port Dick Creek), and 2 were below their SEG range (Dogfish Lagoon and Island Creek; Appendix B5, Table 6). Both Delight and Desire Lakes were above their sockeye salmon SEG ranges (Table 6, Appendix B3).

EASTERN DISTRICT

The Eastern District includes all state waters of the Gulf of Alaska between the longitudes of Aligo Point and Cape Fairfield (Figures 1 and 2). Purse seine gear is permitted in all open waters of this district during periods established by EO. Historically, the primary target species have been sockeye and pink salmon with commercial harvests of the pink salmon occurring irregularly. Harvests of chum salmon were larger in this district during the 1980s (Hollowell et al. 2019). The largest producers of wild sockeye salmon in this district have historically been Bear and Aialik Lakes.

Since 1956, the Seward Chamber of Commerce has conducted a fishing derby that focuses on enhanced and wild coho salmon returning to local spawning systems at the head of Resurrection Bay. Beginning in 1990, coho salmon harvested by participants in the derby have been sold commercially by the Chamber of Commerce to a local processor as a fundraiser for that organization (Hollowell et al. 2019).

Preseason Outlook and Harvest Strategy

The 2022 enhanced sockeye salmon run to Resurrection Bay was forecast to be 78,100 fish (Appendix F1). As specified in regulation, the seine fishing season and fishing periods are opened and closed by EO, depending on the available harvestable surplus of salmon returning to the Eastern District. Early season management of the Eastern District is based on hatchery cost recovery progress toward a stated goal as well as passage at the Bear Creek weir, which is located 8 km (5 miles) from salt water at the outlet of Bear Lake (Figure 1). Beginning in July, management is also based on aerial surveys of sockeye salmon runs to Aialik Lake. Historically, runs of pink and chum salmon to this district have been below the level required to support consistent and sustainable commercial harvests.

Season Summary

On June 22, waters of Resurrection Bay north of Caines Head opened to 16-hour fishing commercial common property fishing periods, Monday through Friday, beginning at 6:00 AM on those days. This schedule ended on Friday, July 15, at 10:00 PM (Table 5).

The total 2022 Eastern District sockeye salmon commercial common property harvest is confidential due to fewer than 3 permit holders reporting deliveries (Appendix C1). The most recent 10-year average sockeye salmon harvest is 6,252 fish (Appendix C2).

Final passage into Bear Lake was 12,760 sockeye salmon (Appendix C3), with 2,798 fish subsequently harvested for broodstock. The remaining 9,962 fish, which exceeded the sockeye salmon SEG range (700–8,300), were allowed to spawn naturally in the lake. In addition, 306 coho salmon were passed through the weir into Bear Lake (Appendix C4). Passage for both species into this lake is above the previous 10-year average (Appendix C5).

In 2022, the peak count for sockeye salmon aerial surveys of Aialik Lake was 2,863 sockeye salmon (Appendix C6). This was below the current SEG range of 3,200–5,400 for this system (Table 6). Aialik Lake has failed to meet the current minimum SEG of 3,200 sockeye salmon in 6 of the previous 10 years (Appendix C6), but high turbidity often hinders visibility making it difficult for aerial observers to accurately assess escapement.

A total of 750 coho salmon were donated to the Seward Chamber of Commerce by sport fishery participants in the annual silver salmon derby; these fish were sold to local processors to benefit the Chamber (Appendix C2).

KAMISHAK BAY DISTRICT

The Kamishak Bay District includes all state waters on the west side of Cook Inlet south of the latitude of Anchor Point and north of a line from Cape Douglas to Elizabeth Island (Figures 1 and 2). Purse seine gear is permitted in all open waters of this district during periods established by EO. Historically, the primary naturally occurring target species have been chum, sockeye, and pink salmon.

The major natural producers of pink salmon in this district have been the Bruin River, Sunday Creek, and Brown’s Peak Creek. Major chum salmon producers have been the Big Kamishak and Little Kamishak Rivers, as well as Cottonwood Creek and the McNeil River (Appendix D6). In addition, numerous other rivers and streams have periodically produced respectable pink and chum salmon runs. The major wild producer of sockeye salmon is Chenik Lake.

Preseason Outlook and Harvest Strategy

The 2022 commercial wild stock harvest forecast for the Kamishak Bay District was 71,600 sockeye, 8,400 chum, 23,200 pink, and 900 coho salmon (Appendix F1). The enhanced CIAA sockeye salmon run to Kirschner Lake was forecast to be 30,300 fish (Appendix F1). In most years, the fishing season in the Kamishak Bay District opens from June 1 until closed by EO. Historically, the Kamishak Bay District has been opened for extended 7-day periods, with specific areas closed as needed by EO to address anticipated escapement shortfalls (e.g., McNeil River chum salmon). Aerial surveys are flown, weather permitting, to monitor sockeye and chum salmon escapement to index streams and to recover recording media from video monitoring sites for inseason review in the Homer Area office. Beginning in July, management is also based on aerial surveys of pink and chum salmon runs to spawning systems in this district. Aerial surveys continued into late August to monitor late-run chum salmon and early progress of coho salmon runs to select streams in this district.

Season Summary

The total 2022 Kamishak Bay District commercial common property harvest is confidential due to fewer than 3 permit holders reporting deliveries from this area (Table 1, Appendices D1 and D2).

Waters of the Kamishak Bay District opened to commercial common property harvest on Wednesday, June 1, with waters of the McNeil River and Paint River subdistricts remaining closed to prevent interception of chum salmon returning to the McNeil River (Table 5), which were designated as a *stock of concern* at the 2016 BOF meeting (Otis et al. 2016b). Fishing was permitted 24 hours per day and remained opened every day. On June 13, ADF&G opened the waters of Chenik Lagoon up to 154° 08.33’ N latitude. In many recent years, this system had

sockeye salmon escapements near the upper end or above the SEG range (Table 6, Appendix D7). Sockeye salmon escapement past the video monitoring station and into Chenik Lake was similar in numbers and timing to that seen in recent years (Appendix D3). The Chenik Subdistrict was later closed to commercial harvest on July 3. The closure was in response a cumulative video count of only 191 sockeye salmon in the lake on that date versus an anticipated passage target of 344–1,626 fish to meet the minimum SEG of 2,900 fish by the end of August (Appendix D3). The Chenik Subdistrict reopened to commercial harvest on July 15 after 11,094 fish had passed into the lake versus an anticipated goal for that date of 797–3,965 fish (Table 5, Appendix D3).

Other fishing areas of the Kamishak Bay District had consistent fishing openings and closures relative to the inseason assessment of Chenik sockeye salmon run strength. The Kirschner Lake special harvest area (SHA) was closed to common property harvest on June 15 and reopened on August 8 (Table 5).

Given the difficulty of fishing in the remote Kamishak Bay District, combined with the relatively good pink salmon runs to some Outer District streams, there was modest effort in this area in 2022; deliveries occurred weekly from late June until mid-August (Table 1, Appendix D1).

Salmon escapement to index streams in the Kamishak Bay District was poor with all pink salmon index streams falling below the minimum SEG. Chum salmon index streams were mixed with 3 stocks (McNeil River, Bruin River, and Ursus Cove Creeks) failing to achieve the lower end of the SEG and 3 stocks (Big Kamishak River, Cottonwood Creek, and Iniskin River) within their assigned SEG. Only the Little Kamishak River exceeded its SEG (Table 6). A total of 2,870 sockeye salmon were counted from video at Mikfik Lake through mid-August (Appendix D4). This is below the SEG range (3,400–11,000 fish) and the previous 10-year average escapement for this system (Appendices D4 and D5). The peak sockeye count in Amakdedori Creek was 2,050 (Table 1, Appendix D6) and within the 1,200–2,600 SEG range though below the previous 10-year average escapement of 2,800 fish (Table 6, Appendix D6).

CIAA harvested 21,809 sockeye salmon for cost-recovery purposes from the Kirschner Lake SHA (Table 1); this was below the anticipated harvest of 30,300 (Appendix F1).

LOWER COOK INLET PERSONAL USE FISHERIES AND COMMERCIAL FISHERIES HOMEPACK

There were 154 personal use set gillnet permits issued in 2022. Of those, 125 permits had been returned, and 134 permits reported harvest. This year was the third year where permits for this fishery were available online and online reporting was an option. A total of 1,531 salmon, of which 1,352 were coho salmon, were reported as harvest (Appendix E1). This season was noteworthy in that for a second consecutive year it was open for the full regulatory season until the last Wednesday or Saturday before September 16. In 2022, the actual closure date was Wednesday, September 14, with the 48-hour period that began on Monday, September 12, concluding at 6:00 AM on Wednesday. There were a total of eight 48-hour fishing periods. Additional information regarding personal use salmon fisheries in LCI may be found in the most recent Alaska Subsistence and Personal Use Salmon Fisheries Annual Report (Brown et al. 2022).

Homepack from commercial fishery deliveries were similar to recent years with 6 seine permit holders reporting 448 salmon retained, and 12 set gillnet permit holders reporting 460 salmon retained (Appendix E2). Of the 12 set gillnet permit holders reporting retained homepack fish, 3 did not report any commercial sales of harvested salmon.

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FIGURES AND TABLES

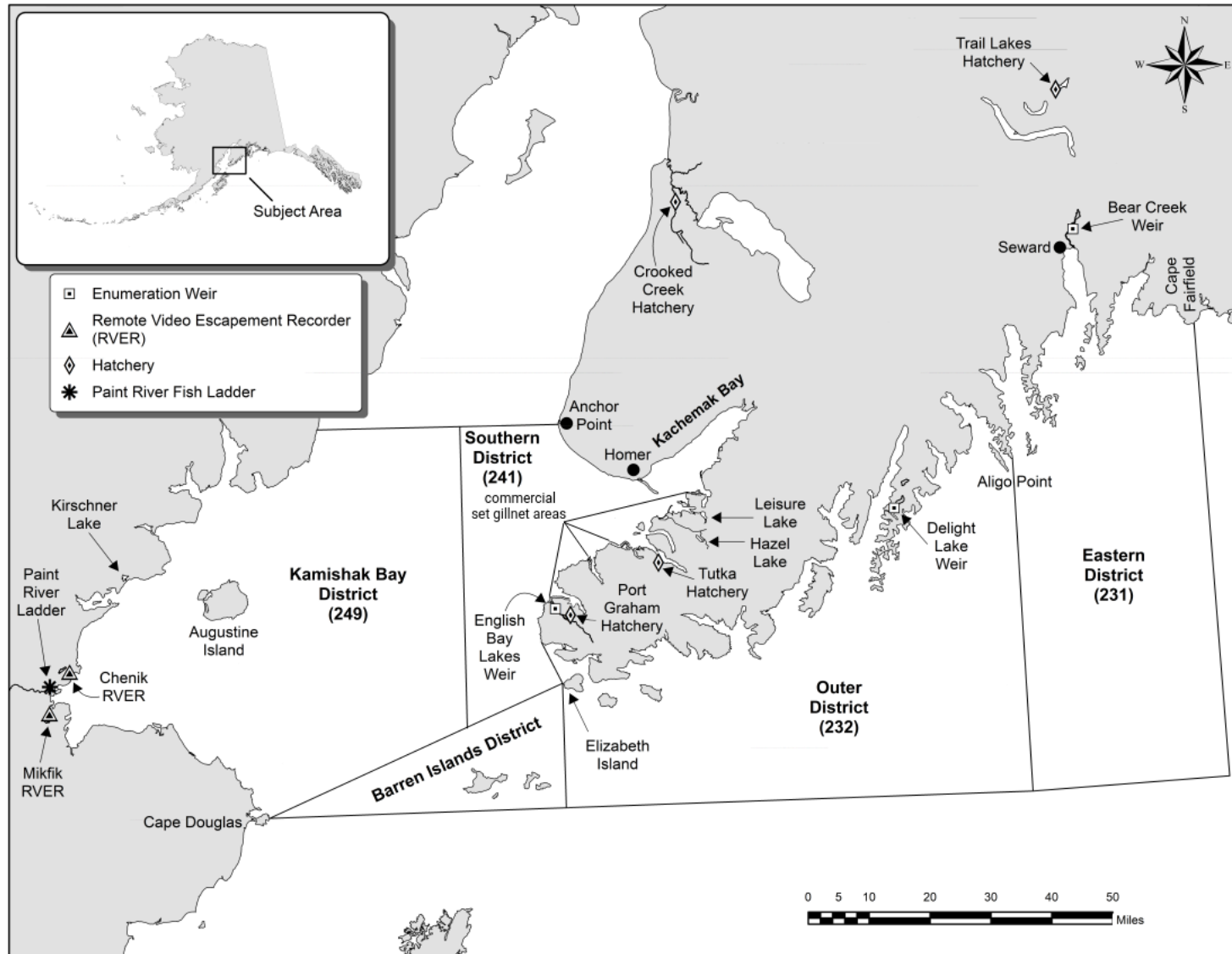


Figure 1.—Lower Cook Inlet Management Area commercial fishing districts, commercial set gillnet areas, salmon hatcheries, weir and fish ladder locations, and remote video salmon monitoring sites.

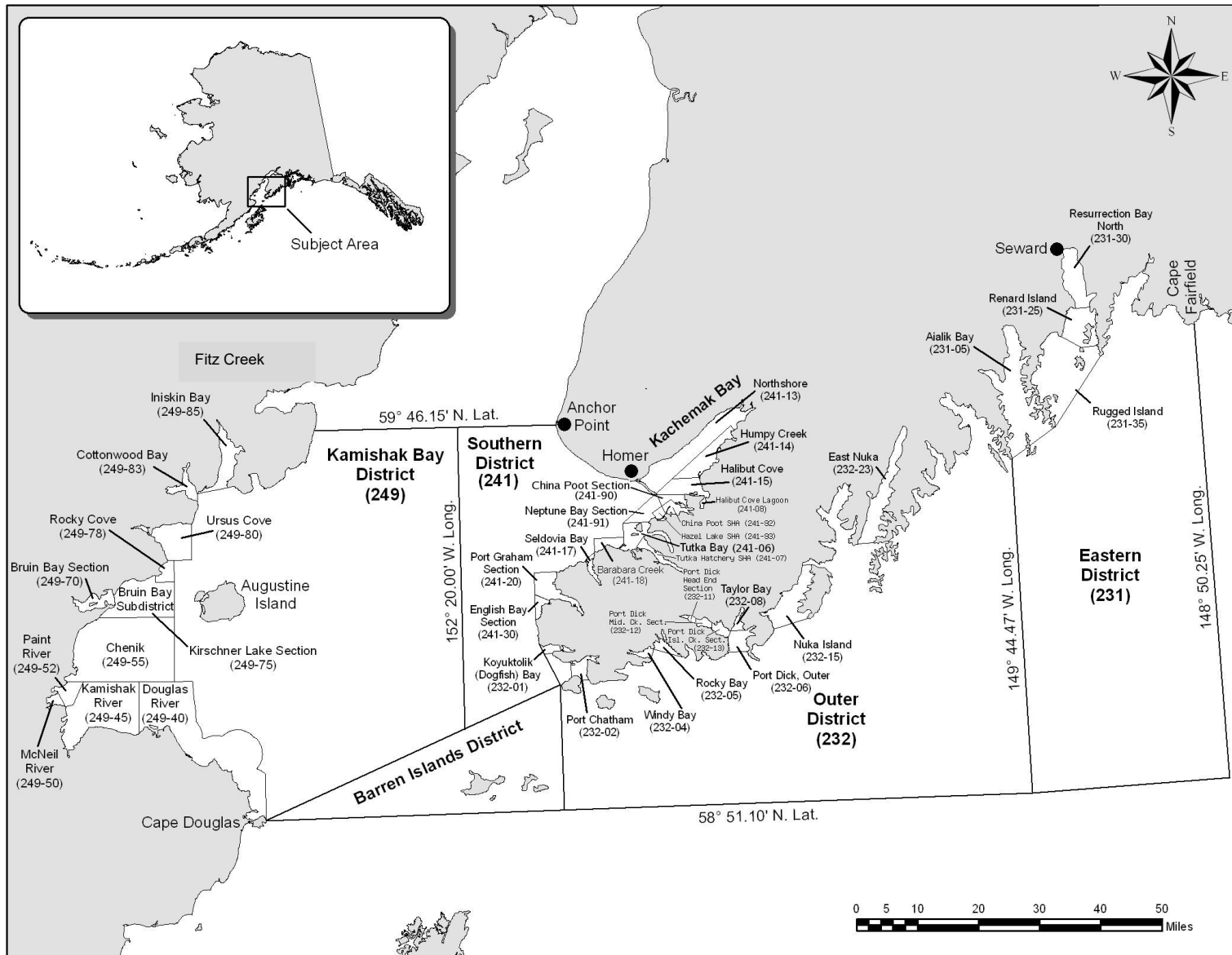


Figure 2.—Lower Cook Inlet Management Area commercial fishing districts and reporting subdistricts.

Table 1.–Lower Cook Inlet Management Area commercial salmon harvest by gear and district, 2022.

District	Permit holders ^a	Chinook ^a	Sockeye ^a	Coho ^{a,b}	Pink ^a	Chum ^a	Total
Southern District	9	64	81,710	167	5,764	308	88,013
Outer District	9	12	16,442	40	324,836	48,970	390,300
Eastern and Kamishak Bay Districts ^c	----- confidential -----						
Purse seine total	11	76	135,099	207	330,646	50,798	516,826
Set gillnet total	15 ^d	182	26,667	643	8,661	2,974	39,127
Commercial common property total		258	161,766	850	339,307	53,772	555,953
Tutka Lagoon SHA		0	26,121	1	63,571	9	89,702
Resurrection Bay SHA		0	79,639	0	0	0	79,639
Kirschner Lake SHA		0	21,809	0	19	0	21,828
Hatchery cost recovery total ^e		0	127,569	1	63,590	9	191,169
Commercially sold total		258	289,335	851	402,897	53,781	747,122
Homepack		17	592	149	138	12	908
Hatchery donated fish		0	2,918	0	0	0	2,918
Miscellaneous total		17	3,510	149	138	12	3,826
Lower Cook Inlet total		275	292,845	1,000	403,035	53,793	750,948

Note: SHA = special harvest area.

^a Numbers of fish and numbers of permit holders delivering are from ADF&G statewide electronic fish ticket database [Internet]. 1985–current. Juneau, AK. [URL not available because some information is confidential].

^b There were 750 coho salmon harvested in the Seward Salmon Derby and sold by the sponsor to commercial processors. These fish were caught by sport permit holders using rod and reel (troll gear). This harvest is not included in the commercial harvest total catch.

^c Harvest confidential (fewer than 3 permit holders delivered).

^d Of the 15 permit holders that delivered, 6 were dual permits.

^e Hatchery sales for hatchery operating costs, may include incidentally harvested wild salmon.

Table 2.—Average price and estimated exvessel value of the total hatchery and commercial salmon harvest (excluding homepack) by gear type, Lower Cook Inlet Management Area, 2022.

PURSE SEINE			Average		
Species	Number ^a	Pounds ^a	weight	Price ^a	Value
Chinook	86	810	10.34	\$2.80	\$2,268
Sockeye	135,513	606,780	4.49	\$2.08	\$1,262,102
Coho	225	1,025	4.95	\$0.70	\$718
Pink	330,652	1,189,393	3.60	\$0.39	\$463,863
Chum	50,798	370,985	7.30	\$0.91	\$337,596
	517,274	2,168,993			\$2,066,548
SET GILLNET			Average		
Species	Number ^a	Pounds ^a	weight	Price ^a	Value
Chinook	189	1,992	10.88	\$4.28	\$8,526
Sockeye	26,855	143,345	5.37	\$2.09	\$299,591
Coho	774	3,703	5.74	\$0.92	\$3,407
Pink	8,793	32,579	3.76	\$0.22	\$7,167
Chum	2,986	20,167	6.78	\$0.75	\$15,125
	39,597	201,786			\$333,816
HATCHERY SALES			Average		
Species	Number ^a	Pounds ^a	weight	Price ^a	Value
Chinook	0	0	0.00	\$0.00	\$0
Sockeye	130,487	527,905	4.05	\$2.28	\$1,203,623
Coho	1	4	4.00	\$0.70	\$3
Pink	63,590	190,903	2.98	\$0.73	\$139,359
Chum	9	65	7.22	\$0.90	\$59
	194,087	718,877			\$1,343,044
TOTAL HARVEST			Average		
Species	Number ^a	Pounds ^a	weight	Price ^a	Value
Chinook	275	2,802	10.72	\$3.85	10,794
Sockeye	292,855	1,278,030	4.37	\$2.16	2,765,317
Coho	1,000	4,732	5.90	\$0.87	4,127
Pink	403,035	1,412,875	3.50	\$0.43	610,390
Chum	53,793	391,217	7.27	\$0.90	352,780
	750,958	3,089,656			\$3,743,408
Gear type		Value of catch		No. of permit holders ^b	Average earnings
Purse seine		\$2,066,548		11	\$187,868
Set gillnet		\$333,816		15	\$22,254
Subtotal-					
Value of CPF catch		\$2,400,364			
Hatchery		\$1,343,044			
GRAND TOTAL		\$3,743,408			

Note: CPF = Common Property Fishery.

^a Mean price are based on weighted average prices from the ADF&G statewide electronic fish ticket database [Internet]. 1985–current Juneau, AK. [URL not available because some information is confidential]. Pounds and numbers of fish are based on fish ticket reporting. Number of fish includes homepack harvest.

^b In 2022, six set gillnet permit holders fished dual permits. Permit stacking has been permitted by the Alaska Board of Fisheries since 2014.

Table 3.—Average price per pound paid to permit holders for salmon, Lower Cook Inlet Management Area, 2012–2022.

Year	Chinook salmon			Sockeye salmon			Coho salmon			Pink salmon			Chum salmon		
	Seine	Set gillnet	Combined	Seine	Set gillnet	Combined	Seine	Set gillnet	Combined	Seine	Set gillnet	Combined	Seine	Set gillnet	Combined
2012	\$2.08	\$4.53	\$4.09	\$1.59	\$1.80	\$1.63	\$0.75	\$1.06	\$0.80	\$0.39	\$0.25	\$0.38	\$0.70	\$0.37	\$0.70
2013	\$1.02	\$5.14	\$4.53	\$2.00	\$2.21	\$2.11	\$0.83	\$1.01	\$0.95	\$0.38	\$0.33	\$0.38	\$0.53	\$0.35	\$0.52
2014	\$2.67	\$3.92	\$3.89	\$1.94	\$2.23	\$2.15	\$0.75	\$1.24	\$1.11	\$0.28	\$0.26	\$0.28	\$0.59	\$0.47	\$0.57
2015	\$1.70	\$3.16	\$3.11	\$1.45	\$1.86	\$1.62	\$0.42	\$0.73	\$0.64	\$0.20	\$0.18	\$0.20	\$0.45	\$0.34	\$0.43
2016	\$1.43	\$3.14	\$2.92	\$1.45	\$1.78	\$1.60	\$0.63	\$1.01	\$0.97	\$0.21	\$0.15	\$0.19	\$0.50	\$0.36	\$0.45
2017	\$4.34	\$3.79	\$3.86	\$1.41	\$2.16	\$1.97	\$0.95	\$0.77	\$0.80	\$0.30	\$0.15	\$0.24	\$0.75	\$0.50	\$0.63
2018	\$2.95	\$4.79	\$4.17	\$2.14	\$2.56	\$2.20	\$1.23	\$1.41	\$1.27	\$0.39	\$0.19	\$0.37	\$0.78	\$0.71	\$0.78
2019	\$3.60	\$4.79	\$4.07	\$2.32	\$2.19	\$2.29	\$0.97	\$0.90	\$0.95	\$0.30	\$0.25	\$0.30	\$0.50	\$0.39	\$0.49
2020	\$2.52	\$3.75	\$3.52	\$1.79	\$2.07	\$1.83	\$0.80	\$0.62	\$0.66	\$0.29	\$0.21	\$0.29	\$0.50	\$0.43	\$0.49
2021	\$2.88	\$3.75	\$3.52	\$2.14	\$2.50	\$2.17	\$0.88	\$1.06	\$0.94	\$0.32	\$0.25	\$0.32	\$0.66	\$0.63	\$0.66
10-year average	\$2.52	\$4.08	\$3.77	\$1.82	\$2.14	\$1.96	\$0.82	\$0.98	\$0.91	\$0.31	\$0.22	\$0.30	\$0.60	\$0.46	\$0.57
2022	\$2.80	\$4.28	\$3.86	\$2.08	\$2.09	\$2.09	\$0.70	\$0.92	\$0.87	\$0.39	\$0.22	\$0.38	\$0.91	\$0.75	\$0.90

Note: Prices are based on weighted average prices from the ADF&G statewide electronic fish ticket database [Internet]. 1985–current. Juneau, AK. [URL not available because some information is confidential] and do not reflect postseason adjustments and bonuses. Caution should be used when estimating value from these prices.

Table 4.—Estimated exvessel value (in US \$) of commercial salmon harvest by gear type with 10-year average, Lower Cook Inlet Management Area, 2012–2022.

Purse seine												
Species	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Previous 10-year Average	2022
Chinook	483	689	411	624	1,966	10,485	3,115	19,229	3,725	2,923	4,365	2,268
Sockeye	461,300	644,508	618,967	424,498	478,989	1,062,723	1,066,657	1,232,374	801,127	1,280,169	807,131	1,262,102
Coho	706	9,366	1,314	2,892	3,140	23,363	117,622	71,361	3,129	9,526	25,877	718
Pink	300,992	2,403,739	264,127	2,788,824	49,958	1,955,477	775,003	1,680,547	1,829,796	1,772,972	1,338,718	463,863
Chum	323,923	205,517	294,110	287,699	243,999	1,117,301	293,259	187,464	61,474	115,119	334,972	337,596
Total value	\$1,087,404	\$3,263,819	\$1,178,929	\$3,504,537	\$778,052	\$4,169,350	\$2,255,656	\$3,190,974	\$2,699,249	\$3,180,710	2,458,663	\$2,066,548
Set gillnet												
Species	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Previous 10-year Average	2022
Chinook	4,847	15,135	11,533	24,510	23,757	29,001	9,992	16,828	17,479	10,789	16,387	8,526
Sockeye	109,526	502,583	433,220	359,009	190,984	455,125	203,034	357,204	131,267	164,195	290,615	299,591
Coho	200	20,959	3,220	13,635	4,735	44,430	28,897	14,960	9,888	5,718	15,658	3,407
Pink	10,074	2,217	3,351	18,010	13,896	25,531	40,586	5,687	30,350	3,391	16,634	7,167
Chum	2,528	6,842	18,062	25,534	4,905	28,931	22,787	10,418	6,218	9,402	14,025	15,125
Total value	\$127,176	\$547,736	\$469,385	\$440,698	\$238,277	\$583,018	\$305,295	\$405,098	\$195,202	\$193,494	367,987	\$333,816
Hatchery sales												
Species	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Previous 10-year Average	2022
Chinook	0	0	245	0	0	0	68	0	0	0	31	0
Sockeye	1,021,125	910,285	1,799,731	821,739	1,642,913	862,685	3,070,644	1,475,610	1,130,740	1,244,672	1,398,014	1,203,623
Coho	44	0	0	554	0	2,909	2,598	1,695	4,571	80	1,375	3
Pink	1,074	57,622	130	1,383,195	24,290	94,108	1,570,933	223,393	1,242,991	412,791	510,860	139,359
Chum	1,034	83	628	4,444	422	1,055	398	515	584	127	1,018	59
Total value	\$1,023,277	\$967,990	\$1,800,733	\$2,209,932	\$1,667,624	\$960,758	\$4,644,642	\$1,701,212	\$2,378,886	\$1,657,670	1,928,339	\$1,343,044
Average earnings												
Purse seine	\$67,963	\$296,711	\$58,946	\$184,449	\$40,950	\$231,631	\$112,783	\$145,044	\$168,703	\$212,047	151,923	\$187,868
Set gillnet	\$8,478	\$28,828	\$24,704	\$18,362	\$11,347	\$29,151	\$16,068	\$20,255	\$11,482	\$12,093	18,077	\$22,254
Number of permit holders fishing												
Purse seine	16	11	20	19	19	18	20	22	16	15	18	11
Set gillnet	15	19	19	24	21	20	19	20	17	16	19	15

Table 5.–Emergency orders (EO) issued for the commercial, personal use, and subsistence salmon fisheries in Lower Cook Inlet Management Area, 2022.

EO number/ Issue date	Description
2-F-LCI-001-22/ Friday, May 27	Southern and Kamishak districts, purse seine and set gillnet. Opens waters of the Southern District to commercial salmon harvest and establishes 2 weekly 48-hour set gillnet fishing periods in the Southern District beginning at 6:00 AM on Mondays and Thursdays effective Wednesday, June 1. Establishes 7-day per week purse seine fishing periods in the Kamishak District excluding McNeil and Paint River subdistricts beginning June 1 with a September 30 season closing. Opens portions of Chenik Lagoon on June 13. Suspends regulatory closed waters in portions of Chenik Lagoon, China Poot Bay, and Neptune Bay.
2-F-LCI-002-22/ Friday, June 10	Southern, Outer, Eastern, Kamishak districts, purse seine. Opens the commercial purse seine salmon fishing season on Monday, June 13 in the Southern, Outer, and Eastern districts and establishes a Monday, Wednesday, and Friday fishing schedule in portions of the former. Establishes a season closure for this gear of September 30. Establishes regulatory closed waters at the head of Tutka Bay, in portions of South Nuka Bay, James Lagoon, Aialik Bay and Lagoon, the northern portion of Iniskin Bay, Rocky Cove, McNeil Bay and lagoon, and in the western portion of Bruin Bay.
2-F-LCI-003-22/ Tuesday, June 22	Eastern District, purse seine. Closes Resurrection Bay to cost recovery harvest on June 19, opens this area to commercial common property harvest on June 22.
2-F-LCI-004-22/ Sunday, July 3	Kamishak, Eastern districts, purse seine. Closes Resurrection Bay to commercial common property harvest on July 4 and after July 15. Closes Chenik Subdistrict after July 3 to commercial salmon harvest.
2-F-LCI-005-22/ Thursday, July 14	Eastern and Outer districts, purse seine. Reopens the Chenik Subdistrict to commercial salmon harvest on July 15. Opens East Nuka, Dogfish Bay, Port Chatham, and Windy Bay subdistricts on July 15 to commercial salmon harvest on a schedule of daily 16-hour fishing periods.
2-F-LCI-006-22/ Friday, July 20	Outer and Kamishak districts, purse seine. Opens additional area of the freshwater lagoon below Delight Lake to commercial salmon harvest. Expands open area in Chenik Lagoon where commercial salmon harvest may occur.
2-F-LCI-007-22/ Friday, July 22	Outer and Southern districts, purse seine. Opens the Head End and Middle Creek sections of Port Dick, rescinds regulatory closed waters off of Desire Lake creek. Closes the China Poot SHA to commercial salmon harvest.
2-F-LCI-008-22/ Friday, July 29	Outer District, purse seine. Opens the Rocky River Subdistrict and a portion of the Nuka Island Subdistrict to commercial salmon harvest.
2-F-LCI-009-22/ Thursday, August 4	Southern and Outer districts, purse seine. Closed the Rocky Bay Subdistrict, the Middle Creek Section of Port Dick, the Hazel Lake SHA, and closes the freshwater lagoon and channel that drains Delight Lake.
2-F-LCI-010-22/ Thursday, August 11	Outer District, purse seine. Opens the Taylor Bay section of Port Dick to commercial salmon harvest.
2-F-LCI-011-22/ Friday, August 19	Outer District, purse seine. Opens the Chugach Bay Subdistrict to commercial salmon harvest. Opens Dogfish Bay Lagoon for a single fishing period on Monday, August 22.

Table 6.—Escapements relative to escapement goals and methods used to monitor escapements in 2022 for chum, pink, and sockeye salmon stocks in Lower Cook Inlet Management Area, Alaska.

Stock	2022 Escapement	Escapement goal range			Monitoring method				Comments
		Lower	Midpoint	Upper	Aerial	Ground	Video	Weir	
CHUM SALMON (12 with goals)									
Port Graham River	606	1,200	1,950	2,700		X			
Dogfish Lagoon	3,319	3,500	6,050	8,600	X	X			used ground index
Rocky River	5,580	1,500	2,950	4,400	X				
Port Dick Creek	2,817	1,900	3,100	4,300	X	X			used ground index
Island Creek	2,822	5,100	8,500	11,900	X	X			used ground index
Big Kamishak River	13,013	6,800	11,200	15,600	X				
Little Kamishak River	22,330	8,000	12,400	16,800	X				
McNeil River	17,739	24,000	36,000	48,000	X				
Bruin River	3,948	5,200	7,600	10,000	X				
Ursus Cove	6,977	5,900	8,000	10,100	X				
Cottonwood Creek	6,588	5,200	8,700	12,200	X				
Iniskin Bay	12,740	5,900	9,750	13,600	X				
PINK SALMON (18 with goals)									
Humpy Creek	2,055	17,500	34,450	51,400		X			
China Poot Creek	145	2,500	4,400	6,300		X			
Tutka Creek	22,908	6,500	11,750	17,000		X			
Barabara Creek	3,492	2,000	3,800	5,600		X			
Seldovia Creek	16,999	21,800	29,600	37,400		X			
Port Graham River	9,193	7,700	13,700	19,700		X			
Dogfish Lagoon Creeks	11,596	800	3,950	7,100	X	X			used ground index
Port Chatham	7,126	7,800	12,950	18,100	X	X			used ground index
Windy Creek Right	17,380	3,400	7,300	11,200	X				
Windy Creek Left	39,094	5,400	16,250	27,100	X				
Rocky River	12,542	11,700	33,250	54,800	X				
Port Dick Creek	30,411	17,900	33,850	49,800	X	X			used ground index
Island Creek	8,550	9,600	21,050	32,500	X	X			used ground index
S. Nuka Island Creek	2,300	2,800	7,000	11,200	X				
Desire Lake	3,820	1,500	9,750	18,000	X				
Bruin River	330	17,800	60,400	103,000	X				
Sunday Creek	3,208	4,400	14,650	24,900	X				
Brown's Peak Creek	541	2,600	10,050	17,500	X				
SOCKEYE SALMON (8 with goals)									
English Bay	11,452	6,000	9,750	13,500					X
Delight Lake ^a	22,777	7,550	12,575	17,650	X	X		X	weir count primarily
Desire Lake	20,460	4,800	8,350	11,900	X				
Bear Lake	9,961	700	4,500	8,300				X	
Aialik Lake	2,863	3,200	4,300	5,400	X				
Mikfik Lake	2,870	3,400	7,200	11,000			X		
Chenik Lake	16,461	2,900	8,300	13,700			X		
Amakdedori Creek	2,050	1,200	1,900	2,600	X				

^a Used weir-based goal because Cook Inlet Aquaculture Association (CIAA) operated a weir at Delight Lake in 2022.

APPENDIX A: SOUTHERN DISTRICT

Appendix A1.–Southern District commercial set gillnet salmon harvest (excluding homepack) by fishing period, 2022.

Period	Statistical week	Date	Hours	Permit holders fishing	Chinook		Sockeye		Coho		Pink		Chum	
					Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1	23	06/02–06/04	48	8	23	297	820	3,903	0	0	0	0	29	253
2	23	06/06–06/08	48	10	23	239	777	4,047	0	0	0	0	52	329
3	24	06/09–06/11	48	9	28	300	910	4,858	0	0	0	0	133	919
4	24	06/13–06/15	48	9	18	208	1,110	5,851	0	0	0	0	51	333
5	25	06/16–06/18	48	10	11	103	1,196	6,458	0	0	0	0	46	327
6	25	06/20–06/22	48	10	22	208	1,693	8,935	0	0	4	9	206	1,607
7	26	06/23–06/25	48	11	15	171	1,907	10,363	0	0	5	17	114	713
8	26	06/27–06/29	48	10	12	114	2,339	12,966	0	0	14	47	141	889
9	27	06/30–07/02	48	10	6	55	2,496	13,283	0	0	36	134	202	1,524
10	27	07/04–07/06	48	9	19	220	2,014	10,234	0	0	168	689	216	1,479
11	28	07/07–07/09	48	6	2	36	745	3,698	0	0	215	778	119	745
12	28	07/11–07/13	48	8	0	0	1,407	7,015	2	8	224	904	110	691
13	29	07/14–07/16	48	6	1	12	812	4,445	0	0	442	1,720	94	628
14	29	07/18–07/20	48	9			1,926	10,717	10	58	1,112	3,762	324	2,122
15	30	07/21–07/23	48	9	1	18	3,065	17,231	37	208	1,103	4,300	279	1,946
16	30	07/25–07/27	48	11	1	11	2,205	12,441	356	2,032	2,578	9,506	489	3,343
17	31	07/28–07/30	48	8	0	0	750	4,296	161	922	1,483	5,894	173	1,188
18 ^a	31	08/01–08/03	48	<3	a	a	a	a	a	a	a	a	a	a
19	32	08/04–08/06	48	4	0	0	185	968	77	475	467	1,583	88	439
20 ^a	32	08/08–08/10	48	<3	a	a	a	a	a	a	a	a	a	a
21 ^a	33	08/11–08/13	48	<3	a	a	a	a	a	a	a	a	a	a
22 ^a	33	08/15–08/17	48	<3	a	a	a	a	a	a	a	a	a	a
23 ^a	34	08/18–08/20	48	<3	a	a	a	a	a	a	a	a	a	a
46 ^a	40	09/29–10/01	48	<3	a	a	a	a	a	a	a	a	a	a
Total				15 ^b	182	1,992	26,677	143,321	643	3,703	8,661	32,579	2,974	20,167
Average weight						10.88		5.37		5.74		3.76		6.78

Note: Fewer than 3 permits reporting deliveries during Periods 35–39, from August 22 through September 28.

^a Confidential data. Fewer than 3 permits reporting.

^b Fifteen permit holders fished in 2022, of those, 6 individuals were dual permit holders.

Appendix A2.–Southern District commercial purse seine salmon harvest (excluding homepack) by period, 2022.

Period	Statistical		Hours	Permits fished	Chinook		Sockeye		Coho		Pink		Chum	
	week	Date			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1 ^{a,b}	26	6/13	16	<3	b	b	b	b	b	b	b	b	b	b
2 ^{a,b}	26	6/15	16	<3	b	b	b	b	b	b	b	b	b	b
3 ^{a,b}	26	6/17	16	<3	b	b	b	b	b	b	b	b	b	b
4 ^{a,b}	27	6/20	16	<3	b	b	b	b	b	b	b	b	b	b
5 ^{a,b}	27	6/22	16	<3	b	b	b	b	b	b	b	b	b	b
6 ^a	27	6/24	16	3	2	51	1,778	8,978	0	0	3	7	7	63
7 ^a	28	6/27	16	6	12	99	4,947	25,995	0	0	1	3	80	831
8 ^a	28	6/29	16	7	8	75	6,019	26,116	0	0	5	14	22	185
9 ^a	28	7/1	16	5	6	131	12,991	61,248	0	0	3	10	10	71
10 ^a	29	7/4	16	5	7	69	17,857	86,861	0	0	14	43	63	581
11 ^a	29	7/6	16	6	7	13	8,070	40,246	0	0	6	15	6	60
12 ^a	29	7/8	16	7	0	0	5,298	24,726	0	0	0	0	0	0
13 ^a	30	7/11	16	6	1	20	8,927	35,826	0	0	119	375	8	63
14 ^a	30	7/13	16	7	2	26	4,470	20,098	1	4	140	413	8	75
15 ^a	30	7/15	16	4	17	77	1,859	9,779	15	79	43	145	13	136
16 ^a	31	7/18	16	4	0	0	2,532	9,823	22	113	1,093	3,582	8	68
17 ^a	31	7/20	16	4	0	0	3,510	14,131	42	149	226	663	4	37
18 ^a	31	7/22	16	4	1	10	1,298	5,136	21	93	641	2,043	14	135
19 ^{a,b,c}	32	7/25	16	<3	b	b	b	b	b	b	b	b	b	b
20 ^{a,b,c}	32	7/27	16	<3	b	b	b	b	b	b	b	b	b	b
21 ^{a,b,c}	32	7/29	16	<3	b	b	b	b	b	b	b	b	b	b
22 ^{a,b,c}	33	8/1	16	<3	b	b	b	b	b	b	b	b	b	b
Total				9	64	579	81,710	378,555	167	730	5,764	18,390	308	2,711
Average weight							9.19	4.63		4.37		3.19		8.80

Note: Fewer than 3 permits reporting deliveries after August 1.

^a Waters of the Tutka Bay, China Poot, and Halibut Cove subdistricts, excluding waters of the SHA in the Tutka Subdistrict is open to commercial salmon seine harvest for regular 16-hour periods. Waters of the Neptune Bay Section up to the freshwater of the Wosnesenski River are open for these periods. Waters of the south arm of China Poot Bay west of 151° 15.53' west longitude, and waters of the north arm of China Poot Bay west of 151° 14.65' west longitude are also open for these periods.

^b Confidential data. Fewer than 3 permits reporting.

^c All waters of the China Poot SHAs are closed.

Appendix A3.—Total commercial common property salmon harvest (excluding homepack) in the Southern District, 2012–2022.

Set gillnet						
Year	Permits	Chinook	Sockeye	Coho	Pink	Chum
2012	15	86	10,260	33	10,305	928
2013	18	234	38,238	3,466	1,804	2,685
2014	19	320	32,910	393	3,231	5,355
2015	24	752	36,061	3,102	27,726	11,539
2016	23	731	19,427	687	21,872	2,124
2017	24	435	36,689	9,353	43,904	7,852
2018	24	185	15,157	3,067	56,638	4,232
2019	22	350	29,274	2,817	6,411	3,908
2020	17	405	12,463	2,680	35,133	1,918
2021	16	231	13,004	981	3,461	2,231
Previous 10-year avg.	20	373	24,348	2,658	21,049	4,277
2022	15	182	26,677	643	8,661	2,974

Purse seine						
Year	Permits	Chinook	Sockeye	Coho	Pink	Chum
2012	11	39	6,396	44	175,770	439
2013	11	140	28,032	1,902	33,288	265
2014	16	18	23,188	269	58,890	3,360
2015	19	52	54,783	997	141,604	1,450
2016	19	112	47,235	169	44,637	165
2017	17	166	62,715	3,493	361,751	3,892
2018	20	131	55,246	1,747	472,204	1,166
2019	21	140	47,006	3,065	22,934	298
2020	15	109	68,698	526	120,861	1,074
2021	14	32	74,535	1,725	41,650	374
Previous 10-year avg.	16	94	46,783	1,394	147,359	1,248
2022	9	64	81,710	167	5,764	308

Purse seine and set gillnet combined						
Year		Chinook	Sockeye	Coho	Pink	Chum
2012		125	16,656	77	186,075	1,367
2013		374	66,270	5,368	35,092	2,950
2014		338	56,098	662	62,121	8,715
2015		804	90,844	4,099	169,330	12,989
2016		843	66,662	856	66,509	2,289
2017		601	99,404	12,846	405,655	11,744
2018		316	70,403	4,814	528,842	5,398
2019		490	76,280	5,882	29,345	4,206
2020		514	81,161	3,206	155,994	2,992
2021		263	87,539	2,706	45,111	2,605
Previous 10-year avg.		467	71,132	4,052	168,407	5,526
2022		246	108,387	810	14,425	3,282

Source: ADF&G statewide electronic fish ticket database [Internet]. 2011–current. Juneau, AK. [URL not available because some information is confidential].

Appendix A4.—Estimated sockeye, pink, and chum salmon escapements for the major spawning systems in the Southern District of the Lower Cook Inlet Management Area, 2012–2022.

Year	Pink salmon						Chum salmon	Sockeye salmon	
	Humpy Creek	China Poot Creek	Tutka Lagoon Creek	Barabara Creek	Seldovia River	Port Graham River	Port Graham River	English Bay River	
2012	67,900	8,400	10,400	1,412	44,700	34,500	167,312	700	8,400
2013	6,749	7,119	9,541	17,377	36,824	11,893	89,503	1,944	7,119
2014	44,369	1,409	10,152	3,558	35,895	32,295	127,678	3,735	1,409
2015	38,025	7,366	81,584	25,203	108,793	82,356	343,327	4,030	7,366
2016	89,673	698	33,242	2,813	15,694	14,629	156,749	2,391	698
2017	71,073	2,379	61,369	25,002	27,025	20,642	207,490	5,765	2,379
2018	54,816	2,280	60,691	7,236	50,827	33,419	209,269	3,725	2,280
2019	25,667	1,575	53,732	9,462	18,337	29,588	138,361	1,074	1,575
2020	232	235	114,986	6,633	39,297	34,784	196,167	660	235
2021	3,125	79	50,911	5,451	21,849	12,824	94,239	1,029	79
Previous 10-year average	40,163	3,154	48,661	10,415	39,924	30,693	173,010	2,505	3,154
2022	2,055	145	22,908	3,492	16,999	9,193	54,792	606	145

Note: Area-under-the-curve escapement indices are derived from periodic ground surveys with a 17.5-day stream-life factor applied.

APPENDIX B: OUTER DISTRICT

Appendix B1.—Outer District commercial purse seine salmon harvest (excluding homepack) by period, 2022.

Period	Statistical		Hours	Permits fished	Chinook		Sockeye		Coho		Pink		Chum	
	week	Date			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1 a,b	29	7/15	16	∩	b	b	b	b	b	b	b	b	b	b
2 a,b	29	7/16	16	∩	b	b	b	b	b	b	b	b	b	b
3 a,b	30	7/17	16	∩	b	b	b	b	b	b	b	b	b	b
4 a,b,c	30	7/18	16	∩	b	b	b	b	b	b	b	b	b	b
5 a,b,c	30	7/19	16	∩	b	b	b	b	b	b	b	b	b	b
6 a,c,d	30	7/20	16	3	5	102	899	4,266	0	0	4,840	16,648	2,393	15,625
7 a,b,c,d	30	7/21	16	∩	b	b	b	b	b	b	b	b	b	b
8 a,b,c,d	30	7/22	16	∩	b	b	b	b	b	b	b	b	b	b
9 a,b,c,d,e	30	7/23	16	∩	b	b	b	b	b	b	b	b	b	b
10 a,b,c,d,e	31	7/24	16	∩	b	b	b	b	b	b	b	b	b	b
11 a,c,d,e,f,g	31	7/25	16	4	0	0	2	9	0	0	23,357	103,109	8,932	66,343
12 a,c,d,e,f,g	31	7/26	16	4	0	0	0	0	0	0	16,187	58,423	2,761	21,237
13 a,c,d,e,f,g	31	7/27	16	5	0	0	323	1,161	0	0	18,436	69,396	12,687	89,379
14 a,c,d,e,f,g	31	7/28	16	5	0	0	0	0	0	0	12,409	54,181	1,901	15,021
15 a,c,d,e,f,g	31	7/29	16	6	0	0	1,261	5,390	0	0	19,373	62,838	1,045	7,216
16 a,b,c,d,e,f,g	31	7/30	16	∩	b	b	b	b	b	b	b	b	b	b
17 a,c,d,e,f,g	32	7/31	16	8	1	10	471	2,262	4	34	13,744	52,522	686	4,570
18 a,c,d,e,f,g,h,i	32	8/1	16	7	0	0	4	22	9	72	8,735	32,279	2,865	22,176
19 a,c,d,e,f,g,h,i	32	8/2	16	3	0	0	0	0	12	78	7,152	24,173	907	7,223
20 a,c,d,e,f,g,h,i	32	8/3	16	3	0	0	3	14	0	0	9,468	35,029	1,368	9,714
21 a,c,d,e,f,g,h,i	32	8/4	16	3	0	0	0	0	0	0	11,368	43,188	4,583	32,530
22 a,c,e,f,g,h,i	32	8/5	16	5	0	0	0	0	0	0	5,559	19,842	1,341	10,960
23 a,c,e,g,i	32	8/6	16	4	0	0	0	0	0	0	10,123	32,801	452	3,604
24 a,c,e,g,i	33	8/7	16	6	0	0	297	1,773	1	12	13,320	45,120	976	7,292
25 a,c,e,g,i	33	8/8	16	7	0	0	946	5,680	0	0	8,104	26,839	398	2,765
26 a,c,e,g,i	33	8/9	16	8	0	0	1,008	4,063	0	0	17,903	63,625	404	2,886
27 a,c,e,g,i	33	8/10	16	8	0	0	1,036	4,178	0	0	11,278	40,781	672	4,558
28 a,c,e,g,i	33	8/11	16	6	0	0	739	3,121	0	0	7,178	24,527	541	4,239
29 a,c,e,g,i,j	33	8/12	16	7	0	0	366	1,549	1	8	11,509	38,812	672	5,313
30 a,c,e,g,i,j	33	8/13	16	4	0	0	0	0	1	12	8,604	30,991	192	1,457
31 a,c,e,g,i,j	34	8/14	16	7	0	0	244	1,028	2	20	18,281	63,805	188	1,104
32 a,c,e,g,i,j	34	8/15	16	8	0	0	159	711	1	10	9,848	37,330	131	756

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Appendix B1.–Page 2 of 2

Period	Statistical		Hours	Permits fished	Chinook		Sockeye		Coho		Pink		Chum	
	week	Date			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
33 ^{a,c,e,g,i,j}	34	8/16	16	5	0	0	3	12	0	0	5,655	20,640	153	921
34 ^{a,c,e,g,i,j}	34	8/17	16	7	0	0	0	0	6	31	11,277	35,195	259	1,862
35 ^{a,c,e,g,i,j}	34	8/18	16	4	0	0	6	23	1	8	6,123	22,036	148	890
36 ^{a,b,c,e,g,i,j}	34	8/19	16	<3	b	b	b	b	b	b	b	b	b	b
37 ^{a,b,c,e,g,i,j}	34	8/20	16	<3	b	b	b	b	b	b	b	b	b	b
38 ^{a,b,c,e,g,i,j}	35	8/21	16	<3	b	b	b	b	b	b	b	b	b	b
39 ^{a,b,c,e,g,i,j,k}	35	8/22	16	<3	b	b	b	b	b	b	b	b	b	b
Total				9	12	203	16,442	76,081	40	295	324,836	1,170,900	48,970	357,472
Average weight							16.67	4.63		7.38		3.60		7.30

Note: No deliveries after August 22.

- ^a Waters of East Nuka Subdistrict open on daily schedule of 16-hour fishing periods. Regulatory closed waters associated with Delight Lake are suspended.
- ^b Confidential data. Fewer than 3 permits reporting.
- ^c Waters of the Dogfish Bay, Port Chatham, and Windy Bay subdistricts open on a daily schedule of 16-hour fishing periods.
- ^d The Delight Lake freshwater lagoon and channel open to commercial salmon harvest.
- ^e Regulatory closed waters associated with Desire Lake are rescinded.
- ^f Waters of the Middle Creek in the Port Dick Subdistrict open to commercial salmon harvest.
- ^g Waters of Head End Creek in the Port Dick Subdistrict open to commercial salmon harvest.
- ^h Waters of the Rocky Bay Subdistrict are open to commercial salmon harvest.
- ⁱ Waters in the Petrof area north and west of a point at 59° 20.00' N lat, 150° 48.00' W long are open.
- ^j The Taylor Bay Section open to commercial salmon harvest.
- ^k A portion of Dogfish Bay Lagoon is open for a single 16-hour fishing period from 6:00 AM to 10:00 PM.

Appendix B2.—Total commercial common property salmon harvest (excluding homepack) in Outer District, 2012–2022.

Year	Permits fished	Chinook	Sockeye	Coho	Pink	Chum
2012	15	8	77	98	69,359	51,313
2013	11	1	119	53	2,015,105	49,062
2014	15	0	24,264	0	163,938	59,702
2015	19	0	613	41	4,096,578	97,974
2016	13	1	7	2	5,369	60,800
2017	17	1	260	389	1,244,172	151,356
2018	11	2	1,409	5	32,326	34,857
2019	21	184	15,482	2,889	1,710,012	19,460
2020	14	3	219	108	1,563,893	11,181
2021	13	22	225	313	1,559,174	20,334
Previous 10-year average	15	22	4,268	390	1,245,993	55,604
2022	9	12	16,442	40	324,836	48,970

Source: ADF&G statewide electronic fish ticket database [Internet]. 2011–current. Juneau, AK. [URL not available because some information is confidential].

Appendix B3.—Daily and cumulative sockeye salmon escapement objectives derived from weir-based sustainable escapement goal (SEG; 7,550–17,650) apportioned using historical run timing versus actual escapement through the Delight Lake weir, 2022.

Date	Actual passage		Anticipated percent	Apportioned SEG (7,500–17,650)				Comments
	Daily	Cumulative		Projected minimum		Projected maximum		
				Daily	Cumulative	Daily	Cumulative	
7/1	60	60	0.0%	0	0	0	0	60 sockeye counted on
7/2	0	60	0.0%	3	3	6	6	June 27 aerial survey.
7/3	0	60	0.2%	13	16	32	38	
7/4	0	60	1.7%	109	125	255	293	
7/5	0	60	4.3%	199	324	469	763	
7/6	0	60	5.8%	110	434	258	1,021	
7/7	77	137	7.3%	117	551	275	1,296	Weir installed, July 7.
7/8	1,486	1,623	8.3%	70	620	164	1,460	
7/9	0	1,623	10.4%	160	780	377	1,837	
7/10	0	1,623	12.5%	160	940	375	2,212	
7/11	513	2,136	15.6%	232	1,172	546	2,758	
7/12	895	3,031	18.2%	197	1,369	463	3,221	
7/13	3,167	6,198	21.5%	240	1,609	565	3,786	
7/14	1,910	8,108	24.5%	231	1,839	543	4,329	
7/15	830	8,938	27.3%	207	2,046	487	4,816	
7/16	1,540	10,478	31.0%	276	2,323	650	5,466	
7/17	1,902	12,380	34.7%	283	2,606	666	6,132	
7/18	1,509	13,889	37.8%	227	2,832	533	6,665	
7/19	1,521	15,410	43.2%	410	3,243	966	7,631	
7/20	1,034	16,444	54.1%	818	4,061	1,926	9,557	Weir removed on July 25.
7/21	1,292	17,736	58.2%	304	4,366	716	10,274	Survey below the weir site
7/22	901	18,637	63.2%	373	4,738	877	11,150	counted 2,000 sockeye salmon.
7/23	946	19,583	65.1%	146	4,884	343	11,494	Total including these and 60
7/24	950	20,533	70.4%	399	5,283	938	12,432	counted on June 27 aerial survey
7/25	2,244	22,777	78.2%	581	5,864	1,368	13,800	is 22,777 fish.

Appendix B4.—Sockeye salmon escapement past Delight Lake weir, 2009–2022.

Year	Sockeye salmon
2009 ^a	5,232
2010 ^a	23,505
2011 ^{a,b}	16,280
2012 ^{a,c}	10,887
2013 ^a	5,961
2014 ^a	22,289
2018 ^a	13,428
2019 ^a	17,410
2020 ^a	12,299
2021 ^d	7,496
Previous 10-year average	13,407
2022 ^e	22,777

Note: Weir not operated at Delight Lake in 2015, 2016, and 2017.

^a Weir operated for the month of July.

^b An additional 400 fish were observed in the lake during an aerial survey prior to weir installation, and 2,310 were observed below the weir site after the weir was removed for the season. These 2,710 fish were not included in the 2011 weir total.

^c An additional 430 fish were observed in the lake during an aerial survey prior to weir installation but does not include 147 fish observed below the weir site after the weir was removed for the season.

^d Weir operated from July 8–August 5. An additional 460 fish were observed in the lake on an aerial survey prior to weir installation, and 400 were observed below the weir site by a ground survey after the weir was removed for the season. Counts from both surveys were added to the weir total.

^e Weir operated from July 7–25. An additional 60 fish were observed in the lake on an aerial survey prior to weir installation, and 2,000 were observed below the weir site by a ground survey after the weir was removed for the season. Counts from both surveys were added to the weir total.

Appendix B5.—Estimated pink, chum, and sockeye salmon escapements for the major spawning systems in the Outer District of the Lower Cook Inlet Management Area, 2012–2022.

Year	Pink salmon										Chum salmon					Sockeye salmon		
	Dogfish Lagoon	Port Chatham	Windy Right Creek	Windy Left Creek	Rocky River	Port Dick Creek	Island Creek	South Nuka Creek	Desire Lake Creek	Total index count	Dogfish Lagoon	Rocky River	Port Dick Creek	Island Creek	Total index count	Delight Lake	Desire Lake	Total index count
2012	11,399	5,430	5,823	11,691	15,664	18,057	20,079	1,250	2,260	91,653	8,842	3,165	8,400	14,863	35,240	10,887 ^b	8,820	19,707
2013	26,448	57,447	11,704	47,849	75,791	55,828	26,004	8,442	56,921	366,434	9,300	8,148	4,133	8,772	30,353	5,961 ^b	8,400	14,361
2014	8,848	10,290	5,710	10,147	17,114	48,732	50,402	11,000	443	162,686	11,205	6,863	1,829	2,699	22,596	22,289 ^b	11,480	33,769
2015	50,058	42,613	17,009	33,640	107,931	98,002	50,387	8,900	46,290	454,830	13,312	3,138	13,230	18,479	48,159	3,220 ^c	2,830	6,050
2016	2,307	1,140	1,400	500	4,300	4,819	1,735	10	169	16,380	11,260	4,620	9,323	8,477	33,680	5,110 ^c	6,740	11,850
2017	13,331	44,291	5,053	17,381	31,189	62,098	22,579	540	4,364	200,826	13,191	6,922	2,633	5,522	28,268	5,380 ^c	9,450	14,830
2018	8,034	18,122	8,925	14,043	2,088	94,585	5,558	545	2,547	154,447	7,615	5,620	724	1,368	15,327	13,428 ^b	9,840	23,268
2019	22,043	39,585	13,744	25,580	75,412	93,157	63,691	2,453	2,547	338,212	3,640	6,569	2,000	5,482	17,691	16,695 ^b	9,040	25,735
2020	18,387	17,291	16,720	74,944	8,310	108,219	9,888	3,943	1,357	259,059	1,246	5,010	1,040	1,399	8,695	12,299 ^b	4,710	17,009
2021	29,205	20,673	12,400	16,133	41,446	115,740	99,199	6,567	13,705	355,068	4,030	6,542	3,261	3,112	16,945	7,496 ^c	3,744	11,240
Previous 10-year avg.	19,006	25,688	9,849	25,191	37,925	69,924	34,952	4,365	13,060	239,960	8,364	5,660	4,657	7,017	25,698	10,277	7,505	17,782
2022	11,596	7,126	17,380	39,094	12,542	30,411	8,550	2,300	3,820	132,819	3,319	5,580	2,817	2,822	14,538	22,777 ^c	20,460	43,237

Note: En dash (–) = no data were collected.

^a Nonindex stream (has no sustainable escapement goal [SEG]).

^b Escapement derived from weir counts.

^c Escapement derived from a combination of weir, video counts, and aerial counts.

APPENDIX C: EASTERN DISTRICT

Appendix C1.—Eastern District common property commercial purse seine salmon harvest (excluding homepack) by period, 2022.

Period ^a	Statistical		Hours	Permits fished	Chinook		Sockeye		Coho		Pink		Chum	
	week	Date			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1 ^a	26	6/22	16	<3	a	a	a	a	a	a	a	a	a	a
2 ^a	26	6/23	16	<3	a	a	a	a	a	a	a	a	a	a
3	26	6/24	16	<3	a	a	a	a	a	a	a	a	a	a
4	26	6/25	16	<3	a	a	a	a	a	a	a	a	a	a
5 ^a	27	6/28	16	<3	a	a	a	a	a	a	a	a	a	a
6 ^a	27	6/29	16	<3	a	a	a	a	a	a	a	a	a	a
7	27	6/30	16	<3	a	a	a	a	a	a	a	a	a	a
8 ^a	27	7/1	16	<3	a	a	a	a	a	a	a	a	a	a
9 ^a	27	7/2	16	<3	a	a	a	a	a	a	a	a	a	a
10	28	7/6	16	<3	a	a	a	a	a	a	a	a	a	a
11	28	7/7	16	<3	a	a	a	a	a	a	a	a	a	a
12	28	7/8	16	<3	a	a	a	a	a	a	a	a	a	a
13	28	7/9	16	<3	a	a	a	a	a	a	a	a	a	a
14	29	7/12	16	<3	a	a	a	a	a	a	a	a	a	a
15	29	7/13	16	<3	a	a	a	a	a	a	a	a	a	a
16	29	7/14	16	<3	a	a	a	a	a	a	a	a	a	a
17	29	7/15	16	<3	a	a	a	a	a	a	a	a	a	a
18	29	7/16	16	<3	a	a	a	a	a	a	a	a	a	a
Total				<3	a	a	a	a	a	a	a	a	a	a
Average weight									4.3					

^a Confidential data. Fewer than 3 permits reporting.

Appendix C2.—Historical commercial common property and derby commercial sales harvest (excluding homepack) by species in the Eastern District, 2012–2022.

Year	Permits	Commercial common property harvest					Derby sales
		Chinook	Sockeye	Coho	Pink	Chum	Coho
2012	<3	a	a	a	a	a	1,400
2013	<3	a	a	a	a	a	1,380
2014	<3	a	a	a	a	a	606
2015	3	0	4,633	0	155	115	1,408
2016	<3	a	a	a	a	a	200
2017	<3	a	a	a	a	a	1,577
2018	5	0	22,310	0	0	66	1,956
2019	4	0	4,307	2	112	19	1,561
2020	<3	a	a	a	a	a	748
2021	<3	a	a	a	a	a	1,878
Previous 10-year avg.	3	0	6,252	2	257	117	1,204
2022	<3	a	a	a	a	a	750

Source: ADF&G statewide electronic fish ticket database [Internet]. 2011–current. Juneau, AK. [URL not available because some information is confidential].

^a Confidential data. Fewer than 3 permits reporting.

Appendix C3.–Daily and cumulative sockeye salmon escapement objectives compared to actual escapement through the Bear Creek weir, 2022.

Date	Actual Escapement to Bear Lake			Anticipated SEG plus CIAA brood goal ^a				Actual weir donations ^b		Actual weir cost recovery		Actual total sockeye at Bear Creek weir	
	Daily	Total	Anticipated percent	Minimum		Maximum		Daily	Total	Daily	Total	Daily	Total
				Daily	Total	Daily	Total						
5/22	3	3	0.1%	4	12	9	25	0	0	0	0	3	3
5/23	3	6	0.2%	8	20	17	43	0	0	0	0	3	6
5/24	10	16	0.5%	16	36	36	79	0	0	0	0	10	16
5/25	71	87	0.7%	15	51	33	112	0	0	0	0	71	87
5/26	134	221	1.1%	24	75	53	165	0	0	0	0	134	221
5/27	53	274	1.6%	34	109	76	240	0	0	0	0	53	274
5/28	202	476	2.2%	35	145	77	317	0	0	0	0	202	476
5/29	208	684	3.2%	67	212	147	464	0	0	0	0	208	684
5/30	393	1,077	4.7%	96	308	211	675	0	0	0	0	393	1,077
5/31	96	1,173	6.3%	101	408	221	895	0	0	0	0	96	1,173
6/1	136	1,309	8.1%	118	527	259	1,155	0	0	0	0	136	1,309
6/2	113	1,422	10.1%	127	653	278	1,433	0	0	831	831	944	2,253
6/3	110	1,532	12.9%	177	830	387	1,820	0	0	1,553	2,384	1,663	3,916
6/4	131	1,663	16.5%	227	1,056	497	2,317	0	0	0	2,384	131	4,047
6/5	69	1,732	20.6%	261	1,317	572	2,889	0	0	1,326	3,710	1,395	5,442
6/6	227	1,959	25.1%	289	1,606	634	3,523	0	0	470	4,180	697	6,139
6/7	204	2,163	30.4%	337	1,944	740	4,263	0	0	0	4,180	204	6,343
6/8	289	2,452	35.4%	317	2,260	694	4,957	0	0	1,571	5,751	1,860	8,203
6/9	345	2,797	41.1%	366	2,626	803	5,760	0	0	695	6,446	1,040	9,243
6/10	514	3,311	46.7%	356	2,982	780	6,540	0	0	1,501	7,947	2,015	11,258
6/11	693	4,004	51.6%	314	3,296	688	7,228	0	0	0	7,947	693	11,951
6/12	709	4,713	56.2%	291	3,586	638	7,865	0	0	3,531	11,478	4,240	16,191
6/13	759	5,472	60.2%	255	3,842	560	8,425	0	0	0	11,478	759	16,950
6/14	888	6,360	63.4%	206	4,048	452	8,878	0	0	1,883	13,361	2,771	19,721
6/15	814	7,174	65.3%	122	4,170	268	9,146	0	0	909	14,270	1,723	21,444
6/16	633	7,807	67.9%	163	4,333	357	9,502	0	0	1,277	15,547	1,910	23,354
6/17	603	8,410	70.1%	141	4,474	309	9,811	0	0	1,166	16,713	1,769	25,123
6/18	658	9,068	71.9%	113	4,587	248	10,059	0	0	0	16,713	658	25,781
6/19	422	9,490	73.8%	123	4,710	271	10,330	0	0	1,978	18,691	2,400	28,181
6/20	599	10,089	75.9%	131	4,841	287	10,616	0	0	0	18,691	599	28,780
6/21	90	10,179	78.4%	158	4,999	347	10,964	0	0	2,409	21,100	2,499	31,279
6/22	89	10,268	80.6%	140	5,139	306	11,270	0	0	741	21,841	830	32,109
6/23	89	10,357	82.3%	111	5,250	244	11,514	0	0	992	22,833	1,081	33,190
6/24	9	10,366	84.0%	110	5,361	242	11,756	0	0	0	22,833	9	33,199
6/25	0	10,366	86.0%	126	5,487	277	12,033	0	0	2,598	25,431	2,598	35,797
6/26	0	10,366	87.5%	96	5,582	210	12,243	0	0	3,350	28,781	3,350	39,147
6/27	0	10,366	89.2%	106	5,689	233	12,476	0	0	1,972	30,753	1,972	41,119
6/28	69	10,435	90.4%	77	5,766	169	12,645	0	0	595	31,348	664	41,783
6/29	444	10,879	91.6%	77	5,843	169	12,814	0	0	323	31,671	767	42,550
6/30	144	11,023	92.9%	84	5,927	184	12,997	0	0	462	32,133	606	43,156
7/1	699	11,722	94.1%	77	6,004	169	13,167	0	0	230	32,363	929	44,085
7/2	754	12,476	95.5%	88	6,092	194	13,360	0	0	270	32,633	1,024	45,109
7/3	54	12,530	96.1%	35	6,127	76	13,436	0	0	229	32,862	283	45,392
7/4	54	12,584	96.8%	44	6,171	97	13,533	0	0	312	33,174	366	45,758
7/5	48	12,632	97.5%	45	6,216	98	13,631	0	0	253	33,427	301	46,059
7/6	52	12,684	98.2%	47	6,262	102	13,734	0	0	151	33,578	203	46,262
7/7	52	12,736	98.5%	23	6,285	49	13,783	0	0	76	33,654	128	46,390

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Appendix C3.–Page 2 of 2.

Date	Actual Escapement to Bear Lake			Anticipated SEG plus CIAA brood goal ^a				Actual weir donations ^b		Actual weir cost recovery		Actual total sockeye at Bear Creek weir	
	Daily	Total	Anticipated percent	Minimum		Maximum		Daily	Total	Daily	Total	Daily	Total
				Daily	Total	Daily	Total						
7/8	3	12,739	98.7%	11	6,295	23	13,806	0	0	275	33,929	278	46,668
7/9	3	12,742	98.8%	5	6,300	11	13,817	0	0	0	33,929	3	46,671
7/10	3	12,745	98.8%	4	6,304	8	13,825	0	0	0	33,929	3	46,674
7/11	3	12,748	98.9%	3	6,307	7	13,832	0	0	440	34,369	443	47,117
7/12	3	12,751	99.0%	5	6,312	11	13,843	0	0	181	34,550	184	47,301
7/13	3	12,754	99.0%	4	6,316	9	13,852	227	227	0	34,550	230	47,531
7/14	3	12,757	99.1%	3	6,320	7	13,859	237	464	0	34,550	240	47,771
7/15	3	12,760	99.1%	2	6,321	4	13,863	194	658	0	34,550	197	47,968
7/16	0	12,760	99.2%	2	6,323	5	13,868	105	763	0	34,550	105	48,073
7/17	0	12,760	99.2%	0	6,323	0	13,868	350	1,113	0	34,550	350	48,423
7/18	0	12,760	99.2%	0	6,323	0	13,868	417	1,530	0	34,550	417	48,840
7/19	0	12,760	99.2%	0	6,323	0	13,868	369	1,899	0	34,550	369	49,209
7/20	0	12,760	99.2%	0	6,323	0	13,868	316	2,215	0	34,550	316	49,525
7/21	0	12,760	99.2%	0	6,323	0	13,868	244	2,459	0	34,550	244	49,769
7/22	0	12,760	99.6%	26	6,349	56	13,924	246	2,705	0	34,550	246	50,015
7/23	0	12,760	99.6%	5	6,354	11	13,935	213	2,918	0	34,550	213	50,228
7/24	0	12,760	99.7%	4	6,358	8	13,943	0	2,918	0	34,550	0	50,228
7/25	0	12,760	99.7%	0	6,358	0	13,943	0	2,918	0	34,550	0	50,228
7/26	0	12,760	99.7%	0	6,358	0	13,943	0	2,918	0	34,550	0	50,228
7/27	0	12,760	99.7%	0	6,358	0	13,943	0	2,918	0	34,550	0	50,228
7/28	0	12,760	99.7%	0	6,358	0	13,943	0	2,918	0	34,550	0	50,228
7/29	0	12,760	99.7%	0	6,358	0	13,943	0	2,918	0	34,550	0	50,228
7/30	0	12,760	99.7%	0	6,358	0	13,943	0	2,918	0	34,550	0	50,228
7/31	0	12,760	99.7%	0	6,358	0	13,943	0	2,918	0	34,550	0	50,228
8/1	0	12,760	99.7%	0	6,358	0	13,943	0	2,918	0	34,550	0	50,228
8/2	0	12,760	99.7%	2	6,359	4	13,946	0	2,918	0	34,550	0	50,228
8/3	0	12,760	99.7%	1	6,360	2	13,949	0	2,918	0	34,550	0	50,228
8/4	0	12,760	99.7%	1	6,361	2	13,951	0	2,918	0	34,550	0	50,228
8/5	0	12,760	99.8%	1	6,362	2	13,953	0	2,918	0	34,550	0	50,228
8/6	0	12,760	99.8%	2	6,364	4	13,956	0	2,918	0	34,550	0	50,228
8/7	0	12,760	99.8%	1	6,365	3	13,959	0	2,918	0	34,550	0	50,228
8/8	0	12,760	99.8%	1	6,366	2	13,961	0	2,918	0	34,550	0	50,228
8/9	0	12,760	99.8%	0	6,367	1	13,962	0	2,918	0	34,550	0	50,228
8/10	0	12,760	99.8%	1	6,367	2	13,964	0	2,918	0	34,550	0	50,228
8/11	0	12,760	99.8%	0	6,368	0	13,965	0	2,918	0	34,550	0	50,228
8/12	0	12,760	99.9%	1	6,368	2	13,966	0	2,918	0	34,550	0	50,228
8/13	0	12,760	99.9%	2	6,370	4	13,970	0	2,918	0	34,550	0	50,228
8/14	0	12,760	99.9%	0	6,370	0	13,970	0	2,918	0	34,550	0	50,228
8/15	0	12,760	99.9%	0	6,370	0	13,970	0	2,918	0	34,550	0	50,228
8/16	0	12,760	99.9%	0	6,370	0	13,970	0	2,918	0	34,550	0	50,228
8/17	0	12,760	99.9%	0	6,370	0	13,970	0	2,918	0	34,550	0	50,228
8/18	0	12,760	99.9%	0	6,370	0	13,970	0	2,918	0	34,550	0	50,228
8/19	0	12,760	99.9%	0	6,370	0	13,970	0	2,918	0	34,550	0	50,228
8/20	0	12,760	99.9%	0	6,370	0	13,970	0	2,918	0	34,550	0	50,228

Note: SEG = sustainable escapement goal; CIAA = Cook Inlet Aquaculture Association. Bear Creek SEG is 700–8,300 sockeye salmon. CIAA broodstock goal is 4,460 for a desired inriver run of 5,160–12,760 fish.

^a Projected daily goal based on expected run timing applied to minimum and maximum cumulative goals at the end of the run.

^b Weir harvest is cost recovery and donations of excess fish above daily SEG plus broodstock needs.

^c A total of 2,799 sockeye salmon were beach seined from the lake for use as broodstock.

Appendix C4.–Coho salmon escapement through the Bear Creek weir, 2022.

Date	Escapement to Bear Lake		Anticipated percent	Broodstock harvest		Weir donations		Cumulative coho at Bear Creek weir	
	Daily	Total		Daily	Total	Daily	Total	Daily	Total
8/28	29	29	4.1%	0	0	0	0	29	29
8/29	21	50	4.5%	0	0	0	0	21	50
8/30	15	65	5.0%	0	0	0	0	15	65
8/31	23	88	5.1%	0	0	0	0	23	88
9/1	24	112	5.2%	0	0	0	0	24	112
9/2	34	146	5.2%	0	0	0	0	34	146
9/3	32	178	6.2%	0	0	0	0	32	178
9/4	14	192	8.6%	0	0	0	0	14	192
9/5	5	197	12.7%	10	10	0	0	15	207
9/6	8	205	13.5%	10	20	0	0	18	225
9/7	7	212	14.1%	8	28	0	0	15	240
9/8	5	217	15.2%	5	33	0	0	10	250
9/9	4	221	17.2%	17	50	0	0	21	271
9/10	9	230	18.6%	31	81	0	0	40	311
9/11	11	241	21.8%	32	113	0	0	43	354
9/12	11	252	23.5%	29	142	0	0	40	394
9/13	48	300	32.3%	97	239	0	0	145	539
9/14	0	300	35.0%	131	370	0	0	131	670
9/15	0	300	41.1%	82	452	0	0	82	752
9/16	0	300	44.6%	49	501	0	0	49	801
9/17	0	300	48.7%	63	564	0	0	63	864
9/18	4	304	51.1%	32	596	0	0	36	900
9/19	2	306	54.4%	45	641	0	0	47	947
9/20	0	306	57.0%	28	669	0	0	28	975
9/21	0	306	57.1%	30	699	0	0	30	1,005
9/22	0	306	57.7%	22	721	0	0	22	1,027
9/23	0	306	58.3%	17	738	0	0	17	1,044
9/24	0	306	59.5%	19	757	0	0	19	1,063
9/25	0	306	60.7%	16	773	0	0	16	1,079
9/26	0	306	61.9%	9	782	0	0	9	1,088
9/27	0	306	63.2%	10	792	0	0	10	1,098
9/28	0	306	64.6%	13	805	0	0	13	1,111
9/29	0	306	65.5%	35	840	0	0	35	1,146
9/30	0	306	67.7%	32	872	0	0	32	1,178

Appendix C5.—Adult sockeye and coho salmon escapement, and Dolly Varden char and smolt outmigration past Bear Creek weir, 2012–2022.

Year	Upstream migration to Bear Lake							Downstream migration to Resurrection Bay					Comments
	Sockeye			Total return at weir	Coho			Total return at weir	Sockeye (smolt)	Coho (smolt)	Dolly Varden (adult)		
	Weir harvest, (sold or donated)	Brood stock harvest	Spawning escapement		Weir harvest, (sold or donated)	Brood stock harvest	Spawning escapement						
2012	1,802	4,428	8,031	14,381	31	578	315	924	466,990	45,936	1,425	4,000 pink salmon below weir	
2013	3,162	3,606	9,004	15,772	1,997	1,074	300	3,371	791,705	36,219	759		
2014	15,569	3,857	9,233	28,659	671	567	534	1,772	393,553	21,113	191		
2015	37,821	3,945	9,560	51,326	1,013	705	261	1,979	728,764	91,657	263		
2016	62,915	3,764	9,011	75,690	0	250	150	400	904,494	71,199	181		
2017	4,701	3,746	9,202	17,649	864	764	858	2,486	1,196,158	98,192	1,784		
2018	31,907	2,211	10,568	44,686	434	456	300	1,190	836,851	72,932	881		
2019	42,278	3,575	9,185	55,038	421	1,572	1,300	3,293	972,810	67,129	268		
2020	3,428	4,538	8,222	16,188	701	383	617	1,870	1,226,961	112,460	695	82 rainbow trout passed smolt weir	
2021	26,040	3,500	11,318	40,858	23	604	1,735	2,362	1,026,482	46,687	3,381	286 rainbow trout passed smolt weir	
Previous 10-year avg.	22,961	3,717	9,334	36,024	776	629	649	2,053	854,477	66,352	983		
2022	37,468	2,798	9,962	50,228	0	872	306	1,178	1,033,238	40,826	8,562	2,327 rainbow trout passed smolt weir	

Source: Data from Cook Inlet Aquaculture Association (CIAA) and ADF&G statewide electronic fish ticket database [Internet]. 2011–2022. Juneau, AK. [URL not available because some information is confidential.]

Appendix C6.—Estimated sockeye and pink salmon escapements for the major spawning systems in the Eastern District of the Lower Cook Inlet Management Area, 2012–2022.

Year	Pink salmon						Sockeye salmon			
	Aialik Lagoon	Bear Creek	Salmon Creek	Tonsina Creek	Thumb Cove	Humpy Cove	Total	Aialik Lake	Bear Lake ^{a,b}	Total
2012	20	4,100	–	–	–	–	–	2,100	8,031	10,131
2013	0	8,125	–	5,255	637	1,783	15,800	3,530	9,004	12,534
2014	–	–	–	–	–	–	–	450	9,245	9,695
2015	800	–	–	–	–	–	800	3,182	9,560	12,742
2016	–	–	–	–	–	–	–	400	9,158	9,558
2017	1,821	–	–	–	–	–	1,821	4,900	9,000	13,900
2018	10	–	–	–	–	–	10	2,620	10,568	13,188
2019	3,752	–	–	–	–	–	3,752	5,000	9,185	14,185
2020	40	–	–	–	–	–	40	4,020	8,222	12,242
2021	3,200	–	–	–	–	–	3,200	2,352	11,318	13,670
Previous 10-year average	1,067	6,113	–	5,255	637	1,783	3,169	3,098	9,224	12,322
2022	–	–	–	–	–	–	–	2,863	9,962	12,825

Note: En dash (–) = no data collected.

^a Weir counts.

^b Beginning in 1994, Bear Lake escapement figures are derived from total weir count minus number of fish collected for hatchery broodstock.

APPENDIX D: KAMISHAK BAY DISTRICT

Appendix D1.–Kamishak Bay District commercial salmon harvest (excluding homepack) by period, 2022.

Period	Statistical		Hours	Permits fished	Chinook		Sockeye		Coho		Pink		Chum	
	week	Date			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1 ^{a,b}	23	06/01–06/04	96	<3	b	b	b	b	b	b	b	b	b	b
2 ^{a,b}	24	06/05–06/11	160	<3	b	b	b	b	b	b	b	b	b	b
3 ^{a,b,c}	25	06/12–06/18	160	<3	b	b	b	b	b	b	b	b	b	b
4 ^{a,b,c}	26	06/19–06/25	160	<3	b	b	b	b	b	b	b	b	b	b
5 ^{a,b,c}	27	06/26–07/02	160	<3	b	b	b	b	b	b	b	b	b	b
6 ^{a,b,c,d}	28	07/03–07/09	160	<3	b	b	b	b	b	b	b	b	b	b
7 ^{a,b,c,d}	29	07/10–07/16	160	<3	b	b	b	b	b	b	b	b	b	b
8 ^{a,b,c,d}	30	07/17–07/23	160	<3	b	b	b	b	b	b	b	b	b	b
9 ^{a,b,c,e}	31	07/24–07/30	160	<3	b	b	b	b	b	b	b	b	b	b
10 ^{a,b,c,e,f}	32	07/31–08/06	160	<3	b	b	b	b	b	b	b	b	b	b
11 ^{a,b,c,e,f}	33	08/07–08/13	160	<3	b	b	b	b	b	b	b	b	b	b
12 ^{a,b,c,e,f}	34	08/14–08/20	160	<3	b	b	b	b	b	b	b	b	b	b
13 ^{a,b,c,e,f}	35	08/21–08/27	160	<3	b	b	b	b	b	b	b	b	b	b
14 ^{a,b,c,e,f}	36	08/28–09/03	160	<3	b	b	b	b	b	b	b	b	b	b
15 ^{a,b,c,e,f}	36	09/04–09/10	160	<3	b	b	b	b	b	b	b	b	b	b
Total				<3	b	b	b	b	b	b	b	b	b	b
Average weight								4.11	6.25	2.24	7.11			

^a Kamishak District open 24 hours/7 days per week, and fishing periods are Sunday–Saturday. Exceptions are McNeil and Paint River subdistricts which remain closed.

^b Confidential data. Fewer than 3 permits reporting.

^c Effective June 15, Kirschner Lake special harvest area is closed.

^d Chenik Subdistrict closed.

^e Effective at 6:00 AM July 15, waters of Chenik Lagoon are open.

^f Effective at 6:00 AM August 8, waters of Kirschner Lake special harvest area are open.

Appendix D2.—Total commercial common property harvest (excluding homepack) by species in the Kamishak Bay District, 2012–2022.

Year	Permits	Chinook	Sockeye	Coho	Pink	Chum
2012	6	0	55,255	0	61	2,425
2013	5	0	33,154	0	314	2,357
2014	8	0	12,137	0	44,227	4,449
2015	<3	^a	^a	^a	^a	^a
2016	5	0	18,218	578	350	10,984
2017	5	0	102,810	185	254,440	34,275
2018	7	0	33,699	9,077	5,226	8,298
2019	7	0	59,069	3,349	59,008	31,629
2020	<3	^a	^a	^a	^a	^a
2021	5	0	71,883	24	62,598	4,443
Previous 10-year avg.	5	0	43,049	1,321	46,880	10,171
2022	<3	^a	^a	^a	^a	^a

Source: ADF&G statewide electronic fish ticket database [Internet]. 2010–current. Juneau, AK. [URL not available because some information is confidential].

^a Confidential data. Fewer than 3 permits reporting.

Appendix D3.–Daily and cumulative sockeye salmon escapement objectives compared to actual escapement past the video monitoring site at Chenik Lake, 2022.

Date	Actual		Anticipated percent	Apportioned sustainable escapement goals				Comments
	Daily	Cumulative		Projected minimum		Projected maximum		
				Daily	Cumulative	Daily	Cumulative	
6/1	0	0	0.0%	0	0	0	0	
6/2	0	0	0.0%	0	0	0	0	
6/3	0	0	0.0%	0	0	0	0	
6/4	0	0	0.0%	0	0	0	0	
6/5	0	0	0.0%	0	0	0	0	
6/6	0	0	0.0%	0	0	0	0	
6/7	0	0	0.0%	0	0	0	0	
6/8	0	0	0.0%	0	0	0	0	
6/9	0	0	0.0%	0	0	0	0	
6/10	0	0	0.0%	0	0	0	0	
6/11	0	0	0.0%	0	0	0	0	
6/12	0	0	0.0%	0	0	0	0	
6/13	0	0	0.0%	0	0	1	1	Video monitoring started
6/14	0	0	0.0%	0	0	0	1	
6/15	9	9	0.1%	1	1	6	7	
6/16	0	9	0.1%	1	2	1	8	
6/17	3	12	0.1%	0	2	1	9	
6/18	4	16	0.1%	0	2	1	10	
6/19	1	17	0.2%	3	5	16	26	
6/20	2	19	0.2%	1	6	2	28	
6/21	19	38	0.2%	0	6	1	29	
6/22	1	39	0.3%	2	8	8	37	
6/23	133	172	0.5%	7	15	34	71	
6/24	17	189	0.5%	0	15	0	71	
6/25	1	190	0.8%	7	22	33	104	
6/26	1	191	2.0%	36	58	171	275	
6/27	0	191	3.5%	42	100	198	473	
6/28	0	191	3.6%	3	103	14	487	
6/29	0	191	4.3%	21	124	97	584	
6/30	0	191	5.5%	36	160	172	756	
7/1	0	191	8.6%	88	248	416	1,172	
7/2	0	191	9.8%	36	284	168	1,340	
7/3	0	191	11.9%	60	344	286	1,626	
7/4	0	191	13.3%	42	386	196	1,822	
7/5	0	191	14.8%	44	430	209	2,031	
7/6	0	191	14.9%	3	433	14	2,045	
7/7	0	191	16.3%	39	472	187	2,232	
7/8	1,771	1,962	16.3%	2	474	7	2,239	
7/9	1,134	3,096	16.7%	12	486	55	2,294	
7/10	78	3,174	18.2%	43	529	204	2,498	
7/11	919	4,093	21.7%	101	630	479	2,977	
7/12	4,731	8,824	22.3%	17	647	77	3,054	
7/13	1,319	10,143	22.5%	5	652	28	3,082	
7/14	951	11,094	27.5%	145	797	683	3,765	
7/15	380	11,474	33.9%	185	982	873	4,638	

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Date	Apportioned sustainable escapement goals							Comments
	Actual		Anticipated percent	Projected minimum		Projected maximum		
	Daily	Cumulative		Daily	Cumulative	Daily	Cumulative	
7/16	2	11,476	36.0%	61	1,043	292	4,930	
7/17	143	11,619	38.4%	69	1,112	325	5,255	
7/18	627	12,246	50.6%	354	1,466	1,671	6,926	
7/19	13	12,259	54.5%	113	1,579	534	7,460	
7/20	3	12,262	56.6%	61	1,640	290	7,750	
7/21	0	12,262	59.2%	77	1,717	359	8,109	
7/22	1,226	13,488	64.6%	156	1,873	741	8,850	
7/23	7	13,495	66.8%	65	1,938	304	9,154	
7/24	51	13,546	68.6%	51	1,989	241	9,395	
7/25	1,124	14,670	71.0%	70	2,059	333	9,728	
7/26	27	14,697	76.3%	153	2,212	722	10,450	
7/27	16	14,713	78.0%	51	2,263	239	10,689	
7/28	142	14,855	80.3%	67	2,330	319	11,008	
7/29	46	14,901	80.8%	13	2,343	62	11,070	
7/30	133	15,034	81.4%	17	2,360	79	11,149	
7/31	14	15,048	82.2%	24	2,384	114	11,263	
8/1	46	15,094	83.6%	42	2,426	196	11,459	
8/2	60	15,154	84.4%	21	2,447	103	11,562	
8/3	35	15,189	87.7%	97	2,544	454	12,016	
8/4	3	15,192	90.6%	84	2,628	399	12,415	
8/5	145	15,337	94.0%	99	2,727	470	12,885	
8/6	357	15,694	96.0%	57	2,784	268	13,153	
8/7	154	15,848	97.9%	54	2,838	256	13,409	
8/8	47	15,895	98.5%	18	2,856	82	13,491	
8/9	202	16,097	98.9%	13	2,869	63	13,554	
8/10	240	16,337	99.1%	5	2,874	25	13,579	
8/11	50	16,387	99.3%	7	2,881	30	13,609	
8/12	8	16,395	99.5%	4	2,885	22	13,631	
8/13	14	16,409	99.6%	2	2,887	8	13,639	
8/14	5	16,414	99.6%	2	2,889	11	13,650	
8/15	9	16,423	99.8%	4	2,893	18	13,668	
8/16	1	16,424	99.9%	3	2,896	12	13,680	
8/17	16	16,440	99.9%	0	2,896	3	13,683	
8/18	10	16,450	99.9%	2	2,898	5	13,688	
8/19	3	16,453	99.9%	0	2,898	1	13,689	
8/20	0	16,453	99.9%	0	2,898	1	13,690	
8/21	3	16,456	99.9%	0	2,898	1	13,691	
8/22	0	16,456	99.9%	1	2,899	2	13,693	
8/23	0	16,456	100.0%	0	2,899	2	13,695	
8/24	2	16,458	100.0%	0	2,899	1	13,696	
8/25	1	16,459	100.0%	1	2,900	4	13,700	
8/26	2	16,461	100.0%	0	2,900	0	13,700	
8/27	0	16,461	100.0%	0	2,900	0	13,700	
8/28	0	16,461	100.0%	0	2,900	0	13,700	
8/29	0	16,461	100.0%	0	2,900	0	13,700	
8/30	0	16,461	100.0%	0	2,900	0	13,700	
8/31	0	16,461	100.0%	0	2,900	0	13,700	Counting ended

Note: Escapement objectives derived from historical run timing and Chenik Lake sockeye salmon SEG (2,900–13,700 fish).

Appendix D4.–Daily and cumulative sockeye salmon escapement objectives compared to actual escapement past the video monitoring site at Mikfik Lake, 2022.

Date	Actual		Anticipated percent	Apportioned sustainable escapement goal				Comments
	Daily	Cumulative		Projected minimum		Projected maximum		
				Daily	Cumulative	Daily	Cumulative	
6/1	0	0	0.4%	10	13	35	43	
6/2	0	0	1.0%	20	33	62	105	
6/3	0	0	2.1%	37	70	121	226	
6/4	0	0	2.5%	13	83	44	270	Video monitoring started.
6/5	0	0	4.1%	57	140	182	452	
6/6	0	0	7.0%	98	238	317	769	
6/7	2	2	8.6%	55	293	178	947	
6/8	1	3	9.6%	33	326	107	1,054	
6/9	7	10	11.9%	79	405	257	1,311	
6/10	71	81	15.7%	130	535	421	1,732	
6/11	16	97	19.8%	140	675	451	2,183	
6/12	2	99	23.0%	105	780	342	2,525	
6/13	7	106	29.9%	237	1,017	765	3,290	
6/14	13	119	34.4%	151	1,168	490	3,780	
6/15	5	124	38.0%	125	1,293	403	4,183	
6/16	3	127	42.2%	141	1,434	456	4,639	
6/17	0	127	46.1%	134	1,568	433	5,072	
6/18	0	127	50.7%	155	1,723	502	5,574	
6/19	1	128	56.4%	194	1,917	627	6,201	
6/20	2	130	60.3%	135	2,052	436	6,637	
6/21	0	130	64.2%	131	2,183	426	7,063	
6/22	0	130	69.0%	163	2,346	528	7,591	
6/23	2	132	71.4%	83	2,429	267	7,858	
6/24	1	133	74.5%	103	2,532	333	8,191	
6/25	3	136	76.4%	65	2,597	211	8,402	
6/26	4	140	78.9%	84	2,681	273	8,675	
6/27	0	140	81.8%	100	2,781	321	8,996	
6/28	0	140	83.5%	59	2,840	192	9,188	
6/29	0	140	84.3%	27	2,867	87	9,275	
6/30	1	141	87.1%	95	2,962	309	9,584	
7/1	0	141	88.7%	53	3,015	170	9,754	
7/2	0	141	89.6%	30	3,045	98	9,852	
7/3	0	141	90.4%	27	3,072	88	9,940	
7/4	0	141	90.6%	9	3,081	28	9,968	
7/5	1	142	91.0%	12	3,093	40	10,008	
7/6	0	142	92.6%	55	3,148	176	10,184	
7/7	113	255	93.8%	41	3,189	133	10,317	
7/8	1,932	2,187	94.6%	29	3,218	94	10,411	
7/9	598	2,785	94.7%	3	3,221	10	10,421	
7/10	11	2,796	94.9%	6	3,227	18	10,439	
7/11	16	2,812	95.0%	2	3,229	9	10,448	
7/12	8	2,820	95.1%	3	3,232	10	10,458	
7/13	19	2,839	95.3%	9	3,241	29	10,487	
7/14	1	2,840	95.5%	5	3,246	16	10,503	
7/15	0	2,840	95.7%	6	3,252	19	10,522	

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Appendix D4.–Page 2 of 2.

Date	Actual		Anticipated percent	Apportioned sustainable escapement goal				Comments
	Daily	Cumulative		Projected minimum		Projected maximum		
				Daily	Cumulative	Daily	Cumulative	
7/16	0	2,840	95.7%	1	3,253	3	10,525	
7/17	1	2,841	96.5%	29	3,282	93	10,618	
7/18	7	2,848	97.2%	24	3,306	77	10,695	
7/19	14	2,862	97.4%	4	3,310	15	10,710	
7/20	3	2,865	97.6%	7	3,317	21	10,731	
7/21	11	2,876	97.6%	3	3,320	10	10,741	
7/22	213	3,089	97.8%	6	3,326	19	10,760	
7/23	0	3,089	98.0%	6	3,332	21	10,781	
7/24	0	3,089	98.2%	7	3,339	21	10,802	
7/25	0	3,089	98.3%	3	3,342	11	10,813	
7/26	0	3,089	98.5%	7	3,349	23	10,836	
7/27	0	3,089	98.9%	14	3,363	44	10,880	
7/28	0	3,089	99.1%	7	3,370	21	10,901	
7/29	0	3,089	99.2%	3	3,373	11	10,912	
7/30	0	3,089	99.3%	4	3,377	14	10,926	
7/31	0	3,089	99.4%	2	3,379	6	10,932	
8/1	0	3,089	99.4%	1	3,380	3	10,935	
8/2	1	3,090	99.5%	3	3,383	10	10,945	
8/3	17	3,107	99.5%	0	3,383	0	10,945	
8/4	7	3,114	99.5%	1	3,384	3	10,948	
8/5	12	3,126	99.7%	5	3,389	15	10,963	
8/6	1	3,127	99.7%	0	3,389	1	10,964	
8/7	4	3,131	99.7%	1	3,390	2	10,966	
8/8	15	3,146	99.7%	0	3,390	0	10,966	
8/9	18	3,164	99.7%	0	3,390	0	10,966	
8/10	1	3,165	99.7%	0	3,390	1	10,967	
8/11	0	3,165	99.7%	1	3,391	3	10,970	
8/12	0	3,165	99.7%	0	3,391	0	10,970	
8/13	0	3,165	99.7%	0	3,391	0	10,970	
8/14	0	3,165	99.8%	2	3,393	8	10,978	Counting ended.
8/15	0	3,165	99.8%	0	3,393	0	10,978	
8/16	0	3,165	99.8%	1	3,394	2	10,980	
8/17	0	3,165	99.8%	0	3,394	0	10,980	
8/18	0	3,165	99.8%	1	3,395	3	10,983	
8/19	0	3,165	99.8%	0	3,395	0	10,983	
8/20	0	3,165	99.8%	0	3,395	0	10,983	
8/21	0	3,165	99.8%	0	3,395	0	10,983	
8/22	0	3,165	99.8%	0	3,395	0	10,983	
8/23	0	3,165	99.8%	0	3,395	0	10,983	
8/24	0	3,165	99.8%	0	3,395	0	10,983	
8/25	0	3,165	99.8%	0	3,395	0	10,983	
8/26	0	3,165	99.8%	0	3,395	0	10,983	
8/27	0	3,165	100.0%	5	3,400	17	11,000	
8/28	0	3,165	100.0%	0	3,400	0	11,000	
8/29	0	3,165	100.0%	0	3,400	0	11,000	
8/30	0	3,165	100.0%	0	3,400	0	11,000	
8/31	0	3,165	100.0%	0	3,400	0	11,000	

Note: Anticipated escapement derived from run timing and Mikfik Lake sockeye salmon sustainable escapement goal of 3,400–11,000 fish.

Appendix D5.–Sockeye salmon escapement into
Chenik Lake and Mikfik Lake, 2012–2022.

Year	Chenik	Mikfik
2012	16,505 ^a	3,131 ^a
2013	11,333 ^a	4,042 ^a
2014	17,774 ^a	17,802 ^{a,b}
2015	19,073 ^a	3,502 ^a
2016	19,510 ^a	10,180 ^a
2017	21,468 ^a	7,495 ^a
2018	6,651 ^a	4,966 ^a
2019	12,079 ^a	2,901 ^a
2020	11,686 ^a	314 ^a
2021	17,134 ^a	2,346 ^a
Previous 10-year average	15,321	5,668
2022	16,461 ^a	3,165 ^a

^a Escapement derived from video counts.

^b Escapement derived from aerial surveys.

Appendix D6.—Estimated pink, chum, and sockeye salmon escapements in thousands of fish for the major spawning systems in the Kamishak Bay District of the Lower Cook Inlet Management Area, 2012–2022.

Year	Pink salmon						Chum salmon							Sockeye salmon				
	Big Kamishak River	Little Kamishak River	Bruin Bay River	Sunday Creek	Brown's Peak Creek	Total of index streams	Big Kamishak River	Little Kamishak River	McNeil River	Bruin Bay	Ursus Cove ^a	Cottonwood Creek	Iniskin Bay	Total of index streams	Mikfik Lake	Chenik Lake	Amakdedori Creek	Total of index streams
2012	2,700	9,300	31,800	1,300	2,800	35,900	12,400	30,300	10,388	16,795	2,800	4,111	3,000	79,794	3,131 ^b	16,500 ^b	800	3,148,300
2013	–	543	15,020	6,132	4,061	25,213	3,280	6,744	9,498	8,942	10,339	5,206	5,928	49,937	4,042 ^b	11,333 ^b	1,540	4,054,873
2014	–	4,826	121,569	7,665	4,048	133,282	5,676	15,069	17,475	3,583	5,308	7,079	13,020	67,210	17,802 ^b	17,797 ^b	4,280	17,824,077
2015	690	1,464	40,801	60,385	29,141	130,327	6,990	14,370	20,494	11,006	14,783	16,962	7,513	92,118	3,502 ^b	19,073 ^b	2,910	3,523,983
2016	690	30	86,632	2,185	1,378	118,927	9,585	11,991	26,262	26,598	7,032	1,648	1,089	84,205	10,180 ^b	19,510 ^b	2,240	10,201,750
2017	3,800	1,400	71,100	22,211	39,197	132,508	32,290	19,275	38,679	38,536	22,025	6,150	15,591	172,546	7,495 ^b	21,468 ^b	1,680	7,518,148
2018	0	23	94,715	3,400	1,341	99,456	7,694	14,417	37,331	28,497	3,718	1,326	9,149	102,132	4,966 ^b	6,651 ^b	1,916	4,974,567
2019	0	1,000	43,800	21,801	43,420	109,021	51,030	22,611	9,205	25,283	13,400	3,908	15,294	140,731	2,901 ^b	12,079 ^b	1,620	2,914,699
2020	0	0	57,320	4,715	21,034	83,069	19,391	38,591	8,850	22,206	4,367	679	8,804	102,888	305 ^b	11,686 ^b	6,992	323,678
2021	0	0	78,374	38,976	74,976	192,326	15,987	35,046	15,219	29,655	7,500	5,690	15,024	124,121	2,346 ^b	17,134 ^b	4,370	2,367,504
10-year average	985	1,859	64,113	16,877	22,140	103,130	16,432	20,841	19,340	21,110	9,127	5,276	9,441	101,568	5,667	15,323	2,835	5,685,158
2022	0	0	330	3,208	541	4,079	13,013	22,330	17,739	3,948	6,977	6,588	12,740	83,335	2,346 ^b	16,461 ^b	2,050	2,364,511

Note: En dash (–) = no data were collected.

^a “Ursus Cove” is the sum of Ursus Lagoon RH Creek and Ursus Lagoon Creek.

^b Escapement derived from video counts.

**APPENDIX E: PERSONAL USE, AND HOMEPACK
HARVEST**

Appendix E1.–Personal use set gillnet salmon harvest in numbers of fish by species and effort, Southern District Lower Cook Inlet Management Area, 2012–2022.

Year	Permits				Reported harvest						
	Issued	Reporting	Fished	Not fished	Chinook	Sockeye	Coho	Pink	Chum	Other	Total
2012	98	95	69	26	5	137	1,471	275	6	0	1,894
2013	123	118	89	29	9	122	1,732	135	3	0	2,001
2014	160	154	115	39	13	310	2,273	20	178	0	2,794
2015	136	131	91	40	10	509	1,373	152	22	6	2,072
2016	170	169	118	50	18	166	2,033	8	335	0	2,560
2017	148	145	108	37	6	298	2,388	11	212	0	2,915
2018	192	187	132	55	6	259	1,947	161	11	0	2,384
2019	156	151	109	43	9	147	1,287	162	27	0	1,632
2020	194	153	118	35	7	112	1,050	250	11	8	1,438
2021	130	90	73	17	4	131	1,085	29	3	7	1,259
Previous 10-year avg.	151	139	102	37	9	219	1,664	120	81	2	2,095
2022	154	132	89	42	1	107	1,352	66	5	2	1,533

Appendix E2.–Salmon retained from the commercial harvest for homepack by species and gear type from Lower Cook Inlet Management Area districts, 2012–2022.

Year	Permits delivery		Chinook salmon		Sockeye salmon		Coho salmon		Pink salmon		Chum salmon	
	Set gillnet	Purse seine	Set gillnet	Purse seine	Set gillnet	Purse seine	Set gillnet	Purse seine	Set gillnet	Purse seine	Set gillnet	Purse seine
2012	7	0	4	0	63	0	61	0	323	0	31	0
2013	7	0	16	0	155	0	150	0	157	0	13	0
2014	8	1	10	0	180	3	128	0	318	0	17	0
2015	16	4	60	7	158	120	417	62	99	302	28	0
2016	12	11	35	40	115	269	171	25	205	79	41	5
2017	13	6	36	23	513	140	189	12	121	71	110	0
2018	10	12	11	50	102	671	108	27	71	1	26	2
2019	7	10	12	53	107	204	143	23	12	50	22	10
2020	8	7	15	49	44	153	133	11	27	25	0	1
2021	8	8	2	12	119	276	301	28	39	154	32	2
Previous 10-year avg.	10	7	20	26	156	204	180	21	137	76	32	2
2022	12	6	7	10	178	414	131	18	132	6	12	0

APPENDIX F: 2022 OUTLOOK

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Advisory Announcement

For Immediate Release: April 7, 2022

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2022 Lower Cook Inlet Commercial Salmon Fishery Outlook

This outlook is provided to assist the commercial salmon industry in planning for the 2022 season in the Lower Cook Inlet Management Area (LCI). Information regarding the forecasts used to create this document will soon be available on the Alaska Department of Fish and Game (ADF&G) web site:

<http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyarealci.salmon#forecasts>

Cook Inlet Aquaculture Association (CIAA) manages the Trail Lakes Hatchery (TLH), Port Graham Hatchery (PGH), and Tutka Bay Lagoon Hatchery (TBLH). Hatchery forecasts can be found by contacting CIAA directly.

Inseason modifications to harvest projections, season opening dates, and strategies for weekly fishing periods may occur as fisheries develop. Management of LCI commercial salmon fisheries is based from the Homer ADF&G office. Fishery announcements from the Homer office will routinely occur on Fridays at 2:00 p.m., and at other times as required. [Interested individuals may sign up to receive email announcements here: http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main](http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main). Recorded commercial fisheries announcements will be available at 907-235-7307. Advisory announcement information is also transmitted by email to all interested members of the public. Harvest information and fisheries announcements are located on the ADF&G web site: <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyarealci.salmon>. The first advisory announcement is expected to be released at 2:00 p.m., Friday, April 29.

The commercial common property harvest from LCI is forecast to be 1.7 million salmon, of which 340,300 fish (20.3%) are anticipated to be of hatchery origin harvested from special harvest areas (SHAs) (Table 1). Additional hatchery-origin fish are harvested incidentally with wild fish outside of SHAs. CIAA forecasts a total of 223,200 hatchery-produced sockeye and 2.7 million pink salmon to return to LCI release sites in 2022. Of those, CIAA projects to harvest 134,400 sockeye (60.2%) and 2.5 million pink salmon (90.8%) for cost recovery and broodstock.

Set Gillnet Fishery

The **Southern District** is expected to open for the 2022 season on Thursday, June 2 at 6:00 a.m. for a 48-hour period. Subsequent commercial fishing periods will likely be 48 hours in length beginning at 6:00 a.m. on Mondays and Thursdays, as specified in regulation. The harvest projections for this district and gear are 200 Chinook, 1,400 coho, 2,100 chum, 26,900 sockeye, and 50,400 pink salmon. The Port Graham Subdistrict is anticipated to open to commercial set gillnet harvest on June 2 and remain on a schedule concurrent with other areas in the Southern District for this gear. Fishing time in the Port Graham Subdistrict will be closely linked to escapement levels in English Bay and Port Graham rivers. Further information may be found in Annual Management Reports for this area at: <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyarealci.salmon#management>.

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Purse Seine Fishery

Portions of the **Southern District** will open to commercial purse seine harvest in mid-June, coinciding with enhanced runs to Leisure and Hazel lakes. Historically, this runs peaks in mid-July. CIAA forecasts a return of 75,900 sockeye salmon to Leisure and Hazel lakes combined, as well as 38,900 sockeye salmon to Tutka Bay. Of those, all fish returning to Leisure and Hazel lakes will be available for harvest, and 35,500 (91.3%) of the sockeye salmon return to Tutka Lagoon will be used for cost recovery and broodstock purposes. A total of 2.7 million hatchery-produced pink salmon are anticipated to return to release sites in the Southern District. Of those, 2.5 million pink salmon (90.8%) will be required for cost recovery and broodstock purposes. Commercial fishing time after mid-July will be based on pink salmon escapement at Humpy Creek, Seldovia Bay, Port Graham, and other locations in this district.

Hatchery sockeye salmon runs to the **Eastern District** are forecasted by CIAA to be 78,100 fish of which CIAA has identified 71,600 (91.7%) for cost recovery and broodstock purposes. Wild stock harvest opportunity in the Eastern District will be linked to aerial survey observations of wild sockeye and pink salmon escapements to Aialik Lake and other spawning systems in this district. Surveys of chum salmon stocks in Resurrection Bay and Day Harbor may be flown, weather, time, and budget permitting.

Portions of the **Outer District** may open to commercial harvest in mid-July focusing on sockeye salmon runs to McCarty Fjord lakes. In recent years, escapement to McCarty Fjord systems (Delight, Desire, and Delusion lakes) have been monitored by aerial survey and weir at Delight Lake. Sockeye salmon escapement into Delight Lake will be monitored again by CIAA using a weir in 2022.

Waters in the western portion of the Outer District may be open by late-July, focusing on pink and chum salmon runs to Port Dick, as well as Windy and Rocky bays. There are numerous other smaller systems in the Nuka Passage area that are also monitored for chum and pink salmon. Dogfish Bay, Chugach Bay, and Port Chatham in the western portion of the district will be evaluated for chum and pink salmon harvest potential from August to early September. The harvest projections for the Outer District are 4,400 sockeye, 23,900 chum, and 726,500 pink salmon.

Portions of the **Kamishak Bay District** typically open by regulation to commercial harvest on June 1. Commercial harvest projections for this district are 74,600 sockeye, 8,400 chum, and 23,200 pink salmon. The majority of sockeye salmon harvest is expected to come from the Chenik Lake run while the chum salmon harvest has historically been spread throughout the district. The department expects to open Chenik Lagoon in mid-June and remain open throughout much of the season. Hatchery-released sockeye salmon returns to the Kirschner Lake outfall remote release site are forecast to be 30,300 fish, of which 27,300 (90.1%) are expected to be required for hatchery cost recovery. The department tracks salmon escapement in this district using remote video monitoring sites at Chenik and Mikfik lakes, as well as regular aerial survey observations of pink and chum salmon index streams.

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Table 1.–Projected salmon harvests for Lower Cook Inlet, 2022.

SOCKEYE SALMON		Total anticipated harvest =		241,600
Natural stocks, (area-wide commercial harvest)^a				152,800
Southern District, (purse seine, excluding hatchery SHAs)				49,900
Southern District, (set gillnet)				26,900
Eastern District, (Aialik Bay)				0
Outer District				4,400
Kamishak Bay District, (excluding Kirschner Lake Subdistrict)				71,600
		Cost	Commercial	
	Hatchery	Broodstock	recovery	common property
	return	harvest	harvest	harvest
Sockeye salmon hatchery programs^b				
Resurrection Bay	78,100	12,800	58,800	6,500
China Poot and Hazel lakes	75,900	0	0	75,900
Tutka Bay Lagoon	38,900	5,200	30,300	3,400
Kirschner Lake	30,300	0	27,300	3,000
Port Graham Bay	0	0	0	0
English Bay Lakes	0	0	0	0
Hatchery stocks (area-wide totals)	223,200	18,000	116,400	88,800
PINK SALMON		Total anticipated harvest =		1,399,500
Natural stocks, (area-wide commercial harvest)^a				1,148,000
Southern District (purse seine, excluding hatchery SHAs)				347,600
Southern District (set gillnet)				50,400
Eastern District				300
Outer District				726,500
Kamishak Bay District				23,200
		Cost	Commercial	
	Hatchery	Broodstock	recovery	common property
	return	harvest	harvest	harvest
Pink salmon hatchery programs^b				
Tutka Bay Lagoon	2,013,400	150,100	1,676,900	186,400
Port Graham Bay	716,200	65,000	586,100	65,100
Hatchery stocks (area-wide totals)	2,729,600	215,100	2,263,000	251,500
CHUM SALMON - Natural production^a		Total anticipated harvest =		35,200
Southern District (purse seine)				700
Southern District (set gillnet)				2,100
Eastern District				0
Outer District				23,900
Kamishak Bay District				8,400
COHO SALMON - Natural production^a		Total anticipated harvest =		3,200
Southern District (purse seine)				700
Southern District (set gillnet)				1,400
Eastern District				0
Outer District				300
Kamishak Bay District				900
CHINOOK SALMON – Natural production^a		Total anticipated harvest =		300
Southern District (purse seine)				100
Southern District (set gillnet)				200
Eastern District				0
Outer District				0
Kamishak Bay District				0
Total LCI anticipated commercial common property harvest- all salmon species =				1,679,800

^a Area-wide harvest forecasts for wild production were produced by ADF&G using trend forecast models based on historical harvests (<http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyarealci.salmon#forecasts>).

^b Provided by Cook Inlet Aquaculture Association, based on parent year releases and recent ocean survival.