Fishery Management Report No. 23-13

2022 Prince William Sound Area Finfish Management Report

NOTE: The 2022 median prefishery biomass was 26,952 tons (page 29; updated November 1, 2023).

by

Matthew Olson

Heather Scannell

Jeremy Botz

Jennifer Morella

Stormy Haught

and

Rachel Ertz

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Alaska Department of Fish and Game **Divisions of Sport Fish and Commercial Fisheries**

Symbols and Abbreviations

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Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
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

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat or long
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	e
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	E
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	′
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	″
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

FISHERY MANAGEMENT REPORT NO. 23-13

2022 PRINCE WILLIAM SOUND AREA FINFISH MANAGEMENT REPORT

by
Matthew Olson, Heather Scannell, Jeremy Botz, Jennifer Morella, Stormy Haught, and Rachel Ertz
Alaska Department of Fish and Game, Division of Commercial Fisheries, Cordova

Alaska Department of Fish and Game
Division of Sport Fish, Research and Technical Services
333 Raspberry Road, Anchorage, Alaska, 99518-1565

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Matthew Olson, Heather Scannell, Jeremy Botz, Jennifer Morella, Stormy Haught, and Rachel Ertz,
Alaska Department of Fish and Game, Division of Commercial Fisheries,
PO Box 669, Cordova, AK 99574, USA

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ABSTRACT

This is the 2022 edition of the annual management report describing commercial fishery management and results for salmon and herring in the Prince William Sound Management Area. This report also describes subsistence and personal use salmon fisheries. In 2022, approximately 33 million salmon were harvested in the Prince William Sound commercial salmon fishery including hatchery and miscellaneous harvest (homepack, confiscated, and donated fish): 14,000 Chinook *Oncorhynchus tshawytscha*, 1.70 million sockeye *O. nerka*, 104,000 coho *O. kisutch*, 28.44 million pink *O. gorbuscha*, and 3.1 million chum salmon *O. keta*. Additionally, 4.72 million salmon were sold for hatchery cost recovery. During 2022, 454 drift gillnet, 26 set gillnet, and 206 purse seine permit holders harvested salmon (Table 1). The estimated value, including hatchery sales, was approximately $99.37 million. Exvessel values were $29.64 million from drift gillnets, $2.15 million from set gillnets, and $43.64 million from purse seines. Revenue from hatchery cost recovery and raceway sales was $23.94 million. Approximately 3,380 subsistence and 9,270 personal use permits were issued, and there was a total combined harvest of 231,000 salmon. The commercial fishery for Pacific herring *Clupea pallasii* was closed in 2022 for the 22nd consecutive year because age structure and projected available surplus in the spawning biomass did not support a fishery.

Keywords: Pacific salmon *Oncorhynchus* spp., Pacific herring *Clupea pallasii*, harvest, hatchery, 2022, area management report AMR, Copper River, Prince William Sound, exvessel value, commercial, personal use, subsistence

INTRODUCTION

OVERVIEW OF MANAGEMENT AREA

The Prince William Sound management area, registration Area E, encompasses all coastal waters and inland drainages entering the north central Gulf of Alaska between Cape Suckling and Cape Fairfield. This area includes the Bering River, Copper River, and all of Prince William Sound (PWS), with a total adjacent land area of approximately 38,000 square miles (Figure 1). The salmon management area is divided into 11 districts that correspond to the local geography and distribution of the 5 species of salmon (*Oncorhynchus* spp.) harvested in the commercial fisheries (Figure 1).

Six private nonprofit (PNP) hatcheries contribute to the area's fisheries (Figure 1). Five are operated by Prince William Sound Aquaculture Corporation (PWSAC). Gulkana Hatchery (GH; located between Paxson and Summit Lakes) augments production of sockeye salmon *O. nerka* to the Copper River. Cannery Creek Hatchery (CCH; located on the north shore of Prince William Sound [PWS] in Unakwik Inlet) and Armin F. Koernig Hatchery (AFK; located in southwestern PWS on the east shore of Evans Island) produce pink salmon *O. gorbuscha.* Wally H. Noerenberg Hatchery (WNH; located in northwestern PWS on the south shore of Esther Island) produces pink, chum *O. keta*, and coho *O. kisutch* salmon. Main Bay Hatchery (MBH; located in western PWS at the head of Main Bay) produces sockeye salmon. Solomon Gulch Hatchery (SGH), operated by the Valdez Fisheries Development Association (VFDA) is located on the south shore of Port Valdez and produces pink and coho salmon.

COMMERCIAL SALMON FISHERIES

All districts are managed to achieve escapement goals, where established, and to allow for the orderly harvest of wild and enhanced salmon stocks surplus to spawning requirements, inriver goals, and hatchery cost-recovery and broodstock needs. In addition, the Alaska Department of Fish and Game (ADF&G) follows regulatory plans to manage fisheries and to work cooperatively with PNP hatcheries in achieving cost-recovery and broodstock objectives.

ADF&G forecasts PWS wild salmon runs, whereas PWSAC and VFDA forecast hatchery runs. Hatchery forecasts are contained in the annual hatchery management plans, which also contain production goals, broodstock development, and harvest management of PWS hatchery returns (unpublished ADF&G manuscripts obtained from Lorna Wilson, Assistant Private Non-Profit Hatchery Coordinator, Juneau, Alaska; hereafter cited in text as "ADF&G *unpublished*"). Following each season, private nonprofit hatchery permit holders in Alaska are required (AS 16.10.470) to submit an annual report to ADF&G that includes details of egg takes, releases, and adult returns (ADF&G *unpublished*), and these reports are summarized in Wilson (2023).

Legal gear for commercial salmon fishing includes purse seines, drift gillnets, and set gillnets. Numbers of commercial limited entry permits in Area E is defined in 20 AAC 05.320. Drift gillnet permits are the most numerous (536 permits) and are allowed in the Bering River; Copper River; Unakwik, Coghill, and Eshamy Districts; and the Port Chalmers Subdistrict when allowed through the allocation plan. Set gillnet gear (28 permits) is only allowed in the Eshamy District. Purse seine gear (267 permits) is allowed in the Eastern, Northern, Unakwik, Coghill, Northwestern, Southwestern, Montague, and Southeastern Districts.

PRINCE WILLIAM SOUND MANAGEMENT AND SALMON ENHANCEMENT ALLOCATION PLAN

In December 2005, the board modified the *Prince William Sound Management and Salmon Enhancement Allocation Plan* (5 AAC 24.370). The modifications only allocated salmon produced by PWSAC and removed wild stocks and salmon produced by VFDA. Additionally, a 5-year rolling-average exvessel value is now used rather than annual value percentages. The set gillnet gear group is allocated 4% of the 5-year average value of PWSAC-enhanced salmon stocks. Drift gillnet and purse seine gear groups each receive 50% of the remaining value of PWSAC-enhanced salmon stocks. If the set gillnet gear group catches 5% or more of the previous 5-year average value of PWSAC-enhanced stocks, the set gillnet group will be limited to no more than 36 hours of fishing time per week beginning July 10, in the following year. If the drift gillnet gear group harvest value is calculated to be 45% or less, then in the year following the calculation, the drift gillnet gear group shall have exclusive access to the Port Chalmers Subdistrict from June 1 through July 30. If the purse seine gear group harvest value is calculated to be 45% or less, then in the year following the calculation, the purse seine gear group shall have exclusive access to the Esther Subdistrict from June 1 through July 20.

In addition, the *Prince William Sound Management and Salmon Enhancement Allocation Plan* limits the time and area open to specific gear groups. For example, the Southwestern District, except within the Armin F. Koernig Hatchery Special Harvest Area and Terminal Harvest Area, is closed to purse seine fishing prior to July 18 to ensure that early season chum and sockeye salmon bound for other districts reach their intended destinations (5 AAC 24.370(e)(2)(A)). Furthermore, the purse seine gear group is allowed to fish in the Coghill District after July 21 when the harvest is predominantly pink salmon (5 AAC 24.370(e)(5)(B)). There are also regulatory provisions that allow for enhanced chum salmon to be harvested prior to July 21 within the Esther Subdistrict of the Coghill District when the available surplus is not being adequately harvested by the drift gillnet fleet.

2022 SALMON SEASON HARVEST SUMMARY

The total commercial harvest was approximately 29 million salmon composed of 14,000 Chinook *O. tshawytscha*, 1.57 million sockeye, 101,000 coho, 24.55 million pink, and 2.4 million chum salmon (Table 1, Figure 2). Additionally, 4.72 million salmon were harvested in the hatchery cost-recovery fisheries and 9,700 fish were harvested for homepack (Table 1). Exvessel values from the 2022 commercial fisheries, excluding hatchery sales, were $43.64 million (73%) for purse seine, $29.64 million (26%) for drift gillnet, and $2.15 million (<1%) for set gillnet (Table 2, Figure 3). The gillnet subareas average price per pound paid for Chinook salmon ($3.32–$13.09) was well above the 10-year (2012–2021) average ($3.16–$7.70; Table 3). Depending on gear and reporting area, the average price per pound paid for sockeye ($1.65–$2.99), coho ($1.07–$1.26), pink ($0.40–$0.44), and chum ($0.67–$1.21) salmon was generally above the 10-year (2012–2021) average (Table 3). The purse seine average earnings per permit was $212,000, which was 11% below the 10-year average (2012–2021) of $234,000 (Table 4). Drift gillnet average earnings per permit was $65,300, 12% below the 10-year (2012–2021) average of $77,500, and set gillnet average earnings per permit was $82,700, 3% above the 10-year (2012–2021) average of $73,600 (Table 4).

2022 GILLNET SALMON SEASON SUMMARY

Overview

The PWS gillnet fishery had weak coho salmon harvests and below average Chinook, sockeye, and chum salmon harvests. Early on, the Copper River sockeye salmon run was well below average in terms of harvest and inriver passage, prompting the use of short-duration fishing periods through mid-June. Following an early conservative fishing schedule, when Chinook salmon passage was near complete and sockeye salmon run strength improved, the fishery was able to maintain a consistent fishing schedule from mid-June through the end of the season. In western PWS gillnet fisheries, below-average hatchery sockeye and chum salmon runs with large cost recovery goals prompted irregular fishing opportunity throughout June and July. The hatchery chum salmon run in western PWS was 24% above forecast while the hatchery sockeye salmon run was 18% below forecast. Hatchery cost recovery and broodstock harvest accounted for 38% of the chum salmon run and 35% of the sockeye salmon run (ADF&G *unpublished*). The season ended with weak coho salmon runs to the Copper River and Bering River districts, which resulted in conservative management of those fisheries. Fortunately, strong grounds prices for Chinook, sockeye, chum, and coho salmon helped boost the season total 2022 exvessel value for the drift gillnet fleet to 15% above the 2021 value and almost 3 times the 2020 value (Tables 3 and 4).

Fishery participation was low in 2022. A total of 454 drift gillnet permit holders sold 12,900 Chinook, 1.31 million sockeye, 92,500 coho, 679,000 pink, and 1.25 million chum salmon, for a combined total of 3.35 million salmon. A total of 26 set gillnet permit holders sold 23 Chinook, 182,000 sockeye, 33 coho, 71,500 pink, and 25,900 chum salmon, for a combined total of 279,000 salmon (Table 1).

The gillnet fishery exvessel values in 2022 were at or below the 10-year (2012–2021) average. The drift gillnet exvessel value of $29.64 million was 23% below the 10-year (2012–2021) average of $38.43 million (Table 4), and comparable to levels seen in the early 2000s. Drift gillnet average permit earnings were $65,300 compared to a 10-year (2012–2021) average of $74,700. The set gillnet exvessel value of $2.15 million was 4% above the 10-year (2012–2021) average of

$2.06 million, and average permit earnings were $82,700 compared to a 10-year (2012–2021) average of $73,600. Set gillnet average permit earnings in 2022 were more than double the values from the previous two years (Table 4, Figure 3).

Copper River District

The Copper River District is defined as all waters of the Gulf of Alaska between Hook Point and Point Martin with a seaward boundary defined by a line between a point 3 miles south of Hook Point, and another point 3 miles south of Pinnacle Rock (Figure 1).

ADF&G, with direction from the Alaska Board of Fisheries, manages salmon runs to the Copper River District to assure a sustained yield and meet all user group allocations, as outlined in the *Copper River District Salmon Management Plan* (5 AAC 24.360). In 2003, the Chinook salmon spawning escapement goal was changed from a range of 28,000–55,000 to 24,000 or more fish (Bue et al. 2002). To increase the likelihood of achieving the Chinook salmon escapement goal, at the December 2011 meeting, the Alaska Board of Fisheries amended the *Copper River King Salmon Management Plan* (5 AAC 24.361) to limit the number of commercial openings inside of the barrier islands in statistical weeks 20 and 21 to no more than one 12-hour fishing period during this 2-week period. In addition, the Chinook salmon escapement goal was updated to a range of 21,000–31,000 fish based on ADF&G's most recent escapement goal analysis (Joy et al. 2021).

The Copper River District is managed using 3 primary assessment tools: (1) fish counts at the Miles Lake sonar site, (2) aerial escapement surveys of lower Copper River Delta systems, and, to a lesser extent, (3) weekly anticipated harvest estimates (forecasts) with environmental conditions such as river height considered. ADF&G relies primarily on the inriver passage index provided by Adaptive Resolution Imaging Sonar (ARIS) units at Miles Lake to manage the commercial fishery and provide upriver escapement and fishery allocations. Aerial surveys in the upper river, hatchery otolith markings (marked thermally or with strontium chloride), weirs, and salmon counting towers provide additional information useful for meeting the escapement objectives of the *Copper River District Salmon Management Plan*.

The current sustainable escapement goal (SEG) range for wild sockeye salmon for the upper Copper River is 360,000–750,000 (Table 5; Moffitt et al. 2014). By regulation (5 AAC 24.360), ADF&G must also provide for an inriver run goal (IRRG) of salmon to the Copper River. This IRRG consists of 7 components and can vary each year because 4 of those components are variable. These components are listed below, along with the number of salmon in 2022:

- The lower bound of the spawning escapement goal (fixed): 360,000 sockeye salmon
- Other salmon (fixed): 17,500 salmon
- Subsistence harvest (variable): 71,500 salmon
- Personal use harvest (variable): 126,600 salmon
- Sport fishery (fixed): 15,000 salmon
- Gulkana Hatchery broodstock (variable): 20,000 sockeye salmon
- Gulkana Hatchery surplus (variable): 65,200 sockeye salmon
- Total: 656,000–1,046,000 salmon

ADF&G manages for a daily inriver objective that is the apportioned number of salmon that need to pass the Miles Lake sonar to meet the overall IRRG (based on historical run timing). For 6 of the 7 IRRG components, the daily inriver objective is calculated using run timing of both wild and

hatchery salmon. The subsistence harvest component is calculated using only wild stock run timing, as required by AS 16.05.940(34).

Annual harvests of Chinook and sockeye salmon in the Copper River District have been variable over the last 25 years (1997–2021; Appendix A4). Average Chinook salmon commercial harvest dropped from an average of 26,800 per year (1997–2021) to 12,600 per year (2012–2021; Appendix A4). Historically small Chinook salmon runs in 2014, 2016, 2020, and 2021 (Appendix A3) resulted in missed escapement goals and commercial catches that all ranked in the lowest 15 years since 1975 (Appendix A4).

Annual sockeye salmon harvests have been stable over the last 25 years (1997–2021) but have experienced some historic lows within the past 5 years. The second smallest annual commercial sockeye salmon harvest since 1975 was in 2018, and the fourth smallest was in 2020 (Appendix A4). These recent, weak runs prompted emergency disaster relief fund requests from the gillnet fleet in 2020, with results pending (Appendix A2).

The coho salmon commercial harvest has varied widely over the last 25 years, from 18,700 in 1997 to 504,400 fish in 2002 (Appendix A4). In the most recent 10 years, however, the coho salmon fishery has helped to stabilize the economic impacts of low Chinook and sockeye salmon harvests. For instance, during the 2018 and 2020 seasons, when drift gillnet Chinook and sockeye salmon harvest values were near all-time lows, coho salmon harvests areawide added $6.10 million (2018) and $2.77 million (2020) of exvessel value into the economy (Table 4, Appendix A4).

2022 Preseason Outlook and Harvest Strategy

In February 2022, ADF&G forecasted below-average harvests of Chinook salmon and sockeye salmon in the Copper River District (Morella 2022). Due to the below-average Chinook salmon forecast, closed waters described in 5 AAC 24.350(1)(B) were anticipated to be utilized beyond statistical weeks 20 (May 15–21) and 21 (May 22–28). The 2022 inriver goal (minimum inriver passage objective) was 620,038 salmon by July 28, which was the season ending date for sonar counting at Miles Lake (Appendix A6).

The Copper River District management objective is to have a fishing schedule of 2 evenly-spaced periods per week, starting on the first Monday or Thursday nearest May 15. Fishing schedules are adjusted inseason to account for variations in river flow, run timing, run strength, fishing effort, and other factors. During years when Miles Lake sonar is not operational before the first commercial fishing period, early season management of the Copper River District is based on actual and anticipated harvest data. The anticipated catch is based on the current year midpoint harvest forecast and the 1998–2007 harvest timing (the most recent years of harvest timing analysis). After Miles Lake sonar is operational, sonar counts and commercial harvest information become the primary factors governing the management of the fishery. By mid-June, aerial indices of sockeye salmon escapement in Copper River Delta systems are also considered when scheduling commercial fishing periods. Due to the many spawning systems in the Copper River Delta, an actual weekly escapement index of selected systems is compared to a weekly escapement index based on historical run timing. The SEG range for Copper River Delta sockeye salmon stocks is 55,000–130,000 fish (Table 5; Bue et al. 2002). On August 15, ADF&G's management priority switches to coho salmon management.

Coho salmon fishery management typically begins the third week of August, and the historical precedent is to provide an initial 24-hour period once per week. If harvest or aerial survey numbers

warrant, the duration of this fishing period may be increased to 36, 48, or 60 hours, or a second fishing period may be added during the week. Aerial escapement indices for the early portion of the coho salmon run probably underestimate salmon abundance because of other species of salmon remaining in tributaries, fish moving into or out of survey index areas, and limited visibility due to poor water conditions. Additionally, inclement fall weather often prevents regular weekly survey flights. The SEG for the Copper River Delta coho salmon is 32,000–50,000 fish (Table 5).

Sockeye and Chinook Salmon Fishery Season Summary

The 2022 sockeye salmon runs to the Copper River were low, resulting in conservative management to ensure escapements were within sockeye salmon escapement goals. The 2022 Copper River sockeye salmon total run was 1.47 million fish, of which 85% were wild Upper Copper River fish, 2% were hatchery Upper Copper River fish, and 14% were Copper River Delta fish (Appendix A2). Of these 1.47 million fish, 601,000 (41%) were commercially harvested, 4,170 (<1%) were retained as homepack, 5,830 (<1%) were harvested in the Copper River District subsistence fishery, and 224,000 (15%) were harvested in state and federal freshwater fisheries. Only Copper River District subsistence, Chitina Subdistrict state and federal subsistence harvest, and Copper River Delta sport harvest were above their respective 10-year (2012–2021) averages. Upper Copper River sockeye salmon spawning escapement was 519,586 fish, which is above the 360,000-fish lower bound of the SEG and below the recent 10-year (2012–2021) average. The Copper River Delta sockeye salmon escapement was 110,150 fish and was 14% below the recent 10-year (2012–2021) average (Appendix A1).

In 2022, the sockeye salmon run produced by GH totaled 24,300 fish, and was 80% below the total run forecast of 119,000 fish (ADF&G *unpublished*; Appendices A2 and E3). A total of 5,000 sockeye salmon were reported as collected for broodstock or escaped into the watershed (Appendices A1 and E3). Of those fish, 3,310 were harvested for broodstock and an estimated 1,690 sockeye salmon returned to release locations but were not harvested (ADF&G *unpublished*).

The 2022 Copper River Chinook salmon run was above average, and escapement was near the upper end of the SEG. The total run was 52,200 Chinook salmon, of which 12,300 (24%) were commercially harvested, 900 (2%) were harvested through educational and subsistence permits in the Copper River District, and 534 (1%) were retained by commercial permit holders as homepack. A total of 9,130 (18%) were harvested in inriver fisheries, and the remaining 29,347 (56%) represent spawning escapement (Appendix A3). Spawning escapement was 650 fish below the 31,000 fish upper bound of the Copper River Chinook salmon SEG (Table 5).

The Miles Lake sonar project became operational on May 17, with the north bank sonar counting fish for approximately half a day. South bank sonar deployment was later than recent years due to shore ice. The first salmon were counted on May 18, when the north bank passed 48 fish. On May 18, the Miles Lake north bank sonar began counting 24 hours a day, and on May 25, the south bank sonar began counting 24 hours a day. The last day of operation was July 28 and the 2022 cumulative Miles Lake sonar count was 785,509 salmon, which was above the lower end of the inriver passage objective for the date (Figure 4, Appendices A6 and A7).

Sockeye salmon aerial surveys for the Copper River and the Copper River Delta extend from mid-June to late September and serve as important metrics of escapement abundance and distribution. The Copper River Delta weekly aerial escapement survey indices were below the lower end of the sockeye salmon objective range for only the last 2 weeks of coverage and within the range for the remainder of the season (Appendix A9). The final escapement index count for the Copper River

Delta systems was 55,075 sockeye salmon, which was within the SEG range of 55,000–130,000 fish (Table 5, Appendix A9). Since 2012, the escapement index has ranged from a low of 51,600 in 2016 to a high of 87,100 in 2021 (Appendix A10). In 2022, two aerial surveys of upper Copper River index streams were conducted to evaluate distribution of sockeye salmon escapement, resulting in the third lowest total peak count index since 2007 (Appendix A11).

Commercial fishing time through the first month of the 2022 season was reduced because of weak early run abundances of sockeye salmon and uncertainty in Chinook salmon run strength. Sockeye salmon harvest was well below anticipated levels for the first 2 fishing periods (May 17 and 20), necessitating a shift to a conservative fishing schedule (once a week or less), despite Chinook salmon harvests that were above the semiweekly anticipated harvest point estimates (Appendix A8). Large spring tidal events of nearly 15 feet coincided with the first and second opening. These large tide cycles increase salmon movement and frequently lead to above-average commercial harvests and counts at the Miles Lake sonar station. Harvest levels during this time, along with cool weather and late ice out in the river, contributed to the increased harvest risk of continuing 2 fishing periods a week through a late-June period that was likely to be the peak of the sockeye and Chinook salmon runs through the district. These factors provided justification for continuing conservative management with no more than 1 fishing period every week for the early season.

Fishing opportunity for Chinook salmon in inside waters (5 AAC 24.350(1)(B)) was not warranted due to the high potential of a small run based on low brood year escapement and poor returns in recent years, despite above anticipated harvest of Chinook salmon earlier in the season and short fishing periods. As an additional step to bolster Chinook salmon conservation efforts, the inside closure area was expanded from the start of the season through mid-June to include inside waters east of Kokinhenik Bar, essentially closing most waters inside barrier islands east of Copper Sands (between Egg Island and Pete Dahl channels). The further reduction in the channelized shallow water fishing area reduced Chinook salmon harvest potential. Those inside waters were opened in late June (Appendix A5) due to increased confidence in achieving Chinook salmon inriver abundance targets.

Early season Miles Lake sonar passage remained below the cumulative minimum inriver passage objective into the second week of June, due in part to the delayed deployment of the south bank sonar. Even when considering potential passage along the south bank during the first 8 days of counts, cumulative passage remained well below minimum objectives. By May 31, cumulative counts were nearly 107,000 fish below minimum objectives. Sonar counts began to improve at this point, and the cumulative count deficit was made up by June 9 (Figure 4, Appendix A6). Reaching the cumulative minimum inriver passage objective by mid-June meant that the early segments of the sockeye, and Chinook salmon runs were likely well represented in overall inriver passage. To achieve this level of inriver passage, the commercial fishery was restricted to 96 hours through the first month of the season with an extended closure timed to coincide with historical peak harvest timing in late May and early June (Appendix A5).

Increasing daily inriver passage into the second week of June and commercial harvest improving to above anticipated levels led to progressively increasing fishing opportunity. Chinook and sockeye salmon harvests from the third fishing period (May 26) were 2,036 Chinook and 70,100 sockeye salmon, and during the fourth fishing period (June 2), Chinook salmon harvest declined to 1,200 fish, while sockeye salmon harvest improved to 85,700 fish. Fishing effort averaged 346 permits between these 2 periods (Appendix A5), signifying that high harvest potential needed

to remain a strong management consideration through early June. The third and fourth fishing periods were during the historical peak harvest period and resulted in above anticipated harvests, indicating that inriver passage was likely to improve. Daily sonar passage peaked at 38,941 salmon on June 4 and remained above minimum passage targets for the remainder of June (Appendix A6). These elevated daily passage counts provided firm justification for maintaining 2 fishing periods per week and expanding fishing time through the first half of June (Appendix A6).

In mid-June, the commercial harvest pattern stabilized around anticipated levels, and the Miles Lake sonar passage stayed consistently above the daily and cumulative objective range (Appendix A6). Those 2 factors combined to further promote the shift to longer-duration fishing periods (Appendix A5). The Copper River Delta sockeye salmon aerial survey escapement index became an increasingly stronger management driver as the fishery progressed later in the season. Aerial surveys stayed between the minimum and average weekly objective from late June through July (Appendix A9). This supported increasing fishing opportunity from 24-hour periods to an alternating schedule of 36-hour and 48-hour periods by late June, which translated to 648 hours of fishing from mid-June through the start of the coho salmon fishery in mid-August (Appendix A5). A total of 302,000 sockeye salmon were harvested during this period or 50% of the total sockeye salmon harvest for the season (Appendix A5). The average (2012–2021) total harvest percent for this late phase in the season (June 15 to August 15) is 44% (J. Botz, PWS Area Management Biologist, ADF&G, Cordova, unpublished data, 2023).

Commercial fishery decision making is also driven to varying degrees by numbers of strontium chloride-marked GH sockeye salmon harvested in the commercial fishery. Through the historical average period of peak abundance (last week of June through first week of July), GH sockeye salmon represented about 8% of the harvest. GH sockeye salmon decreased in abundance 2 weeks later, representing about 5% of the harvest during the July 21–23 fishing period (Appendix E2). The GH contribution to the sockeye salmon commercial fishery harvest was 16,400 fish, or 3% of the Copper River District harvest (Appendix E2), which was about 12% of the recent 10-year (2012–2021) average of 138,000 fish (Appendix E3). This low harvest was on fish that came from fry releases in 2018 and 2019 that were both below the 10-year (2012–2021) average releases (Appendix E4). Main Bay Hatchery contributed 3,480 fish, or 1% of the Copper River District harvest (Appendix E2). The number of wild sockeye salmon in the Copper River District commercial harvest was 581,000, or 97% of the total sockeye salmon catch (Appendix E2).

Sockeye salmon harvest was above semiweekly harvest projections during seven commercial fishing periods after mid-June in 2022 (Appendix A8). From the first fishing period on May 16 until the start of the coho salmon fishery on August 15, the commercial fishery was prosecuted on a schedule that ranged from 1 short-duration (12-hour) period a week to 2 extended-duration (36−48 hours) periods a week. This varied schedule amounted to a total of 744 hours fished for the entirety of the Chinook and sockeye salmon season. The Chinook and sockeye salmon fishery had a preliminary exvessel value of $11.87 million (J. Botz, ADF&G, Division of Commercial Fisheries, PWS Area Management Biologist, Cordova, unpublished data, 2023). In an average year, like 2019, this fishery can be worth $22.74 million (Morella et al. 2021).

A total of 434 drift gillnet permits were active in the Copper River District in 2022 (Appendix A5), a continuation of the steady decline in effort seen over the last 4 years (Botz et al. 2021; Morella et al. 2021; Scannell et al. 2023). Fishing effort in 2022 peaked on May 24 when 398 permits fished during a 12-hour opening decreased to a low of 9 permits fished during the August 4–6 fishing period. This drop in participation was likely from a combination of low sockeye salmon

abundance during the fishery (Appendix A5) and drift gillnetters leaving the Copper River District to participate in fisheries on the western side of PWS (primarily near MBH and WNH).

Harvests of Chinook salmon were average, while sockeye salmon were below average in 2022. The total commercial harvest of 12,800 Chinook salmon was on par with the previous 10-year (2012–2021) average harvest of 12,600 fish (Appendices A3–A5 and A8). Peak Chinook salmon harvest occurred on May 16 when 3,000 Chinook salmon were harvested during a 12-hour fishing period (Appendix A5). The total Copper River District sockeye salmon commercial fishery harvest of 605,000 fish was 45% less than the previous 10-year (2012–2021) average harvest of 1.09 million sockeye salmon (Appendices A1, A4, A5, and A8). Peak sockeye salmon harvest occurred during the June 2 fishing period when 85,700 sockeye salmon were harvested over 12 hours (Appendix A5).

The age structure of both Chinook and sockeye salmon in 2022 was similar to prior years. In 2022, most of the sockeye salmon commercial harvest was age-5 fish (65%), followed by age-4 (25%) and age-6 (8%) fish (Table 6). In 2022, most of the Chinook salmon commercial harvest was also age-5 fish (62%), followed by lower numbers of age-4 (30%) and age-6 (7%) fish (Table 7). Historically, 5-year-old sockeye salmon make up 70–85% and 5-year-old Chinook salmon make up 50–80% of their respective returns in the Copper River (J. Botz, ADF&G, Division of Commercial Fisheries, PWS Area Management Biologist, Cordova, unpublished data, 2023). Over the last 40 years, a sizeable decline in average length-at-age has been observed in the age-5 Chinook and sockeye salmon harvested in the Copper River District commercial fishery (Figures 5 and 6). A decline in length over time was also observed in the other Copper River Chinook and sockeye salmon age classes.

Coho Salmon Fishery Season Summary

The total coho return was estimated to be 119,000 fish, which includes all documented harvest and Copper River Delta escapement. This number does not include upriver spawning escapement because the number of coho salmon migrating upriver is not assessed. This run was the lowest in the last 40 years with the poor survival rate possibly driven by extreme drought conditions when brood year 2019 returned to spawn. In the Copper River District, a total of 44,100 (37%) coho salmon were harvested commercially, 405 (<1%) were reported retained as homepack in the commercial fishery, 391 (<1%) fish were harvested in the subsistence gillnet fishery, and an estimated 13,800 (12%) were harvested in state and federal freshwater fisheries (Appendix A12). The Copper River Delta spawning escapement index of 30,340 coho salmon was below the SEG index range of 32,000–50,000 (Table 5, Appendix A13). This index value is from peak aerial surveys, with poor survey conditions, and was 33% below the recent 10-year (2012–2021) average of 45,205 fish (Appendix A14).

The 2022 coho salmon commercial harvest of 44,500 was 79% less than the harvest projection of 221,000 fish (Table 9, Appendix A8). The below average commercial fishery harvest provided for a small increase in the exvessel value relative to recent years, but still played an important role in supporting the late season salmon fishery economy in Cordova. The coho salmon fishery provided 3% of the Copper River District exvessel value in 2022, down significantly from 20% in 2021 (J. Botz, ADF&G, Division of Commercial Fisheries, PWS Area Management Biologist, Cordova, unpublished data, 2023). With an average price of $1.26/pound (Table 3) and an average fish weight of 7.39 pounds (Appendix A5), the preliminary exvessel value of this fishery was $415,000.

Daily coho salmon harvest did not exceed daily sockeye salmon harvest until the August 11–12 fishing period, when 682 coho and 356 sockeye salmon were harvested by 16 permit holders (Appendix A5). Harvest from the August 15–16 fishing period was less than the forecasted weekly harvest of 32,600 coho salmon (Appendices A5 and A8). The historically low harvest numbers for the fishing period supported a continued conservative management approach, especially when considering the high fishery participation potential due to a poor sockeye salmon season. An aerial escapement survey was not flown until early September (Appendix A13) due to poor survey conditions. This is about 2 weeks later than the typical first survey flown in mid-August. Over the past decade, the first round of coho salmon aerial surveys in mid-August have often been well below the weekly target and, considering the poor harvest in August, coho salmon were likely well below weekly escapement targets throughout August.

Harvest peaked during the August 22–23 fishing period when 126 permit holders delivered 23,300 coho salmon. Effort for coho salmon peaked the following period when 133 permit holders delivered 16,700 coho salmon (Appendix A5). The harvest for this period in the season was tracking well below historical averages (150,000 coho salmon; Appendix A8). An aerial survey flown during the week ending September 3, under good observational conditions, documented 6,530 coho salmon in index streams, which was below the lower weekly index target (Appendix A13).

The combination of poor semiweekly harvest and well below forecast target escapements signified that the fishery should be closed pending improvements in escapement counts (Appendices A8 and A13). The aerial survey for the week ending September 10 resulted in a count of 11,240 coho salmon, which fell below the lower target for the week. This indicated that escapement was not improving enough to provide assurance that the SEG would be achieved (Appendix A13). Inclement weather only allowed for 1 additional aerial survey, flown on September 24, which resulted in a count of 18,630 coho salmon. This fell between the lower and average target for the week, indicating an improvement in escapement, but still projecting not to meet minimum escapement objectives (Appendix A13). This assessment was further bolstered by the lack of a commercial fishery over the previous 3 weeks, indicating that even without this harvest, coho salmon abundance remained low. High precipitation through August and September lead to high turbidity in Eyak Lake aerial survey reaches and made for poor observational conditions. A late October aerial survey of Eyak Lake index reaches resulted in nearly 9,000 additional coho salmon being added to the total Copper River Delta peak count index. The total peak count index of 30,340 coho salmon was below the lower end of the escapement goal range of 32,000–50,000 fish. The 2022 Copper River Delta peak count index was 33% below the 10-year (2012–2021) average of 45,205 fish (Appendices A13 and A14).

The majority of the coho salmon harvested commercially were 4-year-old (58%) and 3-year-old (41%) fish. The rest of the harvest was made up of 5-year-old (1%) fish (Table 8). This age structure was similar to historic harvests from the Copper River District fishery.

Bering River District

The Bering River District includes the waters of the Gulf of Alaska between the eastern edge of the Copper River District and Cape Suckling (Figure 1).

Preseason Outlook and Harvest Strategy

The Bering River District is generally managed concurrently with the Copper River District when Bering River District sockeye and coho salmon aerial escapement surveys indicate that commercial fishing is warranted. Historically, this district has opened to sockeye salmon harvest in early June. However, there has been little sockeye salmon surplus to escapement needs in recent years. ADF&G announced preseason that the district would probably not open to a targeted sockeye salmon fishery until escapement levels were within the weekly escapement index range.

During a typical season in the Bering River District, it is often difficult to estimate the harvest inseason due to inaccurate reporting from the fishing grounds. This is due to fishing vessels delivering their catch from the Bering River District to a tender in the Copper River District, and the harvest being reported in the Copper River District. This error is often, but not always, resolved when fish tickets are entered.

Sockeye Salmon Season Summary

The 2022 Bering River District sockeye salmon fishery was prosecuted in a similar manner to recent seasons. Inseason aerial survey escapement estimates trended near or below the anticipated inseason weekly index, and the fishery remained closed or restricted to the western edge of the district throughout the sockeye salmon season. To reduce enforcement concerns associated with the line fishery on the eastern edge of the Copper River District, a small western section of the Bering River District was opened concurrently with Copper River District fishing periods from May 16 to June 24 (Appendix A16). Between June 25 and August 14, the Bering River District was closed to commercial fishing due to an increase in Bering Lake sockeye salmon harvest potential and insufficient escapement to support a targeted fishery. Bering Lake escapement, with minimal fishing effort over the last 10 years, has indicated minimal salmon surplus to escapement needs. The first aerial survey of the Bering River District was flown during the week ending June 25 (Appendix A17). Only 70 sockeye salmon were observed during this survey. The weekly escapement index range was 4,048–8,906 sockeye salmon, warranting continued closure of the district to commercial fishing. The next survey was flown during the week ending July 16 and resulted in an escapement count of 6,700 fish, which was still below the lower end of the weekly escapement index range of 11,051–24,313 sockeye salmon (Appendix A17). Considering the amount of fishing effort that could have shifted from Copper River District and the continued weakness of the sockeye salmon run, no directed fishery on the tail end of the run was anticipated for the remainder of the sockeye season.

Sockeye salmon escapement peaked from mid- to late July, and inclement weather prevented additional surveys during the sockeye and coho salmon run overlap. The escapement indices peaked at 6,700 sockeye salmon the week ending July 16 (near the average objective for the week; Appendix A17). The final sockeye salmon escapement index for the Bering River was 7,095 fish, which was less than half of the lower bound SEG of 15,000 fish (Appendix A17). Total sockeye salmon harvest in the district was 5,300 fish compared to the 10-year (2012–2021) average harvest of 3,930 fish (Appendices A15 and A16). Most of this harvest occurred during the early season, prior to typical Bering River District run timing, when the western edge of the district was opened to target Copper River-bound sockeye salmon.

Coho Salmon Season Summary

Late-season weather conditions prevented several aerial surveys in the Bering River District from being conducted. Run timing of the Bering River District coho salmon run was average, and the final escapement was below the SEG range for the district (Appendix A18). The commercial fishery harvest of 8,660 coho salmon was 86% below the 10-year (2012–2021) average of 63,800 fish (Appendix A15).

Coho salmon fishing opportunity in the Bering River District followed the same schedule as the Copper River District. Fishing time was restricted to a single 24-hour fishing period per week during the last half of August due to weak harvest indices. Harvest from the period that began August 22 was confidential, with only 2 permit holders participating in the fishery. This fishing effort was exceptionally low for this period of the season. This level of effort in mid- to late August was not surprising because of the perceived commonality in weak coho salmon runs between the Copper River and Bering River District fisheries, and most fishing effort focused on earlier timed coho salmon stocks in the Copper River District. Harvest and effort picked up quickly by the end of August when 49 permit holders delivered 8,470 coho salmon during the last fishing period of the season (Appendix A16).

Inclement weather prevented a comprehensive survey of Bering River District index systems until early September. A survey under good observational conditions was flown during the week ending September 10, and 4,595 coho salmon were observed compared to a projected range of 6,969–17,691 fish (Appendix A18). This survey was below the weekly objective and was less than half the lower bound of the SEG. This survey confirmed the pattern of low run entry that was apparent in the commercial fishery at the beginning of the month and signified that the fishery should remain closed. The peak observed escapement in 2022 also occurred during the week ending September 10. Aerial survey indices in some index systems would probably have been higher in late September, but poor weather and high turbidity prevented several surveys from taking place. The total drainage escapement index for the season was 4,685 coho salmon and was 64% below the SEG range of 13,000–33,000 (Appendix A18).

A total of 58 permit holders fished during the season, and peak coho salmon harvest and fishing effort occurred during the 24-hour period that began August 29

Coghill District

The Coghill District is in northwestern PWS and encompasses waters north and west of Perry and Culross Islands, including waters surrounding Esther Island and waters of southern Port Wells north to Harriman and College Fiords. Most commercial fishing in the Coghill District targets wild sockeye salmon returning to Coghill Lake (located in eastern College Fiord) and hatchery salmon from WNH (located on Lake Bay on the southern end of Esther Island; Figure 1).

Preseason Outlook and Harvest Strategy

The 2022 Coghill Lake sockeye salmon total run forecast was 337,000–491,000 fish (414,000 fish point estimate; Morella 2022). Meeting the median historical escapement estimate of 30,000 sockeye salmon (SEG range of 20,000–75,000; Table 5) would leave 384,000 fish, based on the total run point estimate, available for commercial harvest (Table 9). The WNH enhanced chum salmon run was forecast to be 2.48 million fish (ADF&G *unpublished*). PWSAC's cost-recovery and broodstock requirements were projected to be 1.29 million chum salmon, leaving 1.19 million fish for commercial harvest. An estimated 138,000 coho salmon were expected to return to WNH,

of which 2,700 fish were anticipated to be harvested for broodstock, leaving the remaining 135,300 fish available for commercial harvest (ADF&G *unpublished*).

Early-to-mid-season management of the Coghill District is driven by Coghill Lake sockeye salmon escapement and WNH chum salmon run strength. Coghill District chum, sockeye, pink, and coho salmon fisheries are open to drift gillnet permit holders during all fishing periods and to purse seine permit holders beginning July 21 when the harvest is predominately pink salmon. The drift gillnet chum and sockeye salmon fisheries are generally prosecuted in moderate duration (36–48 hours) fishing periods, with 2 fishing periods per week concurrent with other gillnet fisheries. The pink salmon purse seine and drift gillnet fishery generally consists of short (12−14 hour) fishing periods prosecuted as frequently as every day. PWSAC, in consultation with ADF&G, typically elects to complete a high percentage (80–90%) of their pink and chum salmon cost-recovery harvest goals before recommending commercial harvest openings in terminal areas.

Season Summary

The Coghill River weir escapement counts are critical to the early season management of the Coghill District. The Coghill weir was operated from June 9 through July 27, except for a 10-day period from July 18 to 27 when high water prohibited counts (Appendix B1). Daily sockeye salmon passage peaked on June 28, when 3,760 fish passed the weir (Figure 7, Appendix B1). A total of 34,092 sockeye salmon were counted, within the SEG range of 20,000–75,000 fish (Table 5, Appendices B1 and B2). The Coghill River sockeye escapement goal has been achieved every year since 2017. The 2018 parent year was 76% of the 2022 run (age 1.2 and 2.1 fish; Table 10). The remaining brood years, 2016 and 2017, made up 3% and 21% of the escapement past the weir, respectively. In addition to sockeye salmon, a total of 632 pink salmon passed the Coghill River weir in 2022 (Appendix B1). However, the weir is not used to assess pink salmon escapement because much of the pink salmon escapement occurs after the weir is removed and significant spawning occurs below the weir site. Aerial surveys are used to assess pink and chum salmon escapements.

The 2022 Coghill District commercial drift gillnet harvest was 462 Chinook, 229,000 sockeye, 39,400 coho, 394,000 pink, and 1.12 million chum salmon. A total of 320 permit holders participated in the Coghill drift gillnet fishery (Table 1, Appendices B3 and B5). The combined purse seine and drift gillnet salmon harvest for Coghill District was 236,000 sockeye (97% drift gillnet), 40,000 coho (99% drift gillnet), 503,000 pink (78% drift gillnet), and 1.12 million chum salmon (99% drift gillnet; Appendices B3−B5).

In 2022, PWSAC reported a WNH chum salmon purse seine cost-recovery harvest of 438,900 fish, raceway sales of 103,300 fish, and broodstock carcass sales of 159,200 fish (Appendix E5). The broodstock goal for chum salmon was 226,000 fish (ADF&G *unpublished*). Of the chum salmon collected for broodstock, 159,000 were viable. PWSAC reported harvesting 380 viable coho salmon as part of broodstock collection, which was significantly short of the 2,700 fish goal (ADF&G *unpublished*).

Based on otolith thermal marking data, hatchery-origin salmon made up an estimated 21% of the sockeye, 39% of the pink, and 95% of the commercial chum salmon harvests in the Coghill District (Appendices E6–E8). An estimated 50,000 (21%) MBH and 185,000 (79%) wild sockeye salmon were harvested in the Coghill District commercial fishery for a total of 235,000 sockeye salmon (Appendix E6). Of the 502,000 pink salmon harvested in this district in the commercial fishery, 158,000 (31%) were of WNH origin, 9,000 (2%) were of CCH origin, 24,500 (5%) were of SGH

origin, and 3,000 (<1%) were of AFK origin (Appendix E7). Of the 1.12 million chum salmon harvested in the Coghill District commercial fishery, 1.04 million (92%) were of WNH origin, 16,000 (1%) were of AFK origin, and 19,300 (2%) were of PC origin (Appendix E8).

The Coghill District drift gillnet fishery began on May 30 with semiweekly openings concurrent with the Eshamy District following a consistent schedule of two 60 to 84-hour commercial fishing periods per week through July 21 (Appendix B3). Fishing time north of Esther Pass followed this liberalized fishing schedule to moderate sockeye salmon escapement into Coghill Lake. The remaining open area during these fishing periods followed a reduced fishing schedule consisting of two 24 to 36-hour fishing periods per week, but limited restrictions and expansions of time occurred based on hatchery and wild stock harvest levels. The Esther Subdistrict, WNH Special Harvest Area (SHA), and WNH Terminal Harvest Area (THA) remained closed through the first 13 periods to facilitate chum salmon cost recovery and broodstock collection. Additionally, the western half of the Granite Bay Subdistrict was closed from June 27 to July 4 before the entire subdistrict closed until July 11. Beginning July 11, fishing time and area were liberalized to increase harvest potential of hatchery chum salmon due to deteriorating quality and the inability of PWSAC to do additional cost recovery. Starting July 21 and continuing while pink salmon were the predominate species of harvest, fishing periods were open to purse seine as well as drift gillnet. The entire district was closed from August 8 to August 18 to facilitate pink salmon cost recovery and broodstock collection at WNH (Appendix B3). Fishing opportunities resumed with a 12-hour fishing period on August 19 to harvest remaining surplus hatchery and wild pink salmon. Starting with the next fishing period, August 25−26, the fishery shifted to drift gillnet only based on the assumption that the harvest would no longer be predominately pink salmon. The fishery followed a progressively liberalized schedule until the district was closed for the season on September 28 (Appendix B3).

Peak effort by the drift gillnet fleet occurred during the 60-hour fishing period that started on June 27 when 224 permit holders harvested 39,700 sockeye and 89,000 chum salmon (Appendix B3). Sockeye salmon peak harvest was during this fishing period, and peak chum salmon harvest was 166,000 fish during the 72-hour period that started on July 11 (Appendix B3). The 2022 drift gillnet sockeye salmon harvest in the Coghill District was 30% above the 10-year average (2012–2021) of 177,000 fish (Appendix B5). The drift gillnet fleet's 2022 chum and coho salmon harvests were 19% below and 6% above their respective 10-year averages (2012–2021) of 1.38 million and 37,200 fish (Appendix B5).

Unakwik District

The Unakwik District, located in the northern portion of Unakwik Inlet, is the smallest district in the PWS management area (Figure 1). Both drift gillnet and purse seine gear are allowed during all fishing periods. This district was established for management of sockeye salmon runs to Cowpen and Miners Lakes. Cannery Creek Hatchery, a pink salmon hatchery, sits near the glacial moraine that spans the inlet at the southern boundary of the district. Escapement is counted by aerial surveys; however, water is quite turbid in Miners Lake.

Preseason Outlook and Harvest Strategy

The Unakwik District is managed conservatively to allow for uncertainty in sockeye salmon stock assessment. The management strategy in this district has been to provide 2 periods per week from mid-June through mid- to late July, concurrent with other districts. Fishing opportunity is largely

based on abundance indices, such as harvest data, escapement aerial surveys, and the amount of fishing effort in the district.

Season Summary

The Unakwik District opened to drift gillnet and purse seine commercial salmon harvest for the 2022 fishing season on June 23 and closed on July 19 (Appendix B6). The total 2022 Unakwik District drift gillnet harvest was 26,073 sockeye, 458 pink, and 3,808 chum salmon, which was above the 10-year (2012–2021) averages for all species. Sockeye salmon harvest was 9 times the 10-year average (Appendix B7).

Eshamy District

The Eshamy District, located in western PWS, is approximately 15 miles in length and 1 mile wide along its length (Figure 1). The Eshamy District is open to all Area E drift and set gillnet permits and is the only district in PWS where set gillnet gear is allowed. The Main Bay Subdistrict was established to allow permit holders to harvest enhanced sockeye salmon while minimizing the harvest of salmon bound for other areas in PWS and wild sockeye salmon returning to Eshamy Lake. From 1967 to 2011, ADF&G maintained a weir in the Eshamy River but was discontinued after the 2011 season due to budget cuts. From 2012 to 2017, an uncrewed video weir was deployed at the outlet of Eshamy Lake but was discontinued due to maintenance issues causing partial escapement counts. The Eshamy weir project was again fully operational in 2021 and 2022.

Preseason Outlook and Harvest Strategy

A preseason forecast of the sockeye salmon run to Eshamy Lake was not developed in 2022. PWSAC projected the total run of enhanced sockeye salmon to MBH to be 841,000 fish, of which 9,250 fish were required for broodstock, 102,800 fish were required for cost recovery, and the remaining 728,900 fish were available for harvest in the commercial fishery (Table 9; ADF&G *unpublished*). This MBH run was from smolt releases in 2019 and 2020 (Appendix E14).

During years in which the set gillnet gear group catches 5.0% or more of the previous 5-year average exvessel value of enhanced salmon, the set gillnet gear group is limited to no more than 36 hours per week beginning on July 10. In 2022, the set gillnet group was above the 5.0% allocation and was limited to 36 hours per week.

Season Summary

The 2022 total commercial fishery harvest in the Eshamy District was 145 Chinook, 629,000 sockeye, 386 coho, 290,000 pink, and 145,000 chum salmon (Appendix C5). A total of 258 drift gillnet permit holders and 26 set gillnet permit holders participated in this fishery (Table 1, Appendices C3 and C4). Of the 3 most numerous species, the drift gillnet gear group accounted for 71% of sockeye, 82% of chum, and 75% of pink salmon harvested in the Eshamy District (Appendix C5). Sockeye salmon harvest was below the 10-year (2012–2021) average for both the drift gillnet and set gillnet gear groups (Appendix C5). Chum salmon harvest was below the 10-year average for the drift gillnet gear group while the set gillnet gear group was 36% above the 10-year average. Pink salmon harvests were above average for both the drift and set gillnet gear groups (Appendix C5).

MBH harvested 125,000 sockeye salmon for cost recovery and 10,800 sockeye salmon for broodstock (of which 6,660 were viable; Appendix E12; ADF&G *unpublished*).

The majority of sockeye (83%) and chum (76%) salmon harvested in the Eshamy District were hatchery fish (Appendices E9 and E11). Based on otolith thermal marks, all hatchery sockeye salmon were of MBH origin (Appendix E9). Hatchery chum salmon were predominantly of WNH (29%) and AFK (44%) origin (Appendix E11). The 2022 sockeye salmon run was 28% below the MBH run forecast and 38% below the 10-year (2012–2021) average of 977,000 fish (Table 9, Appendix E13).

Sockeye salmon began arriving in the Eshamy District in late May, and commercial fishing periods followed a consistent schedule. From May 30 through July 1, the fishing schedule was two 36-hour periods per week. Starting July 4, the drift gillnet gear group went to two 24-hour commercial fishing periods per week for the remainder of the season while the set gillnet gear group was limited to 36 hours per week (one 24-hour and one 12-hour fishing period) starting July 10, per the *Prince William Sound Management and Salmon Enhancement Allocation Plan* (5 AAC 24.370 (f); Appendices C3 and C4). The Main Bay Subdistrict was closed throughout much of the early portion of the season to facilitate hatchery cost recovery (June 6–21 and July 4–15).

Participation in the Eshamy District was moderate in 2022. Peak effort for the drift gillnet gear group occurred during the 36-hour period from June 27–28 with 171 drift gillnet permit holders participating (Appendix C3). For the set gillnet gear group, effort peaked at 24 permits fished during consecutive 36-hour periods starting June 27 and June 30 (Appendix C4). Peak sockeye salmon harvest occurred from June 23–24 when 139 drift gillnet permit holders and 22 set gillnet permit holders harvested 111,000 sockeye salmon (Appendices C3 and C4). For the drift gillnet gear group, peak pink salmon harvest was 34,800 fish during the 24-hour period from August 8–9, and peak chum salmon harvest was 20,400 fish during the 36-hour period from June 16–17 (Appendix C3). For the set gillnet gear group, peak pink salmon harvest was 21,600 fish during the 24-hour period from July 18–19, and peak chum salmon harvest was 3,300 fish during the 36-hour period from June 20–21 (Appendix C4).

The Eshamy weir was operated from July 10 through August 28. Peak sockeye salmon escapement occurred between August 6 and 10 when 7,285 fish passed the weir, representing 38% of the total escapement in 2022 (Figure 8, Appendix C1). Total escapement by August 28 was 19,325 sockeye salmon (Appendix C1), exceeding the lower end of the escapement goal (BEG 13,000–28,000) but was 25% below the previous long-term average (2002–2011; Appendix C2). Additionally, 4 Chinook, 24 coho, 6,627 pink, and 339 chum salmon passed the Eshamy weir in 2022 (Appendix C2).

Wild sockeye and pink salmon harvest proportions were highly variable. Sockeye salmon harvest ranged from 0% to 48% in mid- to late June and peaking at 100% during period 22 (August 11–12; Appendix E9). The overall proportion of wild sockeye salmon harvested in the Eshamy District in 2022 was 17% (Appendix E9). Pink salmon harvested in the Eshamy District were sampled for otolith thermal marks 6 times between July and August, with wild origin harvest contributions ranging between 52% and 94% (Appendix E10).

2022 Purse Seine Salmon Season Summary

The general purse seine districts are managed to achieve wild pink and chum salmon escapement goals by district and allow for the orderly harvest of surplus wild and enhanced stocks. Preseason forecasts are the basis for early inseason management of all districts. Escapement of pink and chum salmon is monitored throughout the season by weekly aerial surveys of 134 index streams. Pink

and chum salmon escapement trends, of both wild and enhanced stocks, determine the area and duration of fishing periods within districts. Inseason modifications to harvest projections, season opening dates, and strategies for weekly fishing periods occur as fisheries develop and escapement goals are achieved.

2022 Preseason Outlook and Harvest Strategy

The 2022 pink salmon total run forecast for PWS was 26.84 million fish, comprised of 13.50 million VFDA hatchery fish, 8.30 million PWSAC hatchery fish, and 5.04 million wild fish. Approximately 3.60 million (27%) of VFDA's pink salmon preseason forecast was projected for cost recovery and broodstock, with the remaining 9.90 million VFDA fish expected to be available for commercial harvest. Approximately 3.44 million (41%) of PWSAC's pink salmon preseason forecast was projected for cost recovery and broodstock, with the remaining 4.86 million PWSAC fish expected to be available for commercial harvest. ADF&G's wild stock pink salmon forecast was 5.04 million fish, and assuming a median escapement of 784,000 (SEG 575,000–992,000), there was a potential commercial harvest of 4.25 million fish. Taking into consideration all those factors, 19.02 million pink salmon were expected to be available for commercial harvest (ADF&G *unpublished*; Morella 2022).

The 2022 chum salmon total run forecast was 3.45 million fish, with an estimated commercial harvest forecast of 1.96 million fish. Most of the total run, 3.12 million (90%), were from PWSAC hatchery production, with 360,000 fish returning to the AFK hatchery and 280,000 fish returning to Port Chalmers Subdistrict purse seine fisheries. Based on ADF&G's wild stock chum salmon forecast of 332,000 fish, there was a potential commercial harvest of 132,000 wild chum salmon. ADF&G managed for each district's escapement goal, while aiming for the long-term average, for a combined total of 200,000 chum salmon returning to all districts (Morella 2022).

Pink and Chum Salmon Fishery Season Summary

The 2022 PWS purse seine commercial harvest totaled 25.01 million fish. Harvest was composed of 636 Chinook, 79,700 sockeye, 8,300 coho, 23.80 million pink, and 1.12 million chum salmon (Tables 1 and 12). There were 206 purse seine permit holders operating in PWS in 2022, which is lower than the 212 permit holders in 2021. This is probably due to the implementation of a dual permit system (Tables 1 and 4). Based on pink salmon thermal marked otolith contribution estimates, the commercial harvest (all gear types) was 74% SGH, 4% PWSAC, and 22% wild stock fish (Appendix E17).

Aerial escapement surveys began the last week in June, targeting early season wild chum salmon in the Eastern and Northern Districts. Surveys were flown into mid-September to ensure that the broad range in pink and chum salmon run timing was represented in the escapement index. The 2022 wild pink and chum salmon runs were on time and steady. Wild pink salmon escapement indices in 2022 supported openings outside of hatchery subdistricts starting in mid-July and running through the remainder of the season. The PWS pink salmon escapement aerial index was 1.38 million fish, and 6 of the 8 districts were above the lower end of their respective escapement goal (Table 5). Wild chum salmon escapement indices trended well throughout the season, but ultimately, escapement was not met in 3 out of the 5 districts (Table 5). Poor weather and flying conditions negatively impacted aerial surveys this season. Not only were there prolonged periods of weather that was not conducive to flying, but significant rainfall throughout much of PWS reduced visibility in many systems. Some creeks, particularly in the northern and eastern portions

of PWS, were not surveyed during peak times for both pink and chum salmon stream counts; this probably negatively impacted final escapement estimates.

Overall, the total pink salmon run in 2022 was 30.2 million fish (harvest, broodstock, and escapement), which was 15% above the forecast of 26.06 million fish (Table 9, Appendix D1). The hatchery runs performed inconsistently with VFDA returning stronger than forecasted and PWSAC returning well below their forecast. Based on otolith contributions and hatchery operator annual reports, the total VFDA run of 19.49 million fish was 44% above the forecast and 53% above the 5-year even-year average (2012–2020) of 12.69 million fish (Table 9, Appendix D1). In total, 7% (1.30 million) of the VDFA run was collected for cost recovery and broodstock (ADF&G *unpublished*). The total run of 3.55 million PWSAC pink salmon was 57% below the forecast and 65% below the 5-year even-year (2012–2020) average of 10.06 million fish (Table 9, Appendix D1). In total, 83% (2.94 million) of the PWSAC run was collected for cost recovery and broodstock (ADF&G *unpublished*). The total run of 6.83 million wild pink salmon was above the 5-year even-year (2012–2020) average of 4.57 million and was the second largest even-year return since 2000 (Appendix D1).

Eastern District

The 2022 commercial harvest in the Eastern District was driven by a strong return to SGH. From July 9 through September 6, there were 26 fishing periods with 204 permit holders reporting deliveries (Table 1, Appendix E15). Commercial harvest in the district was 30 Chinook, 8,790 sockeye, 5,920 coho, 21.08 million pink, and 169,000 chum salmon (Table 1). Commercial pink salmon harvest included 83% SGH, 17% wild, and <1% PWSAC fish (Appendix E15).

Early season Eastern District management focused on early wild chum salmon escapement to the district and the SGH pink salmon return. The SGH pink salmon run began returning to Valdez Arm in late June and cost-recovery fishing began on July 1. Pink salmon run entry and cost recovery harvest remained steady, and VFDA opted to wait until cost recovery was near completion before recommending any fishing effort within Valdez Arm. Beginning on July 7, daily cost-recovery harvest started to increase. On July 8, VFDA recommended a commercial fishing period targeting SGH pink salmon in Valdez Arm and in Port Valdez on July 9. Wild stock escapement trends were on time and coming in as forecasted, so the entire district was open for this period. By 9:00 AM on July 9, it became apparent that there was a significant build-up of fish present in Port Valdez, indicating run entry through the district was stronger than anticipated and by noon, processors were struggling with capacity. The July 9 harvest from 400 deliveries was 4.88 million pink salmon and likely the largest single day harvest ever recorded for PWS (Table 12, Appendix E15; H. Scannell, Division of Commercial Fisheries Biologist, ADF&G, Cordova, unpublished data, 2023). VFDA recommended a fishing closure on July 10 to finish cost recovery. The fishery was opened again on July 11, 12, and 13, producing a harvest of 4.29 million fish from 550 deliveries (Table 12, Appendix E15).

Fishing in the Eastern District remained strong through the remainder of July, and despite additional area being provided to target wild stocks, most of the fleet remained in Valdez Arm and Port Valdez to target SGH pink salmon. Aerial surveys conducted throughout July indicated that both wild pink and chum salmon escapement was adequate, and limited commercial fishing opportunity could be provided. By early August, the SGH run slowed, and poor weather conditions lead to a decrease in aerial survey coverage. Given the reduction in harvest, conservative management was implemented beginning the first week in August after it became apparent that

the majority of the SGH pink salmon and early-timed wild stocks were well past their peak. By mid-August, fishing effort had declined throughout PWS due to a poor PWSAC pink salmon return and little fishing opportunity. Given the reduction in fleet size, the Eastern District was opened to commercial fishing on August 14 and again on August 19 to target later-timed wild pink and chum salmon stocks. During these 2 fishing periods, just under 100,000 wild chum salmon and 131,000 wild pink salmon were harvested (Table 11, Appendix E15). After these periods, salmon harvest task force markers (SHTF) were used to provide a level of protection to any fish that were staging in mouths and bays. The implementation of the SHTF resulted in a decrease in both effort and harvest.

The Eastern District commercial fishing season ended after Labor Day weekend in Port Valdez when VFDA recommended a fishing period targeting SGH coho salmon. The SGH coho salmon run is primarily managed as a sport fishery, but the commercial fleet inadvertently harvests them throughout PWS. Of the estimated 104,000 coho salmon harvest in commercial fisheries (all gear types), an estimated 2,500 were SGH coho salmon (Table 1; ADF&G *unpublished*).

The 2022 SGH pink salmon run forecast was for 13.50 million fish, of which 3.60 million were needed for broodstock and cost recovery (Table 9; ADF&G *unpublished*). The actual SGH pink salmon total return was 19.50 million fish (Appendix D1). An estimated 932,000 SGH pink salmon were harvested for VFDA cost recovery by purse seine, and an additional 51,000 fish were harvested for cost recovery via the SGH raceway, for a total cost-recovery harvest of 983,000 pink salmon (ADF&G *unpublished*). VFDA reported that 299,000 pink salmon were sacrificed as broodstock, and an additional 21,800 fish went unharvested as part of brood collection for a total broodstock requirement of 321,000 fish. This total broodstock number was less than a preseason anticipated goal of 409,000 fish and resulted in 18.18 million fish available for commercial harvest (ADF&G *unpublished*; Appendix E17). Pink salmon egg-take operations at SGH were successful in 2022, and they reached their egg-take goal of 270 million eggs on August 26 (ADF&G *unpublished*).

The 2022 SGH coho salmon run was below the projected forecast of 74,600 fish with an estimated total return of 25,400 fish (ADF&G *unpublished*). VFDA reached its 2022 coho salmon egg-take goal of 2 million eggs at SGH on October 27 (ADF&G *unpublished*). VFDA harvested 430 coho salmon for cost recovery from the SGH raceway and utilized an additional 3,100 fish for broodstock (ADF&G *unpublished*).

In the Eastern District, escapement goals were reached for pink salmon but not for chum salmon. The Eastern District pink salmon escapement index of 353,200 fish was above the even-year SEG index range of 203,000–328,000 fish (Table 5, Appendix D2). Despite a strong commercial harvest of wild chum salmon, the chum salmon escapement index of 64,400 fish was below the district's lower bound SEG of 79,000 (Table 5, Appendix D3).

Northern District

Management of the Northern District in 2022 was impacted by poor weather, inconsistent escapement of wild pink and chum salmon, and a poor CCH pink salmon return. There were 8 Northern District commercial fishing periods in 2022 with 93 purse seine permit holders reporting deliveries (Table 1, Appendix E16). Commercial harvest in the district consisted of 0 Chinook, 4,330 sockeye, 220 coho, 1.05 million pink, and 21,400 chum salmon (Table 1). Northern District pink salmon harvest included 42% SGH, 27% CCH, 25% wild, and 6% WNH fish (Appendix E16).

Portions of the Northern District were opened to commercial fishing concurrently with the Eastern District on July 11 to target SGH pink salmon and disperse the fleet (Appendices E15−E16). By July 19, escapement trends for wild chum and pink salmon supported limited fishing opportunity throughout the district; however, due to the strength of the SGH pink salmon run, there was little effort focused on targeting Northern District wild stocks. By early August, management became more conservative because there was uncertainty with wild stock escapements after significant rainfall throughout the area. The rainfall impacted aerial survey coverage and visibility in some of the systems, due to high, turbid water that made it nearly impossible to see or count fish. Additionally, by early August, it became apparent that the CCH return was weak, and time and area restrictions would be needed to facilitate CCH cost-recovery and broodstock efforts (H. Scannell, Division of Commercial Fisheries Biologist, ADF&G, Cordova, unpublished data, 2023). On August 14, a limited portion of the CCH Subdistrict was opened for 6 hours to provide opportunity on wild stocks on the western side of Unakwik Inlet. Harvest from that period was 118,200 fish, and 76% of them were CCH origin (Appendix E16). Following that period, CCH shifted to broodstock collection, and the CCH Subdistrict remained closed for the remainder of the season. The last commercial fishing period in the Northern District occurred on August 19, and the only area open was the western side of the Perry Island Subdistrict; the intent of this period was to target wild stocks along the eastern side of Culross Island and gauge run entry into WNH. Harvest from that final period was predominantly WNH fish (Appendix E16).

The 2022 CCH pink salmon forecast was for 3.00 million fish, of which 1.27 million would be needed for cost recovery and broodstock (Table 9; ADF&G *unpublished*). Based on otolith mark contribution estimates and PWSAC's annual report, the actual CCH pink salmon run was 1.38 million fish (Appendix D1; ADF&G *unpublished*). An estimated 565,000 pink salmon were harvested for PWSAC cost recovery by purse seine, and an additional 34,000 fish were harvested for cost recovery via the CCH fishway, for a total cost-recovery harvest of 599,000 pink salmon. PWSAC reported that 254,000 pink salmon were sacrificed at CCH for broodstock, and an estimated 160,000 fish went unharvested as part of brood collection for a total broodstock requirement of 414,000 fish. This total broodstock number was close to the preseason anticipated goal of 418,000 fish and resulted in 368,000 fish being available for commercial harvest (Appendix E17; ADF&G *unpublished*). Pink salmon egg-take operations at CCH were successful in 2022, and they reached their pink salmon egg-take goal of 187 million eggs on September 9 (ADF&G *unpublished*).

In the Northern District, escapement goals were reached for pink salmon but not for chum salmon. The Northern District pink salmon escapement index of 163,498 fish was above the upper end of the even-year SEG index range of 96,000–127,000 fish (Table 5, Appendix D2). Despite early season area restrictions, chum salmon escapement indices were below expected ranges for the 2022 season, and the escapement index of 26,014 fish was below the district's lower bound SEG of 28,000 fish (Table 5, Appendix D3).

Coghill District

The Coghill District shifted to purse seine management on July 21, when the WNH chum run was over, and the harvestable surplus was predominantly pink salmon (5 AAC 24.370(e)(5)(B)). Prior to the July 21 management shift, the purse seine fleet had 2 fishing periods in College Fiord to target Coghill Lake sockeye salmon (H. Scannell, Division of Commercial Fisheries Biologist, ADF&G, Cordova, unpublished data, 2023). There were 18 commercial fishing periods in 2022 with 44 purse seine permit holders reporting deliveries (Table 1, Appendix B4). Purse seine

commercial harvest in the district consisted of 3 Chinook, 5,909 sockeye, 218 coho, 109,000 pink, and 5,370 chum salmon (Table 1, Appendix B4). Coghill District pink salmon harvest included 61% wild, 31% WNH, 5% SGH, 2% CCH, and 1% AFK fish (Appendix E7).

The purse seine fishery began earlier than anticipated due to a strong Coghill River sockeye run. Typically, the purse seine fishery does not start until July 21; however, ADF&G may provide opportunity on wild stocks even if it affects the allocation percentages in 5 AAC 24.370(h)(i). Through June 29, the Coghill River weir had passed 19,000 sockeye, and passage rates were trending towards reaching the lower end of the SEG before peak passage typically occurs (Appendix B1). To slow down the sockeye salmon run, the purse seine fleet was provided opportunity in College Fiord, with an area restriction to the terminal area near the mouth of the Coghill River to keep purse seiners focused on sockeye salmon and minimize the interception of WNH chum salmon. The purse seine fleet had three periods to target Coghill Lake sockeye salmon, with effort and harvest being minimal during all 3 periods. Following those periods, the Coghill District was closed to purse seine fleet until July 21 (Appendix B4).

The first fishing period where purse seine was allowed to target both wild enhanced salmon stocks within the Coghill District occurred on July 21. During this period, the general district, including the Esther and Granite Bay Subdistricts, was opened for a 14-hour period while the area north of Pakenham Point was opened for a longer duration (38 hours) to keep fishing pressure on Coghill Lake sockeye salmon. For the remainder of July, 14-hour fishing periods occurred daily north of Pakenham Point to provide opportunity on Coghill Lake sockeye salmon (Appendix B4). General district waters were managed conservatively during this time to allow limited opportunity of wild pink salmon and to gauge the run strength of WNH pinks salmon. By early August, PWSAC began cost-recovery operations at WNH, and hatchery subdistricts remained closed. Also, during this same timeframe, the peak of wild pink salmon stocks returning to the district had passed, and the general district streams could no longer support consistent commercial fishing opportunity. The area north of Pakenham Point remained open for daily 14-hour periods, but both effort and harvest were minimal (Appendix B4). The last fishing period targeting pink salmon in the Coghill District occurred on August 19, the day following the completion of cost recovery. After this fishing period, WNH transitioned to pink salmon broodstock acquisition, and the district shifted to gillnet coho salmon management for the remainder of the season (Appendices B3−B4).

The 2022 WNH pink salmon forecast was for 2.70 million fish, and of those fish, 1.09 million would be needed for cost recovery and broodstock (Table 9; ADF&G *unpublished*). Based on contribution estimates and PWSAC's post-season annual report, the actual WNH pink salmon run was 1.43 million fish (Appendices D1 and E17; ADF&G *unpublished*). An estimated 714,000 pink salmon were harvested for PWSAC cost recovery by purse seine and an additional 33,400 fish were harvested for cost recovery via the WNH raceway, for a total cost-recovery harvest of 747,300 pink salmon. PWSAC reported that 271,700 pink salmon were sacrificed at WNH for broodstock, and an estimated 30,000 fish went unharvested as part of brood collection, for a total broodstock requirement of 302,000 fish. This total broodstock number was 8% below the preseason estimate of 326,600 fish and resulted in 384,500 fish being available for commercial harvest. Pink salmon egg-take operations at WNH were successful, and they reached their egg-take goal of 148 million eggs on September 3 (ADF&G *unpublished*).

In the Coghill District, escapement goals were reached for pink salmon but not for chum salmon. The pink salmon escapement index of 73,971 fish was within the even-year SEG index range of

37,000–110,000 fish (Table 5, Appendix D2). The chum salmon escapement index of 8,629 fish was below the district's lower bound SEG of 10,000 fish (Table 5, Appendix D3).

Northwestern District

Commercial harvest in the Northwestern District consisted of 0 Chinook, 4,260 sockeye, 1 coho, 317,000 pink, and 15,700 chum salmon (Table 1). There were 6 Northwestern District commercial fishing periods in 2022 with 33 purse seine permit holders reporting deliveries (H. Scannell, Commercial Fisheries Biologist, ADF&G, Cordova, unpublished data, 2023; Table 1). Northwestern District pink salmon harvest included 88% wild, 7% SGH, 4% WNH, 1% CCH, and 0% AFK (Appendix E17).

The overall wild chum and pink salmon return to the Northwestern District was like 2021 with run entry to the district being inconsistent. At times throughout the season, some index streams had escapement trending above anticipated for that date while other nearby streams were trending below. To provide opportunity, given this sporadic run entry, area was adjusted, and SHTF markers were used to keep fishing effort focused on those portions of the district that had surplus fish available.

In the Northwestern District, escapement goals were reached for both pink and chum salmon. The pink salmon escapement index of 292,892 fish was well above the upper end of the even-year SEG index range of 52,000–93,000 fish (Table 5, Appendix D2). Wild chum salmon returning to the district appeared to be very early with fish being present in many streams during the first aerial survey in early July. The chum salmon escapement index of 13,372 fish was above the lower bound SEG of 7,000 fish (Table 5, Appendix D3).

Southwestern District

The Southwestern District is closed to commercial fishing prior to July 18 except for the AFK THA and SHA, which may be opened to target enhanced chum salmon returning to that facility (5 AAC 24.370(e)(2)(A)). On or after July 18, based on the strength of the pink salmon run, the district may be opened to the purse seine fleet (5 AAC 24.370(e)(2)(B)). Management of the district after July 18 was conservative due to a poor PWSAC pink salmon return (Table 9, Appendix D1). There were 27 Southwestern District commercial fishing periods in 2022, with 105 purse seine permit holders reporting deliveries (Appendix E18, Table 1). Commercial harvest in the district was 21 Chinook, 48,300 sockeye, 1,720 coho, 1.02 million pink, and 201,000 chum salmon (Table 1). The Southwestern District pink salmon harvest included 45% wild, 17% AFK, 15% SGH, 10% WNH, and 3% SGH fish (Appendix E18). This distribution of stocks is the result of conducting the fishery in the primary migration corridor for pink salmon traveling to other areas of PWS (H. Scannell, Division of Commercial Fisheries Biologist, ADF&G, Cordova, unpublished data, 2023).

The 2022 commercial harvest of 201,000 chum salmon in the Southwestern District was below the 2012–2021 average harvest of 276,000 fish (Appendix D5). Southwestern District chum salmon harvest included 63% AFK, 13% WNH, 13% Port Chalmers, and 10% wild fish (Appendix E19). The AFK chum salmon harvest of 245,000 fish was 32% below the preseason forecast of 360,000 fish (Table 9; ADF&G *unpublished*). Additionally, a total of 32,300 sockeye salmon were harvested in the commercial AFK enhanced chum salmon fishery (June 1–July 18; H. Scannell, Commercial Fisheries Biologist, ADF&G, Cordova, unpublished data, 2023).

The first 2 commercial fishing period targeting pink salmon in the Southwestern District indicated that the PWSAC run was either late, weak, or both. The first fishing period was on July 22, when 548,000 pink salmon were harvested. Harvest from that period consisted of 69% wild, 20% SGH, 7% AFK, and 4% WNH fish. The next period occurred on July 28, when 238,000 were harvested. Harvest from that period consisted of 47% wild, 18% SGH, 18% AFK, 10% WNH, and 7% CCH fish (Appendix E18). The harvest compositions from both of these fishing periods provided guidance to both the department and PWSAC on the relative stock status of the run components. PWSAC began cost recovery at AFK on July 29. To aid PWSAC with their cost-recovery efforts, conservative management was implemented and the district remained closed until August 19 (Appendix E18).

In the absence of commercial harvest and aerial survey data due to poor flying conditions, the area available to cost recovery was expanded to gauge run entry, run strength, and to obtain a harvest contribution estimate. On August 7, an emergency order (EO) was issued allowing the PWSAC cost-recovery fleet to make 3 sets at sites that were historically part of ADF&G's test fishery program (Middle Cape, Fox Farm, and Squirrel Bay); additionally, the allowable harvest was capped at 400,000 lb (EO 2-F-E-055-22). Harvest from this expanded cost-recovery effort was weak at 10,200 pink salmon, composed of 49% wild, 39% PWSAC, and 12% SGH fish. At this point, it was becoming apparent that the PWSAC pink salmon run was weak.

The next commercial fishing period did not occur until August 19, and fishing opportunity remained limited for the remainder of the season. During the August 19 fishing period, area was restricted to focus fishing effort on wild stocks and minimize the interception of PWSAC pink salmon migrating through the district. This fishing period resulted in 33 permit holders reporting deliveries and an estimated 116,000 pink salmon being harvested; harvest consisted of 37% wild, 35% WNH, 18% AFK, 9% CCH, and 1% SGH fish. In mid-September, when egg-take operations were completed, opportunity was provided to target dark fish within the AFH SHA; because there was little effort, harvest information remains confidential (Appendix E18; H. Scannell, Division of Commercial Fisheries Biologist, ADF&G, Cordova, unpublished data, 2023).

The 2022 AFK pink salmon forecast was for 2.60 million fish, of which 1.08 million would be needed for cost recovery and broodstock (Table 9; ADF&G *unpublished*). Based on contribution estimates and PWSAC's post-season annual report, the actual AFK pink salmon run was 1.07 million fish (Appendix D1; ADF&G *unpublished*). An estimated 409,000 pink salmon were harvested for PWSAC cost recovery, and an additional 86,400 fish were harvested for cost recovery via the AFK raceway, for a total cost-recovery harvest of 495,000 million pink salmon. PWSAC reported that 316,000 pink salmon were utilized at AFK for broodstock, and an estimated 66,000 fish went unharvested as part of brood collection for a total broodstock requirement of 382,000 fish. This total broodstock number was 10% more than the preseason anticipated goal of 346,000 fish and resulted in 195,000 fish being available for commercial harvest (Appendix E17; ADF&G *unpublished*). Pink salmon egg-take operations at AFK were successful, and they reached their egg-take goal of 190 million eggs on September 4 (ADF&G *unpublished*).

Southwestern District pink salmon escapement was met in 2022. The observed escapement index of 137,692 fish was within the even-year SEG range of 88,000–153,000 fish (Table 5, Appendix D2).

Montague District

The 2022 Montague District commercial seine harvest was 580 Chinook, 5,900 sockeye, 220 coho, 178,000 pink, and 707,000 chum salmon (Table 1). There were 24 Montague District commercial fishing periods in 2022, with 110 purse seine permit holders reporting deliveries (Appendices E20–E21, Table 1). The Montague District's chum salmon commercial harvest was 88% Port Chalmers, 7% WNH, 3% wild, and 2% AFK fish (Appendix E20). The Montague District's pink salmon commercial harvest was 72% wild, 19% SGH, 4% WNH, 3% AFK, and 3% CCH fish (Appendix E21).

Based on the *Prince William Sound Management and Allocation Plan* (5 AAC 24.370), the purse seine fleet had exclusive access to the Port Chalmers Subdistrict remote release chum salmon fishery in 2022. The 5-year rolling average allocation calculation for the 2022 management year was 52% drift gillnet and 48% purse seine, meaning there would be no allocative correction action required for either gear group. The 2022 preseason forecast for chum salmon returning to Port Chalmers Subdistrict was 280,000 fish, all of which were projected to be available for commercial harvest (ADF&G *unpublished*).

The Port Chalmers enhanced chum salmon fishery began on June 2 with a weekly schedule of 3 purse seine fishing periods. This schedule remained in effect until late July when wild pink salmon stocks began returning to district streams. Area within the subdistrict was restricted throughout the chum salmon season to minimize the purse seine harvest of salmon bound for other districts. The Port Chalmers chum salmon harvest, from June 1–July 30 was 706,000 fish, which was above the 2017–2021 average of 538,000 fish (Appendix B9).

There were only 2 fishing periods targeting pink salmon returning to the Montague District. The first period was on July 28, and the second one was on August 1. Pink salmon harvest from these periods was 33,400, and 54,500 fish, respectively. Following these 2 periods, the district was closed for the remainder of the season (Appendix B8).

Montague District pink salmon escapement was met in 2022. The observed escapement index of 143,917 fish was well above the upper-end of the even-year SEG range of 36,000–72,000 fish (Table 5, Appendix D2).

Southeastern District

The 2022 purse seine fishery in the Southeastern District was managed conservatively throughout much of the season due to later than anticipated run timing to the district which impacted early season escapement indices. Escapement trends improved by late July, and limited fishing opportunity was provided through the remainder of the season. There were only 4 commercial fishing periods for the entire season, and both effort and harvest were minimal. Commercial harvest in the district consisted of 9 purse seine permit holders harvesting 0 Chinook, 16 sockeye, 3 coho, 39,000 pink, and 3,220 chum salmon (Table 1). Southeastern District pink salmon harvest was assumed to be 100% wild fish (Appendix E17).

In the Southeastern District, escapement goals were reached for both pink and chum salmon. The observed escapement index of 137,692 pink salmon was within the even-year SEG range of 88,000–153,000 fish (Table 5, Appendix D2). The chum salmon escapement index of 12,944 fish was above the district's lower bound SEG of 11,000 fish (Table 5, Appendix D3).

SUBSISTENCE, PERSONAL USE, AND COMMERCIAL HOMEPACK FISHERIES

The Prince William Sound management area includes all waters of Alaska between the longitudes of Cape Fairfield and Cape Suckling (Figure 1). State of Alaska subsistence fishing requires permits for targeting salmon and all freshwater finfish species in the PWS area. For a detailed history of regulations governing the subsistence fisheries within the Copper River and Prince William Sound, see Botz and Somerville (2011).

State and federal salmon fisheries occur throughout the management area. State saltwater salmon subsistence and commercial homepack harvest are permitted in every commercial fishing district; and state freshwater subsistence, personal use, and federal freshwater subsistence fisheries are focused around the Copper River. State subsistence salmon fisheries are open to all Alaska residents, but federal subsistence salmon fisheries are only open to qualified rural residents. Personal use salmon fishing is open to all Alaska residents only in the Chitina Subdistrict. Commercial fishery participants may withhold a portion of their catch as homepack. This is defined in 5 AAC 39.010: "A person engaged in commercial fishing may retain fish from lawfully taken commercial catch for that person's own use…" All commercially caught finfish not sold must be reported on a fish ticket.

LOWER COPPER RIVER AND PRINCE WILLIAM SOUND

Subsistence salmon fishing is allowed 7 days per week in the Copper River District and general PWS subsistence districts from May 15 until 2 days before the opening of the commercial fishery. Boundary lines for the Copper River District and general PWS District subsistence fishing are the same as those in the commercial fishery (Figure 10). When the commercial season has commenced, subsistence fishing is allowed on Saturday from 6:00 AM to 10:00 PM and during commercial fishing periods. Regulation stipulates that 2 days following the closure of the Copper River District and general PWS districts to commercial salmon fishing for the season, subsistence fishing is allowed 7 days a week until October 31. Within the Copper River District, drift gillnets are the only legal subsistence gear; nets may have a maximum length of 50 fathoms with a maximum mesh size of six inches prior to July 15. Within general PWS subsistence districts, 50 fathom gillnets or purse seine may be used for subsistence fishing depending on the legal commercial gear standard within a commercial fishing district.

In PWS saltwater salmon subsistence fisheries, 909 subsistence permits were issued. The total harvest in these subsistence fisheries was 8,670 salmon (J. Botz, ADF&G, Division of Commercial Fisheries, PWS Area Management Biologist, Cordova, unpublished data, 2023). In the Copper River District, a harvest of 887 Chinook, 5,830 sockeye, and 391 coho salmon were reported from the 351 permit holders that reported fishing. The Copper River District total subsistence harvest of 7,110 salmon was nearly 51% above the 10-year (2012–2021) average (Appendix F1). This larger-than-average harvest in a year with poor Chinook and sockeye salmon runs to the Copper River was probably due to minimal homepack harvest opportunity—necessitating more subsistence fishery participation by commercial fishery participants to meet subsistence needs. In addition, in the PWS general subsistence fishing area, the 61 permit holders that fished reported a harvest of 5 Chinook, 1,480 sockeye, 10 pink, and 50 chum salmon. Notably, the sockeye salmon subsistence harvest continued its upward annual trend in the PWS general subsistence area, a slight

increase over the previous year's subsistence harvest and almost 5 times the 2012–2021 average (Appendix F2).

Since 2010, commercial fishery participants retained more Chinook and sockeye salmon from their commercial harvest as homepack during seasons of average to larger runs, whereas seasons with weak returns, such as 2018, 2020, and 2021, homepack retention declined. For example, due to a poor Copper River sockeye salmon run in 2018, the commercial fishery was closed for 41 days, and Chinook and sockeye salmon homepack harvest dropped 80–90% below average. In 2020, poor Copper River sockeye and Chinook salmon runs led to a more than 2-week closure, and homepack harvest for these species again dropped to 65–85% below average (Appendix A1 and A3). In 2022 Area E commercial fisheries, 321 permit holders reported retaining 9,730 salmon for homepack (Appendix F3). On a homepack harvest-per-permit basis in 2021, the most chum salmon were harvested by drift gillnetters, and the most Chinook, coho, and pink salmon were harvested by purse seiners; the most sockeye salmon were harvested by set gillnetters. For homepack, drift gillnetters retained an average of 27 salmon per permit reporting harvest, set gillnetters retained an average of 40 salmon per permit reporting harvest, and purse seiners retained an average of 66 salmon per permit reporting harvest. The 2022 commercial homepack was low due to weak runs and conservative management, and overall homepack harvest was 30% below the 10-year (2012–2021) average (Appendix F3).

The federal subsistence salmon fishery in the Copper River Delta is administered by the United States Forest Service. In 2005, the federal government began issuing permits allowing subsistence harvests on federal lands in PWS and the lower Copper River area. Legal gear types are dip net, rod and reel, and spear. In 2022, the federal subsistence fishery was expanded to include waters of the Copper River within a half mile of the Copper River Highway between miles posts 27 and 38. In 2022, an estimated total of 95 federal permits were issued; 35 permits were fished, and an estimated 59 sockeye and 498 coho salmon were harvested (Appendix F4).

TATITLEK AND CHENEGA AREA SUBSISTENCE FISHERIES

Two subsistence areas were established in 1988 to provide opportunities for customary and traditional use of salmon by residents of the Tatitlek and Chenega villages. The Chenega area includes the entirety of the Southwestern District, as described in 5 AAC 24.200(i), as well as a portion of the Montague District along the northwestern shore of Green Island from the westernmost tip to the northernmost tip of the island (5 AAC 01.648(a)). The Tatitlek subsistence area is located south of the Valdez Nonsubsistence Area described in 5 AAC 99.015(a)(5) and encompasses portions of the Northern and Eastern Districts (5 AAC 01.648(b); Figure 10).

Permit holders can fish in these areas 7 days per week beginning May 15 until 2 days before the initial commercial fishing period in the associated commercial fishing districts. When the commercial fishing season is established, area and time within the subsistence areas is defined by the area and time in the associated commercial fishing district. Starting in 2018, subsistence fishing was also allowed during the commercial fishing season on Saturday from 6:00 AM to 10:00 PM. Following a 2-day wait after the closure of the commercial fishing season in the associated commercial fishing district, subsistence fisheries are open 7 days per week until October 31.

In 2022, 31 permits were issued for the Chenega subsistence area, of which 18 were returned by users after the season to report harvest information. Two permit holders reported fishing, and no salmon were harvested. In the Tatitlek area, 17 permits were issued, of which 13 were returned.

Of those returned permits, 1 reported fishing, and the harvest was 18 sockeye and 2 chum salmon (Appendix F5).

UPPER COPPER RIVER

The upper Copper River state subsistence salmon fisheries occur in the Glennallen Subdistrict and near the mouth of the Tanada River close to the old Batzulnetas village site (Figure 11). Federal subsistence salmon fisheries occur in the Chitina and Glennallen Subdistricts and are administered by the United States Park Service (Appendices F7 and F8). In 2022, the combined upriver subsistence and personal use sockeye salmon harvest (federal and state) totaled 217,000 fish, which was 7,000 fewer fish than the 2012–2021 average. In contrast to 2020 and 2021, increased inriver abundance of sockeye salmon in 2022 and less conservative upriver fisheries management resulted in increased harvest. From 2012 to 2021, the combined upriver subsistence and personal use sockeye salmon harvest (federal and state) ranged from 127,000 fish in 2020 to 334,000 fish in 2015, for a 10-year (2012–2021) average of 224,000 sockeye salmon (Appendix A1). Even with the low sockeye salmon harvests in 2018 and 2020, the 2012–2021 average harvests in the subsistence and personal use fisheries are within the inriver goal ranges for these fisheries.

Glennallen Subdistrict Subsistence Fishery

The Glennallen Subdistrict is that portion of the mainstem Copper River upstream of the McCarthy Bridge to the mouth of the Slana River (Figure 11). This subdistrict is historically open June 1 through September 30 for continuous fishing. Fish wheels and dip nets are legal gear. Participants must be Alaska residents and are allowed 1 permit per household per year, and the permit identifies the single gear type to be used. Total annual harvest per permit is 30 salmon for a household of 1, 60 salmon for a household of 2, and 10 additional salmon for each additional household member. If additional salmon were requested by the permit holder, the permitted limit cannot exceed 200 salmon for a household of 1, or 500 salmon for a household of 2 or more (5 AAC 01.645). No more than 5 Chinook salmon may be taken by each dip net permit holder. Both tips of the caudal fin must be clipped on all harvested salmon. Subsistence permits with completed harvest information must be returned to ADF&G by October 31 of each year.

In 2022, a total of 931 dip net permits and 297 fish wheel permits were issued to subsistence users in the Glennallen Subdistrict. Of these, 81 (1%) permits were not returned. A combined total estimate of 2,970 Chinook, 46,300 sockeye, and 220 coho salmon were harvested in the Glennallen Subdistrict. Comparatively, the 10-year (2012–2021) average was 2,470 Chinook, 58,800 sockeye, and 149 coho salmon for this subdistrict. Fish wheel effort has been declining over the last 10 years (2012–2021), with an average number of 443 permits issued. The number of dip net permits declined this year relative to the past few years. The number of permits issued in 2022 is 20% less than the 10-year (2012–2021) average of 1,170 dip net permits (Appendix F8). Historically, sockeye salmon dominate the harvest, representing 96% of the estimated harvest in the Glennallen Subdistrict subsistence fishery over the previous 10 years (2012–2021), followed by Chinook and coho salmon (Appendices A1, A3, A12, and F7). Harvest from the Glennallen Subdistrict subsistence fisheries was 1% GH sockeye salmon (S. Haught, ADF&G, Division of Commercial Fisheries, PWS Area Research Biologist, Cordova, unpublished data, 2023).

In 2002, the federal government began issuing permits allowing subsistence harvests on federal lands in the Glennallen Subdistrict. Legal types of fishing gear are dip net, fish wheel, rod and reel, and spear. In 2022, a total of 297 federal permits were issued for the Glennallen Subdistrict, of which 238 permits were returned. A total of 683Chinook, 28% below the 2017–2021 average,

were reported harvested. The 11,400-fish sockeye salmon harvest was 19% below the 2017–2021 average (Appendix F4)

Batzulnetas Subsistence Fishery

The Batzulnetas fishery, as described in 5 AAC 01.647(i), encompasses all waters from the regulatory markers near the mouth of Tanada Creek and approximately ½ mile downstream from that mouth, and in Tanada Creek between ADF&G regulatory markers identifying the open waters of the creek. Salmon may be taken by emergency order starting June 1 when fishing periods are limited to one 48-hour period per week; beginning in July, fishing time is increased to one 84-hour period each week until September 1 when the fishery closes. There were 2 permits issued in 2022 and 41 sockeye salmon reported as harvested (Appendix A1).

Chitina Subdistrict Personal Use Fishery

The Chitina Subdistrict is the portion of the mainstem Copper River from the downstream edge of the McCarthy Road Bridge to a marker 200 yards above Haley Creek (Figure 11). Regulations for the Chitina Subdistrict personal use fishery remain similar to the Glennallen subsistence fishery regulations, with 3 exceptions: (1) permit holders are required to possess a sport fishing license, (2) permit holders are only allowed to take salmon using a dip net, and (3) permit holders are limited to 1 Chinook salmon per household. In December 2014, the Alaska Board of Fisheries changed annual bag limits from 15 salmon for a household of 1 and 30 salmon for a household of 2 or more individuals to 25 salmon for the head of a household and 10 salmon for each dependent of the permit holder. In addition, the Alaska Board of Fisheries removed the allowance for supplemental permits. Previously, when ADF&G had determined that there was a weekly harvestable surplus of at least 50,000 salmon in the Chitina Subdistrict (based on Miles Lake sonar counts, followed by an assumed 2-week travel time), 10 additional fish were given to permit holders who had already achieved their annual limit. If inseason adjustments to the fishery are needed due to fluctuations in salmon escapement, an emergency order is issued.

In 2022, there were 10 emergency orders issued to adjust the dip net fishery. The first period started on June 11, and the last period closed on August 31. The fishery was then open continuously from September 1 to September 30, per regulation. Lower-than-projected inriver passage indices from the Native Village of Eyak's fish wheel mark–recapture program led to the fishery being closed to the retention of Chinook salmon from June 20 through June 26. There were 7,100 permits issued for the Chitina personal use fishery in 2022. Of these, 472 (7%) were not returned. The number of permits issued was 23% below the 2012–2021 average of 9,270 permits issued (Appendix F7). This increase in participation over the last 2 years is probably due to 2 strongly influential fishery participation drivers in 2022: (1) the relaxation of safety protocols related to the COVID-19 pandemic promoting more social interactions, and (2) above average Chinook and improving sockeye salmon abundance resulting in increased harvest potential. Expanded harvest for the Chitina Subdistrict personal use fishery in 2022 was 2,210 Chinook, 154,000 sockeye, and 1,910 coho salmon. The 10-year (2012–2021) average expanded harvests were 1,170 Chinook, 144,000 sockeye, and 980 coho salmon (Appendices A1, A3, A12, and F7). The sockeye salmon harvest in 2022 was above the 10-year (2012–2021) average and was largely the result of increased participation and inriver fish abundance being more than 150,000 fish above the inriver goal (Appendices A6 and F7). Harvest from the Chitina Subdistrict personal use fishery was 2% GH sockeye salmon (S. Haught, ADF&G, Division of Commercial Fisheries, PWS Area Research Biologist, Cordova, unpublished data, 2023).

In 2002, the federal government began issuing permits allowing subsistence harvests on federal lands in the Chitina Subdistrict. Federal subsistence users can use either a dip net or fish wheel in the Chitina Subdistrict. In 2022, an estimated total of 177 federal permits were issued, of which 153were returned. The reported harvest was 86 Chinook and 2,550 sockeye salmon (Appendix F4).

COMMERCIAL HERRING FISHERIES

The PWS herring management area encompasses all coastal waters of the Gulf of Alaska between Cape Suckling and Cape Fairfield, extending offshore to latitude 59°N. The PWS herring management year goes from late summer one year through early summer the next year. A total of 5 herring fisheries may occur annually. During the spring season, 2 fisheries target herring for sac roe using either purse seine or gillnet gear, and 2 spawn-on-kelp fisheries harvest either naturally-occurring spawn-on-kelp or spawn-on-kelp suspended in pounds. In the fall, a food/bait fishery may occur. Of the 5 herring fisheries, only the wild spawn-on-kelp and the food/bait fishery are open entry fisheries. Each of these fisheries is managed depending on observed herring population size and age structure. For additional background, including a review of historical and recent PWS herring management, harvest strategies, and harvest by fishery and gear, see Botz et al. (2013).

The Prince William Sound Herring Management Plan (5 AAC 27.365) is intended to provide an optimum sustained yield and an equitable allocation for all user groups in PWS. The management objective for PWS herring is to target fisheries on high-quality herring and to maintain a threshold spawning biomass. When Pacific herring *Clupea pallasii* spawning biomass allows for a commercial fishery, an annual harvest level is determined for each of the 5 commercial fisheries: purse seine sac roe, gillnet sac roe, spawn-on-kelp not in pounds, spawn-on-kelp in pounds, and herring food/bait fishery. There has not been a commercial herring fishery in PWS since 1999.

2022 SEASON SUMMARY

Based on herring stock assessment information, all Pacific herring fisheries were closed in 2022. An age structured assessment model estimated that the 2022 median prefishery biomass was 26,952 tons[1,2] (the regulatory threshold is 22,000 tons). Aerial surveys showed 32.7 mile-days of spawn in Prince William Sound, the highest estimate since 2014 (Figure 9, Appendices G1 and G2), and 41.1 mile-days of-milt near Kayak and Wingham Islands (J. Morella, ADF&G, Division of Commercial Fisheries, PWS Area Research Biologist, Cordova, unpublished data, 2023).

Net sampling and aerial surveys were used in 2022 to assess herring biomass, disease prevalence, age composition, and growth. Sampling was conducted aboard the R/V *Solstice*. Samples were collected from seven locations: Red Head, Cedar Bay, Rocky Bay, Port Chalmers, Port Etches, Boswell Bay, and Kayak Island. Age sex, and length were processed and summarized from over 3,000 herring collected during 2022 spring sampling (Figure 9; J. Morella, ADF&G, Division of Commercial Fisheries, PWS Area Research Biologist, Cordova, unpublished data, 2023). The Prince William Sound Science Center acoustics data collection ended following the 2021 field season; therefore, acoustic biomass estimates are no longer available. PWS herring, as well as other herring stocks statewide, saw a large component of age-6 fish in 2022. Overall spawning age

[1] The Alaska Board of Fisheries requires that inseason catch and aerial survey biomass estimates be calculated and reported in short tons. The English short ton = 2,000 lb or 907.2 kg.

[2] The metric tonne (1,000 kg or 2,205 lb) = tons/1.1023.

composition of PWS samples collected were 19.5% age-3, 10.7% age-4, 15.8% age-5, 51.3% age-6, 1.8% age-7, and 1% age-8 or older fish (Appendix G3).

ADF&G conducted 69 hours of spring aerial surveys during 22 flights from March 21 to April 28, 2022, in PWS and 10.25 hours of aerial surveys during 5 flights of Kayak and Wingham Islands. PWS herring schools observed in 2022 were more widespread and numerous than in recent years. Spawn was documented at Cedar Bay (April 2–3, 7), Hells Hole and Knowles Bay (April 7–9), Double Bay (April 7 and 26), Whiskey Bay (April 9), Porcupine Point (April 11), Tatitlek (April 12), Boswell Bay (April 12–13), near Mummy Islands (April 14), Snug Corner Cove (April 14), Stockdale (April 16–20), Port Chalmers (April 16–19), Hawkins cutoff (April 16), near Bligh Island (April 19–20), Port Etches (April 25–26), and near Glacier Island (April 25–27; Figure 9; J. Morella, ADF&G, Division of Commercial Fisheries, PWS Area Research Biologist, Cordova, unpublished data, 2023).

2023 HERRING SEASON OUTLOOK

Given the PWS herring spawning population, current fish size, and age structure, a commercial harvest will not occur in spring 2023. Funding was provided by the *Exxon Valdez* Trustee Council for 2016 through 2022. ADF&G will continue to monitor the PWS herring biomass to assess growth and recruitment as funding is available.

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Permanent employees with the Division of Commercial Fisheries

Name	Job Class	Project / Title
Dave Anderson	Boat Off. 3	Captain, R/V Solstice
Heather Scannell	FB 3	Seine Management Biologist
James Craig	PS 2	Publications Specialist 2
Jennifer Morella	FB 3	Finfish Area Research Biologist
Jeremy Botz	FB 3	Gillnet Management Biologist
Justin Nuzzi	VT	Vessel Technician, R/V *Solstice*
Lisa Laird	Prog. Tech.	Office Administration
Matthew Olson	FB 2	Asst. Finfish Research & Management Biologist

Seasonal employees with the Division of Commercial Fisheries

Name	Job Class	Project / Title
Aeson Sweat	FTW 2	Miles Lake Sonar Technician
Allen Cox	FWT 3	Otolith Recovery – Valdez
Bailey Arcilla	FB 1	Field Crew Leader
Brittany Quales	FWT 2	Otolith Laboratory Technician
Casey Somerville	FWT 2	Miles Lake Sonar Technician
Cathy Pegau	Office Asst. 1	Fish Ticket Clerk/ Office Admin.
Chatham Warga	Boat Off. 1	R/V Solstice Boat Officer
Chloe Bee	FWT 2	Otolith Laboratory Technician
Coltan Vivian	FWT 2	Otolith Recovery – Cordova
Dave Craig	FWT 2	Otolith Recovery – Cordova
David Warren	FWT 2	Otolith Recovery – Cordova
Elliot Habel	FWT 2	Coghill Lake Weir
Emile Gauvin	FWT 2	Age, Weight, and Length Technician
Jack Boulter	FWT 2	Otolith Recovery – Valdez
Jon Syder	FWT 2	Miles Lake Sonar Technician
Jordan Van Der Naault	FWT 2	Coghill Lake Weir
Kathleen Weibl	Office Asst. 1	Fish Ticket Clerk/ Office Admin.
Melanie O'Rourke	FWT 3	Otolith Recovery Crew Leader
Paul Fedorowicz	FTW 2	Age, Weight, and Length Technician
Rachel Ertz	FB 1	Age, Weight, and Length Crew Leader
Scott Pegau	FWT 2	Otolith Laboratory Technician
Shane Shepherd	FB 1	Miles Lake Sonar Crew Leader/Herring Research

REFERENCES CITED

Botz, J., and M. A. Somerville. 2011. Management of salmon stocks in the Copper River, report to the Alaska Board of Fisheries: December 2–7, 2011, Valdez, Alaska. Alaska Department of Fish and Game, Special Publication No. 11-13, Anchorage.

Botz, J., T. Sheridan, A. Wiese, H. Scannell, R. Brenner, and S. Moffitt. 2013. 2011 Prince William Sound area finfish management report. Alaska Department of Fish and Game, Fishery Management Report No. 13-11, Anchorage.

Botz, J., C. Russell, J. Morella, and S. Haught. 2021. 2020 Prince William Sound area finfish management report. Fishery Management Report, Alaska Department of Fish and Game, Fishery Management Report No. 21-18, Anchorage.

Bue, B. G., J. J. Hasbrouck, and M. J. Evenson. 2002. Escapement goal review of Copper and Bering Rivers, and Prince William Sound Pacific salmon stocks, report to the Alaska Board of Fisheries. Alaska Department of Fish and Game, Regional Information Report No. 2A02-35, Anchorage.

COAR (Commercial Operators Annual Reports). 2022. Commercial fishing reporting system. Alaska Department of Fish and Game. http://www.adfg.alaska.gov/index.cfm?adfg=fishlicense.coar.

Joy, P. J., S. B. Haught, R. E. Brenner, S. Miller, J. W. Erickson, J. W. Savereide, and T. R. McKinley. 2021. Escapement goal review of Copper and Bering Rivers and Prince William Sound Pacific salmon stocks, 2020. Alaska Department of Fish and Game, Fishery Manuscript No. 21-02, Anchorage.

Moffitt, S. D., R. E. Brenner, J. W. Erickson, M. J. Evenson, R. A. Clark, and T. R. McKinley. 2014. Escapement goal review of Copper and Bering rivers, and Prince William Sound Pacific salmon stocks, 2014. Alaska Department of Fish and Game, Fishery Manuscript No. 14–05, Anchorage.

Morella, J. 2022. 2022 Prince William Sound and Copper River salmon forecast. Advisory Announcement 2/4/2022, Alaska Department of Fish and Game, Cordova. http://www.adfg.alaska.gov/static/applications/dcfnewsrelease/1354974264.pdf (accessed February 7, 2023).

Morella, J., C. Russell, J. Botz, and S. Haught. 2021. 2019 Prince William Sound area finfish management report. Alaska Department of Fish and Game, Fishery Management Report No. 21-19, Anchorage.

Scannell, H., J. Botz, K. Gatt, J. Morella, J. Buza, and R. Ertz. 2023. 2021 Prince William Sound area finfish management report. Alaska Department of Fish and Game, Fishery Management Report No. 23-06, Anchorage.

Wilson, L. 2023. Alaska fisheries enhancement annual report 2022. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report No. 5J23-04, Juneau.

TABLES AND FIGURES

Table 1.–Prince William Sound Area commercial fishery salmon harvest by gear type and district, 2022.

District	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Eastern	204	30	8,785	5,921	21,083,363	169,071	21,267,170
Northern	93	0	4,327	220	1,053,709	21,360	1,079,616
Coghill	44	3	5,909	218	108,822	5,366	120,318
Northwestern	33	0	4,263	1	317,409	15,654	337,327
Southwestern	105	21	48,295	1,720	1,016,253	200,931	1,267,220
Montague	110	582	5,901	220	177,917	706,708	891,328
Southeastern	9	0	16	3	38,997	3,222	42,238
Unakwik	2	0	2174	0	1	379	2,554
Purse seine total	206[a]	636	79,670	8,303	23,796,471	1,122,691	25,007,771
Bering River	58	30	5,217	8,603	0	576	14,426
Copper River	433	12,262	601,009	44,128	66,777	13,517	737,693
Coghill	320	462	228,947	39,373	393,428	1,117,362	1,779,572
Eshamy	258	95	446,235	346	218,133	119,332	784,141
Unakwik	30	18	26,023	0	458	3,808	30,307
Drift gillnet total	454	12,867	1,307,431	92,450	678,796	1,254,595	3,346,139
Eshamy	26	23	181,587	33	71,466	25,940	279,049
Set gillnet total	26	23	181,587	33	71,466	25,940	279,049
Commercial fishery total (sold)		13,526	1,568,688	100,786	24,546,733	2,403,226	28,632,959
Solomon Gulch		0	0	2,874	1,281,142	0	1,284,016
Cannery Creek		0	0	0	851,253	0	851,253
Wally Noerenberg		0	0	0	949,504	701,433	1,650,937
Main Bay		0	124,581	0	0	133	124,714
Armin F. Koernig		0	0	0	809,568	0	809,568
Port Chalmers		0	0	0	0	0	0
Hatchery total[b]		0	124,581	2,874	3,891,467	701,566	4,720,488
Test fishery		0	0	0	0	0	0
Homepack		705	6,600	755	1,549	121	9,730
Confiscated fish		0	0	0	0	0	0
Donated fish		0	0	0	0	0	0
Miscellaneous harvest total		705	6,600	755	1,549	121	9,730
Prince William Sound total		14,231	1,699,869	104,415	28,439,749	3,104,913	33,363,177

[a] 31 Dual permit purse seine boats participated in 2022.

[b] Hatchery sales for hatchery operating costs.

Table 2.–Weight, price, and estimated exvessel value of the total commercial salmon harvest by gear type, Prince William Sound Area, 2022.

Fishery	Species	Number	Pounds	Average weight	Average price	Exvessel value
Purse seine	Chinook	636	5,944	9.35	$1.46	$8,678
	Sockeye	79,670	367,792	4.62	$1.65	$606,857
	Coho	8,303	52,544	6.33	$1.07	$56,222
	Pink	23,796,471	84,208,384	3.54	$0.40	$33,683,354
	Chum	1,122,691	7,671,600	6.83	$1.21	$9,282,636
	Total	25,007,771	92,306,264			$43,637,747
Drift gillnet	Chinook	12,867	181,718	14.12	$12.90	$2,344,162
	Sockeye	1,307,431	6,743,166	5.16	$2.45	$16,520,757
	Coho	92,450	693,331	7.49	$1.28	$887,464
	Pink	678,796	2,250,433	3.32	$0.43	$967,686
	Chum	1,254,595	8,181,136	6.52	$1.09	$8,917,438
	Total	3,346,139	18,049,784			$29,637,507
Set gillnet	Chinook	23	339	14.74	$3.86	$1,309
	Sockeye	181,587	998,983	5.50	$1.85	$1,848,119
	Coho	33	228	6.91	$1.19	$271
	Pink	71,466	227,666	3.19	$0.41	$93,343
	Chum	25,940	179,175	6.91	$1.15	$206,051
	Total	279,049	1,406,391			$2,149,093
Hatchery sales	Chinook	0	0	0		$0
	Sockeye	124,581	492,320	3.95	$3.00	$1,476,960
	Coho	2,874	13,534	4.71	$0.04	$541
	Pink	3,891,467	13,216,650	3.40	$1.31	$17,313,812
	Chum	701,566	4,364,585	6.22	$1.18	$5,150,210
	Total	4,720,488	18,087,089			$23,941,523
Combined	Chinook	13,526	188,001	13.90		$2,354,149
	Sockeye	1,693,269	8,602,261	5.08		$20,452,692
	Coho	103,660	759,637	7.33		$944,498
	Pink	28,438,200	99,903,133	3.51		$52,058,194
	Chum	3,104,792	20,396,496	6.57		$23,556,336
	Total	33,353,447	129,849,528			$99,365,870

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Table 2.–Page 2 of 2.

Gear type	Value of catch	No. of permits	Average earnings
Purse seine	$43,637,747	206	$211,834
Drift gillnet	$29,637,507	454	$65,281
Set gillnet	$2,149,093	26	$82,657
Subtotal (value of CPF catch)	$75,424,347		
Hatchery	$23,941,523		
Grand total	$99,365,870		

Note: CPF = common property fishery.

[a] Number and pounds from fish ticket data. Value from statewide season summary. Personal use/homepack not included.

Table 3.–Average price paid to permit holders for salmon, Prince William Sound Area, 1996–2022.

	Chinook salmon		Sockeye salmon			Coho salmon			Pink salmon			Chum salmon		
	Gillnet		Gillnet			Gillnet			Gillnet			Gillnet		
Year	Copper and Bering	PWS	Copper and Bering	PWS	Purse seine	Copper and Bering	PWS	Purse seine	Copper and Bering	PWS	Purse seine	Copper and Bering	PWS	Purse seine
1996	$1.96	$0.68	$1.38	$0.85	$0.73	$0.53	$0.24	$0.36	NA	$0.04	$0.07	NA	$0.14	$0.13
1997	$2.00	$1.00	$0.88	$0.85	$0.85	$0.30	$0.25	$0.30	NA	$0.07	$0.12	NA	$0.25	$0.30
1998	$2.07	$1.25	$1.49	$1.11	$1.01	$0.46	$0.41	$0.31	NA	$0.14	$0.12	NA	$0.21	$0.27
1999	$3.44	$0.50	$1.84	$0.89	$0.98	$0.58	$0.23	$0.49	NA	$0.06	$0.10	NA	$0.15	$0.27
2000	$4.02	$4.04	$1.72	$1.38	$0.90	$0.57	$0.56	$0.42	NA	$0.11	$0.15	NA	$0.26	$0.28
2001	$3.30	$1.94	$1.35	$0.77	$0.74	$0.32	$0.20	$0.26	NA	$0.05	$0.13	NA	$0.38	$0.37
2002	$3.34	$1.26	$1.29	$1.14	$0.57	$0.35	$0.09	$0.25	NA	$0.05	$0.09	NA	$0.15	$0.15
2003	$3.48	$0.00	$1.16	$0.80	$0.71	$0.48	$0.48	$0.42	NA	$0.06	$0.07	NA	$0.17	$0.17
2004	$4.69	$1.38	$1.81	$0.85	$0.55	$0.69	$0.28	$0.42	NA	$0.04	$0.10	NA	$0.23	$0.18
2005	$4.70	$0.00	$1.79	$0.92	$0.54	$0.83	$0.69	$0.10	NA	$0.05	$0.08	NA	$0.28	$0.18
2006	$5.03	$1.20	$1.83	$1.15	$1.05	$0.92	$0.67	$0.60	NA	$0.11	$0.16	NA	$0.37	$0.33
2007	$4.50	$2.70	$1.81	$1.04	$0.82	$0.90	$0.30	$0.59	NA	$0.11	$0.17	NA	$0.33	$0.37
2008	$5.96	$1.04	$3.12	$1.24	$1.17	$1.23	$1.24	$1.12	$0.27	$0.33	$0.34	$0.21	$0.55	$0.57
2009	$5.29	$2.06	$2.09	$1.42	$1.32	$1.30	$1.13	$0.42	$0.22	$0.27	$0.24	$0.28	$0.52	$0.53
2010	$5.50	$2.13	$2.58	$1.72	$1.79	$1.27	$0.58	$0.70	$0.29	$0.34	$0.35	$0.36	$0.80	$0.78
2011	$5.66	$3.97	$2.08	$1.56	$1.43	$1.24	$1.09	$1.04	$0.31	$0.40	$0.45	$0.38	$0.90	$0.86
2012	$5.39	$1.44	$1.94	$1.40	$1.42	$1.10	$1.04	$0.69	$0.29	$0.38	$0.42	$0.28	$0.66	$0.68
2013	$5.79	$2.83	$2.47	$1.86	$1.69	$1.39	$1.29	$0.95	$0.27	$0.35	$0.42	$0.11	$0.57	$0.59
2014	$6.43	$2.94	$2.44	$1.97	$1.90	$1.17	$1.00	$0.81	$0.13	$0.30	$0.29	$0.22	$0.68	$0.65
2015	$5.76	$1.33	$2.42	$1.40	$1.38	$0.74	$0.19	$0.29	$0.10	$0.17	$0.20	$0.19	$0.53	$0.49
2016	$6.06	$3.93	$2.57	$1.82	$1.54	$1.47	$0.97	$0.79	$0.16	$0.19	$0.28	$0.41	$0.56	$0.60
2017	$7.29	$3.06	$3.71	$1.85	$1.61	$1.41	$1.14	$0.94	$0.29	$0.28	$0.35	$0.21	$0.70	$0.70
2018	$12.09	$8.98	$2.85	$2.74	$1.97	$1.62	$1.51	$0.99	$0.37	$0.40	$0.40	$0.89	$0.91	$0.91
2019	$8.72	$1.82	$2.90	$2.01	$1.81	$1.40	$1.37	$1.06	$0.25	$0.28	$0.30	$0.11	$0.44	$0.52
2020	$5.94	$1.86	$3.00	$1.73	$1.43	$1.40	$0.92	$0.89	$0.27	$0.29	$0.30	$0.15	$0.46	$0.45
2021	$13.54	$3.41	$3.46	$1.88	$1.59	$1.84	$1.41	$0.67	$0.35	$0.34	$0.35	$0.67	$0.83	$0.81
2022	$13.09	$3.32	$2.99	$1.85	$1.65	$1.26	$1.30	$1.07	$0.44	$0.43	$0.40	$0.67	$1.10	$1.21
Average 2012–2021	$7.70	$3.16	$2.78	$1.87	$1.63	$1.35	$1.08	$0.81	$0.25	$0.30	$0.33	$0.32	$0.63	$0.64

Note: These prices are based on weighted average prices given voluntarily by processors and hatchery operators and do not represent prices reported in the Commercial Operators Annual Report (COAR). These prices are estimates and do not reflect postseason adjustments and bonuses. Caution should be used when estimating values from these prices. NA = not available.

Table 4.–Estimated exvessel value of the total commercial salmon harvest by gear type and previous 10-year average, Prince William Sound Area, 2012–2022.

Purse seine Species	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average 2012-2021
Chinook	$3,279	$15,444	$11,317	$6,990	$879	$4,872	$4,517	$3,145	$11,016	$14,533	$8,678	$7,599
Sockeye	$1,449,007	$796,220	$646,931	$1,766,313	$551,225	$1,113,442	$623,322	$1,599,774	$275,770	$865,321	$606,857	$968,732
Coho	$117,259	$1,608,923	$192,659	$83,371	$194,322	$529,613	$613,107	$2,466,094	$201,808	$306,897	$56,222	$631,405
Pink	$37,732,043	$100,334,069	$36,393,753	$60,318,284	$9,196,452	$57,750,324	$29,845,804	$44,112,963	$19,504,631	$66,127,273	$33,683,354	$46,131,560
Chum	$2,450,017	$2,157,525	$1,901,811	$1,436,478	$1,603,442	$11,881,118	$7,405,991	$3,773,440	$3,128,839	$3,902,774	$9,282,636	$3,964,144
	$41,751,606	$104,912,182	$39,146,471	$63,611,435	$11,546,319	$71,279,369	$38,492,741	$51,955,416	$23,122,063	$71,216,798	$43,637,747	$51,703,440
Drift gillnet Species												
Chinook	$1,352,540	$973,720	$1,175,457	$2,250,068	$1,344,847	$2,087,540	$1,562,084	$3,086,883	$486,239	$1,405,878	$2,344,162	$1,572,526
Sockeye	$37,444,516	$29,389,403	$40,966,814	$29,962,566	$20,497,184	$18,059,297	$13,710,079	$30,115,053	$5,307,058	$12,725,695	$16,520,757	$23,817,767
Coho	$1,646,222	$3,986,567	$5,138,204	$862,745	$5,955,839	$5,085,403	$6,096,579	$2,489,766	$2,773,557	$2,653,670	$887,464	$3,668,855
Pink	$1,659,983	$2,465,469	$1,361,065	$569,851	$76,420	$1,093,388	$896,292	$803,665	$1,027,964	$1,197,558	$967,686	$1,115,165
Chum	$13,170,829	$11,654,134	$3,728,785	$3,426,951	$6,902,037	$12,453,314	$14,963,757	$7,681,028	$723,392	$7,861,657	$8,917,438	$8,256,588
	$55,274,091	$48,469,293	$52,370,325	$37,072,182	$34,776,326	$38,778,942	$37,228,790	$44,176,395	$10,318,210	$25,844,458	$29,637,507	$38,430,901
Set gillnet Species												
Chinook	$230	$3,015	$769	$1,239	$2,695	$428	$1,114	$528	$181	$447	$1,309	$1,065
Sockeye	$2,454,505	$2,278,575	$2,887,961	$1,888,979	$1,993,811	$1,432,904	$2,284,793	$2,435,437	$837,264	$861,038	$1,848,119	$1,935,527
Coho	$509	$2,556	$451	$1,015	$54	$1,013	$572	$1,159	$46	$561	$271	$794
Pink	$28,480	$17,062	$35,588	$14,827	$5,826	$42,543	$35,918	$51,771	$37,304	$32,246	$93,343	$30,157
Chum	$121,995	$188,004	$106,662	$69,027	$99,124	$85,157	$74,877	$108,410	$13,916	$72,552	$206,051	$93,972
	$2,605,720	$2,489,211	$3,031,431	$1,975,088	$2,101,510	$1,562,046	$2,397,273	$2,597,305	$888,710	$966,844	$2,149,093	$2,061,514
Hatchery sales Species												
Chinook	$59	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7
Sockeye	$7,749	$110	$0	$1,160,000	$300	$0	$0	$75,500	$1,309,465	$3,525,962	$1,476,960	$607,909
Coho	$217	$214,752	$19,035	$30,000	$15,987	$312,040	$123,541	$139,416	$45,557	$3,460	$541	$90,400
Pink	$12,381,620	$8,765,309	$10,482,055	$9,873,200	$8,456,683	$11,634,771	$11,928,271	$12,833,172	$11,819,555	$15,452,965	$17,313,812	$11,362,760
Chum	$2,952,252	$3,424,927	$1,573,976	$3,457,442	$5,740,327	$4,651,425	$4,260,448	$6,667,469	$3,252,179	$3,644,699	$5,150,210	$3,962,514
	$15,341,896	$12,405,098	$12,075,066	$14,520,642	$14,213,297	$16,598,236	$16,312,260	$19,640,057	$16,426,756	$22,627,086	$23,941,523	$16,016,039

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Table 4.–Page 2 of 2.

Other[a] Species	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average 2012–2021
Chinook	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sockeye	$0	$0	$0	$241	$0	$0	$0	$0	$0	$0	$0	$24
Coho	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pink	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Chum	$243	$0	$0	$2,979	$0	$0	$0	$0	$0	$0	$0	$322
	$243	$0	$0	$3,220	$0	$0	$0	$0	$0	$0	$0	$346
Combined value Species												
Chinook	$1,356,108	$992,179	$1,187,543	$2,258,297	$1,348,421	$2,092,841	$1,567,715	$3,090,556	$497,436	$1,420,858	$2,354,149	$1,581,195
Sockeye	$41,355,777	$32,464,308	$44,501,706	$34,778,099	$23,042,520	$20,605,642	$16,618,194	$34,225,764	$7,729,557	$17,978,016	$20,452,692	$27,329,958
Coho	$1,764,207	$5,812,798	$5,350,349	$977,131	$6,166,202	$5,928,068	$6,833,799	$5,096,435	$3,020,968	$2,964,588	$944,498	$4,391,455
Pink	$51,802,126	$111,581,909	$48,272,461	$70,776,162	$17,735,381	$70,521,027	$42,706,285	$57,801,571	$32,389,454	$82,810,042	$52,058,194	$58,639,642
Chum	$18,695,336	$17,424,590	$7,311,234	$8,392,877	$14,344,930	$29,071,014	$26,705,073	$18,230,347	$7,118,326	$15,481,682	$23,556,336	$16,277,541
	$114,973,556	$168,275,784	$106,623,293	$117,182,566	$62,637,454	$128,218,593	$94,431,065	$118,444,673	$50,755,741	$120,655,186	$99,365,870	$108,219,791
Average earnings												
Purse seine	$186,391	$497,214	$176,335	$289,143	$54,982	$311,264	$164,499	$218,300	$104,625	$335,928	$211,834	$233,868
Drift gillnet	$105,889	$92,853	$99,753	$71,293	$67,266	$74,863	$73,141	$86,791	$21,101	$54,181	$65,281	$74,713
Set gillnet	$89,852	$88,900	$104,532	$63,713	$72,466	$53,864	$92,203	$96,196	$34,181	$40,285	$82,657	$73,619
Number of permits fished												
Purse seine	224	211	222	220	210	229	234	238	221	212	206	222
Drift gillnet	522	522	525	520	517	518	509	509	489	477	454	511
Set gillnet	29	28	29	31	29	29	26	27	26	24	26	28

[a] Confiscated fish.

Table 5.–Escapement goals and escapements for Prince William Sound Area salmon stocks, 2013–2022.

System	2022 Goal range Lower	Upper	Type	Initial year	Escapement 2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CHINOOK SALMON														
Prince William Sound														
Copper River	21,000	31,000	SEG	2022	29,013	20,689	26,751	12,430	33,644	42,678	35,138	22,054	18,431	29,347
CHUM SALMON														
Prince William Sound[a,b]														
Eastern District	79,000		LB SEG	2018	146,349	90,445	104,437	116,685	76,836	109,598	56,846	103,849	58,965	64,365
Northern District	28,000		LB SEG	2018	40,475	27,385	41,253	10,410	33,437	18,407	11,690	23,542	20,404	26,014
Coghill District	10,000		LB SEG	2018	14,086	9,491	14,929	976	13,210	13,617	3,437	8,998	2,395	8,629
Northwestern District	7,000		LB SEG	2018	4,995	5,041	7,060	3,954	7,118	15,563	3,258	7,405	6,979	13,372
Southeastern District	11,000		LB SEG	2018	33,678	29,362	44,095	13,919	26,330	10,164	19,451	26,909	46,391	12,944
COHO SALMON														
Prince William Sound														
Copper River Delta	32,000	50,000	SEG	2022	34,630	44,040	42,065	76,200	43,760	53,800	36,420	36,425	45,485	30,340
Bering River	13,000	25,000	SEG	2022	18,820	26,475	15,550	26,150	30,650	26,525	10,015	25,825	19,450	4,685
PINK SALMON														
Prince William Sound[a,c]														
All districts combined (even year)	eliminated			2012										
All districts combined (odd year)	eliminated			2012										
Eastern District (even year)	203,000	328,000	SEG	2018		250,381		594,778		309,325		206,152		353,187
Eastern District (odd year)	346,000	863,000	SEG	2018	1,266,630		1,440,254		557,545		445,075		729,369	
Northern District (even year)	96,000	127,000	SEG	2018		95,134		133,460		111,174		105,226		163,498
Northern District (odd year)	111,000	208,000	SEG	2018	299,054		708,920		395,437		195,169		464,350	
Coghill District (even year)	37,000	110,000	SEG	2018		60,921		63,986		70,881		88,401		73,971
Coghill District (odd year)	54,000	233,000	SEG	2018	625,991		775,488		181,153		153,129		300,227	
Northwestern District (even year)	52,000	93,000	SEG	2018		66,350		168,272		111,194		77,828		292,892
Northwestern District (odd year)	64,000	144,000	SEG	2018	201,836		438,944		250,989		91,267		368,406	
Eshamy District (even year)	1,000	4,000	SEG	2018		12,167		NA[d]		16,594		7,250		14,937
Eshamy District (odd year)	5,000	31,000	SEG	2018	12,145		68,988		2,836		1,402		17,925	
Southwestern District (even year)	62,000	105,000	SEG	2018		73,104		NA[d]		81,100		64,470		200,057
Southwestern District (odd year)	112,000	231,000	SEG	2018	337,952		644,158		172,930		33,340		339,920	
Montague District (even year)	36,000	72,000	SEG	2018		23,136		NA[d]		135,208		84,238		143,917
Montague District (odd year)	143,000	330,000	SEG	2018	365,807		559,994		205,252		25,385		242,151	
Southeastern District (even year)	88,000	153,000	SEG	2018		141,845		107,769		293,275		138,330		137,692
Southeastern District (odd year)	286,000	515,000	SEG	2018	1,137,736		1,529,543		372,960		290,452		544,906	

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Table 5.–Page 2 of 2.

System	2022 Goal Range Lower	Upper	Type	Initial Year	Escapement 2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
SOCKEYE SALMON														
Prince William Sound														
Upper Copper River	360,000	750,000	SEG	2012	860,253	864,169	930,145	513,143	460,295	495,779	719,526	348,000	508,715	519,586
Copper River Delta	55,000	130,000	SEG	2003	75,705	64,205	66,665	51,550	56,950	58,470	61,825	55,620	87,075	55,075
Bering River	15,000	24,000	SEG	2022	23,900	14,885	22,705	16,390	19,115	13,300	17,630	15,795	13,774	6,720
Coghill Lake	20,000	75,000	SEG	2022	17,231	21,836	13,684	8,708	50,462	62,295	32,247	53,901	101,083	34,092
Eshamy Lake[e]	13,000	28,000	BEG	2009	NA	NA	NA	NA	NA	NA	NA	NA	7,001	19,325

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

[a] All PWS chum and pink salmon goals were revised in 2017 using a different index approach than previously used. Escapement values presented here use the new index based on a reduced set of survey streams. Prior to 2012, the pink salmon escapement goals for PWS combined all districts for both even and odd years.

[b] No estimates for chum salmon escapements are included for the Unakwik, Eshamy, Southwestern, or Montague Districts because there are no escapement goals for those districts.

[c] The estimates for pink salmon (odd year) do not include Unakwik District escapements, due to absence of an escapement goal and an average escapement estimate of a few thousand fish.

[d] Fewer than 3 surveys were flown for almost all the index streams in the Eshamy, Southwestern, and Montague districts in 2016, so they were not used in calculating the area-under-the-curve index.

[e] Eshamy River weir was not operated in 2012–2020. A pilot project to assess the use of video for monitoring in 2013–2016 did not provide a comparable total escapement estimate.

Table 6.–Estimated age and sex composition of sockeye salmon harvested in the Copper River District drift gillnet fishery, 2022.

		Brood year and age class												
		2019		2018			2017			2016		2015		
		0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	2.4	3.3	Total
Totals	Sample size	28	1	207	722	1	5	1,912	84	11	223	2	2	3,198
	Percentage of sample	1%	0%	6%	20%	0%	0%	62%	3%	0%	8%	0%	0%	100%
	Number in harvest	4,858	141	34,686	115,528	32	856	367,276	18,678	1,137	48,058	147	587	591,987
	Standard error	1,411	141	3,610	5,184	50	552	7,483	3,228	564	4,638	213	502	

Note: Strata combined: 5/15–8/27. Sampling dates: 5/16–7/18.

Table 7.–Estimated age and sex composition of Chinook salmon harvested in the Copper River District commercial fishery, 2022.

		Brood year and age class									
		2019		2018			2017		2016		
		0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	Total
Totals	Weighted harvest	3	3	6	284	1	568	32	41	13	951
	Percentage of sample	0%	0%	1%	30%	0%	59%	3%	5%	1%	100%
	Number in harvest	29	25	68	3,588	9	7,175	370	634	176	12,075
	Standard error	17	30	17	188	12	200		97	51	

Note: Strata combined: 5/15–7/2. Sampling dates: 5/16–6/21.

Table 8.–Estimated age and sex composition of coho salmon harvested in the Copper River District drift gillnet fishery, 2022.

		Brood year and age class				
		2020	2019	2018	2017	
		1.0	1.1	2.1	3.1	Total
Totals	Sample size	1	413	561	13	988
	Percentage of sample	0%	41%	58%	1%	100%
	Number in harvest	15	17,991	25,471	652	44,128
	Standard error	15	768	772	192	

Note: Strata combined: 6/2–8/30. Sampling dates: 8/16–8/30.

Table 9.–Preseason projections for the 2022 commercial salmon fisheries by district and species in thousands of fish, Prince William Sound Area.

		Chinook		Sockeye		Coho[a]		Pink		Chum	
District/facility[b]	Forecast type[c]	Point estimate	Range	Point estimate	Range	Point estimate	Range	Point estimate	Range	Point estimate	Range
Copper River[d]	Commercial harvest	14	–	928	561–1,295	221	–	–	–	–	–
Bering River[e]	Commercial harvest	–	–	4	–	60	–	–	–	–	–
Coghill[f]	Commercial harvest	–	–	384	307–461	–	–	–	–	–	–
Eshamy[f]	No forecast	–	–	NA	NA–NA	–	–	–	–	–	–
Unakwik[g]	Commercial harvest	–	–	3	–	–	–	–	–	–	–
General districts	Commercial harvest	–	–	–	–	–	–	4,253	–	132	–
Total wild stock		14	–	1,319	868–1,756	281	–	4,253	–	132	–
SGH	Total run	–	–	–	–	75	–	13,503	6,752–20,255	–	–
AFK	Total run	–	–	–	–	–	–	2,600	1,500–3,600	360	290–440
WNH[h]	Total run	–	–	–	–	138	85–191	2,700	1,200–4,200	2,480	2,210–2,750
CCH	Total run	–	–	–	–	–	–	3,000	1,500–4,600	–	–
MBH	Total run	–	–	841	745–938	–	–	–	–	–	–
GH	Total run	–	–	53	33–73	–	–	–	–	–	–
Total hatchery				894	778–1,011	213	85–191	21,803	10,952–32,655	2,840	2,500–3,190
Total hatchery and wild		14		2,213		494		26,056		2,972	

Note: All values are in thousands. NA = not available. Harvest estimates are made only for areas and species that constitute a significant portion of the catch. Prince William Sound Area hatchery facility abbreviations include SGH (Solomon Gulch Hatchery), AFK (Armin F. Koernig Hatchery), WNH (Wally Noerenberg Hatchery), CCH (Cannery Creek Hatchery), MBH (Main Bay Hatchery), and GH (Gulkana Hatchery).

[a] ADF&G provides harvest forecasts for Copper River and Bering River Districts coho salmon runs.

[b] Formal forecast procedures are used for estimating wild stock runs of pink and chum salmon in PWS. Hatchery contributions are based on known fry releases and average marine survival rates.

[c] Alaska Department of Fish and Game (ADF&G) provides common property fishery (CPF) harvest forecasts for all wild stocks and Gulkana Hatchery sockeye salmon. Hatchery operators provide commercial harvest forecasts for PWS hatchery runs and Gulkana Hatchery sockeye salmon. Harvest projections do not include salmon harvested by hatcheries for cost recovery.

[d] Formalized sibling model forecast procedures are used for Copper River sockeye salmon runs. Copper River Chinook and coho salmon harvest estimates are based on the mean annual harvest (5-year mean for Chinook and 10-year mean for coho salmon).

[e] Bering River coho and sockeye salmon harvest estimates are based on 10-year mean annual harvest.

[f] Formalized sibling model forecast procedures are used for Coghill and Eshamy Districts sockeye salmon runs. Coghill District wild pink and chum salmon harvests are included in the "General districts" projection.

[g] Unakwik District sockeye salmon harvest estimate is based on the 10-year mean annual harvest.

[h] Wally Noerenberg Hatchery chum and coho salmon harvest estimates include all on-site and remote release runs.

Table 10.–Estimated age composition of sockeye salmon escaped through Coghill Weir, 2022.

		Brood year and age class										
		2019	2018		2017		2016			2015		
		1.1	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Total	Sample size	0	477	2	103	33	2	15	2	1	2	636
	Percentage of sample	0%	76%	0%	16%	5%	0%	2%	0%	0%	0%	100%
	Number in escapement	0	25,741	103	5,288	1,858	111	845	36	37	74	34,092
	Standard error	0	605	75	504	327	83	225	37	37	52	

Note: Strata combined: 6/9–7/16. Sampling dates: 6/9–7/17.

Table 11.–Prince William Sound commercial purse seine salmon harvest by day, 2022.

			Chinook		Sockeye		Coho		Pink		Chum	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
06/02	19	19	9	107	7	30	0	0	11	83	1,908	13,607
06/03	3	3	7	96	3	13	0	0	0	0	56	504
06/04	9	10	13	120	2	10	0	0	0	0	1,107	7,646
06/05[a]	2	2	–	–	–	–	–	–	–	–	–	–
06/06	19	19	26	281	40	249	0	0	0	0	4,624	32,816
06/07	3	3	93	583	11	50	0	0	0	0	1,213	9,311
06/09	22	22	11	111	1,090	5,824	0	0	0	0	9,283	67,238
06/10	9	9	68	376	134	667	0	0	0	0	4,331	33,554
06/11	32	32	62	758	2,391	10,920	0	0	2	7	21,455	156,213
06/12[a]	1	1	–	–	–	–	–	–	–	–	–	–
06/13	19	19	70	532	2,872	13,931	0	0	3	8	26,091	196,953
06/14	9	9	5	30	253	1,267	0	0	0	0	5,404	39,454
06/15	21	21	0	0	983	5,127	0	0	0	0	20,830	135,766
06/16	54	55	113	1,197	2,663	12,789	1	5	0	0	80,765	580,049
06/17	3	3	0	0	0	0	0	0	0	0	2,513	17,737
06/18	52	53	39	504	1,605	7,367	0	0	1	2	29,532	203,301
06/19	7	7	0	0	1	5	0	0	0	0	7,836	50,949
06/20	65	65	7	96	4671	21317	0	0	3	12	64,528	434,756
06/21[a]	1	1	–	–	–	–	–	–	–	–	–	–
06/22	60	61	12	110	2,421	11,332	2	11	27	98	69,081	475,421
06/23	12	12	0	0	17	53	0	0	0	0	22,420	141,971
06/24[a]	1	1	–	–	–	–	–	–	–	–	–	–
06/25	78	79	3	45	3,857	18,407	0	0	31	125	63,100	429,178
06/26[a]	2	2	–	–	–	–	–	–	–	–	–	–
06/27	54	54	0	0	3,467	15,951	0	0	51	187	32,734	228,863
06/28	58	58	21	294	1,123	5,076	0	0	106	395	36,404	230,010
06/30	73	75	19	198	4,202	18,298	0	0	391	1,277	61,640	407,073
07/01	13	13	10	42	2,319	9,710	0	0	116	384	7,315	49,257
07/02	44	45	0	0	2,391	10,415	0	0	262	872	30,880	212,038
07/03	19	19	3	32	1,118	4,938	0	0	130	429	13,447	95,906
07/04	43	46	2	28	1,853	8,285	0	0	2,452	9,329	47,447	323,196
07/05	18	18	0	0	795	4961	0	0	2958	10727	10877	71494
07/07	37	38	0	0	761	3722	15	110	1892	7250	33685	241492
07/08	7	7	0	0	176	877	0	0	199	769	10,737	83,310
07/09	182	402	10	82	608	3,129	45	214	4,884,302	16,911,817	9,391	72,411
07/10	3	3	0	0	0	0	0	0	2,121	7,422	13,152	100,563
07/11	170	238	2	27	495	2,701	8	56	2,305,736	8,107,786	40,615	285,533

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Table 11.–Page 2 of 2.

			Chinook		Sockeye		Coho		Pink		Chum	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
07/12	164	180	11	93	136	775	2	13	1,337,324	4,740,065	20,956	161,023
07/13	148	150	1	4	64	346	4	21	642,709	2,184,279	473	3,365
07/14	18	19	0	0	659	2,940	0	0	4,565	15,678	43,483	280,966
07/15	183	259	2	28	2,774	13,867	14	103	2,537,054	8,728,591	26,526	181,710
07/16	8	8	0	0	0	0	0	0	4,597	16,085	11,650	74,865
07/17	175	279	2	22	229	1,185	48	333	2,863,937	9,933,664	7,292	50,616
07/18	4	5	0	0	199	788	0	0	2,852	13,115	6,512	45,597
07/19	174	280	0	0	2,425	12,110	35	204	2,703,129	9,996,068	13,185	92,767
07/20	159	164	0	0	335	1,911	40	365	843,035	3,135,155	2,618	18,031
07/21[a]	1	2	–	–	–	–	–	–	–	–	–	–
07/22	180	210	1	6	16,187	69,062	541	3,387	1,722,765	6,303,465	29,678	194,217
07/23[a]	1	1	–	–	–	–	–	–	–	–	–	–
07/24	4	4	0	0	754	3,542	0	0	12,245	38,646	369	2,436
07/25	183	222	0	0	2,209	10,017	39	216	1,599,683	5,761,501	18,576	106,902
07/27	8	8	0	0	980	4,140	0	0	23,307	83,022	2,570	17,309
07/28	184	203	0	0	5,694	25,502	333	1,867	1,102,366	3,885,660	16,217	107,250
07/30[a]	2	2	–	–	–	–	–	–	–	–	–	–
08/01	169	175	1	7	2,579	13,172	386	2,785	580,542	2,130,107	24,904	154,403
08/02[a]	1	1	–	–	–	–	–	–	–	–	–	–
08/04[a]	1	1	–	–	–	–	–	–	–	–	–	–
08/05[a]	1	1	–	–	–	–	–	–	–	–	–	–
08/14	130	133	1	2	88	473	876	6,201	227,147	836,195	54,460	356,469
08/19	95	96	4	26	728	3,533	1,539	9,000	235,746	828,815	45,908	313,607
08/20	19	19	0	0	4	18	183	1,678	16,240	53,963	1,823	13,653
08/21	16	16	0	0	8	56	123	965	11,981	44,501	1,996	12,344
08/22	8	8	0	0	0	0	395	2,691	6,888	24,321	1,348	8,287
08/23	5	5	0	0	9	37	158	1,324	3,299	9,947	284	2,183
08/25[a]	2	2	–	–	–	–	–	–	–	–	–	–
08/26[a]	2	2	–	–	–	–	–	–	–	–	–	–
09/06	6	6	0	0	0	0	3,284	19,869	0	0	0	0
09/07[a]	1	1	–	–	–	–	–	–	–	–	–	–
09/09[a]	1	1	–	–	–	–	–	–	–	–	–	–
09/12[a]	1	1	–	–	–	–	–	–	–	–	–	–
Total	206	3,988	636	5,944	79,670	367,792	8,303	52,544	23,796,471	84,208,384	1,122,691	7,671,600
Average weight				9.35		4.62		6.33		3.54		6.83

[a] Fewer than 3 permits were fished. Period results are confidential.

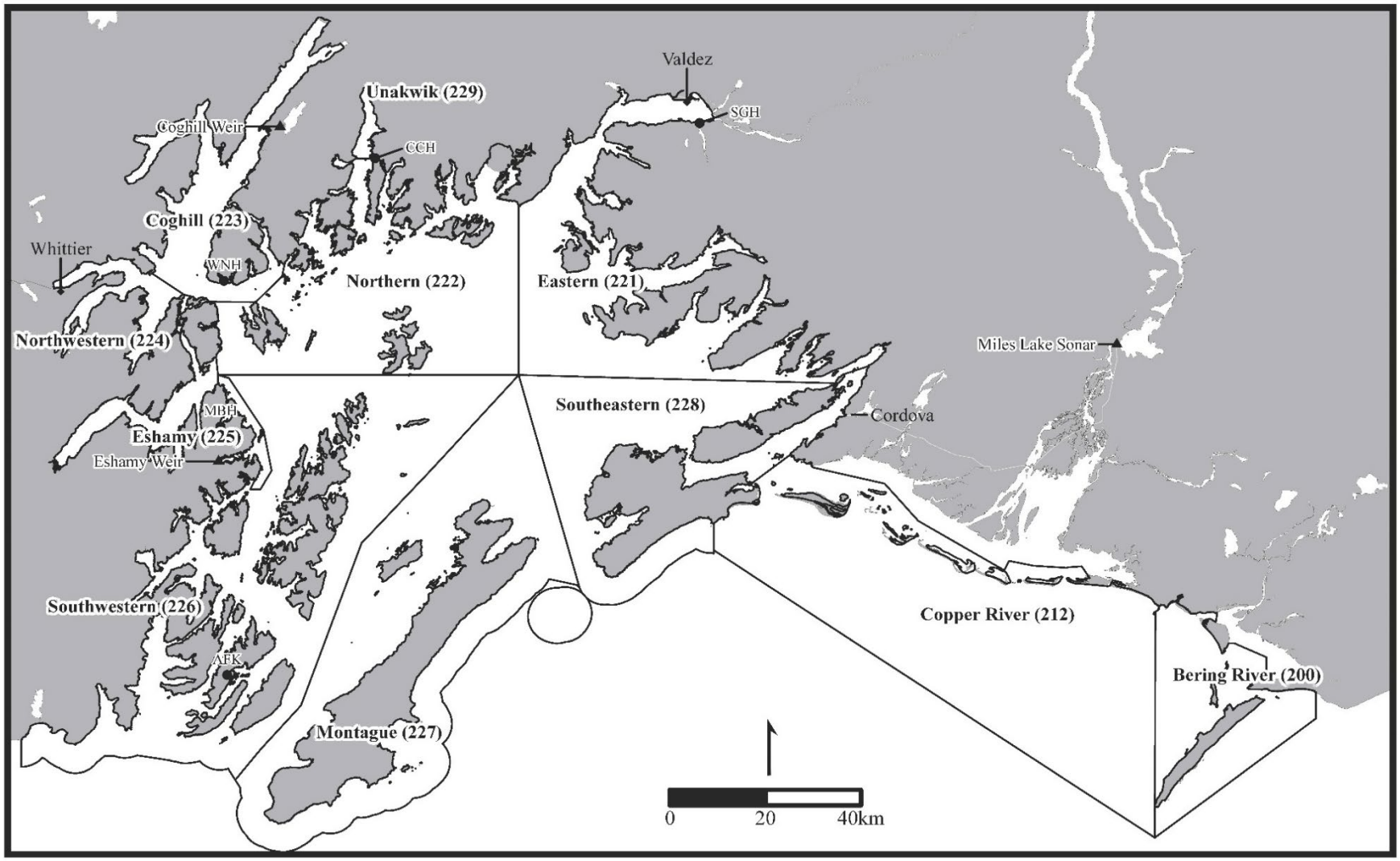

Figure 1.–Prince William Sound Area showing commercial fishing districts, salmon hatcheries (Wally Noerenberg Hatchery -WNH, Cannery Creek Hatchery- CCH, Solomon Gulch Hatchery- SGH, Main Bay Hatchery- MBH, Armin F. Koernig Hatchery- AFK), weir locations, and Miles Lake sonar camp.

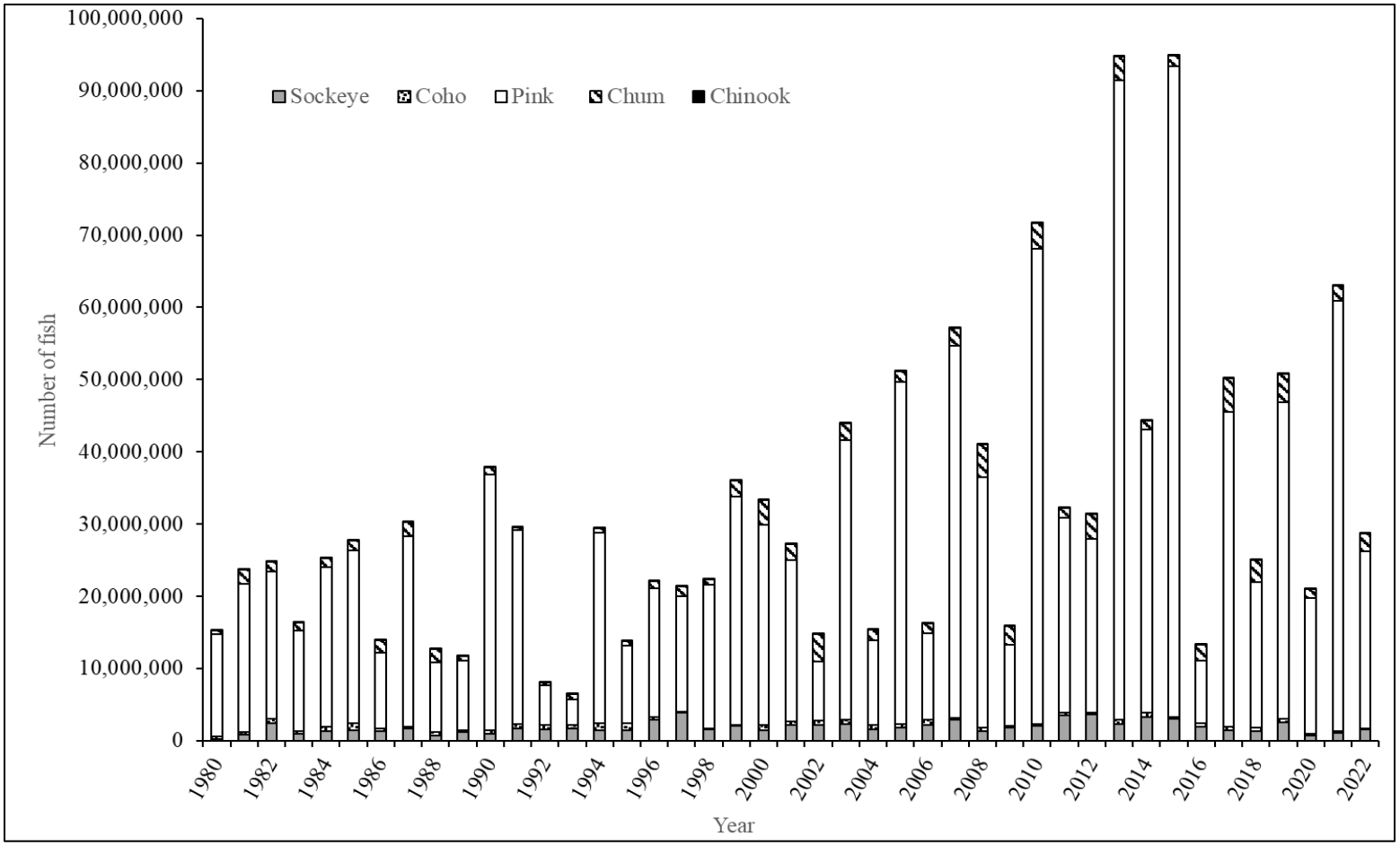

Figure 2.–Commercial salmon harvest (sold) in Prince William Sound Area, 1980–2022.

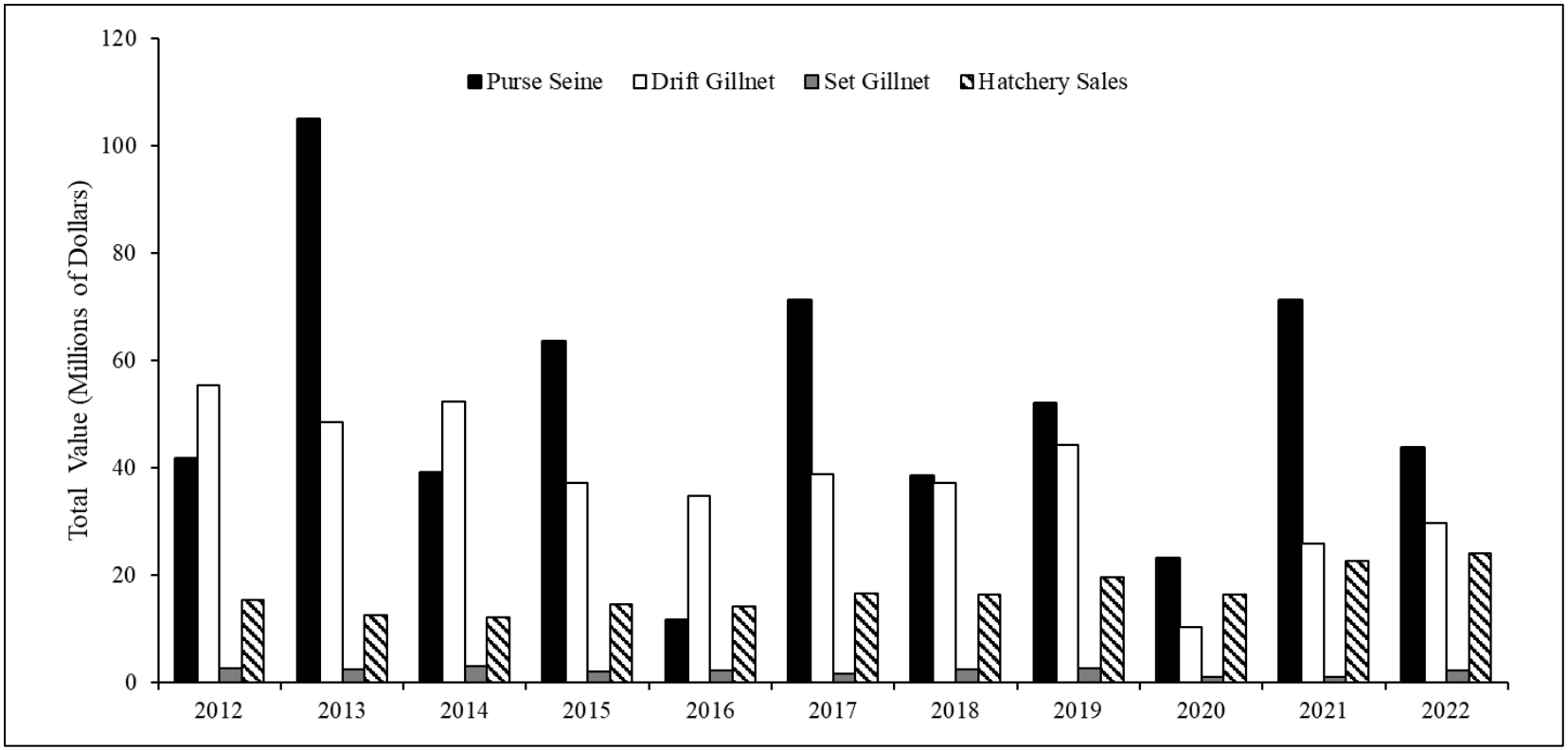

Figure 3.–Exvessel value of the commercial salmon harvest in the Prince William Sound Area by permit type, 2012–2022.

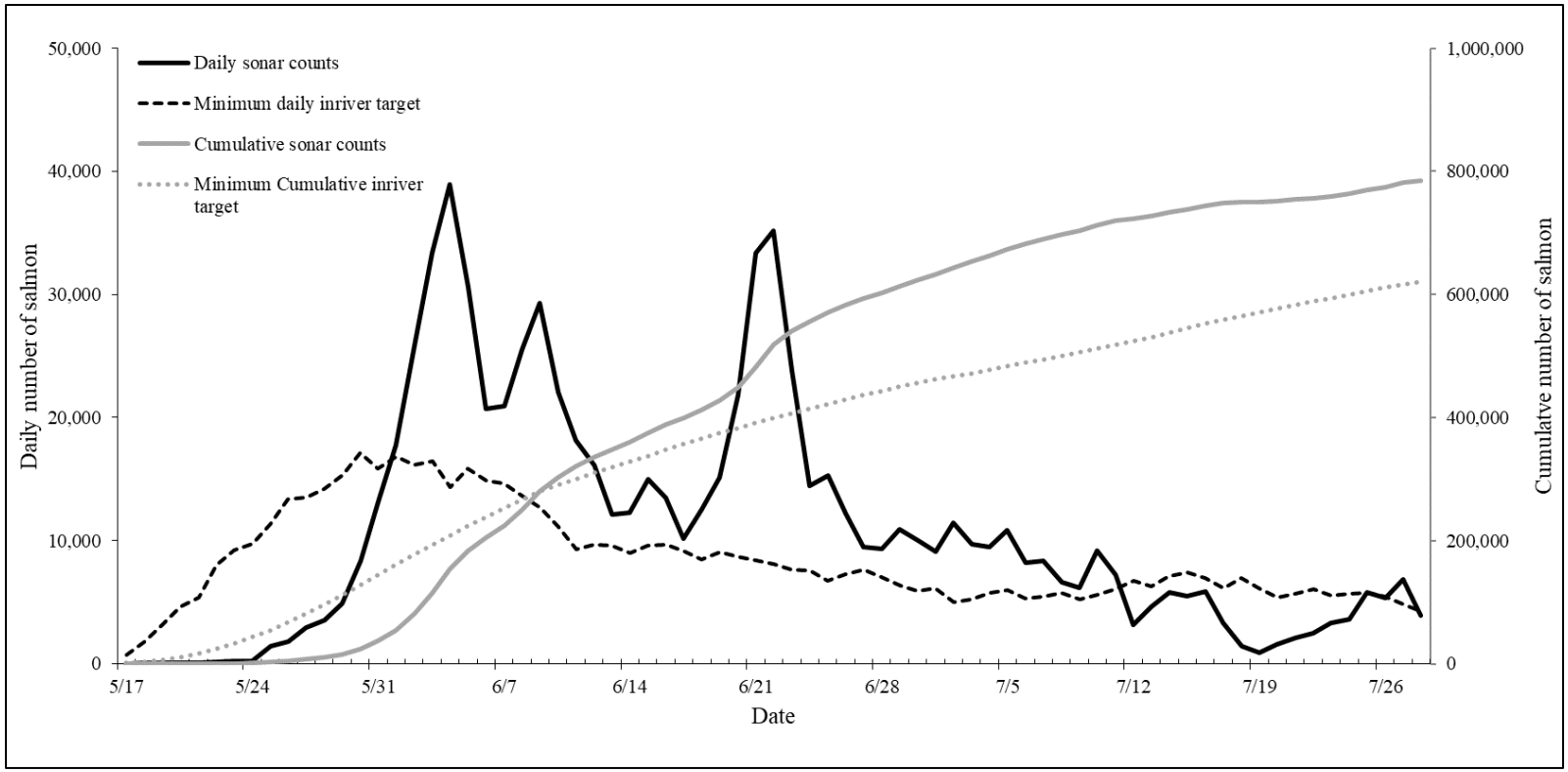

Figure 4.–Minimum daily and cumulative sonar target versus actual daily and cumulative salmon passage, Miles Lake Sonar, 2022.

Figure 5.–Length at age (1.3) Copper River drift gillnet Chinook salmon, 1976–2022.

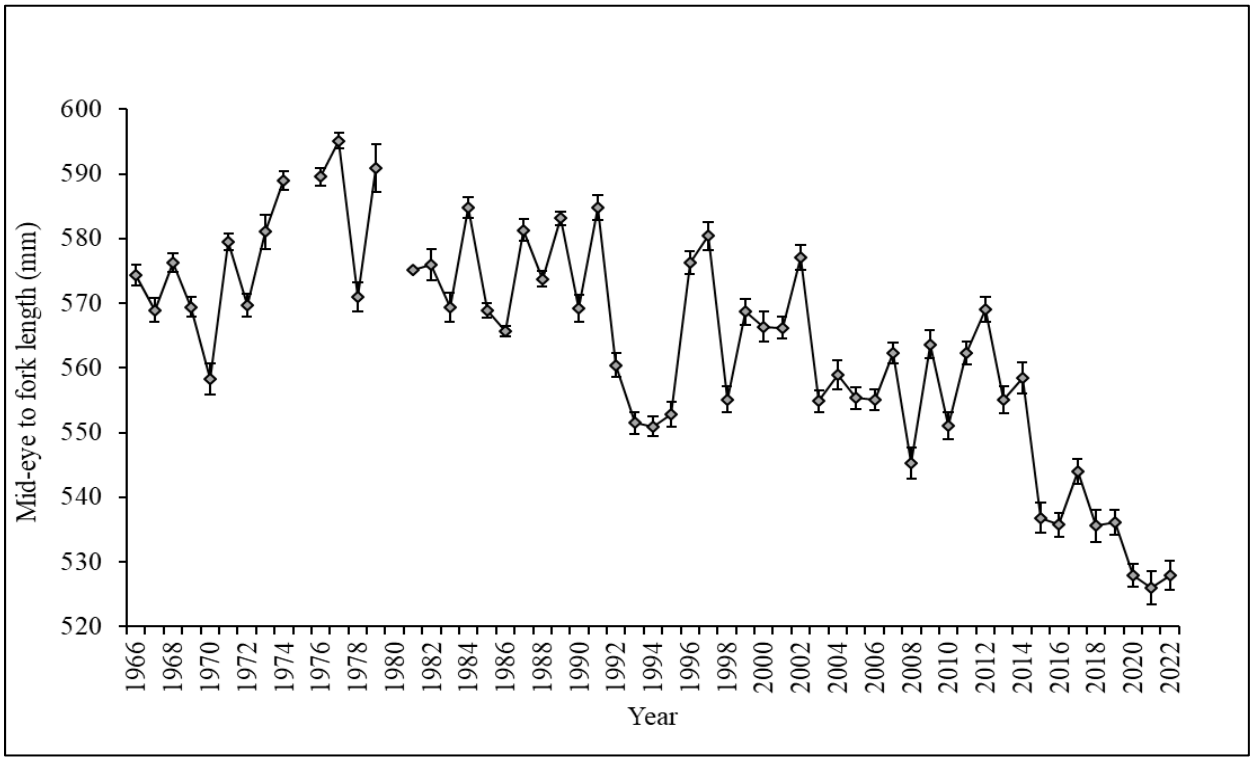

Figure 6.–Length at age (1.3) Copper River drift gillnet sockeye salmon, 1966–2022.

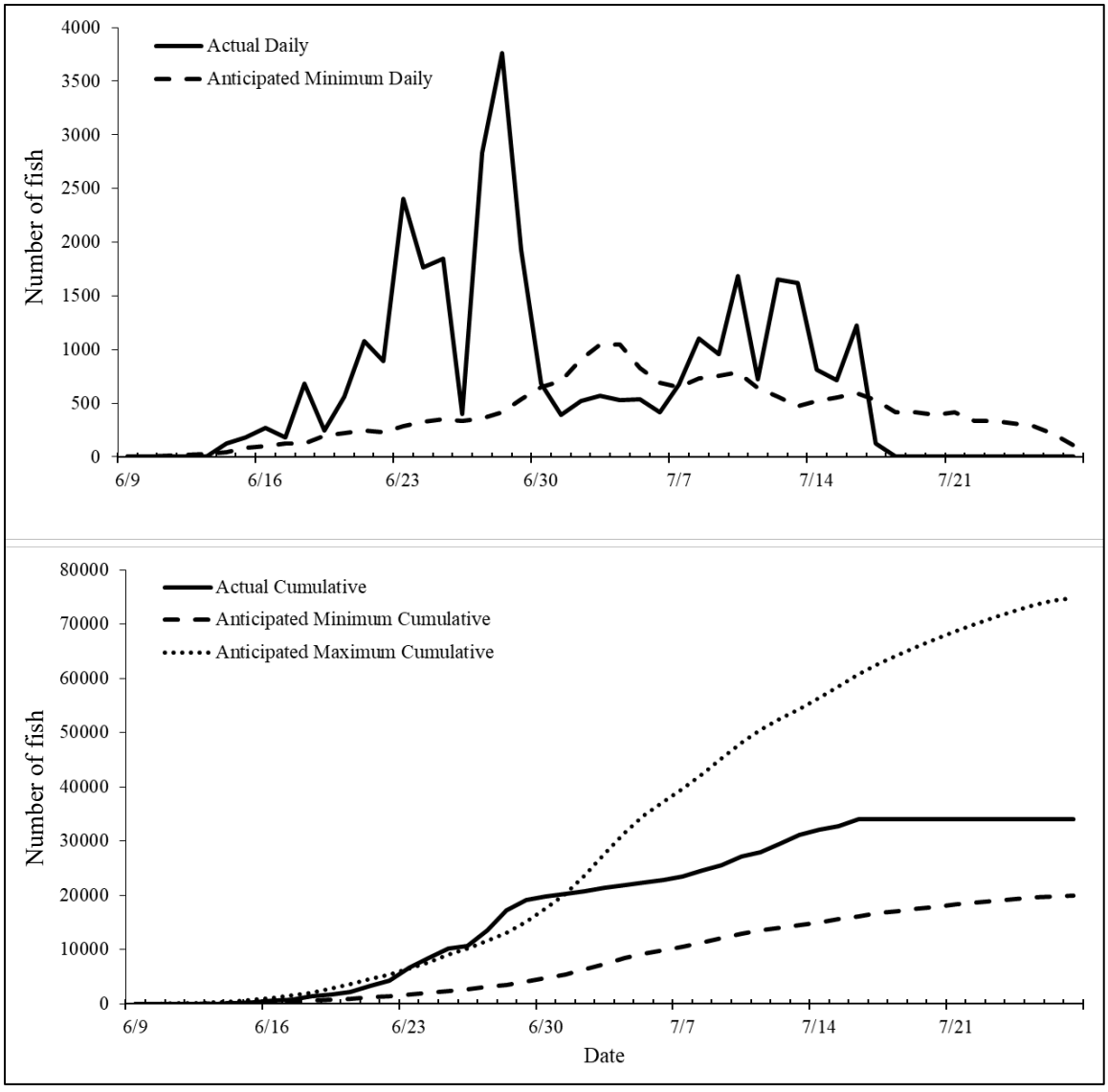

Figure 7.–Anticipated daily and cumulative sockeye salmon escapement based on 3-day running averages compared to actual escapement through Coghill River weir, 2022.

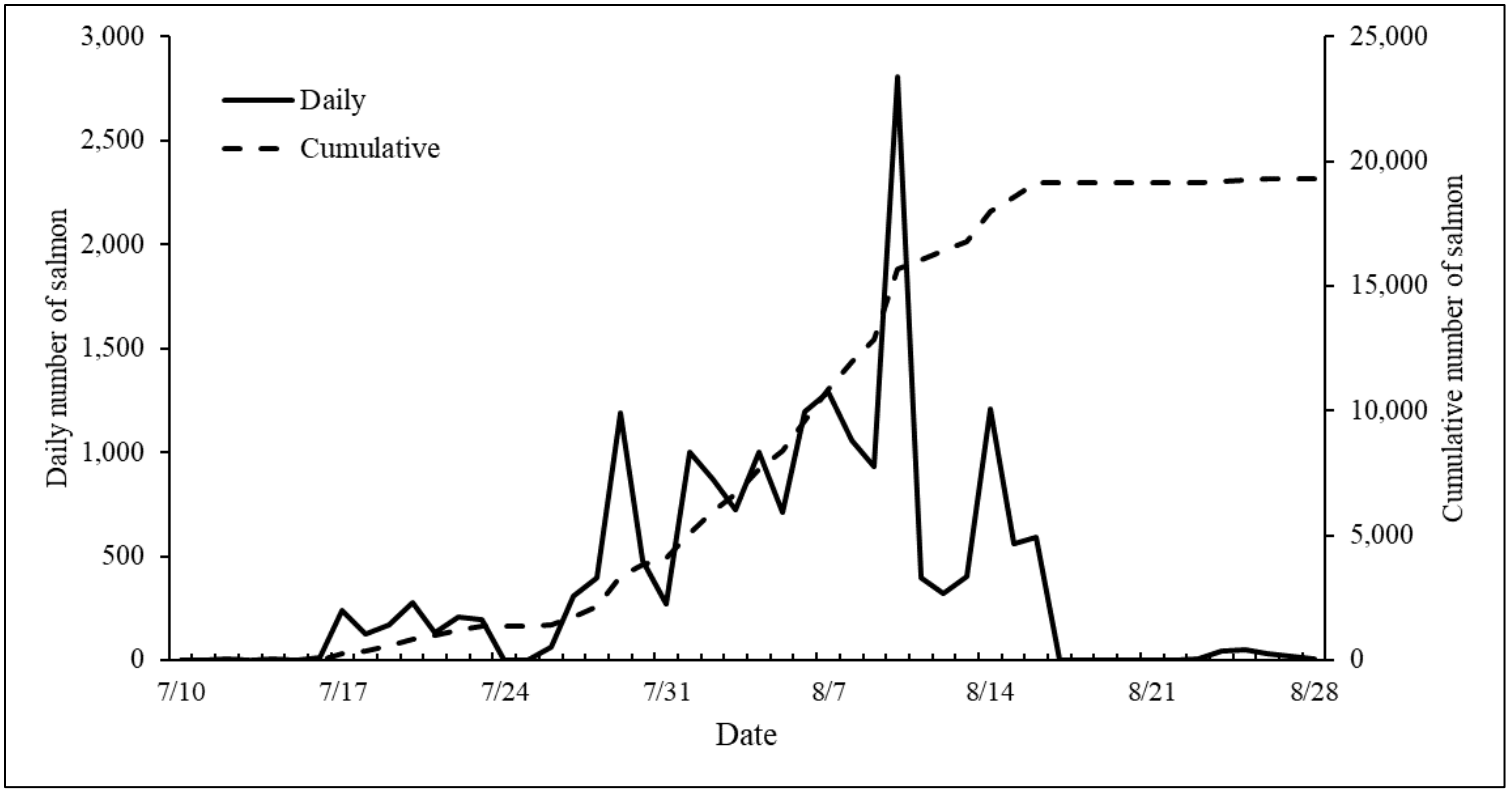

Figure 8.–Daily and cumulative sockeye salmon escapement versus actual escapement through the Eshamy River weir, 2022.

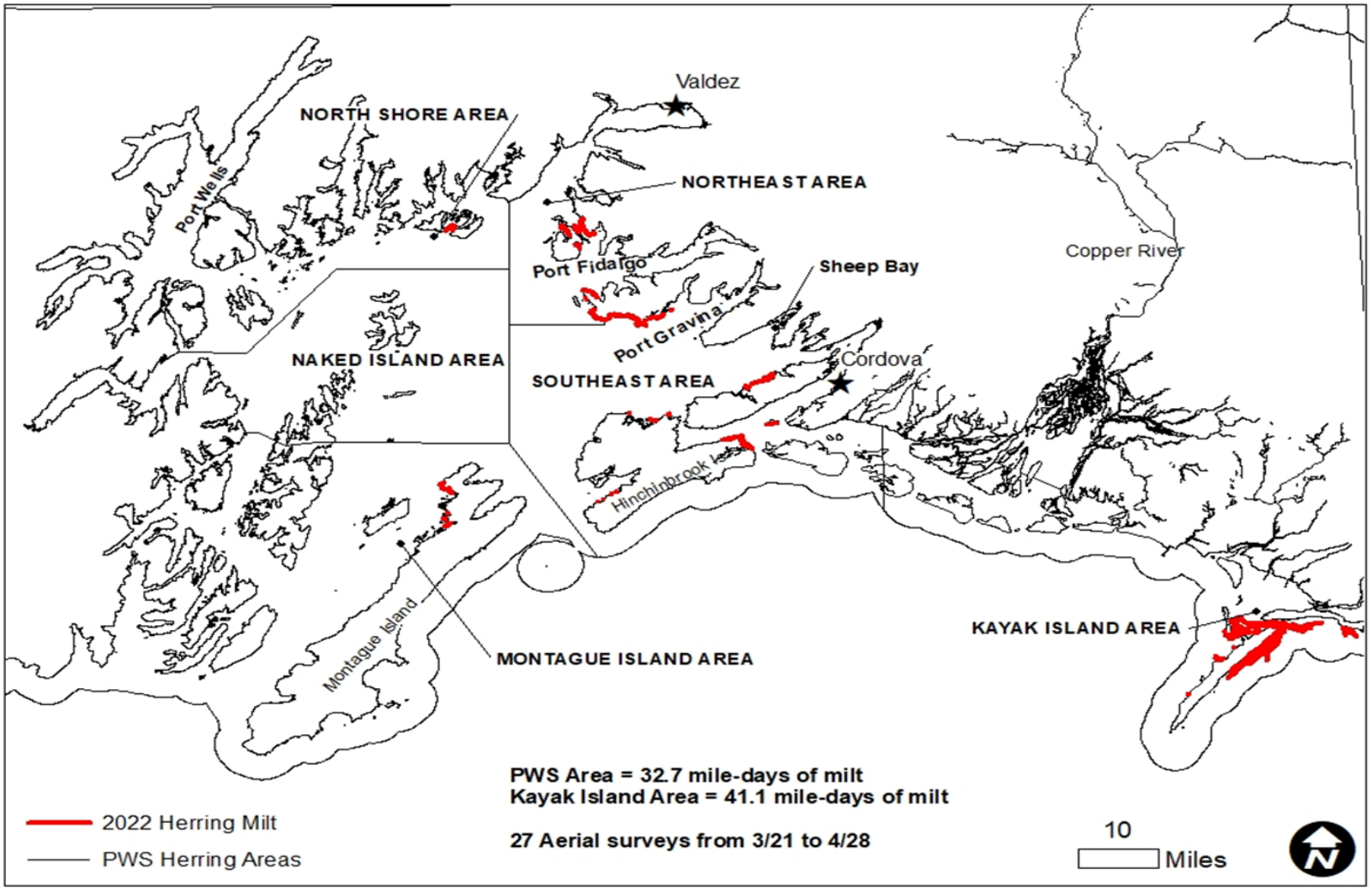

Figure 9.–Prince William Sound area showing commercial herring areas and locations of spawning herring observed during aerial surveys in 2022.

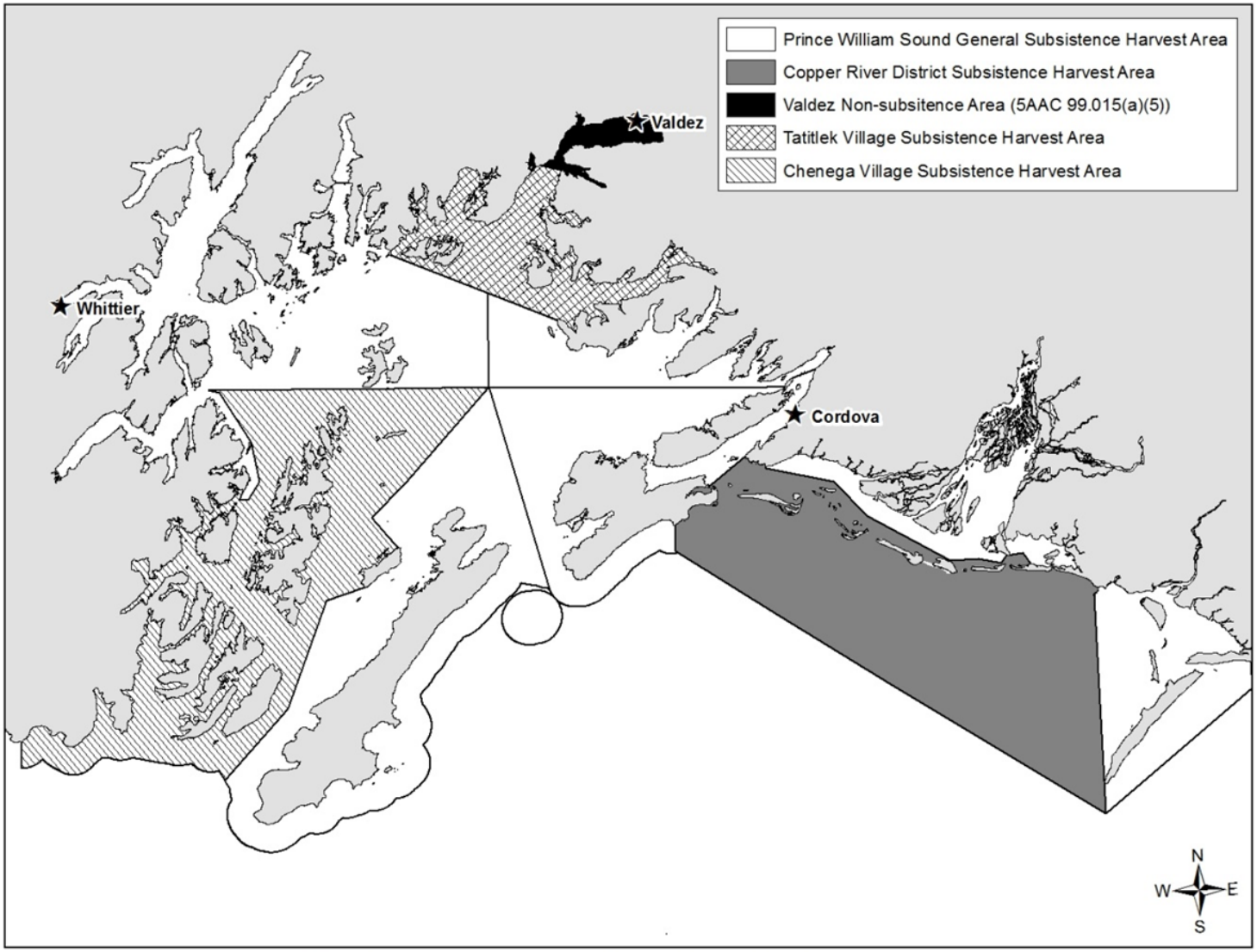

Figure 10.–Map of Prince William Sound Subsistence Areas.

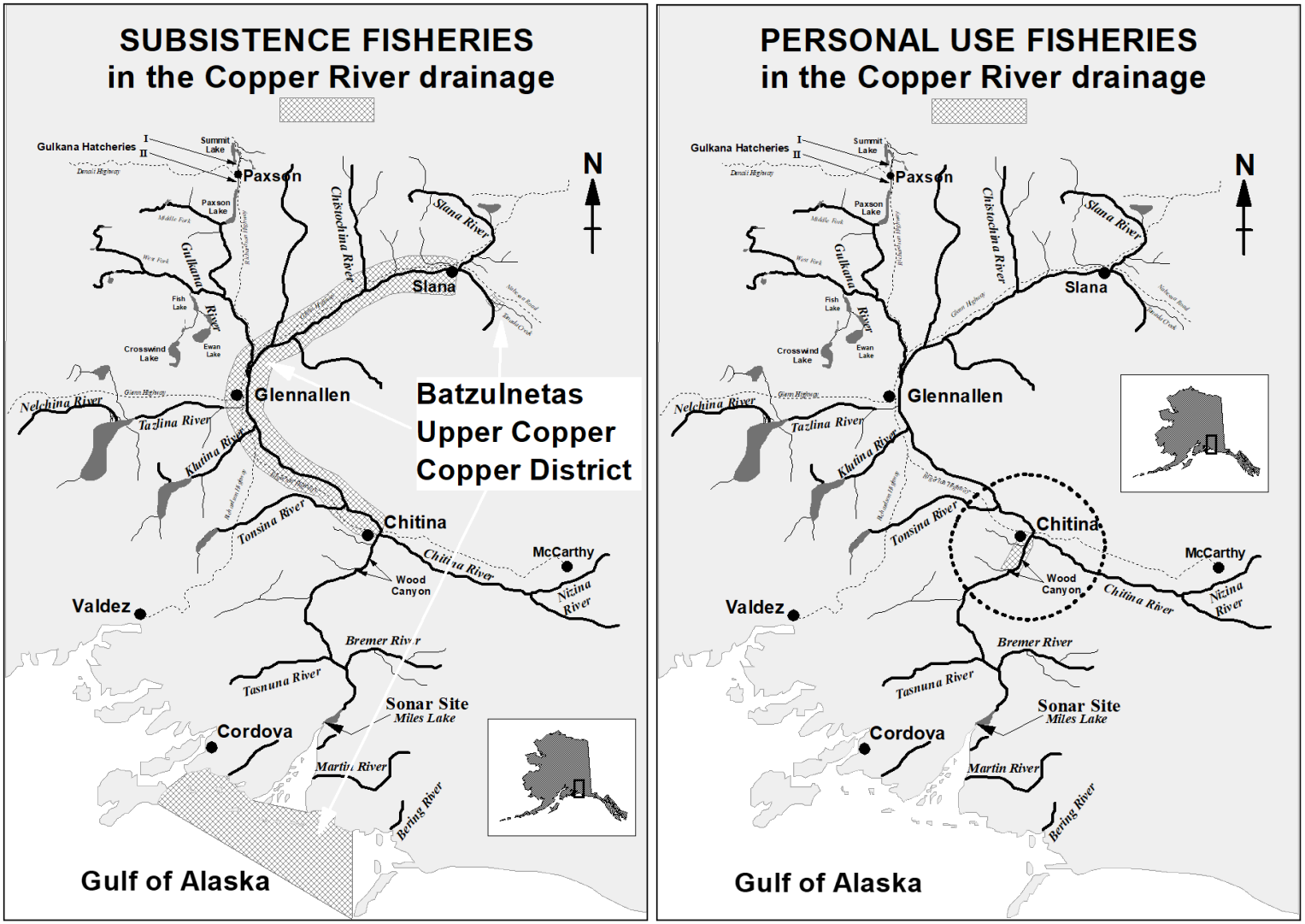

Figure 11.–Map of the subsistence and personal use salmon fisheries on the Copper River.

APPENDIX A: COPPER RIVER AND BERING RIVER DISTRICTS

Appendix A1.–Total estimated sockeye salmon runs to the Copper River by end user or destination, 2012–2022.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average (2012–2021)
Commercial harvest[a]	1,866,541	1,608,117	2,050,007	1,750,762	1,175,100	586,079	46,524	1,283,736	102,269	404,638	601,009	1,087,377
Commercial, homepack[a]	7,985	9,448	12,072	10,590	9,598	8,289	1,545	8,016	1,455	3,625	4,172	7,262
Commercial, donated[a]	0	0	0	0	0	0	0	0	0	15	0	2
Educational drift gillnet permit[a]	200	152	186	91	203	217	6	18	7	6	2	109
Subsistence (Cordova, drift gillnet)[b]	4,270	5,639	1,675	1,403	1,075	2,448	5,189	6,163	7,091	5,338	5,828	4,029
Federal subsistence (PWS/Chugach National Forest, dip net, spear, rod and reel)[b]	64	102	76	152	234	127	96	116	41	19	59	103
Subsistence (Batzulnetas, dip net, fish wheel or spear)[b]	101	862	146	0	0	254	468	209	67	120	41	223
Subsistence (Glennallen Subdistrict, dip net, fish wheel or spear)[c]	76,305	73,728	75,501	81,800	62,474	41,570	39,359	60,257	34,577	42,638	46,343	58,821
Federal subsistence (Glennallen Subdistrict, dip net, fish wheel or spear)[c]	15,718	17,789	23,889	26,753	19,181	18,415	16,736	17,718	11,234	14,847	14,174	18,228
Personal use reported (Chitina Subdistrict, dip net)[c]	127,143	180,663	157,215	223,080	148,982	132,694	77,051	171,203	78,022	143,301	153,654	143,935
Federal subsistence (Chitina Subdistrict, dip net)[c]	1,427	2,199	1,636	2,404	1,925	1,828	3,430	4,479	3,406	5,415	2,948	2,815
Upriver sport harvest[d]	23,404	26,611	18,005	9,489	7,555	9,589	2,943	7,346	3,483	5,008	5,279	11,343
Delta sport harvest[d]	764	386	87	130	246	200	58	2,033	413	603	1,448	492
Upriver spawning escapement[e]	953,502	860,258	864,131	930,145	513,126	461,268	478,760	718,876	362,445	508,715	519,586	665,123
Delta spawning escapement[f]	133,700	151,410	128,410	132,390	103,100	113,900	116,940	122,930	111,240	174,150	110,150	128,817
Hatchery broodstock/excess[g]	65,348	72,369	53,737	40,123	32,341	17,083	30,306	15,552	10,786	9,562	5,004	34,721
Total sockeye salmon run size	3,276,472	3,009,733	3,386,773	3,209,312	2,075,140	1,393,961	819,411	2,418,652	726,536	1,318,000	1,469,697	2,163,399

[a] Numbers are from fish ticket data. Homepack numbers for sockeye salmon are voluntarily reported but are legally required.

[b] Data are reported harvest from returned state and federal subsistence permits.

[c] Data are expanded harvest from returned state and federal subsistence permits.

[d] Upriver and Copper River Delta sport harvest data are from statewide sport fish harvest surveys.

[e] Beginning in 1999, sockeye salmon spawning escapement was based on the total number of fish past the Miles Lake sonar minus the Chinook salmon inriver midpoint abundance estimate, upriver subsistence, personal use, sport, hatchery broodstock, and on-site hatchery surplus.

[f] Delta spawning escapement estimated by doubling the peak aerial survey index.

[g] Hatchery broodstock and on-site excess are from the Prince William Sound Aquaculture Corporation (PWSAC) annual reports (ADF&G *unpublished*).

Appendix A2.–Total estimated sockeye salmon runs to the Copper River by origin, 2012–2022.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average (2012–2021)
Upriver wild contribution[a]	2,503,278	2,224,817	2,633,272	2,679,815	1,608,098	1,115,036	629,071	2,067,025	553,904	970,099	1,243,644	1,698,441
Delta wild contribution[b]	333,445	351,004	350,493	310,313	259,227	213,834	126,691	285,333	136,153	273,500	201,751	263,999
Gulkana contribution[c]	439,749	433,912	403,008	219,184	207,815	65,090	63,649	66,295	36,479	74,402	24,302	200,958
Total sockeye salmon run size	3,276,472	3,009,733	3,386,773	3,209,312	2,075,140	1,393,961	819,411	2,418,652	726,536	1,318,000	1,469,697	2,163,399

[a] Beginning in 1999, the upriver wild sockeye salmon contribution was estimated as the sum of the total number of sockeye salmon past the Miles Lake sonar (total number of fish past the Miles Lake sonar minus the Chinook salmon inriver abundance estimate) and sockeye salmon captured in the Copper River commercial and subsistence harvests minus Gulkana Hatchery contributions to the Copper River commercial and subsistence fisheries, Copper River Delta wild stock, and Copper River Delta sport harvests.

[b] Delta wild sockeye salmon contribution was estimated as the total Copper River District harvest multiplied by proportion Copper River Delta sockeye salmon (delta escapement divided by the total number of sockeye salmon passed the Miles Lake sonar plus Copper River Delta escapement) plus the Copper River Delta escapement and Copper River Delta sport harvest.

[c] Gulkana Hatchery sockeye salmon contributions from 1995 to 2003 are based on coded wire tag recovery; contributions from 2004 to 2021 are based on strontium chloride marks from commercial, personal use, subsistence samples applied to reported harvest, and the historical average of mainstem and upper Copper River sport harvest multiplied by Gulkana Hatchery percent in personal use and subsistence fisheries. Gulkana Hatchery personal use and subsistence contribution estimates were calculated with expanded harvest.

Appendix A3.–Total estimated Chinook salmon run to the Copper River by end user or destination, 2012–2022.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average (2012–2021)
Commercial harvest[a]	11,764	8,826	10,207	22,506	12,348	13,834	7,618	19,148	5,880	7,512	12,262	11,964
Commercial, homepack[a]	853	564	768	1,145	727	744	85	742	225	278	534	613
Commercial, donated[a]	0	0	0	0	0	0	0	0	0	0	0	0
Educational drift gillnet permit[a]	6	55	36	50	86	50	40	31	14	17	13	39
Subsistence (Cordova, drift gillnet)[b]	237	854	153	167	73	778	1,356	808	657	624	887	571
Subsistence (Batzulnetas, dip net, fish wheel, or spear)[b]	0	5	0	0	0	2	0	0	0	0	0	1
Subsistence (Glennallen Subdistrict, dip net, fish wheel, or spear)[c]	2,095	2,148	1,365	2,212	2,075	2,906	4,531	3,429	2,222	1,685	2,968	2,467
Federal subsistence (Glennallen Subdistrict, dip net, fish wheel, or spear)[c]	403	372	439	416	446	468	2,662	946	670	505	852	733
Personal use harvests (Chitina Subdistrict, dip net)[c]	567	744	719	1,570	711	1,961	1,273	2,611	751	832	2,214	1,174
Federal subsistence (Chitina Subdistrict, dip net)[c]	6	19	15	14	20	15	100	83	96	113	99	48
Sport harvest[d]	459	285	931	1,343	327	1,731	1,320	1,565	968	90	3,000	902
Upriver spawning escapement[e]	27,922	29,013	20,689	26,751	12,430	33,644	42,678	35,080	21,586	18,431	29,347	26,822
Total estimated Chinook salmon run size	44,312	42,885	35,322	56,174	29,243	56,133	61,663	64,443	33,069	30,087	52,176	45,333

[a] Numbers are from fish ticket data.

[b] Data are reported harvest from returned state and federal subsistence permits.

[c] Data are expanded harvest from returned state and federal subsistence permits.

[d] Upriver Chinook salmon sport harvest only; there is no Copper River Delta Chinook salmon sport harvest. The sport harvest numbers are generated from the statewide sport fish harvest survey.

[e] Upriver Chinook salmon spawning escapement was estimated using the inriver abundance estimate and subtracting subsistence, personal use, and sport Chinook salmon harvests. Beginning in 1999, inriver abundance estimates were calculated using mark–recapture studies; prior to 1999 inriver abundance estimates were calculated using aerial and foot surveys.

Appendix A4.–Total salmon harvest by species in the Copper River District commercial fishery, 1975–2022.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1975	19,644	335,384	53,805	236	807	409,876
1976	31,479	865,195	111,900	3,392	178	1,012,144
1977	21,722	602,737	131,356	23,185	335	779,335
1978	29,062	249,872	220,338	3,512	2,233	505,017
1979	17,678	80,528	194,885	1,295	107	294,493
1980	8,454	18,908	225,299	3,966	198	256,825
1981	20,178	477,662	310,154	23,952	1,799	833,745
1982	47,362	1,177,632	454,763	7,154	1,177	1,688,088
1983	50,022	626,735	234,243	7,345	2,217	920,562
1984	38,957	900,043	382,432	32,194	6,935	1,360,561
1985	42,214	927,553	587,990	19,061	5,966	1,582,784
1986	40,670	780,808	295,980	3,016	17,614	1,138,088
1987	41,001	1,180,782	111,599	31,635	14,796	1,379,813
1988	30,741	576,950	315,568	2,775	11,022	937,056
1989	30,863	1,025,923	194,454	25,877	5,845	1,282,962
1990	21,702	844,778	246,797	1,596	7,545	1,122,418
1991	34,787	1,206,811	385,086	1,246	20,220	1,648,150
1992	39,810	970,938	291,627	1,664	5,807	1,309,846
1993	29,727	1,398,234	281,469	9,579	13,002	1,732,011
1994	47,812	1,153,167	677,654	12,079	19,069	1,909,781
1995	67,363	1,271,822	542,658	19,809	56,100	1,957,752
1996	57,815	2,356,365	193,042	6,372	25,533	2,639,127
1997	52,516	2,955,431	18,656	8,483	2,465	3,037,551
1998	70,238	1,343,127	108,246	20,833	5,024	1,547,468
1999	63,452	1,683,892	153,097	10,206	25,389	1,936,036
2000	32,005	881,419	304,944	9,804	5,366	1,233,538
2001	40,459	1,325,690	256,638	9,387	2,789	1,634,963
2002	39,511	1,249,769	504,410	3,677	31,653	1,829,020
2003	48,797	1,192,164	363,489	12,934	10,110	1,627,494
2004	38,735	1,048,603	467,861	5,175	3,386	1,563,760
2005	35,395	1,333,532	263,584	35,008	3,522	1,671,041
2006	31,060	1,498,407	318,422	30,847	17,206	1,895,942
2007	40,114	1,903,976	117,522	80,751	9,758	2,152,121
2008	11,978	323,067	203,198	1,490	1,293	541,026
2009	10,333	903,196	208,543	16,820	8,696	1,147,588
2010	10,551	643,278	211,647	21,167	15,776	902,419
2011	19,782	2,061,502	128,054	24,064	13,394	2,246,796
2012	12,617	1,874,526	131,298	6,062	27,376	2,051,879
2013	9,390	1,617,565	245,234	65,495	10,222	1,947,906
2014	10,975	2,062,079	316,922	11,761	43,705	2,445,442
2015	23,651	1,761,352	138,404	84,858	15,724	2,023,989
2016	13,075	1,184,698	368,983	35,116	5,523	1,607,395
2017	14,578	594,368	308,232	69,675	13,019	999,872
2018	7,703	48,069	306,538	10,857	3,185	376,352
2019	19,890	1,291,752	79,147	215,599	23,070	1,629,458
2020	6,105	103,724	170,114	716	1,383	282,042
2021	7,790	408,278	147,018	34,468	8,580	606,134
2022	12,796	605,181	44,533	66,891	13,586	742,987
Average (2012–2021)	12,577	1,094,641	221,189	53,472	15,167	1,397,047
Average (1997–2021)	26,828	1,251,739	233,608	33,015	12,300	1,557,489

Appendix A5.–Drift gillnet harvest by species and period in the Copper River District commercial fishery in 2022.

Period	Date	AA Dates[a]	Hours	Permits fished	Landings	Chinook		Sockeye		Coho		Pink		Chum	
						Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1[b]	5/16	5/4	12	375	417	3,006	38,010	13,303	70,445	0	0	2	3	50	267
2[b]	5/19	5/18	12	387	430	2,812	38,395	12,128	63,367	0	0	2	17	421	2,517
3[b]	5/26	5/24	12	398	484	2,036	27,318	70,076	375,269	0	0	1	0	1,777	11,215
4[b]	6/2	6/1	12	293	441	1,199	15,028	85,669	446,745	2	6	0	0	8	48
5[b]	6/6	6/4	12	344	426	882	12,191	64,208	334,854	2	17	0	0	2,745	17,639
6[b]	6/9	6/8	12	225	257	490	6,484	27,794	143,822	0	0	0	0	2,785	18,913
7[b]	6/13–6/14	6/11	24	138	193	510	8,102	29,243	146,907	0	0	0	0	704	4,355
8[b]	6/16–6/17	6/15	24	125	195	454	7,698	46,537	244,769	1	0	0	0	843	5,445
9[b]	6/20–6/21	6/18	24	137	224	444	8,246	36,800	198,206	2	13	0	0	51	295
10	6/23–6/24	6/22	36	138	278	345	6,150	43,801	234,459	41	246	2	7	176	1,172
11	6/27–6/28	6/24	36	108	182	207	3,892	34,925	183,269	3	21	247	842	553	2,914
12	6/30–7/2	6/30	48	108	242	186	3,241	37,667	199,920	45	276	6,796	24,768	1,418	8,575
13	7/4–7/5	7/2	36	109	224	113	2,167	36,077	192,553	211	1,425	35,676	119,920	1,121	6,472
14	7/7–7/9	7/6	48	77	121	42	631	22,160	119,858	13	86	9,123	35,549	323	2,302
15	7/11–7/12	7/9	36	89	128	27	463	13,094	66,580	41	276	4,521	14,778	239	1,523
16	7/14–7/16	7/13	48	59	96	18	276	13,296	68,828	21	134	6,580	23,301	181	1,203
17	7/18–7/19	7/16	36	38	41	4	52	4,950	27,066	12	90	1,674	6,269	80	532
18	7/21–7/23	7/20	48	22	23	2	39	4,781	26,691	32	220	213	720	15	88
19	7/25–7/27	7/22	36	12	12	2	30	1,742	9,323	16	161	72	285	1	9
20	7/28–7/30	7/27	48	23	31	3	32	3,712	20,157	116	737	769	2,854	27	175
21	8/1–8/2	7/30	36	32	32	7	62	927	4,718	211	1,307	577	2,114	34	225
22	8/4–8/6	8/3	48	9	9	1	14	629	3,126	96	618	439	1,774	20	134
23	8/8–8/9	8/5	36	13	14	1	10	467	2,310	318	1,911	29	108	2	14
24	8/11–8/12	8/10	24	16	17	1	9	356	1,786	682	4,561	129	496	4	21
25	8/15–8/16	8/13	24	61	66	0	0	432	2,120	2,600	18,134	22	75	1	7
26	8/22–8/23	8/19	24	126	173	4	51	325	1,876	23,332	176,610	16	50	7	43
27[c]	8/29–8/30	8/26	24	133	171	0	0	82	527	16,736	122,219	1	4	0	0
Total				434	4,927	12,796	178,591	605,181	3,189,551	44,533	329,068	66,891	233,934	13,586	86,103
Average weights							13.96		5.27		7.39		3.50		6.34

[a] Queries for Advisory Announcements (AA) made through the ADF&G Commercial Fishery Announcements (http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main) will provide results sorted by publication date.

[b] Waters of the inside closure area described in 5 AAC 24.350(1)(A) were expanded and closed for the entire fishing period, see corresponding advisory announcement for more detail.

[c] Waters west of a line from 60°20.33′N, 145°20.00’W to 60°04.90′N., 145° 38.00′W were closed for this fishing period; see corresponding advisory announcement for more detail.

Appendix A6.–Daily salmon counts at Miles Lake sonar, 2022.

	Daily sonar counts						Minimum inriver passage objective		Maximum inriver passage objective	
Date	North bank	South bank	Daily	Cumulative	0600 Count	Projected daily	Daily	Cumulative	Daily	Cumulative
05/16	NA	NA	NA	NA	NA	NA	504	582	846	977
05/17[a]	0	NA	0	0	0	0	749	1,332	1,256	2,233
05/18	48	NA	48	48	6	24	1,786	3,118	2,995	5,228
05/19	44	NA	44	92	6	24	3,237	6,355	5,429	10,657
05/20	84	NA	84	176	48	192	4,643	10,998	7,786	18,444
05/21	108	NA	108	284	6	24	5,363	16,361	8,994	27,438
05/22	145	NA	145	429	37	148	8,002	24,363	13,408	40,846
05/23	259	NA	259	688	48	192	9,252	33,615	15,495	56,340
05/24	243	NA	243	931	60	240	9,784	43,398	16,361	72,702
05/25	463	1,000	1,463	2,394	66	264	11,318	54,716	18,927	91,628
05/26	1,049	745	1,794	4,188	385	1,540	13,399	68,116	22,418	114,046
05/27	1,546	1,389	2,935	7,123	601	2,404	13,485	81,601	22,511	136,557
05/28	1,835	1,739	3,574	10,697	692	2,768	14,173	95,774	23,645	160,202
05/29	2,587	2,327	4,914	15,611	896	3,584	15,350	111,124	25,612	185,815
05/30	4,638	3,711	8,349	23,960	1,630	6,520	17,137	128,261	28,580	214,395
05/31	8,109	5,049	13,158	37,118	2,910	11,640	15,825	144,085	26,358	240,753
06/01	8,499	9,302	17,801	54,919	3,782	15,128	16,868	160,953	28,144	268,897
06/02	12,674	13,161	25,835	80,754	4,552	18,208	16,167	177,120	26,973	295,870
06/03	17,971	15,369	33,340	114,094	7,649	30,596	16,494	193,614	27,488	323,358
06/04	24,167	14,774	38,941	153,035	7,584	30,336	14,365	207,979	23,868	347,226
06/05	15,545	15,051	30,596	183,631	9,369	37,476	15,825	223,805	26,336	373,562
06/06	11,310	9,388	20,698	204,329	4,615	18,460	14,896	238,701	24,721	398,283
06/07	9,609	11,305	20,914	225,243	3,827	15,308	14,637	253,338	24,274	422,557
06/08	9,357	16,146	25,503	250,746	6,012	24,048	13,672	267,010	22,675	445,232
06/09	10,099	19,197	29,296	280,042	7,921	31,684	12,722	279,732	21,122	466,354
06/10	11,047	11,016	22,063	302,105	4,724	18,896	11,200	290,932	18,525	484,879
06/11	6,194	11,966	18,160	320,265	4,302	17,208	9,303	300,235	15,364	500,243
06/12	6,484	9,610	16,094	336,359	4,272	17,088	9,645	309,881	15,954	516,197
06/13	5,174	6,988	12,162	348,521	2,902	11,608	9,581	319,461	15,854	532,051
06/14	4,024	8,266	12,290	360,811	2,817	11,268	8,971	328,432	14,854	546,905

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	Daily sonar counts						Minimum inriver passage objective		Maximum inriver passage objective	
Date	North bank	South bank	Daily	Cumulative	0600 Count	Projected daily	Daily	Cumulative	Daily	Cumulative
06/15	5,509	9,470	14,979	375,790	2,557	10,228	9,569	338,001	15,879	562,784
06/16	4,164	9,345	13,509	389,299	3,046	12,184	9,699	347,700	16,147	578,931
06/17	3,279	6,915	10,194	399,493	1,793	7,172	9,156	356,857	15,210	594,141
06/18	3,814	8,732	12,546	412,039	2,323	9,292	8,504	365,361	14,116	608,257
06/19	3,304	11,811	15,115	427,154	3,756	15,024	9,104	374,464	15,136	623,392
06/20	7,710	14,126	21,836	448,990	3,189	12,756	8,699	383,163	14,463	637,855
06/21	7,291	26,087	33,378	482,368	6,267	25,068	8,402	391,565	13,925	651,781
06/22	9,778	25,393	35,171	517,539	6,666	26,664	8,078	399,643	13,380	665,161
06/23	8,462	15,350	23,812	541,351	4,447	17,788	7,679	407,322	12,726	677,887
06/24	4,173	10,295	14,468	555,819	3,454	13,816	7,538	414,860	12,456	690,343
06/25	2,797	12,467	15,264	571,083	2,665	10,660	6,780	421,641	11,167	701,511
06/26	2,744	9,483	12,227	583,310	2,739	10,956	7,269	428,909	11,998	713,509
06/27	2,439	7,060	9,499	592,809	2,402	9,608	7,627	436,537	12,591	726,100
06/28	1,924	7,390	9,314	602,123	1,859	7,436	7,032	443,568	11,559	737,658
06/29	2,574	8,336	10,910	613,033	2,486	9,944	6,348	449,916	10,385	748,044
06/30	1,564	8,449	10,013	623,046	2,961	11,844	5,941	455,857	9,711	757,755
07/01	1,089	8,059	9,148	632,194	2,696	10,784	6,109	461,965	9,726	767,481
07/02	1,780	9,695	11,475	643,669	3,022	12,088	5,039	467,004	7,891	775,372
07/03	2,669	7,060	9,729	653,398	2,949	11,796	5,240	472,244	8,150	783,522
07/04	2,899	6,622	9,521	662,919	3,063	12,252	5,789	478,033	8,997	792,519
07/05	2,418	8,467	10,885	673,804	2,335	9,340	5,998	484,030	9,099	801,617
07/06	2,622	5,581	8,203	682,007	2,377	9,508	5,309	489,339	8,071	809,688
07/07	1,978	6,412	8,390	690,397	2,210	8,840	5,488	494,827	8,187	817,876
07/08	1,732	4,937	6,669	697,066	1,234	4,936	5,782	500,610	8,606	826,481
07/09	1,747	4,427	6,174	703,240	1,859	7,436	5,270	505,879	7,698	834,180
07/10	3,085	6,139	9,224	712,464	1,859	7,436	5,643	511,522	8,147	842,327
07/11	2,201	5,001	7,202	719,666	2,781	11,124	6,066	517,588	8,731	851,058
07/12	1,054	2,093	3,147	722,813	1,174	4,696	6,763	524,351	9,662	860,721
07/13	2,004	2,640	4,644	727,457	1,161	4,644	6,291	530,642	8,874	869,595
07/14	1,883	3,915	5,798	733,255	1,565	6,260	7,150	537,792	10,156	879,751

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	Daily sonar counts						Minimum inriver passage objective		Maximum inriver passage objective	
Date	North bank	South bank	Daily	Cumulative	0600 Count	Projected daily	Daily	Cumulative	Daily	Cumulative
07/15	1,990	3,529	5,519	738,774	1,383	5,532	7,430	545,223	10,675	890,426
07/16	2,466	3,429	5,895	744,669	1,859	7,436	6,978	552,200	9,893	900,319
07/17	1,275	2,056	3,331	748,000	896	3,584	6,112	558,312	8,807	909,126
07/18	384	1,058	1,442	749,442	662	2,648	6,966	565,279	9,939	919,065
07/19	319	625	944	750,386	205	820	6,112	571,391	8,564	927,629
07/20	638	968	1,606	751,992	325	1,300	5,425	576,816	7,481	935,109
07/21	1,007	1,094	2,101	754,093	458	1,832	5,691	582,506	7,948	943,057
07/22	771	1,755	2,526	756,619	469	1,876	6,086	588,592	8,460	951,517
07/23	1,251	2,080	3,331	759,950	752	3,008	5,502	594,095	7,698	959,215
07/24	1,654	1,957	3,611	763,561	920	3,680	5,703	599,797	8,051	967,266
07/25	2,595	3,199	5,794	769,355	1,702	6,808	5,739	605,537	8,213	975,479
07/26	1,628	3,709	5,337	774,692	1,263	5,052	5,438	610,974	7,625	983,103
07/27	1,919	4,954	6,873	781,565	1,756	7,024	4,827	615,801	6,748	989,851
07/28	1,377	2,567	3,944	785,509	992	3,968	4,237	620,038	5,923	995,774

Note: Anticipated counts are not available prior to 15 May because the sonar has not been deployed frequently enough prior to this date. NA = not available.

[a] North bank was deployed for 11 hours.

Appendix A7.–Inriver salmon passage at the Miles Lake sonar, 1978–2022.

Year	Total	Rank
1978	107,011	45
1979	328,090	44
1980	374,091	43
1981	576,681	36
1982	517,885	40
1983	592,563	35
1984	618,732	32
1985	466,190	42
1986	481,628	41
1987	523,022	39
1988	528,940	38
1989	643,367	28
1990	624,922	31
1991	593,185	34
1992	604,898	33
1993	819,700	17
1994	738,011	22
1995	637,293	29
1996	907,267	11
1997	1,164,791	5
1998	865,896	13
1999	850,597	15
2000	636,837	30
2001	878,205	12
2002	830,263	16
2003	747,091	21
2004	684,103	27
2005	855,125	14
2006	959,706	7
2007	919,601	9
2008	718,344	24
2009	709,748	25
2010	923,811	8
2011	914,231	10
2012	1,294,400	2
2013	1,267,060	3
2014	1,218,418	4
2015	1,346,100	1
2016	801,593	18
2017	723,426	23
2018	701,577	26
2019	1,039,354	6
2020	530,313	37
2021	751,262	20
2022	785,509	19
2012–2021 Average	967,350	

Appendix A8.–Expected and actual semiweekly sockeye and Chinook salmon harvest and weekly coho salmon harvest in the Copper River District drift gillnet fishery, 2022.

Semiweekly date/day		Fishing time (hours)	Forecasted sockeye salmon harvest[a]	Actual sockeye salmon harvest	Forecasted Chinook salmon harvest[b]	Actual Chinook salmon harvest	Forecasted coho salmon harvest[c]	Actual coho salmon harvest
05/14	Sat	0	0	0	0	0	0	0
05/18	Wed	12	20,707	13,303	1,269	3,006	–	–
05/21	Sat	12	29,909	12,128	1,186	2,812	1	0
05/25	Wed	0	59,331	0	1,427	0	–	–
05/28	Sat	12	51,112	70,076	1,073	2,036	18	0
06/01	Wed	0	56,044	0	1,357	0	–	–
06/04	Sat	12	40,664	85,669	862	1,199	48	2
06/08	Wed	12	44,691	64,208	807	882	–	–
06/11	Sat	12	36,793	27,794	485	490	109	2
06/15	Wed	24	50,067	29,243	640	510	–	–
06/18	Sat	24	32,820	46,537	255	454	351	1
06/22	Wed	24	47,186	36,800	252	444	–	–
06/25	Sat	36	31,234	43,801	117	345	540	43
06/29	Wed	36	44,404	34,925	101	207	–	–
07/02	Sat	48	23,898	37,667	46	186	312	48
07/06	Wed	36	39,774	36,077	47	113	–	–
07/09	Sat	48	19,574	22,160	22	42	234	224
07/13	Wed	36	25,551	13,094	17	27	–	–
07/16	Sat	48	14,268	13,296	8	18	324	62
07/20	Wed	36	15,154	4,950	9	4	–	–
07/23	Sat	48	7,627	4,781	4	2	454	44
07/27	Wed	36	6,210	1,742	2	2	–	–
07/30	Sat	48	5,113	3,712	1	3	1,479	132
08/03	Wed	36	4,584	927	3	7	–	–
08/06	Sat	48	3,037	629	1	1	3,064	307
08/10	Wed	36	2,811	467	2	1	–	–

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Semiweekly Date		Fishing time (hours)	Forecasted sockeye salmon harvest[a]	Actual sockeye salmon harvest	Forecasted Chinook salmon harvest[b]	Actual Chinook salmon harvest	Forecasted coho salmon harvest[c]	Actual coho salmon harvest
08/13	Sat	24	1,476	356	1	1	14,354	1,000
08/17	Wed	24	892	432	1	0	–	–
08/20	Sat	0	320	0	1	0	32,614	2,600
08/24	Wed	24	250	325	1	4	–	–
08/27	Sat	0	257	0	1	0	56,035	23,332
08/31	Wed	24	78	82	3	0	–	–
09/03	Sat	0	64	0	0	0	61,322	16,736
Total		816	715,900	605,181	9,998	12,796	171,259	44,533

Note: En dashes = not applicable.

[a] Sockeye salmon forecasted harvest was based on the midpoint preseason forecast (716,000) and the 2012–2021 harvest timing.

[b] Chinook salmon forecasted harvest was based on the preseason harvest forecast (10,000) and the 1998–2007 harvest timing. This harvest forecast is the total run forecast minus the lower bound sustainable escapement goal (SEG) multiplied by the mean commercial exploitation rate. Therefore, the Chinook salmon harvest should be considered a maximum harvest because the escapement goal is a lower bound SEG.

[c] Coho salmon projected harvest was based on the midpoint preseason harvest forecast (221,000) and the 2012–2021 harvest timing.

Appendix A9.–Aerial escapement indices by statistical week and location for sockeye salmon returning to the Copper River Delta, 2022.

System[a]	Weekly escapement indices (statistical week ending date listed)[b] 06/25	07/09	07/16	07/30	09/03	09/10	09/24	Site[c]	System[d]	Anticipated (by drainage)
Eyak River										
Eyak River	200	350	1,000	100	0	0	NS	100	11,800	9,972–23,571
West Shore beaches	0	300	1,600	1,800	200	0	0	1,800	–	–
East Shore beaches	0	7,830	5,500	8,000	1,400	750	30	8,000	–	–
Middle Arm beaches[e]	50	1,800	1,300	1,200	4,000	5,000	1,500	1,800	–	–
North Shore beaches	0	0	0	100	30	0	NS	100	–	–
Hatchery Creek Delta	0	0	0	50	500	300	NS	50	60	–
Hatchery Creek	0	0	0	10	300	200	NS	10	–	–
Power Creek Delta	0	0	0	450	200	0	NS	450	600	–
Power Creek	0	0	0	150	200	100	NS	150	–	–
Ibeck Creek										
Ibeck Creek	NS	NS	NS	NS	0	0	0	0	0	–
Alaganik Slough										
Alaganik Slough	0	2,500	1,700	0	0	0	0	0	5,100	8,359–19,758
McKinley Lake	0	0	0	4,000	1,500	1,200	800	4,000	–	–
Salmon Creek West Fork	0	0	50	300	0	0	0	300	–	–
Salmon Creek East Fork	0	0	0	800	0	5	0	800	–	–
26/27 Mile Creek										
26/27 Mile Creek	0	1,800	1,100	1,300	30	170	100	1,800	1,800	2,182–5,157
39 Mile Creek										
39 Mile Creek	NS	1,300	2,500	2,300	1,700	1,500	1,000	2,500	2,500	5,772–13,642
Goat Mountain										
Goat Mountain Creek	500	800	200	250	0	0	0	800	800	549–1,298
Pleasant Creek										
Pleasant Creek	6,300	5,000	2,600	1,350	0	0	0	6,300	6,300	1,075–2,542
Martin River										
Martin River - Lower	NS	NS	NS	NS	NS	NS	NS	0	0	–
Ragged Point River	0	1,000	1,200	1,700	0	0	0	1,700	2,220	–
Ragged Point Lake Outlet	0	0	NS	120	1,500	10	10	120	–	–
Ragged Point Lake	0	0	NS	400	1,200	400	1,000	400	–	–
Martin River–Upper[e]	500	150	500	100	0	0	0	150	150	–
Martin Lake Outlet	150	100	0	0	0	0	0	100	13,400	17,598–41,596
Martin Lake	7,000	8,100	4,500	600	0	20	30	8,100	–	–

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System[a]	Weekly escapement indices (statistical week ending date listed)[b] 06/25	07/09	07/16	07/30	09/03	09/10	09/24	Site[c]	System[d]	Anticipated (by drainage)
Martin Lake tributary streams	200	5,200	2,500	3,300	0	0	0	5,200	–	–
Pothole River	NS	100	600	0	0	0	0	100	110	–
Pothole Lake	NS	10	0	500	0	600	200	10	–	–
Little Martin River	0	50	10	35	0	0	0	35	835	–
Little Martin Lake	0	0	600	800	100	100	30	800	–	–
Tokun										
Tokun Springs	100	700	100	200	0	0	0	700	8,700	5,352–12,649
Tokun River	400	800	1,500	1,000	100	100	0	1,000	–	–
Tokun Lake Outlet	3,000	100	1,000	200	400	200	0	3,000	–	–
Tokun Lake	4,000	300	2,000	6,000	4,500	1,800	1,100	4,000	–	–
Martin River Slough										
Martin River Slough	700	450	75	550	0	0	0	700	700	4,141–9,787
Total	23,100	38,740	32,135	37,665	17,860	12,455	5,800	55,075	55,075	
Lower target	17,627	30,055	31,424	32,568	17,446	12,467	6,776			55,000
Average anticipated escapement	27,050	46,121	48,222	49,977	26,772	19,131	10,398			84,400
Upper target	41,665	71,040	74,276	76,979	41,236	29,467	16,016			130,000

Note: NS signifies that no survey was flown. En dashes = not applicable.

[a] The system represents the majority of known sockeye salmon spawning locations within the Copper River Delta.

[b] The surveys provide information about the relative strength of escapement among years and within a year, time to spawning sites and relative escapement strength among sites. The indices are not intended to provide an actual estimate of escapement but have served that purpose in the absence of any other escapement estimating method.

[c] Where the survey site is a terminal spawning area, the peak count is used. However, if the site is a schooling area for migratory fish bound for sites further upstream, the count which minimizes possible duplicate of counts across dates is selected.

[d] The sum of the indices by site within a system.

[e] Site typically has a protracted run timing or 2 temporally segregated spawning populations at 1 location. Aerial counts from more than one day may be used in the escapement index if the surveyor indicates these counts represented different fish.

Appendix A10.–Copper River and Bering River area sockeye salmon escapement indices, 2012–2022.

Stream/Lake[a]	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average (2012–2021)
Eyak Lake	23,350	19,205	20,400	14,400	12,700	10,800	7,550	16,455	12,300	10,900	11,800	14,806
Hatchery Creek	1,000	300	300	1,400	500	1,800	500	700	700	250	60	745
Power Creek	3,300	1,000	750	1,450	3,200	800	1,000	1,000	2,200	400	600	1,510
Ibeck Creek	870	200	400	800	50	0	0	10	0	0	0	233
McKinley Lake	7,750	5,700	5,575	1,800	700	2,200	3,020	500	3,400	320	4,000	3,097
Salmon Creek	75	2,200	75	5,500	3,800	5,100	250	1,750	2,250	2,575	1,100	2,358
26/27 Mile Creek	350	950	750	920	900	700	1,300	2,820	1,500	2,700	1,800	1,289
39 Mile Creek	3,000	2,000	1,075	2,400	2,500	2,200	3,600	6,500	4,600	6,100	2,500	3,398
Goat Mountain	1,925	300	900	950	200	300	475	400	900	1,300	800	765
Pleasant Creek	2,300	5,900	4,700	8,300	2,020	8,050	3,800	7,600	950	8,620	6,300	5,224
Martin River	0	150	500	0	1,000	300	3,500	1,800	2,200	320	150	977
Ragged Pt. River/Lake	2,500	3,500	1,700	3,000	3,200	2,100	2,800	3,300	2,150	5,000	2,220	2,925
Martin Lake	3,850	22,000	16,085	100	10,100	6,050	10,400	14,700	12,300	7,400	13,400	10,299
Pothole Lake	6,900	900	250	15,420	0	900	25	20	150	1,700	110	2,627
Little Martin Lake	3,510	5,800	2,050	6,000	1,530	1,900	2,850	50	1,500	1,590	835	2,678
Tokun Lake/River	5,500	4,000	5,825	2,650	5,550	8,800	15,100	2,600	7,220	32,800	8,700	9,005
Martin River Slough	670	1,600	2,870	1,575	3,600	4,500	2,300	1,620	1,300	5,100	700	2,514
Copper River Delta total	66,850	75,705	64,205	66,665	51,550	56,500	58,470	61,825	55,620	87,075	55,075	64,447
Upper Copper River[b]	953,502	860,258	864,131	930,145	513,126	461,268	478,760	718,876	362,445	508,715	519,586	665,123
Copper River District total	1,020,352	935,963	928,336	996,810	564,676	517,768	537,230	780,701	418,065	595,790	574,661	729,569
Bering River/Lake	15,950	19,100	13,600	20,400	15,300	15,750	11,400	15,850	14,000	10,000	6,720	15,135
Shepherd Creek	1,400	750	750	625	700	2,075	100	500	170	550	250	762
Stillwater Creek	170	1,200	100	500	100	900	650	300	125	800	75	485
Kushtaka Lake	370	850	35	180	190	90	700	40	1,300	224	0	398
Katalla River	400	2,000	400	1,000	100	300	450	940	200	2,200	50	799
Bering River Area total	18,290	23,900	14,885	22,705	16,390	19,115	13,300	17,630	15,795	13,774	7,095	17,578
Copper River/Bering River Area total	1,055,762	989,544	963,714	1,018,465	581,486	539,529	550,471	798,981	419,787	609,564	581,756	752,730

[a] This table is based on peak aerial survey indices and sonar counts for the majority of known sockeye salmon spawning areas in the Copper and Bering River deltas. These indices are not intended to provide a true estimate of total escapement but rather a comparable index, based upon the best data available, across years.

[b] Upriver escapement index from Miles Lake sonar counts minus Chinook salmon inriver abundance estimate, upriver harvests, and hatchery escapement and broodstock.

Appendix A11.–Aerial survey indices of sockeye salmon escapement to the upper Copper River drainage, 2007–2022.

Location	Yearly survey indices[a]																Projected indices[b]
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Mentasta Lake	8,507	3,379	3,320	2,870	27,000	9,000	6,000	10,100	4,230	2,700	10,000	320	1,900	3,500	6,600	1,300	3,277
Fish Creek–Mentasta	323	1,440	680	400	91	300	900	350	800	175	600	125	300	55	400	50	963
Bad Crossing 1 and 2	1,683	520	1,691	1,390	742	261	4,100	470	4,650	5	2,625	12	3,450	59	5,350	14	2,604
Suslota Lake	30	86	320	6	350	55	500	2,500	5,500	2,300	200	0	50	35	3	57	1,416
Tanada Lake	563	986	1,290	NS	800	1,715	2,600	1,000	1,100	1,300	1,150	51	60	100	570	420	3,849
Dickey Lake	71	37	20	3	59	26	30	251	300	80	5	30	200	6	10	37	115
Keg Creek	0	1	423	0	0	15	15	10	5	0	20	25	45	30	0	0	725
Swede Lake	731	343	109	320	137	400	60	175	160	85	30	12	200	55	16	350	531
Mahlo Creek	14,512	10,261	11,735	4,570	292	10,100	3,800	7,600	6,700	650	1,300	1,300	1,700	1,900	890	2,500	2,648
Mendeltna Creek	473	727	1,945	1,550	760	1,085	850	300	1,050	335	166	200	20	99	300	156	2,470
St. Anne Creek	11,970	14,000	8,123	2,420	1,751	5,800	3,200	1,650	2,600	515	770	450	985	80	20	455	4,888
Tonsina Lake	20	3	0	–	0	15	0	0	0	0	10	0	10	0	10	0	1,080
Long Lake	505	382	14	10	290	375	5	10	20	0	1	0	0	0	0	0	1,577
Tana River	312	434	19	100	40	410	65	145	83	97	50	0	30	5	4	40	1,345
Salmon Creek (Bremner)	750	3,500	530	340	276	1,000	1,500	610	400	400	300	300	400	85	160	1,000	825
Fish Lake	1,066	158	0	89	1,008	35	20	4	6	60	0	0	0	0	64	0	6,418
Mud Creek–Summit Lake	2,705	11,410	0	2,759	211	870	600	320	225	100	90	150	20	77	95	265	7,445
Paxson Inlet–Mud Creek	9,317	4,665	2,720	2,301	1,520	7,900	9,900	3,100	850	500	3,500	300	700	392	950	470	6,560
Mud Creek and Lake	2	10	0	20	2	10	11	100	30	6	0	20	5	10	0	2	172
Paxson Lake Outlet	324	596	0	560	1,700	350	2,000	350	125	100	50	400	20	18	100	1,100	2,661
Totals	53,864	52,938	32,939	19,708	37,029	39,722	36,156	29,045	28,834	9,408	20,867	3,695	10,095	6,506	15,542	8,216	51,569

Note: NS = no survey.

[a] Escapement numbers are based on peak aerial survey indices and weir counts from the majority of known spawning areas in the upper Copper River drainage. The indices are not intended to provide true estimates of escapement for these stocks but rather a comparable index, based on the best data available, across years. Missing counts are generally a result of bad weather, high water, or other factors that prevented surveys for a given year.

[b] Calculated using the 1983–1992 average.

Appendix A12.–Total estimated coho salmon run to the Copper River by end user or destination and the previous 10-year average, 2012–2022.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average (2012–2021)
Commercial harvest[a]	130,261	244,985	315,776	136,981	367,630	306,287	303,957	78,292	168,524	145,625	44,128	219,832
Commercial, homepack[a]	1,037	249	1,146	1,423	1,353	1,945	2,581	855	1,590	1,389	405	1,357
Commercial, donated[a]	0	0	0	0	0	0	0	0	0	4	0	0
Educational drift gillnet permit[a]	0	0	0	0	0	0	0	0	0	0	0	0
Subsistence (Cordova, drift gillnet)[b]	0	1	0	10	2	43	195	330	326	233	391	114
Federal subsistence (PWS/Chugach National Forest, dip net, spear, rod and reel)[b]	428	329	610	893	555	514	265	671	373	449	498	509
Subsistence (Batzulnetas, fish wheel, dip net or spear)[b]	0	NA	NA	0	0	0	0	0	0	0	0	0
Subsistence (Glennallen Subdistrict, dip net or fish wheel)[c]	335	144	233	77	45	68	151	204	67	166	220	149
Federal subsistence (Glennallen Subdistrict, dip net or fish wheel)[d]	NA	24	23	13	11	1	0	0	1	0	0	8
Personal use (Chitina Subdistrict, dip net)[c]	1,385	797	1,129	841	1,182	715	1,436	1,064	815	439	1,906	980
Federal subsistence (Chitina Subdistrict, dip net)[d]	8	8	68	14	41	9	31	22	23	3	43	23
Delta sport harvest[e]	15,063	16,967	15,859	24,515	13,094	9,559	9,996	12,901	8,443	11,966	11,103	14,490
Upriver sport harvest[e]	0	0	89	0	0	23	387	0	0	100	33	60
Upriver spawning escapement[f]	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown
Delta spawning escapement[g]	74,020	69,360	86,020	83,330	152,400	87,520	107,600	74,040	72,850	90,970	60,680	89,811
Total estimated coho salmon run size	222,704	332,950	421,231	248,097	536,313	406,684	429,601	169,269	254,067	252,399	119,407	327,331

Note: NA = not available.

[a] Numbers are from fish ticket data.

[b] Data are reported harvest from returned state and federal subsistence permits.

[c] Data are expanded harvest from returned state and federal subsistence permits.

[d] Data are expanded harvest (2011–2021) from returned state and federal subsistence permits.

[e] Upper Copper River and Copper River Delta sport harvest data are from statewide sport fish harvest surveys.

[f] Numbers of upriver coho salmon spawners are not assessed.

[g] The Copper River Delta spawning escapement index is calculated by doubling the final peak aerial survey index.

Appendix A13.–Aerial escapement indices by statistical week and location for the coho salmon run to the Copper River Delta, 2022.

Drainage	System[b]	Weekly escapement indices (statistical week ending date)[a] 9/3	9/10	9/24	10/29	Site[c]	System[d]	Projected (by drainage)
Eyak River	Eyak River	20	20	NS	NS	NS	10,400	6,916
	East Shore beaches	0	0	30	200	200	–	–
	West Shore beaches	20	450	1,100	0	0	–	–
	Middle Arm beaches	0	0	400	0	0	–	–
	North Shore beaches	0	0	NS	0	0	–	–
	Hatchery Creek Delta	0	0	NS	1,000	1,000	–	–
	Hatchery Creek	0	0	NS	200	200	–	–
	Power Creek Delta	0	100	NS	1,000	1,000	–	–
	Power Creek	0	0	NS	8,000	8,000	–	–
Ibeck Creek	Ibeck Creek	430	1,600	3,400	4,500	4,500	4,500	6,227
Scott River	Scott Lake	0	0	30	NS	30	30	1,429
	Scott River	0	0	0	NS	0	–	–
	Elsner Lake[e]	0	100	10	NS	100	–	–
Alaganik Slough	Alaganik Slough	20	10	5	0	20	360	2,591
	18/20 Mile Creek	40	50	200	150	200	–	–
	McKinley Lake	20	0	0	NS	20	–	–
	Salmon Creek West Fork	20	0	5	NS	20	–	–
	Salmon Creek East Fork	50	80	100	NS	100	–	–
26/27 Mile Creek	26/27 Mile Creek	0	55	950	NS	950	950	829
39 Mile Creek	39 Mile Creek	3,050	2,500	2,500	NS	2,500	2,500	3,831
Goat Mountain Creek	Goat Mountain Creek	100	620	900	NS	900	900	1,181
Pleasant Creek	Pleasant Creek	25	1,350	20	NS	1,350	1,350	–
Martin River	Martin River - Lower	NS	NS	NS	NS	0	6,270	6,522
	Ragged Point River	10	150	500	NS	500	–	849
	Ragged Point Lake Outlet	50	30	200	NS	200	–	–
	Ragged Point Lake	0	300	300	NS	300	–	–
	Martin River - Upper	500	200	100	NS	100	–	–

-continued-

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Drainage	System[b]	Weekly escapement indices (statistical week ending date)[a] 9/3	9/10	9/24	10/29	Site[c]	System[d]	Projected (by drainage)
Martin River (continued)	Martin Lake Outlet	120	100	0	NS	0	–	1,936
	Martin Lake	160	5	20	NS	20	–	–
	Martin Lake tributary streams	200	200	850	NS	850	–	–
	Pothole River	10	30	50	NS	50	–	1,370
	Pothole Lake	10	400	0	NS	0	–	–
	Little Martin River	900	1,600	4,200	NS	4,200	–	5,413
	Little Martin Lake	50	0	0	NS	50	–	–
Tokun	Tokun Springs	50	200	150	NS	200	600	1,376
	Tokun River	25	30	100	NS	100	–	–
	Tokun Lake Outlet	100	0	0	NS	100	–	–
	Tokun Lake	200	0	0	NS	200	–	–
Martin River Slough	Martin River Slough	350	1,060	2,510	NS	2,510	2,510	9,531
Copper River aerial survey daily total		6,530	11,240	18,630	15,050	30,340	30,340	
Lower SEG		21,447	18,286	15,542	ND			32,000
Average SEG (average anticipated escapement)		33,510	28,571	24,284	ND			50,000
Upper SEG		44,904	38,285	32,540	ND			67,000

Note: NS signifies that no survey was flown. System was flown during the next statistical week on Bering River District survey. En dashes = not applicable.

[a] The surveys provide information about the relative strength of escapement among years and within a year, time to spawning sites, and relative escapement strength among sites. The indices are not intended to provide an actual estimate of escapement but have served that purpose in the absence of any other escapement estimation method.

[b] The system represents the majority of known coho salmon spawning locations in the Copper River Delta.

[c] Where the survey site is a terminal spawning area the peak count is used. However, if the site is a schooling area for migratory fish bound for further sites upstream, the count that minimizes possible duplication of counts across dates is selected.

[d] The sum of the index counts by site within the index systems.

[e] This stream is not included in the estimated delta-wide escapement; it is a non-index stream.

Appendix A14.–Copper River Delta and Bering River coho salmon escapement indices, 2012–2022.

Stream/Lake[a,b]	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average (2012–2021)
Eyak Lake	3,950	3,880	4,450	5,075	3,200	900	6,850	1,020	3,000	1,050	200	3,338
Hatchery Creek	100	40	1,300	950	500	550	1,600	3,500	300	1,100	1,200	994
Power Creek	150	50	760	225	4,500	1,050	1,750	6,600	1,000	3,500	9,000	1,959
Ibeck Creek	7,600	9,150	12,500	8,100	31,500	8,100	6,500	3,500	8,800	7,500	4,500	10,325
Scott & Elsner River[c]	575	50	360	100	200	200	400	600	820	100	30	341
18/20 Mile	450	120	400	600	250	700	600	1,150	220	800	220	529
McKinley Lake	100	400	450	300	650	200	150	600	1,350	400	20	460
Salmon Creek	1,300	850	1,950	1,900	2,500	2,350	1,450	3,400	1,700	385	120	1,779
26/27 Mile	475	1,800	1,600	290	4,000	2,700	200	2,500	1,200	800	950	1,557
39 Mile	2,400	2,300	2,600	1,700	7,500	1,700	3,100	850	500	4,500	2,500	2,715
Goat Mountain	400	900	1,200	350	250	700	550	300	75	1,500	900	623
Pleasant Creek	440	1,500	1,110	400	1,850	1,650	6,050	1,700	2,300	3,800	1,350	2,080
Martin River	1,420	350	3,820	4,475	6,000	1,200	8,050	350	5,575	3,000	100	3,424
Ragged Point River/Lake	4,000	2,500	1,050	3,600	1,050	1,160	1,450	510	850	400	1,000	1,657
Martin Lake	2,350	2,750	2,150	3,250	1,100	1,750	1,400	600	2,600	2,700	870	2,065
Pothole Lake	2,300	120	550	750	800	2,500	750	2,220	1,500	3,700	50	1,519
Little Martin Lake	4,700	3,800	2,900	4,750	2,300	9,300	5,100	1,900	860	5,050	4,250	4,066
Tokun River/Lake	3,200	620	1,175	1,050	900	1,400	2,350	320	370	1,000	600	1,239
Martin River Slough	1,400	3,500	4,075	4,300	7,350	5,850	5,900	5,400	4,225	4,300	2,510	4,630
Copper River Delta total	37,310	34,680	44,400	42,165	76,400	43,960	54,200	37,020	36,425	45,485	30,340	45,205
Katalla River	950	800	1,550	1,000	750	3,300	4,700	800	5,700	1,700	750	2,125
Bering River/Lake	5,700	7,750	10,675	4,300	2,300	3,150	11,750	1,740	8,500	10,300	385	6,617
Dick Creek	2,000	2,800	1,300	1,750	0	700	500	500	1,000	1,400	290	1,195
Shepherd Creek	150	0	0	0	8,000	NS	0	600	NS	0	0	1,094
Nichawak River	3,750	3,800	6,500	5,100	8,500	10,500	2,700	1,000	3,500	2,300	1,700	4,765
Gandil River	500	1,100	1,500	700	300	1,000	250	550	600	300	600	680
Controller Bay	2,555	2,570	4,950	2,700	6,300	12,000	6,625	4,825	6,525	3,450	960	5,250
Bering River Area total	15,605	18,820	26,475	15,550	26,150	30,650	26,525	10,015	25,825	19,450	4,685	21,507
Copper River/Bering total	52,915	53,500	70,875	57,715	102,550	74,610	80,725	47,035	62,250	64,935	35,025	66,711

[a] This table is based on peak aerial survey index counts from the majority of known coho salmon spawning areas in the Copper and Bering River deltas. These indices are not intended to provide a true estimate of total escapement but a comparable index, based upon the best data available, across years.

[b] The stream/lake in this table represents combined survey sites corresponding to the system designations for the current year survey results.

[c] Not an index stream

Appendix A15.–Total commercial harvest by species in the Bering River District, 1980–2022.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1980	0	0	108,872	0	0	108,872
1981	200	55,585	82,626	9,882	8,307	156,600
1982[a]	254	129,667	144,752	47	333	275,053
1983	610	179,273	117,669	851	4,615	303,018
1984	330	91,784	214,632	309	20,408	327,463
1985	215	26,561	419,276	214	9,642	455,908
1986[b]	128	19,038	115,809	15	243	135,233
1987[b]	34	16,926	15,864	54	7	32,885
1988[c]	19	7,152	86,539	23	181	93,914
1989[c]	30	9,225	26,952	7	2	36,216
1990[c]	14	8,332	42,952	2	1	51,301
1991[c]	28	19,181	110,951	4	195	130,359
1992[c]	21	19,721	125,616	4	1	145,363
1993[c]	130	33,951	115,833	82	22	150,018
1994[c]	133	27,926	259,003	34	63	287,159
1995[c]	55	21,585	282,045	26	229	303,940
1996[c]	142	37,712	93,763	0	30	131,647
1997[c]	26	9,651	97	2	0	9,776
1998[c]	77	8,439	12,284	5	2	20,807
1999[c]	44	13,717	9,954	204	96	24,015
2000[c]	8	1,279	56,329	0	0	57,616
2001[c]	78	5,450	2,715	0	0	8,243
2002[c]	15	235	108,522	0	0	108,772
2003[c]	157	18,318	59,481	33	0	77,989
2004[c]	87	13,166	95,605	2	21	108,881
2005[c]	279	77,464	43,030	9,327	14	130,114
2006[c]	247	36,873	56,713	54	39	93,926
2007[c]	90	16,470	9,305	6	1	25,872
2008[c]	51	1,181	40,380	8	1	41,621
2009[c]	15	4,157	45,542	1	5	49,720
2010[c]	0	51	80,642	2	0	80,695
2011[c]	1	6	19,966	8	0	19,981
2012[c]	2	0	46,324	1	0	46,327
2013[c]	20	3,321	46,959	2	16	50,318
2014[c]	0	50	97,679	4	0	97,733
2015[c]	13	2,137	12,116	10	1	14,277
2016[c]	52	9,809	80,094	22	122	90,099
2017[c]	36	2,578	119,295	105	15	122,029
2018[c]	5	34	121,341	11	121	121,512
2019[c]	94	21,099	7,418	262	202	29,075
2020[c]	9	9	65,113	10	0	65,141
2021[c]	20	243	42,135	0	443	42,841
2022[c]	34	5,299	8,660	0	576	14,569
Average (2012–2021)	25	3,928	63,847	43	92	67,935
Average (1997–2021)	57	9,829	51,162	403	44	61,495

[a] In 1980, fishing was prohibited before August 11.

[b] A new Kayak Island Subdistrict management plan allowed an earlier opening date (June 10) and set a closure of the subdistrict on July 10 or when a total of 93,000 sockeye salmon were harvested.

[c] The Alaska Board of Fisheries closed the Kayak Island Subdistrict due to interception of nonlocal stocks.

Appendix A16.–Drift gillnet harvest by species and period in the Bering River District commercial fishery in 2022.

Period	Date	AA Date[a]	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
						Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1	5/16	05/04	12	2	2					Confidential					
2	5/19	05/18	12	3	3	8	98	238	1,275	0	0	0	0	19	147
3	05/26	05/24	12	1	1					Confidential					
4	06/02	06/01	12	1	1					Confidential					
5	06/06	06/04	12	0	0					No harvest reported					
6	06/09	06/08	12	3	3	4	36	870	4,352	0	0	0	0	439	2,460
7	6/13–6/14	06/11	24	2	2					Confidential					
8	6/16–6/17	06/15	24	0	0					No harvest reported					
9	6/20–6/21	06/18	24	1	1					Confidential					
10	6/23–6/24	06/22	36	1	1					Confidential					
11	8/15–8/16	08/13	24	0	0					No harvest reported					
12	8/22–8/23	08/19	24	2	2					Confidential					
13	8/29–8/30	08/26	24	49	63	0	0	6	26	8,470	61,806	0	0	0	0
Total				58	79	34	394	5,299	26,767	8,660	63,135	0	0	576	3,268
Average weights							11.59		5.05		7.29		0.00		5.67

Note: Additional information relevant to each fishing period, including area opened to fishing, may be found on the applicable Advisory Announcement (AA) available through ADF&G's Commercial Fishery Announcements at http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main. Required parameters for searching the ADF&G Commercial Fishery Announcements include the following: Effective Year = 2022; Species Group = Salmon; Management Area = Prince William Sound. Queries made through the ADF&G Commercial Fishery Announcements will provide results sorted by Publication Date.

[a] Queries made through the ADF&G Commercial Fishery Announcements will provide results sorted by Publication Date.

Appendix A17.–Aerial escapement indices by statistical week and location for sockeye salmon returning to the Bering River District, 2022.

Drainage	System[b]	Weekly escapement indices (statistical week ending date listed)[a] 6/25	7/16	7/30	9/3	Site[c]	System[d]	Anticipated (by drainage)
Bering River	Bering River	20	0	0	0	20	6,720	21,903
	Bering Lake	50	1,700	1,010	0	1,700		
	Dick Creek	0	5,000	2,100	0	5,000		
	Shepherd Creek Lagoon	NS	NS	0	NS	0	250	4,375
	Shepherd Creek	NS	NS	200	NS	200		
	Carbon Creek	NS	NS	50	NS	50		
	Clear Creek	NS	NS	75	NS	75	75	1,197
	Kushtaka Lake	NS	NS	0	NS	0	0	1,226
	Shockum Creek	NS	NS	0	NS	0		
Katalla River	Katalla River[e]	0	0	50	0	50	50	
Bering River District weekly index		70	6,700	3,485	0	7,095	7,095	
Lower objective		4,048	11,051	9,401	1,044			15,000
Average objective		6,477	17,682	15,042	1,670			24,000
Upper objective		8,906	24,313	20,683	2,297			33,000

Note: NS signifies that no survey was flown.

[a] Surveys provide information about the relative strength of escapement among years and within a year, time for spawning sites, and relative escapement strength among sites. The indices are not intended to provide an actual estimate of escapement but have served that purpose in the absence of any other escapement estimation method.

[b] Survey systems represent the majority of known sockeye salmon spawning locations in the Bering River drainage.

[c] When the survey site is a terminal spawning area, the peak count is used. However, if the site is a schooling area for migratory fish bound for sites further upstream, the index count which minimizes duplicate counts across dates is selected.

[d] The sum of the index counts by site within a system.

[e] This stream is not included in the indexed escapement for the Bering River drainage; it is a non-index stream.

Appendix A18.–Aerial escapement indices by statistical week and location for coho salmon returning to the Bering River District, 2022.

Drainage	System[b]	Weekly escapement indices (statistical week ending date listed)[a] 9/3	9/10	Site[c]	System[d]	Projected (by drainage)
Bering River	Bering River[e]	75	115	115	385	7,720
	Bering Lake	170	270	270		
	Dick Creek	50	290	290	290	
	Shepherd Creek Lagoon	NS	NS	0	0	
	Shepherd Creek	NS	NS	0		
	Carbon Creek[f]	NS	NS	0		
Katalla River	Katalla River	50	750	750	750	4,993
Lower Bering River	Gandil River	100	600	600	600	2,910
	Nichawak River	700	1,700	1,700	1,700	
Controller Bay	Campbell River	200	785	785	960	7,378
	Edwardes River	100	75	100		
	Okalee River	75	10	75		
	Other clear streams[f]	0	0	0		
Bering River District weekly index		1,520	4,595	4,685	4,685	
Lower objective		8,803	6,969			13,000
Average objective		15,574	12,330			23,000
Upper objective		22,345	17,691			33,000

Note: NS signifies that no survey was flown.

[a] Surveys provide information about the relative strength of escapement among years and within a year, time for spawning sites, and relative escapement strength among sites. The indices are not intended to provide an actual estimate of escapement but have served that purpose in the absence of any other escapement estimation method.

[b] Survey systems represent the majority of known coho salmon spawning locations in the Bering River drainage.

[c] When the survey site is a terminal spawning area, the peak count is used. However, if the site is a schooling area for migratory fish bound for sites further upstream, the index count which minimizes duplicate counts across dates is selected.

[d] The sum of the index counts by site within a system.

[e] Counts include coho salmon observed in the Don Miller Hill tributaries.

[f] These streams are not included in the indexed escapement deltawide; these are non-index streams.

APPENDIX B: COGHILL DISTRICT, UNAKWIK DISTRICT, AND PORT CHALMERS SUBDISTRICT

Appendix B1.–Daily and cumulative salmon escapement through the Coghill River weir, 2022.

	Sockeye salmon		Pink salmon	
Date	Daily	Cumulative	Daily	Cumulative
6/9	0	0	0	0
6/10	0	0	0	0
6/11	0	0	0	0
6/12	0	0	0	0
6/13	0	0	0	0
6/14	127	127	0	0
6/15	181	308	0	0
6/16	273	581	0	0
6/17	181	762	0	0
6/18	686	1,448	0	0
6/19	246	1,694	0	0
6/20	561	2,255	0	0
6/21	1,080	3,335	0	0
6/22	890	4,225	0	0
6/23	2,405	6,630	0	0
6/24	1,766	8,396	0	0
6/25	1,843	10,239	0	0
6/26	403	10,642	0	0
6/27	2,831	13,473	0	0
6/28	3,760	17,233	0	0
6/29	1,930	19,163	0	0
6/30	684	19,847	0	0
7/1	389	20,236	0	0
7/2	517	20,753	0	0
7/3	571	21,324	2	2
7/4	530	21,854	4	6
7/5	537	22,391	0	6
7/6	413	22,804	0	6
7/7	676	23,480	0	6
7/8	1,106	24,586	3	9
7/9	955	25,541	69	78
7/10	1,682	27,223	30	108
7/11	727	27,950	19	127
7/12	1,650	29,600	10	137
7/13	1,618	31,218	31	168
7/14	813	32,031	51	219
7/15	715	32,746	170	389
7/16	1,224	33,970	212	601
7/17	122	34,092	31	632
7/18-7/27[a]	0	34,092	0	632

[a] High water levels prevented weir operation until the end of the season.

Appendix B2.–Salmon escapement by species in the Coghill District, 1981–2022.

Year	Sockeye[a]	Pink[b]	Chum[b]
1981	156,112	140,436	2,389
1982	180,314	309,202	21,586
1983	38,783	284,164	55,127
1984	63,622	365,226	13,500
1985	163,311	238,728	14,514
1986	71,095	109,798	16,300
1987	187,263	67,761	22,472
1988	72,052	42,985	42,536
1989	37,751	48,802	22,434
1990	8,949	45,558	20,494
1991	9,752	84,790	7,055
1992	29,642	23,122	7,583
1993	9,232	41,666	7,404
1994	7,264	65,648	14,176
1995	30,382	46,029	11,596
1996	38,693	104,781	19,669
1997	35,517	52,961	3,101
1998	28,923	85,968	22,764
1999	59,311	168,816	5,057
2000	28,446	223,646	20,488
2001	38,558	148,665	13,388
2002	28,323	54,882	7,430
2003	75,427	375,147	19,729
2004	30,569	36,717	5,000
2005	30,313	528,264	11,979
2006	23,479	145,511	15,900
2007	70,001	197,405	14,052
2008	29,298	145,177	39,660
2009	23,186	125,907	5,208
2010	24,312	355,108	51,589
2011	102,359	257,020	16,368
2012	72,678	172,611	10,281
2013	17,231	640,414	11,369
2014	21,836	63,290	9,491
2015	13,584	801,201	15,444
2016	8,708	171,362	15,444
2017	50,312	187,159	13,666
2018[c]	30,954	70,881	13,617
2019	32,247	153,129	3,437
2020	53,901	88,401	8,998
2021	101,083	300,227	2,395
2022[d]	34,092	73,971	8,629
Average (2012–2021)	40,267	264,868	10,414

[a] Escapement count of sockeye salmon past the Coghill River weir.

[b] Pink and chum escapements indexed for streams by aerial survey. Historical data revised in 1990.

[c] Sockeye salmon escapement total likely incomplete due to 2 weir washouts and extended nonoperational periods .

[d] Sockeye salmon escapement total likely incomplete due to high water levels during the last 2 weeks of operation.

Appendix B3.–Drift gillnet total harvest by species and period in the Coghill District commercial fishery, 2022.

Period	Date	AA date[a]	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
						Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1	5/30–6/1	5/28	60	74	175	121	1,206	688	3,589	0	0	0	0	13,585	99,365
2	6/2–6/5	6/1	84	36	126	64	721	491	2,429	0	0	0	0	13,496	90,254
3	6/6–6/8	6/4	60	82	276	71	646	2,528	12,184	0	0	0	0	58,567	380,240
4	6/9–6/12	6/8	84	170	539	40	421	3,512	17,307	0	0	0	0	91,764	577,486
5	6/13–6/15	6/11	60	209	552	17	183	5,951	29,618	0	0	0	0	69,239	451,380
6	6/16–6/19	6/15	84	178	502	16	206	7,284	36,372	0	0	0	0	55,231	359,153
7	6/20–6/22	6/18	60	172	596	7	54	11,369	59,027	0	0	8	13	94,650	608,555
8	6/23–6/26	6/22	84	173	564	23	317	23,058	117,576	2	14	47	165	53,512	338,236
9	6/27–6/29	6/24	60	224	713	36	399	39,651	205,810	0	0	2,633	8,691	89,027	575,653
10	6/30–7/3	6/29	84	188	685	30	274	35,453	176,848	2	17	4,414	14,145	76,411	495,657
11	7/4–7/6	7/2	60	184	580	24	238	28,482	143,874	1	8	9,468	33,229	58,661	384,159
12	7/7–7/10	7/6	84	177	639	31	269	27,356	147,282	7	48	21,253	67,170	118,018	778,062
13	7/11–7/14	7/9	72	187	661	15	111	9,730	51,443	4	26	28,872	98,612	166,454	1,100,474
14	7/14–7/17	7/13	84	183	609	9	85	14,093	73,477	30	139	79,133	265,631	101,678	675,736
15	7/18–7/20	7/16	60	129	349	4	47	10,969	56,344	9	55	87,676	300,785	39,141	262,642
16	7/21–7/22	7/20	38	64	95	1	18	3,737	20,172	18	125	41,600	140,392	6,919	44,841
17	7/23	7/20	14	7	9	2	19	277	1,400	3	22	2,672	8,214	449	2,670
18	7/24	7/20	14	4	5	0	0	278	1,419	3	20	2,831	8,889	173	1,139
19	7/25	7/24	14	29	39	0	0	1381	7235	1	10	14474	49,323	1,990	12,649
20	7/26	7/24	14	25	37	0	0	1,131	5,895	1	8	10,617	35,564	952	6,489
21	7/27	7/24	14	22	29	0	0	803	4,261	2	22	7,147	26,106	350	2,476
22	7/28	7/27	14	33	46	1	5	662	3,621	9	62	17,701	60,679	2,083	13,019
23	7/29–7/31	7/27	48	21	41	0	0	489	2,543	6	36	13,923	43,578	760	4,730
24	7/31–8/1	7/30	36	31	45	0	0	415	2,184	12	82	14,453	46,602	2,566	16,703
25	8/2	7/30	14	15	16	0	0	94	503	16	114	5,851	17,780	661	4,019
26	8/3	7/30	14	17	19	0	0	70	383	18	140	2,880	9,101	334	2,016
27	8/4	8/3	14	8	9	0	0	41	253	5	35	1,130	3,661	137	938
28	8/5	8/3	14	3	3	0	0	7	43	5	30	520	2,081	71	459
29	8/6	8/3	14	0	0					No harvest reported					
30	8/7	8/5	14	0	0					No harvest reported					
31	8/19	8/17	12	23	27	0	0	95	509	188	1,199	20,163	63,346	502	3,226
32	8/25–8/26	8/24	36	0	0					No harvest reported					
33	8/29–8/30	8/26	36	10	22	0	0	0	0	3,555	24,292	2,222	7,318	12	67
34	9/1–9/2	8/31	36	24	57	0	0	0	0	10,375	78,233	1,324	4,161	0	0

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Period	Date	AA date[a]	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
						Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
32	8/25–8/26	8/24	36	0	0	No harvest reported									
33	8/29–8/30	8/26	36	10	22	0	0	0	0	3,555	24,292	2,222	7,318	12	67
34	9/1–9/2	8/31	36	24	57	0	0	0	0	10,375	78,233	1,324	4,161	0	0
35	9/3–9/4	9/2	36	42	77	0	0	1	6	6,364	49,689	696	2,099	1	5
36	9/5–9/7	9/2	60	69	192	1	18	1	6	13,168	104,822	0	0	5	25
37	9/8–9/11	9/7	84	34	72	0	0	0	0	5,475	40,622	0	0	0	0
38	9/12–9/14	9/7	60	4	4	0	0	0	0	97	763	0	0	0	0
39	9/15–9/18	9/14	84	0	0	0	0	0	0	0	0	0	0	0	0
40	9/19–9/21	9/14	60	0	0	0	0	0	0	0	0	0	0	0	0
41	9/22–9/25	9/21	84	0	0	0	0	0	0	0	0	0	0	0	0
42	9/26–9/28	9/21	60	0	0	0	0	0	0	0	0	0	0	0	0
Total				320	8,410	513	5,237	230,097	1,183,613	39,376	300,633	393,708	1,317,335	1,117,339	7,292,522
Average weights							10.2		5.1		7.6		3.3		6.5

Source: Additional information relevant to each fishing period, including area opened to fishing, may be found on the applicable Advisory Announcement (AA) available through ADF&G's Commercial Fishery Announcements at http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main.

Note: Required parameters for searching the ADF&G Commercial Fishery Announcements include the following: Effective Year = 2022; Species Group = Salmon; Management Area = Prince William Sound.

[a] Queries made through the ADF&G Commercial Fishery Announcements will provide results sorted by Publication Date.

Appendix B4.–Purse seine total harvest by species and period in the Coghill District commercial fishery, 2022.

Period	Date	AA date[a]	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
						Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
10	7/1–7/3	6/30	60	6	8	3	13	3,295	13,691	0	0	0	0	35	194
11[b]	7/4–7/6	7/2	60	1	1	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
16[c]	7/21–7/22	7/20	38	0	0	No Harvest Reported									
17[b]	7/23	7/20	14	1	1	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
18	7/24	7/20	14	4	4	0	0	754	3,542	0	0	12,245	38,646	369	2,436
19	7/25	7/24	14	0	0	No Harvest Reported									
20	7/26	7/24	14	0	0	No Harvest Reported									
21	7/27	7/24	14	8	8	0	0	980	4,140	0	0	23,307	83,022	2,570	17,309
22	7/28	7/27	14	3	3	0	0	184	743	0	0	11,818	44,460	269	2,075
23[b]	7/29–7/31	7/27	48	2	2	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
24[b]	7/31–8/1	7/30	36	1	1	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
25[b]	8/2	7/30	14	1	1	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
26	8/3	7/30	14	0	0	No Harvest Reported									
27[b]	8/4	8/3	14	1	1	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
28[b]	8/5	8/3	14	1	1	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
29	8/6	8/3	14	0	0	No Harvest Reported									
30	8/7	8/5	14	0	0	No Harvest Reported									
31	8/19	8/17	12	28	28	0	0	43	166	218	1,337	49,508	177,109	1,364	6,884
Total				44	59	3	13	5,909	25,922	218	1,337	108,822	387,955	5,366	33,797
Average weight							4.3		4.4		6.1		3.6		6.3

Source: Additional information relevant to each fishing period, including area opened to fishing, may be found on the applicable advisory announcement (AA) available through ADF&G's Commercial Fishery Announcements at http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main.

Note: Periods 1–9 were open to drift gillnet only. Required parameters for searching the ADF&G Commercial Fishery Announcements include the following: Effective Year = 2022; Species Group = Salmon; Management Area = Prince William Sound.

[a] Queries made through the ADF&G Commercial Fishery Announcements will provide results sorted by publication date.

[b] Fewer than 3 permits were fished. Period results are confidential.

[c] Starting 6:00 AM on July 21 to 6:00 AM on July 22, fishing was open exclusively in the waters of Port Wells and College Fiord, north of 60°55.81′N, and east of a line from Pakenham Point (61°00.45′N, 148°04.85′W) to 60°55.81′N, 148°10.92′W. From 6:00 AM to 8:00 PM, July 22, fishing was open district wide, excluding waters of the Wally H. Noerenberg Hatchery Special Harvest Area and Terminal Harvest Area.

Appendix B5.–Commercial salmon harvest by species and gear type in the Coghill District, 2012–2022.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
			Drift gillnet			
2012	147	383,289	7,724	1,125,888	2,256,983	3,774,031
2013	259	93,734	62,968	2,450,108	2,100,394	4,707,463
2014	76	159,167	151,723	1,096,425	642,964	2,050,355
2015	93	74,416	6,094	655,320	778,112	1,816,842
2016	82	63,125	5	8,962	1,530,937	1,603,111
2017	74	111,718	14,165	635,519	2,210,178	2,971,654
2018	336	186,978	4,306	286,356	1,802,402	2,280,378
2019	104	389,051	120,152	301,333	1,049,441	1,860,081
2020	334	111,403	2,475	651,099	229,406	994,717
2021	494	192,461	1,957	666,347	1,192,380	2,055,512
2022	513	230,097	39,376	393,708	1,117,339	1,781,033
Average 2012–2021	200	176,534	37,157	787,736	1,379,320	2,411,414
			Purse seine			
2012	15	16,055	10,203	3,987,252	284,931	4,298,457
2013	33	1,978	7,573	6,690,850	70,271	6,770,705
2014	0	299	8,536	901,916	325	911,076
2015	0	2,120	1,215	5,601,620	121,213	5,726,168
2016	0	44	6	4,583	100,547	105,180
2017	0	5,043	205	417,327	856,613	1,279,188
2018	0	2,315	6,347	687,095	4,148	699,905
2019	0	1,608	280	43,154	10,523	55,565
2020	12	1,445	407	1,108,848	6,721	1,117,433
2021	2	5,506	917	4,180,861	1,600	4,188,886
2022	3	5,909	218	108,822	5,366	120,318
Average 2012–2021	6	3,641	3,569	2,362,351	145,689	2,515,256
			Combined purse seine and drift gillnet			
2012	162	436,182	10,993	3,430,252	2,455,993	6,333,582
2013	292	95,712	70,541	9,140,958	2,170,665	11,478,168
2014	76	159,466	160,259	1,998,341	643,289	2,961,431
2015	93	76,536	7,309	6,256,940	899,325	7,240,203
2016	82	63,169	11	13,545	1,631,484	1,708,291
2017	74	116,761	14,370	1,052,846	3,066,791	4,250,842
2018	336	189,293	10,653	973,451	1,806,550	2,980,283
2019	104	390,659	120,432	344,487	1,059,964	1,915,646
2020	346	112,848	2,882	1,759,947	236,127	2,112,150
2021	496	197,967	2,874	4,847,208	1,193,980	6,244,398
2022	516	236,006	39,594	502,530	1,122,705	1,901,351
Average 2012–2021	206	183,859	40,032	2,981,798	1,516,417	4,722,499

Appendix B6.–Commercial salmon harvest by period and gear type in the Unakwik District, 2022.

Period	Date	AA date[a]	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
						Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Drift Gillnet															
1[b]	6/23–6/24	6/22	36	1	1	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
2	6/27–6/28	6/24	36	5	5	1	21	2,509	12471	0	0	2	8	448	2766
3	6/30–7/1	6/29	36	13	21	2	23	5,849	31863	0	0	2	7	680	3978
4	7/4–7/5	7/2	36	22	52	3	37	12,811	63695	0	0	278	885	2092	12277
5	7/7–7/8	7/6	36	17	27	12	91	3,382	16,911	0	0	143	482	394	2478
6[b]	7/11–7/12	7/9	36	2	2	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
7[b]	7/14–7/15	7/13	36	2	2	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
8	7/18–7/19	7/16	36	0	0	No harvest reported									
Total				30	110	18	172	26,073	132,840	0	0	458	1,485	3,808	22,684
Purse Seine															
1[b]	6/23–6/24	6/22	36	1	1	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
2[b]	6/27–6/28	6/24	36	2	2	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
3[b]	6/30–7/1	6/29	36	1	1	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
4[b]	7/4–7/5	7/2	36	1	1	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
5	7/7–7/8	7/6	36	0	0	No harvest reported									
6	7/11–7/12	7/9	36	0	0	No harvest reported									
7	7/14–7/15	7/13	36	0	0	No harvest reported									
8	7/18–7/19	7/16	36	0	0	No harvest reported									
Total				2	5	0	0	2,174	11,061	0	0	1	3	379	2,110

Source: Additional information relevant to each fishing period, including area opened to fishing, may be found on the applicable advisory announcement (AA) available through ADF&G's Commercial Fishery Announcements at http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main.

Note: All periods were open to drift gillnet and purse seine; however, no purse seine harvest was reported for any period. Required parameters for searching the ADF&G Commercial Fishery Announcements include the following: Effective Year = 2022; Species Group = Salmon; Management Area = Prince William Sound.

[a] Queries made through the ADF&G Commercial Fishery Announcements will provide results sorted by publication date.

[b] Fewer than 3 permits were fished. Period results are confidential.

Appendix B7.–Commercial salmon harvest by species and gear type in the Unakwik District, 2012–2022.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
			Drift gillnet			
2012	0	1,337	0	16	2	6,723
2013	1	776	0	203	28	1,008
2014	0	459	0	3	30	492
2015	2	2,968	0	55	23	3,037
2016	0	259	0	0	481	740
2017	0	551	0	196	56	803
2018	0	3,505	1	36	16	3,558
2019	2	7,657	0	2,114	1,015	10,788
2020	9	791	0	2	22	824
2021	4	5,987	0	409	219	6,619
2022	18	26,073	0	458	3,808	30,357
Average 2012–2021	2	2,935	0	355	169	4,131
			Purse seine			
2012	1	386	0	0	1	388
2013	0	2,815	1	81	159	3,056
2014	1	686	0	2	243	932
2015	7	1,994	0	346	245	2,592
2016[a]	[a]	[a]	[a]	[a]	[a]	[a]
2017[a]	[a]	[a]	[a]	[a]	[a]	[a]
2018	0	0	0	0	0	0
2019	2	1,900	0	1,946	815	4,663
2020	0	18	0	0	0	18
2021	0	2,489	0	154	35	2,678
2022[a]						
Average 2012–2021	1	1,043	0	254	157	1,456
			Combined purse seine and drift gillnet			
2012	1	1,723	0	16	3	7,111
2013	1	3,591	1	284	187	4,064
2014	1	1,145	0	5	273	1,424
2015	9	4,962	0	401	268	5,629
2016[a]	[a]	[a]	[a]	[a]	[a]	[a]
2017[a]	[a]	[a]	[a]	[a]	[a]	[a]
2018	0	3,505	1	36	16	3,558
2019	4	9,557	0	4,060	1,830	15,451
2020	9	809	0	2	22	842
2021	4	8,476	0	563	254	9,297
2022[a]	[a]	[a]	[a]	[a]	[a]	[a]
Average 2012–2021	5	5,621	0	598	774	4,379

[a] Fewer than 3 permits fished.; results are confidential.

Appendix B8.–Port Chalmers Subdistrict commercial purse seine harvest of salmon by period, 2022.

Period	Date	AA date[a]	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
						Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1	6/2–6/6	5/28	96	15	23	35	397	9	40	0	0	11	83	2,170	15,943
2	6/6–6/8	6/4	48	13	13	118	844	11	50	0	0	0	0	4,162	30,521
3	6/9–610	6/4	36	20	21	77	461	132	664	0	0	0	0	8,513	66,987
4	6/11–6/12	6/4	36	20	20	62	758	113	484	0	0	2	7	14,970	111,762
5	6/13–6/15	6/11	48	25	29	75	562	2,465	12,580	0	0	3	8	42,496	308,233
6	6/16–6/17	6/11	36	38	38	111	1,161	839	4,648	1	5	0	0	74,467	535,726
7	6/18–6/19	6/11	24	44	45	36	480	234	1,300	0	0	1	2	30,734	212,023
8	6/20–6/21	6/18	24	48	48	4	41	30	151	0	0	3	12	48,720	331,603
9	6/22–6/23	6/18	36	55	56	12	110	68	260	2	11	21	71	78,914	534,171
10	6/25–6/26	6/18	24	55	57	3	45	420	1,922	0	0	31	125	41,575	288,469
11	6/27	6/24	12	24	24	0	0	18	89	0	0	28	103	12,781	87,845
12	6/28	6/24	12	37	37	21	294	35	166	0	0	94	360	29,604	186,078
13	6/30–7/1	6/29	36	48	51	25	211	163	742	0	0	138	433	46,966	319,115
14	7/2–7/3	6/29	36	35	36	0	0	26	126	0	0	84	308	32,692	232,003
15	7/4–7/6	7/2	48	45	46	2	28	342	1,544	0	0	4,822	18,224	49,687	339,032
16	7/7–7/8	7/6	36	34	35	0	0	92	524	1	5	1,556	6,111	37,348	274,293
17	7/9–7/10	7/8	38	3	3	0	0	0	0	0	0	0	0	17,725	137,100
18	7/11–7/13	7/9	50	3	17	0	0	0	0	0	0	35	76	57,484	416,541
19	7/14–7/15	7/13	38	18	25	1	20	199	1,108	0	0	34,907	134,266	48,787	326,137
20	7/16–7/17	7/14	38	8	13	0	0	8	32	0	0	6,309	23,375	17,946	118,932
21	7/18–7/20	7/16	50	3	3	0	0	86	340	0	0	1,988	9,142	3,454	24,190
22[b]	7/21–7/22	7/20	38	1	2	–	–	–	–	–	–	–	–	–	–
23	7/28	7/27	14	9	9	0	0	167	753	16	115	33,403	109,320	677	4,228
24	8/1	7/30	14	15	15	0	0	80	399	20	142	54,510	185,755	307	2,235
Total				107	666	582	5,412	5,537	27,922	40	278	142,902	506,613	706,290	4,927,831
Average weight							9.30		5.04		6.95		3.55		6.98

Note: Additional information relevant to each fishing period, including area opened to fishing, may be found on the applicable advisory announcement (AA) available through ADF&G's Commercial Fishery Announcements at http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main. Required parameters for searching the ADF&G Commercial Fishery Announcements include the following: Effective Year = 2022; Species Group = Salmon; Management Area = Prince William Sound.

[a] Queries made through the ADF&G Commercial Fishery Announcements will provide results sorted by publication date.

[b] Fewer than 3 permits were fished. Period results are confidential.

Appendix B9.–Total commercial harvest by species in the Port Chalmers Subdistrict, June 1–July 30, 2015–2022.

			Numbers of fish					
Year	Permits	Gear Type	Chinook	Sockeye	Coho	Pink	Chum	Total
2015	102	Drift gillnet	87	9,751	697	58,371	166,949	235,855
2016	132	Drift gillnet	81	3,009	13	19,360	196,377	218,840
2017	143	Purse seine	97	7,045	527	990,829	528,381	1,526,879
2018	139	Purse seine	137	6,015	585	346,820	452,585	806,142
2019	218	Drift gillnet	43	4,913	20	18,270	1,571,659	1,594,905
2020	129	Purse seine	288	2,185	155	32,032	562,744	597,404
2021	131	Purse seine	297	4,182	362	2,126,149	289,800	2,420,790
2022	107	Purse seine	582	5,537	40	142,902	706260	855,321
Average 2015–2021	142		147	5,300	337	513,119	538,356	1,057,259

APPENDIX C: ESHAMY DISTRICT

Appendix C1.–Daily and cumulative salmon escapement through the Eshamy River weir, 2022.

	Sockeye salmon BEG (13,000–28,000)		Pink salmon		Chum salmon	
Date	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
7/10	0	0	0	0	0	0
7/11	0	0	0	0	3	3
7/12	4	4	0	0	25	28
7/13	2	6	0	0	9	37
7/14	4	10	1	1	19	56
7/15	2	12	0	1	1	57
7/16	14	26	0	1	12	69
7/17	239	265	15	16	93	162
7/18	129	394	19	35	32	194
7/19	173	567	12	47	36	230
7/20	278	845	7	54	8	238
7/21	131	976	0	54	9	247
7/22	208	1,184	0	54	15	262
7/23	196	1,380	20	74	2	264
7/24	0	1,380	0	74	0	264
7/25	0	1,380	0	74	0	264
7/26	61	1,441	34	108	1	265
7/27	309	1,750	245	353	5	270
7/28	400	2,150	140	493	2	272
7/29	1,192	3,342	276	769	7	279
7/30	480	3,822	218	987	6	285
7/31	272	4,094	71	1,058	0	285
8/1	998	5,092	80	1,138	9	294
8/2	872	5,964	34	1,172	3	297
8/3	724	6,688	36	1,208	3	300
8/4	998	7,686	119	1,327	11	311
8/5	709	8,395	76	1,403	2	313
8/6	1,198	9,593	210	1,613	2	315
8/7	1,291	10,884	92	1,705	3	318
8/8	1,058	11,942	223	1,928	1	319
8/9	931	12,873	243	2,171	7	326
8/10	2,807	15,680	1,068	3,239	13	339
8/11	394	16,074	310	3,549	0	339
8/12	323	16,397	853	4,402	0	339
8/13	402	16,799	382	4,784	0	339
8/14	1,211	18,010	661	5,445	0	339

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	Sockeye salmon BEG (13,000–28,000)		Pink salmon		Chum salmon	
Date	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
8/15	561	18,571	455	5,900	0	339
8/16	594	19,165	462	6,362	0	339
8/17	0	19,165	0	6,362	0	339
8/18	0	19,165	0	6,362	0	339
8/19	0	19,165	0	6,362	0	339
8/20	0	19,165	0	6,362	0	339
8/21	0	19,165	0	6,362	0	339
8/22	0	19,165	0	6,362	0	339
8/23	4	19,169	5	6,367	0	339
8/24	46	19,215	79	6,446	0	339
8/25	51	19,266	109	6,555	0	339
8/26	29	19,295	39	6,594	0	339
8/27	21	19,316	22	6,616	0	339
8/28	9	19,325	11	6,627	0	339

Note: BEG = biological escapement goal.

Appendix C2.–Salmon escapement by species past the Eshamy River weir, 1967–2022.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1967	0	10,821	192	10,433	1	21,447
1968	1	68,048	450	919	1	69,419
1969	0	61,196	96	3,095	2	64,389
1970	0	11,460	25	387	0	11,872
1971[a]	0	954	97	3,179	0	4,230
1972[b]	0	28,683	0	0	0	28,683
1973	0	10,202	205	1,698	0	12,105
1974[b]	0	633	0	0	0	633
1975[b]	0	1,724	0	0	0	1,724
1976[b]	0	19,367	0	0	0	19,367
1977	0	11,746	230	32,080	0	44,056
1978	0	12,580	20	552	0	13,152
1979	0	12,169	5	3,654	1	15,829
1980	5	44,263	128	963	2	45,361
1981	1	23,048	249	5,956	13	29,267
1982	0	6,782	79	1,056	79	7,996
1983	0	10,348	40	7,047	4	17,439
1984	2	36,121	881	3,970	0	40,974
1985	0	26,178	96	6,271	0	32,545
1986	2	6,949	55	1,004	31	8,041
1987[c]	0	0	0	0	0	0
1988	2	31,747	48	1,205	1	33,003
1989	1	57,232	0	7,782	210	65,225
1990	0	14,477	43	2,209	5	16,734
1991	2	46,229	907	31,241	17	78,396
1992	1	36,237	52	3,004	5	39,299
1993	1	42,893	92	3,435	9	46,430
1994	1	64,660	1,184	12,061	87	77,993
1995	7	21,701	1,076	18,601	407	41,792
1996	2	5,271	108	7,959	9	13,349
1997	2	39,015	111	15,142	18	54,288
1998[c]	0	0	0	0	0	0
1999	1	27,057	194	32,756	3	60,011
2000	2	22,653	151	20,515	381	43,702
2001	0	55,187	335	21,027	176	76,725
2002	0	40,478	14	4,843	1,072	46,407
2003	2	39,845	0	2,440	335	42,622
2004	0	13,443	0	1,518	0	14,961
2005	1	23,523	46	11,024	529	35,123
2006	0	41,823	201	3,585	608	46,217
2007	0	16,646	831	29,409	243	46,673
2008	0	18,494	27	2,060	20	20,601
2009	1	24,025	147	3,849	416	28,438
2010	0	16,291	114	2,268	84	18,757
2011	0	24,129	0	2,879	35	27,043
2012–2020[c]	0	0	0	0	0	0
2021	30	7,001	39	10,788	212	18,070
2022	4	19,325	24	6,627	339	26,319
Average (2002–2011)	0	25,870	138	6,388	334	32,684

[a] Estimate may be low due to holes in the weir; actual escapement is estimated to be greater than 3,000 sockeye salmon.

[b] Passage of salmon other than sockeye salmon was not recorded.

[c] The Eshamy weir was not in operation.

Appendix C3.–Total drift gillnet commercial salmon harvest by period in the Eshamy District, 2022.

Period	Date	AA date[a]	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
						Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1	5/30–5/31	5/28	36	19	32	45	338	679	3,684	0	0	0	0	1,129	7,105
2	6/2–6/3	6/1	36	3	9	5	40	697	4,049	0	0	0	0	230	1,279
3	6/6–6/7	6/4	36	7	18	19	155	1,701	8,107	0	0	0	0	1,742	12,229
4	6/9–6/10	6/8	36	21	45	4	53	3,751	19,815	0	0	0	0	4,178	29,344
5	6/13–6/14	6/11	36	78	212	4	38	23,843	118,326	0	0	0	0	12,505	78,690
6	6/16–6/17	6/15	36	137	418	3	20	51,969	251,415	0	0	2	6	20,429	137,985
7	6/20–6/21	6/18	36	145	394	6	66	55,475	285,085	0	0	10	36	18,587	125,026
8	6/23–6/24	6/22	36	139	409	1	30	75,961	373,526	0	0	36	127	9,954	69,522
9	6/27–6/28	6/24	36	171	421	1	6	74,545	362,481	1	6	1,719	5,305	14,518	92,765
10	6/30–7/1	6/29	36	115	300	2	19	46,132	230,068	1	11	5,452	18,071	9,663	60,602
11	7/4–7/5	7/2	24	67	140	5	43	17,972	88,830	4	22	7,727	25,281	6,031	36,956
12	7/7–7/8	7/6	24	28	70	4	54	9,691	47,528	1	4	7,330	24,355	4,635	25,844
13	7/11–7/12	7/9	24	30	66	1	0	7,829	38,721	4	17	12,382	40,455	3,590	21,991
14	7/14–7/15	7/13	24	29	60	1	10	5,998	30,642	5	32	16,419	51,706	2,585	15,799
15	7/18–7/19	7/16	24	54	111	0	0	50,353	256,687	13	92	23,671	77,203	3,051	18,695
16	7/21–7/22	7/20	24	14	21	0	0	4,266	22,878	0	0	5,174	16,271	512	3,290
17	7/25–7/26	7/22	24	32	61	0	0	7,320	35,185	15	115	19,821	66,346	1,716	11,066
18	7/28–7/29	7/27	24	5	7	0	0	833	4,989	0	0	583	1,747	11	79
19	8/1–8/2	7/30	24	10	20	0	0	1,301	6,774	22	153	6,417	22,948	646	4,159
20	8/4–8/5	8/3	24	6	12	0	0	758	3892	2	14	3,506	13,768	36	236
21	8/8–8/9	8/5	24	40	73	3	19	1,638	9,065	94	645	34,818	110,094	1,846	12,608
22	8/11–8/12	8/10	24	26	40	0	0	1,961	10,646	12	86	20,279	63,922	140	927
23	8/15–8/16	8/13	24	30	55	0	0	1366	7234	132	982	34,743	106,269	998	6378
24	8/18–8/19	8/17	24	9	13	0	0	536	3010	5	34	3,610	11,393	24	163
25	8/22–8/23	8/19	24	8	22	5	0	415	2,295	42	236	14,510	43,527	589	4,113
26–29	8/25–8/26	8/24–9/2	96	0	0	No harvest reported									
Total				258	3,029	95	951	446,717	2,226,098	353	2,476	218,209	698,839	119,345	776,918
Average weight							10.01		5.0		7.0		3.2		6.5

Note: Additional information relevant to each fishing period, including area opened to fishing, may be found on the applicable advisory announcement (AA) available through ADF&G's Commercial Fishery Announcements at http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main. Required parameters for searching the ADF&G Commercial Fishery Announcements include the following: Effective Year = 2022; Species Group = Salmon; Management Area = Prince William Sound.

[a] Queries made through the ADF&G Commercial Fishery Announcements will provide results sorted by Publication Date.

Appendix C4.–Total set gillnet commercial salmon harvest by period in the Eshamy District, 2022.

Period	Date	AA date[a]	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
						Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1	5/30–5/31	5/28	36	12	24	10	79	517	3,027	0	0	1	6	214	1,457
2	6/2–6/3	6/1	36	14	37	8	74	1,576	9,339	0	0	0	0	474	3,048
3	6/6–6/7	6/4	36	16	56	19	109	3,558	18,836	0	0	0	0	1,220	9,161
4	6/9–6/10	6/8	36	17	91	6	45	7,207	41,211	0	0	1	3	1,985	15,461
5	6/13–6/14	6/11	36	19	106	2	15	15,381	86,819	0	0	0	0	1,975	14,005
6	6/16–6/17	6/15	36	20	114	0	0	13,923	76,055	0	0	0	0	2,570	18,983
7	6/20–6/21	6/18	36	22	122	0	0	19,966	106,043	0	0	9	27	3,328	22,506
8	6/23–6/24	6/22	36	22	152	0	0	35,386	196,541	0	0	15	49	1,608	11,421
9	6/27–6/28	6/24	36	24	113	0	0	14,351	77,777	0	0	317	1,023	2,181	14,914
10	6/30–7/1	6/29	36	24	133	1	12	21,591	119,186	0	0	1,270	4,195	1,725	11,553
11	7/4–7/5	7/2	24	23	78	0	0	9,682	50,572	0	0	1,722	5,573	1,281	8,164
12	7/7–7/8	7/6	24	22	65	1	0	9,225	49,715	2	11	4,859	15,139	1,261	8,283
13	7/11–7/12	7/9	24	22	80	0	0	9,102	51,094	6	38	10,345	34,003	2,943	19,291
14	7/14–7/15	7/13	12	20	54	1	5	3,372	18,887	1	5	5,292	16,746	935	6,099
15	7/18–7/19	7/16	24	14	76	0	0	8,040	46,264	0	0	21,572	66,465	1,488	9,851
16	7/21–7/22	7/20	12	8	19	0	0	5,062	24,910	0	0	1,158	3,643	171	1,075
17	7/25–7/26	7/22	24	8	26	0	0	909	5,085	2	14	6,211	19,417	235	1,606
18	7/28–7/29	7/27	12	4	12	0	0	766	4,587	0	0	535	1,605	18	126
19	8/1–8/2	7/30	24	6	19	0	0	747	4,128	4	34	5,526	18,322	160	1,068
20	8/4–8/5	8/3	12	3	14	0	0	975	4,873	6	43	3,679	14,226	35	220
21	8/8–8/9	8/5	24	3	9	0	0	209	1,095	1	7	2,590	7,847	35	214
22[a]	8/11–8/12	8/10	12	2	6	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
23[a]	8/15–8/16	8/13	24	1	5	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
24[a]	8/18–8/19	8/17	12	1	4	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
25[a]	8/22–8/23	8/19	24	1	4	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
26–29	8/25–9/6	8/24–9/2	72	0	0	No harvest reported									
Total				26	1,419	50	668	182,049	1,001,717	33	228	71,491	227,742	25,940	179,175
Average weight							13.36		5.5		6.9		3.2		6.9

Note: Additional information relevant to each fishing period, including area opened to fishing, may be found on the applicable advisory announcement (AA) available through ADF&G's Commercial Fishery Announcements at http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main. Required parameters for searching the ADF&G Commercial Fishery Announcements include the following: Effective Year = 2022; Species Group = Salmon; Management Area = Prince William Sound.

[a] Fewer than 3 permits were fished. Period results are confidential.

Appendix C5.–Total commercial salmon harvest by species and gear type in the Eshamy District, 2012–2022.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
			Drift gillnet			
2012	52	987,678	192	88,951	254,774	1,331,647
2013	74	336,061	1,724	62,176	184,334	584,369
2014	35	761,315	607	189,940	77,719	1,029,616
2015	92	860,637	4,611	178,336	85,864	1,129,540
2016	40	443,723	362	51,872	78,409	574,484
2017	63	424,049	3,733	321,935	103,445	853,225
2018	131	823,344	3,407	303,572	131,246	1,261,700
2019	105	469,905	1,083	265,080	125,207	861,380
2020	188	358,068	930	316,963	70,666	746,815
2021	251	293,994	1,875	254,010	133,608	683,738
2022	95	446,717	353	218,209	119,345	784,719
Average 2012–2021	103	575,877	1,852	203,284	124,527	905,651
			Set gillnet			
2012	14	294,632	97	17,311	24,368	336,422
2013	59	203,019	360	19,114	42,630	265,182
2014	22	259,568	65	35,681	20,921	316,257
2015	61	265,575	839	29,070	22	295,567
2016	33	218,013	13	8,011	20,831	246,901
2017	7	181,949	216	37,633	17,583	237,388
2018	7	180,945	103	22,784	9,948	141,787
2019	14	225,676	182	54,899	38,534	319,305
2020	7	91,826	23	35,136	4,069	131,054
2021	9	79,220	57	24,755	12,413	116,454
2022	50	182,049	33	71,491	25,940	279,563
Average 2012–2021	23	200,042	196	28,439	19,132	240,632
			Combined set gillnet and drift gillnet			
2012	66	1,282,310	289	106,262	279,142	1,668,069
2013	133	539,080	2,084	81,290	226,964	849,551
2014	57	1,020,883	672	225,621	98,640	1,345,873
2015	153	1,126,212	5,450	207,406	107,560	1,425,107
2016	73	661,736	375	59,883	99,240	821,385
2017	70	605,998	3,949	359,568	121,028	1,090,613
2018	138	1,004,289	3,510	326,356	141,194	1,403,487
2019	119	695,581	1,265	319,979	163,741	1,180,685
2020	195	449,894	953	352,099	74,735	877,869
2021	260	373,214	1,932	278,765	146,021	800,192
2022	145	628,766	386	289,700	145,285	1,064,282
Average 2012–2021	126	775,920	2,048	231,723	145,827	1,146,283

APPENDIX D: PURSE SEINE FISHERIES PINK AND CHUM SALMON ESCAPEMENT

Appendix D1.–Prince William Sound pink salmon returns by origin, 2000–2022.

	Estimated pink salmon returns					
	Hatcheries					
Year	SGH	AFK	WNH	CCH	Wild	Total
2000	12,113,551	6,904,559	8,856,119	6,573,795	7,360,000	41,808,024
2001	15,932,656	4,865,879	7,126,101	2,108,028	8,800,000	38,832,664
2002	5,149,430	7,929,788	5,616,803	1,588,501	1,230,000	21,514,522
2003	17,784,817	7,065,581	17,843,002	8,349,320	7,389,184	58,431,904
2004	11,296,792	5,230,138	2,704,549	2,761,140	4,900,000	26,892,619
2005	17,833,484	10,121,228	9,221,716	13,595,157	12,540,000	63,311,585
2006	9,021,053	5,216,231	3,977,073	2,969,543	1,794,000	22,977,900
2007	23,967,744	15,760,177	7,519,098	7,430,043	10,333,079	65,010,141
2008	15,617,999	6,112,588	8,701,656	11,013,594	2,232,000	43,677,837
2009	1,222,473	10,703,437	3,223,164	3,258,244	2,825,000	21,232,318
2010	18,399,595	13,768,753	17,309,257	19,768,346	4,320,000	73,565,951
2011	13,830,644	3,199,541	6,647,472	4,743,895	9,230,000	37,651,552
2012	11,330,663	3,763,888	5,687,710	3,478,658	4,320,000	28,580,919
2013	22,183,858	20,222,117	17,479,441	15,959,517	22,250,000	98,094,933
2014	25,445,746	4,476,859	7,609,619	4,537,866	2,500,000	44,570,090
2015	34,751,413	10,854,375	17,537,606	10,183,238	31,680,000	105,006,632
2016	8,057,516	1,471,867	744,035	707,850	3,520,000	14,501,268
2017	14,543,144	4,968,436	2,508,749	6,736,574	22,430,000	51,186,903
2018	10,002,010	3,307,954	2,296,808	3,656,259	5,980,000	25,243,031
2019	11,282,485	6,071,637	4,025,313	10,274,004	18,380,000	50,033,439
2020	8,624,211	1,293,916	4,185,154	3,057,366	6,534,128	23,694,775
2021	20,363,732	4,310,394	9,464,883	10,045,817	25,227,494	69,412,320
2022	19,492,853	1,072,482	1,433,531	1,381,203	6,826,696	30,207,038
Odd-year average (2013–2021)	20,624,926	9,285,392	10,203,198	10,639,830	23,993,499	74,746,845
Even-year average (2012–2020)	12,692,029	2,862,897	4,104,665	3,087,600	4,570,826	27,318,017

Note: SGH = Solomon Gulch Hatchery; AFK = Armin F. Koernig Hatchery; WNH = Wally H. Noerenberg Hatchery; CCH = Cannery Creek Hatchery.

Appendix D2.–Prince William Sound pink salmon escapement indices by district, 1995–2022.

Year	Eastern	Northern[a]	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total
1995	396,696	84,447	46,029	50,582	10,182	82,490	183,448	336,310	1,190,184
1996	584,236	218,022	104,781	86,709	3,000	63,337	92,966	330,285	1,483,336
1997	345,725	65,260	52,961	53,740	914	112,010	206,943	585,135	1,422,688
1998	377,700	213,288	85,968	97,485	4,644	280,335	161,275	199,410	1,420,105
1999	622,502	214,732	168,816	52,340	6,900	163,347	381,054	853,180	2,462,871
2000	554,984	168,247	223,646	66,078	4,286	131,648	227,881	282,258	1,659,028
2001	436,585	163,573	148,665	102,294	2,963	176,503	314,323	655,480	2,000,386
2002	226,068	138,204	54,882	50,981	1,397	35,554	71,461	364,630	943,177
2003	975,327	255,059	375,147	103,931	5,206	130,356	320,494	691,769	2,857,289
2004	724,663	158,958	79,010	51,306	2,300	108,192	183,891	687,903	1,996,223
2005	1,025,756	570,079	528,264	401,640	32,396	272,572	566,002	1,330,407	4,727,116
2006	248,592	208,397	145,511	127,836	11,247	118,205	149,798	178,009	1,187,595
2007	374,723	156,063	197,405	68,667	9,461	116,130	142,769	443,914	1,509,133
2008	193,844	141,396	145,177	141,787	579	70,291	56,999	112,347	862,419
2009	454,960	119,747	125,907	127,261	9,790	239,357	263,770	488,831	1,829,623
2010	490,952	287,570	335,108	211,709	9,585	126,489	144,821	310,676	1,916,910
2011	982,837	167,408	257,020	147,128	4,368	232,302	598,918	1,537,438	3,927,419
2012	301,709	106,568	172,611	117,795	1,052	90,156	77,756	258,047	1,125,693
2013	1,266,783	329,434	640,414	203,444	12,145	348,012	411,373	1,472,633	4,684,239
2014[b]	270,244	105,843	63,290	67,030	12,400	83,581	24,917	185,072	812,376
2015[c]	1,605,058	779,600	801,201	454,427	70,068	789,725	649,144	2,032,492	7,181,714
2016[d]	663,113	152,509	171,362	171,633	NA	NA	NA	169,660	1,326,535
2017[d]	624,502	445,858	187,159	259,842	2,880	212,009	237,927	528,948	2,499,125
2018	309,325	113,383	70,881	111,194	16,594	81,100	135,208	293,275	1,130,960
2019	445,075	195,169	153,129	91,267	1,402	33,340	25,385	290,452	1,235,219
2020	206,152	105,226	88,401	77,828	7,250	64,470	84,238	138,330	771,895
2021	729,369	471,417	300,227	368,406	17,925	339,920	242,151	544,906	3,014,321
2022	353,187	163,498	73,971	292,892	14,937	200,057	143,917	137,692	1,380,152

Note: This does not represent the total spawning escapement but rather a comparable annual index. NA = not available.

[a] Northern District totals include both Northern and Unakwik District counts combined.

[b] Only 17 of 33 index streams in the Montague District were surveyed often enough (≥3) in 2014 to use with the area-under-the-curve methodology.

[c] AUC counts adjusted for the average proportion of the 214 index streams represented by the 129 index streams surveyed 3 or more times in 2015.

[d] Escapement index total includes indices from Eastern, Northern, Coghill, Northwestern, and Southeastern Districts. Only Eastern, Northern, and Northwestern Districts had reasonable temporal survey coverage. The Coghill and Southeastern Districts had limited temporal coverage, but the indices were within the sustainable escapement goal (SEG) range, so they are included in the total.

Appendix D3.–Prince William Sound chum salmon escapement indices by district, 1995–2022.

Year	Eastern	Northern[a]	Coghill	Northwestern	Southeastern
1995	75,655	28,899	11,596	4,883	23,200
1996	137,908	55,568	19,669	24,405	47,334
1997	93,146	19,429	3,101	8,387	43,274
1998	86,227	28,867	22,764	7,553	52,103
1999	242,713	36,691	5,057	4,544	36,181
2000	196,253	23,655	20,488	10,150	34,969
2001	198,683	75,473	13,388	6,373	37,526
2002	94,046	30,531	7,430	16,194	104,906
2003	198,921	44,272	19,729	12,736	116,131
2004	108,833	42,456	9,685	10,371	42,344
2005	113,135	30,657	11,979	12,696	25,547
2006	109,403	52,069	15,900	25,860	26,739
2007	123,814	49,669	14,052	10,778	60,464
2008	74,740	38,791	39,660	28,051	21,614
2009	100,309	22,063	6,150	12,293	106,284
2010	91,514	38,207	51,589	30,074	85,138
2011	196,933	52,474	16,368	11,447	91,218
2012	61,969	14,680	10,281	7,072	20,467
2013	119,110	34,240	11,369	4,746	35,942
2014	93,491	27,680	9,491	5,041	30,177
2015[b]	112,142	43,179	15,444	7,321	52,031
2016[b]	93,491	27,680	9,491	5,831	30,177
2017[b]	85,618	34,516	13,666	7,381	49,421
2018	109,598	18,407	13,617	15,563	10,164
2019	56,846	11,690	3,437	3,258	19,451
2020	103,849	23,542	8,998	7,405	26,909
2021	58,965	20,404	2,395	6,979	46,391
2022	64,365	26,014	8,629	13,372	12,944

Note: Current goals are district-specific lower-bound sustainable escapement goals: Coghill >10,000; Eastern >79,000; Northern/Unakwik >28,000; Northwestern >7,000; Southeastern >11,000. This does not represent the total spawning escapement but rather a comparable annual index.

[a] Northern District totals include both Northern and Unakwik District counts combined.

[b] AUC counts adjusted for the average proportion of the 214 index streams represented by 129 index streams.

Appendix D4.–Prince William Sound commercial pink salmon harvest for all gear types, by district, 1995–2022.

Year	Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total
1995	4,235,638	3,656,119	1,078,693	0	88,830	1,707,745	18,239	11,418	10,796,682
1996	6,076,471	5,042,415	1,543,869	0	35,691	5,052,789	0	0	17,751,235
1997	4,534,365	3,162,822	2,030,586	0	222,934	5,929,544	65,107	28,040	15,973,398
1998	2,231,061	5,037,668	3,228,761	0	134,984	8,435,431	430,252	350,081	19,848,238
1999	12,305,629	4,981,085	3,542,130	0	170,525	9,524,043	189,641	914,907	31,627,960
2000	9,819,466	4,093,620	3,359,542	17,223	514,258	9,308,399	87,634	549,763	27,749,905
2001	16,050,235	404,899	957,042	0	495,325	3,072,848	807,010	534,538	22,321,897
2002	355,964	594,245	1,277,637	0	186,786	5,710,938	32,857	1,075	8,159,502
2003	14,945,744	5,911,904	11,484,334	0	90,102	5,789,419	60,287	514,452	38,796,242
2004	9,512,987	45,355	43,690	0	107,487	1,628,219	102,352	260,992	11,701,082
2005	20,516,356	10,259,182	3,318,888	0	236,634	11,381,417	844,658	770,570	47,327,705
2006	5,712,890	1,331,776	1,373,036	0	110,625	3,269,037	144,417	21,805	11,963,586
2007	22,059,138	6,221,016	2,400,004	0	56,618	17,907,847	878,371	1,869,245	51,392,239
2008	10,829,504	8,548,368	7,439,560	0	123,780	7,548,950	216,013	0	34,706,175
2009	95,071	2,064,871	1,305,714	0	81,790	7,481,863	87,952	36,698	11,153,959
2010	16,423,602	17,916,866	14,252,563	0	134,734	16,978,392	15,985	19,293	65,741,435
2011	13,308,509	2,782,875	2,397,044	252,337	96,399	6,807,127	784,603	504,828	26,933,722
2012	10,611,728	3,677,106	3,433,740	87,010	106,269	5,722,240	200,600	225,255	24,063,948
2013	25,566,365	17,062,817	9,141,077	110,432	81,290	33,510,249	441,913	2,570,809	88,484,952
2014	19,853,828	5,024,240	1,998,341	70,684	225,641	8,958,165	3,044,491	19,949	39,195,339
2015	42,432,142	13,559,066	6,256,940	0	207,409	23,763,243	1,589,439	2,235,414	90,043,653
2016	7,536,833	417,218	13,556	172,360	59,894	345,842	19,360	37,970	8,603,033
2017	17,632,123	7,420,481	1,051,864	1,513,365	359,688	11,574,563	3,235,571	676,089	43,463,744
2018	10,296,388	2,626,739	974,408	184,091	326,431	4,912,297	395,459	443,118	20,158,931
2019	20,017,274	8,944,664	344,574	729,579	320,133	10,081,361	315,396	2,815,872	43,568,853
2020	8,964,070	3,425,006	1,760,360	921,426	352,730	2,739,176	268,006	378,859	18,809,633
2021	22,913,848	10,678,944	4,847,275	707,552	279,083	12,460,881	6,879,217	765,176	59,531,976
2022	21,084,417	1,054,168	502,530	317,409	289,700	1,016,253	177,917	38,997	24,481,391
Average (2012–2021)	18,582,460	7,283,572	2,982,214	449,650	231,857	11,406,802	1,638,945	1,1016,851	43,592,350

Note: Includes purse seine, drift gillnet, and set gillnet harvests from all Prince William Sound districts; Unakwik harvests are included in the Northern District totals. Does not include hatchery cost recovery, homepack, confiscated, or test fish harvests.

Appendix D5.–Prince William Sound commercial chum salmon harvest for all gear types, by district, 1995–2022.

Year	Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total
1995	52,113	5,812	382,256	0	19,905	8,334	32	40	468,492
1996	340,398	11,432	613,432	0	32,828	13,222	0	0	1,011,312
1997	446,757	5,054	723,116	3	43,243	6,656	185,400	3,252	1,413,481
1998	107,854	57,088	368,921	0	557	4,063	204,536	4,685	747,704
1999	105,981	11,346	1,292,977	0	24,221	11,303	628,952	83,147	2,157,927
2000	240,299	9,894	1,645,145	581	39,828	428,665	992,253	71,565	3,428,230
2001	258,569	9,602	1,146,253	0	28,373	229,670	442,317	44,493	2,159,277
2002	9,811	9,516	2,455,237	0	127,271	54,845	1,071,478	32,776	3,760,934
2003	113,154	12,432	1,478,537	0	22,323	25,624	566,535	13,148	2,231,753
2004	102,067	322	921,002	0	53,609	338	342,968	49,560	1,469,866
2005	32,423	14,895	1,156,770	0	6,945	3,759	238,516	4,329	1,457,637
2006	113,079	51,650	563,802	0	40,724	107,569	445,762	17,171	1,339,757
2007	81,077	10,127	1,474,826	0	106,061	42,445	741,020	13,997	2,469,553
2008	20,808	38,583	2,317,589	0	305,120	517,449	1,233,909	0	4,433,458
2009	4,752	15,618	1,336,662	0	336,928	234,996	672,918	2,887	2,604,761
2010	14,383	2,464	2,515,238	0	610,573	166,464	243,606	0	3,552,728
2011	29,251	2,381	1,092,952	1,083	121,341	62,616	103,678	11,797	1,425,099
2012	102,192	2,152	2,457,115	37	279,149	164,913	325,417	35,560	3,366,535
2013	94,277	6,513	2,170,633	171	226,970	275,290	483,728	40,929	3,298,511
2014	101,443	2,511	643,327	5,884	98,664	66,261	187,016	12,749	1,117,855
2015	143,320	8,099	899,332	0	107,622	176,773	168,721	13,532	1,517,399
2016	56,570	7,386	1,631,485	4,126	99,249	210,600	196,688	325	2,206,429
2017	293,242	90,858	3,066,829	45,126	121,049	445,083	540,388	51,827	4,654,402
2018	197,459	8,619	1,806,642	7,576	141,413	355,623	452,791	27,717	2,997,840
2019	522,862	31,335	1,060,108	9,602	163,838	545,263	1,572,646	38,173	3,943,827
2020	54,688	5,780	236,202	12,051	74,793	222,231	592,049	1,161	1,198,955
2021	100,146	13,217	1,194,305	2,966	146,027	296,653	295,939	9,176	2,058,429
2022	169,071	25,547	1,122,765	15,654	145,285	200,931	706,710	3,222	2,389,185
Average (2012–2021)	166,620	17,622	1,516,598	8,754	145,878	275,869	481,538	23,115	2,635,994

Note: Includes purse seine, drift gillnet, and set gillnet harvests from all Prince William Sound districts. Unakwik harvests are included in the Northern District totals. Does not include hatchery cost recovery, homepack, confiscated, or test fish harvests.

APPENDIX E: SALMON ENHANCEMENT

Appendix E1.–Historical harvest contributions, thermally marked otolith releases, and total returns of coho salmon to Prince William Sound hatcheries, brood years 1993–2019.

Solomon Gulch Hatchery			Hatchery contribution to the CF[a]	Hatchery contribution to subsistence/ homepack harvest[b]	Hatchery contribution to sport harvest[c]	Hatchery contribution to broodstock esc[d]	Hatchery contribution to cost recovery[e]	Total hatchery return	Estimated marine survival
Brood year	Return year	Fry release							
2000	2003	1,821,889	63,132	185	78,162	17,379	4,087	162,945	8.94%
2001	2004	1,275,145	26,711	315	59,331	2,585	9,897	98,839	7.75%
2002	2005	1,442,274	129,966	286	67,000	2,102	30,686	230,040	15.95%
2003	2006	1,968,366	210,382	18	61,298	2,455	16,172	290,325	14.75%
2004	2007	1,511,592	58,299	0	74,616	3,564	17,748	154,227	10.20%
2005	2008	1,973,604	154,383	0	59,313	3,101	22,356	239,153	12.12%
2006	2009	1,828,100	914	131	43,651	3,955	17,424	66,075	3.61%
2007	2010	1,525,927	2,918	189	70,531	2,847	43,722	120,207	7.88%
2008	2011	1,915,058	28,412	883	50,801	7,145	38,285	125,526	6.55%
2009	2012	2,111,389	914	75	12,873	2,458	454	16,774	0.79%
2010	2013	1,879,768	153,819	277	55,844	7,071	39,946	256,957	13.67%
2011	2014	1,657,016	1,327	103	6,044	1,804	1,139	10,416	0.63%
2012	2015	1,810,315	32,108	40	24,920	2,722	14,571	74,361	4.11%
2013	2016	1,869,354	7,034	0	31,390	2,722	14,571	55,717	2.98%
2014	2017	1,913,395	6,440	0	10,284	4,623	1,620	22,967	1.20%
2015	2018	1,929,471	5,751	0	26,454	9,790	1,620	43,615	2.26%
2016	2019	1,929,471	67,296	0	38,108	1,018	3,190	109,612	5.68%
2017	2020	1,788,449	10,419	0	17,173	5,765	18,475	51,832	2.90%
2018	2021	1,878,493	40,175	0	29,749	4,010	3,046	76,980	4.10%
2019	2022	1,697,213	2,490	66	28,343	3,136	426	34,461	2.03%

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Wally Noerenberg Hatchery			Hatchery contribution to the CF[a]	Hatchery contribution to subsistence/ homepack harvest[b]	Hatchery contribution to sport harvest[c]	Hatchery contribution to broodstock esc[d]	Hatchery contribution to cost recovery[e]	Total hatchery return	Estimated marine survival
Brood year	Return year	Fry release							
2000	2003	485,834	9,624	133	21,444	1,314	0	32,515	6.69%
2001	2004	920,858	9,333	37	19,852	150	637	30,009	3.26%
2002	2005	989,383	53,257	178	34,587	11,450	19	99,492	10.06%
2003	2006	1,057,922	113,997	20	19,973	17,079	0	151,069	14.28%
2004	2007	1,052,897	84,867	36	31,745	2,129	11,975	130,752	12.42%
2005	2008	1,850,000	116,641	90	19,738	2,609	267	139,345	7.53%
2006	2009	1,930,000	20,209	52	16,751	2,064	0	39,076	2.02%
2007	2010	226,000	5,215	9	20,569	1,399	0	27,192	12.03%
2008	2011	3,490,000	95,267	274	26,062	7,374	678	129,655	3.72%
2009	2012	3,480,000	10,276	123	7,625	558	0	18,582	0.53%
2010	2013	1,018,000	69,824	64	21,185	2,293	0	93,366	9.17%
2011	2014	3,210,000	165,600	292	11,314	6,584	10,877	194,667	6.06%
2012	2015	907,000	6,592	292	14,793	3,084	0	24,761	2.73%
2013	2016	370,000	347	292	1,886	245	0	2,770	0.75%
2014	2017	3,090,000	14,406	0	8,536	3,814	0	26,756	0.87%
2015	2018	2,241,000	NA	0	5,267	2,380	0	7,647	0.34%
2016	2019	2,091,000	194,717	0	9,888	2,226	0	206,831	9.89%
2017	2020	1,886,822	0	0	5,531	5,149	0	10,680	0.57%
2018	2021	2,028,263	113	0	10,587	1,285	5,000	16,985	0.84%
2019	2022	3,167,000	38,874	214	8,669	661	0	48,418	1.53%

Note: NA = no estimate available.

[a] Commercial fishery (CF)

[b] Subsistence and commercial homepack.

[c] No hatchery contribution sampling occurs in the sport fishery. These estimates apply a fixed proportion of Solomon Gulch Hatchery or Wally Noerenberg Hatchery production to sport harvest by reporting area.

[d] Broodstock escapements include all fish remaining after commercial harvests—i.e., fish used for brood, watershed spawners, predation behind the barrier seine, and fish remaining in front of the hatchery.

[e] Hatchery cost recovery is the whole fish purse seine and raceway effort and does not include carcass sales from viable broodstock.

Appendix E2.–Sockeye salmon hatchery and wild stock contributions to the Copper River drift gillnet commercial common property fishery by period, 2022.

			Origin							
			Gulkana		Main Bay		Hatchery	Wild		
Period	Dates	Hours	Number	Percent	Number	Percent	total	Number	Percent	Total
1[a]	5/16	12	0	0.0	0	0.0	0	13,273	100.0	13,273
2[a]	5/19	12	0	0.0	0	0.0	0	12,104	100.0	12,104
3[a]	5/26	12	0	0.0	0	0.0	0	69,944	100.0	69,944
4[a]	6/2	12	0	0.0	0	0.0	0	85,324	100.0	85,324
5[a]	6/6	12	0	0.0	0	0.0	0	63,809	100.0	63,809
6[a]	6/9	12	0	0.0	0	0.0	0	27,459	100.0	27,459
7[a]	6/13–6/14	24	0	0.0	0	0.0	0	28,932	100.0	28,932
8	6/16–6/17	24	487	1.1	0	0.0	487	45,751	98.9	46,238
9	6/20–6/21	24	1,950	5.3	390	1.1	2,340	34,320	93.6	36,660
10	6/23–6/24	36	902	2.1	902	2.1	1,804	41,488	95.8	43,292
11	6/27–6/28	36	1,910	5.5	1,528	4.4	3,438	31,325	90.1	34,763
12	6/30–7/2	48	2,017	5.4	0	0.0	2,017	35,495	94.6	37,512
13	7/4–7/5	36	6,721	18.8	0	0.0	6,721	29,126	81.3	35,847
14	7/7–7/9	48	587	2.7	587	2.7	1,174	20,847	94.7	22,021
15	7/11–7/12	36	748	5.8	0	0.0	748	12,159	94.2	12,907
16	7/14–7/16	48	688	5.4	0	0.0	688	12,110	94.6	12,798
17	7/18–7/19	36	158	3.3	0	0.0	158	4,660	96.7	4,818
18	7/21–7/23	48	230	4.8	77	1.6	307	4,444	93.5	4,751
19	7/25–7/26	36	35	2.0	0	0.0	35	1,682	98.0	1,717
20[a]	7/28–7/30	48	0	0.0	0	0.0	0	3,704	100.0	3,704
21[a]	8/1–8/2	36	0	0.0	0	0.0	0	910	100.0	910
22[a]	8/4–8/6	48	0	0.0	0	0.0	0	629	100.0	629
23[a]	8/8–8/9	36	0	0.0	0	0.0	0	464	100.0	464
24[a]	8/11–8/12	24	0	0.0	0	0.0	0	356	100.0	356
25[a]	8/15–8/16	24	0	0.0	0	0.0	0	422	100.0	422
26[a]	8/22–8/23	24	0	0.0	0	0.0	0	312	100.0	312
27[a]	8/29–8/30	24	0	0.0	0	0.0	0	43	100.0	43
Total		816	16,433	2.7	3,484	0.6	19,917	581,092	96.7	601,009

Note: Total harvest data from fish ticket reporting as of November 30, 2022.

[a] No samples collected; assumed wild origin.

Appendix E3.–Gulkana Hatchery sockeye salmon harvests and total contribution, 1982–2022.

	Hatchery contributions				
Year	Commercial[a]	Subsistence/ personal use[b]	Sport[c]	Broodstock/ escapement[d]	Total hatchery run
1982	3,600	322	6	5,740	9,666
1983	6,600	1,167	23	8,396	16,177
1984	5,318	450	14	4,846	10,623
1985	31,955	2,121	114	24,021	58,170
1986	30,404	2,667	113	25,408	58,592
1987	47,347	3,071	184	25,505	76,105
1988	92,552	9,351	257	94,563	196,726
1989	175,643	13,734	531	120,872	310,781
1990	64,917	7,203	209	55,431	127,760
1991	102,009	9,449	220	63,400	175,078
1992	87,120	11,455	257	84,000	182,832
1993	149,844	14,812	370	17,600	182,625
1994	94,656	9,157	158	40,736	144,707
1995	147,844	15,289	342	45,733	209,208
1996	314,916	16,144	849	151,762	483,671
1997	266,724	8,857	189	92,745	368,515
1998	524,985	31,824	1,038	106,954	664,801
1999	945,287	42,281	868	109,663	1,098,099
2000	366,372	34,113	1,006	75,385	476,876
2001	196,326	35,699	356	75,620	308,001
2002	335,451	28,305	586	62,361	426,665
2003	138,056	19,513	284	45,024	202,845
2004	59,540	27,117	184	6,618	93,438
2005	95,897	28,031	225	92,455	216,583
2006	163,691	26,860	182	97,192	287,906
2007	94,232	9,656	97	28,648	132,625
2008	21,669	19,175	229	44,865	85,916
2009	59,948	29,355	376	43,409	133,047
2010	207,915	68,180	816	157,980	434,608
2011	487,916	33,113	326	59,589	580,917
2012	330,402	43,549	450	65,348	439,688
2013	318,212	45,800	541	72,369	436,788
2014	297,943	44,918	222	53,737	396,990
2015	137,414	48,887	85	40,123	226,509
2016	157,035	18,156	283	32,341	207,815
2017	32,292	10,492	738	17,083	60,605
2018	6,174	25,594	574	29,930	62,272
2019	39,882	11,664	532	15,600	67,678
2020	9,810	8,423	66	10,786	29,085
2021	47,588	29,733	653	9,562	87,536
2022	16,433	3,963	417	5,004	21,854
Average (2012–2021)	137,675	28,722	414	34,688	201,497

[a] Commercial contributions are from strontium chloride marks (2004–current); coded wire tags (1995–2003); and fry to adult survival, age composition at return, and exploitation rate (1977–1994).

[b] Subsistence and personal use contributions are from strontium chloride marks (2004–current); coded wire tags (1995–2003); and fry to adult survival, age composition at return, and exploitation rate (1977–1994).

[c] Sport fishery contributions are the sum of sport harvest from Copper River mainstem and Gulkana River multiplied by Gulkana Hatchery contribution percentage to the Glennallen subsistence and Chitina personal use fisheries for that year.

[d] Broodstock and escapement contributions are based on survey of release sites and hatchery reporting.

Appendix E4.–Gulkana Hatchery salmon fry releases, 1977–2022.

	Chinook salmon			Sockeye salmon					
Release year	Monsoon Lake	Gulkana River (E. Fork)	Total Chinook salmon released	Gulkana I & II (Paxson Lake)	Summit Lake	Crosswind Lake	Harding Lake	Ten Mile Lake	Total sockeye salmon released
1977	0	0	0	516,326	0	0	0	112,248	628,574
1978	0	0	0	479,864	0	0	0	104,058	583,922
1979	0	0	0	940,666	0	0	0	99,589	1,040,255
1980	0	0	0	1,105,397	1,340,660	0	0	0	2,446,057
1981	0	0	0	3,388,682	1,860,491	0	0	0	5,249,173
1982	0	0	0	5,985,270	2,047,947	0	0	0	8,033,217
1983	0	0	0	5,470,056	4,312,628	0	0	0	9,782,684
1984	0	0	0	6,079,838	4,739,293	0	0	0	10,819,131
1985	0	0	0	10,130,942	9,296,882	1,419,095			20,846,919
1986	0	0	0	8,586,509	14,999,085	0	0	0	23,585,594
1987	0	0	0	9,905,907	12,491,826	0	0	0	22,397,733
1988	0	1,388	1,388	6,389,963	12,026,642	2,487,396	503,375		21,407,376
1989	15,977	0	15,977	10,870,655	12,004,491	3,130,373	515,046	0	26,520,565
1990		0		14,127,313	6,445,011	4,906,005	505,305	0	25,983,634
1991	26,209	0	26,209	11,288,721	6,109,833	5,469,759	0	0	22,868,313
1992	30,488	34,842	65,330	11,640,000	7,049,000	8,420,000	0	0	27,109,000
1993	0	0	0	5,866,230	2,661,549	5,627,346	0	0	14,155,125
1994	0	0	0	11,008,964	7,637,009	9,144,382	0	0	27,790,355
1995	0	0	0	12,345,894	7,418,311	9,973,600	0	0	29,737,805
1996	0	0	0	12,241,896	8,400,148	9,732,911	0	0	30,374,955
1997	0	0	0	12,286,366	8,987,213	10,516,107	0	0	31,789,686
1998	0	0	0	11,589,845	10,162,655	10,512,299	0	0	32,264,799
1999	0	0	0	11,551,836	9,191,217	9,984,392	0	0	30,727,445
2000	0	0	0	10,705,795	3,300,504	8,331,080	0	0	22,337,379
2001	0	0	0	7,870,334	493,516	5,585,665	0	0	13,949,515
2002	0	0	0	11,922,685	5,805,231	8,174,754	0	0	25,902,670
2003	0	0	0	11,284,330	6,599,519	8,360,966	0	0	26,244,815
2004	0	0	0	12,408,512	6,574,962	8,359,115	0	0	27,342,589
2005	0	0	0	3,308,065	0	3,703,295	0	0	7,011,360
2006	0	0	0	5,523,920	4,681,325	10,017,211	0	0	20,222,456
2007	0	0	0	6,000,000	6,000,000	10,000,000	0	0	22,000,000
2008	0	0	0	6,000,000	6,000,000	9,980,000	0	0	21,980,000
2009	0	0	0	6,000,000	6,000,000	10,000,000	0	0	22,000,000
2010	0	0	0	6,010,000	6,000,000	10,000,000	0	0	22,010,000
2011	0	0	0	6,000,000	5,980,000	10,000,000	0	0	21,980,000
2012	0	0	0	7,340,000	5,950,000	9,570,000	0	0	22,860,000
2013	0	0	0	6,000,000	6,000,000	6,560,000	0	0	18,560,000
2014	0	0	0	6,000,000	6,000,000	10,000,000	0	0	22,000,000
2015	0	0	0	5,997,000	5,990,000	0	0	0	22,000,000
2016	0	0	0	6,004,000	0	10,000,000	0	0	16,004,000
2017	0	0	0	4,660,000	0	9,690,000	0	0	14,350,000
2018	0	0	0	5,962,463	0	4,252,400	0	0	10,214,863
2019	0	0	0	6,057,999	0	8,427,130	0	0	14,485,129
2020	0	0	0	5,962,155	0	8,912,385	0	0	14,874,540
2021	0	0	0	4,920,706	0	6,306,358	0	0	11,227,064
2022	0	0	0	5,951,221	0	3,740,342	0	0	9,691,563
Average (2012–2021)				5,890,432	2,176,364	7,371,827	0	0	16,657,560

Appendix E5.–Daily chum and coho salmon sales and sex ratios, sales summary, and broodstock summary at the Wally Noerenberg Hatchery, 2022.

	Chum salmon				Coho salmon	
Date	Sales harvest[a]	Sales harvest cumulative	Broodstock[b]	Broodstock cumulative	Sales harvest	Sales harvest cumulative
06/11	17,311	17,311	0	0	ND	ND
06/15	27,121	44,432	0	0	ND	ND
06/16	19,882	64,314	0	0	ND	ND
06/17	26,189	90,503	0	0	ND	ND
06/20	53,215	143,718	0	0	ND	ND
06/21	46,017	189,735	0	0	ND	ND
06/22	29,273	219,008	0	0	ND	ND
06/24	64,306	283,314	0	0	ND	ND
06/25	43,036	326,350	0	0	ND	ND
06/26	47,961	374,311	0	0	ND	ND
07/05	25,064	399,375	0	0	ND	ND
07/07	0	399,375	9,457	9,457	ND	ND
07/08	9,986	409,361	13,299	22,756	ND	ND
07/09	0	409,361	13,273	36,029	ND	ND
07/10	0	409,361	13,239	49,268	ND	ND
07/11	0	409,361	13,088	62,356	ND	ND
07/12	0	409,361	15,047	77,403	ND	ND
07/13	0	409,361	13,090	90,493	ND	ND
07/14	18,297	427,658	13,090	103,583	ND	ND
07/15	0	427,658	14,573	118,156	ND	ND
07/16	0	427,658	13,129	131,285	ND	ND
07/17	0	427,658	15,564	146,849	ND	ND
07/18	0	427,658	13,629	160,478	ND	ND
07/19	0	427,658	14,372	174,850	ND	ND
07/20	13,572	441,230	31	174,881	ND	ND
07/21	7,961	449,191	39	174,920	ND	ND
07/22	20,015	469,206	66	174,986	ND	ND
07/23	13,509	482,715	214	175,200	ND	ND
07/25	15,656	498,371	41	175,241	ND	ND
07/26	23,202	521,573	32	175,273	ND	ND
07/27	6,968	528,541	5,035	180,308	ND	ND

-continued-

Hatchery escapement summary[c]	Chum salmon	Coho salmon
Purse seine whole fish harvest	438,859	0
Raceway harvest[d]	89,682	0
Viable broodstock (spawned, eggs in incubators)	159,246	380
Unviable broodstock (green/over-ripe/bad)	11,860	9
Unspawned fish (e.g.,excess males/females)	1,787	37
Holding mortalities (raceway, pen mortalities)	7,415	3
Estimated unharvested return[e]	10,000	300
Estimated total run to hatchery site	718,849	729

Sales summary	Chum salmon	Coho salmon
Purse seine whole fish sales	438,859	0
Raceway sales[f]	103,329	0
Carcass sales[g]	159,246	0
Total sales	701,434	0

Note: ND= No data available

[a] Daily whole fish from purse seine and raceway harvests as reported inseason and on fish tickets.

[b] Broodstock daily totals from Prince William Sound Aquaculture Corporation (PWSAC) egg-take log.

[c] Determined by fish tickets, PWSAC egg-take log, and annual report (ADF&G *unpublished*).

[d] Raceway harvest includes whole fish as well as roe extraction not conducted as egg take.

[e] Fish remaining in saltwater and freshwater after all hatchery harvest is complete.

[f] Sum of raceway harvest, unviable broodstock and unspawned fish.

[g] Represents the sale of "viable broodstock" carcasses.

Appendix E6.–Sockeye salmon hatchery and wild stock contributions to the Coghill District commercial common property fishery by period, 2022.

			Origin					
			Main Bay		Hatchery	Wild		
Period	Dates	Hours	Number	Percent	Total	Number	Percent	Total
1[a]	5/30–6/1	60	0	0.0	0	682	100.0	682
2[b]	6/2–6/5	84	297	61.9	297	182	38.1	479
3[b]	6/6–6/8	60	1,540	61.9	1,540	948	38.1	2,488
4[b]	6/9–6/12	84	2,166	61.9	2,166	1,333	38.1	3,499
5	6/13–6/15	60	3,684	61.9	3,684	2,267	38.1	5,951
6	6/16–6/19	84	3,766	51.7	3,766	3,515	48.3	7,281
7	6/20–6/22	60	3,163	27.8	3,163	8,195	72.2	11,358
8	6/23–6/26	84	1,860	8.2	1,860	20,931	91.8	22,791
9	6/27–6/29	60	14,353	36.3	14,353	25,226	63.7	39,579
10	6/30–7/3	84	6,443	16.7	6,443	32,213	83.3	38,656
11	7/4–7/6	60	1,458	5.1	1,458	26,967	94.9	28,425
12	7/7–7/10	84	2,397	8.8	2,397	24,868	91.2	27,265
13	7/11–7/14	72	2,242	23.1	2,242	7,472	76.9	9,714
14[c]	7/14–7/17	84	3,219	23.1	3,219	10,729	76.9	13,948
15[c]	7/18–7/20	60	2,511	23.1	2,511	8,371	76.9	10,882
16[c]	7/21–7/22	38	858	23.1	858	2,858	76.9	3,716
17[a]	7/23	14	0	0.0	0	318	100.0	318
18[a]	7/24	14	0	0.0	0	1,032	100.0	1,032
19[a]	7/25	14	0	0.0	0	1,381	100.0	1,381
20[a]	7/26	14	0	0.0	0	1,131	100.0	1,131
21[a]	7/27	14	0	0.0	0	1,783	100.0	1,783
22[a]	7/28	14	0	0.0	0	846	100.0	846
23[a]	7/29–7/31	48	0	0.0	0	763	100.0	763
24[a]	7/31–8/1	36	0	0.0	0	441	100.0	441
25[a]	8/2	14	0	0.0	0	111	100.0	111
26[a]	8/3	14	0	0.0	0	70	100.0	70
27[a]	8/4	14	0	0.0	0	46	100.0	46
28[a]	8/5	14	0	0.0	0	80	100.0	80
29[d]	8/6	14	0	0.0	0	0	0.0	0
30[d]	8/7	14	0	0.0	0	0	0.0	0
31[a]	8/19	12	0	0.0	0	138	100.0	138
32[d]	8/25–8/26	36	0	0.0	0	0	0.0	0
33[d]	8/29–8/30	36	0	0.0	0	0	0.0	0
34[d]	9/1–9/2	36	0	0.0	0	0	0.0	0
35[a]	9/3–9/4	36	0	0.0	0	1	100.0	1
36[a]	9/5–9/7	60	0	0.0	0	1	100.0	1
37–42[a]	9/8–9/28	283	0	0.0	0	0	100.0	0
Total			49,956	21.3	49,956	184,900	78.7	234,856

Note: Total harvest data from fish ticket reporting as of November 15, 2021. MBH= Main Bay hatchery. The MBH15A, MBH15B, MBH15C, MBH15D, MBH15E marks were not observed in 2021 samples. Samples were not processed for strontium chloride mark identification, so the Gulkana Hatchery contribution is unknown. All fish without a thermal mark are assumed to be of wild origin.

[a] No samples collected; wild origin assumed.

[b] No samples collected; proportions are from the following period sampled.

[c] No samples collected; proportions are from the previous sampled period.

[d] No harvest reported.

Appendix E7.–Pink salmon hatchery and wild stock contributions to the Coghill District commercial drift gillnet and purse seine fisheries by period, 2022.

			Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		Armin F. Koernig		Hatchery	Wild		
Period	Dates	Hours	Number	Percent	Number	Percent	Number	Percent	Number	Percent	total	Number	Percent	Total
1[a]	5/30–6/1	60	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
2[a]	6/2–6/5	84	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
3[a]	6/6–6/8	60	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
4[a]	6/9–6/12	84	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
5[a]	6/13–6/15	60	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
6[a]	6/16–6/19	84	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
7[b]	6/20–6/22	60	0	0.0	0	0.0	0	0.0	0	0.0	0	4	100.0	4
8[b]	6/23–6/26	84	0	0.0	0	0.0	0	0.0	0	0.0	0	47	100.0	47
9[b]	6/27–6/29	60	0	0.0	0	0.0	0	0.0	0	0.0	0	2,633	100.0	2,633
10[c]	6/30–7/3	84	163	3.7	0	0.0	163	3.7	0	0.0	327	4,087	92.6	4,414
11[c]	7/4–7/6	60	350	3.7	0	0.0	350	3.7	0	0.0	700	8,745	92.6	9,445
12[c]	7/7–7/10	84	787	3.7	0	0.0	787	3.7	0	0.0	1,574	19,679	92.6	21,253
13	7/11–7/14	72	1,069	3.7	0	0.0	1,069	3.7	0	0.0	2,139	26,733	92.6	28,872
14[d]	7/14–7/17	84	5,214	6.6	0	0.0	13,544	17.1	0	0.0	18,757	60,376	76.3	79,133
15	7/18–7/20	60	8,306	9.5	0	0.0	26,764	30.5	0	0.0	35,070	52,606	60.0	87,676
16	7/21–7/22	38	4,097	9.8	1,261	3.0	11,976	28.8	0	0.0	17,333	24,267	58.3	41,600
17	7/23	14	206	3.1	0	0.0	1,644	25.0	0	0.0	1,850	4,727	71.9	6,577
18[d]	7/24	14	510	3.4	137	0.9	4,351	28.9	0	0.0	4,998	10,078	66.8	15,076
19	7/25	14	517	3.6	259	1.8	4,655	32.7	0	0.0	5,431	8,793	61.8	14,224
20[e]	7/26	14	386	3.6	193	1.8	3,475	32.7	0	0.0	4,054	6,563	61.8	10,617
21[c]	7/27	14	1,450	4.8	1,450	4.8	13,052	42.9	0	0.0	15,952	14,502	47.6	30,454
22	7/28	14	1,406	4.8	1,406	4.8	12,651	42.9	0	0.0	15,462	14,057	47.6	29,519
23	7/29–7/31	48	0	0.0	736	3.8	2,207	11.5	1,471	7.7	4,414	14,715	76.9	19,129
24[e]	7/31–8/1	36	0	0.0	646	3.8	1,937	11.5	1,291	7.7	3,874	12,912	76.9	16,786
25[e]	8/2	14	0	0.0	238	3.8	715	11.5	477	7.7	1,430	4,765	76.9	6,195
26[e]	8/3	14	0	0.0	111	3.8	332	11.5	222	7.7	665	2,215	76.9	2,880
27[b]	8/4	14	0	0.0	0	0.0	0	0.0	0	0.0	0	1,207	100.0	1,207
28[b]	8/5	14	0	0.0	0	0.0	0	0.0	0	0.0	0	596	100.0	596
29[a]	8/6	14	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
30[a]	8/7	14	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0

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			Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		Armin F. Koernig		Hatchery	Wild		
Period	Dates	Hours	Number	Percent	Number	Percent	Number	Percent	Number	Percent	total	Number	Percent	Total
31	8/19	12	0	0.0	2,459	3.5	58,196	83.5	0	0.0	60,655	9,016	12.9	69,671
32[a]	8/25–8/26	36	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
33[b]	8/29–8/30	36	0	0.0	0	0.0	0	0.0	0	0.0	0	2,222	100.0	2,222
34[b]	9/1–9/2	36	0	0.0	0	0.0	0	0.0	0	0.0	0	1,324	100.0	1,324
35[b]	9/3–9/4	36	0	0.0	0	0.0	0	0.0	0	0.0	0	696	100.0	696
36[a]	9/5–9/7	60	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
Totals			24,461	4.9	8,895	1.8	157,869	31.4	3,461	0.7	194,685	307,565	61.2	502,250

Note: Total harvest data from fish ticket reporting as of November 30, 2022.

[a] No harvest reported.

[b] No samples collected; wild origin assumed.

[c] No samples collected; proportions from following period sampled.

[d] No samples collected; proportions are an average of previous and following periods sampled.

[e] No samples collected; proportions from previous period sampled.

Appendix E8.–Chum salmon hatchery and wild stock contributions to the Coghill District commercial drift gillnet and purse seine harvest, 2022.

			Origin									
			Wally Noerenberg		Port Chalmers		Armin F Koernig		Hatchery	Wild		
Period	Dates	Hours	Number	Percent	Number	Percent	Number	Percent	Total	Number	Percent	Total
1[a]	5/30–6/1	60	13,302	97.9	142	1.0	0	0.0	5,806	142	1.0	13,585
2[a]	6/2–6/5	84	13,213	97.9	141	1.0	0	0.0	14,656	141	1.0	13,494
3	6/6–6/8	60	57,347	97.9	610	1.0	0	0.0	16,477	610	1.0	58,567
4	6/9–6/11	84	89,470	97.5	0	0.0	2,294	2.5	6,606	0	0.0	91,764
5	6/13–6/15	60	63,346	91.5	737	1.1	2,946	4.3	11,550	2,210	3.2	69,239
6	6/16–6/18	84	50,580	91.6	1,744	3.2	1,744	3.2	10,944	1,163	2.1	55,231
7	6/20–6/22	60	89,668	94.7	996	1.1	996	1.1	10,818	2,989	3.2	94,650
8	6/23–6/26	84	47,879	89.5	1,408	2.6	1,408	2.6	38,291	2,816	5.3	53,512
9	6/27–6/30	60	83,911	94.3	1,023	1.1	1,023	1.1	10,386	3,070	3.4	89,027
10	6/30–7/3	84	74,032	96.8	0	0.0	1,609	2.1	16,062	805	1.1	76,446
11	7/4–7/7	60	53,463	91.1	0	0.0	1,485	2.5	19,568	3,713	6.3	58,661
12	7/7–7/10	84	109,413	92.7	4,917	4.2	2,459	2.1	13,336	1,229	1.0	118,018
13	7/11–7/14	72	155,105	93.2	0	0.0	0	0.0	18,853	11,349	6.8	166,454
14	7/14–7/17	84	93,061	91.5	5,170	5.1	0	0.0	18,930	3,447	3.4	101,678
15[b]	7/18–7/20	60	35,792	91.5	1,988	5.1	0	0.0	9,540	1,326	3.4	39,106
16[b]	7/21–7/22	38	6,333	91.5	352	5.1	0	0.0	1,190	235	3.4	6,919
17[b]	7/23	14	728	91.5	40	5.1	0	0.0	0	27	3.4	795
18[c]	7/24	14	0	0.0	0	0.0	0	0.0	0	542	100.0	542
19[c]	7/25	14	0	0.0	0	0.0	0	0.0	0	1,990	100.0	1,990
20[c]	7/26	14	0	0.0	0	0.0	0	0.0	0	952	100.0	952
21[c]	7/27	14	0	0.0	0	0.0	0	0.0	0	2920	100.0	2,920
22[c]	7/28	14	0	0.0	0	0.0	0	0.0	0	2,352	100.0	2,352
23[c]	7/29–7/31	48	0	0.0	0	0.0	0	0.0	0	929	100.0	929
24[c]	7/31–8/1	36	0	0.0	0	0.0	0	0.0	0	2700	100.0	2,700
25[c]	8/2	14	0	0.0	0	0.0	0	0.0	0	703	100.0	703
26[c]	8/3	14	0	0.0	0	0.0	0	0.0	0	334	100.0	334
27[c]	8/4	14	0	0.0	0	0.0	0	0.0	0	155	100.0	155
28[c]	8/5	14	0	0.0	0	0.0	0	0.0	0	121	100.0	121
29[d]	8/6	14	0	0.0	0	0.0	0	0.0	0	0	0.0	0
30[d]	8/7	14	0	0.0	0	0.0	0	0.0	0	0	0.0	0

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			Origin									
			Wally Noerenberg		Port Chalmers		Armin F Koernig		Hatchery	Wild		
Period	Dates	Hours	Number	Percent	Number	Percent	Number	Percent	total	Number	Percent	Total
31[c]	8/19	12	0	0.0	0	0.0	0	0.0	0	1866	100.0	1,866
32[d]	8/25–8/26	36	0	0.0	0	0.0	0	0.0	0	0	0.0	0
33[c]	8/29–8/30	36	0	0.0	0	0.0	0	0.0	0	12	100.0	12
34[c]	9/1–9/2	36	0	0.0	0	0.0	0	0.0	0	0	0.0	0
35[c]	9/3–9/4	36	0	0.0	0	0.0	0	0.0	0	1	100.0	1
36[c]	9/5–9/7	60	0	0.0	0	0.0	0	0.0	0	5	100.0	5
Totals			1,036,642	92.3	19,269	1.7	15,966	1.4	223,013	50,852	4.5	1,122,728

Note: Total harvest data from fish ticket reporting as of November 30, 2022.

[a] No samples collected; proportions from following period sampled.

[b] No samples collected; proportions from previous period sampled.

[c] No samples collected; wild origin assumed.

[d] No harvest reported.

Appendix E9.–Sockeye salmon hatchery and wild stock contributions to the Eshamy District commercial common property fishery by period, 2022.

			Origin					
			Main Bay		Hatchery	Wild		
Period	Dates	Hours	Number	Percent	total	Number	Percent	Total
1[a]	5/30–5/31	36	1,196	100.0	1,196	0	0.0	1,196
2[a]	6/2–6/3	36	2,273	100.0	2,273	0	0.0	2,273
3[a]	6/6–6/7	36	5,258	100.0	5,258	0	0.0	5,258
4[a]	6/9–6/10	36	10,956	100.0	10,956	0	0.0	10,956
5	6/13–6/14	36	39,223	100.0	39,223	0	0.0	39,223
6	6/16–6/17	36	53,686	81.9	53,686	11,843	18.1	65,529
7	6/20–6/21	36	39,292	52.1	39,292	36,149	47.9	75,441
8	6/23–6/24	36	106,679	95.8	106,679	4,638	4.2	111,317
9	6/27–6/28	36	84,101	94.6	84,101	4,778	5.4	88,879
10	6/30–7/1	36	59,714	88.4	59,714	7,820	11.6	67,534
11[b]	7/4–7/5	24	23,350	85.3	23,350	4,036	14.7	27,386
12	7/7–7/8	24	15,385	82.1	15,385	3,353	17.9	18,738
13[c]	7/11–7/12	24	13,878	82.1	13,878	3,025	17.9	16,903
14[c]	7/14–7/15	24	7,693	82.1	7,693	1,677	17.9	9,370
15[c]	7/18–7/19	24	47,923	82.1	47,923	10,445	17.9	58,368
16[c]	7/21–7/22	24	7,659	82.1	7,659	1,669	17.9	9,328
17[d]	7/25–7/26	24	0	0.0	0	8,229	100.0	8,229
18[c]	7/28–7/29	24	1,313	82.1	1,313	286	17.9	1,599
19[d]	8/1–8/2	24	0	0.0	0	2,048	100.0	2,048
20[d]	8/4–8/5	24	0	0.0	0	1,733	100.0	1,733
21[d]	8/8–8/9	24	0	0.0	0	1,796	100.0	1,796
22	8/11–8/12	24	0	0.0	0	2,271	100.0	2,271
23[c]	8/15–8/16	24	0	0.0	0	1,398	100.0	1,398
24[c]	8/18–8/19	24	0	0.0	0	594	100.0	594
25[c]	8/22–8/23	24	0	0.0	0	455	100.0	455
26[e]	8/25–8/26	24	0	0.0	0	0	0.0	0
27[e]	8/29–8/30	24	0	0.0	0	0	0.0	0
28[e]	9/1–9/2	24	0	0.0	0	0	0.0	0
29[e]	9/5–9/6	24	0	0.0	0	0	0.0	0
Total			519,580	82.8	519,580	108,242	17.2	627,822

Note: Total harvest data from fish ticket reporting as of November 30, 2022. Samples were not processed for strontium chloride mark identification, so the Gulkana Hatchery contribution is unknown. All fish without a thermal mark are assumed to be of wild origin.

[a] No samples collected; proportions are from the following sampled period.

[b] No samples collected; proportions are the average of the prior and following sampling period.

[c] No samples collected; proportions are from the previous sampled period.

[d] No samples collected; wild origin assumed.

[e] No harvest reported.

Appendix E10.–Pink salmon hatchery and wild stock contributions to the Eshamy District commercial fishery by period, 2022.

			Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		Armin F. Koernig		Hatchery	Wild		
Period	Date	Hours	Number	Percent	Number	Percent	Number	Percent	Number	Percent	total	Number	Percent	Total
1[a]	5/30–5/31	36	0	0.0	0	0.0	0	0.0	0	0.0	0	1	100.0	1
2[b]	6/2–6/3	36	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
3[b]	6/6–6/7	36	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
4[b]	6/9–6/10	36	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
5[b]	6/13–6/14	36	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
6[a]	6/16–6/17	36	0	0.0	0	0.0	0	0.0	0	0.0	0	2	100.0	2
7[a]	6/20–6/21	36	0	0.0	0	0.0	0	0.0	0	0.0	0	19	100.0	19
8[a]	6/23–6/24	36	0	0.0	0	0.0	0	0.0	0	0.0	0	51	100.0	51
9[a]	6/27–6/28	36	0	0.0	0	0.0	0	0.0	0	0.0	0	2,033	100.0	2,033
10[a]	6/30–7/1	36	0	0.0	0	0.0	0	0.0	0	0.0	0	6,719	100.0	6,719
11[c]	7/4–7/5	24	248	2.6	124	1.3	0	0.0	372	3.9	744	8,680	92.1	9,424
12[c]	7/7–7/8	24	321	2.6	160	1.3	0	0.0	481	3.9	962	11,227	92.1	12,189
13[c]	7/11–7/12	24	598	2.6	299	1.3	0	0.0	897	3.9	1,794	20,933	92.1	22,727
14	7/14–7/15	24	571	2.6	286	1.3	0	0.0	857	3.9	1,714	19,997	92.1	21,711
15	7/18–7/19	24	7,784	17.2	486	1.1	2,919	6.5	0	0.0	11,189	34,054	75.3	45,243
16	7/21–7/22	24	0	0.0	0	0.0	275	4.3	138	2.2	413	5,919	93.5	6,332
17	7/25–7/26	24	1,531	5.9	0	0.0	3,063	11.8	1,531	5.9	6,125	19,907	76.5	26,032
18[d]	7/28–7/29	24	66	5.9	0	0.0	132	11.8	66	5.9	263	855	76.5	1,118
19[d]	8/1–8/2	24	703	5.9	0	0.0	1,405	11.8	703	5.9	2,810	9,133	76.5	11,943
20[c]	8/4–8/5	24	0	0.0	599	8.3	2,096	29.2	748	10.4	3,443	3,742	52.1	7,185
21	8/8–8/9	24	0	0.0	3,117	8.3	10,909	29.2	3,896	10.4	17,922	19,481	52.1	37,403
22	8/11–8/12	24	0	0.0	0	0.0	4,571	21.1	1,143	5.3	5,714	15,998	73.7	21,712
23[d]	8/15–8/16	24	0	0.0	0	0.0	7,714	21.1	1,929	5.3	9,643	26,999	73.7	36,642
24[d]	8/18–8/19	24	0	0.0	0	0.0	1,229	21.1	307	5.3	1,537	4,303	73.7	5,840
25[d]	8/22–8/23	24	0	0.0	0	0.0	3,215	21.1	804	5.3	4,019	11,253	73.7	15,272
26[b]	8/25–8/26	24	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
27[b]	8/29–8/30	24	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
28[b]	9/1–9/2	24	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
29[b]	9/5–9/6	24	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
Total			11,822	4.1	5,071	1.8	37,528	13.0	13,872	4.8	68,292	221,306	76.4	259,599

Note: Total harvest data from fish ticket reporting as of November 30, 2022.

[a] No samples collected; wild origin assumed.

[b] No harvest reported.

[c] No samples collected; proportions from following period sampled.

[d] No samples collected; proportions from previous period sampled.

Appendix E11.–Chum salmon hatchery and wild stock contributions to the Eshamy District commercial fishery by period, 2022.

			Origin									
			Wally Noerenberg		Port Chalmers		Armin F Koernig		Hatchery	Wild		
Period	Date	Hours	Number	Percent	Number	Percent	Number	Percent	total	Number	Percent	Total
1[a]	5/30–5/31	36	591	44.0	0	0.0	645	48.0	1,236	107	8.0	1,343
2[a]	6/2–6/3	36	310	44.0	0	48.0	338	48.0	648	56	8.0	704
3[a]	6/6–6/7	36	1,303	44.0	0	48.0	1,422	48.0	2,725	237	8.0	2,962
4	6/9–6/10	36	2,712	44.0	0	48.0	2,958	48.0	5,670	493	8.0	6,163
5[b]	6/13–6/14	36	5,840	40.3	0	54.0	7,819	54.0	13,659	821	5.7	14,480
6	6/16–6/17	36	8,433	36.7	0	60.0	13,799	60.0	22,232	767	3.3	22,999
7	6/20–6/21	36	6,994	31.9	933	28.7	6,295	28.7	14,221	7,694	35.1	21,915
8	6/23–6/24	36	3,016	26.1	628	60.9	7,038	60.9	10,682	880	7.6	11,562
9	6/27–6/28	36	5,152	30.9	1244	57.4	9,593	57.4	15,988	711	4.3	16,699
10[c]	6/30–7/1	36	3,512	30.9	848	57.4	6,540	57.4	10,901	484	4.3	11,385
11[c]	7/4–7/5	24	2,256	30.9	545	57.4	4,201	57.4	7,001	311	4.3	7,312
12[c]	7/7–7/8	24	1,819	30.9	439	57.4	3,387	57.4	5,645	251	4.3	5,896
13	7/11–7/12	24	0	0.0	0	0.0	0	0.0	0	6,533	100.0	6,533
14	7/14–7/15	24	0	0.0	0	0.0	0	0.0	0	3,520	100.0	3,520
15	7/18–7/19	24	0	0.0	0	0.0	0	0.0	0	4,529	100.0	4,529
16	7/21–7/22	24	0	0.0	0	0.0	0	0.0	0	683	100.0	683
17	7/25–7/26	24	0	0.0	0	0.0	0	0.0	0	1,951	100.0	1,951
18	7/28–7/29	24	0	0.0	0	0.0	0	0.0	0	29	100.0	29
19	8/1–8/2	24	0	0.0	0	0.0	0	0.0	0	806	100.0	806
20	8/4–8/5	24	0	0.0	0	0.0	0	0.0	0	71	100.0	71
21	8/8–8/9	24	0	0.0	0	0.0	0	0.0	0	1,881	100.0	1,881
22	8/11–8/12	24	0	0.0	0	0.0	0	0.0	0	148	100.0	148
23	8/15–8/16	24	0	0.0	0	0.0	0	0.0	0	1,012	100.0	1,012
24	8/18–8/19	24	0	0.0	0	0.0	0	0.0	0	86	100.0	86
25	8/22–8/23	24	0	0.0	0	0.0	0	0.0	0	603	100.0	603
26[d]	8/25–8/26	24	0	0.0	0	0.0	0	0.0	0	0	0.0	0
27[d]	8/29–8/30	24	0	0.0	0	0.0	0	0.0	0	0	0.0	0
28[d]	9/1–9/2	24	0	0.0	0	0.0	0	0.0	0	0	0.0	0
29[d]	9/5–9/6	24	0	0.0	0	0.0	0	0.0	0	0	0.0	0
Total			41,938	28.9	4,636	3.2	64,035	44.1	110,609	34,663	23.9	145,272

Note: Total harvest data from fish ticket reporting as of November 30, 2022.

[a] No samples collected; proportions from following period sampled.

[b] No samples collected; proportions are the average of the prior and following sampling period.

[c] No samples collected; proportions are from the previous sampled period.

[c] No harvest reported.

Appendix E12.–Daily sockeye salmon sales and sex ratios, sales summary, and broodstock summary at the Main Bay Hatchery, 2022.

Date	Sales harvest[a]	Sales harvest cumulative	Broodstock[b]	Broodstock cumulative
6/12	17,104	17,104	0	0
6/13	28,618	45,722	0	0
6/15	9,066	54,788	0	0
6/17	13,444	68,232	0	0
6/19	23,860	92,092	0	0
6/21	26,328	118,420	0	0
6/30	0	118,420	140	140
7/1	0	118,420	156	296
7/2	0	118,420	178	474
7/3	0	118,420	132	606
7/5	0	118,420	31	637
7/6	5,458	123,878	55	692
7/7	0	118,420	68	760
7/8	0	118,420	55	815
7/9	0	118,420	21	836
7/10	0	118,420	75	911
7/11	0	118,420	46	957
7/14	703	124,581	0	957
7/28	0	124,581	16	973
7/31	0	124,581	26	999
8/1	0	124,581	449	1,448
8/2	0	124,581	21	1,469
8/3	0	124,581	473	1,942
8/4	0	124,581	49	1,991
8/5	0	124,581	675	2,666
8/6	0	124,581	53	2,719
8/7	0	124,581	681	3,400
8/8	0	124,581	47	3,447
8/9	0	124,581	636	4,083
8/10	0	124,581	42	4,125
8/11	0	124,581	847	4,972
8/12	0	124,581	62	5,034
8/13	0	124,581	663	5,697
8/14	0	124,581	68	5,765
8/15	0	124,581	873	6,638
8/16	0	124,581	87	6,725
8/17	0	124,581	694	7,419
8/18	0	124,581	254	7,673
8/19	0	124,581	692	8,365
8/20	0	124,581	75	8,440
8/21	0	124,581	658	9,098
8/22	0	124,581	73	9,171
8/23	0	124,581	413	9,584
8/24	0	124,581	405	9,989
8/25	0	124,581	805	10,794

-continued-

Sockeye salmon	
Hatchery escapement summary[c]	Broodstock totals
Purse seine whole fish harvest	124,581
Raceway harvest[d]	0
Viable broodstock (spawned, eggs in incubators)	6,660
Unviable broodstock (green/over-ripe/bad)	215
Unspawned fish (e.g., excess males/females)	2,367
Holding mortalities (raceway, pen mortalities)	1,552
Estimated unharvested return[e]	1,500
Estimated total run to hatchery site	136,875
Sales summary	
Purse seine whole fish sales	124,581
Raceway sales[f]	0
Carcass sales[g]	0
Total sales	124,581

[a] Whole fish from purse seine and raceway sales.

[b] Broodstock daily harvest numbers include viable broodstock, unviable broodstock, unspawned fish, and holding mortalities.

[c] Determined by fish tickets, PWSAC egg-take log, and annual report (ADF&G *unpublished*).

[d] Raceway harvest includes whole fish as well as roe extraction not conducted as egg take.

[e] Fish remaining in saltwater and fresh water after all hatchery harvest is complete.

[f] Sum of raceway harvest, unviable broodstock, and unspawned fish.

[g] Represents the sale of "viable broodstock" carcasses.

Appendix E13.–Main Bay sockeye salmon harvests and total contribution, 1990–2022.

	Hatchery contributions[a]					
Year	Commercial	Subsistence/ homepack	Sport	Broodstock/ escapement	Cost recovery	Total hatchery contribution
1990	9,000	8	0	0	0	9,008
1991	480,200	260	0	4,700	0	485,160
1992	368,427	395	0	6,185	158,893	533,900
1993	208,709	656	0	8,020	97,594	314,979
1994	214,737	181	0	72,335	85,511	372,764
1995	134,778	114	0	11,148	62,782	208,822
1996	406,100	120	935	7,979	83,430	498,564
1997	845,871	147	1,031	16,498	236,031	1,099,578
1998	128,702	133	1,746	10,596	111,026	252,203
1999	143,511	187	2,207	7,104	0	153,008
2000	339,305	75	1,835	5,426	0	346,641
2001	770,884	170	2,861	10,508	50,458	834,881
2002	846,534	17	3,566	7,352	93,794	951,263
2003	1,047,133	229	4,731	6,878	366,768	1,425,739
2004	355,821	506	4,160	17,578	279,139	657,205
2005	233,089	531	2,884	44,366	188,904	469,774
2006	668,780	203	2,568	15,854	350,742	1,038,147
2007	819,244	290	6,290	20,285	321,330	1,167,439
2008	835,241	344	3,482	15,659	0	854,727
2009	756,130	244	5,473	10,815	131,553	903,971
2010	1,347,644	1,013	2,980	18,196	0	1,366,340
2011	1,274,096	983	3,291	12,810	0	1,291,180
2012	1,271,314	1,542	3,033	19,173	40	1,295,103
2013	639,157	1,333	5,420	189,059	0	834,969
2014	1,189,499	3,485	9,361	84,324	0	1,281,347
2015	1,331,675	2,332	5,574	31,255	180,516	1,551,352
2016	778,515	1,777	3,947	9,846	0	794,085
2017	552,059	3,404	5,663	48,535	0	609,661
2018	1,034,159	48	3,158	11,640	0	1,047,347
2019	862,311	2,706	6,162	9,269	8,987	880,567
2020	494,934	3,011	4,901	9,735	232,337	744,918
2021	446,944	4,298	6,721	15,498	255,837	729,298
2022	473,706	2,664	5,928	10,794	118,420	608,848
Average (2012–2021)	860,057	2,654	5,642	42,833	67,772	976,865

[a] Commercial harvest estimates are from otolith marks. Sport harvest is the previous 5-year averages from Prince William Sound sport fishing surveys and commercial harvest contribution proportions. Subsistence/homepack estimates are derived from commercial harvest proportions. Broodstock/escapement and hatchery cost recovery are assumed to be 100% MBH origin.

Appendix E14.–Main Bay Hatchery salmon smolt releases, 1983–2022.

	Sockeye salmon					Pink salmon	Chum salmon
Release year	Primary return years	Coghill Lake stock	Eshamy Lake stock	Eyak Lake stock	Total released[a]	Total released	Total released
1983	0	0	0	0	0	25,751,531	8,644,179
1984	0	0	0	0	0	41,945,403	7,490,291
1985	0	0	0	0	0	29,286,498	11,033,065
1986	1987, 1988	0	0	0	0	32,728,663	5,258,175
1987	1988, 1989	0	0	0	0	2,660,000	76,646,750
1988	1989, 1990	330,025	0	0	330,025	0	0
1989	1991, 1990	3,925,357	0	0	3,925,357	10,200,000	0
1990	1992, 1993	2,616,498	0	0	2,616,498	0	0
1991	1993, 1994	1,960,774	1,843,176		3,803,950	0	0
1992	1994, 1995	1,546,929	2,475,390	47,609	4,069,928	0	0
1993	1995, 1996	3,288,689	966,750	63,822	4,319,261	0	0
1994	1996, 1997	3,289,824	691,633		3,981,457	0	0
1995	1997, 1998	4,049,763	1,546,011	90,348	5,686,122	0	0
1996	1998, 1999	4,194,174	114,475	82,514	4,391,163	0	0
1997	1999, 2000	239,023	845,190	131,503	1,215,716	0	0
1998	2000, 2001	0	2,485,000	181,000	2,666,000	0	0
1999	2001, 2002	0	4,165,786	2,913,460	7,079,246	0	0
2000	2002, 2003	8,401,117	0	0	8,401,117	0	0
2001	2003, 2004	7,612,350	0	0	7,612,350	0	0
2002	2004, 2005	7,858,190	0	0	7,858,190	0	0
2003	2005, 2006	6,576,535	0	0	6,576,535	0	0
2004	2006, 2007	9,057,829	0	0	9,057,829	0	0
2005	2007, 2008	10,868,642	0	0	10,868,642	0	0
2006	2008, 2009	9,516,461	0	0	9,516,461	0	0
2007	2009, 2010	9,393,000	0	0	9,393,000	0	0
2008	2010, 2011	9,384,000	0	0	9,384,000	0	0
2009	2011, 2012	9,419,000	0	0	9,419,000	0	0
2010	2012, 2013	8,160,000	0	0	8,160,000	0	0
2011	2013, 2014	8,680,000	0	0	8,680,000	0	0
2012	2014, 2015	11,040,000	0	0	11,040,000	0	0
2013	2015, 2016	11,500,000	0	0	11,500,000	0	0
2014	2016, 2017	11,460,000	0	0	11,460,000	0	0
2015	2017, 2018	10,730,000	0	0	10,730,000	0	0
2016	2018, 2019	10,040,000	0	0	10,040,000	0	0
2017	2019, 2020	10,504,000	0	0	10,504,000	0	0
2018	2020, 2021	10,240,000	0	0	10,240,000	0	0
2019	2021, 2022	10,240,000	0	0	10,240,000	0	0
2020	2022,2023	11,080,000	0	0	11,080,000	0	0
2021	2023,2024	10,725,328	0	0	10,725,328	0	0
2022	2024, 2025	10,601,034	0	0	10,601,034	0	0
Average (2012–2021)		10,755,933	0	0	10,755,933	0	0

[a] Totals do not include releases at other locations, such as Coghill, Davis, Eshamy, Eyak, Marsha, Pass, Solf, or Esther Pass.

Appendix E15.–Pink salmon hatchery and wild stock contributions to the Eastern District commercial fishery by period, 2022.

			Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		Armin F. Koernig		Hatchery	Wild		
Period	Date	Hours	Number	Percent	Number	Percent	Number	Percent	Number	Percent	total	Number	Percent	Total
1	7/9	14	4,833,424	99.0	0	0.0	0	0.0	0	0.0	4,833,424	50,878	1.0	4,884,302
2	7/11	14	2,210,479	96.9	0	0.0	0	0.0	0	0.0	2,210,479	71,306	3.1	2,281,785
3	7/12	14	1,258,429	94.8	0	0.0	0	0.0	0	0.0	1,258,429	69,144	5.2	1,327,573
4	7/13	14	551,553	85.8	0	0.0	0	0.0	0	0.0	551,553	91,156	14.2	642,709
5	7/15	14	1,903,983	76.8	0	0.0	0	0.0	0	0.0	1,903,983	573,803	23.2	2,477,786
6	7/17	14	2,862,225	100.0	0	0.0	0	0.0	0	0.0	2,862,225	0	0.0	2,862,225
7	7/19	14	1,173,399	44.8	0	0.0	0	0.0	0	0.0	1,173,399	1,446,282	55.2	2,619,681
8	7/20	14	469,816	55.7	0	0.0	0	0.0	0	0.0	469,816	373,219	44.3	843,035
9	7/22	14	471,539	66.7	0	0.0	0	0.0	0	0.0	471,539	235,770	33.3	707,309
10	7/25	14	1,211,431	85.4	0	0.0	0	0.0	0	0.0	1,211,431	206,830	14.6	1,418,261
11	7/28	14	370,891	68.4	22,824	4.2	0	0.0	0	0.0	393,715	148,356	27.4	542,071
12	8/1	14	107,620	35.4	3,165	1.0	3,165	1.0	0	0.0	113,950	189,917	62.5	303,867
13	8/14	12	6,809	6.3	5,674	5.2	4,540	4.2	1,135	1.0	18,158	90,790	83.3	108,948
14	8/19	12	238	1.1	477	2.2	953	4.4	238	0.0	1,907	19,783	0.0	21,690
15	8/20	12	338	2.1	675	4.2	338	2.1	0	0.0	1,351	14,859	91.7	16,210
16	8/21	12	0	0.0	719	6.0	240	2.0	0	0.0	958	11,023	92.0	11,981
17	8/22	12	0	0.0	417	6.1	0	0.0	0	0.0	417	6,471	93.9	6,888
18	8/23	12	0	0.0	0	0.0	127	3.8	0	0.0	127	3,172	96.2	3,299
19[a,b]	8/25	12	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
20[a,b]	8/26	12	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
21[c]	8/27	12	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
22[c]	8/28	12	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
23[c]	8/29	12	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
24[c]	8/30	12	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
25[c]	8/31	12	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
26[c]	9/6	12	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
Total			17,432,174	82.7	33,952	0.2	9,362	0.0	1,373	0.0	17,476,862	3,606,501	17.1	21,083,363

Note: Total harvest data from fish ticket reporting as of November 30, 2022.

[a] Three or fewer deliveries; results are confidential

[b] No samples collected; wild origin assumed.

[c] No harvest reported.

Appendix E16.–Pink salmon hatchery and wild stock contributions to the Northern District commercial fishery by period, 2022.

			Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		Armin F. Koernig		Hatchery	Wild		
Period	Date	Hours	Number	Percent	Number	Percent	Number	Percent	Number	Percent	total	Number	Percent	Total
1[a,b]	7/11	14	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
2[a]	7/19	14	43,197	65.3	2,090	3.2	2,090	3.2	0	0.0	47,377	18,812	28.4	66,189
3	7/22	14	272,406	65.3	13,181	3.2	13,181	3.2	0	0.0	298,768	118,629	28.4	417,397
4	7/25	14	38,313	53.2	17,755	24.7	0	0.0	0	0.0	56,068	15,886	22.1	71,954
5	7/28	14	48,972	21.9	130,593	58.3	6,996	3.1	0	0.0	186,561	37,312	16.7	223,873
6	8/1	14	24,360	24.7	20,513	20.8	10,257	10.4	0	0.0	55,130	43,591	44.2	98,721
7	8/14	6	0	0.0	89,831	76.0	4,728	4.0	0	0.0	94,559	23,640	20.0	118,199
8	8/19	12	1,556	4.7	5,447	16.3	23,344	69.8	0	0.0	30,347	3,113	9.3	33,460
Totals			444,413	42.2	280,166	26.6	61,351	5.8	0	0.0	785,930	267,779	25.4	1,053,709

Note: Total harvest data from fish ticket reporting as of November 30, 2022.

[a] No samples collected; proportions are from the following period sampled.

[b] Fewer than 3 permits fished; results are confidential.

Appendix E17.–Pink salmon hatchery and wild stock contributions to Prince William Sound, Bering River, and Copper River commercial fishery, 2022.

		Origin											
		Solomon Gulch		Cannery Creek		Wally Noerenberg		Armin F Koernig		Hatchery	Wild		
Districts		Number	Percent	Number	Percent	Number	Percent	Number	Percent	total	Number	Percent	Total
Bering River	200[a]	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0.00	0
Copper River	212	52,602	78.77	0	0.00	0	0.00	0	0.00	52,602	14,175	21.23	66,777
Eastern	221	17,432,174	82.68	33,952	0.16	9,362	0.04	1,373	0.01	17,476,862	3,606,501	17.11	21,083,363
Northern	222	444,413	42.18	280,166	26.59	61,351	5.82	0	0.00	785,930	267,779	25.41	1,053,709
Coghill	223	24,461	4.87	8,895	1.77	157,869	31.43	3,461	0.69	194,685	307,565	61.24	502,250
Northwestern	224	22,648	7.14	3,380	1.07	11,582	3.65	0	0.00	37,610	279,799	88.15	317,409
Eshamy	225	11,822	4.08	5,071	1.75	37,528	12.96	13,872	4.79	68,292	221,306	76.42	289,599
Southwestern	226	156,021	15.35	31,884	3.14	99,131	9.75	172,094	16.93	459,130	557,123	54.82	1,016,253
Montague	227	33,824	19.01	4,791	2.69	7,720	4.34	4,361	2.45	50,695	127,220	71.51	177,917
Southeastern	228[a]	0	0.00	0	0.00	0	0.00	0	0.00	0	38,997	100.00	38,997
Unakwik	229[a]	0	0.00	0	0.00	0	0.00	0	0.00	0	417	90.85	459
Total		18,177,963	74.05	368,138	1.50	384,543	1.57	195,161	0.80	19,125,806	5,420,882	22.08	24,546,733

Note: Total harvest data from fish ticket reporting as of November 30, 2022. Homepack harvests are excluded.

[a] No samples collected; wild origin assumed.

Appendix E18.–Pink salmon hatchery and wild stock contributions to the Southwestern District commercial fishery by period, 2022.

			Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		Armin F Koernig		Hatchery	Wild		
Period	Date	Hours	Number	Percent	Number	Percent	Number	Percent	Number	Percent	total	Number	Percent	Total
1[a]	5/31–6/2	96	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
2[a]	6/3–6/4	48	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
3[a]	6/5–6/6	36	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
4[a]	6/7–6/9	36	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
5[a]	6/10–6/11	48	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
6[a]	6/12–6/13	36	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
7[a]	6/14–6/16	24	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
8[a]	6/17–6/18	24	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
9[b]	6/19–6/20	36	0	0.0	0	0.0	0	0.0	0	0.0	0	6	100.0	6
10[a]	6/21–6/23	12	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
11[b]	6/24–6/25	12	0	0.0	0	0.0	0	0.0	0	0.0	0	22	100.0	22
12[b]	6/26–6/27	12	0	0.0	0	0.0	0	0.0	0	0.0	0	12	100.0	12
13[b]	6/28–6/29	36	0	0.0	0	0.0	0	0.0	0	0.0	0	369	100.0	369
14[b]	7/1–7/2	36	0	0.0	0	0.0	0	0.0	0	0.0	0	308	100.0	308
15	7/3–7/4	48	113	19.2	0	0.0	0	0.0	0	0.0	113	473	80.8	585
16[c]	7/5–7/6	36	103	19.2	0	0.0	0	0.0	0	0.0	103	432	80.8	535
17[c,d]	7/8	38	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
18[c,d]	7/10	50	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
19[c,d]	7/12–7/13	38	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
20[a]	7/14–7/15	38	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
21[b,d]	7/17–7/18	50	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
22	7/22	14	108,535	19.8	0	0.0	22,849	4.2	39,986	7.3	171,371	377,015	68.8	548,386
23	7/28	14	43,043	18.1	17,724	7.4	22,787	9.6	43,043	18.1	126,597	111,405	46.8	238,002
24	8/19	12	1,212	1.0	10,908	9.4	41,206	35.4	20,603	17.7	73,929	42,418	36.5	116,347
25[c,d]	9/7	12	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
26[a]	9/8	12	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
27[c,d]	9/9	84	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	_	[d]	[d]	[d]
Totals			156,021	15.4	31,884	3.1	99,131	9.8	172,094	16.9	372,112	459,130	45.2	1,016,253

Note: Total harvest data from fish ticket reporting as of November 30, 2022.

[a] No harvest reported.

[b] No samples collected; wild origin assumed.

[c] No samples collected; proportions are from the previous period sampled.

[d] Fewer than 3 permits fished; results are confidential.

Appendix E19.–Chum salmon hatchery and wild stock contributions to commercial fisheries by period and mark identification, Southwestern District, 2022.

			Origin									
			Port Chalmers		Wally Noerenberg		Armin F Koernig		Hatchery	Wild		
Period	Date	Hours	Number	Percent	Number	Percent	Number	Percent	total	Number	Percent	Total
1[a]	6/2–6/6	96	146	11.8	219	17.6	877	70.59	0	0	0.0	1,243
2[a]	6/6–6/8	48	169	11.8	254	17.6	1,014	70.59	0	0	0.0	1,437
3	6/9–6/10	36	600	11.8	900	17.6	3,601	70.59	0	0	0.0	5,101
4[b]	6/11–6/12	36	783	11.8	1,175	17.6	4,698	70.59	0	0	0.0	6,656
5[b]	6/13–6/15	48	1,156	11.8	1,735	17.6	6,938	70.59	0	0	0.0	9,829
6[a]	6/16–6/17	36	687	7.8	1,030	11.7	6,522	74.03	572	572	6.5	8,811
7[a]	6/18–6/19	24	517	7.8	775	11.7	4,911	74.03	431	431	6.5	6,634
8[a]	6/20–6/21	24	1,363	7.8	2,045	11.7	12,953	74.03	1,136	1,136	6.5	17,498
9	6/22–6/23	36	3,662	29.1	1,144	9.1	7,323	58.18	458	458	3.6	12,587
10[c]	6/25–6/25	12	4,363	19.9	3,802	17.3	12,933	58.88	867	867	3.9	21,965
11	6/27–6/27	12	2,091	10.6	5,020	25.5	11,712	59.57	837	837	4.3	19,660
12	6/28–6/28	12	756	11.1	1,511	22.2	3,778	55.56	756	756	11.1	6,800
13	6/30–7/1	36	2,912	13.3	1,059	4.8	16,417	74.71	1,588	1,588	7.2	21,974
14	7/2–7/3	36	1,123	9.7	2,994	25.8	7,485	64.52	0	0	0.0	11,601
15	7/4–7/6	48	705	8.2	940	11.0	6,694	78.08	235	235	2.7	8,573
16[b]	7/7–7/8	36	581	8.2	775	11.0	5,524	78.08	194	194	2.7	7,074
17[b,d]	7/9–7/10	38	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
18[a,d]	7/11–7/13	50	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
19[d]	7/14–7/15	38	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
20[b]	7/16–7/17	38	0	0.0	0	0.0	0	0.00	0	0	0.0	0
21[a,d]	7/18–7/20	50	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
22	7/22	14	0	0.0	0	0.0	0	0.00	0	0	0.0	0
23[b]	7/28	14	0	0.0	0	0.0	0	0.00	0	1,821	100.0	1,821
24[b]	8/19	12	0	0.0	0	0.0	0	0.00	0	1,581	100.0	1,581
25[d,e]	9/7	12	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
26[e]	9/8	12	0	0.0	0	0.0	0	0.00	0	550	100.0	550
Total			26,309	13.1	27,021	13.4	126,874	63.10	180,202	20,279	10.3	200,931

Note: Total harvest data from fish ticket reporting as of November 30, 2022.

[a] No samples collected; proportions are from the following period sampled.

[b] No samples collected; proportions are from the previous period sampled.

[c] No samples collected; proportions are the average of the previous and following periods sampled.

[d] Fewer than 3 permits fished; results are confidential.

[e] No harvest reported.

Appendix E20.–Chum salmon hatchery and wild stock contributions to commercial fisheries by period and mark identification, Montague District, 2022.

			Origin									
			Port Chalmers		Wally Noerenberg		Armin F Koernig		Hatchery total	Wild		
Period	Date	Hours	Number	Percent	Number	Percent	Number	Percent		Number	Percent	Total
1[a]	6/2–6/6	96	977	45.0	977	45.0	0	0.0	1,953	217	10.0	2,170
2	6/6–6/8	48	1,873	45.0	1,873	45.0	0	0.0	3,746	416	10.0	4,162
3	6/9–6/10	36	7,403	87.0	1,110	13.0	0	0.0	8,513	0	0.0	8,513
4	6/11–6/12	36	4,158	27.8	6,653	44.4	2,495	16.7	13,307	1,663	11.1	14,970
5	6/13–6/15	48	7,157	16.8	26,392	62.1	3,131	7.4	36,681	5,815	13.7	42,496
6	6/16–6/17	36	66,108	88.8	6,839	9.2	0	0.0	72,947	1,520	2.0	74,467
7[b]	6/18–6/19	24	28,214	91.8	1,941	6.3	0	0.0	30,155	579	1.9	30,734
8	6/20–6/21	24	46200	94.8	1680	3.4	0	0.0	47,880	840	1.7	48,720
9	6/22–6/23	36	77,141	97.8	887	1.1	0	0.0	78,027	887	1.1	78,914
10	6/25–6/26	24	40,981	98.6	0	0.0	0	0.0	40,981	594	1.4	41,575
11	6/27–6/27	12	12,781	100.0	0	0.0	0	0.0	12,781	0	0.0	12,781
12	6/28–6/28	12	27,754	93.8	0	0.0	0	0.0	27,754	1,850	6.3	29,604
13	6/30–7/1	36	43,670	93.0	0	0.0	0	0.0	43,670	3,296	7.0	46,966
14	7/2–7/3	36	29,890	91.4	0	0.0	934	2.9	30,824	1,868	5.7	32,692
15	7/4–7/6	48	43,111	86.8	1,461	2.9	4,384	8.8	48,956	731	1.5	49,687
16	7/7–7/8	36	37,348	100.0	0	0.0	0	0.0	37,348	0	0.0	37,348
17[b]	7/9–7/10	38	17,632	99.5	0	0.0	0	0.0	17,632	93	0.5	17,725
18	7/11–7/13	50	56,879	98.9	0	0.0	0	0.0	56,879	605	1.1	57,484
19	7/14–7/15	38	47,771	97.9	0	0.0	0	0.0	47,771	1,016	2.1	48,787
20[c]	7/16–7/17	38	17,572	97.9	0	0.0	0	0.0	17,572	374	2.1	17,946
21[c]	7/18–7/20	50	3,382	97.9	0	0.0	0	0.0	3,382	72	2.1	3,454
22[d]	7/21–7/22	38	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
23	7/28	14	669	66.7	67	6.7	0	0.0	736	267	26.7	1,003
24[c]	8/1	14	266	66.7	27	6.7	0	0.0	293	106	26.7	399
Total			621,676	88.0	50,181	7.1	10,944	1.5	682,802	23,906	3.4	706,708

Note: Total harvest data from fish ticket reporting as of November 30, 2022.

[a] No samples collected; proportions are from the following period sampled.

[b] No samples collected; proportions are an average of the previous and following period sampled.

[c] No samples collected; proportions are from the previous period sampled.

[d] Fewer than 3 permits fished; results are confidential.

Appendix E21.–Pink salmon hatchery and wild stock contributions to commercial fisheries by period and mark identification, Montague District, 2022.

			Origin											
			Solomon Gulch		Cannery Creek		Wally Noerenberg		Armin F. Koernig		Hatchery	Wild		
Period	Date	Hours	Number	Percent	Number	Percent	Number	Percent	Number	Percent	total	Number	Percent	Total
1[a]	6/2–6/6	96	0	0.0	0	0.0	0	0.0	0	0.0	0	11	100.0	11
2[b]	6/6–6/8	48	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
3[b]	6/9–6/10	36	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
4[b]	6/11–6/12	36	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
5[a]	6/13–6/15	48	0	0.0	0	0.0	0	0.0	0	0.0	0	3	100.0	3
6[b]	6/16–6/17	36	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
7[a]	6/18–6/19	24	0	0.0	0	0.0	0	0.0	0	0.0	0	1	100.0	1
8[a]	6/20–6/21	24	0	0.0	0	0.0	0	0.0	0	0.0	0	3	100.0	3
9[a]	6/22–6/23	36	0	0.0	0	0.0	0	0.0	0	0.0	0	21	100.0	21
10[a]	6/25–6/26	24	0	0.0	0	0.0	0	0.0	0	0.0	0	31	100.0	31
11[a]	6/27	12	0	0.0	0	0.0	0	0.0	0	0.0	0	28	100.0	28
12[a]	6/28	12	0	0.0	0	0.0	0	0.0	0	0.0	0	94	100.0	94
13[a]	6/30–7/1	36	0	0.0	0	0.0	0	0.0	0	0.0	0	138	100.0	138
14[a]	7/2–7/3	36	0	0.0	0	0.0	0	0.0	0	0.0	0	84	100.0	84
15	7/4–7/6	48	3,063	63.5	0	0.0	0	0.0	0	0.0	3,063	1,759	36.5	4,822
16	7/7–7/8	36	989	63.5	0	0.0	0	0.0	0	0.0	989	567	36.5	1,556
17[b]	7/9–7/10	38	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0	0
18[c]	7/11–7/13	50	11	30.5	0	0.0	0	1.1	1	2.1	12	23	66.3	35
19	7/14–7/15	38	10,656	30.5	0	0.0	367	1.1	735	2.1	11,758	23,149	66.3	34,907
20[d]	7/16–7/17	38	1,926	30.5	0	0.0	66	1.1	133	2.1	2,125	4,184	66.3	6,309
21[d]	7/18–7/20	50	607	30.5	0	0.0	21	1.1	42	2.1	670	1,318	66.3	1,988
22[c,e]	7/21–7/22	38	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
23	7/28	14	8,759	15.6	1,168	2.1	4,088	7.3	584	1.0	14,599	41,461	74.0	56,060
24	8/1	14	7,039	10.5	3,519	5.3	2,815	4.2	2,815	4.2	16,189	50,679	75.8	66,868
Total			33,824	19.0	4,791	2.7	7,720	4.3	4,361	2.5	50,695	127,220	71.5	177,917

Note: Total harvest data from fish ticket reporting as of November 30, 2022.

[a] No samples collected; wild origin assumed.

[b] No harvest reported.

[c] No samples collected; proportions are from the following period sampled.

[d] No samples collected; proportions are from the previous period sampled.

[e] Fewer than 3 permits fished; results are confidential.

APPENDIX F: SUBSISTENCE AND COMMERCIAL HOMEPACK SALMON HARVEST

Appendix F1.–Salmon harvest and effort in the Copper River District subsistence drift gillnet fishery, 1961–2022.

	Permits				Reported harvest			
Year	Issued	Returned	Fished	Not fished[a]	Chinook	Sockeye	Coho	Total
1961	14	0	0	0	60	137	99	296
1962	14	0	0	0	44	135	3	182
1963	8	0	0	0	3	13	157	173
1964	5	0	0	2	14	0	0	14
1965	31	20	15	5	12	459	85	556
1966	45	31	21	10	47	175	0	222
1967	61	56	37	19	83	153	0	236
1968	17	15	7	8	11	36	0	47
1969	49	33	20	13	16	63	85	164
1970	32	27	24	3	66	179	0	245
1971	29	26	17	9	10	32	4	46
1972	104	80	75	5	149	569	53	771
1973	94	89	89	NA	153	326	180	659
1974	9	5	3	2	5	4	2	11
1975	2	2	2	NA	0	5	0	5
1976	27	14	14	NA	1	10	0	11
1977	23	22	22	NA	10	71	0	81
1978	34	28	9	19	37	18	12	67
1979	49	41	21	20	45	26	17	88
1980	39	35	18	17	19	27	17	63
1981	72	51	30	21	48	145	104	297
1982	108	90	48	42	60	634	106	800
1983	87	73	31	42	79	107	57	243
1984	118	104	57	47	68	324	135	527
1985	94	94	67	27	88	261	83	432
1986	88	85	57	28	86	348	47	481
1987	95	89	39	50	49	359	14	422
1988	114	97	57	40	59	226	42	327
1989	75	64	32	32	56	339	51	446
1990	88	76	40	39	60	469	82	611
1991	129	115	71	44	136	830	38	1,004
1992	126	114	67	47	142	785	42	969
1993	111	93	50	43	120	428	29	577
1994	101	97	60	37	164	474	67	705
1995	126	113	72	41	154	692	31	877
1996	176	158	101	57	276	969	47	1,292
1997	269	243	165	78	200	1,001	1,777	2,978
1998	245	231	144	87	295	850	680	1,825
1999	294	275	175	100	353	1,330	682	2,365
2000	416	400	293	107	689	4,360	44	5,093
2001	468	439	288	151	826	3,072	70	3,968
2002	355	331	199	132	549	3,067	28	3,644
2003	384	365	225	140	710	1,607	36	2,353
2004	511	482	321	161	1,106	1,822	46	2,974
2005	237	224	121	103	260	830	15	1,105

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	Permits				Reported harvest			
Year	Issued	Returned	Fished	Not fished[a]	Chinook	Sockeye	Coho	Total
2006	421	399	300	121	779	4,355	1	5,135
2007	469	440	295	145	1,145	6,148	15	7,308
2008	506	480	248	232	470	3,969	53	4,492
2009	323	293	128	165	212	1,764	22	1,998
2010	325	314	139	175	276	1,980	27	2,283
2011	273	263	113	150	212	1,783	34	2,029
2012	378	357	204	153	237	4,270	0	4,507
2013	531	492	321	171	854	5,639	1	6,494
2014	288	269	101	168	153	1,675	0	1,828
2015	241	231	97	134	167	1,403	10	1,580
2016	195	189	77	112	73	1,075	2	1,150
2017	450	416	265	151	778	2,448	43	3,269
2018	684	630	437	193	1,356	5,189	195	6,740
2019	573	555	347	208	808	6,163	330	7,301
2020	ND	ND	344	ND	657	7,091	326	8,074
2021	ND	ND	278	ND	624	5,338	233	6,195
2022	842	650	351	299	887	5,828	391	7,106
Average (2012–2021)	418	392	247	161	571	4,029	114	4,714

Note: NA = not available; ND = no data.

[a] As reported on returned permits.

Appendix F2.–Salmon harvest and effort in the Prince William Sound general area subsistence fishery, 1966–2022.

	Permits				Reported harvest[a]						
Year	Issued	Returned	Fished	Not fished[b]	Chinook	Sockeye	Coho	Pink	Chum	Unknown	Total
1966	3	3	0	0	0	3	19	20	50	0	92
1967	4	3	0	0	0	0	4	4	0	0	8
1968	4	3	0	0	0	0	20	156	0	22	198
1969	7	3	0	0	0	0	16	0	0	0	16
1970	1	1	0	0	0	0	0	0	0	0	0
1971	3	2	0	0	0	0	0	46	0	0	46
1972	0	0	0	0	0	0	0	0	0	0	0
1973	19	16	0	0	0	0	289	0	0	0	289
1974	3	1	0	0	0	0	0	0	0	0	0
1975	2	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0
1977	4	4	0	0	0	0	0	0	0	0	0
1978	3	2	0	0	0	0	0	0	0	0	0
1979	15	2	0	0	0	0	0	0	0	0	0
1980	26	15	0	0	0	7	6	0	0	0	13
1981	12	8	0	0	0	3	29	0	2	0	34
1982	35	27	0	0	0	84	4	31	24	0	143
1983	26	21	0	0	0	22	36	9	79	0	146
1984	8	8	0	0	0	10	0	11	2	0	23
1985	22	16	0	0	1	27	16	14	26	0	84
1986	25	14	0	0	0	5	15	0	0	0	20
1987	18	17	0	0	5	31	6	0	16	0	58
1988	7	7	0	0	2	51	7	10	9	0	79
1989	11	7	0	0	0	0	0	0	3	0	3
1990	8	7	0	0	0	0	7	4	0	0	11
1991	9	5	2	3	0	2	0	0	0	0	2
1992	10	6	1	5	0	20	0	0	0	0	20
1993	6	6	4	2	1	104	10	0	0	0	115
1994	5	4	2	2	0	0	0	0	0	0	0
1995	4	2	0	2	0	0	0	0	0	0	0
1996	10	7	0	7	0	0	0	0	0	0	0
1997	4	3	1	2	0	3	0	0	0	0	3
1998	4	3	0	3	0	0	0	0	0	0	0
1999	3	3	0	3	0	0	0	0	0	0	0
2000	3	3	0	3	0	0	0	0	0	0	0
2001	5	5	0	5	0	0	0	0	0	0	0
2002	11	9	2	7	0	31	0	9	7	0	47
2003	3	3	0	3	0	48	0	0	3	0	51
2004	12	11	5	6	0	8	0	0	3	0	11
2005	14	13	1	12	0	4	0	0	0	0	4
2006	11	9	2	7	0	20	0	30	0	0	50
2007	3	3	1	2	0	30	0	0	0	0	30

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	Permits				Reported harvest[a]						
Year	Issued	Returned	Fished	Not fished[b]	Chinook	Sockeye	Coho	Pink	Chum	Unknown	Total
2008	11	10	4	6	1	32	0	0	0	0	33
2009	1	1	0	1	0	0	0	0	0	0	0
2010	2	2	1	1	0	0	0	0	0	0	0
2011	4	4	3	1	29	40	1	5	10	0	85
2012	14	12	6	6	0	40	0	0	22	0	62
2013	8	8	7	1	0	12	0	0	24	5	41
2014	23	21	2	19	0	3	0	0	0	0	3
2015	25	23	10	13	4	115	0	0	3	0	122
2016	5	5	1	4	0	1	0	0	0	0	1
2017	6	5	3	2	0	16	0	0	0	0	16
2018	26	24	8	16	1	103	22	9	19	0	154
2019	44	43	16	27	8	406	0	3	14	0	431
2020	ND	ND	41	ND	0	1,180	1	20	12	0	1,213
2021	ND	ND	45	ND	8	1,277	0	33	20	1	1,339
2022	309	234	61	173	5	1,478	0	10	50	1	1,544
Average (2012–2021)	19	21	14	11	2	315	2	7	11	1	338

[a] Reported harvest only and includes harvest from Prince William Sound (PWS), exclusive of the Copper River District and customary and traditional subsistence locations within PWS.

[b] As reported on returned permits.

Appendix F3.–Area E salmon retained from the commercial harvest for homepack by species and gear type, 2005–2022.

	Number of permits			Number of Chinook			Number of sockeye			Number of coho			Number of pink			Number of chum		
Year	Purse seine	Drift gillnet	Set gillnet	Purse seine	Drift gillnet	Set gillnet	Purse seine	Drift gillnet	Set gillnet	Purse seine	Drift gillnet	Set gillnet	Purse seine	Drift gillnet	Set gillnet	Purse seine	Drift gillnet	Set gillnet
2005	0	226	0	0	767	0	0	1,897	0	0	226	0	0	21	0	0	27	0
2006	1	264	0	2	779	0	0	1,598	0	0	166	0	0	10	0	0	5	0
2007	1	279	0	1	1,028	0	0	2,086	1	0	353	0	0	43	0	0	102	0
2008	2	236	1	3	611	1	0	2,349	72	0	449	0	0	53	0	0	14	0
2009	0	325	3	0	876	0	0	6,474	7	0	767	0	0	61	0	0	67	0
2010	4	351	1	0	957	0	2	8,126	55	51	1,117	0	0	21	0	0	152	0
2011	8	350	2	0	1,344	2	73	9,740	268	350	802	0	0	82	0	0	184	0
2012	20	403	7	11	929	0	143	10,344	318	78	1,220	0	83	3,546	0	55	1,240	0
2013	1	379	7	0	633	24	50	10,532	228	25	288	0	0	248	0	0	81	0
2014	11	405	8	7	806	10	168	13,218	301	17	1,463	0	0	191	0	11	120	0
2015	8	385	9	5	1,179	9	401	11,607	965	23	1,500	0	0	169	0	4	123	20
2016	9	364	8	9	758	10	316	10,507	696	60	1,639	0	13	708	0	7	57	0
2017	29	408	8	37	788	6	218	10,197	1,306	177	2,448	0	287	615	19	28	209	2
2018	32	366	13	24	156	3	556	5,433	304	123	3,829	65	91	1,320	0	10	134	191
2019	33	379	11	45	789	11	867	9,914	763	755	1,260	0	8	1,424	5	42	382	0
2020	29	332	6	164	278	2	341	3,582	329	121	2,062	0	87	1,068	0	8	181	0
2021	52	222	14	177	82	8	720	3,844	1,337	246	353	0	327	316	241	57	392	2
2022	22	286	13	79	599	27	202	5,936	462	104	651	0	1,054	470	25	2	119	0
Average (2012–2021)	22	364	9	48	640	8	378	8,918	655	163	1,606	7	90	961	27	22	292	22

Appendix F4.–Salmon harvest and effort in the PWS and upper Copper River federal subsistence fisheries, 2012–2022.

	Permits				Reported harvest[a]			
Year	Issued	Returned	Fished	Not fished[b]	Chinook	Sockeye	Coho	Total
	Chitina Subdistrict							
2012	89	80	33	47	6	1,332	8	1,346
2013	99	85	39	46	17	1,999	8	2,024
2014	113	103	49	54	14	1,549	68	1,631
2015	111	100	52	48	13	2,231	14	2,258
2016	128	95	43	52	16	1,549	33	1,598
2017	132	104	47	57	12	1,454	7	1,473
2018	132	117	58	59	92	3,144	28	3,264
2019	181	161	0	0	74	3,984	20	4,078
2020	215	187	95	92	76	3,229	23	3,328
2021	194	168	102	66	98	5,415	3	5,516
2022	177	153	77	76	86	2,548	37	2,671
Average (2017–2021)	171	147	60	55	70	3,445	16	3,532
	Glennallen Subdistrict							
2012	277	244	169	75	371	14,461	78	14,910
2013	274	236	160	76	331	15,834	24	16,189
2014	314	279	206	73	397	21,614	23	22,034
2015	325	286	210	76	384	24,695	13	25,092
2016	320	246	176	75	369	15,884	9	16,262
2017	338	283	212	71	399	15,691	1	16,091
2018	335	300	199	101	2,432	15,287	0	17,719
2019	343	304	0	0	838	15,703	0	16,541
2020	376	330	185	145	623	10,884	1	11,508
2021	355	294	173	121	418	12,296	0	12,714
2022	297	238	147	91	683	11,358	0	12,041
Average (2017–2021)	349	302	154	88	942	13,972	0	14,915
	PWS/Chugach Subdistrict							
2012	63	53	31	22	0	64	428	492
2013	65	46	23	17	0	102	329	431
2014	88	76	41	0	0	76	610	686
2015	94	68	47	15	0	152	893	1,045
2016	110	92	51	41	0	234	555	789
2017	97	83	49	34	0	127	514	641
2018	97	92	40	52	3	96	265	364
2019	120	89	54	35	0	116	671	787
2020	90	43	25	18	0	41	373	414
2021	74	64	27	37	0	19	449	468
2022[c]	95	65	35	30	0	59	498	557
Average (2017–2021)	96	74	39	35	1	80	454	535

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Year	Permits				Reported harvest[a]			
	Issued	Returned	Fished	Not fished[b]	Chinook	Sockeye	Coho	Total
	Total federal subsistence harvests							
2012	429	377	233	144	377	15,857	514	16,748
2013	438	367	222	139	348	17,935	361	18,644
2014	515	458	296	127	411	23,239	701	24,351
2015	530	454	309	139	397	27,078	920	28,395
2016	558	433	270	168	385	17,667	597	18,649
2017	567	470	308	162	411	17,272	522	18,205
2018	564	509	297	212	2,527	18,527	293	21,347
2019	644	554	54	35	912	19,803	691	21,406
2020	681	560	305	255	699	14,154	397	15,250
2021	623	526	302	224	516	17,730	452	18,698
2022	569	456	259	197	769	13,965	535	15,269
Average (2017–2021)	616	524	253	178	1,013	17,497	471	18,981

[a] Reported harvest only.

[b] As reported on returned permits.

[c] The federal subsistence fishery was expanded to include waters of the Copper River within a half mile of the Copper River Highway between miles posts 27 and 38.

Appendix F5.–Salmon harvest and effort in the Tatitlek and Chenega subsistence fisheries, 2002–2022.

Year	Permits				Reported harvest[a]						
	Issued	Returned	Fished	Not fished[b]	Chinook	Sockeye	Coho	Pink	Chum	Unk.	Total
					Tatitlek						
2002	19	6	5	1	0	375	136	28	36	0	575
2003	15	8	6	2	0	81	185	20	12	0	298
2004	18	12	9	3	2	322	315	46	28	0	713
2005	16	3	2	1	0	98	286	200	16	0	600
2006	12	2	1	1	0	3	18	35	25	0	81
2007	14	0	0	0	NR	NR	NR	NR	NR	NR	0
2008	2	1	1	0	0	60	0	0	0	0	60
2009	12	4	3	1	0	170	131	0	0	0	301
2010	8	5	5	0	0	165	142	50	10	0	367
2011	10	4	4	0	0	922	536	0	22	0	1,480
2012	32	7	6	1	15	728	75	0	0	0	818
2013	22	11	8	3	0	613	277	0	129	0	1,019
2014	7	5	2	3	0	46	103	0	0	0	149
2015	16	4	4	0	12	110	143	0	8	0	273
2016	5	5	0	5	0	0	0	0	0	0	0
2017	7	5	4	1	0	45	55	0	0	0	100
2018	24	6	2	4	0	143	0	0	4	10	157
2019	5	4	3	1	0	100	37	0	2	0	139
2020	6	4	4	0	2	43	27	37	7	0	116
2021	17	4	1	3	0	25	0	0	0	0	25
2022	17	13	1	12	0	18	0	0	2	0	20
Average (2012–2021)	14	6	3	2	3	185	72	4	15	1	280
					Chenega						
2002	10	5	4	1	10	142	123	83	60	0	418
2003	13	7	5	2	6	219	156	149	147	0	677
2004	8	5	4	1	3	535	44	56	84	0	722
2005	13	8	6	2	10	516	84	124	174	0	908
2006	11	6	4	2	0	159	1	28	111	0	299
2007	4	3	2	1	2	293	27	4	55	0	381
2008	15	3	1	2	4	97	75	70	30	0	276
2009	4	4	3	1	2	168	26	5	84	0	285
2010	9	5	5	0	0	55	0	6	87	0	148
2011	17	11	8	3	2	134	26	50	60	0	272
2012	23	14	6	8	0	603	20	0	77	1	701
2013	13	4	3	1	0	19	0	0	63	0	82
2014	10	5	2	3	0	0	0	10	0	0	10
2015	21	4	1	3	56	0	35	0	12	0	103
2016	7	6	1	5	0	32	1	0	0	0	33
2017	6	3	2	1	0	105	0	0	61	0	166
2018	22	1	1	0	0	13	2	0	40	0	55
2019	2	2	1	1	0	0	0	0	0	0	0
2020	12	10	1	8	0	5	0	0	11	0	16
2021	44	11	3	8	0	1	0	25	0	0	26
2022	31	18	2	16	0	0	0	0	0	0	0
Average (2012–2021)	16	6	2	4	6	78	6	4	26	0	119

Note: NR = no harvest reported.

[a] Reported harvest only.

[b] As reported on returned subsistence permits.

Appendix F6.–Personal use and subsistence salmon harvests by year, district and gear types for the Upper Copper River subsistence and personal use fisheries, 2005–2022.

					Reported harvest				Expanded harvest					
			Permits		Salmon				Salmon				Other species	
Year	District	Gear	Issued	Returned	Chinook	Sockeye	Coho	Total	Chinook	Sockeye	Coho	Total	Steelhead	Other
2005	Glennallen	Dipnet	363	303	264	6,305	0	6,569	310	7,486	0	7,796	0	0
	Glennallen	Fishwheel	598	557	1,816	54,661	97	56,574	1,919	56,727	154	58,800	19	0
	Chitina	Dipnet	8,230	6,937	1,773	106,797	1,562	110,132	2,043	120,013	1,869	123,925	0	478
	Total		9,191	7,797	3,853	167,763	1,659	173,275	4,272	184,226	2,023	190,521	19	478
2006	Glennallen	Dipnet	338	273	266	6,243	10	6,519	335	7,170	10	7,515	0	1
	Glennallen	Fishwheel	646	605	2,178	46,516	200	48,894	2,434	50,540	202	53,176	0	82
	Chitina	Dipnet	8,566	6,762	2,071	102,443	1,886	106,400	2,663	123,261	2,715	128,639	0	464
	Total		9,550	7,640	4,515	155,202	2,096	161,813	5,432	180,971	2,927	189,330	0	547
2007	Glennallen	Dipnet	467	383	432	8,155	28	8,615	496	9,416	28	9,940	0	1
	Glennallen	Fishwheel	707	654	2,674	53,322	203	56,199	2,780	56,298	210	59,288	0	55
	Chitina	Dipnet	8,490	7,187	2,388	112,753	1,492	116,633	2,694	125,126	1,742	129,562	0	660
	Total		9,664	8,224	5,494	174,230	1,723	181,447	5,970	190,840	1,980	198,790	0	716
2008	Glennallen	Dipnet	536	447	445	6,517	35	6,997	496	7,177	35	7,708	0	0
	Glennallen	Fishwheel	650	600	1,793	33,687	447	35,927	1,885	35,980	458	38,323	0	75
	Chitina	Dipnet	8,258	6,861	1,690	70,597	2,346	74,633	1,999	81,359	2,711	86,069	0	407
	Total		9,444	7,908	3,928	110,801	2,828	117,557	4,380	124,516	3,204	132,100	0	482
2009	Glennallen	Dipnet	469	391	342	6,030	8	6,380	394	6,950	19	7,363	0	1
	Glennallen	Fishwheel	621	575	1,988	37,708	186	39,882	2,099	39,899	209	42,207	0	72
	Chitina	Dipnet	7,958	6,908	199	81,432	1,452	83,083	214	90,035	1,712	91,961	0	267
	Total		9,048	7,874	2,529	125,170	1,646	129,345	2,707	136,884	1,940	141,531	0	340
2010	Glennallen	Dipnet	620	510	126	384	0	0	9,970	7,757	0	17,727	0	325
	Glennallen	Fishwheel	701	647	1,360	54,490	228	56,078	1,427	57,717	228	59,372	0	148
	Chitina	Dipnet	9,970	7,757	587	116,790	1,592	118,969	700	138,487	2,013	141,200	0	365
	Total		11,291	8,914	2,073	171,664	1,820	175,047	12,097	203,961	2,241	218,299	0	838

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					Reported harvest				Expanded harvest					
			Permits		Salmon				Salmon				Other species	
Year	District	Gear	Issued	Returned	Chinook	Sockeye	Coho	Total	Chinook	Sockeye	Coho	Total	Steelhead	other
2011	Glennallen	Dipnet	617	530	681	13,034	63	13,778	734	14,454	68	15,256	0	0
	Glennallen	Fishwheel	689	625	1,518	41,009	283	42,810	1,585	45,168	304	47,057	0	164
	Chitina	Dipnet	9,217	7,566	924	114,164	1,512	116,600	1,067	128,052	1,702	130,821	0	444
	Total		10,523	8,721	3,123	168,207	1,858	173,188	3,386	187,674	2,074	193,134	0	608
2012	Glennallen	Dipnet	867	699	516	17,860	50	18,426	591	21,198	59	21,848	0	4
	Glennallen	Fishwheel	660	612	1,407	50,269	229	51,905	1,504	55,107	276	56,887	0	112
	Chitina	Dipnet	10,016	8,030	496	109,777	1,132	111,405	567	127,143	1,385	129,095	0	267
	Total		11,543	9,341	2,419	177,906	1,411	181,736	2,662	203,448	1,720	207,830	0	383
2013	Glennallen	Dipnet	808	667	794	22,924	55	23,773	902	25,879	79	26,860	4	0
	Glennallen	Fishwheel	531	494	1,169	44,201	63	45,433	1,246	47,849	64	49,159	22	25
	Chitina	Dipnet	10,424	8,482	620	151,658	719	152,997	744	180,663	797	182,204	0	700
	Total		11,763	9,643	2,583	218,783	837	222,203	2,892	254,391	941	258,224	26	725
2014	Glennallen	Dipnet	1,148	918	551	24,736	169	25,456	675	29,914	174	30,763	0	3
	Glennallen	Fishwheel	508	461	652	42,027	57	42,736	690	45,587	59	46,336	0	29
	Chitina	Dipnet	11,618	9,332	652	137,179	854	138,685	719	157,215	1,129	159,063	0	329
	Total		13,274	10,711	1,855	203,942	1,080	206,877	2,084	232,716	1,362	236,162	0	361
2015	Glennallen	Dipnet	1,128	909	1,087	29,092	26	30,205	1,297	35,416	32	36,745	0	0
	Glennallen	Fishwheel	503	455	870	43,316	45	44,231	915	46,384	45	47,344	0	234
	Chitina	Dipnet	12,635	10,509	1,305	186,485	797	188,587	1,570	223,080	841	225,491	0	1,341
	Total		14,266	11,873	3,262	258,893	868	263,023	3,782	304,880	918	309,580	0	1,575
2016	Glennallen	Dipnet	1,300	1,030	833	22,525	20	23,378	1,002	26,301	20	27,323	0	0
	Glennallen	Fishwheel	469	413	930	31,703	25	32,658	1,073	36,173	25	37,271	0	424
	Chitina	Dipnet	11,394	9,302	563	126,528	1,027	128,118	711	148,982	1,182	150,875	0	605
	Total		13,163	10,745	2,326	180,756	1,072	184,154	2,786	211,456	1,227	215,469	0	1,029

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			Permits		Reported harvest				Expanded harvest					
					Salmon				Salmon				Other species	
Year	District	Gear	Issued	Returned	Chinook	Sockeye	Coho	Total	Chinook	Sockeye	Coho	Total	Steelhead	other
2017	Glennallen	Dipnet	1,264	1,005	1,695	16,499	51	18,245	2,014	19,599	61	21,674	0	5
	Glennallen	Fishwheel	368	316	751	18,495	6	19,252	892	21,971	7	22,870	7	557
	Chitina	Dipnet	9,490	7,665	1,709	113,202	532	115,443	1,961	132,694	715	135,370	0	673
	Total		11,122	8,986	4,155	148,196	589	152,940	4,867	174,264	783	179,914	7	1,235
2018	Glennallen	Dipnet	1,312	1,045	1,243	14,637	92	15,972	1,459	17,028	117	18,604	3	4
	Glennallen	Fishwheel	347	311	2,747	19,353	33	22,133	3,072	22,331	34	25,437	10	15
	Chitina	Dipnet	4,982	4,026	1,069	65,202	1,234	67,505	1,273	77,051	1,436	79,760	0	375
	Total		6,641	5,382	5,059	99,192	1,359	105,610	5,804	116,410	1,587	123,801	13	394
2019	Glennallen	Dipnet	1,354	1,062	1,603	29,838	111	31,552	1,913	37,791	186	39,890	0	5
	Glennallen	Fishwheel	359	321	1,474	20,163	18	21,655	1,516	22,466	18	24,000	0	20
	Chitina	Dipnet	8,070	6,639	2,251	147,256	927	150,434	2,611	171,203	1,064	174,878	0	609
	Total		9,783	8,022	5,328	197,257	1,056	203,641	6,040	231,460	1,268	238,768	0	634
2020	Glennallen	Dipnet	1,290	1,046	970	18,042	34	19,046	1,012	19,036	36	20,084	0	1
	Glennallen	Fishwheel	375	320	1,121	14,407	30	15,558	1,210	15,541	31	16,782	0	36
	Chitina	Dipnet	6,810	6,070	678	70,755	639	72,072	751	78,022	815	79,588	0	230
	Total		8,475	7,436	2,769	103,204	703	106,676	2,973	112,599	882	116,454	0	267
2021	Glennallen	Dipnet	1,205	1,119	969	24,178	148	25,295	1,041	26,292	148	27,481	0	2
	Glennallen	Fishwheel	313	298	554	15,590	18	16,162	644	16,346	18	17,008	0	18
	Chitina	Dipnet	7,222	6,681	794	136,477	404	137,675	832	143,301	439	144,572	0	434
	Total		8,740	8,098	2,317	176,245	570	179,132	2,517	185,939	605	189,061	0	454
2022	Glennallen	Dipnet	931	866	1,178	25,127	108	26,413	1,336	28,108	130	29,574	15	221
	Glennallen	Fishwheel	297	281	1,560	16,269	90	17,919	1,632	18,235	90	19,957	6	554
	Chitina	Dipnet	7,100	6,628	2,128	146,348	1,882	150,358	2,214	153,654	1,906	157,774	0	464
	Total		8,328	7,775	4,866	187,744	2,080	194,690	5,182	199,997	2,126	207,305	21	1,239
Average (2012–2021)	Glennallen	Dipnet	1,168	950	1,026	22,033	76	23,135	1,191	25,845	91	27,127	1	2
	Glennallen	Fishwheel	443	400	1,168	29,952	52	31,172	1,276	32,976	58	34,309	4	147
	Chitina	Dipnet	9,266	7,674	1,014	124,452	827	126,292	1,174	143,935	980	146,090	0	556
	Total		10,877	9,024	3,207	176,437	955	180,599	3,641	202,756	1,129	207,526	5	706

APPENDIX G: HERRING

Appendix G1.–Annual Pacific herring biomass indices for Prince William Sound Area harvest management years, 1985–2022.

Harvest management year	Use and harvest mortality (tons)[a]	Aerial survey estimate (mile-days of spawn)[b]	Peak spring acoustic biomass estimate (tons)[a]
1985–1986	11,180	146.8	ND
1986–1987	6,281	186.8	ND
1987–1988	9,871	269.8	ND
1988–1989[c]	–	228.1	ND
1989–1990	10,103	164.4	ND
1990–1991	15,196	71.5	ND
1991–1992	20,752	119.8	ND
1992–1993	2,360	50.3	ND
1993–1994	151	23.1	ND
1994–1995	0	28.2	14,639
1995–1996	0	37.3	25,346
1996–1997	5,170	64.3	44,083
1997–1998	3,849	62.0	19,456
1998–1999	49	40.7	22,397
1999–2000	0	31.7	8,024
2000–2001	0	14.8	7,035
2001–2002	0	23.6	11,791
2002–2003	0	26.1	29,864
2003–2004	0	30.4	21,046
2004–2005	0	31.7	16,800[f]
2005–2006	0	21.7	7,600[f]
2006–2007	0	18.3	10,700[f]
2007–2008	0	33.2	23,300[f]
2008–2009	0	29.8	16,900[f]
2009–2010	0	32.7	28,500[f]
2010–2011	0	26.2	24,000[f]
2011–2012	0	39.3	30,000[f]
2012–2013	0	29.3	24,200[f]
2013–2014	0	36.6	22,000[f]
2014–2015	0	21.6	NA[g]
2015–2016	0	9.89	3,453
2016–2017	0	8.12	9,896
2017–2018	0	4.52	3,646
2018–2019	0	12.68	8,448
2019–2020	0	23.68	19,841
2020–2021	0	25.55	6,000
2021–2022	0	32.7	ND

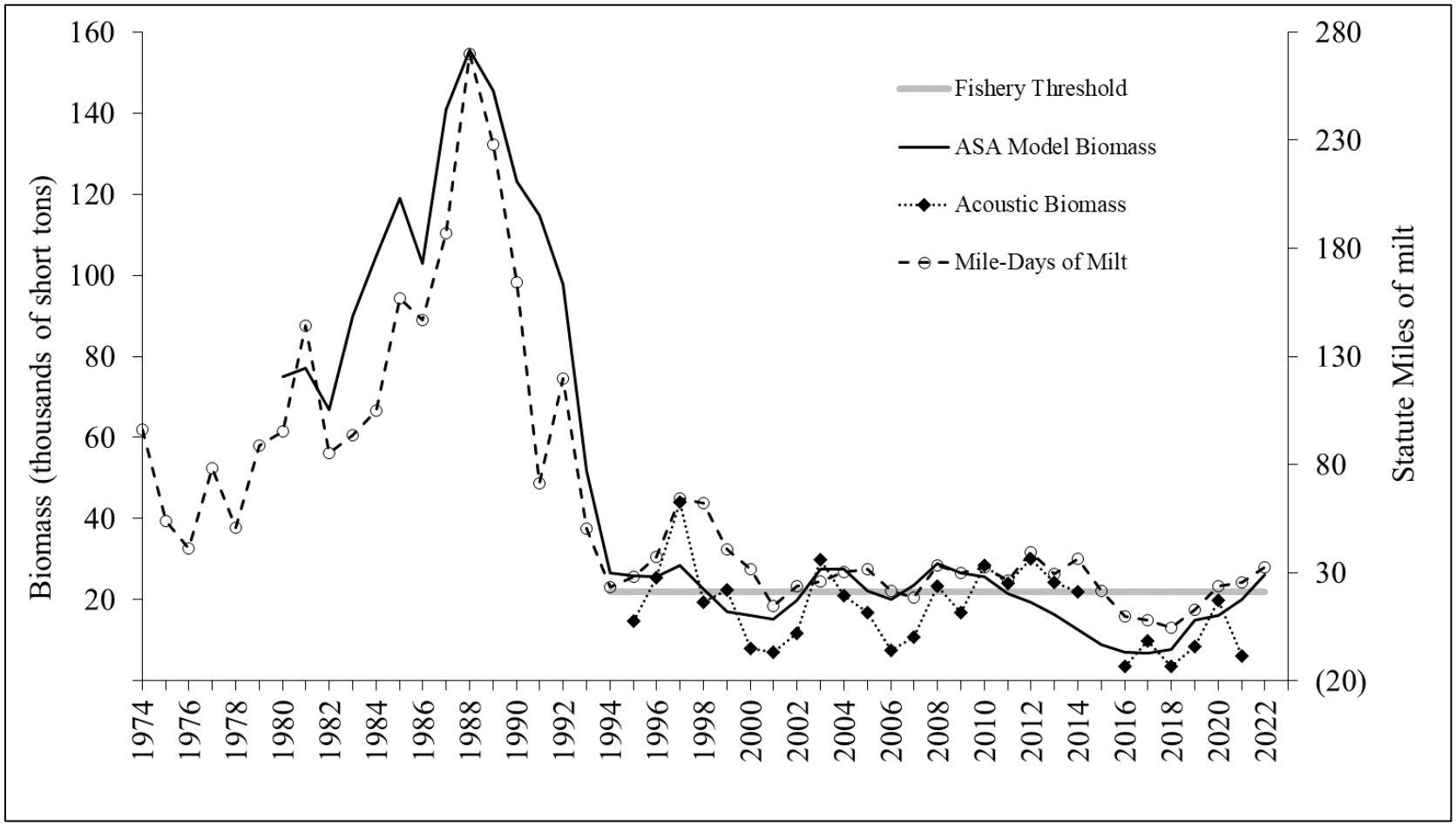
Note: All biomass estimates are in short tons (2,000 lb), and all linear extent of milt estimates are in statute miles. ND = No data.

[a] Represents the common property seine and gillnet sac roe harvest, and equivalent use of herring in closed pound spawn-on-kelp fisheries.

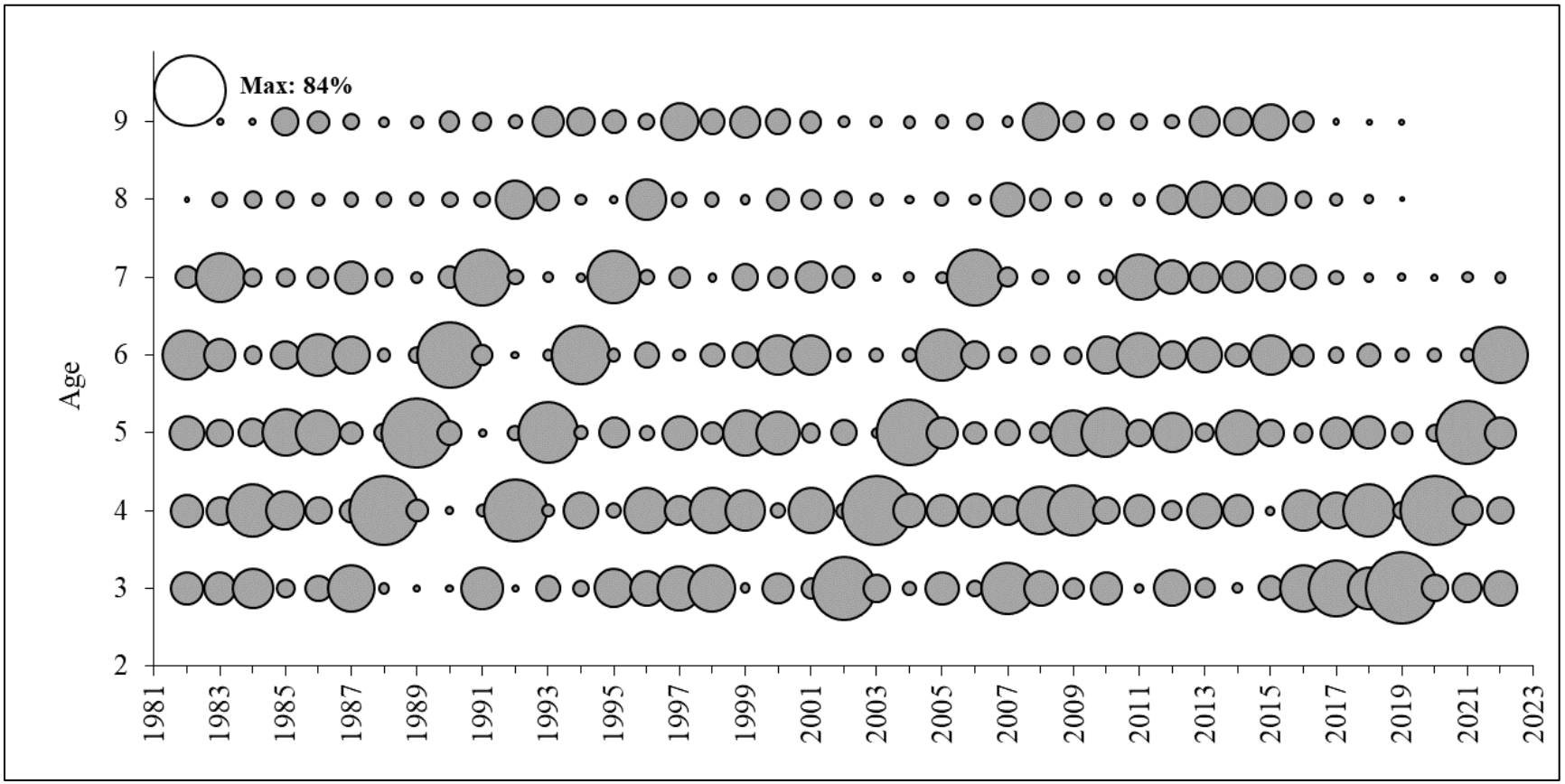
[b] Sum of the daily observed linear miles of herring milt calculated in ArcMap from digitized hand-annotated paper maps and data collected electronically.

[c] All herring commercial fisheries in Prince William Sound were closed in the spring of 1989 because of the potential for the contamination of harvests from the T/V *Exxon Valdez* oil spill.

Appendix G2.–Prince William Sound Area annual Pacific herring biomass indices by management year, 1974–2022.



Appendix G3.–Spring Prince William Sound Pacific herring age composition by year, 1982–2022.



Note: Circle size indicates percent contribution of age class to spawning population (see upper left for scale).